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# Motivations and outcomes of social network site usage in the South African workplace

**Nkwe, Nugi**

**2020**
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# Motivations and Outcomes of Social Network Site Usage in the South African Workplace

**PhD Thesis**

**Submitted in Fulfilment of the Requirements for the Degree of Doctor of Philosophy in the Field of Information Systems**

**Submitted by: Nugi Nkwe**

**Student Id: 761212**

**Supervised by: Prof. Jason Cohen**

**Declaration**

I, Nugi Nkwe hereby declare that this thesis is my own work. This thesis is submitted in fulfilment of the requirements for the Doctor of Philosophy degree in the department of Information System in the Faculty of Commerce, Law and Management at the University of the Witwatersrand, Johannesburg South Africa.

In addition, I declare that:

1. I am aware that plagiarism (the use of someone else's work without their permission and/or without acknowledging the original source) is an academic offence.
2. Where external sources have been used, all have been acknowledged by means of appropriate in-text citation and added to the list of references.
3. This thesis has not been submitted before for any degree or examination at this or any other University.
4. I recognise that it was my responsibility to conduct this research in an ethical manner and according to the guidelines of the University of the Witwatersrand.



Nugi Nkwe

20 April 2020

**Acknowledgements**

Firstly, I must give my high, respectful gratitude to my supervisor Prof. Jason Cohen for his guidance and help throughout my PhD tenure. He provided me with direction and support. His continuous encouragement and constructive feedback have kept me motivated. He gave me the chance to explore new knowledge as well as giving me precious advice in order to improve myself to become a better person. He is more than a mentor to me.

Secondly, to my wife Keneetswe and the boys, I would like to apologise for my absence. The journey took longer than expected. Thank you for the endless support, love and encouragement. I understand the sacrifice you guys have made.

Thirdly, I am indebted to my wonderful siblings and their families for being there, especially after the loss of our mom. Thanks for the love.

Fourthly, my sincere appreciation also goes to the Wits University Information Systems department staff for their encouragement throughout the period of my study.

Finally, my eternal thanks go to reviews and panels for their comments. Last but not least, I need to thank my fellow PhD friends, Thuba Ndlela, P.C. Thebe and Metsiatsile Nazo, who have embarked on this journey with me, offered me friendship, shared so many experiences, joys and woes together. Although this journey presented many challenges it has been a valuable and extremely wonderful experience for me.

## ABSTRACT

Social Network Sites (SNS) such as Facebook, Twitter, LinkedIn and Instagram allow participants to interact with their social network, to communicate, share media such as videos and photos, and share knowledge. Although SNS has been popularised in the social context, the use of SNS is extending into the workplace context.

However, the motivations underling SNS usage behaviours in the workplace are not well understood and the impact of SNS usage on individuals' work outcomes is being debated. For example, relatively few studies have used motivation as lens to examine SNS user behaviour. This is surprising because different types of motivations such as intrinsic, extrinsic, hedonic and utilitarian motivations have been found to be important in system's usage and may be the same for SNS usage. A majority of the studies used theory of reasoned action, technology acceptance model and uses and gratification theory as lens. Also, the studies have typically ignored other dimensions of motivations while focus on enjoyment or fun. Another limitation is the manner in which usage has been observed such as frequency of use or SNS intensity. This one-dimensional conceptualization of usage has been found to be narrow. Further, extant findings from studies examining the link between SNS use and work outcomes are inconsistent and difficult to reconcile. To address these shortcomings in our understanding of the link between motivation and SNS user behaviour, and the impact of SNS use on workplace outcomes, this thesis undertook an in-depth review in the form of a conceptual background on motivation as determinant of information systems usage, and a review of the workplace outcomes. Further, this thesis adopted three research designs namely systematic literature review, meta-analytics approach and cross-sectional surveys.

Narrative literature reviews on motivations and workplace outcomes were followed by a meta-analytic study and systematic literature review. The meta-analytic study[1] extended the work of Wu and Lu (2013) and was used to aggregate the empirical findings from across prior studies examining the link between motivation and information systems usage. Specifically, it considered the effects of 16 intrinsic, extrinsic, hedonic and utilitarian motivations on IS system usage, behavioural intention, perceived usefulness (PU) and perceived ease of use (PEOU). 73 studies published between 2009 and 2016 met the inclusion criteria. Bare bones and true score correlations were calculated and moderation analysis was performed. Curiosity was found to have the strongest effects on behavioural intention while social interaction had the strongest effects on usage. Results also show that enjoyment and playfulness motivations had stronger effects on behavioural intention in hedonic system contexts, and reward motivation had stronger effects on utilitarian systems usage. The application of motivation theory to adoption and use of information systems together with synthesis of empirical data may provide new insights in system usage behaviour.

The systematic literature review[2] examined the evidence on the impact of social network site usage on individual workplace outcomes. Twenty-seven studies met the inclusion criteria. SNS use in the workplace has been found to be positively associated with job satisfaction, job performance, innovative behaviour, employee engagement, and knowledge sharing, with knowledge sharing the most supported workplace outcome. The evidence does not support SNS use as being associated with negative behaviours like absenteeism and turnover intentions. Evidence of effects on behavioural outcomes such as presenteeism, organisational citizenship behaviour, and psychological outcomes such as employee involvement were limited. Results have implications for SNS usage policies in the workplace. Avenues for future work are provided.


[1] Presented at 23rd Americas Conference on Information Systems (AMCIS), Boston, 2017

[2] Presented at 25th European Conference on Information Systems (ECIS), Guimaraes, 2017

Subsequently, a cross-sectional study was carried out to develop and validate measurement items for a multi-dimensional SNS usage construct[3][4]. Cognisant that SNS platforms are simultaneously providing for hedonic and utilitarian type uses, there is a need to conceptualize SNS usage differently from other information systems. However, extant research continues to model the SNS usage construct as a simplistic unidimensional construct that fails to adequately reflect the multi-dimensional nature of SNS usage in workplace contexts. The study contributes by presenting results of a multi-phase process used to develop and validate measures of the deep structure SNS usage construct from both hedonic and utilitarian perspectives. Psychometric tests were conducted using 124 usable responses, and the results show that deep structure usage is best modelled as a reflective second order construct with three first order dimensions reflecting hedonic use, utilitarian use, and cognitive absorption. The multi-dimensional deep usage SNS usage construct will be of interest to researchers examining SNS usage in the workplace and its implications for workplace outcomes.

In addition to the development and validation of the measurement items, this thesis used the developed measurement items and the multi-dimensional SNS usage construct in three cross-sectional studies. The first cross-sectional study was carried out to explain the influence of motivation on SNS user behaviour. The study was underpinned by multiple theoretical perspective namely hedonic-motivation system adoption model, self-determination theory, and hedonic-utilitarian theory of motivation. An online survey was employed for data collection. A total of 290 usable responses were collected from employees of different firms across the different industries in South Africa. The results indicate that SNS users mostly use the different platforms for pleasure or fun or entertainment (43%), social friendship and family (43%) and sharing work-related information (37%), also Facebook is still the highest used platform by employees in South Africa. Using PLS analysis, data showed that hedonic-intrinsic motivations and utilitarian-extrinsic motivations, positively influences SNS usage. Specifically, hedonic-intrinsic motivations and utilitarian-extrinsic motivations both positively influence cognitive absorption. Further, utilitarian-extrinsic motivations positively influence deep utilitarian motivations, while hedonic-intrinsic motivations positively influence deep hedonic usage. The findings complement the suggestion that hedonic and intrinsic motivations strongly influence the use of an information system for hedonic purposes. Despite prior evidence suggesting that hedonic-intrinsic motivations positively influence deep utilitarian usage, and utilitarian-extrinsic motivations positively influence deep hedonic usage, the results on each of these relationships reflect quite clearly that the effect is quite small and not statistically significant. This study found that employees' deep SNS usage (hedonic, utilitarian and cognitive absorption) has minimal effect on job performance. The relationships between deep utilitarian SNS usage and cognitive absorption on job satisfaction were both found to be non-significant. However, the relationship between deep hedonic SNS usage and job satisfaction was found to be significant. Surprisingly, the effect of deep hedonic SNS usage on job satisfaction is negative. Explanations for this finding are considered.

The second cross-sectional study was carried out to explain the link between SNS usage and workplace outcomes. The study was underpinned by social support theory. An online survey was employed to collect a total of 260 usable responses from employees of different firms across the different industries in South Africa. Using PLS analysis, the study examined the relationship between the three dimensions of SNS usage and five behavioural workplace outcomes namely job performance, innovative behaviour, turnover intentions, absenteeism and knowledge sharing, and the link between types of usages and psychological outcomes namely job satisfaction, organisational commitment, burnout and work-life balance. Further,

[3] Earlier vision of the study was Presented at 3rd African Conference on Information Systems and Technology (ACIST), 2017

[4] Published in African Journal of Information Systems (AJIS) 10 (4), 2018

social support was included as a mediator between usage and workplace outcomes. The results indicated that all the three dimensions of SNS usages positively influence social support. The links between social support and deep utilitarian SNS usage, cognitive absorption, work-life balance and burnout were found to be statistically significant. However, the link between the deep hedonic usage, job performance, job satisfaction, turnover intention, innovative behaviour, knowledge sharing and social support were found to be non-significant. The study contributes to the existing literature by examining the link between the three newly developed SNS usage dimensions and social support, and the link between the social support and the established and less established outcomes. This helps in understanding the impact of different uses of SNS on both behavioural and psychological outcomes. In addition, the results of the study provide practical insights for employees, managers and organisations.

Next, the third cross-sectional study used a hold-out sample of 210 employees to confirm certain findings that were reported in the two last chapters, specifically findings relating to SNS usage and outcomes. In addition, a set of SNS user archetypes based on their usage behaviours was developed and compared on their workplace performance. Results showed that highest hedonic usage will yield the lowest level of job satisfaction and lowest job performance (i.e. hedonic user).

The study has made a significant contribution to theory in the area of SNS adoption and use in a workplace context. Specific contributions include proposing and validating a multi-dimensional SNS usage construct, extending hedonic motivation system adoption model (HMSAM) and examining the impact of different SNS uses on both behavioural and psychological outcomes, including the less established outcomes. Also, the study contributes by employing theory and methods drawn from other disciplines. In addition, practitioners can draw from the study and develop or improve SNS usage-related policies. The findings will help SNS providers to better understand factors influencing SNS usage and the impact of different SNS uses on workplace outcomes.

**Keywords**: Social network sites, motivation theory, hedonic motivation, intrinsic motivation, utilitarian motivation, extrinsic motivation, behavioural outcomes, psychological outcomes, social support theory, multi-dimensional SNS usage, meta-analysis, systematic literature review

# CONTENTS


1. CHAPTER 1: BACKGROUND ..... 1
   1.0 Introduction ..... 1
   1.1 Introduction to the Problem of SNS use in the Workplace ..... 1
   1.2 Problem Statement ..... 2
   1.3 Research Objectives and Purpose of the study ..... 2
   1.4 Importance and Significance of the study ..... 4
      1.4.1 Contributions of the study ..... 4
         1.4.1.1 Contribution to Theory ..... 4
         1.4.1.2 Practical Contribution ..... 5
         1.4.1.3 Methodological Contributions ..... 6
   1.5 Structure of the Thesis ..... 7
2. CHAPTER 2: SOCIAL NETWORK SITES (SNS) AS INFORMATION SYSTEMS ..... 10
   2.0 Introduction ..... 10
   2.1 SNS as Information Systems ..... 10
   2.2 SNS as Hedonic and Utilitarian Information Systems ..... 13
   2.3 Adoption and Usage of SNS ..... 15
   2.4 SNS Use and Workplace Outcomes ..... 19
   2.5 Conclusions ..... 21
3. CHAPTER 3: CONCEPTUAL BACKGROUND ON MOTIVATION AS A DETERMINANT OF IS USAGE ..... 23
   3.0 Introduction ..... 23
   3.1 Overview of Motivation ..... 23
   3.2 Maslow's Hierarchy of Needs ..... 24
   3.3 Flow Theory ..... 26
   3.4 Uses and Gratifications (U &G) Theory ..... 28
   3.5 Self-determination Theory ..... 29
   3.6 Hedonic and Utilitarian Motivations ..... 32
   3.7 Hedonic Motivation System Adoption Model (HMSAM) ..... 34
   3.8 Conclusion ..... 36
4. CHAPTER 4: THE EFFECT OF MOTIVATION ON INFORMATION SYSTEMS USAGE: META- ANALYSIS ..... 37
   4.0 Introduction ..... 37
   4.1 Overview on Motivations ..... 37
   4.2 Theoretical Background ..... 39

4.3 Methodology ..... 41
4.3.1 Meta-Analytic Approach ..... 44
4.4 Results ..... 45
4.4.1 Effects of Motivations on System Usage ..... 45
4.4.2 Effects of Moderators such as System Type, Sample, and Country of Study ..... 46
4.5 Discussion ..... 46
4.6 Conclusion ..... 49
5. CHAPTER 5: CONCEPTUAL BACKGROUND ON WORKPLACE OUTCOMES ..... 50
5.0 Introduction ..... 50
5.1 Information Systems User Behaviour and Workplace Outcomes ..... 50
5.2 Overview of Workplace Outcomes ..... 50
5.3 Psychological Outcomes ..... 50
5.3.1 Job Satisfaction ..... 52
5.3.2 Organisational Commitment ..... 52
5.3.3 Burnout ..... 53
5.3.4 Employee Engagement ..... 54
5.3.5 Employee Involvement ..... 55
5.3.6 Work-life Balance ..... 55
5.4 Behavioural outcomes ..... 56
5.4.1 Turnover Intentions ..... 57
5.4.2 Job Performance ..... 58
5.4.3 Innovative Behavior ..... 58
5.4.4 Organisational Citizenship Behaviour ..... 59
5.4.5 Knowledge Sharing ..... 59
5.4.6 Absenteeism ..... 60
5.4.7 Presenteeism ..... 60
5.5 Inter-relations Amongst the Outcomes ..... 61
5.6 Conclusion ..... 61
6. CHAPTER 6: IMPACT OF SOCIAL NETWORK SITES ON PSYCHOLOGICAL AND BEHAVIOURAL OUTCOMES IN THE WORKPLACE: A SYSTEMATIC LITERATURE REVIEW ..... 63
6.0 Introduction ..... 63
6.1 Overview of Social Network Sites and Workplace Outcomes ..... 63
6.2 Conceptual Background ..... 64

6.3 Review Protocol ..... 66
6.3.1 Literature Search Strategy ..... 66
6.3.2 Study Selection ..... 67
6.4 Coding ..... 68
6.5 Overview of the Included Studies ..... 68
6.6 Methodological Review ..... 69
6.7 Results ..... 69
6.8 Psychological Workplace Outcomes ..... 70
6.9 Behavioural Work Outcomes ..... 71
6.10 Discussion ..... 74
6.11 Limitations ..... 76
6.12 Conclusion ..... 76
7. CHAPTER 7: RESEARCH METHODOLOGY ..... 78
7.0 Introduction ..... 78
7.1 Research Philosophy/Paradigm ..... 78
7.2 Study Orientation ..... 80
7.3 Research Strategy ..... 81
7.4 Sampling ..... 82
7.4.1 Qualitative Approach ..... 82
7.4.2 Quantitative Approach ..... 85
7.5 Instrumentation ..... 86
7.5.1 Measurement Operationalization ..... 86
7.6 Pre and Pilot Test ..... 87
7.7 Analysis Approach ..... 87
7.7.1 Validity and Reliability ..... 87
7.7.2 Testing of Cross-sectional Models (Figure 9.2, chapter 9, and Figure 10.2, chapter 10), Using PLS. ..... 88
7.7.3 Ethical Consideration ..... 89
7.8 Conclusion ..... 90
8. CHAPTER 8: DEVELOPING AND VALIDATING MEASUREMENT ITEMS FOR A MULTI-DIMENSIONAL SOCIAL NETWORK SITE USAGE CONSTRUCT ..... 91
8.0 Introduction ..... 91
8.1 Background on SNS ..... 91
8.2 Conceptual Background ..... 93

8.2.1 System Usage ..... 93
8.3 Methods ..... 94
8.3.1 Phase 1: Literature Review ..... 94
8.3.2 Phase 2: Exploratory Interviews ..... 95
8.3.2.1 Coding of Patterns (Themes) ..... 96
8.3.2.1.1 Hedonic and Social Use ..... 96
8.3.3 Phase 3: IS Researcher Panel ..... 99
8.3.4 Phase 4: Q-Sorting ..... 100
8.3.5 Phase 5: Non-IS Panel ..... 100
8.3.6 Phase 6: Pre-Test ..... 100
8.3.7 Phase 7: Pilot for Testing Psychometric Properties ..... 101
8.3.8 Results of the Psychometric Tests ..... 101
8.3.8.1 Descriptive Analysis of the Items ..... 101
8.3.8.2 Psychometric Characteristics ..... 101
8.3.8.3 Factor Structure ..... 101
8.3.8.4 Partial Least Squares Approach to Testing Validity and Reliability ..... 102
8.3.8.5 Maximum Likelihood Approach to Testing Validity or Fit of the Measurement Model ..... 104
8.3.8.5.1 Model 1: First-order Factor Model ..... 104
8.3.8.5.2 Model 2: Dimensionality and Convergent Validity ..... 104
8.3.8.5.3 Model 3: Discriminant Validity ..... 107
8.3.8.5.4 Model 4 Reflective First-Order, Reflective Second-Order Construct ..... 108
8.3.8.5.4 Model 4 Structural Model ..... 109
8.4 Discussions ..... 110
8.5 Contributions, Implications and Limitations ..... 111
8.6 Conclusion ..... 112
9. CHAPTER 9: A CROSS-SECTIONAL STUDY OF MOTIVATION, USAGE BEHAVIOURS AND IMPLICATIONS FOR JOB OUTCOMES ..... 113
9.1 Introduction ..... 113
9.2 Theoretical Background ..... 114
9.2.1 Hedonic-Motivation System Adoption Model (HMSAM) ..... 114
9.2.2 Self-Determination Theory (SDT) ..... 116
9.2.3 Utilitarian and Hedonic Theory of Motivation ..... 116
9.2.4 Past Work on HMSAM, SDT and Hedonic-Utilitarian Theory ..... 117
9.2.5 Conceptual Definitions of Constructs ..... 118
9.3 The SNS Usage Construct ..... 120

9.4 The Effects of Intrinsic-Hedonic Motivations on Usage ..... 121
9.5 The Effects of Extrinsic-Utilitarian Motivations on Usage ..... 123
9.6 The Effects of SNS Usage on Job Performance and Job Satisfaction ..... 127
9.6.1 SNS Usage and Job Performance ..... 128
9.6.2 SNS Usage and Job Satisfaction ..... 130
9.7 Control Variables ..... 132
9.8 Methods ..... 132
9.8.1 Measurement ..... 132
9.8.1.1 Pre-Testing ..... 133
9.8.1.2 Pilot testing ..... 133
9.8.2 Research context and sampling ..... 136
9.9 RESULTS ..... 137
9.9.1 Data Preparation ..... 137
9.9.2 Respondent Profile ..... 137
9.9.3 Analysis Method ..... 144
9.9.3.1 Preliminary Analysis – SNS Usage to Outcomes ..... 147
9.9.3.2 Preliminary Analysis – SNS Usage and Motivations ..... 148
9.9.3.3 The Test of the Measurement Model ..... 150
9.9.3.4 Structural Model Assessment and Hypotheses Testing ..... 153
9.9.3.5 Controls ..... 155
9.9.3.6 Moderation Effects ..... 158
9.10 Discussion ..... 160
9.11 Implications ..... 162
9.12 Limitations ..... 164
9.13 Conclusion ..... 165
10. CHAPTER 10: THE EFFECTS OF SOCIAL NETWORK SITE USAGE ON INDIVIDUALS' WORKPLACE OUTCOMES ..... 166
10.0 Introduction ..... 166
10.1 Theoretical Underpinning ..... 167
10.1.1 Social Support Theory ..... 167
10.1.2 Models of workplace outcomes ..... 169
10.1.3 SNS and Outcomes ..... 171
10.2 Research Model and Hypotheses ..... 173
10.2.1 SNS Usage ..... 173

10.2.2 SNS Usage and Social Support ..... 174
10.2.2.1 Deep Hedonic Usage and Social Support ..... 174
10.2.2.2 Deep Utilitarian Usage and Social Support ..... 175
10.2.2.3 Cognitive Absorption and Social Support ..... 175
10.2.3 SNS Usage and Workplace outcomes ..... 176
10.2.3.1 Deep hedonic and Behavioural Outcomes ..... 177
10.2.3.2 Deep Hedonic and Psychological Outcomes ..... 178
10.2.3.3 Deep Utilitarian and Behavioural Outcomes ..... 179
10.2.3.4 Deep Utilitarian and Psychological Outcomes ..... 180
10.2.3.5 Cognitive Absorption and Behavioural Outcomes ..... 180
10.2.3.6 Cognitive Absorption and Psychological Outcomes ..... 181
10.2.4 Social Support and Workplace Outcomes ..... 182
10.2.4.1 Using SNS for Social Support and Behavioural Outcomes ..... 182
10.2.4.2 Using SNS for Social Support and Psychological Outcomes ..... 183
10.2.5 Relationship between Behavioural and Psychological Outcomes ..... 184
10.3 Methods ..... 185
10.3.1 Constructs in the Model ..... 185
10.3.2 Research context and sampling ..... 188
10.4 Results ..... 189
10.4.1 Data Preparation ..... 189
10.4.2 Description of Respondents ..... 189
10.4.3 Analysis Method ..... 191
10.4.3.1 The Test of the Measurement Model ..... 194
10.4.3.2 Structural Model Assessment and Hypotheses Testing ..... 197
10.4.3.2.1 In-depth Analysis ..... 198
10.4.3.2.2 Usage, Social Support and Negative and Positive Outcomes ..... 200
10.4.3.2.2.2 SNS Usage and Social Support ..... 200
10.4.3.2.2.3 SNS Usage and Outcomes ..... 201
10.4.3.2.2.4 Social Support and Outcomes ..... 201
10.4.3.2.2.5 Behavioural Outcomes and Psychological Outcomes ..... 201
10.5 Discussion ..... 203
10.6 Implications ..... 205
10.7 Limitations ..... 207
10.8 Conclusion ..... 207

11. CHAPTER 11: SOCIAL NETWORK SITE USER ARCHETYPES: AN EXPLORATORY STUDY OF IMPLICATIONS FOR WORKPLACE OUTCOMES ..... 209
11.0 Introduction ..... 209
11.1 Theoretical Background ..... 209
11.1.1 SNS Usage ..... 209
11.1.2 User Archetypes ..... 210
11.2 Methods ..... 212
11.2.1 Measurements Items ..... 212
11.2.2 Research Context and Sampling ..... 212
11.3 Results ..... 213
11.3.1 Data Preparation ..... 213
11.3.2 Respondent Profile ..... 213
11.3.3 Analysis Method and Results ..... 214
11.3.3.1 Segmenting the Archetypes ..... 215
11.4 Discussion ..... 220
11.4.1 Archetypes of SNS users ..... 220
11.5 Implications and Limitations ..... 221
11.6 Conclusions ..... 221
12. CHAPTER 12: SUMMARY AND CONCLUSION ..... 223
12.0 Summary of the Thesis ..... 223
12.1 Implications for Theory and Research ..... 225
12.2 Implications for Practice ..... 227
12.3 Methodological Implications ..... 228
12.4 Limitations and Future Research ..... 229
12.5 Future Research ..... 231
12.6 Conclusion ..... 231
13. REFERENCES ..... 233
14. 12. APPENDIX ..... 278
Appendix A: Database Permission Letter ..... 278
Appendix B: Interview Questions ..... 279
Appendix C: Quantitative Survey Motivations ..... 280
Appendix D: Quantitave Survey Outcomes ..... 284
Appendix E: Hold-out Survey Archetypes ..... 287

Appendix F: Ethics Clearance ..... 288
Appendix G: Bootstrap Results ..... 289

**Table of Figures**

*Figure 1.1: The Chapters of the Thesis and Research Questions* ..... 9
*Figure 2.1 Components of an Information System* ..... 10
*Figure 2.2: Fields Contributing to Development and Study of SNS* ..... 12
*Figure 2.3: Personal Use of SNS ( https://kimgarst.com/what-do-people-love-to-share-on-social-media/ )* ..... 12
*Figure 3.1: Maslow's Hierarchy of Needs (https://www.simplypsychology.org/maslow.html)* ..... 24
*Figure 3.2: Flow Theory Diagram/Schematic (https://is.theorizeit.org/wiki/Flow_theory )* ..... 26
*Figure 3.3: Uses and Gratifications (Luo et al., 2011, pg. 22)* ..... 28
*Figure 3.4: Self-determination Theory (Deci and Ryan, 2000, pg. 70)* ..... 30
*Figure 3.5: Baseline for HMSAM (Lowry et al. 2013, pg. 8)* ..... 34
*Figure 3.6: HMSAM (Lowry et al. 2013, pg. 9)* ..... 35
*Figure 4.1. Research Model* ..... 40
*Figure 4.2: Motivations and their coding* ..... 44
*Figure 5.1: Models of Workplace Outcomes* ..... 51
*Figure 5.2: Workplace Outcomes Models* ..... 53
*Figure 5.3: Varying Models of Behavioural Outcomes* ..... 57
*Figure 6.1: Workplace Outcomes Framework* ..... 65
*Figure 6.2: Selection Process* ..... 67
*Figure 7.1: Positivism and Interpretivism (Source: Saunders and Bezzina, 2015)* ..... 79
*Figure 7.2: Qualitative Stages* ..... 83
*Figure 8.1. Deep Structure Usage, adapted (Burton-Jones and Straub, 2006)* ..... 94
*Figure 8.2: Unidimensional Factor* ..... 106
*Figure 8.3: Dimensionality and Convergent Validity* ..... 107
*Figure 8.4. Sample of Pairs of First-Order Factors (constrained)* ..... 107
*Figure 8.5: Sample of Pairs of First-Order Factors (unconstrained)* ..... 108
*Figure 8.6: Reflective First-Order, Reflective Second-Order Construct* ..... 109
*Figure 8.7: Dimensions of Usage (SEM)* ..... 110
*Figure 8.8: Traditional Use (SEM)* ..... 110
*Figure 9.1: Overview of HMSAM, from Lowry et al. (2013)* ..... 115
*Figure 9.2: Research Model showing the motivations that influence usage* ..... 120
*Figure 9.3: Emojis Used to Show Reaction in SNS* ..... 126
*Figure 9.4: A Chart of the Most Used SNS* ..... 139
*Figure 9.5: A Graph showing the length of SNS Use* ..... 139
*Figure 9.6: A Graph Showing the Lowest and Highest SNS Use* ..... 140
*Figure 9.7: A Graph Indicating what Respondents Use SNS for* ..... 140
*Figure 9.8: A Chart Showing the Amount of Times SNS are viewed in a Day* ..... 141
*Figure 9.9: Group Analysis of Hedonic Usage and Job Satisfaction* ..... 147
*Figure 9.10: Group Analysis of Utilitarian Usage and Job Satisfaction* ..... 148
*Figure 9.11: Research Model* ..... 153

*Figure 9.12: Utilitarian-Extrinsic Motivation as a Moderator* ..... *159*
*Figure 9.13: Hedonic-Intrinsic Motivation as a Moderator* ..... *159*
*Figure 10.1: Models of Workplace Outcomes* ..... *170*
*Figure 10.2: SNS Usage and Outcomes Model* ..... *173*
*Figure 10.3: Research Model, Factor Analysis Results* ..... *198*
*Figure 11.1: Classification of SNS Users* ..... *211*
*Figure 11.2: Graphical Representation of the Final Cluster Centers* ..... *217*
*Figure 11.3. Archetypes of SNS users* ..... *220*

***Table of Tables***

*Table 1.1: Publication of the Chapters* ..... *8*
*Table 2.1: Organisational Uses of SNS (Adapted from Kroenke, 2017)* ..... *12*
*Table 2.2: Hedonic and Utilitarian use of SNS* ..... *14*
*Table 2.3: Summary of past SNS adoption studies* ..... *18*
*Table 2.4: Summary of past research on SNS use and work outcomes* ..... *21*
*Table 4.1: Summary of Accepted Articles* ..... *43*
*Table 4.2: Moderators* ..... *48*
*Table 4.3: Comparison with Wu and Lu (2013)* ..... *48*
*Table 4.4: Perceived Usefulness and Perceived Ease of Use* ..... *48*
*Table 4.5: Behavioral Intention and Actual Use* ..... *49*
*Table 5.1: Inter-relations between the Outcomes* ..... *61*
*Table 6.1: Psychological Work Outcomes* ..... *65*
*Table 6.2: Behavioural Work Outcomes* ..... *65*
*Table 6.3: Summary of the Included Articles* ..... *67*
*Table 6.4: Coding of Variables* ..... *68*
*Table 6.5: Workplace Outcome and Study Methods* ..... *69*
*Table 6.6: Summary of the Effects* ..... *75*
*Table 7.1: Tenets of Positivism Research (Source: Johnson and Duberly, 2006)* ..... *80*
*Table 7.2: Qualitative and Quantitative Approach (Source: Creswell, 1994)* ..... *81*
*Table 8.1. Different Conceptualizations of Usage* ..... *94*
*Table 8.2. Multi-phase Process of Validation and Refinement* ..... *95*
*Table 8.3. Conceptual Definition of SNS Dimensions* ..... *96*
*Table 8.4. Profile of Interviewees* ..... *96*
*Table 8.5. Summary of Literature, Interview Findings and Proposed Items* ..... *99*
*Table 8.6. Item Means and Deviations* ..... *104*
*Table 8.7: Principal Component Analysis* ..... *105*
*Table 8.8: Test of Discriminant Validity (correlation matrix) for Model A* ..... *105*
*Table 8.9: Test of Discriminant Validity (correlation matrix) for Model B* ..... *105*
*Table 8.10: Test of Discriminant Validity (HTMT matrix) for Model A* ..... *106*
*Table 8.11: Test of Discriminant Validity (HTMT matrix) for Model B* ..... *106*
*Table 8.12: Cronbach's Alpha, Composite Reliability and Average Variance Extracted (AVEs) for model A* ..... *106*

*Table 8.13: Cronbach's Alpha, Composite Reliability and Average Variance Extracted (AVEs) for model B* ..... 106
*Table 8.14: Assessment of Discriminant Validity* ..... 108
*Table 8.15: Comparing Fit Indices for Model 1, Model 2 and Model 3* ..... 109
*Table 9.1: Past Application of Hedonic and Utilitarian Theory in Research* ..... 117
*Table 9.2: Past Application of the SDT Theory in IS Research* ..... 118
*Table 9.3: Conceptual Definitions of Constructs* ..... 119
*Table 9.4: Summary of the Narratives and Rationale for Impacts* ..... 127
*Table 9.5: Items Used in the Questionnaire* ..... 136
*Table 9.6: A Summary of the Demographics* ..... 143
*Table 9.7: Summary of the Measurement Items' Results* ..... 144
*Table 9.8: Results of the Principal Component Analysis* ..... 146
*Table 9.9: Statistics for the Composites* ..... 147
*Table 9.10: Correlations between items and SNS usage* ..... 149
*Table 9.11: The Outer Loadings, AVEs, Cronbach's Alpha and Composite Reliability* ..... 151
*Table 9.12: Inter Construct Correlations* ..... 152
*Table 9.13: Heterotrait-Monotrait Ratio Correlations* ..... 152
*Table 9.14: Summary of Results (notes: *p<0.05; **p<0.01; ***p<0.001).* ..... 154
*Table 9.15: Results of the Adjusted R-Squared* ..... 155
*Table 9.16: Detailed Gender Subgroup Analysis* ..... 156
*Table 9.17: Sub-group Analysis Based on Gender* ..... 156
*Table 9.18: Detailed Age Subgroup Analysis* ..... 157
*Table 9.19: Sub-group Analysis Based on Age* ..... 158
*Table 10.1: Past Studies Examining the Link Between SNS Use and Social Support/Capital* ..... 168
*Table 10.2: Definitions of Social Support Dimensions from Ko, Wang and Xu (2013)* ..... 169
*Table 10.3: Summary of Outcomes* ..... 170
*Table 10.4: Past Studies Examining Workplace Outcomes* ..... 172
*Table 10.5: Behavioural Outcomes* ..... 176
*Table 10.6: Psychological Outcomes* ..... 177
*Table 10.7: Summary of the Effects* ..... 185
*Table 10.8: Items used in the Questionnaire* ..... 188
*Table 10.9: Demographics of Respondents* ..... 190
*Table 10.10: Results of the Principal Component Analysis (Loadings below 0.40 were supressed)* ..... 192
*Table 10.11: Principal Component Analysis for Job Satisfaction and Organisational Commitment* ..... 193
*Table 10.12: Correlation Between Social Support and Usage* ..... 193
*Table 10.13: Item Loadings, Cronbach's Alpha and Composite Reliability* ..... 195
*Table 10.14: Inter-Construct Correlations* ..... 196
*Table 10.15: Heterotrait-Monotrait Ratio (HTMT)* ..... 196
*Table 10.16: Summary of Bivarate Correlations* ..... 198
*Table 10.17: PLS Paths (Positive and Negative Outcomes)* ..... 200
*Table 10.18: Summary of Findings* ..... 203
*Table 11.1: Principal Component Analysis Results* ..... 214
*Table 11.2: Iteration History* ..... 215
*Table 11.3: Final Cluster Centers* ..... 216

*Table 11.4: Table of Number of Cases Per Cluster* ..... *217*
*Table 11.5: ANOVA Results* ..... *218*
*Table 11.6: One-Way ANOVA Results* ..... *218*
*Table 11.7: Multiple Comparisons* ..... *219*

# CHAPTER 1: BACKGROUND

## 1.0 Introduction

This chapter introduces the problem of SNS use in the workplace, and discusses the problem statement, research objectives and purpose of the study. Followed by, importance and significance of the study, and ends with discussions on contributions of the study.

## 1.1 Introduction to the Problem of SNS use in the Workplace

Social network sites (SNS) are web-based platforms used to build social networks and relations among individuals who share similar interests, activities, backgrounds, or real-life connections (Ellison, 2007; Lau, 2017). Among the most popular are Facebook, Twitter, LinkedIn and Instagram. These SNS typically allow participants to communicate, share media such as videos and photos, and share knowledge. SNS can be accessed from mobile devices such as smartphones and tablets thus providing users with the opportunity to interact with their social network irrespective of the time and place (Khan, 2017; Powell, 2009). SNS content is largely user generated (Soliman, 2012), social and professional community orientated (Ellison, 2007), and relationship-based (Buettner, 2015). The number of SNS users are expected to increase from an estimated 1 billion in 2010 to 3 billion by 2019 (Portal, 2018; Zolkepli and Kamarulzaman, 2015).

The use of SNS is extending beyond social uses and also into workplace-related uses with access occurring in both contexts. In this study workplace is defined as the place(s) or location(s) where people work such as, but not limited to, an office, factory or even teleworker (Oxford University Press). This definition accommodates a broad range of employment situations across industries and thus implies SNS being used while working or on duty.

The impact of SNS use on individuals' social lives has received significant research attention (e.g. Greenhow and Burton, 2011; Ito, Horst, Bittanti, Boyd, Herr-Stephenson and Lange et al., 2008; Livingstone, 2009; Selwyn, 2007). However, SNS use may also have impacts for individuals in the workplace. For example, employees who use SNS frequently have been found to be more productive and more satisfied with their work environment than the average employee (Alahmad, Pierce, Carter and Robert, 2018). Other studies similarly attribute positive outcomes to the use of SNS at work including improved job performance and improved communication (Bennett, Owers, Pitt and Tucker, 2010; Leidner, Koch and Gonzalez, 2010; Patel and Jasani, 2010; Zhang, Gao, Chen, Sun and de Pablos, 2015).

Yet, SNS use may also have created problems in the workplace. For example, some have argued that employee engagement and productivity may be lost through SNS use (Clark and Roberts, 2010), and that the boundaries between personal and professional spaces may blur (Dutta, 2010). Information overload, time wastage, role conflict, lack of privacy, lack of productivity and low performance are other potentially negative outcomes (D'Abate and Eddy 2007; Nucleus 2009; O'Murchu, Breslin and Decker, 2004; Rooksby, Kahn, Keen, Sommerville and Rooksby, 2009; Shepherd, 2011).

Thus the impacts of SNS use on individuals' work outcomes remains an open and debatable question (Aguenza and Som, 2012; Bennett et al., 2010; Charoensukmongkol, 2014; Forsgren and Byström, 2018; Moqbel, 2012). This study therefore focuses on SNS usage in the workplace where it is recognised that such usage may be for both social (non-work) and work-related purposes (Huy and Shipilov, 2012).

In spite of SNS growth, academic researchers have not yet broadly understood the factors that influence SNS usage behaviour (Verhagen, Feldberg, Hooff and Meents, 2009; Yap and Gaur, 2016). In particular, the motivations underling SNS user behaviour in the workplace are not understood. Understanding motivations may provide valuable insights into this question. For example, it has been identified that users may be using SNS for interest, entertainment and enjoyment, as well as to be in touch with others, self-expression and to meet needs to learn, grow and find social and workplace related information such as recruitment, marketing, finding colleagues and business contacts (Howard, Marshall and Swatman, 2010; Mikalef, Giannakos and Pateli, 2012).

Thus, this doctoral study sets out to examine both the motivations influencing SNS usage behaviour in the workplace and the work outcomes that result from SNS use.

### 1.2 Problem Statement

SNS are hybrid information systems because they serve hedonic and utilitarian purposes (Wu and Lu, 2013). They are *hedonic* systems because they may provide the user with fun and entertainment. However, they have found their way into a *utilitarian* space i.e. the workplace where they are used to share and access work-related information. This hybrid hedonic and utilitarian nature raises important questions about the motivations underlying their usage. However, past studies have provided little insight into these motivations.

As a hybrid information system, SNS have hybrid uses. The consequences of these hybrid uses for outcomes in the workplace is currently a topic of debate. Conceptualizing different types of usage is needed and examining their effects on social support, multiple workplace outcomes including behavioural outcomes such as job performance, innovative behaviour, absenteeism, and knowledge sharing and learning, and psychological outcomes such as job satisfaction, turnover intention, organisational commitment and burnout is required to ensure a more evidence-based appraisal of the workplace consequences.

Taken together, this study addresses the need to examine the effects of motivations on SNS usage behaviour, and the effects of SNS usage on work outcomes.

### 1.3 Research Objectives and Purpose of the study

The purpose of the study is to provide insights into the effect of motivation on SNS use behaviour and the impact of SNS use on work outcomes. First, this study carried out a meta-analytical investigation of past studies to synthesize the available evidence[5] regarding the effects of

[5] Available evidence refers to empirical research findings published and accessible in the academic literature

motivation on technology usage behaviour. This was to establish or inform which motivations are most important to system usage and input into subsequent empirical work.

Second, the study carried out a systematic literature review of past studies to synthesize available evidence regarding the impact of SNS use on individual's workplace outcomes. This was to help establish a gap in evidence regarding positive and negative outcomes related to SNS usage.

Third, the study conceptualized and validated a multi-dimensional SNS usage construct. Drawing on past work by Burton-Jones and Straub (2006), the study developed the SNS usage construct that will cater for the hybrid hedonic and utilitarian nature of SNS.

Fourth, the study carried out empirical investigation of the link between motivation and SNS usage behaviour, and the link between SNS usage and workplace outcomes. For this purpose, the study proposed and tested, (i) a model of the relationship between motivation and use of social network sites in the workplace that accounts for how motivations combine to effect use; (ii) a model of the impact of SNS usage on social support, and individuals' outcomes in the workplace.

While there is no reason to believe that South African workplaces are inherently different from workplaces in other countries, the study is focused on an analysis of employees of South African firms using SNS while working or on duty in that context. Many employees lack Internet connectivity at home and/or data costs may prohibit extended use of Internet at home. Few SA workers are teleworkers. There is no homegrown South African based SNS used to the same extent as global platforms unlike China for example. China has Renren as their own version of Facebook.

Thus the main purpose of the study can be summarised as:

**Firstly, to examine the effect of motivation on SNS usage in the workplace.**

**Secondly, to examine the effect of SNS usage on individual behavioural and psychological outcomes in the workplace.**

To achieve this, the following research questions are posed:

RQ 1: What is the available evidence regarding the effects of motivation on technology user behaviour?

RQ 2: What is the available evidence regarding the impact of SNS usage behaviour on work outcomes?

RQ 3: What is the appropriate conceptualization of SNS usage behaviour given its hybrid hedonic and utilitarian nature?

RQ 4: What are the effects of motivation on SNS usage behaviour?

RQ 5: What is the impact of SNS use on individual work outcomes?

RQ 6: What are the SNS user archetypes, and their implications for user outcomes.

Answering these questions provided insights into the determinants and consequence of SNS usage in the workplace.

## 1.4 Importance and Significance of the study

By addressing the above research questions, the study aims to shed light on some important issues related to SNS use which have not been addressed by previous studies. Specifically, it extends studies examining factors influencing SNS user behaviour (Yap and Gaur, 2016), and those examining the relationship between SNS use and work outcomes (Charoensukmongokol, 2014). These are an area worthy of further research because of the inconclusive findings reported by past studies. Although, past studies have extended and refined acceptance and adoption theories, few include the role of motivations (Lee, Cheung and Chen, 2005; Legris, Ingham and Collerette, 2003).

Using motivation as a lens to examine SNS user behaviour may provide insights which have eluded past research. More light can be shed on SNS in the workplace by examining the hybrid nature of SNS use and the motivations behind it.

Further, examination of the link between SNS use and intermediate social support outcomes, as well as higher order psychological and behavioural outcomes, may usefully resolve the controversy over the use of social networking sites in the workplace. The use of SNS has seen a tremendous increase in the last few years. Progressively, the use of SNS has evolved and many SNS have emerged. The use is extending beyond social uses and also into workplace-related uses with access occurring in both contexts. The growth trajectory and complex hybrid hedonic and utilitarian nature of SNS has resulted in interests from both academia and organisations. To harness the power of SNS, it is important to study the process and the uniqueness of how users behave in SNS setting. There is lack of information on motivations that drive SNS usage and, also on the impact of SNS usage in the workplace. By examining the motivations and impacts, this research can help scholars to understand SNS user behavior and ultimately help organisations to design or improve their SNS policy.

### 1.4.1 Contributions of the study

The study's contributions are three fold. The study aims to contribute to theory, practice and methodology.

#### 1.4.1.1 Contribution to Theory

The study contributes to theory in a number of ways.

In addressing RQ1 and RQ2, meta-analysis and systematic reviews contribute by synthesizing the available evidence and demonstrating the factors most relevant to our understanding of usage behaviours and outcomes. The meta-analysis and systematic literature are discussed in chapter 4 and chapter 6 respectively.

In addressing research question 3, this study contributes by proposing and validating a multi-dimensional SNS usage construct comprising of hedonic deep usage, utilitarian deep usage and cognitive absorption. These dimensions are context based and consider the varied functions and nature of SNS as hedonic and utilitarian systems. This is discussed in chapter 8.

In addressing RQ 4, the study extends motivation theory, self-determination theory and Hedonic Motivation System Adoption Model (HMSAM) into the study of these multiple dimensions of usage. The study proposes examination of different dimensions of hedonic and utilitarian motivations to account for varying factors influencing SNS usage. This approach is based on the hybrid hedonic and utilitarian nature of SNS. The different dimensions of motivations have not been given enough attention in information systems research. For example, past studies have identified and often refer to extrinsic motivation as perceived usefulness and ignore other dimensions such as rewards, promotions and punishment. The inclusion of these additional motivation factors may provide new insights into technology usage behaviour. Additionally, the study proposes to examine the impact of individual characteristics such as personal innovativeness which may moderate certain relationships. This is discussed in chapter 9.

Prior studies have used social support theory as an underpinning theory linking SNS usage and work outcomes. However, no study has explicitly examined the link between the dimensions of SNS usage and social support. In addressing RQ 5, this study uses social support to examine the impact of multi-dimensional SNS usage on work outcomes. This study is among the first to explicitly model dimensions of SNS usage and test the role of social support in linking them to individual outcomes. Outcomes will be classified as behavioural outcomes (e.g. job performance and innovative behaviour) and psychological outcomes (e.g. job satisfaction and organisational commitment), and this comprehensive assessment of outcomes provides better insights into the relation between multi-dimensional usage construct, social support constructs and work outcomes. This is discussed in chapter 10.

Further, this study is the first to consider the development of a set of user archetypes (RQ 6) that can be explored for their effects on outcomes. This is in detail in chapter 11.

#### 1.4.1.2 Practical Contribution

This research offers some useful and practical guidelines for SNS users, SNS providers and organisations.

As hybrid systems, SNS include both hedonic functionalities (e.g. to support social interaction) and utilitarian functionalities (e.g. to facilitate knowledge acquisition). However, determining the relative emphasis that is to be placed on these functionalities within SNS design requires empirical understanding of individuals' motivations to use SNS. SNS providers may thus benefit from understanding the impact of different motivations on SNS usage. In understanding the impacts, providers will be better placed to design SNS that cater or fulfil those motivations. For example, if users are driven more by intrinsic motivations, then SNS functions and designs which provide the user with intrinsic motivations such as fun and entertainment are likely to succeed. Alternatively, if users are driven from a utilitarian perspective then the functional utilities (e.g. job search feature) of SNS applications can be considered.

The findings may help SNS users to better understand factors which drive their SNS usage. Further, individuals will better understand how SNS usage affects their work or workplace outcomes. As a result of understanding the determinants and consequences of SNS usage, users are better informed to input into SNS usage policies. Also, they can monitor and manage their SNS

usage for better work outcomes. For example, in situations where SNS usage results in negative outcomes, users can change their usage behaviour for the better.

The observed outcomes of SNS usage can be manipulated by SNS providers through the inclusion or exclusion of features demonstrated to favour hedonic or utilitarian uses. For example, features that preclude increased knowledge sharing may reduce job performance, whilst those promoting more fun and enjoyment may unintentionally result in distracting usage behaviours that lead to negative outcomes.

For organisations, the results may contribute to their efforts to introduce or enforce SNS usage policy. There is a great concern amongst organisations regarding the negative impacts of SNS usage in the workplace. These concerns have resulted in stringent measures such as blocking or curtailing employees' access to SNS by certain organisations. These controls were not well informed by evidence of the impacts of SNS usage. The study proposes to provide evidence which can be used as foundation for SNS usage policy across organisations. For example, numerous organisations have implemented usage policies. Such policies are however often based on lack of evidence of the outcomes of SNS usage for individual workplace performance. This study will contribute by providing evidence of the workplace outcomes whether negative outcomes (e.g. productivity loss) or positive outcomes (e.g. improved knowledge sharing). The findings may reveal other hidden relationships which may be important to organisations. For example, social support may mediate the relationship between SNS usage and outcomes. Therefore, for organisations to achieve better individual outcomes, the mediating support should be present. For example, the work environment should provide SNS features that promote these social support outcomes.

These findings can change real-world organisational policy and in so doing influence how SNS is going to be used in the workplace. Individuals whose workplace use of SNS is not governed by any policy, may at an individual level still decide to change their usage practices based on the study's findings. For example, if the use of SNS is associated with improved outcomes then individuals who have historically 'bucked the trend' and avoided joining SNS communities (e.g. LinkedIn) may now change their attitudes to SNS and become more regular users. Others whose usage has been sporadic may be motivated to achieve deep level usage behaviours. Organisations can also draw on the results from this study when developing organization specific SNS (enterprise network sites-ENS). The study will inform on factors which drive hedonic and utilitarian usage, which can inform the features to be embedded in the design of ENS.

#### 1.4.1.3 Methodological Contributions

The first methodological contribution is based on the development and validation of the multi-dimensional SNS usage construct measures. The scales or items will be context specific and these scales can be used in future studies on SNS usage.

Other methods that are relatively new to IS such as systematic literature review and meta- analysis will be used, which also will contribute to knowledge. At a higher level, the study contributes to the literature, and to the discussions regarding the effects of motivations on information systems usage, and also to discussions regarding the impact of SNS usage on work outcomes. These

contributions are through the use of (i) a meta-analysis, which provides a benchmark against which future studies can compare their effect size. Also, examining the heterogeneity of effect sizes helped in reaching a conclusion about the impact of moderators, (ii) the systems literature review (SLR) which is a scientific way of trying to resolve inconsistencies or questions that cannot be solved using traditional ways of research. SLR was used to try and solve the inconsistencies reported on the impacts of SNS usage on work outcomes.

The cross-sectional studies, contributed by surveying workers of different firms in South Africa. It has been indicated that surveying employees of different companies is not easy. The companies are reluctant to grant access. Therefore, this study might give a different understanding. The examination of the impact of the different SNS usages on outcomes, particularly the positive and negative outcomes is novel.

Finally, through the development of the archetypes, this thesis offers a framework that allows researchers, SNS users, SNS providers and organisations to better understand SNS user behaviours and their implications for outcomes.

### 1.5 Structure of the Thesis

Figure 1.1 below depicts the chapters and structure of the study. There are twelve (12) chapters and some of these chapters address the previously stated research questions. Chapter 1 has introduced the problem of SNS usage in the workplace and developed the study's objectives and research questions. Chapter 2 outlines the literature on SNS as an information system. Chapter 3 presents the conceptual background on motivation as a determinant of IS usage. Then, Chapter 4reports on a meta-analysis carried out on the effects of intrinsic, extrinsic, hedonic, and utilitarian motivations on IS usage (RQ1). Chapter 5 reviews work outcomes as consequences of information systems usage. These include psychological and behavioural outcomes. Drawing from Chapter 5, Chapter 6 then reports on a systematic literature review (SLR) on the impact of social network sites on psychological and behavioural outcomes in the work-place (RQ2).

The research methods adopted for the empirical studies aimed at addressing RQs 3, 4 and 5 are discussed in Chapter 7. RQ3 is then addressed in Chapter 8 where the conceptualization and validation of the multi-dimensional SNS usage construct is presented. Thereafter, the proposed multi-dimensional SNS usage construct is used in two (2) cross-sectional studies. First, it is used in Chapter 9 in the examination of the effect of motivation on SNS usage (RQ 4). Second, it is used in Chapter 10 in the examination of the impact of SNS usage on work outcomes (RQ5). Then Chapter 11 uses a hold-out sample to develop archetypes of SNS users in the workplace (RQ 6). Finally, chapter 12 discusses the conclusions, contributions, impacts and limitations of the thesis.

Chapter 4, Chapter 6 and Chapter 8 have already been published, and the publication status is reported in Table 1.1. In all cases, the papers have been updated and improved for the purpose of the thesis.

| Chapter | Status |
|---|---|
| 4 | Nkwe, N and Cohen, J, (2017). "The effects of intrinsic, extrinsic, hedonic, and utilitarian motivations on IS usage: An updated meta-analytic investigation". In Proceedings of the 23rd Americas Conference on Information Systems (AMCIS), Boston, USA, August 10-12, 2017 |
| 6 | Nkwe, N and Cohen, J, (2017). "Impact of social network sites on psychological and behavioural outcomes in the work-place: a systematic literature review". In Proceedings of the 25th European Conference on Information Systems (ECIS), Guimarães, Portugal, June 5-10, 2017 |
| 8 | Nkwe, N and Cohen, J, (2017). "The impact of deep structure social network site usage on psychological and behavioural work outcomes". In Proceedings of the 3rd African Conference on Information Systems and Technology (ACIST), Cape Town, South Africa, July 10-11, 2017<br><br>Nkwe, N, (2018). "Developing and validating measurement items for a multi-dimensional social network site usage construct". African Journal of Information Systems (AJIS) *10*(4), 4. |

*Table 1.1: Publication of the Chapters*

## Chapters and Structure of the Study

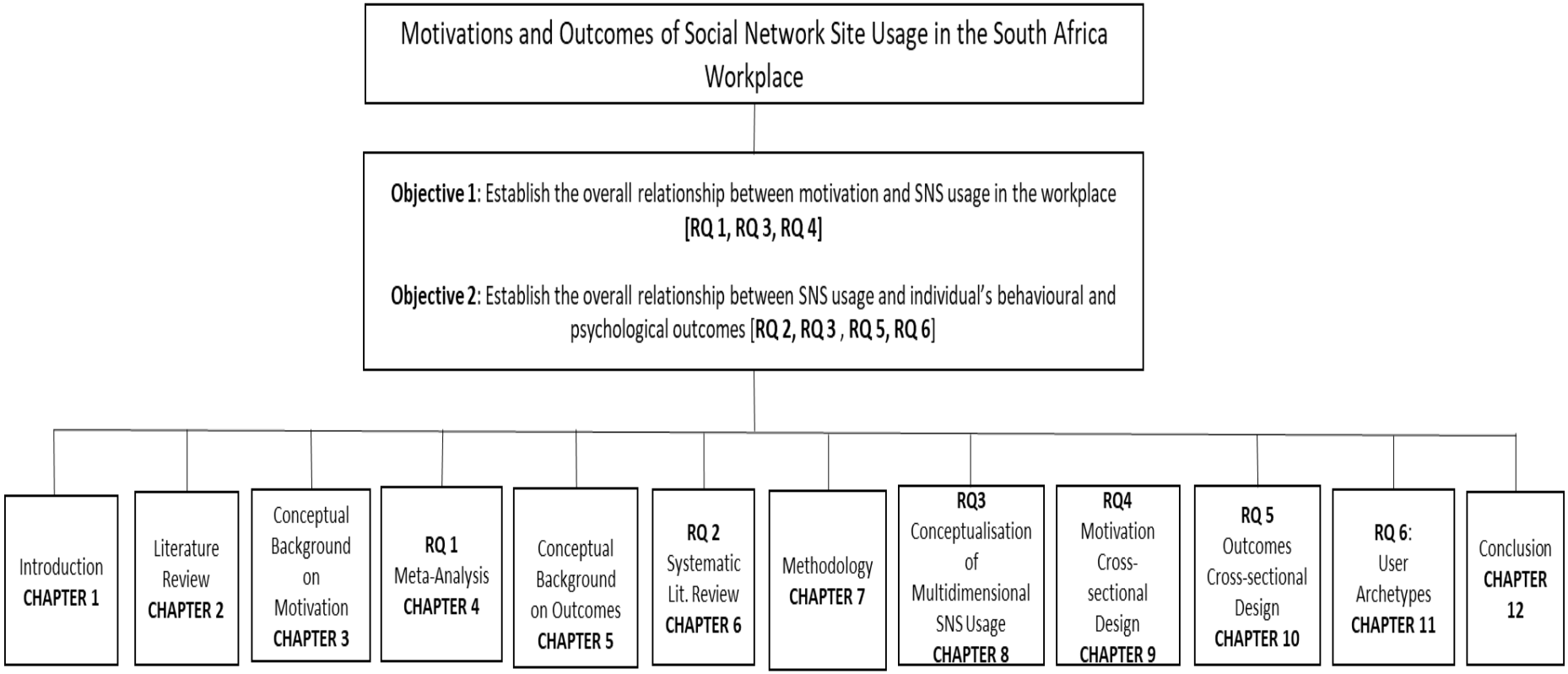



*Figure 1.1: The Chapters of the Thesis and Research Questions*

The next chapter of the thesis presents some of the study's background before proceeding to describe the remaining chapters in greater detail. The background includes the classification of SNS, as hedonic and utilitarian information system, the adoption and usage of SNS, and association between usage and outcomes.

# CHAPTER 2: SOCIAL NETWORK SITES (SNS) AS INFORMATION SYSTEMS

## 2.0 Introduction

This chapter presents background literature on the classification of SNS as hedonic and utilitarian information systems. Furthermore, literature on the adoption and usage of SNS, and association between SNS usage and outcomes is discussed.

## 2.1 SNS as Information Systems

Information systems are interrelated components working together to collect, process, store, and disseminate information to support decision making, coordination, control, analysis, and visualization (Laudon and Laudon, 2011; Westfall, 2019). These can be personal information systems or organisational information systems. SNS are social information systems (Donaldson and Duggan, 2011). As an IS, an SNS includes the typical IS components of hardware, software, data, procedures, networks and people (Figure 2.1). The components support the objective of content sharing among networks of users related by a common interest. For example, one of the objectives includes converting inputs about a user's likes and preferences into outputs such as information on communities of interest.

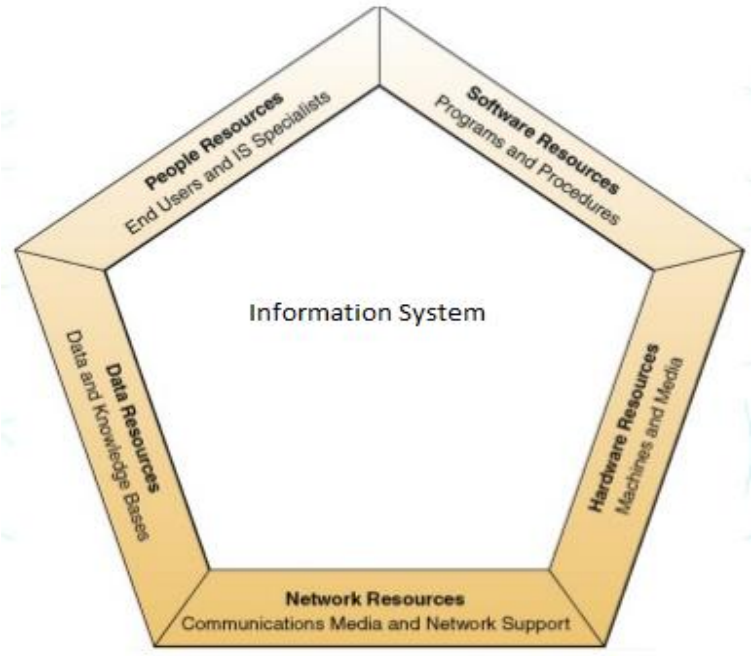



*Figure 2.1 Components of an Information System*

SNS hardware includes both the users' and the provider's hardware. SNS providers typically rely on elastic, cloud-based servers as the backend hardware of their platforms (Kroenke, 2017). For SNS users, their computing devices such as mobile phones, tablets and desktops are the hardware.

Software is a component of SNS. SNS providers use different softwares to provide SNS services to their users (Kroenke, Wilson and Brookes, 2015). These softwares include application software, NoSQL or other database management software and analytics software (Kroenke, 2017). Users and communities also typically use browsers, iOS, Android, Windows and other applications to access different SNS platforms.

In addition to hardware and software, SNS have data as an information system component. SNS providers are in charge of content data, including data and responses to the data that are contributed by users. Also, they are in charge of connection data such as data about relationships (friends, connections). On the other side, users and communities are the main generators of content, and connection data (Agichtein et al., 2008).

All information systems have procedures, i.e. those strategies, policies, methods, and rules for using the information system (Laudon and Laudon, 2018). In the case of SNS, providers run and maintain applications. Providers also maintain procedures to guide SNS users, and mostly these procedures are informal, evolving and social oriented (Kroenke, 2017). Procedures for SNS users and communities include creating and managing content which is informal, procedures for protecting users' information such as log-in passwords and rules for profile visibility (Bodea, Dascalu, Huemann, Velikic and Mogos, 2017).

The final component of an information system is people. Employees of these platforms or SNS companies run and maintain applications. On the other hand, individuals and communities are key end users of these platforms. Social network sites users are usually members of communities, tribes and hives (Kietzmann, Hermkens, McCarthy and Silvestre, 2011). Users choose these based on interest, task and vocation, i.e. they choose a segment based on subjects that they find interesting, a segment focused on peer-to-peer reviews and a segment focused on professional connections with specific vocational needs (Schrammel, Köffel and Tscheligi, 2009). Users' main role is content creation and consumption. Social network sites users voluntarily contribute data, information, or media that then appears before others in a useful or entertaining way (Krumm, Davies and Narayanaswami, 2008).

SNS support content sharing but their specific objectives have been framed by a multitude of disciplines cutting across organisational theory, marketing, management information systems, computer science, sociology and psychology (see Figure 2.2). Within organisations, the uses of an SNS can be understood in terms of Table 2.1 below. But at individual level, uses of SNS may vary as shown in Figure 2.3.

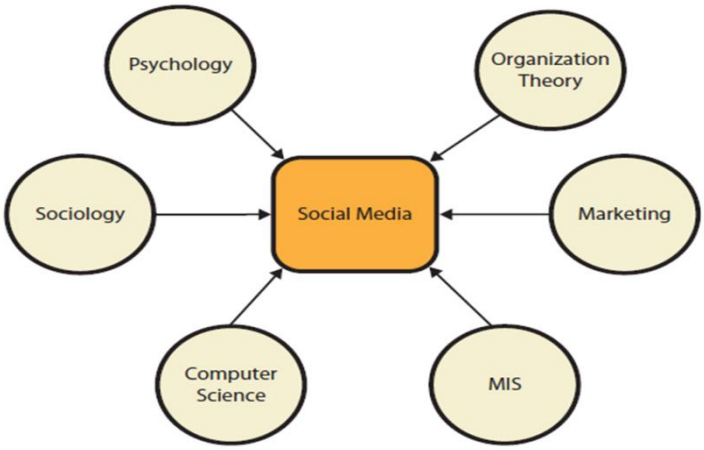



*Figure 2.2: Fields Contributing to Development and Study of SNS*

| Activity | Dynamic Process |
|---|---|
| Sales and Marketing | Peer to peer sales (CRM) |
| Customer Service | Peer to peer support |
| Inbound logistics | Communication with suppliers |
| Outbound logistics | Communication with clients |
| Manufacturing and operations | User-guided design<br>Enterprise 2.0<br>Knowledge management |
| Human resources | Employee prospecting, recruiting and evaluation, employee to employee communication |

*Table 2.1: Organisational Uses of SNS (Adapted from Kroenke, 2017)*

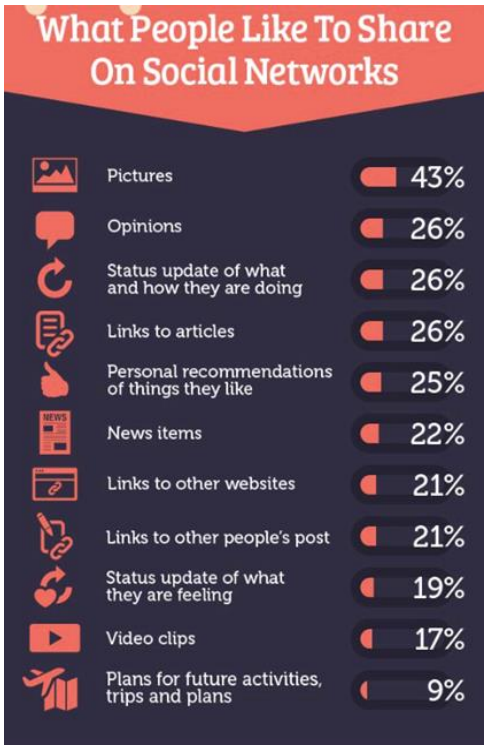



*Figure 2.3: Personal Use of SNS ( https://kimgarst.com/what-do-people-love-to-share-on-social-media/ )*

In organisations, SNS have been found to play a role in the sales and marketing role. SNS can be used to achieve dynamic customer relations management. Customers use SNS to create relationships, search content, contribute to reviews and commentary regarding products and services, ask questions and create user groups amongst others (Correa, Hinsley and De Zuniga, 2010). SNS can also be part of customer service. SNS help relationships (between brands and customers) to emerge from joint activity, and customers have as much control as companies. In addition, product users freely help each other solve problems.

SNS can be used to provide numerous inbound and outbound logistics' solutions\ideas and rapid evaluation of them. SNS provide better solutions to complex supply chain problems. Inbound-outbound problems can be solved through the use of SNS, content and feedback among networks play an important role in problem solving. Still in the value-chain specifically in manufacturing and operations SNS can help in designing products and developing supplier relationships. Recently companies are using SNS for crowdsourcing e.g. non-employees voluntarily participate in product design or product redesign, product reviews are done using YouTube video, SNS provide factory walk-throughs.

Recently companies are using SNS for human resources. This includes social recruiting, human resource personnel use SNS to find employee prospects, recruiting candidates and candidate evaluation. SNS is also a place for employee to post their expertise (Vicknair, Elkersh, Yancey and Budden, 2010).

The above mentioned components of information systems qualify social network sites to be an information system, but they are different from traditional information systems. They are hybrid hedonic and utilitarian information systems. This is discussed next.

### 2.2 SNS as Hedonic and Utilitarian Information Systems

The concepts of utilitarianism and hedonism have been adapted and used by different fields such as marketing to understand human behaviour (Babin, Darden and Griffin, 1994, p 645). Certain artefacts have utility only from the standpoint of being instrumental (Valentinov, 2013) while others contribute to the pursuit of pleasure and are intrinsic (Feldman, 2007). Utilitarian value of artefacts is task-related and rational, and in the contrary, hedonic value is subjective, personal and is reflected by fun and playfulness (Batra and Ahtola, 1991).

Information systems may be classified as either hedonic or utilitarian (van der Heijden, 2004; Wu and Lu, 2013). Hedonic information systems are valued according to the degree to which the user experiences pleasure when using the system (van der Heijden, 2004). Developers of hedonic systems try to embed hedonic content, animated images, a focus on colours, sounds, and aesthetically appealing visual layout which can bring pleasurable experiences to the user (Hirschman and Holbrook 1982; van der Heijden, 2004).

On the other hand, utilitarian information systems are associated with work or education environments e.g. job/school-related tasks (Brown and Venkatesh, 2005; van der Heijden, 2004; Wu and Lu, 2013). These systems provide instrumental value to users, and are typically exploited for improving productivity (Wu and Lu, 2013) and task performance (van der Heijden, 2004).

However, it is becoming increasingly evident that many IS cannot be classified in such a narrow dichotomy. A more complex landscape of IS application is emerging and one such system situated in this complex landscape is the social network site.

These systems are best understood as a hybrid of hedonic and utilitarian information systems. They are hedonic systems because through entertainment features like gaming, photo and video sharing (O'Murchu, Breslin and Decker, 2004), they provide for pleasurable experiences and self-fulfilling values (van der Heijden). They also serve as utilitarian systems that have found their way into the workplace to fulfil more instrumental and functional roles (Brown and Venkatesh, 2005). For example, they can serve as a tool for recruitment (Moqbel, 2012). The utilitarian and hedonic uses of SNS are summarized in Table 2.2.

| **Hedonic** | |
|---|---|
| **Uses** | **Description** |
| Means of communication | • Medium of communication, communicate with friends, family and recently with brands.<br>• Broadcast or private messages (e.g. posting on Facebook wall, or write a direct message like an inbox message (Stone, 2009) |
| Content and media sharing | • Users create content and share it with others in their family or social circle<br>• Users share photos, events, videos with family and friends (Kim et al., 2010). |
| Online community's participation | • Communities promote interaction with a large number of people<br>• Global community so they exchange ideas and information with members of this social village (Kim et al., 2010)<br>• Communities are divided according to interests and hobbies (Ellison, et al., 2007). |
| New source of entertainment | • Emerging as a source of entertainment<br>• Users can share and play games through SNS<br>• Most common shared and played in SNS is candy-crusher (Kim, 2013). |
| New source of self-expression | • Users post content and update status, respond to content, updates posted by others and to participate in discussion boards and reach out and help others online (Zolkepli, 2014). |
| Online directories of people | • Users use these platforms to search for other community members. Platforms provides SNS users with the opportunity to search, with the same search engine capabilities similar to search engines, only that they are searching for community members (Zolkepli, 2014). |
| | |
| **Utilitarian** | |
| **Uses** | **Description** |
| Online directories of people | • Users use these platforms to search for other colleagues. Platforms provide SNS users with the opportunity to search, with the same search engine capabilities similar to search engines (Zolkepli, 2014). |
| Recruitment and HR management | • SNS can be used as medium to identify potential employees and also can be used to bridge external and internal communication (Leader-Chivee and Cowan, 2008). Organisations can use SNS to communicate with retirees and alumni |
| New source of knowledge sharing | • Users create content and share it with others in their business circles<br>• Users share work-related information (Kim et al., 2010).<br>• Exchange can be internal and external (Bennett, Owers, Pitt and Tucker, 2010).<br>• Employees can access new resources, discovering new opportunities, intelligence gathering and new contacts through SNS.<br>• Employees and organisations can take advantage of SNS and have access to crowdsourcing (Howe, 2008). |
| Means of communication | • Medium of communication, communicate with colleagues and business partners<br>• Broadcast or private messages (e.g. posting on Facebook wall, or write a direct message like an inbox message (Stone, 2009) |
| Marketing | • Communicate their offerings to customers through SNS (Moqbel, 2012).<br>• Quicker way of reaching customers and gather feedback (Patel and Jasani, 2010).<br>• good marketing resource, and offer segmented way of reaching different clients and potential clients (O'Murchu et al., 2004)<br>• Advertising and branding. |

*Table 2.2: Hedonic and Utilitarian use of SNS*

## 2.3 Adoption and Usage of SNS

SNS, due to their nature of being social, are adopted and used initially by individuals as opposed to organisations. This can be compared to other IS systems such as ERP which are adopted and used by organisations then passed on to employees. Adoption and usage of SNS may be triggered more by personal or social motivations as opposed to external factors (Soliman, 2012). System usage is a key variable in information systems research (Burton-Jones and Straub, 2006). Its determinants have been examined in almost all technology acceptance and adoption studies (Ma and Liu, 2004; Schepers and Wertzels, 2007; Wirtz and Gottel, 2016).

Some of the motivations associated with adoption and usage of SNS can be drawn from motivation theories such self-determination theory, hedonic and utilitarian motivations and Maslow's hierarchy of needs. It has been identified that intrinsic motivations such as the need for fun, entertainment and arousal can influence system adoption and usage, on the other hand extrinsic motivations such as rewards and promotion can also influence system usage. Other motivations which are based on the system such its aesthetics (hedonic motivations) and convenience (utilitarian motivations) may also play an important role in influencing system adoption and usage.

These motivations are in addition to other determinants of system adoption and usage which have been examined over decades by information systems researchers. Some of the determinants are based on theories such as Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB), Unified Theory of Acceptance and Use of Technology (UTAUT), and uses and gratifications.

For example, TAM is based on salient beliefs of perceived usefulness and perceived ease of use, TRA discusses the idea of user behaviour as a function of attitudes and attitudes are a function of beliefs. TPB is an extension of TRA, and introduces perceived behavioural control as a determinant. Uses and gratification theory posits that needs such as information seeking and entertainment seeking drive system adoption and usage.

The literature on SNS adoption and use is summarized in Table 2.3.

| Author | Context | Determinants | SNS usage construct | Theory | Type of study |
|---|---|---|---|---|---|
| Chen (2013) | SNS | Enjoyment and risk | Site use | Social exchange theory | Cross-sectional |
| Park, Baek, Ohm and Chang (2014) | SNS games | Enjoyment, ease of use and usefulness | Intention | Technology acceptance model | Cross-sectional |
| Kwon and Wen (2010) | SNS | Ease of use, usefulness and perceived encouragement | Actual use | Technology acceptance model | Cross-sectional |
| Shin and Shin (2011) | SNS games | Security, usefulness, enjoyment, playfulness | Use | Technology acceptance model | Cross-sectional |
| Chang and Zhu (2010) | SNS | Information, entertainment, sociality motivations | Intention | Theory of Planned Behavior | Cross-sectional |
| Park, Lee and Kim (2012) | Facebook | Ego-alter tie attributes, Alter-alter tie attributes | Use | Social network analysis and personal network structure | Cross-sectional |
| Tazghin and Siedlecki (2013) | Facebook | Self-esteem and personality | Use | Social capital | Cross-sectional |

| | | | | | |
|---|---|---|---|---|---|
| Lu and Yang (2014) | SNS | Task, technology and social characteristics | Intention | Task-technology fit | Cross-sectional |
| Zolkepli and Kamarulzaman (2011) | Social media | Perceived media needs and innovation characteristics | Sustained usage | Uses and Gratification and diffusion of innovation | Cross-sectional |
| Mansumitrchai, i Park and Chiu (2012) | SNS | Involvement, usefulness, convenience, openness of information | Use | Technology acceptance model | Cross-sectional |
| Ernst, Pfeiffer and Rothlauf (2013) | SNS | Usefulness, enjoyment and ease of use | Use | Technology acceptance model | Cross-sectional |
| Dhume, Pattanshetti, Kamble and Prasad (2012) | Social media | Usefulness and ease of use | Use | Technology acceptance model | Cross-sectional |
| Pillai and Mukherjee (2011) | SNS | Usefulness and ease of use | Use | Technology acceptance model | Cross-sectional |
| Sledgianowski and Kulviwat (2008) | SNS | Playfulness, usefulness, ease of use, critical mass, enjoyment | Use | Technology acceptance model | Cross-sectional |
| Kim, Kim and Nam (2010) | Facebook | non-social and social motivations | Use | Uses and Gratification | Cross-sectional |
| Hong, Huang, Lin and Chiu (2014) | | self-esteem, shyness, introversion, neuroticism, loneliness and sadness | Use | Character traits | Cross-sectional |
| Lin and Liu (2012) | SNS | Social and nonsocial motivations, privacy, trust | SNS use intensity | Uses and Gratifications | Cross-sectional |
| Oldmeadow, Quinn and Kowert (2013) | Facebook | Emotional Expressivity, Emotional Sensitivity, Emotional Control, Social Sensitivity | | Attachment theory | Cross-sectional |
| Barker (2009) | SNS | Self-esteem, social identity, entertainment | Use | Uses and gratification | Cross-sectional |
| Kim, Sohn and Choi (2011) | SNS | Seeking entertainment, friends, information | Use | Uses and gratification | Cross-sectional |
| Hew (2011) | Facebook | Seeking entertainment, friends, information | Use | Uses and gratification | Cross-sectional |
| Spiliotopoulos and Oakley (2013) | Facebook | Seeking entertainment, friends, information | Use | Uses and gratification | Cross-sectional |
| Ledbetter, Mazer, DeGroot, Meyer, Mao and Swafford (2010) | Facebook | self-disclosure and online connection | Use | Self-disclosure | Cross-sectional |
| Ancu (2012) | SNS | Mood management, communication | Use | Uses and gratification | Cross-sectional |
| Jackson and Wang (2013) | SNS | Culture, Extraversion, Neuroticism, Conscientiousness, | Use | Hofstede and Big Five Personality factors | Cross-sectional |
| Panek, Nardis and Konrath (2013) | SNS | Narcissism | Use | Narcissism | Cross-sectional |
| Lin, Chiu and Lim (2011) | SNS | Innovation characteristics | Use | Diffusion of innovation | Cross-sectional |
| Huang, Hsieh and Wu (2014) | SNS | Interaction, arousal and social gratification | Use | Uses and gratification and Flow theory | Cross-sectional |
| Shin (2010) | SNS | Trust, security and privacy | Intention | Theory of reasoned action | Cross-sectional |
| Xu, Ryan, Prybutok andWen (2012) | SNS | Hedonic and utilitarian gratification | Use | Uses and gratification | Cross-sectional |

| | | | | | |
|---|---|---|---|---|---|
| Rauniar, Rawski,Yang and Johnson (2014) | Facebook | Usefulness and ease of use | Use | Technology acceptance model | Cross-sectional |
| Kaba and Touré (2014) | SNS | Performance expectancy, effort expectancy, social influence, | Use | Unified theory of acceptance and use of technology | Cross-sectional |
| Lampe, Vitak and Ellison (2013) | Facebook | Usefulness and ease of use | Use | Technology acceptance model | Cross-sectional |
| Lee, Park, Kim, Kim and Moon (2011) | SNS | Social identity, ease of use and social presence | Intention | Social identity theory | Cross-sectional |
| Baek, Holton, Harp and Yaschur (2011) | Facebook | Entertainment, job related content, news | Use | Uses and gratification | Cross-sectional |
| Raacke and Bonds-Raacke (2008) | Facebook and MySpace | Gratifications | Use | Uses and gratification | Cross-sectional |
| McKinney , Kelly and Duran (2012) | Facebook and Twitter | Narcissism | Use | Personal traits/ psychological traits | Cross-sectional |
| Panek, Nardis and Konrath (2013) | Facebook and Twitter | Narcissism | Use | Personal traits/ psychological traits | Cross-sectional |
| Park, Kee and Valenzuela (2009) | Facebook | Information seeking, entertainment, self-status, socializing | Use | Uses and gratification | Cross-sectional |
| Toma and Hancock (2013) | Facebook | Well-being and self-affirmation | Use | Self-affirmation theory | Cross-sectional |
| Ernst (2014) | SNS | Enjoyment, risk | Use | Theory of reasoned action | Cross-sectional |
| Hughes, Rowe, Batey and Lee (2011) | Facebook and Twitter | Neuroticism, Extraversion, Openness-to-Experience, Agreeableness, Conscientiousness, Sociability and Need-for-Cognition | Use | Five factor model | Cross-sectional |
| Seidman (2013) | Facebook | Belongingness, Conscientiousness, self-presentation, | Use | Five factor model | Cross-sectional |
| Smock, Ellison, Lampe and Wohn (2011) | Facebook | Enjoyment, escapism, information seeking, companionship, social interaction | Use | Uses and gratification | Cross-sectional |
| Jang and Dworkin (2014) | SNS | Age, experience, education, income | Use | Theory of reasoned action and personal characteristics | Cross-sectional |
| Zhong, Hardin and Sun (2011) | SNS | Need for cognition, innovativeness | Use | Personal traits/ psychological traits | Cross-sectional |
| Thambusamy, Church, Nemati and Barrick (2010) | SNS | Altruism, group gain, competition, reciprocity | Use | Social exchange theory and hedonic motivation | Cross-sectional |
| Maier, Laumer and Eckhardt (2011) | SNS | Attitudinal beliefs, normative and control beliefs | Intention | Theory of reasoned action and Model of Adoption of Technology in Households | Cross-sectional |
| Hunt , Atkin and Krishnan (2012) | Facebook | Information seeking, entertainment, self-status, socializing | Use | Uses and gratification | Cross-sectional |
| Chen (2011) | Twitter | Information seeking, entertainment, self-status, socializing | Use | Uses and gratification | Cross-sectional |
| Wu (2009) | SNS | Hedonic and utilitarian value | Use | Hedonic and utilitarian motivation | Cross-sectional |

| | | | | | |
|---|---|---|---|---|---|
| Utz, Tanis and Vermeulen (2011) | SNS | Need to belong, self-esteem | Use | Human needs | Cross-sectional |
| Wehrli (2008) | SNS | Neuroticism, Extraversion, Openness-to-Experience, Agreeableness, Conscientiousness, Sociability and Need-for-Cognition | | Five factor model | Cross-sectional |
| Jeong and Coyle (2014) | Facebook and Twitter | Gratifications and privacy | Use | Theory of reasoned action and uses and gratification | Cross-sectional |
| Pelling and White (2009) | SNS | Self-identity and belongingness | Use | Theory of Planned Behavior | Cross-sectional |
| Wu, Wang, Chang and Xu (20100 | SNS applications | Playfulness, symbolic physicality, inherent sociability, interactivity | Stickiness | Flow theory | Cross-sectional |

*Table 2.3: Summary of past SNS adoption studies*

Past studies as shown in Table 2.3 have made significant contributions by identifying the need to include motivations such as enjoyment as determinants. However, relatively few studies have used motivation as a lens to examine SNS user behaviour. This is surprising because different types of motivations such as intrinsic, extrinsic, hedonic and utilitarian have been found to be important in system usage and may be the same for SNS usage. Individuals use SNS to communicate and make friends, search and share information with colleagues and family, they also fulfil needs to belong and love (Lame, Ellison and Steinfield, 2006). This suggests that other motivations such as rewards and convenience need to be considered besides enjoyment and leisure.

A majority of the studies used TRA, TAM and Uses and gratifications theories as lens. Although some past studies mainly use enjoyment or fun as motivations, and typically ignore other types and dimensions of motivations such as extrinsic hedonic and utilitarian. Including different dimensions of motivation may help in better understanding the determinants of SNS use. Hence there is a need to more comprehensively consider motivation as a lens to examine SNS user behaviour.

A majority of the studies do not recognise the contingent factors such as personal innovativeness which may affect the relationship between the determinants and SNS use.

No longitudinal studies which examined the link between determinants and SNS usage were identified, this is a major shortcoming. Future studies may have to examine the link over a period of time.

Another limitation is the manner in which SNS usage has been observed such as frequency, SNS intensity, length of use and non-use (Ellison et al., 2007). Moreover, despite variety of work involving system usage, its unidimensional conceptualisation is overly narrow (Adams, Nelson and Todd, 1992; Burton-Jones and Straub, 2006; Compeau and Meister, 2002). Therefore, there is need to reconceptualise usage. Richer measures of SNS usage may provide better insights presenting the hedonic and utilitarian dimensions of usage. Hence, there is a need to re-conceptualize SNS usage construct. Especially for complex and hybrid systems like SNS which portray both hedonic and utilitarian features (Lou, 2014). Thus, their usage may be hedonic, utilitarian or both. This reconceptualization may have an impact on other constructs which are

depending on SNS usage (independent variable) such as workplace outcomes (dependent variable). For example, hedonic use of SNS may affect behavioural outcomes and utilitarian use may affect psychological outcomes. The stage approach by Burton-Jones and Straub (2006) will be used to help in conceptualizing SNS usage. A two-stage approach is proposed, definition stage and selection stage as a way of conceptualizing usage (see Chapter 8). Building on the work of Burton-Jones and Straub (2006) and reconceptualising SNS usage may uncover more insights into motivation and its link with different usages, and effects of SNS usage on work outcomes.

### 2.4 SNS Use and Workplace Outcomes

The impact of SNS on both personal/social outcomes and workplace outcomes has been identified. Past studies have suggested that SNS has positive impact on individuals' learning outcomes and satisfaction (Cao, Ajjan and Hong, 2013). Further, research has indicated that SNS usage is important in the formation and maintenance of social capital (Berthon et al., 2011). In addition, SNS usage has an impact on individuals' physical well-being because SNS are efficient and effective in communicating health information to people (Hackworth and Kunz, 2010). Other studies have associated SNS usage with increased individual's civic and political involvement (Park, Kee and Valenzuela, 2009). Lately, SNS research on the impact of SNS usage has extended into the workplace.

The impact of SNS use on workplace outcomes is currently a topic of debate both in academia and practice (Moqbel, 2012). Past research examining the link between SNS use and work outcomes has reported inconsistent findings. It is identified that SNS use in the workplace may be negative and/or positive for work outcomes (Nucleus, 2009).

Those discussing positive outcomes typically reflect on the benefits of SNS use for social support (e.g. Lu and Hampton, 2017), knowledge sharing (e.g. Leonardi, 2017) and positive engagement of employees within the workplace (e.g. Naim and Lenka, 2017). For these researchers, SNS provides a platform for employees to socialize, and to some extent employees exchange work-related information such as solutions to problems or feedback on work products. Therefore, employees might use information gathered from social network platforms to improve their productivity. For example, a report by a research company IPSOS[6] states that nearly 50% of employees believe social network sites make them more productive while more than 30% of companies restrict the use or undervalue them.

Those examining negative impacts tend to concern themselves with the role SNS use can play in lowering productivity (e.g. Syrek, Kühnel, Vahle-Hinz and De Bloom, 2017), and contributing to negative outcomes such as absenteeism (e.g. Jin, Chen, Khandpur, Lu and Ramakrishnan, 2017). The typical argument developed by these researchers is that SNS use encourages engagement with non-work activity, thus actual working time and productivity decrease (e.g. Andreassen, Torsheim and Pallesen, 2014). Recently, for example, Microsoft Research has published findings supporting the potential for negative effects. Microsoft acknowledged that new digital technology can, in some circumstances, make businesses less productive (Bloomberg, 2018). Results such as this are

[6] https://www.ipsos.com/en-us/nearly-half-information-workers-say-using-social-tools-has-increased-their-productivity

likely to impact how SNS such as Facebook are designed, e.g. to include utilitarian features, and also the findings might inform corporate policies that block usage of social network sites during certain times e.g. from 8am till 12noon.

A summary of the literature into SNS usage and work outcomes is presented in Table 2.4.

| Author | Work Outcomes | Theory | Type of Study | Findings |
|---|---|---|---|---|
| Tormo-Carbo´, Seguı´-Mas and Oltra (2014) | Work performance, Knowledge sharing | Social Capital | Cross-sectional | Positive relationship |
| Swartz (2010) | Employee engagement | Social Capital | Cross-sectional | Positive relationship |
| Puijenbroek, Poell, Kroont and Timmerman (2014) | Knowledge sharing | Action theory | Cross-sectional | Positive relationship |
| Moqbel (2012) | Job satisfaction, organisational commitment, absenteeism, turnover intentions, innovative behavior and job performance | Social Capital and Social support | Cross-sectional | Mixed relationships |
| Leftheriotis, and Giannakos (2014) | Job performance | Uncertainty and computational theory | Cross-sectional | Positive relationship |
| Ku¨ gler, Dittes, Smolnik and Richter (2015) | Job performance | Social support | Cross-sectional | Positive relationship |
| Charoensukmongkol (2015) | Burnout | Job-demands-resources model | Cross-sectional | Positive relationship |
| Eren and Varda (2013) | Organisational commitment | Social support and social exchange | Cross-sectional | Positive relationship |
| Charoensukmongkol (2014) | Cognitive absorption, job performance and job satisfaction | Social support, social exchange and Media synchronicity theory | Cross-sectional | Positive relationships |
| Chow and Chan (2008) | Knowledge sharing | Social support | Cross-sectional | Positive relationships |
| Cao, Vogel, Guo, Liu and Gu (2012) | Knowledge sharing | Media Synchronicity and Social Capital | Cross-sectional | Positive relationships |
| Bucher (2013) | Burnout | Process based view model | Cross-sectional | Negative relationship |
| Ali-Hassan, Nevo, Kim, Perelgut (2011) | Knowledge sharing | none | Cross-sectional | Positive relationships |
| Andreassena and Pallesen (2014) | Job performance | none | Cross-sectional | Negative relationship |
| Moqbel, Nevo and Kock (2013) | Job performance, job satisfaction and organisational commitment | Social support and social capital | Cross-sectional | Mixed relationships |
| Moqbel and Kock (2018) | Job performance | Social cognitive theory | Cross-sectional | Negative relationship |
| Kock, Moqbel, Barton and Bartelt (2018) | Job performance and job satisfaction | TAM | Cross-sectional | Positive relationship |
| Moqbel and Aftab (2015) | Job performance, job satisfaction and organisational commitment | Social support and social capital | Cross-sectional | Mixed relationships |
| Charoensukmongkol (2017) | Burnout | Social support theory | Cross-sectional | Positive relationship |
| Charoensukmongkol (2017) | Burnout | Social support theory | Cross-sectional | Positive relationship |
| Moqbel and Nah (2017) | Job performance | Social capital theory and the broaden-and-build theory of positive emotions | Cross-sectional | Positive relationship |
| Wang, Yang and Tseng (2016) | Work-life | role boundary theory | Cross-sectional | Positive relationship |

| | | | | |
|---|---|---|---|---|
| Moqbel and Nah (2017) | Knowledge sharing and performace | social capital and social cognitive theories | Cross-sectional | Proposed positive relationship |
| Myddleton and Fullwood (2016 | Performance | Social capital | Cross-sectional | Positive relationship |
| Holland, Cooper and Hecker (2016) | Job satisfaction | Theory on voice | Cross-sectional | Positive relationship |
| Syrek, Kühnel, Vahle-Hinz and De Bloom (2017) | Work engagement | Episodic process model | Cross-sectional | Negative relationship |
| van Zoonen, Verhoeven and Vliegenthart (2017) | Work engagement, and exhaustion | Job demands and resources model | Cross-sectional | Positive for engagement and negative for burnout |
| Min (2016) | Job performance | Distraction-conflict theory | Cross-sectional | Mixed relationship, depends on task |

*Table 2.4: Summary of past research on SNS use and work outcomes*

Establishing a link between SNS use and work outcome will go a long way in helping researchers and managers to better understand the impact of SNS in the workplace. Extant findings are difficult to reconcile and, as shown in Table 4, the link between system usage and performance has been found to be positive (Doll and Torkzadeh, 1998), negative (Pentland, 1989; Szajna and Scamell, 1993) and no effect (Lucas and Spitler, 1999). Likewise, the examination of the relationship between SNS usage and turnover intention has provided inconsistent results, e.g. significant and non-significant results (Moqbel, 2012).

The available few studies report mixed findings. Hence, there is a need for systematic literature review and meta-analysis to aggregate the results and better understanding the relationships.

Prior works also suffer from an ad-hoc selection of the outcomes studied. Current frameworks seem not to be sufficient in explaining the relationship between SNS usage and work outcomes. Most of the studies examine the link between SNS use and one work outcome, only a few e.g. Moqbel (2012), Moqbel et al. (2013) and Charoensukmongkol (2014) examine multiple work outcomes. Examining SNS use and a single work outcome prohibits the researcher from arriving at a more holistic conclusion of how SNS use impacts individual's in the workplace. Certain outcomes have not been examined as much as others, or not at all (e.g. burnout and absenteeism). Hence a comprehensive examination with multiple work outcomes derived from a theoretical framework is needed.

In addition, theories such as social capital and social support have been used by researchers trying to link SNS use and work outcomes. However, the link between these constructs and the less established outcomes has not been modelled and examined. For example, the link between social support and absenteeism. There is a need to examine the link between these social support constructs and work outcomes for them to be validated as an explanation for the outcomes of SNS use.

## 2.5 Conclusions

Taken together the above review of the existing literature on motivation, SNS use and outcomes suggests and points to the following gaps:

- Past studies examining the link between motivation and SNS usage, and SNS usage and outcomes and often used students as respondents as opposed to actual employees.
- Few studies used the system utility or functional aspects of SNS as motivations for usage
- No study has combined intrinsic, extrinsic, hedonic and utilitarian motivations, influencing SNS usage behaviour.
- SNS studies did not examine the effect of motivations on different dimensions of usage.
- Few studies have examined the link between the different dimensions of SNS usage and social support, however, the dimensions were not conceptualised as deep structure usage.
- Past studies selected outcomes to be included in the study in ad-hoc way, there is need for more systematic selection of outcomes with a focus on both behavioural and psychological.
- Inconsistent findings reported on the link between SNS use and work outcomes have not been resolved.
- Few studies examined the link between SNS use and multiple outcomes beyond job performance, and some were not underpinned by theory.
- Studies have used simplistic measures of SNS usage, but not richer conceptualization of hybrid hedonic and utilitarian usage.
- No study has examined whether hedonic usage and utilitarian usage effect different behavioural and psychological outcomes.
- There is still a need for SNS user behaviour framework

This study thus aims to build on the contributions and address some of the shortcomings summarised above by carrying out meta-analytic, systematic literature review, and cross-sectional research. This approach may provide better insights and explanations of the SNS usage phenomenon.

The next chapter presents the conceptual background of motivation. The chapter draws from different theories and models of motivation across different disciplines.

# CHAPTER 3: CONCEPTUAL BACKGROUND ON MOTIVATION AS A DETERMINANT OF IS USAGE

## 3.0 Introduction

This chapter conceptualizes motivation. As discussed in the first chapter, motivation is one of the foci of this study. The study investigates the relationship between motivation and SNS usage. The chapter will examine the different theories of motivations across different areas of study such as psychology, sociology and management. The chapter will inform the choice of motivation theory used in this thesis. This chapter is followed by a meta-analysis on the effects of motivation on technology user behaviour.

## 3.1 Overview of Motivation

Motivation has been studied for more than six decades. It has been defined as what prompts a person to act in a certain way or at least to develop an inclination for specific behaviour (French, Kast and Rosenzweig, 1985). It has also been defined as the forces within individuals that push or propel them to satisfy their basic needs or wants (Yorks, 1976). In other words, needs arouse motivation and human reaction thus forming a complex human behaviour (Zolkepli, 2014).

In the study of different human motives by Dichter in the 1950s, findings suggested that behaviour can be influenced by subconscious or hidden motivation, and individuals are sometimes not aware of the reasons for their actions (Schwarzkopf, 2007).

While some, e.g. Dichter, view the links between motivation and behaviour as a subconscious process with individuals unaware of reasons for their action, others such as Zolkelpli (2014) consider motivation's influence on behaviour as being more goal directed, with others even suggesting it is a more mechanical process of stimulus - response (Hoeffler, Zauberman and Zhao, 2011).

Furthermore, some define motivations in terms of what they do, e.g. prompt people to act (Kast and Rosenzweig, 1985), yet others define motivations in terms of what they are e.g. forces that propel individuals to satisfy their needs and wants (Yorks, 1976).

Drawing from these explanations, an initial perspective on human motivation emerges for the thesis. Specifically, motivation can be viewed as the driving force which propels individuals to act to satisfy their needs. A motive is what prompts a person to act in a certain way or at least develop an inclination for specific behaviour (Kast and Rosenzweig 1985). In the context of this study, motivations are driving forces that propel individuals and prompt their use of social network sites to satisfy various needs.

Different theories of motivation have been developed to expand on the definition of motivation and to understand the specific set of driving forces influencing human behaviour. These theories and motivations are discussed next, and from them insights into a specific set of motivations relevant to examination of SNS usage behaviour can be derived.

### 3.2 Maslow's Hierarchy of Needs

Abraham Maslow's hierarchy of needs (Maslow, 1954) has been used and continues to be used as a lens to examine or understand human behaviour. His ideas have been used mainly in disciplines such as social sciences and business where his hierarchy is used as a model for understanding motivation and individual needs (Benson and Dundis, 2003).

Maslow postulated that there is a pattern of needs and satisfaction, and visualized these needs in the shape of a pyramid (see Figure 3.1) divided into five levels (Maslow, 1954). At the bottom, we find physiological needs, followed by safety and security needs, then social needs which are followed by esteem needs, and lastly the self-actualization needs. The bottom of the pyramid 'needs' are the most important for physical survival e.g. food, water and shelter and are pursued first, then as you move up the pyramid, the emphasis shifts from the basic needs of survival toward safety needs such as freedom from anxiety and stress, and then through to individuals' social and psychological needs. These include the need to belonging, friendship and love. Depending on each individual, the need for love or belonging will vary, and might be greater for one person and less for another. Then Maslow postulates that individuals would seek to fulfil their self-esteem, i.e. to feel competent, confident and self-assured. At the top of the pyramid, is the pursuit of self-actualization that stems for a need to fulfil one's potentialities in life.

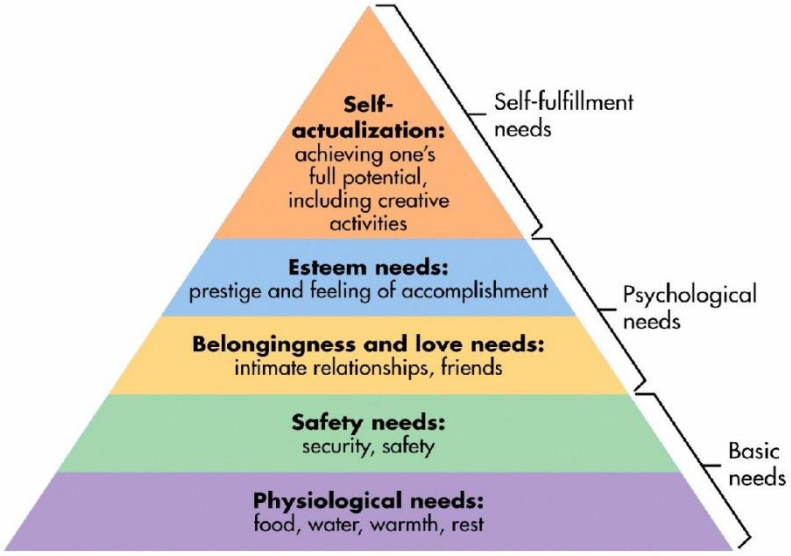



*Figure 3.1: Maslow's Hierarchy of Needs (https://www.simplypsychology.org/maslow.html)*

Maslow's hierarchy of needs model has been applied in studies across different disciplines such as health, tourism, education, and human resources. Specifically, the theory has been used to summarize a considerable portion of what is now known about the nature of workplace behaviour and performance. For example, it was used as a framework to understand the impact of burnout in a medical profession and to inform mitigation strategies against such professional burnout (Hale, Ricotta, Freed, Smith and Huang, 2018). A study examining the influence of human needs at work concluded that needs drive employees to achieve certain work outcomes such as engagement (Green, Finkel, Fitzsimons and Gino, 2017).

One study suggested that employees who are seeking self-actualization and self-esteem tend to be motivated to attain the highest level of performance (Korman, 1970).

In an effort to better understand turnover intentions of information systems personnel, researchers have explored career orientations that characterize an employee's internal motivations and desires. Maslow's hierarchy was used as the underpinning theory. Turnover of information system (IS) personnel is a critical problem for organizations (Jiang and Klein, 2002). In order to show the varied use of Maslow's theory, in one study, a hierarchy of progressive IT maturity was presented using Maslow's hierarchy of needs as a metaphor for articulating the increasing value that can be derived by the application of information systems within competitive organizations. Each level of the IT Value Hierarchy is described using examples and comparisons to Maslow's Hierarchy (Urwiler and Frolick, 2008).

Maslow's hierarchy of needs has also been applied in the information systems discipline to understand user behaviour. Maslow's hierarchy was used to understand senior citizens' adoption of information systems in the context e-government. Maslow's hierarchy was used to extend technology acceptance model (TAM). It was found that self-actualization determines senior citizens' usefulness perception, then usefulness influences adoption (Phang, Sutanto, Kankanhalli, Li, Tan, and Teo, 2006). A similar study examining the adoption of cellular phones by older people found that self-actualization as an intrinsic motivation has an important, even if indirect, impact on behavioural intention, mediated again by utilitarian considerations (Conci, Pianesi, and Zancanaro, 2009). In a study examining the adoption of mobile health services it was revealed that self-actualization positively affected the behavioural intention to adopt mobile health services by older users (Deng, Mo and Liu, 2014).

The influence of perceived belonging on perceived usefulness and perceived enjoyment was examined in the context of social network sites. The findings indicated that perceived belonging positively (e.g. social relationships) influences both perceived enjoyment and perceived usefulness and, hence, also indirectly influences overall SNS adoption behaviour (Ernst, Pfeiffer and Rothlauf, 2013).

Another study employed the higher-order needs from Maslow's hierarchy (i.e. belonging, esteem and self-actualization) and a series of drivers related to the characteristics of the virtual world medium, personality characteristics, channel interaction, and demographic criteria (Barnes and Pressey, 2011). Closely related to this study, Maslow's hierarchy of needs was used to extend the expectation-confirmation model of information systems continuance (ECM-IS) to analyse users' continuance intention of social networking services (SNSs). The study contributed to research on continuance intention of social networking services from the perspective of Maslow's hierarchy of needs by capturing continuance intention as a function of social needs and self-actualization needs. Fulfilment of self-actualization needs has a significant impact on continuance intention; however, the direct impact of fulfilment of social needs on continuance intention is not significant but fully mediated by satisfaction (Cao, Jiang, Oh, Li, Liao and Chen, 2013).

Maslow's theory was used in a study examining the capability of Facebook to meet human needs and satisfaction with life (Houghton et al., 2020). Facebook was found to be a useful tool to fulfil

human needs, which in turn predicted continued Facebook use intentions and satisfaction with life. Another study examined the influence of Maslow's perceived belonging concept on SNS adoption (Ernst et al., 2013). The findings confirmed that perceived belonging positively influences both perceived enjoyment and perceived usefulness and, hence, also indirectly influences overall SNS adoption behaviour.

Maslow contributed to humanistic and positive psychology. Intrinsic and hedonic motivations such as self-actualization (intrinsic motivation), self-esteem and perceived belonging (e.g. social interaction-hedonic) were identified as determinants of information systems user behaviour. Drawing from above, it is evident that some of his ideas are similar to concepts such as flow theory. Flow theory is discussed next.

### 3.3 Flow Theory

Flow theory was developed in reference discipline of psychology. Flow is defined as the state in which people are so intensely involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it (Csikszentmihalyi, 1977; Csikszentmihalyi and Csikszentmihalyi, 1988). People who are in the flow state, they become absorbed in their activities: their awareness is focused on the activity itself; they lose self-consciousness, and they feel they have control over their environment (Csikszentmihalyi, 1977). Flow is a multi-dimensional concept that has been measured in varied ways across disciplines (see Figure 3.2). For example, it has been measured as enjoyment and concentration (Ghani, 1995), control, attention focus, curiosity, and intrinsic interest (Huang, 2003), focused attention, control, curiosity and temporal dissociation (Li and Browne, 2006), perceived enjoyment, concentration, and curiosity (Moon and Kim, 2001), perceived enjoyment, perceived control, and concentration (Koufaris, 2002). The dimension and measurements used for flow indicate that flow is an intrinsic motivation (Faiola, Newlon, Pfaff and Smyslova, 2013). These dimensions have been used to examine optimal user experiences and behaviour.

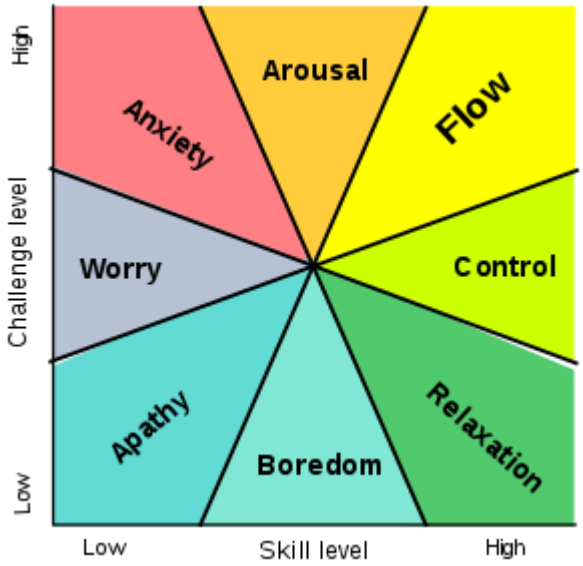



*Figure 3.2: Flow Theory Diagram/Schematic (https://is.theorizeit.org/wiki/Flow_theory )*

Some of the studies using flow theory include the study of the relationship between white-water rafting experience formation and customer reaction. This study adopts the concept of flow experience to examine the relationships between experience antecedents and flow experience. The results show that tourist rafting skill, level of challenge of rafting activity and playfulness significantly and positively influence tourist flow experience. Playfulness was observed to be the most important influence on flow experience (Wu and Liang, 2011).

In a study focused on speeding behaviour of a special segment of motorcyclists of heavy motor cycles in Taiwan, it was found that the psychological flow variables (i.e. perceived enjoyment and concentration) appear to have significantly positive influences on motorcyclists' speeding behaviour (Chen and Chen, 2011).

In a different study, examining the influence of flow variables on learning behaviour, it was found that the dimensions of flow were in play, including arousal and interest in the task, and have been sufficient to overcome any problems in learning a foreign language (Egbert, 2003).

In addition to the few studies above, majority of the studies using flow theory as lens are situated in the information systems discipline. For example, integrated theoretical framework (Technology Acceptance Model, Consumer Behaviour and Flow theory) was used to examine emotional and cognitive responses to visiting a Web-based store for the first time, and how the responses influence online consumers to return and make a purchase. The results indicate that both shopping enjoyment and perceived usefulness of the site strongly predict intention to return (Koufaris, 2002).

Another study examining the influence of flow on information systems user behaviour was focused on effects of flow and telepresence in virtual worlds. The purpose was to enhance understanding of user behaviour in game-based learning. It was concluded that heightened sense of pleasure experienced by game users drive their user behaviour (Faiola et al., 2013).

Recently there is an increase in studies which examine the influence of flow on usage of new information systems. For example, a study focused on the development and validation of the flow experience instrument for social networking found that six components of flow experience i.e. skill, machine interaction, social interaction, playfulness, concentration and enjoyment were important drivers of social networking services usage (Kaur, Dhir, Chen, and Rajalaa, 2016). In another study focused on understanding online regret experience using the theoretical lens of flow, it was found that the increase in playfulness and users' focused attention on Facebook led to higher levels of online regret experience (Kaur et al.,2016).

In the context of SNS, a study examined the role of flow experience in driving users to continue using SNS. The results suggest that flow experience has influence on users' satisfaction but none on continuance intention (Chang and Zhu, 2012). Another study of flow experiences in social network sites (Wu and Wang, 2011), found that perceived enjoyment was the most important flow experience in the SNS context, followed by escape and social interaction.

As stated above, flow theory discusses motivations such as enjoyment, pleasure, playfulness, concentration, arousal, interest and social interaction. These motivations have been identified as

important in influencing user behaviour. Apart from Maslow's theory and Flow theory, there is an idea that suggests that user behaviour is selective and motivated by rational self-awareness of the individual's own needs and an expectation that those needs will be satisfied by particular types of artefacts and content (Katz et al., 1974). This idea is rooted in the Uses and Gratification theory, which is discussed next.

### 3.4 Uses and Gratifications (U &G) Theory

The uses and gratifications (U&G) theory originated from the functionalist perspective on mass media communication and was developed on the effectiveness of the radio medium in the 1940 (Herzog, 1944). The theory is a media use paradigm that inquiries into the reasons why people use certain media and the gratifications derived from usage and access (Luo, Chea and Chen, 2011). U&G suggests that media consumption is purposive, and that the users actively seek to fulfil their needs via a variety of uses (Katz, Blumler and Gurevitch, 1974; Al-Jabri, Sohail and Ndubisi, 2015). It is focused on users' motivations and associated behaviours, as shown in Figure 3.3. U&G explanation is that certain technologies especially media relate to various human needs, including information acquisition, escape, emotional release, companionship, reality, exploration (Luo, 2002), convenience, entertainment, socialising, status seeking, information seeking and sharing experience (Gallego, Bueno and Noyes, 2016).

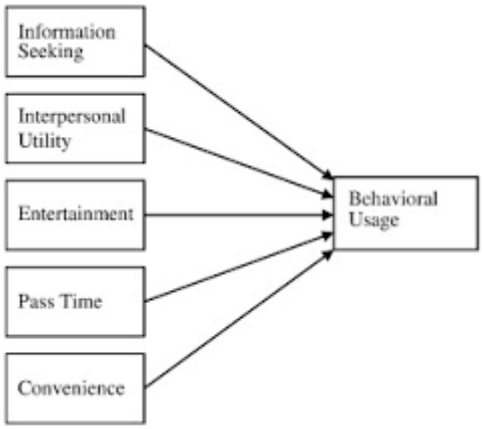



*Figure 3.3: Uses and Gratifications (Luo et al., 2011, pg. 22)*

U&G has been an important theory in understanding users' behaviour. As expected because of its origins and focus in media, most of the studies are technology related. For example, a study focused on understanding the determinants and usage of global technology services (Twitter) in Saudi Arabia found that enjoyment, freedom of expression, and social interaction were found to influence Twitter usage (Al-Jabri et al., 2015). In a different study focused on how personal motivation affects engagement in online learning courses (e-learning) found that convenience, sharing experiences, and entertainment have a positive influence on the intention to continue to use second life e-learning.

In a study examining motivations influencing university students' intentions to adopt social networking sites (SNSs), the results suggested that self-discovery, entertainment value, social enhancement, and the need to maintain interpersonal connectivity through the construct of behavioural intentions, were found to have positive impacts on students' pervasive adoption of SNSs (Ifinedo, 2016). Another study examined the differences in the uses and gratifications of Facebook as a function of motivational reactivity. It was found that motivation to use Facebook for entertainment was strongest in predicting intensity to use Facebook (Alhabash, Chiang and Huang, 2014).

A hedonic IS continuance model was developed based on the uses and gratifications theory. The model incorporated three types of gratification: hedonic gratification (enjoyment, fantasy and escapism); social gratification (social interaction and social presence); and utilitarian gratification (achievement and self-presentation). It was found that hedonic gratification (enjoyment, fantasy and escapism), utilitarian gratification (achievement) and social gratification (social interaction and social presence) affect an individual's continuance intention to use a social network game (Li, Liu, Xu, Heikkilä and Van der Heijden, 2015).

Although the above discussed theories of motivation have helped us understand the role of enjoyment, arousal, entertainment, convenience, escapism, fantasy, pleasure, reward, image, status and social interaction on user behaviour, the most comprehensive theory of motivation is probably SDT theory that was introduced by Deci and Ryan. SDT draws a specific distinction between intrinsic and extrinsic motivation. The SDT theory is discussed next.

### 3.5 Self-determination Theory

As with other theories of motivation, Self-Determination Theory (SDT) also views human needs as specifying the content of motivation and providing the substantive basis for energizing and directing behaviour (Deci and Ryan, 1987). Building on prior theories of motivation, SDT highlights the importance of a human's evolved inner resources for personality development and behavioural self-regulation (Ryan, Kuhl, and Deci, 1997). SDT is summarized in Figure 3.4.

SDT holds that intrinsic and extrinsic motivations are the primary reasons individuals engage in various behaviours (Deci and Ryan, 2000). Intrinsic motivation is defined as doing an activity for its own sake, because one enjoys the process (Roca and Gagne, 2008; Ryan and Deci, 2000). Individuals are moved to act for fun or challenge entailed rather than external pressures or rewards (Ryan and Deci, 2000). Intrinsic motivation affects learning, adaptation and competencies (Ryan and Stiller, 1991). SDT theory suggests that intrinsic motivation rests on the assumption that individuals possess an innate desire for autonomy, competence and relatedness (Deci and Ryan, 2000). Examples of intrinsic motivation include enjoyment and playfulness.

In contrast, extrinsic motivation is defined as doing an activity for a consequence separable from the activity itself, as the pursuit of a reward or the avoidance of a punishment (Roca and Gagne, 2008; Ryan and Deci, 2000). The prospects of gain (e.g. incentives) or loss govern the extrinsic motivations (Cerasoli, Nicklin and Ford, 2014). The primary form of extrinsic motivation is external regulation, which implies that the individual engages in the desired behaviour in order to

receive external rewards or to avoid punishment (Deci and Ryan, 2012, Liang et al., 2013). Examples of extrinsic motivation includes rewards and punishment,

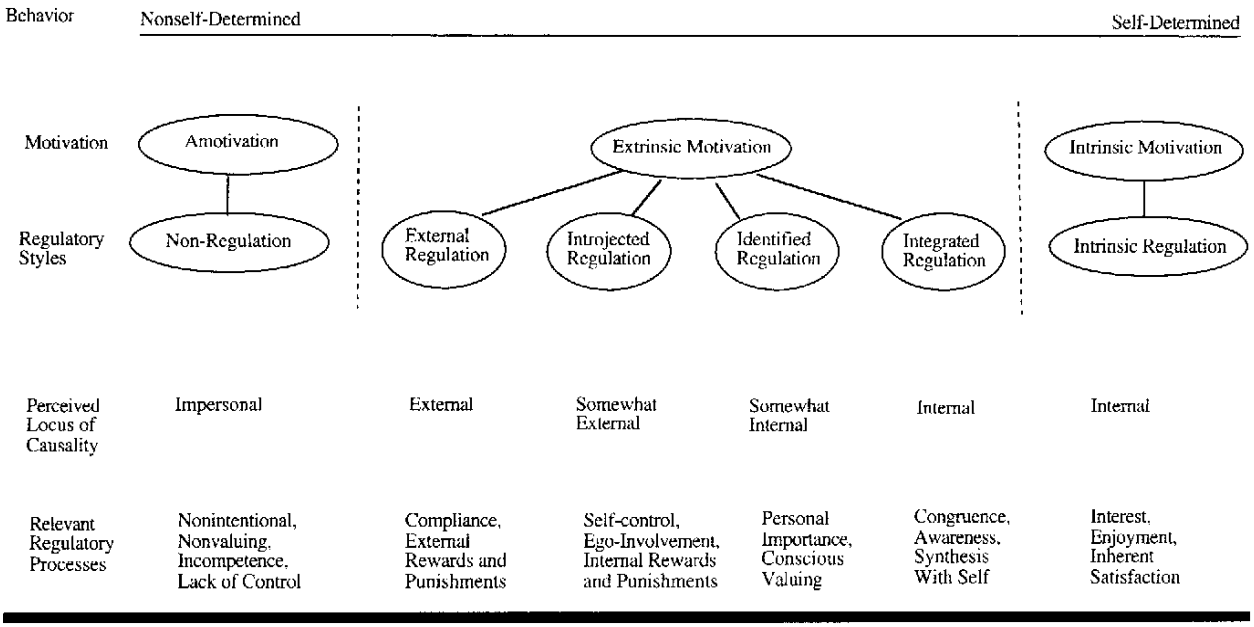



*Figure 3.4: Self-determination Theory (Deci and Ryan, 2000, pg. 70)*

In general, SDT has been used to understand the relationships between intrinsic motivation, extrinsic motivation and behaviour in different domains. For example, work (Gagne´ and Forest, 2008), well-being and health (Miquelon and Vallerand, 2008), sport and exercise (Wilson, Mack and Grattan, 2008) and information systems-education (Guay, Ratelle and Chanal, 2008),

For example, in a study focused on motivation as longitudinal predictors of adolescents' self-reported physical activity, it was found that perceived enjoyment has positive influence on adolescent's choice to engage in physical activity (Timo, Sami, Anthony and Jarmo, 2016). A closely related study examining "What makes coaches tick", found that athletes' satisfaction with the coach–athlete relationship was only associated with the coach's intrinsic motivation in the form of fun and interest. Interaction effects among the two types of motivation (intrinsic and extrinsic motivation) were significant suggesting that extrinsic motivation in the form of high salary or good benefits can potentially undermine intrinsic motivation when intrinsic motivation is low (Jowett, 2008).

The effects of intrinsic and extrinsic motivation on attention and memory were examined. The results revealed that the effects of motivational factors e.g. reward, usefulness, interest and enjoyment should not be overlooked when interpreting absolute levels of performance in neuropsychological processes (Robinson et al., 2012).

A meta-analysis focused on the application of self-determination theory in health contexts indicated that punishment, fun, pleasure, guilt, and value-attachment affect behaviour (e.g. decision to smoke, exercise and medication use) (Ng, Ntoumanis, Thøgersen-Ntoumani, Deci, Ryan, Duda and Williams, 2012). In a health related study, SDT was used to understand pupils' physical activity intentions and self-reported leisure-time physical activity behaviour. The results showed that pupils are driven by interesting activities and other activities are mandatory so they participate to avoid punishment (Chatzisarantis and Hagger, 2009).

Drawing from above studies, intrinsic and extrinsic motivations are likely to influence information systems user behaviour, SNS included. This suggests that employees may use an information system because it fulfils their intrinsic motivations i.e. enjoyable, fun or entertaining. Indeed, intrinsic motivations have been shown to positively influences system use behaviour (Davis, Bagozzi and Warshaw, 1992; Hwang, 2005; Lee, Cheung and Chen, 2005; Teo, Lim and Lai, 1999; Venkatesh, 1999; Venkatesh, 2000). Similarly, a positive relationship between system use behaviour and extrinsic motivations has also been found in early studies (Davis et al., 1992; Lee et al., 2005; Igbaria, Iivari and Maragahh, 1995).

SDT was used as a lens to examine computer usage in the workplace. The results suggest that together usefulness and enjoyment explained 62% (Study 1) and 75% (Study 2) of the variance in usage intentions (Davis, Bagozzi and Warshaw, 1992).

Another study, examined the role of self-determination theory in explaining teachers' motivation to continue to use e-learning technology. The results show that users' basic psychological needs and intrinsic motivation such as fun and enjoyment can be useful for predicting their e-learning continuance intentions (Sørebø, Halvari, Gulli and Kristiansen, 2009).

A study investigating students' acceptance of an Internet-based learning medium suggested integrating a motivational perspective into the technology acceptance model to capture both extrinsic (perceived usefulness) and intrinsic (perceived ease of use and perceived enjoyment) motivators for explaining students' intention to use the new learning medium (Lee, Cheung and Chen, 2005).

SDT was used in an empirical study investigating the moderating effects of gender on e-commerce systems adoption factors. The normative and affective factors, namely social norms and perceived enjoyment, as derived from self-determination theory were investigated. It was found that the influence of social norms is stronger in the female group while the influence of enjoyment is stronger in the male group (Hwang, 2010).

As shown in chapter 2 (Table 2.3 and Table 2.4), SDT has rarely been used in the study of SNS user behavior. One study applied an intrinsic–extrinsic perspective to examine information disclosure intentions by online social network users. A positive correlation between reward-level and disclosure intentions on one hand, and an insignificant effect of extrinsic motivations on disclosure intentions on the other hand (Shibchurn and Yan, 2015). Another study developed a model illustrating how extrinsic motivation may impact consumer behaviors. The findings suggest that consumers' external motivation has a positive impact on intention to contribute social commerce information (Wang et al., 2019).

SDT surfaces intrinsic and extrinsic motivations as determinants of user behaviour. Yet outside of SDT, the relevance of constructs of intrinsic motivation (e.g. enjoyment) and of extrinsic motivation (e.g. rewards) to behaviour has been considered by others. These are typically captured by concepts of hedonic and utilitarian motivation. The theory surrounding hedonic and utilitarian motivations is discussed next.

### 3.6 Hedonic and Utilitarian Motivations

In addition, there is the hedonic and utilitarian theory of motivation (Lin, Wang and Chou, 2012). This theory explains that hedonic and utilitarian motivations also drive humans to achieve their goals (Batra and Ahtola, 1991; Hirschman and Holbrook, 1982). These two motivation concepts have been used largely in the marketing discipline (Cardoso and Pinto 2010, Close and Kukar-Kinney, 2010; Hirschman and Holbrook, 1982; Tauber, 1972). They have been used to understand consumers shopping behaviour (Cardoso and Pinto, 2010; Kang and Park-Poaps, 2010; To et al., 2007). Apart from marketing, these concepts have been used in other disciplines such as education (Saeed and Sinnappan, 2013) and health (Li and Mao, 2015).

Hedonic and utilitarian motivations are frequently considered in marketing studies to understand consumer behaviour. For example, one study focused on the attitudes that the older segment of Generation Y consumers (19-25) have toward a mall, and on their consumption motivation. It was found that objective motivations to consume predict an individual consumer's perception of a shopping mall's hedonic features (e.g. ambience, layout) and his or her involvement in the shopping process (Martin and Turley, 2004).

Another study, examining the dimension of product attitude indicated that hedonic (amusing, thrilling, pleasant) and utilitarian (e.g. usefulness, practicality, productive) features of the product motivate user’s purchase intention (Voss, Spangenberg and Grohmann, 2003). In a study comparing the effects of utilitarian and hedonic features of a product on its purchase intention, the findings suggest that hedonic features tend to motivate more highly than comparable utilitarian features when each is presented singly, but the utilitarian features tend to be chosen over the hedonic features when the two are presented jointly (the respondents compared the Bailey's Irish cream cheesecake as more hedonic and the cheesecake deLite as more utilitarian) (Okada, 2005).

A study examining factors that motivate users to be purchase and use a product suggested that products that meet or exceed customers' utilitarian needs and fulfil prevention goals enhance customer’s intention to use and satisfaction (e.g., a car with antilock brakes and vehicle stability assist), and products that meet or exceed customers' hedonic wants and fulfil promotion goals enhance customer’s intention to use and delight (e.g., a car with panoramic sunroof and six-speaker audio system) (Chitturi, Raghunathan and Mahajan, 2008).

Another study examined the relationships among hedonic and utilitarian motivations, customer satisfaction and behavioural intentions in the fast-casual restaurant industry. The findings indicate that hedonic (fun, joy, excitement and pleasant) and utilitarian (convenient, quick, pragmatic and economical) motivations significantly influence customer satisfaction, and customer satisfaction has a significant influence on behavioural intentions. Utilitarian motivations show a greater influence on both customer satisfaction and behavioural intention than hedonic motivations. This

study also reveals that customer satisfaction acts as a partial mediator in the link between hedonic/utilitarian motivations and behavioural intentions (Ryu, Han and Jang, 2010).

There have been attempts to use these concepts in IS (e.g. Kim and Forsythe, 2010; Jin, Park and Kim, 2010). Hedonic motivations to use an IS are based on the system providing functionalities which make it possible for the user to gain happiness, fantasy, awakening, sensuality, and enjoyment (Hirschman and Holbrook, 1982). Utilitarian motivations are based on the system providing functionalities which make it possible for the user to accomplish a mission or task (Batra and Ahtola, 1991; Sherry et al., 1993; Babin et al., 1994).

Other studies in information systems use hedonic and utilitarian motivations to understand online consumer behaviour. For example, the examination of hedonic and utilitarian motivations for online retail shopping behaviour revealed that the interactive shopping environment support the differential importance of immersive, hedonic aspects of the new media as well as the more traditional utilitarian motivations. Also, navigation, convenience, and the substitutability of the electronic environment to personally examine products were found to be important predictors of online shopping attitudes (Childers, Carr, Peck and Carson, 2001).

Another study investigated the internet shopping motivations from both utilitarian and hedonic perspectives. The study focused on differential effects of these dual motivations on both search intention and purchase intentions. The findings indicate that utilitarian (e.g. convenience) motivation is a determinant of consumer intention to search and intention to purchase. However, hedonic motivation (e.g. adventure, social interaction) has a direct impact on intention to search and indirect impact on intention to purchase (To, Liao and Lin, 2007).

Another study explored hedonic (e.g. social, adventure/gratification) and utilitarian (e.g. value and achievement) motivations in the context of user engagement with online shopping. The results show the salience of adventure shopping (hedonic) and achievement shopping (utilitarian) motivations to specific variables of user engagement in the e-commerce environment (O'Brien, 2010).

Hedonic and utilitarian motivations have also been applied to study SNS users. Building on both the hedonic and utilitarian foundations, Ernst (2015) examined whether SNS usage is determined by hedonic motivations, utilitarian motivations, or both. It was found that SNSs are dual technologies, and both perceived usefulness and perceived enjoyment are critical influence factors of SNS use). Another study, distinguished between consumers' hedonic and utilitarian motivations for using company-hosted Facebook pages. The data revealedthat hedonic motivations drive a higher propensity to participate in the Facebook community whereas utilitarian motivations relate more strongly to merely browsing the community page (Poyry et al., 2013).

The studies discussed above support the importance of hedonic and utilitarian motivations in understanding information systems user behaviour. The studies surfaced motivations such as convenience, social interaction, usefulness, joy and amusement as drivers of user behaviour. Certain dimensions of these motivations have been used as predictors of behavioural intention to use an IS in the Hedonic Motivation System Adoption Model (HMSAM).

### 3.7 Hedonic Motivation System Adoption Model (HMSAM)

HMSAM is a model that was conceptualized to help researchers to better understand adoption and use of hedonic systems (Lowry, Gaskin, Twyman, Hammer and Roberts, 2012). This became increasingly necessary given the change in the information systems landscape characterised by growth in hedonic software sales, which at one stage was more than triple the growth of utilitarian software sales (ESA, 2007). This change in software landscape is associated with the explosion of mobile computing, social computing, and gaming, and represents an economic and social revolution in technology usage. In trying to undestand these developments, researchers conceptualized the HMSAM model. Van der Heijden's (2004) model was used as the baseline for HMSAM. The van der Heijden (2004) hedonic system acceptance model was a variation of the technology acceptance model (Figure 3.5). The baseline model contained extrinsic motivation, with perceived usefulness being used to represent extrinsic motivation. On the other hand, perceived ease of use and joy were used to represent intrinsic motivations. However, hedonic motivation systems do not include efficiency or productivity goals therefore, the perceived usefulness of hedonic systems relates to "the usefulness of pursuing pleasure" (Gu, Fan, Suh, and Lee, 2010) rather than to utilitarian usefulness. Thus the van der Heijden (2004) hedonic system acceptance model was extended to capture the key role of intrinsic motivation in explaining the hedonic system users' behaviour. The extensions included replacing joy with cognitive absorption CA), and unpacking the cognitive absorption (CA) subcontracts.

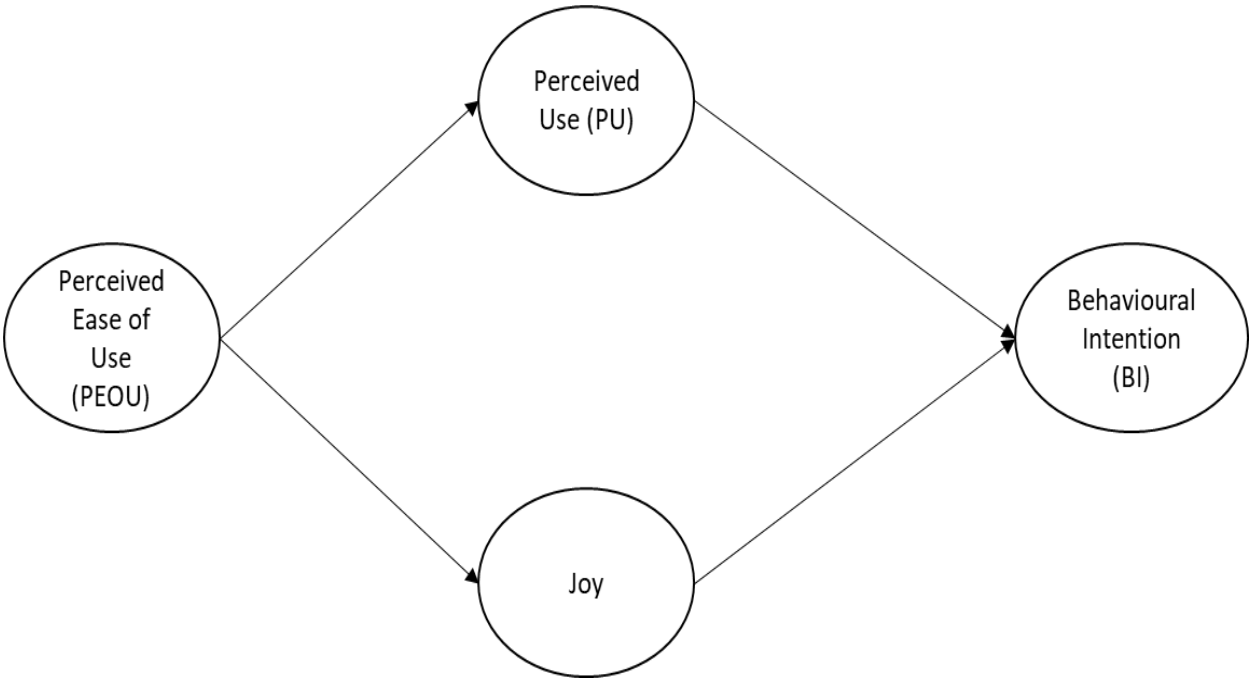



*Figure 3.5: Baseline for HMSAM (Lowry et al. 2013, pg. 8)*

The first extension, joy, or perceived enjoyment (PE), is the extent to which using a system is perceived to bring pleasure and fulfilment for their own sake, apart from any anticipated performance consequences (Lee, Cheung and Chen, 2005). Replacing joy with cognitive absorption is an attempt to incorporate other aspects of intrinsic motivation (Hsu and Lu, 2007).

Using joy exaggerates its role in representing intrinsic motivation and it does not fully represent intrinsic motivation. Therefore, cognitive absorption is a better representation of intrinsic motivation. Cognitive absorption is a second-order construct consisting of control, curiosity, heightened enjoyment (joy), focused immersion and temporal dissociation (Agarwal and Karahanna, 2000). Agrawal and Karahanna (2000, p. 674) define these first order constructs:

- Control: "the user's perception of being in charge of the interaction"
- Curiosity: "the extent the experience arouses an individual's sensory and cognitive curiosity"
- Heightened enjoyment (which we term joy for short): "the pleasurable aspects of the interaction described as being fun and enjoyable rather than boring"
- Focused immersion: "the experience of total engagement where other attentional demands are, in essence, ignored"
- Temporal dissociation: "the inability to register the passage of time while engaged in an interaction"

After extending joy with cognitive absorption, in the next step Lowry, Gaskin, Twyman, Hammer and Roberts (2012) expanded HMSAM by using cognitive absorption sub-constructs individually instead of collapsing them into a single second order construct (Figure 3.6). Conceptualizing these sub-constructs as single order constructs is in line with flow theory (the theoretical basis of cogntive absorption).

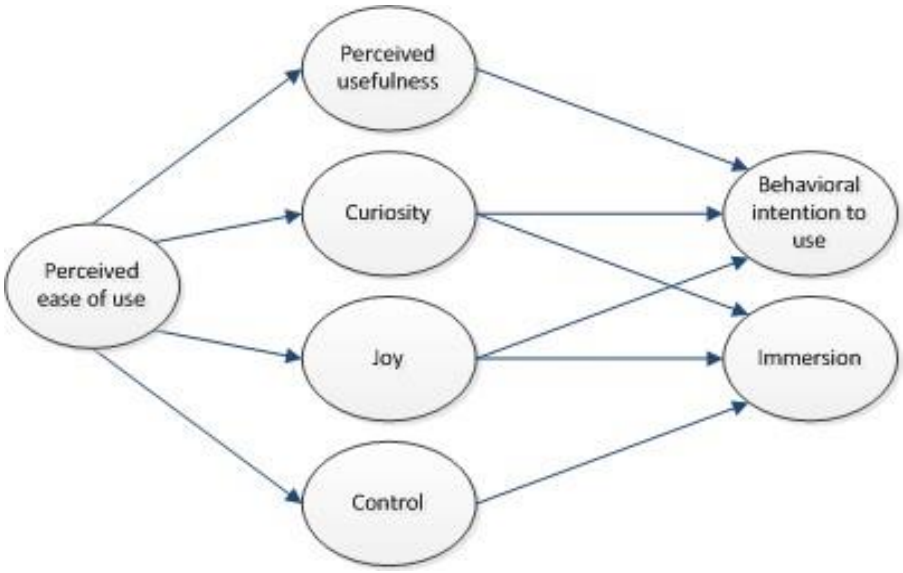



*Figure 3.6: HMSAM (Lowry et al. 2013, pg. 9)*

Reviewed literature indicates that HMSAM has not been used as a lens in many studies, however there are some studies that refer to it or use it as one of the underpinning theories (e.g. Pethig, Noeltner and Krönung, 2016; Stanciu, 2017).

Other theories such as McCllelland theory (1960) and expectancy theory (1964) are also focused on motivation as a theory for understanding workplace context. Those works show that motivators

such as power, achievement or affiliation are learned but can be subsumed in the theories above e.g. SDT or Maslow's theory.

### 3.8 Conclusion

Drawing from the different motivation theories discussed above, it can be summarized that motivations are the driving force which propels individuals to act to satisfy their needs. A motive is what prompts a person to act in a certain way or at least develop an inclination for specific behaviour (Kast and Rosenzweig 1985

Motivation theories have demonstrated their utility for improving our understanding of human behaviour, and may consequently provide a useful lens from which to understand social network site usage behaviours. Whether extrinsic and expectancy driven, intrinsic or hedonic needs driven, focused on self-actualization, or the need for achievement or for association, motivations may collectively determine the actions of SNS users.

It is evident from the literature that both hedonic and utilitarian, and both intrinsic and extrinsic need to be considered as they offer more complete explanations when taken together. Further, the review showed that relative effects of different motivations occur across contexts.

In summary, from the discussed motivation thoeries Maslow hierarchy of needs and flow theory provide limited view of motivations, while uses and gratification theory has been used by studies focused on SNS despite some researchers' argument that U&G approach is too simplistic to accurately account for users' gratification sought or gratification obtained from the media (e.g. Littejohn, 1996).

To address this study's research question on the influence of motivations on SNS usage, it is necessary to be cognisant of the hybrid hedonic and utilitarian nature of SNS. Therefore, motivation theories that recognise human behaviour as simultaneously influenced by both utilitarian and hedonic motivations may provide for a more comprehensive explanation of SNS user behaviour. More specifically, from the above mentioned theories, SDT, hedonic and utilitarian motivations, and HMSAM theories of motivation seem most promising for informing this study's examination of the work and non-work related motivations influencing SNS user behaviour in the workplace.

Taken together, motivations theories are a promising lens for this study and for how we might come to understand SNS usage. Chapter 9 explores this in more detail in the specific context of South Africa where a model aimed at testing the effects of motivation on SNS usage in the South African workplace is developed and empirical validated. First, for the purpose of addressing Research Question 1, the existing empirical evidence into the effects of motivation on IS usage is synthesized via a meta-analytic investigation in the next chapter.

# CHAPTER 4: THE EFFECT OF MOTIVATION ON INFORMATION SYSTEMS USAGE: META- ANALYSIS

An earlier version of this chapter has been published as: Nkwe, N and Cohen, J, (2017). "The effects of intrinsic, extrinsic, hedonic, and utilitarian motivations on IS usage: An updated meta-analytic investigation". In Proceedings of the 23rd Americas Conference on Information Systems (AMCIS), Boston, USA, August 10-12, 2017.

## 4.0 Introduction

Chapter 3 discussed a conceptual background of motivation as a determinant of usage behaviour, and uncovered different motivations. Advancing our understanding of the impact of motivation, this chapter discusses the study's objective to examine via a meta-analytic investigation the effect of motivation on IS usage.

To address, RQ 1: *what is the available evidence regarding the effects of motivation on information systems user behaviour?* This chapter presents results of a meta-analysis. More specifically, the chapter aggregates the findings of studies examining the link between motivation and system usage, and the effect of system type, sample, country and mobile application (as a moderator) on the relationship between motivation and system usage.

This is important to establishing motivations as relevant determinants of system usage as well surfacing and identifying those motivations that have been found most important to the use of different types of IS in past works. Subsequently their relevance to predicting SNS usage can be evaluated. The overview on motivations, objectives, research methodology and coding for this meta-analysis are discussed in this section.

## 4.1 Overview on Motivations

Motivations are a primary impetus for people to engage in various behaviours (Deci, 1975). They include intrinsic (e.g. fun) and extrinsic motivations (e.g. reward) (Ryan and Deci, 2000) as well as hedonic (e.g. social interaction) and utilitarian (e.g. convenience) motivations (Batra and Ahtola, 1991; Hirschman and Holbrook, 1982). Motivations have been associated with aspects of behavioural activation and intention (Deci, 1975), and thus their role in IS usage behaviour has consequently been the subject of much attention (e.g., Agrifoglio, Black, Metallo and Ferrara, 2012; Jin, Park and Kim, 2010; Kim and Forsythe, 2008; Lin and Liu, 2012; Teo et al., 1999). However, extant research has demonstrated wide variations in the predicted effects of motivations on system usage. Some studies found high correlations between motivation and usage (e.g., enjoyment-usage r=0.601 reported by Lee, 2009), and others report little or no effects (e.g., enjoyment-usage r=0.061 reported by Mun and Hwang, 2003). Different motivations also have varying effects on the use of different types of information systems. For example, in utilitarian system contexts the enjoyment-usage relationship had a low correlation of r=0.135 (Igbaria, Iivari

and Maragahh, 1995), but the image-usage relationship had a higher correlation of r=0.582 (Mohammadi, 2015). Few studies have attempted to reconcile these conflicting results, Wu and Lu (2013) are a notable exception. In their earlier meta-analytic study of motivations and IS usage, Wu and Lu (2013) focused on effects of extrinsic and intrinsic motivations on using utilitarian, hedonic and dual-purposed information systems. They reviewed IS studies published through 2009, and found that in the context of hedonic systems, intrinsic motivations are more important than extrinsic motivations whereas in the context of utilitarian systems, extrinsic motivations play a more critical role than hedonic motivations. However, in the years since their review, i.e. 2009 to 2016, the role of motivation in system usage behaviour has gained increased attention. Recently, researchers are examining different types of motivations, e.g. convenience (Mansumitrchai, Park and Chiu, 2012), entertainment, image, and social interaction (Hamari and Koivisto, 2015; Hsiao and Tang, 2016), alongside more established motivations such as enjoyment. Moreover, new types of IS systems such as social network sites as well as mobile applications are becoming more prolific since the Wu and Lu study, and their use may be differentially effected by motivations.

The purpose of this chapter is to build upon and extend the Wu and Lu findings by providing an updated meta-analytic investigation of the influence of motivation on system usage. Specifically, this chapter examines studies of motivation in IS usage post 2009, and examine possible changes in the strength of effects over time as systems have become more embedded into workplace and social contexts (Leftheriotis and Giannakos, 2014). This study also extends Wu and Lu (2013) by observing effects of motivations not included in their study such as entertainment, convenience, and social interactions.

To define IS usage, reference is made to the technology acceptance model (TAM). Specifically, the chapter considers the relationship between motivations and four IS usage constructs, namely perceived usefulness, perceived ease of use, behavioural intention, and actual usage. Inclusion of the technology acceptance model's (TAM) salient beliefs of perceived usefulness and perceived ease of use provides for a more comprehensive assessment of the role of motivation in technology usage. In addition, the chapter considers the moderating effects of system type, specifically hedonic versus utilitarian systems, on the relationships between motivation and usage. The study also examines the moderating effects of culture (using country as a proxy), portability of the technology (e.g. mobile vs non-mobile), and the population examined in the study (students versus non-students).

Specifically, the following questions are posed:

1. What is the overall effect of motivations on perceived usefulness, perceived ease of use, behavioural intention to use and actual system usage?
2. To what extent are these effects moderated by factors such as system type, portability of the technology, culture and population examined in the study?

To answer these questions, a meta-analytic examination of the bare-bone effect sizes and true-score effect sizes is carried out. Further, homogeneity tests for determining potential for the moderating effects of system type and other methodological factors on the links between

motivations and IS usage is considered. The investigation is focused on studies published after 2009, thereby extending the work of Wu and Lu and ensuring the results are reflective of more recent studies. Repeated investigations over time allow studies to build on previous ones and examine new sources and reasons for heterogeneity in effect sizes, and thus allowing for new insights.

As a follow on from the previous chapter, the next section reflects briefly on motivation theory in the study of IS usage. Next, a research model is presented that underpins the meta-analytic investigation. Next, the methodology and approach to the meta-analysis are outlined. Then the results will be presented followed by conclusions.

## 4.2 Theoretical Background

Past IS research has promoted the study of motivations as an influence on information system adoption and use (Davis, Bagozzi, and Warshaw, 1992), with an initial focus on the argument that employees may use an information system because it fulfils their intrinsic motivations i.e. enjoyable, fun or entertaining. Other studies later supported the effects of intrinsic motivation on system use behaviour (Davis et al., 1992; Hwang, 2005; Lee, Cheung and Chen, 2005; Teo, Lim and Lai, 1999; Venkatesh, 1999; Venkatesh, 2000). Over the years, motivation theory has become an increasingly popular underpinning theory in examining factors that influence information systems use (Ayeh, Au and Law, 2013). IS researchers have extended this work by studying different types of motivations influencing IS use. These include convenience, social interaction, image, reward, enjoyment, playfulness, arousal, escapism, flow and entertainment amongst others. Some studies have even suggested that the use of hedonic systems like games, or those offering entertainment content and playful services, is driven largely by intrinsic motivations as opposed to other factors such as ease of use (Shin and Shin, 2011).

Interest in the effects of motivation led to the development of the hedonic motivation system adoption model (Lowry, Gaskin, Twyman, Hammer and Roberts, 2012). The model describes how intrinsic motivations are more prominent in a process-oriented context, than outcome-oriented extrinsic motivation that are highly emphasized in traditional information systems adoption and use studies. Hedonic motivations to use an IS are based on the system providing functionalities which make it possible for the user to fulfil the need to belong, socially interact and therapy (Hirschman and Holbrook, 1982). It is the feeling resulting from using the IS which motivates the use of the IS (Xu, Lin, and Chan, 2012).

Fewer studies have however examined extrinsic and utilitarian motivations (e.g. Beldona, Kline and Morrison, 2004). Extrinsic motivations focus on the pursuit of a reward and gain or the avoidance of loss as the motivation for system use (Ryan and Deci, 2000). For example, the relationship between IS use and reward has been examined and found to be positive especially for work-related systems (Martins and Kellermanns, 2004). The relationship between punishment, image and IS use has also been found to be positive (Tong, Teo and Tan, 2008). The explanation is that by using the IS individuals may get the opportunity to enhance their social image, else by

not using the IS they may lose certain incentives. So, the desire to avoid such loss or to benefit from such gain may serve as external motivational factors for employees to use the IS.

Utilitarian motivations to use an IS are based on the functionalities provided by the system which make it possible for the user to accomplish a mission or task often in a more convenient way (Batra and Ahtola, 1991; Sherry et al., 1993; Babin et al., 1994). When the technology has features or utility which serve as an instrumental means to an end then users are motivated to use it (Kempf, 1999). For example, mobile and internet banking make it convenient for users to access different functionalities such as making payments and checking account balances. If users attach much importance to these utility aspects then the use of the information system is more likely (Xu et al., 2012).

Elsewhere, the effects of motivations such as enjoyment on productivity-oriented versus pleasure-oriented systems has been examined (e.g. van der Heijden, 2004). Despite these past works, IS researchers are yet to make conclusions regarding the overall effects of motivations on system usage, and how different motivations interact to influence usage behaviour. Similarly, the role of different motivations in different contexts is not well understood, e.g. whether intrinsic motivations are important for all systems (Gerow, Ayyagari, Thatcher and Roth, 2013) or more so for hedonic systems (Wu and Lu, 2013).

Based on the above discussion, the four types of motivations that will be investigated in this meta-analysis are presented in Figure 4.1. Because understanding the sources of variation or heterogeneity in previously reported effect sizes should be an important goal of any meta-analysis, the potential of system type and other methodological factors to moderate the links between motivations and IS usage are considered. As mentioned in the introduction, TAM is used to conceptualise the phenomenon of IS usage.

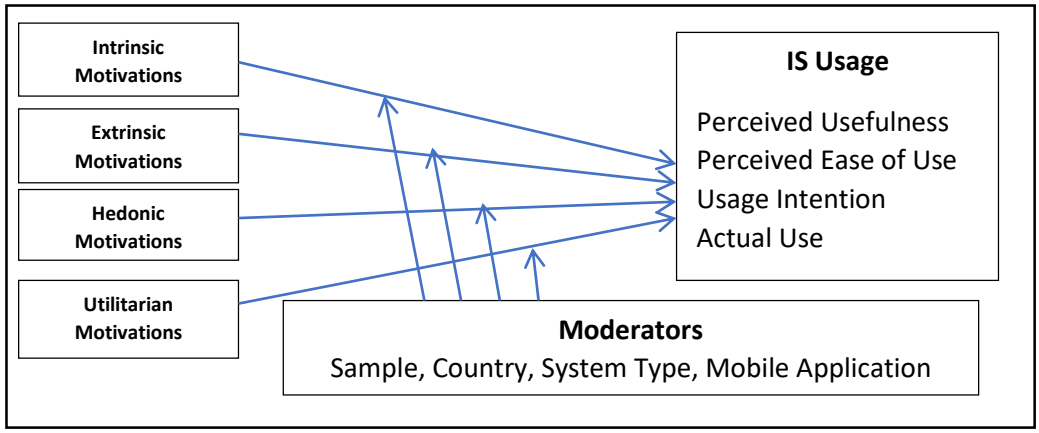



*Figure 4.1. Research Model*

## 4.3 Methodology

Meta-analysis is the statistical analysis of a large collection of prior empirical results for the purpose of integrating the findings (Glass, 1976) and aims to offer an unbiased synthesis of empirical data (Crombie and Davies, 2009). A recent trend in research synthesis is to integrate, quantitatively, knowledge garnered from empirical studies on a topic by using meta-analysis (King and He, 2006). Meta-analysis is the most commonly used quantitative research synthesis method in the social and behavioral sciences (Hedges and Olkin, 1985). It has been identified as a better way to conduct reviews of a body of completed research than the traditional narrative fashion [Wolf, 1986; Hunter and Schmidt, 1990; Rosenthal, 1991; Cooper and Hedges, 1994; Rosenthal and DiMatteo, 2001]. Some journals revised their review policy to encourage the use of this methodology (e.g., from the editors of Academy of Management Journal, 2002). In IS, however, meta-analysis is extremely underutilized (Cram, D'arcy and Proudfoot, 2019).

A review of the commonly-used meta-analysis methods suggest that the following procedures have to been followed when conducting a meta-analysi in IS. The 9 step procedure is illustrative and based on Hall et al. (1995) and Rosenthal and DiMatteo (2001):

1. Define the research domain and the relationships of interest.
2. Collect studies in a systematic way. Try multiple databases with the same selection criterion not only to enlarge the data pool, but also to avoid bias toward certain journals.
3. Extract effect sizes ─ the strength of a relationship or the magnitude of a difference information necessary to calculate these effects. It is also recommended contacting the authors for the needed information.
4. Select either the random effects (suggested for most cases) or the fixed-effect model, and a specific analysis method to combine the effect sizes. First, to correct for sampling error, the bare-bones or weighted mean effect size (r+) is calculated. This approach weights each study's correlation by the number of observations in that study. Second, to correct for measurement error, the true-score correlation (rc) is calculated.
5. Examine the variability among the obtained effect sizes. Perform a homogeneity test, or plot effect sizes graphically to judge the range of effect sizes and the existence of possible moderating effects.
6. Examine the signs and magnitudes of the combined effect sizes (the means). Although t-tests are commonly employed for the significance level of an effect size, it is more useful to calculate confidence intervals around the mean to indicate the range of the effect size (Rosenthal and DiMatteo, 2001). This approach is especially appropriate for the random-effects model, because this model assumes variations among effect sizes. A combined effect size implies no more than an average of a set of possible population effect sizes.
7. If the objective of the research is to find or test moderating effects, studies should be coded for characteristics of their contexts. Code the characteristics of individual articles in an unbiased way. Coders (often Ph.D. students or colleagues) should be "blind" to the research, and the internal consistency of the coding results should be tested.
8. To test the moderating effects, two methods are commonly used:

a. Subgroup comparison: group studies according to their coded research contexts, then compare the combined effect sizes that are calculated within each subgroup.

9. Summarize and discuss the findings.

For this study, synthesizing past studies allows us to understand which motivations are most important in technology acceptance and system usage. Effect sizes will be examined to identify heterogeneity, and further analysis will be carried out to examine the influence of system type, portability of the system, culture and population examined in the study as moderators.

The first step of the meta-analysis involved a literature search strategy. The search covered all articles published from 2010 up to present 2017. The search included papers post 2009 so as to extend the meta-analysis of Wu and Lu (2013), which covered papers through 2009. A search for literature was conducted in the following online databases: ACM, Jstor, Emerald, ABI/INFORM Global, ProQuest, Web of Science, EBSCO and Science Direct. Search strings were constructed around the study's focus on users of information technology as the population of interest, information systems acceptance and usage as the criterion variables of interest (outcome) and motivations as the determinants of usage. Because the focus of a meta-analysis was on quantitative studies, additional search terms were added such as regression, correlations, relational and empirical. All full-text studies had to be accessible to the authors through their university's library system and its comprehensive electronic database subscription. A number of additional articles were identified for inclusion in the meta-analysis by examining the reference lists of the extracted papers.

A review of the titles and abstracts was carried out and all non-empirical studies, and those that were not in English were excluded. Articles were also excluded if the dependent variable was not behavioural intention or usage (e.g. Verhagen, Feldberg, van den Hoof, Meents and Merikivi, 2012), there was no correlation matrix of constructs (e.g. Lee, Lee and Hwang, 2015; Rouibah, Lowry and Hwang, 2016), no reliability of variables reported, measurement items not included (e.g. Reychav, Ndicu and Wu, 2016) or sample size not reported. A total of 73 studies (details in Table 4.1) were extracted that met these inclusion criteria.

| Summary of included studies (the total number of papers extracted =73) | |
|---|---|
| Years<br>2010 (5); 2011 (8); 2012 (9); 2013 (17); 2014 (12); 2015 (13); 2016 (9) | Publication Type<br>Journal (66); Conference (7) |
| System Type<br>Mobile (19); Non-mobile (54) | Type of Information System<br>Hedonic (26); Utilitarian (22); Hybrid (25) |
| Actual systems<br>Business Intelligence (1); Online blog (1); Online booking system (1); E-commerce (8); E-learning (6); Enterprise social network (1); Facebook (4); Games (9); Green devices (2); Internet (2); Knowledge repository (1); Messaging (1); e-coupon (1); Online advertising (1); Online communities (2); Online newspaper (3); Online service (1); Online self-service (1); Smartphone (2); Social network sites (14); Technology Innovation (1); Online travel planner (1); Twitter (1); Virtual world (4); E-book (3); Smartwatch (1) | |
| Country<br>Chile (1); China (11); Finland (1); Germany (2); Global (2); Iran (1); Israel (1); Japan (1); Jordan (1); Korea (13); Malaysia (1); North America (1); Portugal (1); Saudi Arabia (1); Spain (3); Taiwan (11); Thailand (3); United Kingdom (1); United States (17) | |
| Respondents (user type)<br>Students (27); non-students (46) | |

*Table 4.1: Summary of Accepted Articles*

In order to code the various motivations, the conceptual and/or operational definitions of the studies' constructs were examined to confirm their consistency with the conceptual definitions of each construct. Intrinsic motivation variables were coded if they reflected participation in an activity because it was intrinsically enjoyable or doing an activity for its own sake, because one enjoys the process (Roca and Gagne, 2008; Ryan and Deci, 2000). This includes variables such as playfulness (PLA), entertainment (ENT), enjoyment (ENJ) and fun (FUN) (Wu and Lu, 2013). Extrinsic motivation variables were coded if they reflected doing an activity for a consequence separable from the activity itself, as the pursuit of a reward or the avoidance of a punishment (Roca and Gagne, 2008; Ryan and Deci, 2000). This included coding variables such as pay (PAY), image (IMA), reward (REW), promotion (PRO) and deadline (DEA) (Wu and Lu, 2013). Utilitarian motivation variables were coded if they reflect beliefs in effectiveness and efficiency as outcomes that could be derived from the use of a system (Venketash and Brown, 2001). This included coding for utilitarian variables such as convenience (CONV). Hedonic motivation variables were coded if they reflect non-instrumental, experiential, and affective results gained from using the system (Hong and Tam 2006). This required coding for different hedonic motivations such as interactions and belonging as (INTR).

In addition, the acceptance and usage variables, namely actual system usage, behavioural intention, perceived usefulness, and perceived ease of use were also coded based on Davis (1989). For each extracted study, we also recorded the system and system type under study i.e. utilitarian (UT) e.g. ERP, hedonic (HE) e.g. games or hybrid (HY) e.g., social network sites. The country in which the study was conducted, sample size, the sample respondents (students or non-students), and the year of publication were also coded. Results are summarized in Table 4.1.

Effect sizes (correlations) were recorded. Direction of the correlations was reversed for measures phrased in the negative. In addition to the effect size, reliabilities of each study's variable were

coded using the reported Cronbach's alpha co-efficient or, if not available, the reported composite reliability scores.[7]
The motivations and their coding are summarised in Table 4.2.

| | | |
|---|---|---|
| **Intrinsic** | | |
| PLA | Playfulness | The degree of cognitive spontaneity in information system interactions (Webster and Martocchio, 1992). |
| ENT | Entertainment | The extent to which the user desires to gratify certain emotions (Reinecke et al., 2014). |
| ENJ | Enjoyment | The extent to which using an information system is perceived as fun in its own right, aside from any performance consequences (Davis et al., 1992). |
| ARO | Arousal | The degree to which a user feels excited, stimulated, or active while using an information system (Holbrook et al., 1984). |
| **Extrinsic** | | |
| IMG | Image | The degree to which using an information system is perceived to enhance one's status in an organization or society (Moore and Benbasat, 1991). |
| REW | Reward | A recompense resulting from using an information system (Wu and Lu, 2013). |
| **Hedonic** | | |
| INT | Social Interactions | The extent to which the information system provides for social exchange with friends, family and colleagues (O'Brien, 2010). |
| **Utilitarian** | | |
| CON | Convenience | The extent to which the information system enables the user to complete tasks efficiently (Kim, 2006) |
| PU | Perceived Usefulness | The degree to which a user believes that using the system would enhance his/her performance or effectiveness (Venkatesh, 2000). |

*Figure 4.2: Motivations and their coding*

### 4.3.1 Meta-Analytic Approach

The study was guided by Hunter and Schmidt's (2004) methods in estimating effect sizes. First a sample size adjusted mean ($r_+$) was calculated, which is the weighted average of individual correlations. Then corrected true-score correlations ($r_c$) were calculated, to correct for measurement error (Schmidt and Hunter, 2014). Homogeneity tests were carried out to determine whether there was any heterogeneity in the underlying correlations (Hedges and Olkins, 1985). Homogeneity Q, which is used to determine the potential for moderator effects should not exceed the critical value, if it does then moderating effects should be suspected (Schepers and Wetzels, 2007). To do the Homogeneity test, the Fisher Z transformation was used to calculate Homogeneity Q, which gives an indication of possible moderator effects. Finally, fail-safe test was carried out to test the robustness of the findings and provide for an indication of publication bias by estimating the number of non-significant results or non-published studies that would be required to reduce an obtained mean effect to a trivial level (Rosenthal, 1979). It is expected that fail-safe N value should exceed 5k+10 (where k is the number of observed correlations).

[7] Supervisor of the work (Prof. Cohen) assisted in checking the coding of variables, correlations and reliabilities. This is as per the recommended approach (Borenstein et al. 2009) for a meta-analysis that there is agreement on coding among the researchers prior to analysis.

## 4.4 Results

### 4.4.1 Effects of Motivations on System Usage

Meta-analysis results are presented in Table 4.4 and Table 4.5. For each motivation, the following are reported, the total number of studies, the total number of observed correlations, and range of correlation, average correlation, and range of sample size, the total sample size and the average of sample size. Because some publications reported results from tests on more than one sample under examination, the number of available pair-wise correlations could exceed the number of publications. Then, $r_+$, $r_c$, the variance of $r_+$, and 95% confidence interval of $r_+$ were calculated. The fail-safe N test was done to further evaluate the significance of each motivation.

The meta-analysis results of intrinsic motivations (ENJ and PLAY) (Table 4.5) indicate that both of them have significant effects, and enjoyment has the strongest effects. Among them, 15 correlations were obtained between enjoyment and actual use, and 2 correlations between playfulness and actual use. However, 46 correlations were obtained between enjoyment and behavioural intention. Enjoyment exerts the largest effects across all TAM constructs, perceive ease of use ($r_+$=0.468), perceive usefulness ($r_+$=0.405), behavioural intention ($r_+$=0.57), and actual use ($r_+$=0.43), compared to other motivations. All the true-score correlations are larger than 0.400. These findings suggest that enjoyment as an intrinsic motivation has important inter-relationships with TAM (PU, PEOU, BI and Use). Comparing the lower and upper correlation reveals large difference in the correlations across studies indicating that potential moderators may exist. Other important intrinsic motivations were playfulness (PLA), entertainment (ENT) and curiosity (CUR). All these three had effects (r+>0.4) on all TAM constructs except for usage.

Fewer studies included extrinsic motivations (IMG and REW). 3 correlations were obtained between image and actual use, and 2 between reward and actual use. The relationships between image-TAM constructs, and reward-TAM constructs were all significant, except for reward-usage relationship. However, a much larger number of studies examined links between image and behavioural intention (15 correlations), and reward and behavioural intention (6 correlations) and the other TAM constructs of PU and PEOU. Results showed that these extrinsic motivations exert the least effects on perceived ease of use ([IMG-PU $r_+$=0.368], [IMG-PEOU $r_+$=0.244], IMG-Use $r_+$=0.451], [IMG-BI $r_+$=0.38] and [REW-PU $r_+$=0.405], [REW-PEOU $r_+$=0.155], [REW-BI $r_+$=o.49], [REW-USE $r_+$=0.40]).

With regards to hedonic motivation of social interaction (INT), significant and almost equal effects were observed on actual use, behavioural intention, and perceived usefulness with all exhibiting an $r_+$ above 0.4, except for PEOU with r+=0.270. Only the effect on perceived ease of use was non-significant. Results show that the utilitarian motivation of convenience (CON) has a large effect size on perceived ease of use $r_+$=0.506.

Compared to Wu and Lu (2013), enjoyment and image's effects are higher in the studies examined post 2009 (see Table 4.3). Rewards have only more recently been examined, whilst the effects of playfulness as an intrinsic motivation appear stable and relatively unchanged. The studies that

examined rewards were focused on systems such as business intelligence systems, online banking and knowledge repository systems which are largely utilitarian systems.

Some of the motivations were not presented in the table because only one correlation was observed (e.g. arousal-use, entertainment-use, fantasy-use, pleasure-intention, fantasy-intention, reward-ease of use, pleasure-ease of use). Across all the studies, few studies examine the effect of motivations on actual use. In summary (Table 4.5), all the motivations (CON, INT, IMG, REW, ENJ, FLW, PLA, ARO, ENT, CUR) and TAM (PU, PEOU) constructs were significantly related to behavioural intention, except FLW. Table 4.5 also shows that PU, PEOU, CON, INT, IMG, ENJ and PLA were significantly related to actual use except REW and PLA.

Table 4.4 shows that INT, IMG, REW, ENJ, PLA, ENT, CUR are all significantly related to perceived usefulness, and CON, IMG, ENJ, PLA, ENJ, PLA, ENT and CUR are significantly related to perceived ease of use except INT. Future research may do well to expand the examination of these relationships.

### 4.4.2 Effects of Moderators such as System Type, Sample, and Country of Study

The results of testing for moderation effects are reported in Table 4.2. Because Q values exceed the critical value for all motivations, four moderators were considered, namely type of IS (hybrid vs hedonic), type of IS (mobile vs non-mobile), country of study (western vs non-western), and sampling strategy (student vs non-student). Different motivations exert different effects depending on the system type. For example, intrinsic motivations (enjoyment and playfulness) and hedonic motivation (social interaction) exert nearly the same effects on hedonic and hybrid systems but slightly less effects on utilitarian systems. However, extrinsic motivations (image and reward) exert higher effects on utilitarian systems and less on hedonic systems. Hybrid systems such as social network sites are influenced strongly by intrinsic motivations such as enjoyment and playfulness but surprisingly less influenced by utilitarian motivations (e.g. rewards) than are pure hedonic systems. Sample strategy had an effect on most of the results such that the effects sizes for students were higher for reward, enjoyment and playfulness. Non-students had the highest effects for image only. This is to say that, students are highly motivated by the recompense, fun or cognitive spontaneity of the information system.

## 4.5 Discussion

The meta-analysis reported above has aggregated the findings of past studies examining the effects of motivation on information systems usage and has extended the study of Wu and Lu (2013). The search identified 16 motivations examined in studies post 2009. Enjoyment is the most commonly studied intrinsic motivations construct, with 46 correlations. Image is the highest studied construct amongst extrinsic motivation constructs with 15 correlations.

Our findings confirm that enjoyment, playfulness, enjoyment, reward, interaction, and entertainment do, on average, exert strong effects on IS usage constructs, most notably on

behavioural intention and perceived usefulness. Also, enjoyment as a motivation has, on average, the highest correlation with behavioural intention, and social interaction motivation has the highest correlation with usage. Extending Wu and Lu (2013), this study observed how different motivations interact with TAM constructs. Enjoyment had the highest correlation with PU and PEOU. This meta-analysis included hedonic motivations (e.g. social interaction), utilitarian motivations (e.g. convenience), and other intrinsic motivations (e.g. entertainment and curiosity) not considered in their work. Since the Wu and Lu (2013) studies (refer to Table 4.3), systems have continued to embed themselves into workplace and social contexts. Whilst these results reach similar conclusions with regards to the average effects size for constructs such as enjoyment, this study observed an increase in the number of studies examining motivations such as rewards which appear to be exerting strong effects in certain contexts under study. Researchers and practitioners now have a better sense of the role of rewards as extrinsic motivation. For utilitarian systems such as ERP, motivations such as reward exert larger effects than motivations such as enjoyment. However, consistent with Gerow et al. (2013), enjoyment nonetheless exerts strong effects (>.0.5) across all systems. Use of hybrid systems is largely predicted by motivations such as enjoyment and playfulness and less by utilitarian motivations. This might be because social network sites were classified as hybrid. The use of utilitarian features in hybrid systems may also appeal to intrinsic and hedonic motivations of users.

The results demonstrated that sampling strategy moderated the results. It was expected based on van der Heijden (2004) that intrinsic motivation may be more important to students, and based on Gu, Fan, Suh and Lee (2010) that extrinsic and utilitarian motivations may be more important to non-students e.g. workers. However, intrinsic and utilitarian motivations were both found important for students. Culture only affected the relationship between reward and behavioural intention. Mobility of the system moderated the relationship between enjoyment and playfulness with behavioural intention. Future researchers may consider coding moderators differently, e.g. America vs Europe or workplace vs non-workplace setting. Motivations such as curiosity and reward were subjected to relatively less attention and future research may wish to consider their inclusion. It is also recommended researchers should be cognisant of the type of system under study (e.g. hybrid vs hedonic) and explore the extent to which different types of motivations surfaced in this chapter may exert differential effects on system usage.

| Moderators | | BI | | | | |
|---|---|---|---|---|---|---|
| | | INT | IMG | REW | ENJ | PLA |
| Q | | 22.24 | 165.54 | 48.03 | 1003.37 | 266.74 |
| Critical | | 11.o7 | 23.68 | 12.53 | 61.66 | 19.68 |
| Population | Student | 0.469 | 0.187 | 0.734 | 0.814 | 0.767 |
| | Non | 0.423 | 0.470 | 0.471 | 0.657 | 0.338 |
| | *Z* | *non* | *sig* | *sig* | *sig* | *sig* |
| Country | Western | 0.408 | 0.461 | 0.731 | 0.771 | 0.483 |
| | Non Western | 0.446 | 0.384 | 0.440 | 0.645 | 0.501 |
| | *Z* | *non* | *non* | *sig* | *non* | *non* |
| Mobile Application | Mobile | o.399 | 0.345 | 0.557 | 0.596 | 0.665 |
| | Non | o.493 | 0.431 | 0.576 | 0.747 | 0.454 |
| | *Z* | *non* | *non* | *non* | *sig* | *sig* |
| System Type | Hedonic | *0.590* | *0.391* | *0.5.28* | *0.709* | *0.510* |
| | Utilitarian | *0.402* | *0.500* | *0.721* | *0.6340* | *0.109* |
| | Hybrid | *0.470* | *0.406* | *0.463* | *0.724* | *0.691* |

*Table 4.2: Moderators*

(*BI-behavioral intention, INT-social interaction, IMG-Image, REW-reward, ENJ-enjoyment, PLA-playfulness, TAM-technology acceptance model, PU-perceived usefulness, PEOU-perceived ease of use, CON-convenience, FLW-flow, ARO-arousal, ENT-entertainment, CUR-curiosity, HED-hedonic, UTI-Utilitarian)*

| | IMG-BI | REW-BI | ENJ-BI | PLA-BI | ARO-BI |
|---|---|---|---|---|---|
| Wu and Lu (2013) | 0.37 | 0.24 | 0.52 | 0.41 | 0.34 |
| This study | 0.384 | 0.405 | 0.577 | 0.431 | 0.33 |

*Table 4.3: Comparison with Wu and Lu (2013)*

| | | Perceived Usefulness | | | | | | | Perceived Ease of Use | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HED | EXT | | INTR | | | | UTI | HED | EXT | INTR | | | |
| | | INT | IMG | REW | ENJ | PLA | ENT | CUR | CON | INT | IMG | ENJ | PLA | ENT | CUR |
| No. studies | | 4 | 6 | 3 | 37 | 8 | 3 | 2 | 2 | 4 | 6 | 37 | 8 | 3 | 2 |
| No. correlations | | 5 | 6 | 3 | 45 | 10 | 3 | 2 | 2 | 5 | 6 | 41 | 10 | 3 | 2 |
| Total sample size | | 2049 | 2136 | 513 | 14837 | 2544 | 1514 | 455 | 1805 | 2049 | 1624 | 13777 | 2487 | 1514 | 455 |
| Average | | 410 | 356 | 171 | 330 | 255 | 505 | 228 | 903 | 410 | 271 | 336 | 249 | 505 | 228 |
| Range sample size | Upper | 1409 | 662 | 333 | 1409 | 443 | 800 | 243 | 1409 | 1409 | 579 | 1409 | 443 | 800 | 243 |
| | Lower | 64 | 80 | 80 | 63 | 64 | 314 | 212 | 396 | 64 | 80 | 63 | 64 | 314 | 212 |
| Correlations | Upper | 0.48 | 0.61 | 0.49 | 0.846 | 0.69 | 0.631 | 0.799 | 0.74 | 0.32 | 0.48 | 0.792 | 0.63 | 0.42 | 0.536 |
| | Lower | 0.308 | 0.142 | 0.361 | 0.07 | 0.25 | 0.282 | 0.651 | 0.44 | 0.116 | 0.14 | 0.08 | 0.065 | 0.166 | 0.316 |
| | Avg. | 0.408 | 0.389 | 0.437 | 0.571 | 0.444 | 0.458 | 0.725 | 0.59 | 0.195 | 0.265 | 0.461 | 0.38 | 0.294 | 0.426 |
| r+ | | 0.447 | 0.368 | 0.405 | 0.405 | 0.412 | 0.448 | 0.730 | 0.506 | 0.270 | 0.244 | 0.468 | 0.401 | 0.327 | 0.433 |
| Rc | | 0.505 | 0.423 | 0.557 | 0.557 | 0.461 | 0.518 | 0.786 | 0.559 | 0.311 | 0.283 | 0.520 | 0.447 | 0.392 | 0.468 |
| var r+ | | 0.003 | 0.0194 | 0.003 | 0.003 | 0.018 | 0.020 | 0.005 | 0.022 | 0.005 | 0.014 | 0.0411 | 0.03 | 0.011 | 0.0121 |
| 95% confid. level (r+) | Upper | 0.492 | 0.472 | 0.498 | 0.624 | 0.510 | 0.584 | 0.832 | 0.713 | 0.363 | 0.340 | 0.528 | 0.496 | 0.458 | 0.585 |
| | Lower | 0.402 | 0.264 | 0.403 | 0.517 | 0.313 | 0.313 | 0.627 | 0.298 | 0.178 | 0.147 | 0.409 | 0.306 | 0.200 | 0.281 |
| 5k+10 | | 35 | 40 | 25 | 235 | 60 | 25 | 20 | 20 | 34. | 40 | 215 | 60 | 25 | 20 |
| Fail-safe (0.05) | | 84 | 95 | 55 | 1207 | 188 | 59 | 82 | 56 | 35 | 60 | 811 | 154 | 34 | 36 |
| Result | | sig | sig | sig | sig | sig | sig | sig | sig | non | sig | sig | sig | sig | sig |

*Table 4.4: Perceived Usefulness and Perceived Ease of Use*

| | | Behavioral Intention | | | | | | | | | | | | Actual Use | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TAM | | UTI | HED | EXT | | INTR | | | | | | TAM | | UTI | HED | EXT | INTR | | |
| | | PU | PEO | CON | INT | IMG | REW | ENJ | FLW | PLA | ARO | ENT | CUR | PU | EOU | CON | INT | IMG | REW | ENJ | PLA |
| No. studies | | 44 | 42 | 3 | 6 | 15 | 6 | 43 | 2 | 12 | 2 | 3 | 2 | 10 | 9 | 3 | 2 | 3 | 2 | 13 | 2 |
| No. correlations | | 47 | 45 | 3 | 6 | 15 | 7 | 46 | 2 | 12 | 2 | 3 | 2 | 10 | 10 | 3 | 2 | 3 | 2 | 15 | 2 |
| Total sample size | | 15160 | 14909 | 2587 | 3034 | 4658 | 1843 | 14718 | 732 | 3469 | 1243 | 1514 | 455 | 2240 | 2338 | 539 | 452 | 866 | 333 | 3454 | 507 |
| Average | | 323 | 331 | 862 | 506 | 312 | 263 | 322 | 366 | 289 | 622 | 505 | 228 | 224 | 234 | 180 | 226 | 289 | 167 | 230 | 254 |
| Range of sample size | Upper | 1409 | 1409 | 1409 | 1409 | 662 | 424 | 1409 | 534 | 534 | 800 | 800 | 243 | 443 | 443 | 383 | 388 | 390 | 233 | 443 | 443 |
| | Lower | 63 | 63 | 396 | 80 | 80 | 138 | 63 | 198 | 80 | 433 | 314 | 212 | 63 | 63 | 63 | 64 | 93 | 100 | 63 | 64 |
| Correlations | Upper | 0.874 | 0.831 | 0.788 | 0.53 | 0.64 | 0.641 | 0.89 | 0.84 | 0.714 | 0.44 | 0.549 | 0.778 | 0.564 | 0.47 | 0.411 | 0.62 | 0.582 | 0.266 | 0.7 | 0.18 |
| | Lower | 0.06 | 0.031 | 0.26 | 0.35 | 0.178 | 0.28 | 0.148 | 0.04 | 0.05 | 0.27 | 0.171 | 0.691 | 0.105 | 0.13 | 0.22 | 0.24 | 0.282 | 0.23 | 0.15 | 0.1 |
| | Average | 0.56 | 0.45 | 0.51 | 0.45 | 0.31 | 0.50 | 0.59 | 0.44 | 0.46 | 0.35 | 0.39 | 0.73 | 0.34 | 0.26 | 0.33 | 0.43 | 0.40 | 0.24 | 0.46 | 0.14 |
| r+ | | 0.56 | 0.47 | 0.41 | 0.41 | 0.38 | 0.49 | 0.57 | 0.25 | 0.43 | 0.33 | 0.40 | 0.73 | 0.29 | 0.25 | 0.38 | 0.55 | 0.45 | 0.24 | 0.43 | 0.170 |
| Rc | | 0.62 | 0.52 | 0.44 | 0.47 | 0.43 | 0.50 | 0.63 | 0.29 | 0.48 | 0.39 | 0.48 | 0.77 | 0.32 | 0.29 | 0.44 | 0.64 | 0.51 | 0.27 | 0.49 | 0.184 |
| var r+ | | 0.031 | 0.042 | 0.046 | 0.004 | 0.021 | 0.015 | 0.0264 | 0.16 | 0.034 | 0.007 | 0.026 | 0.002 | 0.023 | 0.015 | 0.007 | 0.0361 | 0.0262 | 0.0003 | 0.020 | 0.0016 |
| 95% confidence level (r+) | Upper | 0.611 | 0.525 | 0.654 | 0.476 | 0.463 | 0.589 | 0.624 | 0.811 | 0.558 | 0.448 | 0.564 | 0.798 | 0.396 | 0.326 | 0.470 | 0.830 | 0.240 | 0.266 | 0.509 | 0.225 |
| | Lower | 0.517 | 0.414 | 0.166 | 0.349 | 0.305 | 0.408 | 0.530 | -0.3 | 0.304 | 0.213 | 0.240 | 0.677 | 0.186 | 0.189 | 0.3 | 0.303 | 0.105 | 0.216 | 0.361 | 0.114 |
| 5k+10 | | 245 | 235 | 25 | 40 | 85 | 45 | 240 | 20 | 70 | 20 | 25 | 20 | 60 | 60 | 25 | 20 | 25 | 20 | 85 | 20 |
| Fail-safe (0.05) | | 1220 | 875 | 40 | 115 | 240 | 155 | 1302 | 18 | 242 | 28 | 48 | 85 | 135 | 98 | 40 | 36 | 51 | 18 | 295 | 9 |
| Result | | Sig | sig | sig | sig | Sig | sig | sig | non | sig | sig | sig | sig | sig | sig | sig | Sig | sig | non | sig | non |

*Table 4.5: Behavioral Intention and Actual Use*

## 4.6 Conclusion

The chapter has identified the different motivations and revealed their effects on IS usage through a meta-analysis of 73 past studies. This review addresses the study's first research question, and concludes that enjoyment motivations play a significant role in influencing use behaviour irrespective of the type of the information system. However, hedonic/intrinsic motivations were prominent determinants of hedonic systems user behaviour, and utilitarian/extrinsic motivations were prominent for utilitarian systems. Chapter 9 builds on these findings by incorporating intrinsic, extrinsic, hedonic and utilitarian motivations into the study focused on the effect of motivations on user behaviour.

In an effort to achieve the second objective, which is examining the impact of usage on work outcomes, different outcomes are reviewed. The next chapter will draw from management, organisational behaviour and human resources literature, and make conclusions regarding the different individuals' workplace outcomes.

# CHAPTER 5: CONCEPTUAL BACKGROUND ON WORKPLACE OUTCOMES

## 5.0 Introduction

This study has two primary research objectives. First, to understand the motivations for SNS usage in the workplace, and second, to examine consequent impacts of usage on various workplace outcomes. The previous chapters discussed the theory of motivation and presented a meta-analysis of existing efforts focused on the impact of motivation on IS usage behaviour. Those chapters have provided a basis for subsequent development and empirical validation of a research model aimed at testing the relative effects of motivation on SNS usage in the South African workplace context. This chapter turns attention to the second objective, specifically it provides the conceptual background necessary for understanding the concept of workplace outcomes, which may be impacted by SNS use.

## 5.1 Information Systems User Behaviour and Workplace Outcomes

Researchers in the field of information systems have also examined the relationship between information system's user behavior and work outcomes (e.g. Charoensukmongkol 2014; Charoensukmongkol, 2015; Moqbel et al., 2013). Their work shows that SNS usage behavior positively influences workplace outcomes such as job satisfaction, job performance and organizational commitment. However, relatively few studies included a substantial number of both psychological and behavioural outcomes. Majority of the studies included the salient outcomes such as job satisfaction, organizational commitment, job performance and turnover intentions, and tend to ignore others such as burnout, employee engagement, absenteeism and presenteeism. Therefore, this chapter engages with the workplace literature in order to extend the field's understanding of workplace outcomes and how they may be relevant consequences in the study of IS usage.

## 5.2 Overview of Workplace Outcomes

In the past two decades, researchers have examined why and how individuals achieve their work outcomes, and how organisations achieve their goals **(**Wright and McMahan, 1992). Enhanced employees' knowledge, skills, abilities, motivation and their opportunity to contribute have been associated with workplace outcomes (Gong, Law, Chang, and Xin, 2009). Literature indicates that there are two schools of thoughts regarding workplace outcomes. The first is labelled the behavioural view, and the second is labelled the psychological view (Rhoads, Singh and Goodell, 1994). Psychological and behavioural outcomes are discussed in turn below.

## 5.3 Psychological Outcomes

There is a school of thought that views psychological outcomes in the workplace as being the most important factors to examine. This is because they see these outcomes as influencing subsequent behaviours and performance. Among, the psychological outcomes that have garnered the most

attention are job satisfaction and organisational commitment. These psychological work outcomes have been supported across multiple studies and contexts, including in meta-analyses e.g. Fried (1991), Fried and Ferris (1987), and Taber and Taylor (1990). They each conducted meta-analyses on the relationships between the Job Characteristics Model (Hackman and Oldham, 1975) and outcome variables such as job satisfaction, motivation, and performance. Previous studies carried out meta-analytic investigations to examine the relationship between the varies determinants and outcomes. For example, the study investigating the relationships between leadership style and job satisfaction (Mullen, Symons, Hu and Salas, 1989), and the study examining the relationship between role perceptions (e.g., role conflict and ambiguity) and job satisfaction (Abramis, 1994; Jackson and Schuler, 1985). Other meta-analytic studies included Carr et al. (2003), Paker et al. (2003) and Miao et al. (2003), the models from these studies are shown in Figure 5.1. They suggest that job satisfaction and job commitment are salient psychological outcomes, and they are discussed in turn below.

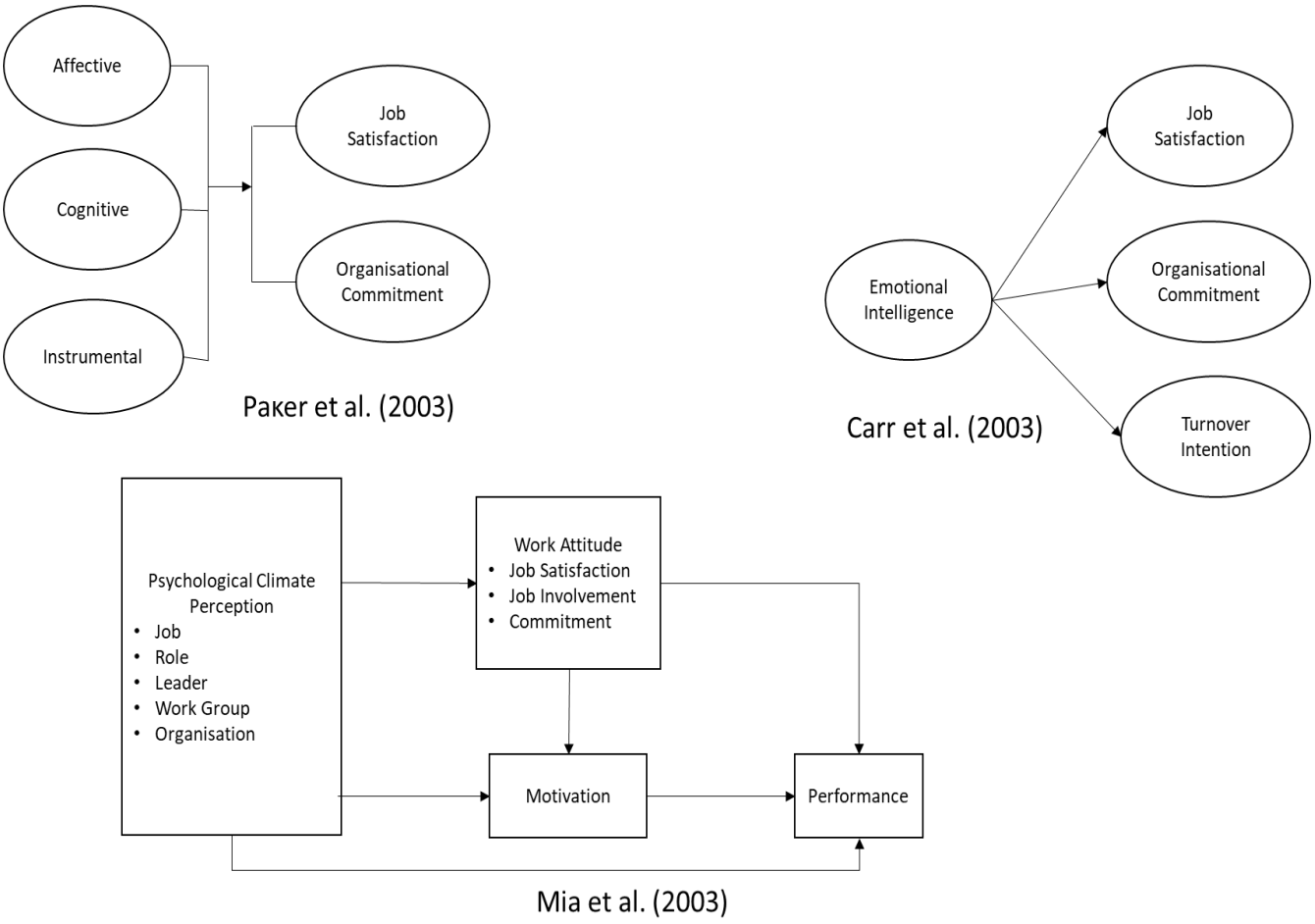



*Figure 5.1: Models of Workplace Outcomes*

### 5.3.1 Job Satisfaction

Job satisfaction has varying definitions (Sook, 2008). It has been defined in literature as the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values (Locke, 1976), and as an employee's affective reaction to their job (Hackman and Oldham, 1975). Job satisfaction is a function of the perceived relationship between what one wants from one's job and what one perceives it as offering or entailing. These two definitions are close to each other, they emphasize the emotional reactions. However, other researchers define it as positive/negative evaluative judgment one makes about one's job or job situation (Brief and Weiss, 2002).

Job satisfaction can be conceptualized as a unidimensional overall satisfaction (e.g. Rehman and Waheed, 2011) or can be conceptualized as a multi-dimensional variable made up of pay, promotion, supervision, co-workers and work itself as dimensions (e.g. Porter, Steers, Mowday and Boulian, 1974), or with dimensions such as one's specific satisfaction about job security, peers and co-workers, pay and other compensations, opportunities for personal growth, and relationship with one's supervisor; and one's self-motivation for doing the job (Hackman and Oldham, 1975). Among all the psychological outcomes, an individual's overall job satisfaction has been shown most important to their job performance, turnover intentions and job commitment (Bowling, Khazon, Meyer and Burrus, 2015; Platis, Reklitis and Zimeras, 2015). Improving job satisfaction of employees has therefore been described as the most important task of leadership. Leadership has to consider job satisfaction because a majority of other outcomes are the consequences of employee satisfaction e.g. lower job satisfaction leads to poor performance and poor commitment, among others (Andrews et al., 2014).

### 5.3.2 Organisational Commitment

Organizational commitment has been conceptualized differently across disciplines but the common suggestion is that it comprises affective, normative and continuance factors (Meyer, Allen and Gellatly, 1990). Workers who have strong affective commitments remain because they have emotional attachments to the organization they work in and because they want to stay; those with strong normative commitment feel they ought to stay; and those with strong continuance commitment stay because they need to (Allen and Meyer, 1990).

Among the three, affective commitment is considered the most important for understanding voluntary behaviours in workplace settings (Mathieu and Zajac, 1990; Mowday et al., 1982; Randall, Fedor and Longenecker, 1990) and the performance of individuals that extend beyond compliance (Riketta, 2002). It has also been found strongly related to turnover intentions (Jaros, 1997). Individual's identification with the organisation is influenced by the extent to which the individual's needs and expectations about the organisation are matched by their actual experiences (Meyer, Becker and Vandenberghe, 2004). Hence, affective organisational commitment is associated with perceived reciprocal obligations of the psychological contract (Donald and Makin, 2000). Hence, this particular study is interested in the employee's affective commitment, which is the extent to which the individual identifies with the organisation (Porter, Steers, Mowday, and Boulian, 1974).

The above mentioned are established constructs (Leiter and Maslach, 2003), however there has been a surge of published scientific research on less established psychological workplace constructs such as burnout, engagement, involvement and work-life-balance. Some of the studies, refer Figure 5.1 and Figure 5.2, where these constructs were drawn from include Crawford, LePine and Rich (2010), Schaufeli, Taris and Van Rhenen (2008) and Shankar and Bhatnagar (2010).

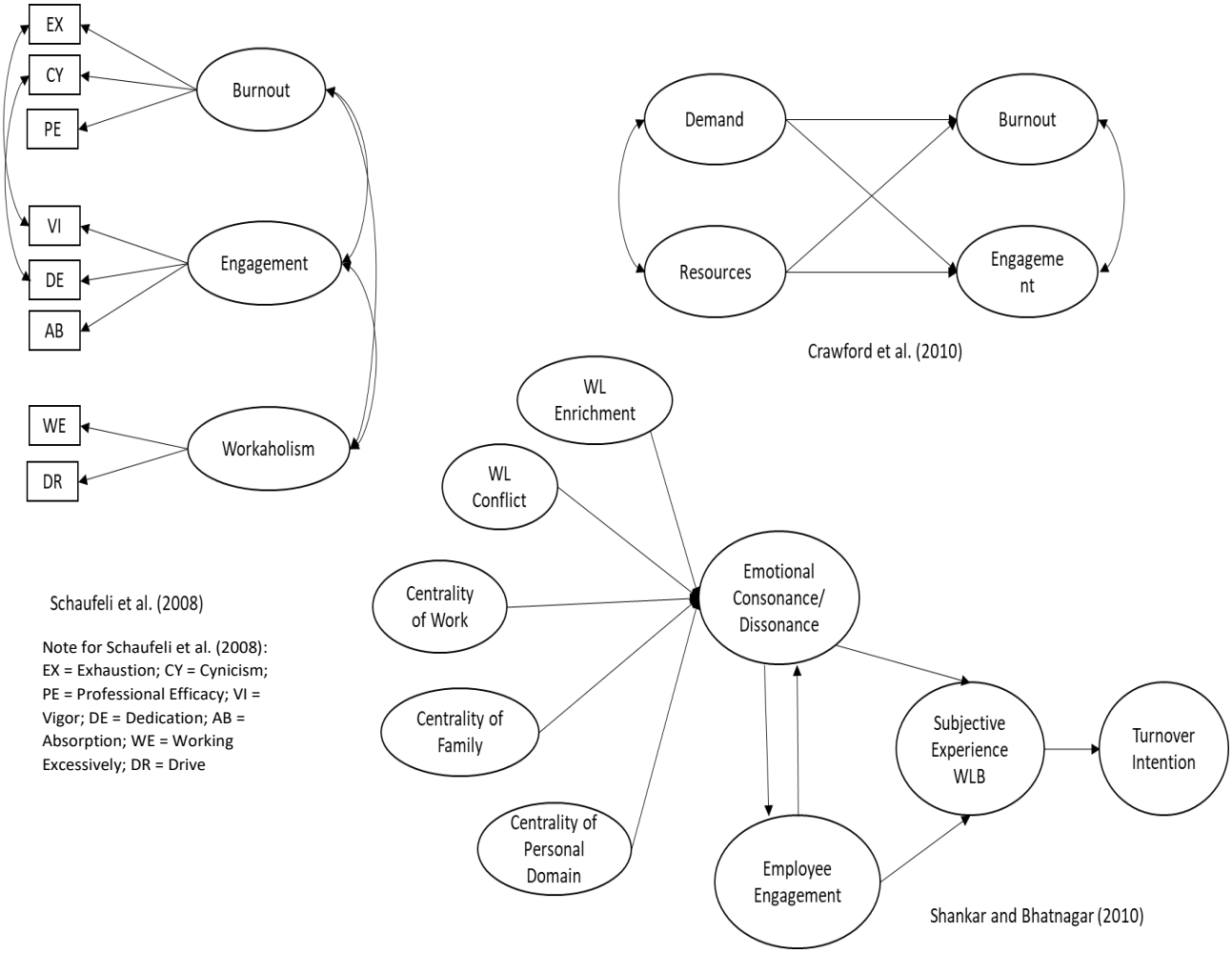



*Figure 5.2: Workplace Outcomes Models*

## 5.3.3 Burnout

The conceptual development of 'burnout' as a psychological work outcome construct has evolved. Initially, it was viewed as a three-dimensional syndrome of emotional exhaustion, depersonalization and lack of accomplishment (Maslach and Jackson, 1981). Emotional exhaustion includes draining of emotional resources because of demanding interpersonal contacts with others. Some examples of depersonalization include a negative, callous, and cynical attitude towards the recipients of one's care or services (Ryan, 1971). The tendency to evaluate one's work with others negatively can be classified as lack of personal accomplishment (Schaufeli, Salanova,

González-Romá and Bakker, 2002). This conceptualization of burnout was based on the idea that it occurs in individuals who work with people in some capacity, for instance in health care, social services, or education.

Currently, the definition of burnout has been extended to include those employees outside the realm of human services (Schaufeli, Leiter, Maslach and Jackson, 1996). The extended versions of burnout dimensions are more generic, and do not refer to other people one is working with.

The relationship between burnout, job satisfaction and performance is not clear. Some say burnout negatively impacts job satisfaction (Crawford et al., 2010) and others say job satisfaction negatively impacts burnout (Kalliath and Morris, 2002), but burnout negatively influences job performance (Demerouti, Bakker and Leiter, 2014). Both studies indicate that exhaustions are a key problem for employees, and it affects their production. As a result of the high burnout and the resultant low satisfaction, employees become less committed, less engaged and develop an intention to leave the job (Crawford et al., 2010; Kanwar, Singh and Kodwani, 2009). Burnout constitutes an important psychological outcome that is relevant for workplace studies, and therefore an important dependent variable to consider given its inter-relationship with others such as satisfaction and performance. Employees expect their organisations to help in managing and in reducing stress and burnout. It is suggested that to mitigate the problems that arise due to burnout, employers and other colleagues must provide support to an individual (Tsigilis, Zachopoulou and Grammatikopoulos, 2006).

### 5.3.4 Employee Engagement

The meaning of employee engagement is said to be ambiguous to both researchers and practitioners (Macey and Schneider, 2008). It has been used to refer to psychological states, traits, and behaviours as well as their antecedents and outcomes. Here, it is conceptualized as a psychological presence. Based on Kahn's (1990) definition, it is the harnessing of organisation members' selves to their work roles. It is a psychological rather than behavioural outcome, dealing with cognition and emotions. This definition is the most used in information systems studies and related disciplines such as organization behaviour, human resources and management.

Numerous definitions of engagement can be derived from practice and research driven literatures. It has been defined as emotional and intellectual commitment to the organisation (Baumruk, 2004; Richman, 2006; Shaw, 2005) which may subsequently manifest in the amount of discretionary effort exhibited by employees in their jobs (Frank et al., 2004). Drawing from research or academic literature it has been defined as the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances (Kahn, 1990). It involves two critical components: attention and absorption (Rothbard, 2001). In addition, it is a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption (Schaufeli et al., 2002). However, in practice, there is still confusion regarding the distinction between employee engagement and other organisational behaviour constructs. Robinson et al. (2004, p. 8) however provides a clearer distinction among these concepts as follows:

> *"Engagement contains many of the elements of both commitment and organization citizenship behaviors, but is by no means a perfect match with either. In addition, neither commitment nor OCB reflect sufficiently two aspects of engagement – its two-way nature, and the extent to which engaged employees are expected to have an element of business awareness".*

Research indicates that increased employee engagement is likely to lead to increased employee's job satisfaction. The two are positively related. Hence, if employees are satisfied with their job, they are likely to be engaged with their work (Saks, 2006). Also, employee engagement is likely to be eroded by burnout (Maslach et al., 2001). Employee engagement is an important outcome because there is a general belief that there is a connection between employee engagement and business results (Harter et al., 2002). For employee engagement to positively impact business results, the engagement must impact individual level outcomes. Hence, it can be viewed as a mediating outcome leading to burnout, which is related to outcomes such as increased withdrawal, lower performance, job satisfaction, and commitment (Maslach et al., 2001). Further, it is expected that engaged employees are likely to have a greater attachment to their organisation and a lower tendency to leave their organisation (Schaufeli and Bakker, 2004). Based on the interrelationships between employee engagement and important workplace outcomes such as job satisfaction, burnout and business results (performance), it is important to examine employee engagement as an outcome or consequence of SNS usage.

### 5.3.5 Employee Involvement

Another workplace outcome that is similar to employee engagement is employee involvement.

While some fail to distinguish involvement and engagement (e.g. Marchington, Goodman, Wilkinson and Ackers, 1992), and others consider them as conceptually overlapping as they both deal with the relationship between the employee and the work (e.g. Hallberg and Schaufeli, 2006), this study follows Fenton-O'Creevy (2001) who views employee involvement as feelings about the extent to which employees have influence over how their work is organized and carried out. Employee involvement comprises a cognitive, psychological identification with work (Kanungo, 1979).

Employee involvement has been identified as an important mediator between other psychological outcomes such as job satisfaction and behavioural outcomes such as absenteeism (Cheloha and Farr, 1980), such that employees who are satisfied with their jobs are more likely to be involved in their job which encourages them to come to work thus reducing absenteeism (Saal, 1978). Considering the changeable use of the labels of engagement and involvement, and the idea that employee involvement refers to the positive attachment to work, it is important to understand how SNS usage impact employees' involvement as this might give us more insights related to this psychological outcome separate from employee engagement.

### 5.3.6 Work-life Balance

The imbalance between the demands of work and the demands of family or personal life (Hochschild, 1997) has been examined by a number of researchers. Work-life-balance is

sometimes referred to as a "time bind". It is a complex phenomenon reflected in the simultaneous time and energy demands of family life and the workplace, both considered to be "greedy institutions" (Coser and Coser, 1974; Glass and Camarigg, 1992; Hochschild, 1997). The situation arises when work and family/personal obligations are perceived to be out of balance due to lack of time to meet both. Work-life-balance (WLB) can be reflected by the extent to which workers feel successful in balancing work and personal or family life, and the amount of conflict they face in balancing work and family or personal life (Tausig and Fenwich, 2001). High levels of WLB were more positively associated with organisational commitment and job satisfaction (Scandura and Lankau, 1997; Haar, Russo, Suñe and Ollier-Malaterre, 2014; Kanwar, Singh and Kodwani, 2009). Given its role in influencing other important workplace outcomes, a feeling of work-life balance is thus among the most important psychological outcomes to be considered in studies of individuals in the workplace (Haar et al., 2014).

The above review of literature has introduced and described the important role played by psychological outcomes in the study of employees in the workplace. The majority of studies were from human resources management and organizational behavior. It is evident from the review that certain psychological outcomes (e.g. job satisfaction) have been studied more frequently and are believed to be more important than others (e.g. employee involvement). Some of the established outcomes have been found to impact the less established outcomes (e.g. job satisfaction influence employee engagement (Huang et al., 2016)). There are complex inter-relationships among the psychological outcomes with factors such as burnout, work-life balance, and employee engagement often viewed as influencing job satisfaction, while others e.g. employee engagement are viewed as consequences of job satisfaction.

For most of the outcomes (e.g. job satisfaction, burnout, employee engagement, and organizational commitment) are highly influenced by the support the employee is getting from the organization, supervisors, colleagues and family (Lim and Lee, 2011; O'neill, Vandenberg, DeJoy and Wilson, 2009; Rupp and Cropanzano, 2002). Therefore, these outcomes are variable, and can be influenced by other factors, including technologies used in the workplace. Therefore, there is a need to examine psychological outcomes in the information systems context especially in relation to usage of new information systems such as social network sites.

### 5.4 Behavioural outcomes

In addition to psychological work outcomes, there is a school of thought that subscribes to the behavioural perspective. Researchers in this space focus on behavioural work outcomes such as turnover intentions, job performance, innovative behaviour, organisational citizen behaviour, knowledge sharing, absenteeism and presenteeism. The focus on behavioural work outcomes is exemplified in the works of Caemeli (2003), Walumbwa and Lawler (2003), and a meta-analytic study by Harrison, Newman and Roth (2006). They have varying models of behavioural work outcomes as illustrated in Figure 5.3.

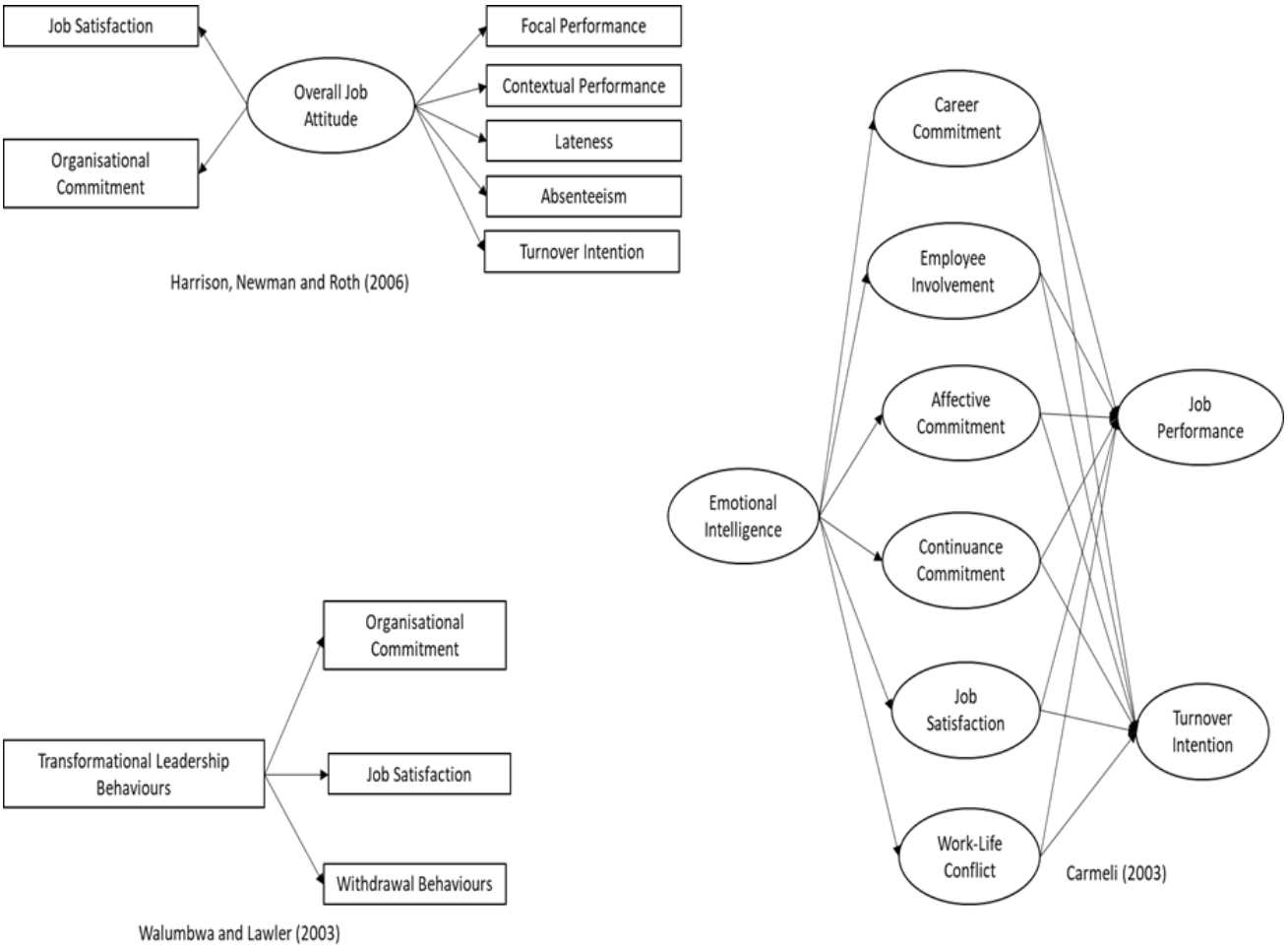



*Figure 5.3: Varying Models of Behavioural Outcomes*

### 5.4.1 Turnover Intentions

Arguably, the most well studied voluntary behavioural workplace outcome is an employee's turnover intention. Turnover intention is defined as a conscious and deliberate wilfulness to leave the organization (Tett and Meyer, 1993) or can be conceived as the extent to which an employee demonstrates their intent, desire and plan to leave the organization (Igbaria and Greenhaus, 1992). Turnover intention is considered the last in a sequence of withdrawal cognitions, which includes thinking of quitting and intent to search for alternative employment (Mobley, Horner, and Hollingsworth, 1978). For organisations, turnover costs range from indirect costs, such as loss of skilled employees with tacit organizational knowledge, to more direct ones, such as replacement and training costs (Mitchell, Holtom and Lee, 2001). Consequently, organisations aim to minimize turnover rates (Cascio, 2010; Mayfield and Mayfield, 2009).

The psychological outcomes and the behavioural outcome of turnover are related. For example, employees who are exhausted and stressed by their work, are more likely to leave their job than those who are experiencing less burnout. It has been suggested that employees who are less committed to the organization are most likely to leave, and similarly those who are not satisfied are most likely to leave (Ahmad and Rainyee, 2014; Lu, Lu, Gursoy and Neale, 2016; Porter,

Steers, Mowday and Boulian, 1974). High level of turnover intentions are likely to reduce if the employee has support, e.g. management support or supervisor support (Kang, Gatling and Kim, 2015; Li, Kim and Zhao, 2017).

### 5.4.2 Job Performance

Another behavioral work outcome that has received attention is the concept of job performance. Job performance is a complex construct and thus its conceptualization is difficult. It is a multidimensional variable in which every job has distinct performance dimensions (Moqbel, 2012). In organisations, it is complex because work outcomes are a result of multiple interdependent work processes (Borman, 1991). In simple terms, it can be defined as an individual's overall task proficiency or as performance on specific dimensions, such as the quality and quantity of work (Meyer, Paunonen, Gellatly, Goffin and Jackson, 1989).

Technical proficiency is often used to refer to job or task performance (Chan and Schmitt, 2002). This traditional conceptualization of job perform has gone through a number of reviews, and resulted in researchers expanding the performance criterion space to include motivational and interpersonal aspects of job performance (Arvey and Murphy, 1998). Motivational and interpersonal performance variables put together are usually referred to as contextual performance. Contextual performance reflects "will-do" as opposed to the "can-do" focus of technical proficiency (Lance et al., 2000). This study is interested in performance as an individual's overall performance in terms of "can-do" proficiency.

Job performance has been associated with almost all other workplace outcomes and is thus of both theoretical and practical interest. In most of past studies, job performance is examined as a consequence of other outcomes e.g. as a consequence of psychological outcomes such as job satisfaction, burnout, and employee engagement, among others (eg. Demerouti et al., 2010). The level of job performance has been found to increase with increased family motivation (Menges, Tussing, Wihler and Grant, 2017), organisational support (Karatepe and Aga, 2016), and supervisor and co-worker support (Kim, Hur, Moon and Jun, 2017). Elsewhere job performance is linked to subsequent behavioural outcomes such as turnover intentions (Biron and Boon, 2013; Zimmerman and Darnold, 2009), along with outcomes such as absenteeism, presenteeism, innovative behaviour, organisational citizenship behaviour and knowledge sharing, which are discussed next.

### 5.4.3 Innovative Behavior

Innovative behavior is the intentional generation, promotion and realization of new ideas within a work role, work group or organisation, in order to benefit role performance, the group or the organization (Kanter, 1988; Scott and Bruce, 1994; West and Farr, 1989). Also, it can be defined as all individual actions directed at the generation, introduction and/or application of beneficial novelty at any organizational level (Kleysen and Street, 2001). It is also called individual innovation (Bunce and West, 1995), and innovative behavior (Janssen, 2004; Kleysen and Street, 2001).

Great ideas and innovative behaviors are byproducts of people's minds (Moqbel, 2012). Previous work has indicated that employees' innovative behaviour depends greatly on their interaction with others in the workplace (Anderson et al., 2004; Zhou and Shalley, 2003). As the first step,

employees may benefit from engagement with their colleagues, engaging in behaviours focused on exploring opportunities, identifying performance gaps or produce solutions to problems.

Therefore, identifying how innovative behaviour can be fostered through increased engagement and knowledge sharing among employees has been a focus of attention (Agarwal, 2014; Agarwal, Datta, Blake-Beard and Bhargava, 2012; Moustaghfir et al., 2013), with technologies often considered to play a meaningful role in the innovative behaviour process (Chung and Kim, 2017).

### 5.4.4 Organisational Citizenship Behaviour

Organisational citizenship behaviour is another behavioural outcome considered in organisational and human resources studies. It is defined as an individual behaviour that is discretionary, not directly or explicitly by the formal reward system and that in aggregate promotes effective functioning of the organization (Organ, 1988). Studies examining organisational citizenship behaviour (OCB) suggest that it enhances organizational effectiveness (Podsakoff, Ahearne and MacKenzie, 1997). Thus, it is found to be an important factor that contributes to the survival of an organization (Organ, 1988). Employees satisfaction and organisational commitment can impact and effect organisational citizenship behaviours within an organization (Penner, Midili and Kegelmeyer, 1997; Tang and Ibrahim, 1998).

OCB is related to a number of individual-level outcomes, including employee performance, and a variety of withdrawal-related criteria, e.g., employee turnover intentions, actual turnover, and absenteeism (Podsakoff, Whiting, Podsakoff and Blume, 2009). Employees are more likely to offer extra-role behaviour, such as helping co-workers solve work-related problems, when they are satisfied with their jobs or committed to their organisations (Bolino et al., 2002). In addition, OCB accounts for the relationships between job satisfaction and knowledge sharing behaviour (Teh and Sun, 2012). Individuals with higher OCB are more willing to increase the welfare of others, thereby they will be more favourable to share knowledge (Hsu and Lin, 2008).

### 5.4.5 Knowledge Sharing

Closely related to organizational citizenship behavior is knowledge sharing behaviour. Equally, job outcomes such as job satisfaction and employee involvement are related to knowledge sharing. It is defined as the informal communication process involving the sharing of knowledge between co-workers (Siemsen, Roth and Balasubramanian, 2008). Employees who share knowledge are likely to find their job to be easier and, it saves them time for more substantive tasks (Teh and Sun, 2012). Recently, majority of the studies examining knowledge sharing behavior are focused on new technology such as internet. The internet enables exchange of knowledge in ways that were not possible before (Hsu, Ju, Yen and Chang, 2007).

Knowledge sharing is associated with a number of workplace outcomes e.g. job involvement, job satisfaction, organisational commitment (Teh and Sun, 2012). When employees are satisfied with their job, committed and involved, they are more likely to share knowledge with those around them (Teh and Sun, 2012). Lately, the uses of technology such as internet and social network sites have made it easy for employees to reach and share knowledge across different geographically located places (Huang et al., 2010).

### 5.4.6 Absenteeism

Absenteeism is any failure of an employee to report for or to remain at work as scheduled, regardless of the reason (Muchinsky, 1977). It is a costly personnel problem attracting the attention of theoreticians and practitioners alike (Hausknecht, Hiller and Vance, 2008). Absenteeism can be distinguished into two types, involuntary and voluntary (March and Simon, 1958). Involuntary absenteeism includes certified sickness while voluntary absenteeism includes vacation and uncertified sickness. Voluntary absenteeism is under the control of the employee, and sometimes includes personal aims such as employment prospects e.g. job interviews (Miller, 1984), while on the other side involuntary absence is beyond the employees immediate control.

Voluntary absenteeism and other withdrawal behaviours reflect less observable attitudes (Hanisch and Hullin, 1991). For example, an employee who is absent from work is consciously or unconsciously expressing negative attachment to the organisation. Employees with low commitment often resort to absenteeism behaviours (McDermott, Keating, Chênevert, Jourdain, Cole and Banville, 2013). Committed and satisfied employees are less likely to be absent from work, increasing job satisfaction and organisational commitment seem to be good strategies for reducing absenteeism (Diestel, Wegge and Schmidt, 2014; Dhaini, Zúñiga, Ausserhofer, Simon, Kunz, De Geest and Schwendimann, 2016). In order to reduce levels of absenteeism in the workplace, organisations must improve their work conditions, e.g. provision of internet and supportive leader behaviour (Biron and Bamberger, 2012). Stressful and poor work conditions (e.g. lack of adequate technology) are more likely to increase absenteeism (Ebert, Kählke, Buntrock, Berking, Smit, Heber and Lehr, 2018; Mudalyand Nkosi, 2015).

### 5.4.7 Presenteeism

Presenteeism is a behavioural work outcome that has become the subject of increasing interest for management scholars (e.g., Simpson, 1998; Worrall, Cooper and Campbell, 2000) and occupational health scholars (e.g., Virtanen, Kivima¨ki, Elovainio, Vahtera and Ferrie, 2003).

While the presenteeism concept has been associated with the idea of working through illness (Aronsson, Gustafsson and Dallner. 2000; McKevitt, Morgan, Dundas and Holland, 1997), more generally it refers to any circumstance where an employee is present in the workplace but less than fully productive (Johns, 2010). This can occur due to distraction or pre-occupation with other matters (Yildiz, Yildiz, Zehir, Altindağ, Moloğlu and Kitapci, 2017). Organisations that better manage presenteeism are considered at an advantage (Hemp, 2004). To better manage presenteeism behaviours, organisations try to provide support to employees such as using communication mediums to share their problems or distractions with others. The support they get through communication can help them root out the problems or distractions (Zhou, Martinez, Ferreira, and Rodrigues, 2016). However, the same communications medium can themselves become a cause of presenteeism where employees may end up being distracted and spending too much time on the phone, on social network sites or the internet (Brooks, 2013).

## 5.5 Inter-relations Amongst the Outcomes

Almost all the studies examining work outcomes have indicated that there are relationships between these outcomes e.g. among the psychological outcomes, among the behavioural outcomes and between psychological and behavioural outcomes. For example, employee involvement has been reported to have numerous benefits including increased individual performance, less absenteeism and reduced employee turnover (e.g., Manz and Sims, 1987; Daily and Bishop, 2003).

Work-life balance practices can influence job performance, and turnover intentions (Beauregard and Henry, 2009).

Significantly, psychological work outcomes have been found to influence behavioural outcomes. For example, in a number of research findings job performance and turnover intentions are outcomes of job satisfaction and organisational commitment (e.g. Parker et al., 2003; Carr et al., 2003; Miao et al., 2017). Engagement was identified as a predictor of job satisfaction, organisational commitment, turnover intention and organisational citizenship behaviour (Saks, 2006). Table 5.1 below shows a summary of the inter-relations between the outcomes.

| Outcome 1 | Outcome 2 | Inter-relation |
|---|---|---|
| Job satisafaction | Job performance | Positive (Bowling et al., 2015; Lu et al., 2016) |
| | Turnover intention | Negative (Bowling et al., 2015) |
| | Organisational commitment | Positive (Bowling et al., 2015) |
| | Employee engagement | Positive (Saks, 2006) |
| | Employee involvement | Positive (Saal, 1978) |
| | Work-life balance | Positive (Haar et al., 2014) |
| | Organisational citizenship behaviour | Positive (Penner et al., 1997) |
| | Knowledge sharing | Positive (Teh and Sun, 2011) |
| | Absenteeism | Negative (Dhaine et al., 2016) |
| Job performance | Burnout | Negative (Demerouti and Moms, 2002) |
| | Employee involvement | Positive (Manz and Sims, 1987) |
| | Work-life balance | Positive (Beauregard and Henry, 2009). |
| Employee involvement | Absenteeism | Negative (Manz and Sims, 1987) |
| | Turnover intention | Negative (Daily and Bishop, 2003) |
| Work-life balance | Organisational commitment | Positive (Haar et al., 2014) |
| Burnout | Employee engagement | Negative (Maslach et al., 2000) |
| | Turnover intention | Positive (Crawford et al., 2010) |
| | Organisational commitment | Negative (Crawford et al., 2010) |
| Employeee engagement | Turnover intention | Negative (Schaufeli and Bakker, 2004) |
| Organisational citizenship behaviour | Organisational commitment | Positive (Penner et al., 1997) |
| Absenteeism | Organisational commitment | Negative (McDermott et al., 2013) |

*Table 5.1: Inter-relations between the Outcomes*

Therefore, it is important to examine how these discussed inter-relationships playout in the context of social network sites in the workplace. Chapter 10 discusses the outcomes as consequences of SNS use, and the inter-relations in details.

## 5.6 Conclusion

This chapter has discussed psychological and behavioral outcomes for individuals in the workplace. It has been suggested that there are relationships amongst the different workplace outcomes, both positive and negative relationships. Further, the review indicated that different workplace outcomes can be manipulated by mechanisms such as family, colleague or supervisor support. Recently, information systems e.g. internet and social network sites are being used as a

medium to offer support. This chapter identified a set of psychological and behavioural outcomes that may usefully be explored in the IS literature as consequences of IS usage.

In order to fully understand the relationship between information systems usage, particularly SNS usage and work outcomes. The next chapter reviews the IS literature in more detail to better understand the extent to which SNS usage influence workplace outcomes. A systematic literature review of the impact of social network sites on psychological and behavioural outcomes in the workplace is presented and the available evidence is synthesized to reach a conclusion as to which workplace outcome effects are most supported by past studies.

# CHAPTER 6: IMPACT OF SOCIAL NETWORK SITES ON PSYCHOLOGICAL AND BEHAVIOURAL OUTCOMES IN THE WORKPLACE: A SYSTEMATIC LITERATURE REVIEW

An earlier version of this chapter has been published as: Nkwe, N and Cohen, J, (2017). "Impact of social network sites on psychological and behavioural outcomes in the work-place: a systematic literature review". In Proceedings of the 25th European Conference on Information Systems (ECIS), Guimarães, Portugal, June 5-10, 2017

## 6.0 Introduction

The literature review in Chapter 5 revealed established and less examined workplace outcomes. Building on the previous chapter, this chapter presents results of systematic review (SLR) that examined literature from the field of information systems and related fields including psychology and management, to synthesizes the available evidence and reach a conclusion on what types of workplace outcomes are most supported by past studies of SNS usage.

In doing so, this chapter addresses the study's second research question: *What is the available evidence regarding the impact of SNS usage on work outcomes?*

Answering this question is important to the thesis because it will create a firm foundation for advancing knowledge. By integrating findings and perspectives from many findings, this review identifies the different outcomes, and their classification. Subsequently, chapter 10 builds on review and examines the impact of SNS use on the identified outcomes.

## 6.1 Overview of Social Network Sites and Workplace Outcomes

Social network sites (SNS) are web based platforms used to build social networks and relations among individuals who share similar interests, activities, backgrounds, or real-life connections (Ellison, 2007). Among the most popular are Facebook, Twitter, LinkedIn and Instagram. These SNS typically allow participants to communicate, share media such as videos and photos, and share knowledge. SNS can be accessed from mobile devices such as smartphones and tablets thus providing users with the opportunity to interact with their social network irrespective of the time and place (Powell, 2009). SNS content is largely user generated (Soliman, 2012), social and professional community orientated (Ellison, 2007), and relationship-based (Buettner, 2015). The number of SNS users increased from an estimated 1 billion in 2010 to 3 billion by 2015 (Digital Statshot Report, 2015; The Statistics Portal, 2015; Zolkepli and Kamarulzaman, 2015).

The impact of social network sites (SNS) on individuals' social lives has received significant research attention (e.g. Greenhow and Burton, 2011; Ito, Horst, Bittanti, Boyd, Herr-Stephenson and Lange et al., 2008; Livingstone, 2009; Selwyn, 2007). However, SNS use may also have impacts for individuals in the workplace. Some past studies have attributed positive outcomes to

the use of SNS at work. For example, employees who use SNS frequently have been found to be more productive and more satisfied with their work environment than the average employee (Elvolv, 2015), and others report improved job performance and improved communication (AT and T, 2008; Bennett, Owers, Pitt and Tucker, 2010; Leidner, Koch and Gonzalez, 2010; Patel and Jasani, 2010; Zhang, Gao, Chen, Sun and de Pablos, 2015).

Yet, SNS use may also have created problems in the workplace. For example, some have argued that employee engagement and productivity may be lost through SNS use (Clark and Roberts, 2010), and that the boundaries between personal and professional spaces may blur (Dutta, 2010). Information overload, time wastage, role conflict, lack of privacy, lack of productivity and low performance are other potentially negative outcomes (Computing 2009; D'Abate and Eddy 2007; Nucleus 2009; O'Murchu, Breslin and Decker, 2004; Rooksby, Kahn, Keen, Sommerville and Rooksby, 2009; Shepherd, 2011). These negative outcomes may result from addictive usage behaviours (Griffiths, 2012; Ryan, Chester, Reece and Xenos, 2014; Rooksby et al., 2009).

Thus the impacts of SNS use on individuals' work outcomes remains an open and debatable question (Aguenza and Som, 2012; Bennett et al., 2012; Charoensukmongkol and Moqbel, 2014; Moqbel, 2012). To contribute to clarifying the nature of these impacts, the research question examined in this chapter is: *What is the available evidence regarding the impact of SNS usage on work outcomes?*

In answering the research question, this chapter presents results from a systematic review of extant quantitative and qualitative evidence on the impacts of SNS use on employees in the workplace. Novel insights to be generated include classification of work outcomes, and identifying negative and positive impacts of SNS usage in the workplace. Work outcomes are known from the previous chapter to include both behavioural and psychological outcomes. Extending beyond a focus on job performance as the most commonly explored outcome, this chapter includes a search for other factors such as absenteeism and turnover intention, amongst others. The review draws on literature in the field of information systems, and related fields including psychology and management, and synthesizes the available evidence. Results provide insights for future research in this area.

## 6.2 Conceptual Background

The work of this chapter was largely informed by Rhoads, Singh and Goodell (1994) who classified individual workplace outcomes into two dimensions, namely psychological outcomes and behavioural outcomes. Psychology outcomes include job satisfaction, organisational commitment, employee involvement, employee engagement and burnout, while behavioural outcomes include job performance, turnover intention, innovative behaviour, presenteeism, absenteeism, organisational citizenship and knowledge sharing and learning. Additionally, the framework was extended by considering the Organizational Commitment Model of Meyer, Stanley, Herscovitch and Topolnytsky (2002), the Knowledge sharing framework by Wang and Noe (2010), the Innovation and organization framework by Zaltman, Duncan and Holbek (1973), as well as Ployhart and Bliese's (2006) adaptability theory. Figure 6.1 identifies the relevant workplace outcomes derived from these frameworks, and Table 6.1 and 6.2 define them.

| Psychological Outcome | Definition |
|---|---|
| Job satisfaction | Pleasurable or positive emotional state resulting from the appraisal of one's job or job experience (Locke, 1976) |
| Organisational commitment | The relative strength of an individual's identification with and involvement in a particular organization (Porter, Steers, Mowday and Boulian, 1974). |
| Burnout | Associated with negative job related 'state' that occurs when employees experience stress for a prolonged period of time (Charoensukmongkol, 2015; Maslach, Schaufeli and Leiter, 2011). |
| Employee engagement | The exercise by employees of influence over how their work is organised and carried out (Fento-O'Creevy, 2001). |
| Employee involvement | The exercise, by employees of influence over how their work is organized and carried out (Fenton-O'Creevy, 2001) |
| Work-life balance | Employee's social life interferes with work or work interferes with social life (Greenhaus and Beutell, 1985). |

*Table 6.1: Psychological Work Outcomes*

| Behavioural Outcome | Definition |
|---|---|
| Job performance | Actions that are relevant to the goals of the organizationor self-reported work performance (McCloy, Campbell and Cudeck, 1994). |
| Turnover intentions | Employee's intent, desire and plan to leave the organization(Igbaria and Greenhaus, 1992) |
| Innovative behaviour | Introduction and/or application beneficial novelty at any organization (Kleysen and Street, 2001) and it may include new product, technology or change in procedures. |
| Presenteeism | Where employees come to work but underperform such as producing lower quantity or quality of work, and repeating tasks (Hemp, 2004; Simpson, 1998; Zengerle, 2004), |
| Absenteeism | Any failure of an employee to report for or to remain at work as scheduled, it may be due to stress or medical illness (Casio, 2010). |
| Organisational citizen behaviour | Employees' voluntary commitment within an organization or company that is not part of his or her contractual tasks (Farh, Zhong and Organ, 2004) |
| Knowledge sharing and learning | Employees' exchange of knowledge and experiences with colleagues or helping others to solve problems (Cummings, 2004). |
| Adaptability | Employees' ability to cope with change in their work (Ployhart and Bliese, 2006) |

*Table 6.2: Behavioural Work Outcomes*

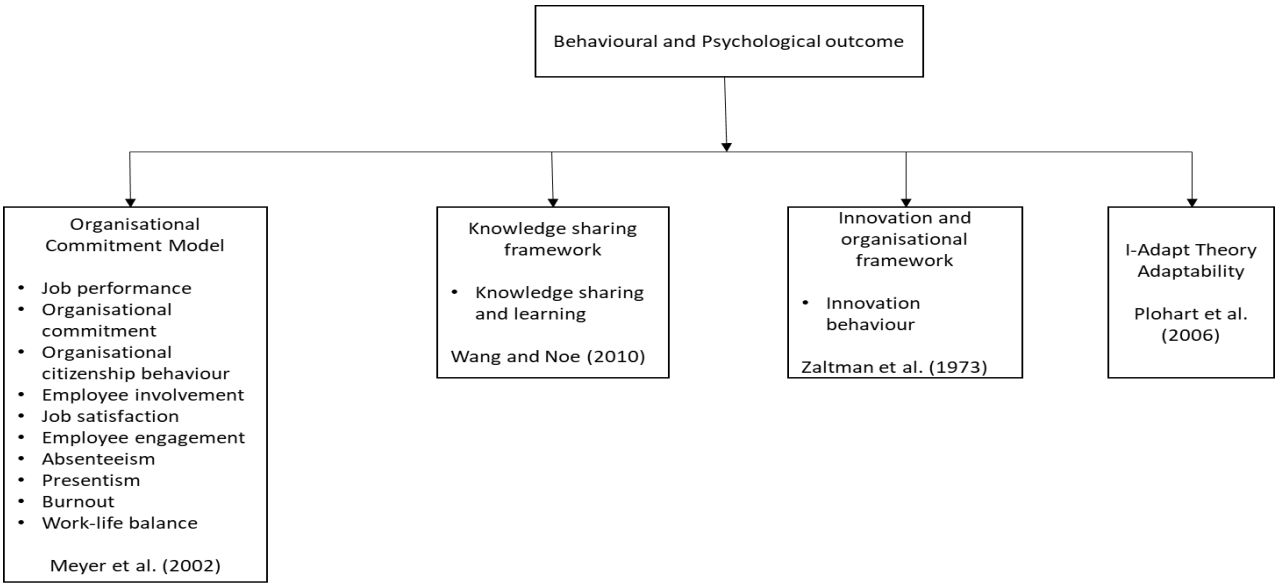



*Figure 6.1: Workplace Outcomes Framework*

## 6.3 Review Protocol

The study followed the steps for a systematic literature review as defined by Webster and Watson (2002). The steps are literature search, study selection, coding, results and discussion[8].

### 6.3.1 Literature Search Strategy

The systematic search of literature covered all articles published from January 2003 up to August 2016. The decision to include literature from 2003 onward was because Friendster, MySpace, and LinkedIn were among the first examples of SNS that started in 2003 prior to Facebook in 2004 (Boyd and Ellison, 2007). A search for literature was conducted in the following online databases: ACM, Jstor, Emerald, ABI/INFORM Global, ProQuest, Web of Science, EBSCO and Science Direct. These databases have been considered appropriate in past systematic literature reviews and meta-analysis for their amount of quality academic content relevant to information systems and management (Kim, Moon and Park, 2015; Mou, Shin and Cohen, 2017; Schepers and Wetzels, 2007). In addition to the databases searched, the following top information systems journals were also individually searched just to ensure no omissions. The journals include MIS Quarterly, Information Systems Research, Journal of Information Systems, Journal of Management Information Systems, Journal of Strategic Information Systems, Journal of Association of Information Systems, European Journal of Information Systems, and Journal of Information Technology.

Having identified the data sources, the next step for the systematic review was to define the search terms. The search string was constructed around this study's focus on employees as the population of interest, SNS as the technological intervention, and individual outcomes in the workplace as criterion variables of interest.

Search terms for SNS included: "*social network sites" or "social media"* or "*social network service"* or "*social networking sites"*, or "*Facebook"* or "*Twitte*r". Facebook and Twitter were included in the search as they are common SNS platforms and there was a high likelihood that they would be referenced in relevant papers *(*Ahmad, Mustafa, and Ullah, 2016; Huang, 2016; Kim, Sohn and Choi, 2011).

The search terms also included the behavioural and psychological outcomes of SNS use for individuals in the workplace. The search terms for outcomes were based on outcomes identified in Tables 6.1 and 6.2.

Because this chapter was interested in both quantitative and qualitative evidence, search terms were not used to restrict the results based on methodological consideration. The search yielded 171 results after removal of duplicates as shown Figure 6.2.

[8] Supervisor of the work (Prof. Cohen) assisted in checking the coding of variables, correlations and reliabilities. This is as per the recommended approach (Borenstein et al. 2009) for a meta-analysis that there is agreement on coding among the researchers prior to analysis.

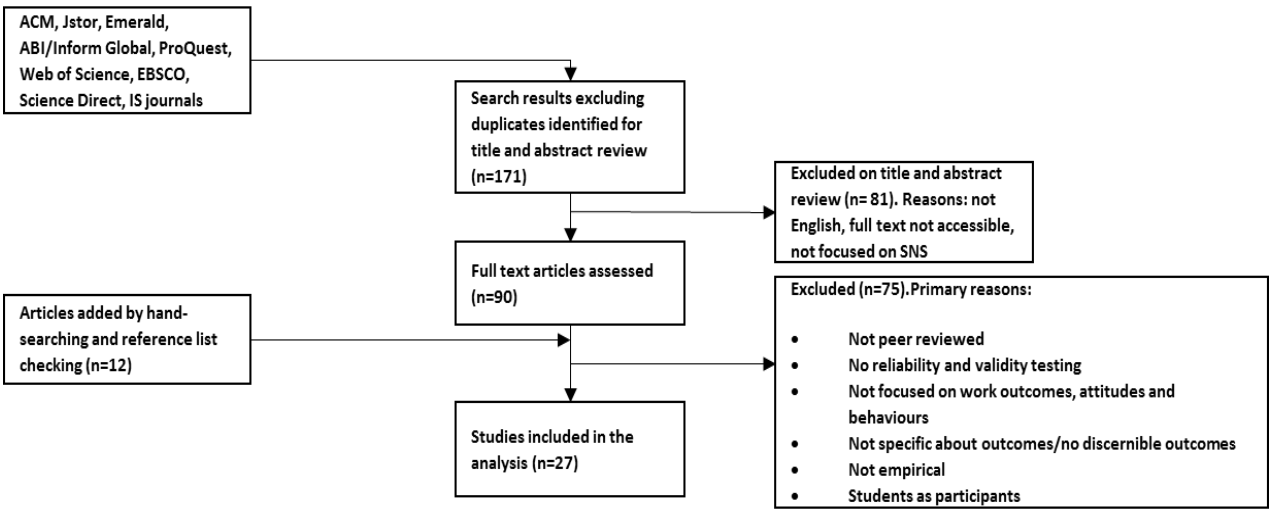



*Figure 6.2: Selection Process*

### 6.3.2 Study Selection

A review of titles and abstracts was carried out. At this point, non-empirical studies, those not focused on SNS or did not study employees, those where full text was not accessible, and which were not in English were excluded. Next, the full-text of remaining articles was reviewed. Articles were excluded if they did not meet the following criteria:

- Did not meet study definition of SNS as public and enterprise web-based platforms used to build social interactions and relations;
- Had no empirical focus on work outcomes;
- Lacked peer review or were of poor quality (poor methodological quality e.g. quantitative papers which did not present tests for reliability and validity (e.g Olalekan, Remi and Eniola, 2013)
- Did not examine employees as respondents such as using a student sample (e.g. Lynch, 2012; Ryberg and Christiansen, 2008).

At this point, a number of additional articles were identified for inclusion in the review by examining the reference lists of the extracted papers. Twenty-seven studies met criteria for inclusion. The studies are profiled in Table 6.3.

| |
|---|
| Year of publication<br>2008 (2); 2009 (2); 2010 (1); 2011 (3); 2012 (3); 2013 (5); 2014 (9); 2015 (2) |
| Country<br>UK (1); China (3); Germany (1); Europe (across different countries) (1); Greece (1); Netherlands (1); Norway (1); Spain (1); South Africa (1); Taiwan (1); Thailand (2); Turkey (1); USA (3); Across the World (different continents) (2); Yemen (1); Not stated (6) |
| Type of SNS<br>General (SNS/Social media) (19); Facebook (1); Facebook/Twitter (Mixed) (1); Enterprise Social Network (6) |
| Type of publication<br>Journals (19); Conferences (4); Thesis (4) |

*Table 6.3: Summary of the Included Articles*

The reviewed articles were identified from sixteen different journals, three conference proceedings and four dissertations were also included (see Table 6.3).

## 6.4 Coding

In order to code the various workplace outcomes identified in Figure 6.1, Table 6.1 and Table 6.2, the conceptual and/or operational definitions of the studies' constructs were examined to confirm their consistency with the definition of each of the outcomes (see Table 6.4). This is considered a relevant approach by Bandara, Miskon and Fielt (2011), Brereton, Kitchenham, Budgen, Turner and Khalil (2007) and Webster and Watson (2002).

| | |
|---|---|
| Job satisfaction (SAT) | Employees' affective reactions to their job experience (Locke, 1976; Hackman and Oldham, 1975), e.g. I am very satisfied with my current job (Moqbel, 2012). |
| Job performance (PER) | Work performance including productivity, quality, or effort in carrying out work (Andreassen and Palleseen, 2014; Zhang et al., 2015). |
| Turnover intentions (TUR) | Intent, desire or plan to leave the organization (Igbaria and Greenhaus, 1992), and] including actively looking for another job (Moqbel, 2012). |
| Innovative behaviour (INB) | Individual actions directed at the generation, introduction or application of beneficial novelty at any organizational level (Kleysen and Street, 2001). |
| Absenteeism (ABS) | Any failure of an employee to report for or remain at work as scheduled, regardless of the reason (Casio, 2010). |
| Organisational commitment (COM) | A worker having emotional attachments to the organization they work in (Allen and Meyer, 1990). |
| Employee involvement (INV) | The exercise, by employees of influence over how their work is organized and carried out (Fenton-O'Creevy, 2001). |
| Employee engagement (ENG) | Harnessing of an employee's self to his/her work role (Kahn, 2010). An engaged employee expresses themselves physically, cognitively, or emotionally during role performances (Kahn, 1990). |
| Organisational citizenship behaviour (OCB) | Employees' voluntary commitment within an organization or company that is not part of his or her contractual tasks. |
| Work-life balance (WLB) | Degree to which an employee's social life interferes with work or work interferes with social life. (Greenhaus and Beutell, 1985). |
| Presenteeism (PRE) | Situations where employees come to work but underperform such as producing lower quantity or quality of work, making mistakes, and repeating tasks (Hemp, 2004; Simpson, 1998; Zengerle, 2004), and often engage in non-work-related activities such as personal business for a portion of the workday (D'Abate and Eddy, 2007). |
| Knowledge sharing and learning (KNW) | Whether employees have learned by exchanging knowledge and experiences with colleagues or helped others to solve problems, develop new ideas, or implement policies or procedures (Cummings, 2004; Pulakos, Dorsey, and Borman, 2003). |
| Burnout (BUR) | Employee's prolonged response to chronic emotional and interpersonal stressors on the job, including exhaustion, cynicism, and inefficacy (Maslach, Schaufeli and Leiter, 2001). Burnout might include dimensions such as emotional exhaustion, depersonalization and lack of personal commitment (Charoensukmongol, 2015). |
| Adaptability (ADP) | Employees' ability to cope with change in their work (Ployhart and Bliese, 2006). Possible measures reflect that a respondent finds it easy to adjust to doing new tasks or finds it very encouraging when the work they do in their job changes (O'Connell, McNeely and Hall, 2008; Ployhart and Bliese, 2006). |

*Table 6.4: Coding of Variables*

## 6.5 Overview of the Included Studies

The 27 articles which met the inclusion criteria were published between 2008 and 2015, see Table 6.3. There has been an increase over the years with studies peaking in 2013/14. Even though SNS started in 2003, a lot of earlier research was focusing on understanding SNS fundamentals. The earlier studies included SNS definitions, the differences between SNS and traditional media, and exploring characteristics such as user generated content which are specific to SNS. After these

more exploratory studies, it is only more recent research that has examined the relationship between SNS and other concepts such as employee behaviours and performance outcomes.

The studies were conducted in more than fifteen (15) countries. USA and China have three studies each. Six studies did not explicitly state the country context. From these countries, technology companies were the highest participants. Out of 27 studies, 8 were from technology companies, one from banking and hospitality industry, two from services industry and 15 were cross-sector.

Different types of SNS were found in different papers. Nineteen (19) papers discussed SNS in general (not platform specific). Two (2) papers were platform specific, discussing Facebook and Facebook-Twitter respectively. Enterprise social network sites (ESN) were examined in 6 papers.

## 6.6 Methodological Review

Table 6.5 summarizes the research designs used by the articles. Classification of articles was adopted from Ouirdi, Ouirdi, Segers and Hendrickx (2015). Qualitative methods were used in 37 % of the articles (n=10), of which seven were case studies and three using interviews and quantitative methods were used in 60 % of the articles (n=16). Only one article (3 %) included survey and interview. All the quantitative articles (n=16) used survey method.

| |
|---|
| Workplace Outcomes<br><br>Job satisfaction (3); Job performance (10); Organizational commitment (4); Innovation behavior (1); Turnover intention (1); Absenteeism (1); Employee involvement (0); Employee engagement (2); Organizational citizenship behavior (1); Work-life balance (1); Presenteeism (0); Knowledge sharing and learning (12); Burnout (2); Adaptability (1) |
| Study Methods<br>Case study (7); Surveys (16); Survey and Interview (1); Interviews (3)<br>Mixed (1); Qualitative (10); Quantitative (16) |

*Table 6.5: Workplace Outcome and Study Methods*

## 6.7 Results

A total of fourteen (14) outcomes were identified from the framework in Figure 6.1. The systematic review revealed that only ten (10) outcomes had been the focus of the articles, as shown Table 6.5. Although work involvement and preseentism were discussed in the literature review in some of the articles (e.g. Moqbel et al., 2013), none of the articles had examined them empirically.

Articles often examined more than one outcome, and from the 27 articles, knowledge sharing and learning was found to be the most studied outcome. This outcome appeared in 12 articles, followed by performance with 10 articles, organisational commitment with 4 articles, job satisfaction with 3 articles, work engagement and burnout with 2 articles each, work-life balance, innovative behaviour, turnover intention and absenteeism with 1 article each. Adaptability, presenteeism, organisational citizenship behaviour and employee involvement were not examined as outcomes of SNS in the included articles.

The impacts of SNS use on the psychological workplace outcomes as evidenced in the reviewed articles are discussed next.

## 6.8 Psychological Workplace Outcomes

Three quantitative studies but no qualitative studies examined the link between SNS use and *job satisfaction* as a psychological outcome. In a study of 426 respondents conducted in both Yemen and USA by Moqbel (2012), the reported correlations between SNS use and job satisfaction were positive and significant in both samples. Both countries were using Facebook more than other SNS platforms, although intensity of use was lower in the US. Similarly, Charoensukmongkol (2014) in a study of 170 employees in Thailand found that intensity of SNS use is positively and significantly related to job satisfaction ($r=0.144$, $p<0.05$). This is despite only 13% reporting that social media use related to work. The third study by Moqbel (2013) found similar positive effects. Taken together, all reviewed studies found SNS use and job satisfaction to be positively related based largely on the social support, social resources and social ties provided by SNS (Moqbel, 2012).

Three (3) quantitative studies identified a positive relationship between SNS use and *organisational commitment* as a psychological outcome (Eren and Vardarlier, 2013; Moqbel, 2012; Moqbel et al., 2013). However, results in Moqbel et al. (2013) and Moqbel (2012) were not statistically significant and only a small percentage of respondents indicated using SNS for work related purposes. One qualitative study found that employees demonstrated higher organisational commitment such as identifying with and being more attached to their organization when they had an opportunity to communicate with other employees using the social-media–internal-communication-platform (Papageorgiou, 2014). This is likely because when employees can use SNS to take part in decisions and come up with solutions, whey they have a voice, or are supported by others at work through an SNS platform, they may be more likely to see themselves as part of the organization and interested in the future success of that organisation.

Two (2) quantitative studies reported contradictory findings on the association between *burnout* as a psychological outcome and SNS use (Bucher, 2013; Charoensukmongkol, 2015). One study found that SNS use is positively associated with emotional exhaustion as a dimension of burnout in the workplace (Charoensukmongkol, 2015). In contrast, Bucher (2013) found a negative effect i.e. SNS use was associated with less burnout. This is explained by the job-demand-resources model which argues that employees who experience unfavourable work conditions need to rely on some sort of support to buffer themselves from stress (Demerouti and Bakker, 2011; Ren et al., 2013). Employees who experience high job demand may perceive SNS to be important in helping to relax and take breaks from their stressful work.

One qualitative study (Trimi and Galanxhi, 2014) and one mixed methods (Swartz, 2010) study found an association between SNS use and *employee engagement* as a psychological outcome. In the first study, the enterprise social network site was found to have created new possibilities for engagement and participation as it engaged and immersed employees in their work (Trimi and Galanxhi, 2014). In the second study, SNS use was found to have resulted in employees feeling more engrossed in their work, and feeling stronger and more vigorous in their job (Swartz, 2010). Notably, the type of use in both these studies was focused on work or utilitarian use of the SNS rather than social or personal use. The observed relationship may be influenced by the type of use.

One psychological outcome that was not examined or discussed in any of the identified studies was *employee involvement*. Employee involvement occurs when employees have a say and influence in their jobs. Trimi and Galanxhi (2014) referred to employees using SNS to take part in decisions, but the direct effect of SNS use on employees' feelings of involvement have not yet been tested, and is an identified gap for future research.

Two (2) qualitative studies were found that supported a link between SNS use and *work-life balance* such that SNS use has been found in one case to blur the boundary between work life and social life (Koch et al., 2012; Skeel and Gurdin, 2009). While another concluded that work is interfering with social life and social life is interfering with work (Skeel and Gurdin, 2009). However, the studies provided no insights into the nature of SNS use, e.g. whether social or hedonic in nature versus more work-oriented or utilitarian. Thus it is not yet clear whether the observed relations may be explained by how the SNS were being used in the workplace context. Also, no quantitative studies were included that had examined the relationship between SNS use and work-life balance.

### 6.9 Behavioural Work Outcomes

Nine quantitative studies but no qualitative studies examined the link between SNS use and *job performance* as a behavioural work outcome. A study surveying 174 employees in Germany found that employees who use SNS at work are more likely to perform better at work (Kugler et al., 2015). Another survey of 1799 employees in Greece found SNS use to be positively and significant related to job performance ($F(2, 1796) = 6.08$, $p < 0.005$) (Leftheriotis and Giannakos, 2014). One third (33%) of employees indicated that they do not use SNS for their work at all. Other studies (Leidner et al., 2010; North, 2010; Moqbel, 2012; Shami et al., 2014; and Charoensukmongkol, 2014) found similar positive effects between SNS use and job performance. An explanation for this positive effect is that SNS provide for social capital. Social capital can have a positive impact on work performance since it makes it more convenient and easier for employees to obtain and share information with colleagues and friends. SNS use also facilitates exchange of knowledge, provides employees with social interactions for task advice and strategic information (McQuail, 2010; Cao et al., 2012). All of which can be performance enhancing.

Yet, some reviewed studies (Andreassen and Pallesen, 2014; Moqbel et al. 2013) have found negative or non-significant relationships between SNS use and job performance. A survey of 11 018 employees across different sectors in Norway asking about SNS use for personal purposes during working hours revealed that employees who use SNS for personal purposes during working hours exhibited lower job performance but the relationship was not statistically significant (Andreassen and Pallesen, 2014). While Moqbel et al. (2013) found that the SNS intensity lowers job performance. In both these studies the type of use was focused more on social and less on business-related relationships. Thus it appears that positive effect on job performance can occur in those settings where SNS use is focused on developing work-related social capital, communicating with colleagues and customers, watching market competition, and obtaining work-related resources and task advice (Andreassen and Pallesen, 2014; Leftheriotis and Giannakos, 2014; Moqbel et al. 2013) whilst negative effect might be more likely to occur when the use is related to

or predominantly for personal or social reasons. Future research should directly test the moderating effect of the purposes of SNS use.

SNS can provide a platform for employees to explore, develop, and adopt new ideas. One empirical study was found supporting this link between SNS use and *innovative behavior* (Moqbel, 2012). The results from both Yemen ($\beta$ =0.18) and USA ($\beta$ =0.23) samples in the study were significant. The explanation for this effect is based on social capital theory, where the exchange of ideas, knowledge and resources may help or improve creativity of employees (Coleman, 1988). Workers who use SNS may be experiencing this increased social support and thus be more motivated to explore, and develop or adopt new ideas. SNS can be used for product development and are a source of innovation in the product development process, and businesses are using their SNS community for market research to get feedback on products and features (Bughin, 2009; Moqbel, 2012; Parameswaran and Whinston, 2009). Examining the effects of SNS use on innovative behavior of employees across different industry contexts is thus a promising area for future research.

Only one article discussed SNS use and its relation to *turnover intention*. Moqbel (2012) provides only weak support for the hypothesis that SNS use may increase turnover intentions. The results in Yemen were not significant but were significant in the USA sample ($\beta$ =0.14, $p<0.05$). Employees who use SNS at work have access to a large social network, which might provide them with better opportunities for finding jobs (Moynihan and Pandey, 2008; Moqbel, 2012). The relationship between SNS use and turnover is likely to be subject to a number of additional factors and it would be premature to draw any conclusions from the available evidence.

Moqbel (2012) examined whether SNS use has an influence on *absenteeism*. SNS use can help reduce the causes of absenteeism by providing social support. Potential pathological influences of stressful events that could cause absenteeism can be mitigated or curbed by social support provided by SNS use (Moqbel, 2012). The results however showed that reduced absenteeism is not an established outcome of SNS use as statistically significant relationships could not be found in Moqbel's Yemen or US sample. SNS usage may actually contribute to absenteeism directly by advertising or make employees aware of events (e.g. funeral, concert) or indirectly by triggering other outcomes which may lead to absenteeism such as depression or burnout (Pranjic and Males-Bilic, 2014; Welthagen and Els, 2012). This effect of SNS use on absenteeism behaviours requires additional research in order to better understand whether certain contexts of use and certain types of use are more or less associated with potential for absenteeism.

Unlike absenteeism, *presenteeism* as a workplace behaviour occurs when employees are physically present at work but are not performing to the best of their ability due to lack of concentration and absentmindedness (D'Abate and Eddy, 2007). SNS use might contribute to employees' lack of concentration and absentmindedness and may result in higher levels of presenteeism. Certain companies like those which fall under the essential services (e.g. hospitals) may introduce restrictions with regards to accessing SNS in the workplace in order to curtail presenteeism. No studies were found that examined the association of SNS use and presenteeism. Future work might consider presenteesim as a possible intermediate mechanism linking SNS use to other outcomes.

Five (5) quantitative empirical studies were found that supported the link between SNS use and *knowledge sharing* (Ali-Hassan et al., 2011; Cao et al., 2012; Chow and Chan, 2008; Tormo-Carbo et al., 2014; Van Puijenbroek et al., 2014). In one study of 307 participants drawn from 150 countries (Ali-Hassan et al., 2011), it was found that SNS use has a positive relationship with knowledge sharing ($r=0.308$, $p<0.01$). In a study of 485 participants in Spain employees were similarly found more likely to share knowledge when using SNS ($r=0.178$, $p<0.01$) (Tormo-Carbo et al., 2014). Three more quantitative studies found similar effects (Cao et al., 2012; Chow and Chan, 2008; Van Puijenbroek et al., 2014). Knowledge sharing through the use of SNS is observed both in public (Cao et al., 2012; Chow and Chan, 2008; Van Puijenbroek et al., 2014) and enterprises network sites (Ali-Hassan et al., 2011). In both cases, the use of the SNS is for expertise location, collaboration, and information access and social interaction with colleagues at work.

Qualitative studies similarly supported this association that SNS use is positively associated with knowledge sharing. Five studies were case studies (Denyer et al., 2011; Kline and Alex-Brown, 2013; Paraoutis and Saleh, 2009; Ryberg and Christiansen, 2008; Trimi and Galanhi, 2014l) and two additional studies were qualitative studies based on interviews (Jarrahi and Sawyer, 2013; Swartz, 2010). In one case study, ESN was used to share knowledge across teams, such as market positioning, business development and to drive improvements in product and service delivery (Denyer et al., 2011). In another case company, ESN was used as a potential to innovate or solve problems using the available knowledge resources wherever present in the local or global organization (Kline and Alex-Brown, 2013). A third case organizationencouraged employees to share information and collaborate amongst teams. These included discussion forums and other community facilities (Paraoutis and Saleh, 2009). A fourth case company initiative ESN to foster knowledge sharing amongst academic and industry practitioners (Kline and Alex-Brown, 2013). Taken together, the evidence suggest that SNS use and knowledge sharing are positively related. Networks and ties created by using SNS can provide employees with various sources of knowledge and foster a new form of information exchange (Cao et al., 2015). Therefore, SNS use can be a useful tool that supports knowledge sharing and reaching out. Employees who use SNS at work are more likely to share and receive information or be exposed to learning opportunities that arise from social networks than those who do not use SNS at work.

Closely related to learning and knowledge sharing is the concept of *adaptability* i.e. employees' ability to adapt to changes at work. The explanation of the association between SNS use and the employees' ability to adapt is based on adaptability theory. SNS use may influence employee adaptability by increasing communication and information sharing. Also, SNS use facilitates employees' learning to deal with dramatic, unpredicted, and unexpected environmental changes (Almahamid et al. 2010). Therefore, an employee who uses SNS is likely to adapt better. No studies explicitly examined adaptability as a workplace outcome.

None of the studies examine or mention the relationship between SNS use and *organisational citizenship behaviour*. Social exchange theory (Blau, 1964) suggests that employees tend to respond in kind to their co-workers and organization when treated favourably by their organization (Moqbel et al. 2013). The use of SNS may help employees to voluntarily commit within an

organization in ways that are not part of their contractual tasks, a link that future research should look to explore.

### 6.10 Discussion

The purpose of the SLR was to review the state of the existing evidence regarding the impact of SNS use on individuals' outcomes in the workplace. Twenty-seven (27) articles were reviewed to provide the theoretical rationale and evidence regarding the impact of SNS on individuals' outcomes in the workplace.

Ten (10) workplace outcomes were identified from the reviewed literature. Of these, knowledge sharing and job performance are two outcomes that have been examined most often. On the other hand, less attention has been paid to study of outcomes such as adaptability, presenteeism, employee involvement and organisational citizenship behaviour. There is still work to be done to understand the relationship between SNS usage and a comprehensive set of workplace outcomes.

The review revealed that social support theory has most often been drawn upon to explain the links between SNS use and workplace outcomes (Charoensukmongkol, 2014; Charoensukmongkol, 2015; Moqbel, 2012). The theory postulates that an individual who belongs to a community or social group will be cared by the members of the group (Glanz et al, 2002), and will receive assistance and be part of a supportive social network. Social support can be emotional, tangible, informational or companionship and intangible (House, 1981). Support can be from work or family, friends and organisations. Social support may influence workplace outcomes such as burnout, job satisfaction, employee involvement, employee engagement and job performance. SNS facilitate interaction amongst communities, and users through SNS can receive or give support within these communities. Support may include emotional support and instrumental support amongst others. For example, if colleagues offer emotional support such as posting supporting words or words of encouragement on SNS during tough times, then that may result into improved levels of employees' job satisfaction. With that emotional support, the employees may feel valued at work.

Social capital theory has also been drawn upon. This theory provides a similar argument to social support theory, i.e. that social support provides resources to people through social interactions (Lin, 2001 and Putman, 2004). These resources can in turn influence outcomes such as performance. It was drawn on in Moqbel et al. (2013) and Moqbel (2012) and used to support hypotheses linking SNS use to job performance, job satisfaction and organisational commitment. Other theories underpinning the past studies are media synchronicity theory and social exchange theory. Media synchronicity theory was drawn upon to explain why SNS use influence job performance (Cao et al., 2013). It suggests that SNS provide the employees with a communication medium which enables employees to achieve synchronicity in their work. Social exchange theory postulates that if employees perceive their organizational environment as supportive then they will feel obligated to reciprocate with beneficial behaviours (Zhang and Jia, 2010). It was used to explain the links between SNS use and job satisfaction and other work outcomes such as organisational commitment (Moqbel et al., 2013).

| Workplace Outcomes | Number of Qualitative Studies | Number of Quantitative Studies | Overall Evidence of Direction of Effect |
|---|---|---|---|
| Job satisfaction | - | 3 | + |
| Job performance | - | 8 | + |
| Organizational commitment | 1 | 3 | + |
| Innovative behavior | - | 1 | + |
| Employee engagement | 1 | 1 | + |
| Knowledge sharing | 5 | 5 | + |
| Burnout | - | 2 | contingent |
| Turnover intentions | - | 1 | inconclusive |
| Absenteeism | - | 1 | inconclusive |
| Work-life balance | 2 | 0 | inconclusive |
| Adaptability | - | - | no evidence |
| Organizational citizen behavior | - | - | no evidence |
| Employee involvement | - | - | no evidence |
| Presenteeism | - | - | no evidence |

*Table 6.6: Summary of the Effects*

A summary of the evidence is presented in Table 6.6. SNS use at work has been found to positively impact psychological work outcomes of job satisfaction, employee engagement and organisational commitment, and behavioural work outcomes of job performance, knowledge sharing and innovative behaviour. SNS use thus appears to result in increased 'positive' work outcomes. If these levels are increased, the organization will benefit because these individual outcomes contribute to the organisation's success (Engelbrecht, Heine and Mahembe, 2014). Employees who use SNS at work may thus be better placed to contribute positively to the success of the organisation. This might occur through mechanisms such as sharing of valuable information with colleagues, and this information may empower employees to propose innovative solutions which may contribute to the organisation's performance.

Outcomes such as burnout, turnover intentions, absenteeism and presenteeism might be considered 'negative' work outcomes, which may detract from individual and organisational performance. Evidence linking SNS use to these outcomes is however inconclusive. Although some evidence suggests that SNS use seems to fuel absenteeism (Moqbel, 2012), other evidence does not support this link (Hausknecht, Hiller, and Vance, 2008). The negative impacts may be due to employees being regularly informed by SNS communities and colleagues. For example, other users may post about vacancies and this may influence an employee to think about quitting their job.

There is similar contradictory evidence on burnout (Charoensukmongkol, 2015). Future research is needed to improve our understanding of the contexts and mechanisms through which SNS use might influence these outcomes. The existing evidence is largely supportive of SNS use impacting three psychological and three behavioural important workplace outcomes in a positive manner. However, other outcomes require further investigation.

## 6.11 Limitations

Despite all the efforts to undertake a comprehensive search and review of the articles, a few limitations are noted. Some of the articles were excluded due to the language barrier. They were not in English and this may have resulted in the authors omitting important papers. The articles which met the inclusion criteria were all published papers and other papers which were not published may have been left out. This may result in missing of important studies due to the problem of publication bias. A framework of workplace outcomes was developed for the purpose of the review and other potentially relevant workplace outcomes may have been omitted.

Despite these limitations, the review provided important insights into the use of SNS and work related outcomes. It included different studies which were based on different research methods, covered all the articles since the inception of SNS, examined different work related outcomes, and different types of SNS across various contexts of use.

## 6.12 Conclusion

The use of SNS in the workplace has been met with scepticism. A number of organisations have implemented policies aimed to curb SNS use under the assumption that SNS use is largely associated with negative outcomes such as poor job performance and presenteeism.

Results show that SNS use is not primarily associated with absenteeism, turnover intentions, and work-life balance, however SNS use is associated with knowledge sharing, job satisfaction and job performance, and that knowledge sharing is one of the most supported workplace outcomes. In addition, the evidence indicate that SNS use does not always have to be work-related for positive results such as for job satisfaction, knowledge sharing, employee engagement, organisational commitment, job performance and innovative behaviour. Novel insights generated include classification of outcomes into behavioural and psychological work outcomes, and identifying negative and positive impacts of SNS usage on these outcomes in the workplace. It has been found that SNS usage can have positive and negative results depending on how it is used. If used mainly for positive work related tasks, the organization stands to gain more from its usage. Organisations looking to improve knowledge sharing, job satisfaction and innovation outcomes, among others, might consider encouraging as opposed to inhibiting use of SNS at work. Managers will need to consider how to achieve work-related use of public SNS platforms without regulating against their use entirely.

The chapter reported on the relationship between SNS use and workplace outcomes. A number of workplace outcomes were identified and coded, and a framework which can be used to understand the impacts of SNS on outcomes was developed. Based on the findings reported in this chapter, the thesis will need to focus more on the less established outcomes. Exploring these further may provide a more inclusive picture of the outcomes. In addition to the outcomes identified in the frameworks, intermediary outcomes such as information overload, cognitive absorption, role conflict and social capital were identified in the literature. These intermediary outcomes may also be considered in future. Theories such as social capital theory, social exchange theory (Blau, 1964),

perceived organisational support (Rhoades and Eisenberger, 2002), the norm reciprocity (Goulder, 1960), job-demands model (Hausser, Mojzisch, Niesel and Schulz-Hardt, 2010) and media synchronicity theory (Cao et al. 2012) can be considered in future to link SNS use and outcomes.

Therefore, subsequent chapters of this thesis have an opportunity to examine the impact of SNS use on both established and less established outcomes. Furthermore, the thesis has a chance to examine the role of intermediaries such social support in the relationship between SNS use and outcomes.

Previous chapters address RQ1 and RQ2. The remaining chapters will address RQ3, RQ4 and RQ5. These RQs involve primary empirical work and this require the methods to be discussed. The next chapter presents an explanation and justification of the research methodology that was chosen. The chapter provides a description of the methodological steps taken to address the remaining research questions, that is *RQ3*-What is the appropriate conceptualization of SNS usage behaviour given its hybrid hedonic and utilitarian nature?, *RQ4*-What are the effects of motivation on SNS usage behaviour? and *RQ5*- What is the impact of SNS use on individual work outcomes?

# CHAPTER 7: RESEARCH METHODOLOGY

## 7.0 Introduction

The previous chapters established the context of the study, research significance, rationale for conducting the research and provided a conceptual background of the important concepts in the study. The review of the literature including systematic literature review and meta-analyses have revealed the different knowledge gaps which exit in understanding the determinants and impacts of SNS usage in the workplace. The identified gaps led to the development of multi-dimensional SNS usage construct, and a set of research models aimed at addressing the study's empirical research questions.

The purpose of this chapter is to explain and justify the research methodology for carrying out the empirical studies. First, research philosophy and study orientation are discussed, next research strategy and sampling are presented before discussing instrumentation and the measurements. The section concludes by discussing the analysis methods that will be used to test the research models and to answer research question.

## 7.1 Research Philosophy/Paradigm

Information Systems (IS) research has been informed by different paradigms, positivism, post-positivism interpretivism and critical research (Chen and Hirschheim, 2004). The positivist paradigm is a dominant underpinning for IS research (Orlikowski and Baroudi, 1991), with interpretivism often regarded as appropriate in certain circumstances.

These different philosophical stances are based on different beliefs and assumptions about the world (ontology), knowledge (epistemology) and values (axiology). Figure 16 summarises the difference between positivism and interpretivism. This study is informed by a positivist perspective, and views the nature of reality (world) as external, objective and independent of social actions. Epistemologically, only observable phenomenon can provide credible data. Knowledge consists of casual explanations and law like generalisations. The researcher undertakes research in a value-free way, independent of the data and maintains an objective stance. The philosophical stance is summarized in Figure 7.1.

| | Objectivism | ⇔ | Subjectivism |
|---|---|---|---|
| **Ontology** | Real<br>• External<br>• One true reality (universalism)<br>• Granular (things)<br>• Order | ⇔ | Nominal/ decided by convention<br>• Socially constructed<br>• Multiple realities (relativism)<br>• Flowing (processes)<br>• Chaos |
| **Epistemology** | Facts<br>Numbers<br>Observable phenomena<br>Law-like generalisations | ⇔ | Opinions<br>Narratives<br>Attributed meanings<br>Individuals and contexts, specifics |
| **Axiology** | Value-free<br>Detachment | ⇔ | Value-bound<br>Integral and reflexive |
| **Methods** | Quantitative | ⇔ | Qualitative |

*Figure 7.1: Positivism and Interpretivism (Source: Saunders and Bezzina, 2015)*

Positivist research is based on the existence of a *priori* fixed relationships within phenomena which are typically investigated with structured instrumentation (Orlikowski and Baroudi, 1991). Positivism adopts the philosophical stance of the natural scientist and prefer "working with an observable social reality and that the end product of such research can be law-like generalisations similar to those produced by the physical and natural scientists" (Remenyi et al. 1998:32).

Choosing a paradigm should be based on the research questions to be posed, the topic and phenomenon examined (Denscombe, 2003). The selection of the research design should be based on the nature of the relationship between theory and research, the epistemological orientation of a research and the knowledge relating to the social world (Bryman, 2004). A good social research depends on adopting an approach that is suitable for the topic or phenomenon of interest (Dencombe, 2003). Therefore, this study is informed by a positivist perspective (as summarized in Table 7.1) which is in line with the researcher's intentions to test a set of models drawn from theory and also to make reasonable inferences about a phenomenon by combining empirical observations with logical reasoning (Bhattacherjee, 2012). The tenets of positivism research are summarized in Table 7.1.

| | |
|---|---|
| Aim of Research | |
| Generation of causal laws | The aim of the research should be to identify causal explanations and fundamental laws that explain regularities in human social behaviour |
| Research Approach | |
| Unity of natural and social science method | The method of the natural sciences is the only rational source of knowledge and should therefore be adopted in the social sciences. This implies a preoccupation with:<br>• Internal validity<br>• External validity<br>• Reliability<br>• Operationalisation |
| Relationship of Researcher with the Researched | |
| Independence theory and neutral observational language | The observer is independent of what is being observed. Therefore, the observer can stand back and observe the world objectively |
| Value freedom | The choice of what is to be studied, and how to study it, can be determined by objective criteria rather than by human beliefs and interest |
| Correspondence theory of truth | Theory can be tested against irreducible statements of observation – the 'facts' of the situation. Research is concerned with producing accounts that correspond to an independent reality |

*Table 7.1: Tenets of Positivism Research (Source: Johnson and Duberly, 2006)*

## 7.2 Study Orientation

There are three orientations used in research but the commonly used are qualitative and quantitative orientations. Creswell (2010) suggests that the orientation should be based on the following questions:

i. What knowledge claims are being made by the researcher (including theoretical perspective)?
ii. What strategies of inquiry will inform the procedures?
iii. What methods of data collection and analysis will be used?

The inductive orientation is associated with building a theory, which is being concerned with the context of events, using more qualitative data and permitting alternative explanation for phenomena (Saunders and Lewis, 2007). The deductive orientation involves deducing a hypothesis from theory, expressing the hypothesis operationally, testing the operational hypothesis, examining the specific outcome of the enquiry and modifying the theory if necessary (Bhattacherjee, 2012). The present study follows deductive orientation by deducing hypotheses from theories such as self-determination theory and social support theory, and testing those hypotheses in order to determine the relative and combined effects of the theoretically derived concepts on observed SNS usage behaviours and work outcomes.

The two orientations are commonly used with either quantitative or qualitative or both (mixed methods) (Jonker and Pennink, 2010). Qualitative research by definition is exploratory and it best suits a researcher who does not know what to expect, to define the problem or develop an approach to the problem (Bhattacherjee, 2012). To develop the measures for the multi-dimensional SNS usage construct the study followed the qualitative approach.

On the other hand, quantitative research is for a "researcher who is trying to quantify the problem and understand how prevalent it is by looking for projectable results to a larger population" (Johnson and Christensen, 2008: p34). For the most part, the study follows a deductive orientation with a quantitative design, consistent with its objective to establish the overall relationship between

motivation, SNS usage and multiple outcomes. Table 7.2 summarises the methods and the research ends to which the approaches are used.

In conjunction with the deductive orientation, this study adopts a relational or weak causal research design (Johnson, 2001). While other designs (e.g. experimental designs) might provide stronger evidence for causality, they are inappropriate for studying phenomenon e.g. SNS usage that is already existing and carried out in a real world setting. Users studied are actual users of SNS technology and they have already been exposed to the technology of interest. Although interaction cannot be controlled, observation is made in real world setting. Users were examined in the natural world setting and therefore not able to control users' interactions and experiences with SNS in the manner required by experimental designs. Therefore, this study suits a relational design.

| Strategy of Inquiry | Method | Usage |
|---|---|---|
| Qualitative Research Approach | | |
| Ethnographic Design | • Emerging methods<br>• Open-ended questions<br>• Field observation and data documentation<br>• Text and image analysis | • Collect meaning of concept from the participant<br>• Focus on a single concept and phenomenon<br>• Bring personal value into the study<br>• Study the context or setting participants<br>• Validate the accuracy of findings<br>• Make interpretations of the data Create an agenda for change/reform |
| Narrative Design | • Open-ended interview<br>• and audio-visual data<br>• Text and image analysis | |
| | | |
| Quantitative Research Approach | | |
| Experimental Design<br>Quasi-Experimental Design<br>**Relational Design** | • Predetermined<br>• Closed-ended questions<br>• Performance, attitude, observation and census data<br>• Statistical analysis | • Test to verify theories or explanations<br>• Identify variables to study<br>• Relate variables in questions or hypotheses<br>• Use standards of validity and<br>• reliability<br>• Observe and measure information numerically<br>• Use unbiased approach<br>• Employ statistical procedures |

*Table 7.2: Qualitative and Quantitative Approach (Source: Creswell, 1994)*

## 7.3 Research Strategy

To determine the measures for the proposed multi-dimensional SNS usage construct (refer to chapter 8), a qualitative approach was necessary to supplement literature. Qualitative data was needed to explore the views, experiences and motivations of individual participants' SNS usage behaviours. For this, the study adopted the face to face interview strategy. After the qualitative approach, the SNS usage items were developed and used in subsequent surveys in this study.

To test the research models presented in chapter 9 and 10, the study also adopted the survey strategy compatible with relational designs. The research gathered data systematically from respondents as a way to understand and predict aspects of the population of interest. The respondents answered questions through a questionnaire. The questionnaire was administered to the respondents electronically as opposed to other forms such as telephone (Malhotra and Birks, 2007). The questions were focused on motivations, intentions, use, and outcomes.

In addition, the survey strategy provides advantages such as: highly economical way of collecting large amounts has good generalizability, versatility and efficiency, possibility of measuring many variables without substantially increasing the time or cost (Johnson and Christensen, 2008).

Despite the advantages, surveys may have biases such are nonresponse, sampling bias, selection bias, social desirability bias, recall bias and common method bias (Johnson and Christensen, 2008). These biases may be mitigated by: respondent friendly questionnaire, offering incentives, and ensuring a high level of confidentiality and privacy to respondents (Bhattacherjee, 2012).

The initial data collection, the data was used for validating the newly developed SNS usage items (chapter 8), the second data collection was for testing cross-sectional model examining the relationship between motivations and SNS usage (chapter 9), the third one was for testing the cross-sectional model examining relationship between SNS usage and outcomes (chapter 10). The final one was for developing the SNS user archetypes (chapter 11).

## 7.4 Sampling

Sampling is a "statistical process used to get a good representative subset of a population of interest" (Bhattacherjee, 2012: p 65). The study focused on drawing a valid and representative sample of the population. The sample was used to draw conclusions about the whole population (William, 2003).

There are two main types of sampling, probability and non-probability sampling (Brink and Van Rensburg, 1996; Polit and Hungler 1999). Probability sampling comprises simple random sampling and systematic sampling, while non-probability sampling comprises convenience sampling, quota sampling and expert or judgment-based sampling (Saunders, 2012). Probability sampling is used when every element in the population has a known zero probability of selection. This technique is used when the representativeness of the sample is of importance in the interest of wider generalisability (Zolkepli, 2014). When generalisability is not important but time or other factors are, non-probability sampling can be used (Polit and Hungler 1999).

### 7.4.1 Qualitative Approach

Previous chapters discussed the idea of the conceptualization of the multi-dimensional usage construct. In addition to the literature, the measurements were strengthened through qualitative work.

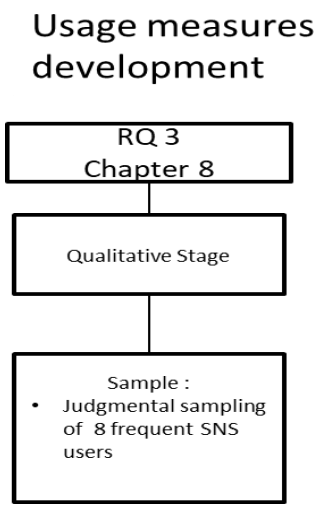



*Figure 7.2: Qualitative Stages*

Qualitative work in the form of interviews were undertaken to help develop the measures for the multi-dimensional SNS usage construct. The use of this qualitative method enriched the understanding of the multi-dimensional SNS usage construct through exploring individual's rich description of their usage behaviour.

The face-to-face interviews were semi-structured made up of key questions that helped to define SNS usage, different SNS uses, and the motivations for why SNS is used at work. Face-to-face interview techniques are better than other interview techniques such as phone, because they are synchronous communication in time and place (Edward and Holland, 2013). Therefore, the interviewer can observe social cues such as voice, intonation and body language of the interviewee and these can give a lot of extra information (Rubin and Rubin, 2011). The semi-structured interview questions allowed the interviewer to dig-in and undertake follow up questions (Britten, et al., 2000).

The use of semi-structured interviews is best suited in this study as opposed to focus group because the researcher is to understand and get feedback on isolated user behaviour (Legard, Keegan and Ward, 2003). This is relevant because using SNS is an individual activity. The issue of SNS usage at work may be sensitive and some users may not want others to know how much they use SNS at work, as this may be viewed negatively. Hence, interviews are preferred in dealing with this sensitive subject (Silverman, 2000).

For qualitative section, participants who are frequent users of SNS were chosen for interviews. A judgemental sampling strategy was used to select the interviewees from a population of workers in South Africa who are SNS users (see Figure 7.2). The researcher had to use his knowledge and judgement to select frequent SNS users. The researcher was targeting employees who are experienced in using SNS, hence, the use of judgemental sampling. The researcher selected respondents who are connected with him on SNS or connected through researcher's friends (SNS connections). The SNS connections would provide comprehensive feedback on the questions posed about their motivations and usage behaviours on SNS platforms. Therefore, the researcher is aware of their SNS activities.

The interview stage used eight (8) frequent SNS users as interviewees. Researchers who have embarked on qualitative studies involving focus groups or interviews have argued that sample size of 8 participants is a good number and expected to result in saturation (Catterall and Maclaran, 2007; Cavana, Delahaye and Sekaran, 2001; Malhotra and Birks, 2007). In addition, researchers who have discussed saturation in length suggest that eight (8) interview participants is a good number, considering the homogeneity and research objective of the study (Baker and Edwards, 2012; Dworkin, 2012; Mason, 2010). Anything beyond eight interviewees may no longer offer any new or relevant data. The researcher started getting redundant data from respondents by the time the seventh interviewee was reached, and similar data was obtained from the eighth respondent. The researcher heard the same comments and repeated ideas (see sample comments, 8.3.2.1.1).

The interview questions were formulated based on literature and the concept of deep structure usage adopted from Burton-Jones and Straub (2006). The deep structure usage of an SNS is defined as an activity involving (1) a user, i.e. the subject using the SNS, (2) the system being used, in this case the SNS, and (3) the task, i.e. the functions being performed. Hence, the questions were formulated based on the three parts of deep structure usage concept. The questions were pre-tested using 3 (three) experts, that is two from IS department and on from marketing department. For pilot testing, three SNS experts were used, they were from different companies.

The interviewer used tape recorder with the permission of the interviewee, also the interviewer took notes during the interview. The tapes were transcribed, and the notes were analysed too. Content analysis was used to pinpoint, examine and recorded the patterns in the data (Braun and Clarke, 2006).

The transcripts were analysed using content analysis based on an approach adopted from literature (e.g. Bengtsson, 2016; Neuendorf and Kumar, 2015) follows;

- Copied and read through the transcript - made brief notes in the margin when interesting or relevant information was found
- Went through the notes made in the margins and listed the different types of information found
- Read through the list and categorised each item in a way that offers a description of what it is about
- Identified whether or not the categories can be linked in a way and listed them as major categories (or themes) and / or minor categories (or themes)
- Compared and contrasted the various major and minor categories
- The first five stages were repeated for each transcript
- After the above, categories or themes were each examined in detail and considered if it fits and its relevance
- Once all the transcript data was categorised into minor and major categories/themes, data was reviewed in order to ensure that the information was categorised as it should be.
- Reviewed all of the categories and ascertained whether some categories can be merged or if some need to them be sub-categorised

- Returned to the original transcripts and ensured that all the information that needs to be categorised has been acted on.
- The collected data was examined to find patterns and draw conclusions in response to the research question

The process of content analysis is lengthy and requires the researcher to go over and over the data to ensure they have done a thorough job of analysis (Kassarjian, 1977).

The focus of the interviews was on understanding the ways in which SNS are used for hedonic and utilitarian purposes, and which factors of SNS provide for these uses. This is discussed in detail in chapter 8.

7.4.2 Quantitative Approach

Chapters 8 to 11 involved the survey based empirical work.

The population of interest for this study is employees of South African firms. The number is estimated to be over 10 Million as per the Trading Economics report of 2018. The study was targeting all employees irrespective of the nature of work, type of SNS platform, or the type and amount of usage.

The study targeted a nationwide sample of respondents to avoid any geographic bias or differences in regional availability of SNS platform options. Because of this, a specific nationwide audience that was expected to use a wide range of SNS was targeted for data collection. The sampling frame consisted of a database of respondents from a research firm that specialized in academic surveys over the internet. The database consisted of employees of different firms across the industries and provinces.

It was presumed that this population would be more representative of the employees of South African firms. Although the sample may not cover the general population of employees in South Africa, it addresses the needs of this study. In addition, the sampling approach enabled us to collect data from a nationwide sample of employees in a timely and cost-effective manner.

The database comprises of more than 350 000 employees who signed up and agreed to complete online surveys (see Appendix A permission letter). A sample of 5 500 email addresses was randomly drawn from the 350 000 emails. The survey instrument was sent as a link on emails, emails were sent to the 5 500 members of the database notifying them of a survey and requesting their participation.

The survey was open for 6 weeks, and after the third week the first reminder was sent, followed by the second reminder a week later. The number of reminders and timing was based on past studies' recommendations (e.g. Cook et al., 2000; Kittleson 1995; Nulty, 2008), who pointed out that more than three reminders may see inevitable diminishing return on this investment coupled with the possibility of irritating the survey population.

The sample size for the survey stage can be determined by a couple of factors e.g. number of variables, data analysis techniques. The focus was not choosing a too large or too small sample. Too small a sample may result in type II error, that is when hypotheses get rejected when they are supposed to be supported (Zolkepli, 2014). In addition, a too large sample size may result in getting significant correlated relationship for weak relationships thus leading to a wrong conclusion (Malhotra, 2007). Therefore, sample size is important for generalisation.

As mentioned, analysis techniques such as factor analysis can dictate the minimum sample size to be used. Factor analysis is less stable and sensitive to small sample size (Tabachnick and Fidell, 2007). Apart from the analysis techniques, other determinants may be used e.g. using rule of thumb, the sample size should be several times (preferably ten times or more) as large as the number of variables in the study (Bhattacherjee, 2012; Malhotra and Birks, 2007; Saunders, 2006). Another is the power analysis method based on anticipated effect size, desired statistical power level, and probability level can be used to estimate the sample size (Cohen, 1992).

Using Cohen's approach with a population of 15 million workers, a sample size of 380 at 5% margin of error is found to be ideal. Alternatively, Pallant's (2005) approach, proposes that a sample based on at least five (5) times the number of indicators should have enough statistical power. Based on Pallant (2005), the quantitative study focused on motivation used a minimum of (54 indicators x 5) 270 participants and the one focused on impacts will use a minimum of (44 indicators X 5) 220 participants. Therefore, Pallant's estimation of 220 is used as the minimum accepted sample size, and Cohen's estimation of 380 is used as the ideal size to be targeted. Each of the surveys collected more than 220 usable responses.

## 7.5 Instrumentation

The instrument for interviews (Appendix B) consisted of semi-structured questions, which were used to guide the interviewer. A sequential approach was followed, the interviewer asked the initial question and based on the interviewee's response subsequent questions was formulated or modified.

As instrument for the surveys, the study used structured questionnaires as data collection instruments. The questionnaire allowed the researcher to reach a high number of the target population in an economic way (Bhattacherjee, 2012). The advantages of using questionnaires are that they capture the responses in a standardized manner (Saunders et al. 2011).

The questionnaires constituted of closed ended questions. The operationalization of the items is discussed next.

### 7.5.1 Measurement Operationalization

The measurement items were drawn from literature and adapted to social network sites use. The constructs and items were adapted from published studies to ensure that the study is underpinned by rigorously developed and validated items (Bulmer, Gibbs and Hyman, 2006). For detailed measurements items, and literature sources refer to appendices. Appendix C is a questionnaire for the effects of motivation on SNS usage, appendix D is a questionnaire for the effects of usage on outcomes and appendix E is for the hold-out sample used to develop the SNS user archetypes.

The respondents conveyed their perceptions on 7 point Likert scales, ranging from strongly disagree to strongly agree, with the midpoint as ―neither agree nor disagree.

In addition, the respondents' demographics e.g. age, gender, work/career related information were captured here.

### 7.6 Pre and Pilot Test

Prior to data collection through the surveys, a pre-test and pilot test of the survey instrument were conducted. Pre-test involved experts in the IS field. Their input helped in fine-tuning the questionnaires thus achieving better content validity. The pilot test was undertaken to check if the items and interview questions were easy to understand and not ambiguous.

The input from pilot test ensured better face validity and content validity of the questionnaire items. Face validity is an assessment of operationalization and see whether "on its face" it seems like a good translation of the construct, while content validity is assessment of operationalization against the relevant content domain for the construct (Research Knowledge Base, 2006; Zolkepli, 2014).

### 7.7 Analysis Approach

For the qualitative data, content analysis strategy was followed. Content analysis involved identifying and categorising data (Cavana et al., 2008). The part of the data that was emphasized was identified while others were set aside (data reduction), patterns were identified, and finally the meaning of the data was drawn and verified (Malhotra and Birks, 2007). The patterns and meaning of data identified was used to develop measures for the SNS usage construct.

For the quantitative data, data preparation was done first (Bhattacherjee, 2012). Then, listwise deletion was used in cases where more than 10% of the data is missing or imputation technique was used in cases where small amount of data is missing (Johnson and Christensen, 2008). Also outliers were removed at this stage.

The descriptive statistics followed the missing items and outliers step. The demographics and SNS trends were analysed as part of the descriptive. This will include age, gender, education levels and length of use among others.

The results for demographic data analysis included frequency distributions, mean scores, standard deviations. Prior to hypotheses testing, validity and reliability of the items were tested.

#### 7.7.1 Validity and Reliability

The questionnaires items were tested for convergent validity, discriminant validity, content and face reliability, reliability (e.g. CR, CA), and collinearity. The first validity process was face and content validity. The face validity process was to ensure that items are clear and understandable while content validity ensures that the measure adequately measure the concept as based on the relevant literature. Pre-test using members of the faculty were done to cover content and face validity. After the theoretical or representational validity, the empirical validity test was next (Bhattacherjee, 2012).

The next sets of validity included statistics. First a principal component analysis (PCA) was carried out as an exploratory factor analysis. PCA is a technique used for data extraction. Using PCA convergent and discriminant validity was assessed. Convergent validity state that items should measure only the construct they are intended to measure and no other construct (Bagozzi et al. 1991). Item loadings should be higher than .60 on their relevant theoretical construct for convergent validity, and items should not load above .40 on other constructs they are not intended to measure (Chen and Paulraj, 2004). Items found not to load well were dropped at this stage.

Discriminant validity state that constructs should differ from each other. It is a measure of the indicators of dissimilar constructs that theoretically and empirically should not be related to each other (Hair et al., 2010). Latent variables should differ from each other (Bollen, 1989; Chin, Marcolin, and Newsted, 2003; Fornell and Larcker, 1981).

Following PCA, confirmatory factor analysis (CFA) were undertaken using PLS. From CFA, the average variances extracted (AVEs), comparing the inter-construct correlations with the square roots of their respective average variances extracted, the square roots of the AVEs for each latent variable should be greater than any correlation relating to each latent variable (Fornell and Larcker, 1981).

Reliability was also assessed using composite reliability (CR) and Cronbach's alpha (CA). Cronbach's alpha is a measure of internal consistency of the scale measures. An alpha of 0.7 was used as it is a generally accepted cut-off level. A latent variable's CR should generally be 0.70 (Hair et al., 2014; Nunnally and Bernstein, 1994). However, given the exploratory nature of the study, Cronbach's alpha values of 0.60 was still considered.

After the data validations, the structural model (Figure 9.2 and 10.2) was assessed next. The partial least squares (PLS) approach to structural equation modelling was used to carry out testing of the models and underlying hypothesized relationships.

7.7.2 Testing of Cross-sectional Models (Figure 9.2, chapter 9, and Figure 10.2, chapter 10),

Using PLS.

The study used second generation technique, the partial least squares structural model (PLS)-SEM (Gefen et al., 2000). A common technique to test structural models is the component-based approach partial least squares (PLS) (Albers, 2010; Henseler et al., 2009). SEM is a statistical technique for simultaneously testing and estimating causal relationships among multiple independent and dependent constructs (Gefen et al. 2000). In SEM; the inner model specifies the relationships between the independent and dependent latent variables (Wong, 2013).

The study used smart PLS as it is one of the prominent software applications for PLS-SEM (Wong, 2013). PLS is appropriate for this study because of the reasons stated below by (Urbach and Ahlemann, 2010),

- PLS makes fewer demands regarding sample size than other methods,
- PLS does not require normal-distributed input data,

- PLS can be applied to complex structural equation models with a large number of constructs,
- PLS is able to handle both reflective and formative constructs,
- PLS is better suited for theory development than for theory testing,
- PLS is especially useful for prediction.

The ability of PLS to handle formative and reflective constructs is especially important in the test of this study's model as constructs were modelled in the reflective mode.

The hypothesised relationship between the constructs (i.e. research model) is tested using PLS, where path coefficients in the PLS model are interpreted to determine if hypotheses are supported or rejected. An alpha level of 0.05 was adopted in the study, i.e. all paths where $p<0.05$ were considered as supporting the associated hypothesis otherwise the hypotheses were rejected (Luo et al. 2010). Path coefficients reflect the strength of the relationships between the exogenous and endogenous variables. Bootstrapping was performed to obtain t-statistics which indicated the significance of paths.

Finally, the independent variables were subjected to collinearity test. The variance inflation factors (VIF) of each latent variable in relation to other latent variables was assessed. The VIF should be less than the threshold of 5 (Hair et al., 2010).

The software used was SmartPLS. SMartPLS has built-in functionality to test moderating effect such as the proposed moderation indicated in Figure 9. PLS also provides the $\mathbf{R}^2$ coefficient of determination which provides a measure of how well observed outcomes are replicated by the model, as a proportion of total variation of outcomes explained by the model (Draper and Smith, 1998; Glantz, Stanton and Slinker 1990; Steel and Torrie, 1960). $\mathbf{R}^2$ is used with PLS as an indicator of the model's fit, if the model perfectly fits the data, $\mathbf{R}^2$ should be 1. PLS path model as a variance-based model is strongly oriented to prediction. For model validation, PLS concentrates on model predictive capability (Zolkepli, 2014). The inner and outer models are validated. These validations are not the same as construct validation.

### 7.7.3 Ethical Consideration

The researcher collected primary data from individuals thus ethical considerations were important. Clearance from Witwatersrand University Human Subjects Non-medical ethics committee was sought, protocol number H16/08/25 (Ethics Clearance in Appendix F). Moreover, permission letters from senior officers of identified companies were obtained prior to questionnaire administration. As per the university and national ethics requirements, the following were observed:

Voluntary participation and harmlessness: The respondents were made aware that their participation in the study was voluntary and they can withdraw at any time without any unfavourable consequences. Respondents' participation or non-participation did not subject them to any harm.

Anonymity and confidentiality: To protect respondents' interest and anonymity, no personal identity (e.g. name, id or cell number) were required. All data was treated confidentially and was not shared with any third party.

The researcher also observed the disclosure standard: the researcher provided some information about the study to respondents before data collection to ensure informed consent by allowing them to decide whether or not they wished to participate. Aggregate findings of the study were disclosed irrespective of the outcome (e.g. negative or positive).

## 7.8 Conclusion

The chapter presented a detailed discussion of the chosen research methodology including the selected paradigm, research design, sampling strategy, survey instrument and data analysis methods. These will be discussed in details in the following chapters (Chapter 8 to 10).

The next chapter presents the proposed conceptualization of SNS usage construct. The chapter's objective is to develop and validate a multidimensional SNS usage construct. The chapter follows Burton-Jones and Straub's two stage approach for developing a deep structure usage construct.

# CHAPTER 8: DEVELOPING AND VALIDATING MEASUREMENT ITEMS FOR A MULTI-DIMENSIONAL SOCIAL NETWORK SITE USAGE CONSTRUCT

An earlier version of this chapter has been published as: Nkwe, Nugi, (2018). "Developing and validating measurement items for a multi-dimensional social network site usage construct", African Journal of Information Systems (AJIS), *2018.*

## 8.0 Introduction

The two main objectives of the study are (1) to examine the influence of motivation on SNS usage, and (2) to examine the influence of SNS usage on workplace outcomes. The previous chapters focused particularly on the reviews of motivations and outcomes, and have provided important background but both reviews did not discuss SNS usage in detail. The next chapter focuses on SNS usage. This chapter discusses the study's objective to develop and validate a multidimensional SNS usage construct. The objectives and the two stage approach for developing SNS usage are discussed in this section.

To address RQ 3, *what is the appropriate conceptualization of SNS usage given its hybrid hedonic and utilitarian nature?* This section proposes the need to develop a multi-dimensional SNS usage construct that will be validated in this research and that reflects both the hedonic and utilitarian nature of SNS usage in the workplace. The re-conceptualization will be based on the two staged approach proposed by Burton-Jones and Straub (2006).

## 8.1 Background on SNS

Social Network Sites (SNS) provide a digital platform for interaction with others through the sharing of content such as messages, posts, videos and photos (Ellison, 2007). Individuals are attracted to SNS sites because of their potential to enhance communication, facilitate information sharing and collaboration, and relationship formation and maintenance (Thackeray, Neiger, Smith and Van Wagenen, 2012).

Social Network Sites (SNS) have more than 2.3 billion combined users (See-To and Ho, 2014) and Facebook is enjoying the largest share of users at 1.7 billion (Verduyn, Ybarra, Résibois, Jonides and Kross, 2017). Worldwide, the use of SNS such as MySpace, LinkedIn, Facebook and Twitter has grown exponentially across different age groups between the years 2005 and 2013 (Wang, Scown, Urguhart and Hardman, 2014). India and United States have the highest number of Facebook users (Hootsuite Report, 2017). South Africa is ranked 4th in Africa and 28$^{th}$ in the top 30 countries in the world in Facebook usage (SA Social Media Landscape, 2016). Facebook and twitter have been dominating the SNS landscape for a long time but that is changing with the emergence of other SNS providers such as Instagram (Internetworldstats Report, 2017; SA Social Media Landscape, 2016).

SNS are defined as hybrid hedonic and utilitarian information systems. They are hedonic systems because through entertainment features like gaming, photo and video sharing (O'Murchu, Breslin

and Decker, 2004), they provide for pleasurable experiences and self-fulfilling values (van der Heijden, 2004). They also serve as utilitarian systems that have found their way into the workplace to fulfil more instrumental and functional roles such as knowledge sharing (Brown and Venkatesh, 2005).

Unsurprisingly, SNS usage is thus extending beyond the personal social context into the workplace (Bennett, Owers, Pitt and Tucker, 2010), and interest in SNS uses and its implications within the workplace have been the subject of much attention. Examples of studies on SNS usage in the workplace included its implications for job performance (Moqbel, 2012), burnout (Charoensukmongkol, Moqbel, and Gutierrez-Wirsching, 2017), and work outcomes (Charoensukmongkol, 2014).

However, researchers interested in SNS use in the workplace continue to model the SNS usage construct as a simplistic unidimensional construct that fails to adequately reflect the multi-dimensional nature of SNS usage. Specifically, the dual nature of SNS systems as hedonic systems and utilitarian systems has not been appreciated. Researchers in IS are calling for a multi-dimensional theory driven conceptualization and operationalization of the IS usage construct (Barki, Titah and Boffo, 2007) and the need to conceptualise system usage in terms of its "deep structure" (Burton-Jones and Straub, 2006). Deep structure usage is defined as the extent of use of different features of a technology (Schwarz, 2003). Users interact with various features that the IS has to offer and develop different patterns of use (Abdinnour-Helm and Saeed, 2006). However, there are very few studies focused explicitly on the deep structure of SNS usage. Therefore, there is a need to develop a multi-dimensional construct that captures the deep structure of SNS usage in a manner that accounts for both the hedonic and utilitarian nature of the tool.

The consequence of these hybrid uses for workplace outcomes is a topic of debate. For example, some have argued that employee engagement and productivity may be lost through SNS use (Clark and Roberts, 2010), and others attribute positive outcomes to the use of SNS at work including improved job performance and improved communication (Bennett et al., 2010). Extending how we understand and observe usage might lead to better understanding of the differential effects of usage on individuals' workplace outcomes.

This study contributes by developing and validating a multi-dimensional conceptualization of SNS usage. More specifically, the study draws on the work of Burton-Jones and Straub (2006) and their concept of deep structure usage and adapts it to the SNS context. The conceptual definition and operational items developed here will be valuable to researchers interested in examining SNS usage. Moreover, the paper provides additional insights for practice by explaining the links between SNS usage and workplace outcomes. The results can inform practitioners concerned with designing, implementing and managing SNS. Further, the evidence provided by the paper may provide direction for managers charged with responsibility for developing or updating SNS usage policies in their organisations.

The next section provides the conceptual background to the study. Subsequently, the multi-phase process of validation and refinement is discussed, including findings from interviews and psychometric analysis. Finally, by implications of the study are discussed.

## 8.2 Conceptual Background

### 8.2.1 System Usage

System usage is an important construct in information systems research (Burton-Jones and Straub, 2006). However, system usage has too often been conceptualized as a one-dimensional construct with a diverse set of narrow measures such as features used, tasks supported, extent of use, frequency of use, and duration of use among others (Burton-Jones and Straub, 2006). Those simplistic views of system usage have resulted in insufficient knowledge about utilization and its effects on individual outcomes. More sophisticated conceptualizations of usage behaviour are required (Chin and Marcolin, 2001). In response, system usage behaviour has begun to be conceptualized (see Table 8.1) as extended use (Hsieh and Wang, 2007), emergent use (Saga and Zmud, 1993), integrative use (Ahuja and Thatcher, 2005), exploratory use (Abdinnour-Helm and Saeed, 2006) and deep structure usage (Schwarz, 2003).

Among the above, the deep usage concept has been considered particularly promising (Saga and Zmud, 1993; Schwarz, 2003). This is because a systematic approach was followed in conceptualizing deep structure usage, and the usage measures were selected in a theoretically rigorous way (Burton-Jones and Straub, 2006). The deep structure usage of an SNS is defined as an activity involving (1) a user, i.e. the subject using the SNS, (2) the system being used, in this case the SNS, and (3) the task, i.e. the functions being performed.

Considering its hybrid qualities and unique characteristics, SNS usage could be viewed from this deep structure perspective and defined as an individual user's employment of one or more features of the SNS to perform a task. The hybrid nature of SNS requires that both its utilitarian and hedonic features are reflected in the conceptualisation of deep structure usage (see Figure 8.1). Thus deep structure usage includes hedonic deep structure usage and utilitarian deep structure usage. Hedonic functions are for personal reasons and satisfaction such as fun, enjoyment and entertainment. An example here would include playing a game such as candy crusher through SNS. Utilitarian functions are performed to accomplish more productivity-based tasks that are typically work-related or instrumental (Li, Wang and Chou, 2012). An example here would include recruiting potential employees using LinkedIn.

Burton-Jones and Straub (2006) have also distinguished deep structure usage from cognitive absorption, which is a user's engagement and immersion in the use of an IS (Burton-Jones and Straub, 2006). They consider both deep structure usage and cognitive absorption as necessary dimensions of the usage phenomenon. Cognitive absorption in the SNS context reflects user's engagement with the SNS (Burton-Jones and Straub, 2006).

| Concept | Definition |
|---|---|
| Deep structure use | An individual user's employment of one or more features of a system to perform a task (Burton-Jones and Straub, 2006) |
| Extended use | The degree to which users apply more of the technology's features in order to accommodate a more comprehensive set of work tasks (Saga and Zmud, 1994) |
| Emergent use | Using the technology in ways not recognized prior to its implementation within the work context or not feasible until after enhanced functionalities are identified and developed (Saga and Zmud, 1994) |
| Exploratory use | The user's willingness and determination to find new ways of applying IT to work tasks ( Nambisan, Agarwal and Tanniru, 1999) |
| Innovative use | Usage behaviours that are novel or innovative in the immediate work environment e.g. finding new uses for existing workplace IS (Ahuja and Thatcher, 2005; Hajri, Nuwangi and Sedera, 2014) |
| Integrative use | Incorporation of IS into the work practices of the user (Ahuja and Thatcher, 2005) |
| Routine use | The state where system use is no longer perceived as out-of-ordinary but actually becomes institutionalized (Hsieh and Wang, 2007) |

*Table 8.1. Different Conceptualizations of Usage*

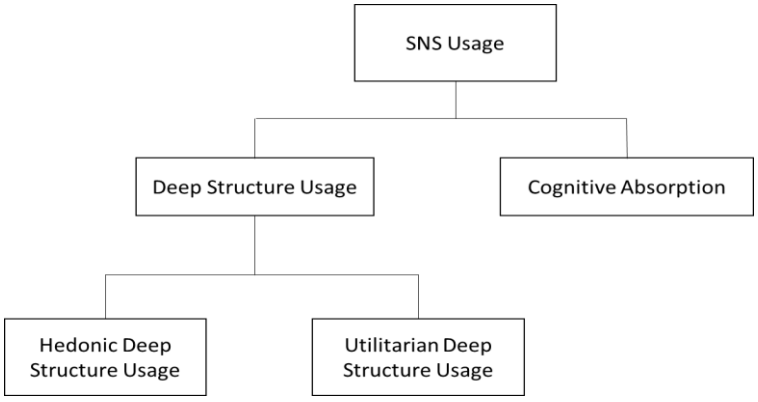



*Figure 8.1. Deep Structure Usage, adapted (Burton-Jones and Straub, 2006)*

Taken together SNS usage can then be defined in terms of deep structure usage including hedonic deep structure and utilitarian deep structure usage, as well as cognitive absorption.

The next section details the methods used to develop and validate the items for the proposed multi-dimensional SNS usage construct.

## 8.3 Methods

Measurements items for the multi-dimensional SNS usage construct were developed using a multi-phase process of validation and refinement (Straub, 1989). Straub's multi-phase process, as applied elsewhere (Nevo and Wade, 2011), was adopted with slight modification, by extending it to include exploratory interviews as shown in Table 8.2.

### 8.3.1 Phase 1: Literature Review

Literature was reviewed and initial measures were identified (see Table 8.3). The definition of deep usage drawn from Burton-Jones and Straub (2006) was important in delimiting the domain of the construct. Identified measures from literature were refined by using exploratory interviews in the next phase.

### 8.3.2 Phase 2: Exploratory Interviews

Exploratory interviews were undertaken to compliment literature. Its purpose was to unearth more or confirm the items found in the literature. Eight (8) frequent SNS users were interviewed (see their profile in Table 8.4), and these interviewees were from a spectrum of industries. Some of the industries included high education, financial sector, pharmaceuticals and journalism, among others. Although the interviewees did not represent all possible industries, they were identified as frequent SNS users, generally knowledgeable about SNS use, and able to present views on SNS usage.

Researchers who have embarked on qualitative studies involving focus groups or interviews have argued that sample size of 8 participants is a good number (see section 7.4.1 for details) and expected to result in saturation (Cavana, Delahaye and Sekaran, 2001; Malhotra and Birks, 2007). In addition, researchers who have discussed saturation in length suggest that eight (8) interview participants is a good number, considering the homogeneity and research objective of the study (Baker and Edwards, 2012; Dworkin, 2012; Mason, 2010). Anything beyond eight interviewees may no longer offer any new or relevant data. This was evident in this study too, as the researcher proceeded through the interviews, the answers obtained converged.

All the interviews were conducted by the author and lasted between 30 and 60 minutes. As suggested by Burton-Jones and Straub (2006), deep usage includes task, features and motivations. These three [dimensions] were captured in the interviews. As per Burton-Jones and Straub's (1996) definition, deep usage is user's employment of one or more features of the SNS to perform a task. Therefore, based on the definition, interviewees were asked about the tasks they do using SNS, the feature (s) of the SNS they use to accomplish those tasks and what motivates them to undertake those tasks.

| Phase | Description |
|---|---|
| Phase 1: Literature review | The existing literature was reviewed, and any items or scale fragments which were suitable for the proposed multi-dimensional SNS usage construct were identified. |
| Phase 2: Exploratory interviews | To supplement the literature, face-to-face interviews (n=8) were be carried out to explore the views, usage experiences and motivations of frequent SNS users. Themes uncovered here were used to further inform scale items. |
| Phase 3: IS researcher panel | A panel of three (3) IS researchers familiar with SNS and IS usage research were tasked with evaluating the appropriateness of the formulated items. Items were evaluated against their ability to cover the theoretical domain of the constructs, and thereby help improve content validity. |
| Phase 4: Card sorting | Based on Moore and Benbasat (1991) guidelines, the items that passed phase 3 were subjected to a card sorting exercise by six (6) experts. Inter-rater agreement was calculated. Items were re-phrased as necessary. |
| Phase 5: Non-IS researcher panel | Three (3) researchers from a non-IS field (e.g. marketing department) who work in the SNS space were asked to evaluate the relevance of the measurement items, this is to provide a non-IS perspective. Additional modifications were made as required. |
| Phase 6: Pre-test with members of the sampling frame | The sampling frame is employees in South African firms who use SNS. Using the items, a questionnaire was developed to and sent to five (5) SNS users who are members of the population for the purposes of assessing face validity of the instrument. It was necessary to change the wording, and instructions based on their responses. |
| Phase 7: Pilot test | Finally, the questionnaire was sent to roughly 300 employees in selected companies in South Africa. The data obtained from the survey was analysed to establish the reliability, convergent validity, discriminant validity and predictive validity of the measures of deep structure SNS usage. |

*Table 8.2. Multi-phase Process of Validation and Refinement*

| | Conceptual definition | Example items from literature |
|---|---|---|
| Deep structure hedonic usage | Using one or many features of the information systems to perform a task for hedonic purposes | Information searching and seeking are important in the usage of social media for social purposes (Dunne, Lawlor and Rowley 2010) |
| Deep structure utilitarian usage | Using one or many features of the information systems to perform a task for utilitarian purpose | LinkedIn is being used as professional networking tool by users (Skeels and Grudin, 2009) |
| Cognitive absorption | User's engagement with the SNS (Burton-Jones and Straub, 2006). | My mind is focused when using this online social platform. (Rich, Lepine and Crawford, 2010). |

*Table 8.3. Conceptual Definition of SNS Dimensions*

There were nine questions used to guide the interview (see Appendix B). Before interviews were conducted, the interview schedule was examined by three (3) qualitative researchers from the field of information systems. This was to make sure the questions are well structured and not ambiguous. After the examination of the interview schedule, three (3) SNS users from different companies were used for a practice run of the interview. The questions were modified based on the feedback from these employees.

After undergoing these quality checks, the interviews were carried out, recorded and transcribed. The data collected from the interviews was deciphered, examined and interpreted to obtain meaningful patterns (Fielding and Schreir, 2001; Yin, 2009). The data was analysed using content analysis steps detailed in section 7.4.1. The interviews provided important insights, thus indicating that a qualitative process is an important aspect of developing new measures (Haynes, Nelson and Blaine, 1999; Netemeyer et al., 2004).

| Role | Industry |
|---|---|
| 1. Administrator | Education |
| 2. Educator | Higher learning |
| 3. Corporate Affairs | Fast-moving consumer goods industry |
| 4. Communications officer | Agriculture |
| 5. Internal Auditor | Insurance and investments |
| 6. Marketing | Pharmaceuticals |
| 7. Journalist | Print media |
| 8. Small business manager/owner | Marketing (Corporate gifts and promotions) |

*Table 8.4. Profile of Interviewees*

#### 8.3.2.1 Coding of Patterns (Themes)

The results from the interviews were classified and coded to identify statements indicating tasks, features and motivations.

The following statements were extracted from different interviews illustrating perception of interviewees regarding the task, features and motivation associated with SNS usage.

##### 8.3.2.1.1 Hedonic and Social Use

*Tasks:*

One interviewee [University Administrator] reported that she uses SNS to sensitize and create social awareness regarding political and community issues. *"I thread, and use it as a platform to speak about issues that are personal to me". "I also get information and use it as a soul-box, sharing my thoughts and opinions fulfils me"*

Another person [Educator] said *"I no longer watch news; I pull content from SNS and get soccer related news through SNS". "With so much going on these days, SNS make it possible to get breaking news quickly and easier". "I no longer visit websites to get information." "It is satisfying to get such amount of information from SNS related to my personal interest and hobbies".*

The interviewee [Educator] stated that he is hardly on SNS for social or hedonic purposes. *"When I do it for social purposes, I go on SNS platforms to get insights regarding politics and sports". "They are the best way to see trail of thoughts". "I follow politics and sports on SNS for my personal fun"*

*Features*

SNS user [Journalist] reported that *"SNS have a lot to offer but I use basic features such as post, reply, respond and react". "If I can post and read I am ok". "I just keep in touch with family and friends".*

Another user [Internal Auditor] said *"I post and share funny and interesting topics with friends and colleagues". "Once in a while I use it for communication (inbox/messenger) if I don't have someone's contact details".*

*Motivations*

SNS user [Internal Auditor] reported that *"SNS are funny and interesting….that is why I like them".*

One [Small business owner] said that *"I love the social interaction provided by SNS, it is more social, fun and not work-related".* Another pointed that *"SNS are interesting and entertaining, after a long day at work I turn to them and be soothed. .....emotional reason. They are a therapy*". One reported that *"SNS are fun, interesting, and most importantly curiosity and fear of missing out drive me to use them".*

*8.3.2.1.2 Utilitarian and Work-related*

*Tasks*

Statements on work-related use include, *"I use SNS to share work related information with colleagues and clients"* as reported by one of the interviewees [Communications officer].

Another interviewee [Marketing officer] said "*I use it to build professional network". "I use it to reach different experts in my field of work".* Another person [Corporate affairs officer] said *"I basically use it to update my CV and put myself out there for potential employers". "I search for job opportunities through SNS".*

One [Marketing officer] of the interviewees said *that "I use SNS to share, mostly industry or work-related articles". "I search for new jobs, career road maps and see how colleagues are progressing*".

*Features*

One [Communications officer] of the interviewees stated that *"SNS enables me to connect, share and serve my clients". "I communicate with colleagues and get work-related advice from them, in addition I get feedback relating to products and customer service from clients".*

Another [Marketing officer] said that *"There are different features but I mostly communicate with clients and stakeholders through SNS, I share schedule of meetings, new developments and most of the updates regarding the organisation". "Also, I use features like follow and others, which make it possible to get information regarding industry related information*".

Also, one [Corporate affairs officer] of the users reported that *"Across all the SNS, I search for colleagues". "I have used the search feature to find colleagues in different geographical location". "I have also found human resource to use in different company projects".*

*Motivation*

Interviewee [Communications officer said *"I use SNS because it is easy and convenient …". "As a leader in my department I am trying to set an example, to show the rest of the department that SNS is a useful tool".*

Another [Journalist] said that "*It is convenient to communicate through SNS…".*

One [Small business owner] of the interviewees said *"I have learnt a lot from SNS, it is relaxed, more social. It has come to a point that I look for answers from SNS, experts share a lot. It is such a knowledge sharing tool*".

| No. | Literature | Corroborating Interview Data | Proposed Item |
|---|---|---|---|
| Hedonic Deep Structure Usage | | | |
| 1 | Literature suggest that SNS are a tool for communication e.g. SNS users create and share content with family online (Boyd, 2008; Lüders, 2008). | *"I post and share funny and interesting topics", "I use SNS to share fun-filled information e.g. jokes, memes and comedian video with friends or colleagues".* | When using SNS at work, I use features that help me share information that is fun-filled with friends or colleagues. |
| 2 | The use of SNS for social interaction and social relationships is highly mentioned in the literature e.g. Ellison (2007). | *"I love the social interaction provided by SNS, it is more social, fun and not work-related".* | When using SNS at work, I use features that help me interact in a social way with friends, family or colleagues. |
| 3 | Another type of SNS use that is frequently mentioned is using SNS for entertainment e.g. The entertainment provided by SNS comes in many forms, the platform on its own can provide entertainment or provide other entertaining features like games e.g. Dunne, Lawlor and Rowley (2010). | *"SNS are personally interesting and entertaining…".* | When using SNS at work, I use features that provide me with personally fulfilling entertainment. |
| 4 | SNS uses include information seeking and searching related to family and friends e.g. information searching and seeking are important in the usage of social media for social purposes (Dunne et al., 2010). | *"Using SNS is a quicker way of learning what is going on with friends, family or colleagues…just to keep myself up-to-date".* | When using SNS at work, I use features that help me to seek information about family and friends. |
| 5 | One of the most frequently cited uses of SNS in the workplace is for fulfilling the need to belong e.g. SNS allows users to fulfil belonging needs through communicating with and learning about others (Seidman, 2013). | *"I use SNS to just keep in touch with family and friends, and that is fulfilling".* | When using SNS at work, I use features that fulfil my need to keep in touch with friends, family or colleagues. |
| 6 | Literature indicate that SNS is a source of information i.e. hotels, weather, product reviews, entertainment events, people with the same interest (Xiang and Gretzel, 2010). | *"I follow and like, which make it easy for me to get information and to be part of colleagues, family and friends".* | When using SNS at work, I use features that allow me to follow activities or events that are of personal importance. |
| 7 | Users have been found to use SNS to relax e.g. the humour provided by SNS offer users a platform to use to relax their mind (Holton and Lewis, 2011). | *"SNS are interesting and entertaining, after a long day at work I turn to them and am soothed. They are a therapy".* | When using SNS at work, I use features that help me to be calm and relaxed at work. |

| | | | |
|---|---|---|---|
| 8 | Users share different information on SNS e.g. topics of interest and interesting personal digital media (McCarthy, Congleton and Harper, 2008). | *"It is satisfying to get such amount of information from SNS related to my personal interest and hobbies".* | When using SNS, I use features that help me access information on topics of personal interest |
| 9 | The most salient use of SNS is personal communication……(Zhao, Salehi, Naranjit, Alwaalan, Voida and Cosley, 2013). | *"Once in a while I use it for communication (inbox/messenger) if I don't have someone's contact details".* | When using SNS, I use features that support my need for personal communication |
| Utilitarian Deep Structure Usage | | | |
| 10. | Literature has revealed SNS as a tool for interaction in the workplace e.g. Co-workers share knowledge and advice on SNS (Zhao and Rosson, 2009). | *"SNS enables me to connect and share knowledge amongst colleagues so that I can serve my clients better".* | When using SNS at work, I use features that help me interact with others to obtain work advice or support. |
| 11 | "First, social media enables companies to talk to their customers, and second, it enables customers to talk to one another. Social media also enables customers to talk to companies…" (Mangold and Faulds, 2009). | *"SNS enables me to get feedback from colleagues and clients regarding work products"* | When using SNS at work, I use features that help me obtain feedback on work products. |
| 12 | In addition, SNS are used as a tool to gain assistance from others or experts (Java, Song, Finin and Tseng, 2007). | *"It has come to a point that I look for answers from SNS, experts share a lot…".* | When using SNS at work, I use features that help me gain assistance from others in order to improve my performance at work. |
| 13 | Recent literature has impressed on the new concept of co-worker or colleague endorsement e.g. SNS such as LinkedIn allow user endorsements for specific skills (Pérez-Rosés, Sebé and Ribó, 2016). | *"I basically use it to update my CV and put myself out there for potential employers".* | When using SNS at work, I use features that help me receive endorsement from others thus improve my curricula vitae. |
| 14 | Another use of SNS in the workplace is searching for human resources or for experts e.g. companies are increasingly using SNS to search for potential employees (Brown and Vaughn, 2011). | *"I use it to reach different experts in my field of work"*<br>*"I have also found human resource to use in different company projects".* | When using SNS at work, I use features that help me search for industry experts. |
| 15 | One of the most frequently cited uses for SNS in the workplace is for searching for job opportunities e.g. Most job seekers and human resource professionals use SNS these days extensively (Stopfer and Gosling, 2013). | *"I search for new jobs, career road maps and see how colleagues are progressing".* | When using SNS at work, I use features that help me search for job opportunities. |
| 16 | Literature suggest that SNS users find SNS to be a good tool for professional networking e.g. LinkedIn is being used as professional networking tool by users (Skeels and Grudin, 2009). | *"I use SNS to build my professional network".* | When using SNS at work, I use features that help me build my professional network. |
| 17 | SNS are used to share and get information related to user's industry e.g. educators were using it for professional development, as a source of educational information or material (Lightle, 2010). | *"Also, I use features like follow and others, which make it possible to get information regarding industry related information".* | When using SNS at work, I use features that help me gather *industry related information.* |
| 18 | Literature suggests that SNS are used by employees for communication at work e.g. corridor conversations are now on SNS (Lightle, 2010). | *"We use SNS more than other communication tools at work…..".* | When using SNS at work, I use features that support my need for workplace communication. |

*Table 8.5. Summary of Literature, Interview Findings and Proposed Items*

### 8.3.3 Phase 3: IS Researcher Panel

Three (3) IS research experts (as suggested by Arnold, Arad, Rhoades and Drasgow (2000)) evaluated the eighteen (18) items. Experts who have experience relating to system usage (construct and items) were tasked with evaluating the appropriateness of the formulated items. Items were formulated based on summary of literature and interview findings as shown in Table 8.5. Items were evaluated against their ability to cover the theoretical domain of the constructs, and thereby help improve content and face validity. Based on their suggestions, items were modified where necessary to improve their clarity.

### 8.3.4 Phase 4: Q-Sorting

A Q-sort, or card sort, is systematic study of participant viewpoint (Kitzinger, 1987). It is an investigation of perspectives of participants who represent different stances on an issue. In Q-sort participants are asked to sort a set of statements representing a broad diversity of opinions and perspectives on the phenomenon being investigated. Items for the Q set can be gathered from a variety of sources, for example, direct quotes and themes from interviews with participants (Kitzinger, 1987) and statements originating from academic literature and popular media in addition to interviews (Segars and Grover, 1998).

Typical for a Q-sort, the items resulting from Phase 3 were randomly listed and independently sent to six (6) experts who have experience relating to SNS usage. There were eighteen (18) statements. The statements described use of SNS, which can reflect either a hedonic or a utilitarian use. For each statement, the participants were instructed to indicate whether they felt the statements reflected hedonic use or utilitarian use by placing an (×) under the relevant column.

There was 100% inter-rate agreement for all 18 items, with each Q-sort participant assigning an item as either hedonic or utilitarian usage. There were no disagreements among q-sort participants on any of the items. Consequently, the items were all retained since they have been found to reflect their intended usage. This 100% agreement indicates that the items are not ambiguous, thus the researcher can be confident and subsequently use the items in the next stages. All the 18 items were subjected to non-IS-panel in the next stage.

### 8.3.5 Phase 5: Non-IS Panel

Non-IS scholars (e.g. experts from marketing) who are familiar with SNS usage research were asked to evaluate the items, and indicate if they were relevant to SNS users. They were comfortable with the wording and structure of the statements. Thus, the items were developed into a questionnaire that was then pre-tested in the next phase. The purpose of the questionnaire was for collecting data from a large sample of SNS users that could then be used for testing the psychometric properties of the newly developed deep structure usage scales (phase 7).

### 8.3.6 Phase 6: Pre-Test

To assess the psychometric characteristics, the newly developed items for deep structure hedonic and utilitarian usage formed part of a 35 item questionnaire. Items were measured using a seven-point Likert scale ranging from (1) “strongly disagree” to (7) “strongly agree”. The questionnaire contained 18 items measuring deep structure hedonic usage (9 items) and deep structure utilitarian usage (9 items). These deep structure measurement items were combined with an additional seventeen (17) items from literature capturing cognitive absorption (3 items), traditional unidimensional usage (3 items), enjoyment (5 items), job performance (3 items) and job satisfaction (3 items).

These seventeen items were included for two reasons, to demonstrate that dimensions of usage can be discriminate against other constructs which they might relate with (factor analysis), and the other reason is to establish the predictive effect of the dimensions of usage on job outcomes such as job performance and job satisfaction.

Five (5) SNS users were drawn from the previous list of the interviewees (see Table 8.4), and were asked to pre-test the questionnaire. Pre-test was done to further assess the questionnaire's validity and there were no further changes. The questionnaire items appear in Table 8.6

### 8.3.7 Phase 7: Pilot for Testing Psychometric Properties

The last phase of the multi-phase approach was for the questionnaire to be sent to a sample of SNS users. Non-probability snowball sampling strategy was used to select and invite 124 SNS users who are employees of different firms in South Africa to participate. Sample size is acceptable when compared to other measurement development studies (e.g. Aladwani and Palvia, 2002; Netemeyer, Krishnan, Pullig et al., 2004). Early stage respondents were drawn from the researcher's email list, and the link to the online questionnaire was sent to them through email. Further, they were asked to forward the link to people in their email list. The questionnaire was administered using an online survey tool. Together with the questionnaire, a cover page was sent to the respondents, and it included statements on issues of confidentiality and anonymity, and ethics clearance protocol number. Responses were received from one hundred and seventy-three (173) of these conveniently selected SNS users. The usable data collected during pilot test was used for psychometric analysis to confirm reliability and validity. Results are presented next.

### 8.3.8 Results of the Psychometric Tests

#### 8.3.8.1 Descriptive Analysis of the Items

The means and standard deviations of the items were calculated and results are in Table 8.6. The means ranged between 2.70 and 6.19 on a scale of 1 to 7, while the standard deviations were between 1.00 and 2.20. Next, the psychometric characteristics of the items were analysed.

#### 8.3.8.2 Psychometric Characteristics

The psychometric characteristics of the multi-dimensional SNS usage construct items were assessed subjected principal component analysis (PCA) and component factor analysis (CFA). These two undertaken to assess psychometric characteristics such as factor structure, convergent validity, discriminant validity, reliability, model fit and structure equation model.

#### 8.3.8.3 Factor Structure

Principal component analysis (PCA) was used to explore underlying dimensions of the constructs. Varimax rotation and eigenvalue of 1 were used for the PCA. Using PCA, six (6) factors were extracted.

Items with factor loadings at or above 0.70 on a specific factor (factor they are supposed to measure) and loadings at or below 0.40 on factors they are not supposed to measure, were retained. All the retained factors and their loadings are shown in Table 8.7.

The first iteration, five (5) items were deleted. Hedonic deep usage had one (1) item deleted, and utilitarian deep usage had four (4) items deleted. The second iteration, one item for traditional use was deleted. Third iteration, final stable solution was achieved. All the items converged cleanly on the factors representing the items except for job performance and job satisfaction. These two workplace outcomes converged into one factor instead of separating into two. These two factors are both potential outcomes. For now, the two were combined to form job outcome (see Table 8.7).

Final stable solution, hedonic deep usage had eight (8) items, job outcome (6), utilitarian deep usage had (5) items, cognitive absorption (3), enjoyment (5), traditional use (3) and job outcome (6) items.

Factor (1) accounted for 28.78 % of the variance, factor (2) accounted for 18.13% of variance, factor (3) explained 17.17% of variance, factor (4) explained 12.00%, factor (5) explained 10.72% of variance in the 26 items, and together the five factors explained 83.80% of the variance.

The items were tested for convergent and discriminate validity in the next step.

8.3.8.4 Partial Least Squares Approach to Testing Validity and Reliability

Further, the psychometric properties of the items were analysed using PLS structural equation modelling tool SmartPLS. Using SmartPLS, the factors and cross-loadings of those items that survived the PCA were extracted to their respective factors. Next, two models were formulated.

First for model A, six (6) factors were used, enjoyment was used as antecedent of the three dimensions of usage, and job outcome was used as an outcome of the three dimensions of usage. This was to test if the proposed usage can be predicted, and also it can predict an outcome. Second for model B, three (3) factors were used, enjoyment as antecedent of traditional use, traditional use as predictor variable for job outcome. For both models all the items were modelled as reflective, because they are viewed as effects of latent variables (Mun and Hwang, 2003).

For each of the models a factor analysis was carried out in SmartPLS. The model was run twice, the first iteration three (3) items from job outcome had loadings low than the threshold of 0.7, and therefore they were deleted. The loadings for each of the three (3) dropped items were less than 0.65.

For model A, the loadings were significant as indicated by T-statistics. The T-statistics values ranged between 2.41 and 27.56. The item loadings and significant T-statistics for each item confirmed the convergent validity for each of the items. In addition, the AVEs are above 0.50 threshold (see Table 8.12), the smallest AVE is 0.741 and largest is 0.830, thus indicating convergent validity and reliability.

For model B, the loadings were significant as indicated by T-statistics. The T-statistics values ranged between 2.75 and 82.21. The item loadings and significant T-statistics for each item confirmed the convergent validity for each of the items. In addition, the AVEs are above 0.50 threshold (see Table 8.13) the smallest AVE is 0.778 and largest is 0.943, thus indicating convergent validity and reliability.

Discriminant validity was tested using Fornell and Larcker (1981) guideline/criteria, suggesting that the square roots of the AVEs must be greater than any other of the inter-factor correlations. Drawing from Tables 8.8 and Table 8.9, the items meet the criteria, thus discriminant validity is supported. Further, a Heterotrait Monotrait Ratio (HTMT) criteria was used, the results are in Tables 8.10 and Table 8.11. The HTMT values are less than 1, thus indicating discriminant validity. The results are far below the threshold of 1, thus showing that the factors are different.

| Descriptive Statistics | | |
|---|---|---|
| | Mean | Std. Deviation |
| **Deep structure hedonic usage** | | |
| When using SNS, I use features that support my need for personal communication. (deleted) | 6.19 | 1.001 |
| When using SNS at work, I use features that help me to seek information about family and friends. | 5.07 | 1.796 |
| When using SNS at work, I use features that help me share information that is fun-filled with friends or colleagues. | 5.37 | 1.713 |
| When using SNS at work, I use features that fulfil my need to keep in touch with friends, family or colleagues. | 5.74 | 1.375 |
| When using SNS at work, I use features that allow me to follow activities or events that are of personal importance. | 5.63 | 1.497 |
| When using SNS at work, I use features that provide me with personally fulfilling entertainment. | 5.15 | 1.812 |
| When using SNS at work, I use features that help me interact in a social way with friends, family or colleagues. | 5.70 | 1.353 |
| When using SNS, I use features that help me access information on topics of personal interest. | 5.96 | 1.400 |
| When using SNS at work, I use features that help me to be calm and relaxed at work. | 5.19 | 1.819 |
| **Deep structure utilitarian usage** | | |
| When using SNS at work, I use features that help me interact with others to obtain work advice or support. | 4.96 | 1.971 |
| When using SNS at work, I use features that support my need for workplace communication. | 4.85 | 1.936 |
| When using SNS at work, I use features that help me build my professional network. (deleted) | 5.63 | 1.597 |
| When using SNS at work, I use features that help me receive endorsement from others thus improve my professional profile. (deleted) | 5.63 | 1.245 |
| When using SNS at work, I use features that help me search for job opportunities. | 5.41 | 1.500 |
| When using SNS at work, I use features that help me gain assistance from others in order to improve my performance at work. | 5.07 | 1.639 |
| When using SNS at work, I use features that help me search for industry experts. (deleted) | 5.89 | 1.121 |
| When using SNS at work, I use features that help me obtain feedback on work products. | 5.04 | 1.698 |
| When using SNS at work, I use features that help me gather industry related information. (deleted) | 5.63 | 1.334 |
| **Cognitive absorption** | | |
| Time appears to go by very quickly when I am using SNS at work | 5.11 | 1.888 |
| While using SNS at work, I am able to block out most other distractions | 4.11 | 1.601 |
| While on SNS at work, I tend to get immersed in the SNS task I am performing | 4.11 | 1.761 |
| Traditional use | | |
| At work, I spend many hours on SNS per week (deleted) | 2.70 | 1.589 |
| At work, I use SNS many times a week | 3.93 | 2.037 |
| At work, SNS have become part of my daily routine | 3.85 | 1.975 |
| **Enjoyment** | | |
| SNS are enjoyable to use at work. | 4.89 | 1.577 |
| SNS are fun to use at work. | 4.67 | 1.494 |
| Using SNS at work gives me pleasure. | 4.26 | 1.873 |
| Using SNS at work excites my curiosity. | 4.19 | 1.665 |
| Using SNS at work is amusing. | 4.11 | 1.717 |
| **Job outcome** | | |
| I am very satisfied with my current job | 4.93 | 2.200 |
| My present job gives me internal satisfaction | 4.89 | 2.136 |
| My job gives me a sense of fulfilment | 5.04 | 2.047 |

| | | |
|---|---|---|
| My performance in my current job is of high level | 5.74 | 1.631 |
| My performance in my current job is excellent | 5.89 | 1.219 |
| My performance in my current job is better than others | 5.48 | 1.424 |

*Table 8.6. Item Means and Deviations*

The reliability of the items was computed, the results are in Table 8.12 and Table 8.13. The alpha values are as follows: for eight (8) items hedonic deep usage (0.956), five (5) items utilitarian deep usage (0.909), three (3) items cognitive absorption (0.784), five (5) items enjoyment (0.951), and job outcome (0.863) with three (3) items each. Traditional use with three (3) items had alpha 0.94. All the recorded Cronbach's alphas and composite reliabilities were above the threshold of 0.7.

8.3.8.5 Maximum Likelihood Approach to Testing Validity or Fit of the Measurement Model

Statistical package, AMOS was used to evaluate the fit of the measurement models. Although the sample size fell slightly short of the recommended 200, AMOS CFA was preferred over PLS due to its ability to provide a number of established model-fit indices (e.g. Chi-square/df, CFI, GFI, NFI, RFI, RMSEA), and the frequency of its use in past studies focused on the development and validation of constructs and items.
The models were evaluated based on standard practice using fit indices such as root-mean square error of approximation (RMSEA), comparative fit index (CFI), and also Chi-squared.

The multi-dimensional SNS usage construct was modeled based on recommendations by Wright, Campbell, Thatcher and Roberts (2012) and Polites, Roberts and Thatcher (2012). Different models were conceptualized as follows:

*8.3.8.5.1 Model 1: First-order Factor Model*

The multi-dimensionality of usage was tested using the first model. It was hypothesized that a unidimensional first-order model accounts for the variance among all the sixteen indicators, 8 hedonic usage items, 5 utilitarian usage items and 3 cognitive absorption items (see Figure 8.2). The confirmatory factor analysis provided evidence of poor mode fit as shown by the following indices: $\chi 2$=269.34; d.f.=104; CFI=0.561; RMSEA=0.247. Based on the results, the indicators do not load on a single factor. Next, a multi-dimensional approach is taken.

*8.3.8.5.2 Model 2: Dimensionality and Convergent Validity*

Model 2 shows the first-order factors for each dimension of usage. Modeling usage as shown in Figure 8.3 is to provide evidence of multi-dimensionality and convergent validity. In this model, it is hypothesized that sixteen indicators indicate three freely correlated first-order factors. The fit indices for model 2 are $\chi 2$=167.84; d.f.= 83; CFI=0.947 and RMSEA=0.08 achieved with 150 iterations and adjusting the modification indices (covariances of errors).

Furthermore, all the standardized factor loadings of indicators on their respective factors were above the threshold of .70, and highly significant ($p<0.001$) thus supporting convergent validity.

**Rotated Component Matrix[a]**

| | Component | | | | | |
|---|---|---|---|---|---|---|
| | Hedonic | Enjoyment | Job Outcome | Utilitarian | Cognitive Absorption | Traditional Use |
| HED2 | .790 | | | | | |
| HED3 | .848 | | | | | |
| HED4 | .947 | | | | | |
| HED5 | .910 | | | | | |
| HED6 | .857 | | | | | |
| HED7 | .933 | | | | | |
| HED8 | .868 | | | | | |
| HED9 | .772 | | | | | |
| UTI1 | | | | .931 | | |
| UTI2 | | | | .836 | | |
| UTI5 | | | | .573 | | |
| UTI6 | | | | .898 | | |
| UTI8 | | | | .821 | | |
| CA | | | | | .873 | |
| CA | | | | | .858 | |
| CA | | | | | .816 | |
| USE2 | | | | | | .774 |
| USE3 | | . | | | | .831 |
| ENJ1 | | .861 | | | | |
| ENJ2 | | .897 | | | | |
| ENJ3 | | .914 | | | | |
| ENJ4 | | .862 | | | | |
| ENJ5 | | .855 | | | | |
| SAT1 | | | .868 | | | |
| SAT2 | | | .927 | | | |
| SAT3 | | | .947 | | | |
| PER1 | | | .837 | | | |
| PER2 | | | .847 | | | |
| PER3 | | | .726 | | | |

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.
Variance Explained: Hedonic (22.55%), Enjoyment (17.44%), Job Outcome (17.05%), Utilitarian (13.24%), Cognitive Absorption (8.55%), Traditional Use (4.88)

*Table 8.7: Principal Component Analysis*

| | Cognitive absorption | Enjoyment | Hedonic usage | Job outcome | Utilitarian usage |
|---|---|---|---|---|---|
| Cognitive absorption | 0.878 | | | | |
| Enjoyment | 0.183 | 0.914 | | | |
| Hedonic usage | 0.165 | 0.133 | 0.874 | | |
| Job outcome | 0.171 | 0.302 | 0.268 | 0.887 | |
| Utilitarian usage | -0.033 | 0.459 | 0.211 | 0.291 | 0.861 |

*Table 8.8: Test of Discriminant Validity (correlation matrix) for Model A*

| | Enjoyment | Job outcome | Traditional use |
|---|---|---|---|
| Enjoyment | 0.915 | | |
| Job outcome | 0.273 | 0.882 | |
| Traditional use | 0.572 | -0.098 | 0.971 |

*Table 8.9: Test of Discriminant Validity (correlation matrix) for Model B*

| | Cognitive absorption | Enjoyment | Hedonic usage | Job outcome | Utilitarian usage |
|---|---|---|---|---|---|
| Cognitive absorption | | | | | |
| Enjoyment | 0.186 | | | | |
| Hedonic usage | 0.166 | 0.15 | | | |
| Job outcome | 0.172 | 0.321 | 0.268 | | |
| Utilitarian usage | 0.125 | 0.469 | 0.262 | 0.322 | |

*Table 8.10: Test of Discriminant Validity (HTMT matrix) for Model A*

| | Enjoyment | Job outcome | Traditional use |
|---|---|---|---|
| Enjoyment | | | |
| Job outcome | 0.326 | | |
| Traditional use | 0.602 | 0.093 | |

*Table 8.11: Test of Discriminant Validity (HTMT matrix) for Model B*

| | Cronbach's Alpha | Composite Reliability | AVEs |
|---|---|---|---|
| Cognitive absorption | 0.784 | 0.868 | 0.77 |
| Enjoyment | 0.951 | 0.962 | 0.83 |
| Hedonic usage | 0.956 | 0.967 | 0.764 |
| Job outcome | 0.863 | 0.917 | 0.787 |
| Utilitarian usage | 0.909 | 0.934 | 0.741 |

*Table 8.12: Cronbach's Alpha, Composite Reliability and Average Variance Extracted (AVEs) for model A*

| | Cronbach's Alpha | Composite Reliability | AVEs |
|---|---|---|---|
| Enjoyment | 0.951 | 0.962 | 0.837 |
| Job outcome | 0.863 | 0.914 | 0.778 |
| Traditional use | 0.94 | 0.952 | 0.943 |

*Table 8.13: Cronbach's Alpha, Composite Reliability and Average Variance Extracted (AVEs) for model B*

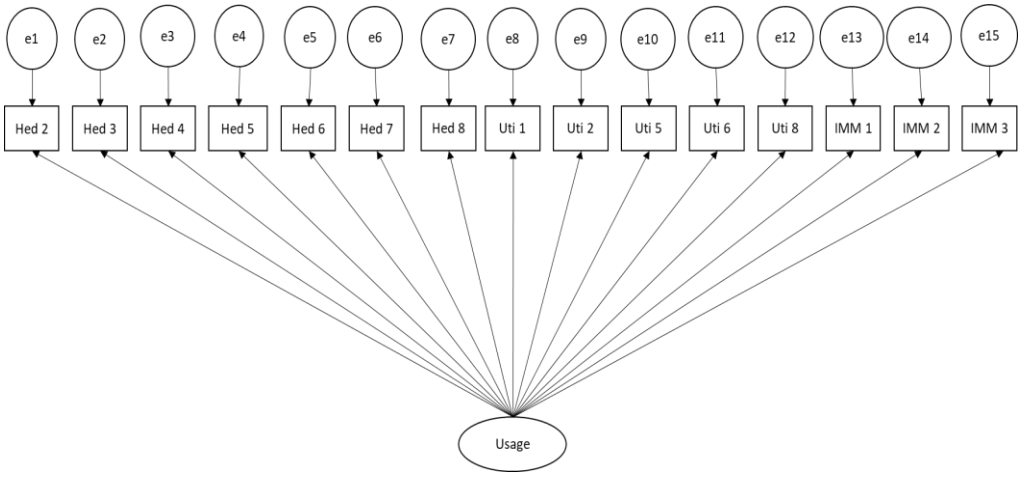



*Figure 8.2: Unidimensional Factor*

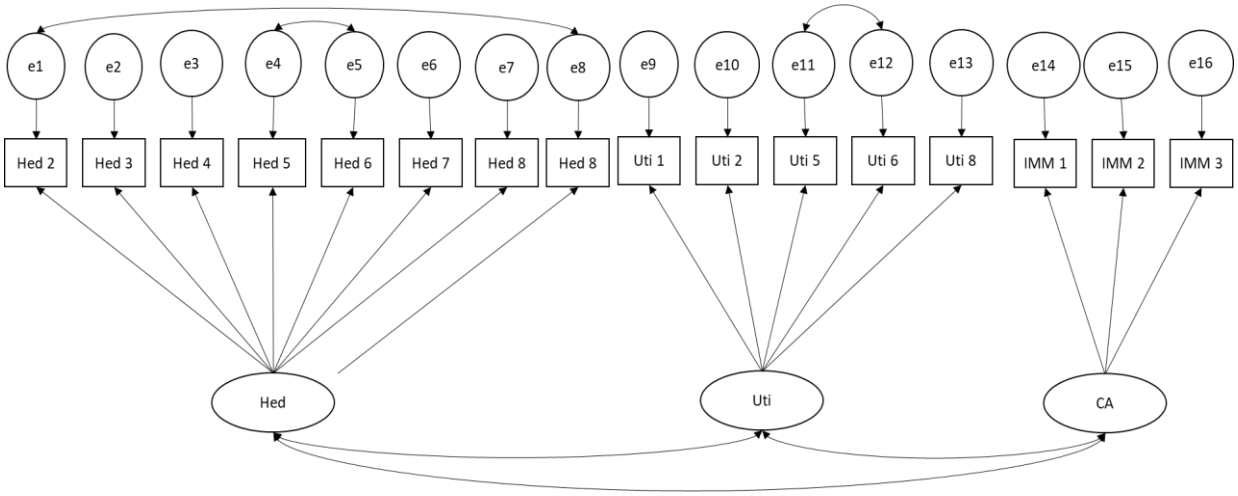



*Figure 8.3: Dimensionality and Convergent Validity*

### *8.3.8.5.3 Model 3: Discriminant Validity*

The third model establishes that each first-order factor is discriminant from the other first-order factors. A pair of first-order factors is used to create a model (see Figure 8.4 and Figure 8.5). Initially, the pairs of factors are allowed to freely covary in a confirmatory factor analysis (CFA). Secondly, the covariance is constrained to 1.0. This process is repeated for each of the factors. For both iteration, the chi-squared are recorded and are compared, if constraining the covariance results in a significant change in chi-squared values then there is evidence of discriminant validity (Venkatram, 1989). Assessment of discriminant validity results are presented in Table 8.14. All the changes in chi-squared are significant at $p<0.1$ thus providing evidence of discriminant validity.

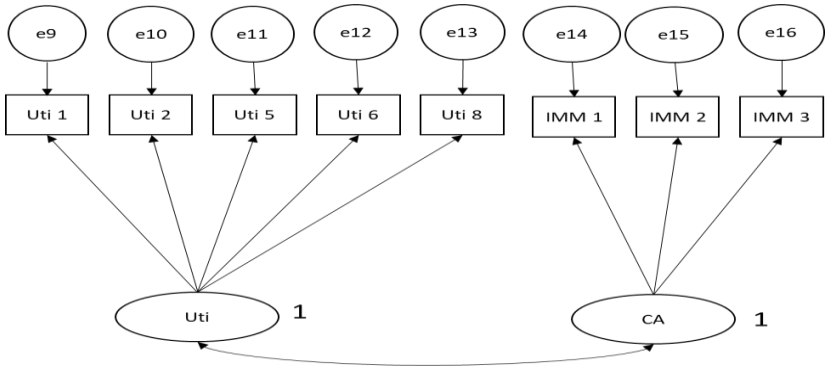



*Figure 8.4. Sample of Pairs of First-Order Factors (constrained)*

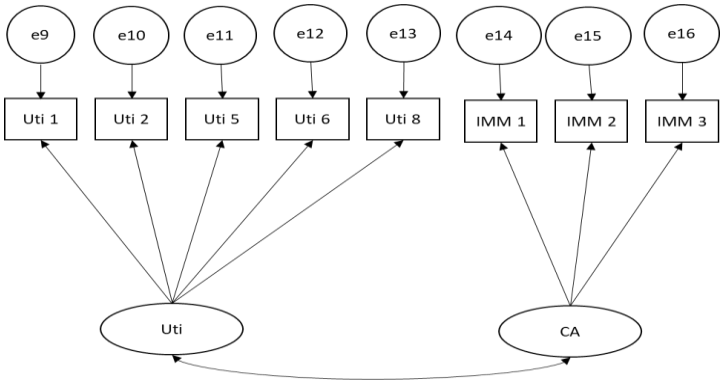
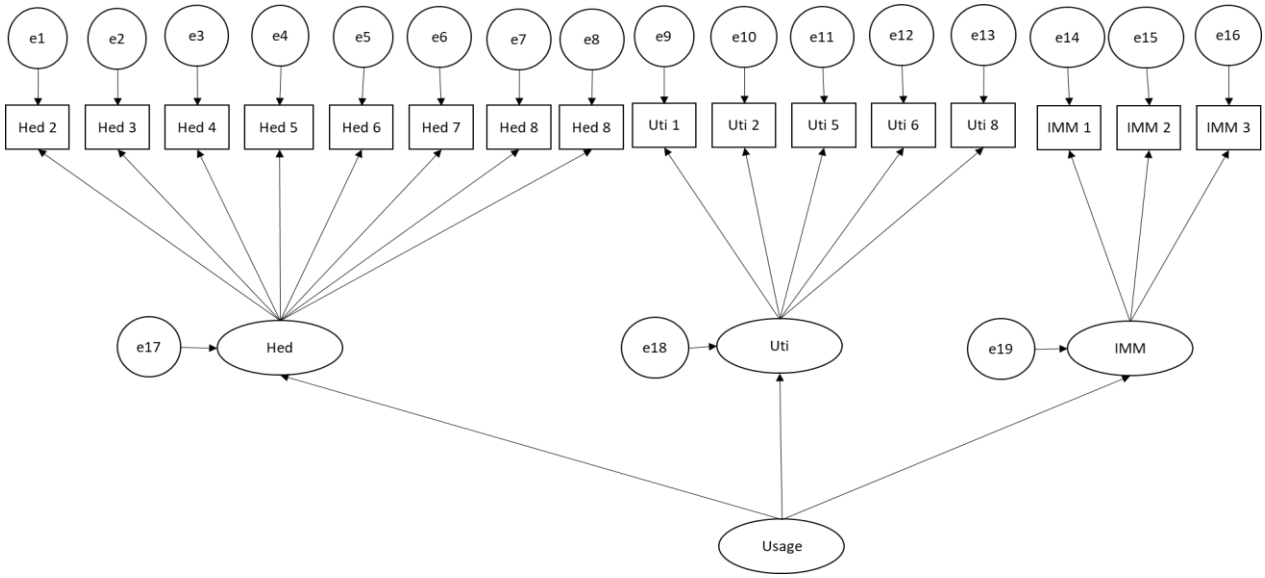



*Figure 8.5: Sample of Pairs of First-Order Factors (unconstrained)*

| Dimensions | Unconstrained model $\chi 2$ (Df) | Constrained model $\chi 2$ (Df) | Difference in $\chi 2$ |
|---|---|---|---|
| **Hedonic usage with** | | | |
| Utilitarian usage | 83.77 (53) | 91.130 (55) | 7.36 |
| Cognitive absorption | 51.34 (42) | 63.48 (45) | 12.14 |
| **Utilitarian usage with** | | | |
| Cognitive absorption | 27.03 (19) | 45.48 (21) | 18.45 |

*Table 8.14: Assessment of Discriminant Validity*




*8.3.8.5.4 Model 4 Reflective First-Order, Reflective Second-Order Construct*

A second-order factor is used in this covariance model. A reflective first-order, reflective second-order construct model is proposed. In this model, not only are each of the dimensions different manifestations (reflections) of the same higher-order concept, but the indicators of each dimension are likewise different manifestations of their respective dimensions (Polites et al., 2012). The results of the indices are $\chi 2$=144.93; d.f.=101; CFI=0.883, and RMSEA=0.129.

*Figure 8.6: Reflective First-Order, Reflective Second-Order Construct*

| Model | $\chi 2$ | D.f. | CFI | RMSEA |
|---|---|---|---|---|
| 1 | 269.34 | 104 | 0.561 | 0.247 |
| 2 | 167.84 | 83 | 0.947 | 0.08 |
| 3 | 144.93 | 101 | 0.833 | 0.129 |

*Table 8.15: Comparing Fit Indices for Model 1, Model 2 and Model 3*

Comparison of model 1, model 2 and model 3 shows that model 2 is a better-fitting model (see Table 8.15). The results indicate that a multi-dimensional model consisting of three freely correlated first-order factors is better than a unidimensional first-order factor model.

*8.3.8.5.4 Model 4 Structural Model*

After assessing the dimensionality, validity and reliability of the items, next the items are used in a structural model. The model integrates the measurement and structural relationships (Agrawal and Karahanna, 2000). Two different models were assessed, one model integrating the dimensions of usage (see Figure 8.7), the other model integrates the traditional usage construct (see Figure 8.8).

For the model integrating dimensions of usage, it was found that enjoyment had the highest significant effect on utilitarian usage (ß=0.46, $p<0.05$). This suggests that even if the user is using SNS for its instrumental value, the user still has to enjoy it. The dimensions of usage as predictor variables had no significant effect on job outcome. Job outcome was made-up of job performance items, based on this, the results are not surprising because the relationship between usage and job performance has been found to be insignificant in previous studies (Moqbel, 2012; Moqbel et al., 2013).

Next, the model integrating traditional use was assessed. The effect of enjoyment on traditional use is the highest and significant (ß=0.58, $p<0.05$), but the relationship between traditional use and job outcome (measured using job performance items) has been found to be negative and insignificant. This corroborates the earlier findings regarding the relationship between usage and job performance (e.g. Moqbel 2012; Moqbel et al., 2013).

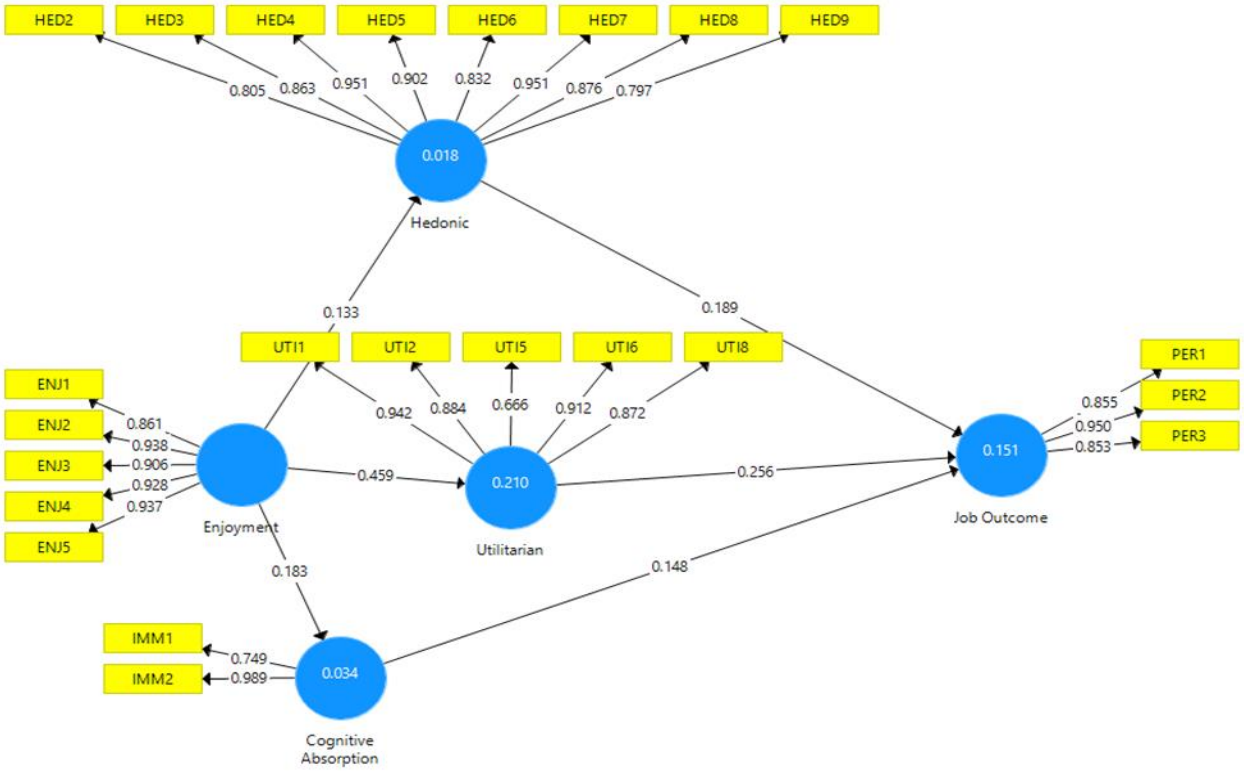



*Figure 8.7: Dimensions of Usage (SEM)*

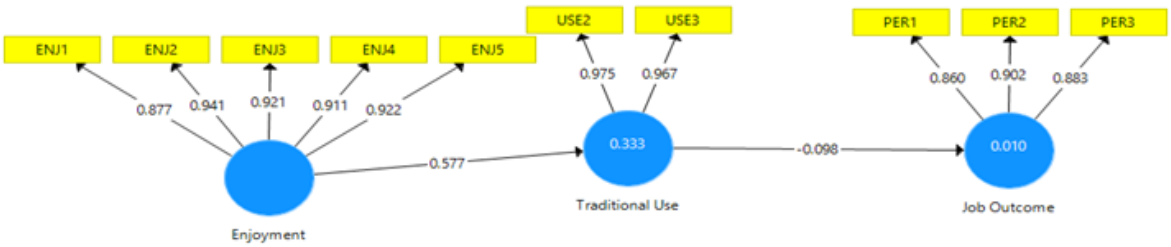



*Figure 8.8: Traditional Use (SEM)*

## 8.4 Discussions

This study has proposed and validated multi-dimensional social network site usage construct. Usage has been conceptualized as multi-dimensional construct consisting of deep structure hedonic usage, deep structure utilitarian usage and cognitive absorption.

Four models were explored. First, a first-order factor model was explored, suggesting that a unidimensional first-order factor model accounts for the variance among all the sixteen indicators. The results did not support the unidimensional first-order factor model. Second, it was hypothesized that the sixteen indicators indicate three freely correlated first-order factors. In terms of fit, this model was found to be superior to the unidimensional first-order factor model. Thirdly, superordinate second-order factor model was explored. The results of the model did not provide evidence of acceptable model fit.

Comparing all the three models, the second model (sixteen indicators indicating three freely correlated first-order factors) is a better fitting model. The proposed items for the multi-dimensional SNS usage construct have been assessed for dimensionality, convergent validity, and discriminant validity and the results show that these tests have been passed. The dimensions of usage were used in a structural model, predicted by enjoyment, and also predicting job outcome. These results showed that the dimensions have passed the predictive test. Thus, the multi-dimensional usage construct has been developed and validated.

## 8.5 Contributions, Implications and Limitations

Past SNS usage and systems usage research were focused mainly on unidimensional conceptualization of usage. The conceptualization was atheoretical and not context dependent. This was measured using narrow measures. In an attempt to address the shortcomings in conceptualization of SNS usage this study proposes a multi-dimensional SNS usage construct, made of hedonic deep structure usage, utilitarian deep usage and cognitive absorption. The multi-phase process used resulted in three dimensions of usage and provided evidence for the 13 SNS usage items (8 hedonic and 5 utilitarian) psychometric characteristics. This is a step in advancing the extant literature in the information systems field.

SNS usage in the workplace has been a topic of discussion. Understanding SNS usage better may result in gaining better insights regarding the effect of SNS usage in the workplace. Findings from past studies examining the relationship between SNS usage and work outcomes are not consistent. With the proposed SNS usage, each dimension can be associated with certain outcomes thus help to explain the relationship. Practically, the findings suggest that SNS is of benefit to organisations in general. Specifically, the results can help companies and human resource managers to better understand the association between SNS usage and workplace outcomes. SNS usage is likely to improve work outcomes. Hence, organisations may want to leverage the benefits of SNS (e.g. for knowledge sharing, social capital), and to establish guidelines for how SNS can be more effectively used for work-related purposes and outcomes. Organisations should find ways to incorporate SNS in their practices rather than trying to eliminate all opportunities for access. SNS like other information systems has been found to improve outcomes such as job performance and job satisfaction.

Likewise, organizations and policy makers can understand and have evidence when designing or updating SNS usage policies. They will be in a position to separate different types of usage and understand how each affects the organisation. For example, they might find that SNS hedonic deep usage is more likely to reduce stress and exhaustion at work, while SNS utilitarian deep usage is

more likely to improve employees' engagement and job performance. These dimensions will go a long way in providing information for decision making by SNS usage policy makers.

Designers of these sites or platforms may draw from this research. Depending on the purpose of the site, they may choose to include features which will provide for such usage. For example, those designing enterprise social network sites may want to provide for utilitarian deep usage more than hedonic deep usage.

Despite all the novel ideas, the study has some limitations. The items need to be tested with another sample of SNS users. There is a need to evaluate the items with other platforms, this study was focused on the general SNS hence this can be tested further with each platform e.g. Facebook. In addition, in future the relation between the different dimensions and different work outcomes (behavioral or psychological) can be examined.

There is a need to use the items in different studies and contexts, and conduct a longitudinal study to get more insights. This will help researchers to understand the relationship over time, and increased sample size will help with external validity. These limitations are not specific to this study but are common in measurement development and survey studies. However, the multi-phase validations and testing have improved the development of the items and they can still be improved further. Researchers may use and improve these items.

Despite the limitations, a multi-dimensional SNS usage construct was conceptualized and validated. Multi-dimensional model was supported by the results. The new conceptualization of usage construct may provide better insights regarding the relationship between usage and its antecedents, and usage and its outcomes.

## 8.6 Conclusion

This chapter conceptualized, developed and validated the multi-dimensional SNS usage construct, the subsequent chapters describe how this usage construct will be examined in empirical work i.e. the effects of motivation on hedonic deep usage and utilitarian deep usage (Chapter 9), and the effect of hedonic deep usage and utilitarian deep usage on outcomes (Chapter 10).

The next chapter presents a cross-sectional study of the effects of motivation on SNS usage.

# CHAPTER 9: A CROSS-SECTIONAL STUDY OF MOTIVATION, USAGE BEHAVIOURS AND IMPLICATIONS FOR JOB OUTCOMES

## 9.1 Introduction

This chapter addresses the study's first objective, which is to understand what motivates people to use social network sites in the workplace. The chapter also gives some insights into the second objective by undertaking a preliminary examination of the impact of SNS usage on two salient workplace outcomes. The impact of SNS usage on workplace outcomes will however be examined in-depth in the next chapter. The objective of this chapter, is important because social network sites (SNS) are complex information systems, being a hybrid of hedonic and utilitarian information systems. Therefore, the underlying motivations to use SNS are likely to be myriad because as hedonic systems they embed entertainment-like features such as gaming, photo and video sharing (O'Murchu, Breslin and Decker, 2004), and provide for pleasurable experiences and self-fulfilling values (van der Heijden, 2004). Yet, they also serve as utilitarian systems that have found their way into the workplace to fulfil more instrumental and functional roles such as knowledge sharing and gathering professional information (Cao, Vogel, Guo, Liu and Gu, 2012; Skeels and Grudin, 2009). Their use has implications for the way people interact within organisations (Scheepers, Scheepers, Stockdale and Nurdin, 2014), and they offer much promise as digital platforms for communication and interactive dialogue (Leftheriotis and Giannakos, 2014).

A better understanding of SNS usage motivations will be important when implementing policy and designing incentives targeted toward increasing SNS adoption and usage in the workplace. Policy makers and SNS designers have to be aware of the factors that 'energize, direct, and sustain human behaviour' (de Zúñiga, Lewis, Willard, Valenzuela, Lee and Baresch, 2011). Different human behaviours are driven by different motivations. Understanding those motivations might enable designers to design SNS platforms that meet users' needs and wants and to achieve higher adoption rates. Motivations direct behaviour and determine how much time is devoted to which tasks.

Motivations are likely to influence the way SNS is used and influence the degree to which usage is directed toward outcomes that are valuable and self-fulfilling. Past studies have focused and viewed the impacts of different motivations in silos e.g. the influence of intrinsic motivations (e.g. Zolkepli and Kamarulzaman, 2015), extrinsic motivations (e.g. Kim and Drumwright, 2016), hedonic motivations (e.g. van Heijden, 2004), and utilitarian motivations (e.g. Leftheriotis and Giannakos, 2014). A few studies have however examined two types of these motivations in the same model. For example, intrinsic and extrinsic motivations (Kim and Drumwright, 2016; Rode, 2016; Shibchurn and Yan, 2015), and hedonic and utilitarian motivations (Anderson, Knight, Pookulangara and Josiam, 2014; Martín-Consuegra, Díaz, Gómez and Molina, 2018). However, this approach has not provided in-depth insights on the relative and combined effects of different types of motivations on SNS usage. Therefore, there is a need for an extensive and inclusive model theorizing the influence of different types of motivations on SNS usage.

Further, an understanding of motivations must be cognisant of the hybrid nature of SNS usage itself. Even though past studies have attempted to shed light on social network site usage (e.g. Brooks, 2015; Zolkepli and Kamarulzaman, 2015; Scheefers et al., 2014), there is still a lack of deeper understanding of the hybrid hedonic and utilitarian usage of SNS. The conceptualization of usage behaviour, e.g. SNS usage, as a generic behaviour, and the undifferentiated treatment of behaviours toward the use of technology is a limitation that also needs to be addressed (Ali-Hassan et al., 2015; Burton-Jones and Straub, 2006; Sheefers et al., 2014). As an attempt to address that shortcoming, Chapter 8 proposed and validated a multi-dimensional SNS usage construct. This chapter builds on that conceptualization of SNS usage to view SNS usage as a construct comprising of deep hedonic usage, deep utilitarian usage and cognitive absorption as its dimensions.

This chapter also begins to make inroads toward resolving the second objective of the thesis, namely to establish the relationship between the dimensions of SNS usage and workplace outcomes. There is a great debate within the academic circles about the potential impacts of SNS usage on some workplace outcomes (Ali-Hassan et al., 2015). Past studies suggest that SNS usage has negative and positive effects on certain workplace outcomes e.g. negative for job performance (e.g. Moqbel and Kock, 2018), positive for job performance (e.g. Ali-Hassan, 2015; Moqbel et al., 2013; Moqbel and Nah, 2017), and positive for job satisfaction (e.g. Charoensukmongkol, 2014). However, these studies were not conceptualizing SNS usage as a multi-dimensional construct, thus limiting a more complete understanding of the relationship between dimensions of SNS usage and workplace outcomes. Without such understanding, organisations risk developing inappropriate policies which might affect their employee negatively and translate into negative workplace outcomes. Further, SNS designers might miss out on important factors that drive adoption and design platforms which will not be adopted and used. In summary, the purpose of this chapter is to develop and test a model of the motivational determinants of SNS usage and its implications for selected workplace outcomes. More specifically, this chapter draws on self-determination theory (Deci and Ryan, 2000) and hedonic and utilitarian motivation theory (Batra and Ahtola, 1991; Hirschman and Holbrook, 1982) to examine the influence of four types of motivations (intrinsic, extrinsic, hedonic and utilitarian) on multi-dimensional SNS usage (deep hedonic usage, deep utilitarian usage and cognitive absorption). Secondly, social cognitive theory is used as an underpinning theory to examine the relationship between the different dimensions of SNS usage and established workplace outcomes namely job satisfaction and job performance.

The next section of this chapter provides the theoretical background to the study. Subsequently, the model is developed. A description of methods and the data analysis then follows. Finally, implications of the study are discussed.

## 9.2 Theoretical Background

The study is built strongly on information systems and organisational behaviour theories. Specifically, the study is underpinned by hedonic-motivation system adoption model (HMSAM), hedonic and utilitarian theory, and self-determination theory (SDT).

### 9.2.1 Hedonic-Motivation System Adoption Model (HMSAM)

The HMSAM model is extended in this study as an attempt to provide more insights into the factors that influence the usage of SNS. As discussed in section 3.5, the hedonic-motivation system adoption model (HMSAM) is a native information systems theory that was introduced to help

predict the adoption and use of information systems that have hedonic characteristics or features (Lowry, Gaskin, Twyman, Hammer and Roberts, 2013). This model is therefore mainly applicable for studying systems such as online gaming, virtual worlds, online dating, digital music repositories, and these dimensions of social networking, that are fun and provide entertainment to the users (van der Heijden, 2004). It may also be relevant to other systems which are largely utilitarian but may have some hedonic elements (e.g. work instant messenger and email (Wu and Lu, 2013; Gu, Fan, Suh and Lee 2010). The HMSAM model (Figure 9.1) draws from technology acceptance model (TAM) and includes cognitive absorption as a mediator of perceived ease of use and behavioural intention. Cognitive absorption is grounded in flow-based cognitive absorption, and HMSAM proposes it as a rich construct focused on control, curiosity, joy, focused immersion and temporal dissociation. Thus HMSAM is not a minor and general extension of TAM but rather a model grounded in the alternative theoretical perspective of motivation (Lowry, Gaskin, Twyman, Hammer and Roberts, 2013).

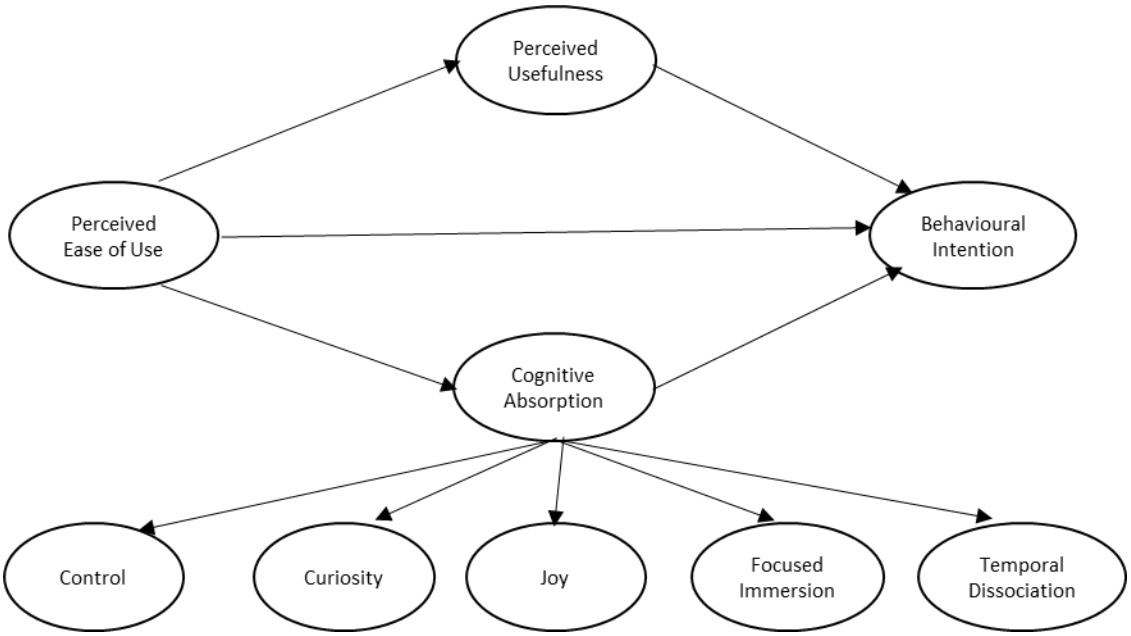



*Figure 9.1: Overview of HMSAM, from Lowry et al. (2013)*

However, on its own, the model does not give enough attention to utilitarian motivations and extrinsic motivations which may be important for hybrid hedonic and utilitarian systems. Therefore, the model may be inadequate in providing a complete explanation for the adoption and use of hybrid systems such as SNS. Hence, this chapter develops and tests a model that may help improve the understanding of hybrid hedonic and utilitarian system adoption.

One promising direction for extending HMSAM is to incorporate additional motivations informed by self-determination theory and other hedonic and utilitarian theories of motivation. These motivations have been identified as important to understanding system usage behaviour. Hence they are discussed next.

### 9.2.2 Self-Determination Theory (SDT)

As discussed in section 3.6, Self-determination theory (SDT) indicates that human needs specify the content of motivation and provide a substantive basis for energizing and directing behaviour (Deci and Ryan, 1987). Further, SDT hold that intrinsic and extrinsic motivations are the primary reasons individuals engage in various behaviours (Deci and Ryan, 2000). Intrinsic motivation is defined as doing an activity for its own sake, because one enjoys the process (Roca and Gagne, 2008; Ryan and Deci, 2000). Individuals are moved to act for fun or challenge entailed rather than external pressures or rewards (Ryan and Deci, 2000). Intrinsic motivation affects learning, adaptation and competencies (Ryan and Stiller, 1991). Examples of intrinsic motivation include enjoyment and playfulness. This suggests that employees may use information system because it fulfils their intrinsic motivations such as being enjoyable, fun or entertaining. Past research confirms that intrinsic motivation positively influences system use behaviour in contexts such as internet based learning, internet usage and games (Davis, Bagozzi and Warshaw, 1992; Hwang, 2005; Lee, Cheung and Chen, 2005; Teo, Lim and Lai, 1999; Venkatesh, 1999; Venkatesh, 2000). In contrast, extrinsic motivation is defined as doing an activity for a consequence separable from the activity itself such as in the pursuit of a reward or incentive or for the avoidance of punishment (Roca and Gagne, 2008; Ryan and Deci, 2000). These prospects of gain or loss govern the extrinsic motivations (Cerasoli, Nicklin and Ford, 2014). Past research finds that the relationship between system use behaviour and extrinsic motivation is positive in contexts such as micro-computer based software and Internet-based systems (Davis et al., 1992; Lee et al., 2005; Igbaria, Iivari and Maragahh, 1995). SDT can thus extend HMSAM by suggesting the inclusion of rewards and other incentives as explanation of IS usage behaviour. Past studies on SNS usage behaviour confirm SDT as a promising theoretical underpinning (e.g. Lee, Cheung and Chen, 2005).

### 9.2.3 Utilitarian and Hedonic Theory of Motivation

One additional theory relevant to user motivation is the utilitarian and hedonic theory of motivation (Lin, Wang and Chou, 2012). This theory explains that hedonic and utilitarian motivations are the driving force by which humans achieve their goals (Batra and Ahtola, 1991; Hirschman and Holbrook, 1982). Hedonic motivations to use an IS stem from the system providing functionalities which make it possible for the user to gain happiness, fantasy, awakening, sensuality, and enjoyment (Hirschman and Holbrook, 1982). Utilitarian motivations are based on the system providing functionalities which make it possible for the user to accomplish a mission or task (Batra and Ahtola, 1991; Sherry et al., 1993; Babin et al., 1994). These two motivation concepts have been used largely in the marketing discipline (Cardoso and Pinto 2010, Close and Kukar-Kinney, 2010; Hirschman and Holbrook, 1982; Tauber, 1972), and have been used inter-alia to understand consumer shopping behaviour (Cardoso and Pinto, 2010; Kang and Park-Poaps, 2010; To et al., 2007). Apart from marketing, these concepts have been used in other disciplines such as education (Saeed and Sinnappan, 2013) and health (Li and Mao, 2015). Past information systems researchers have infrequently used hedonic and utilitarian aspects of the system in explaining behaviours (Lin et al., 2012). Some of the attempts to use these concepts include studies by Childers, Carr, Peck and Carson (2001), Kim and Forsythe (2010), Jin, Park and Kim (2010) and Overby and Lee (2006). They included motivations such as convenience and escapism in studies of online shopping

system use. Despite the significance of SNS, past studies seldom examine the effect of utilitarian and hedonic functional aspects on SNS user behaviour. One study, examining SNS use mentioned perceived usefulness and perceived ease of use as functional determinants (Yap and Gaur 2016). This deficiency of studies examining functional aspects of SNS calls for more research in this area.

### 9.2.4 Past Work on HMSAM, SDT and Hedonic-Utilitarian Theory

A review of past literature focused on HMSAM, SDT and hedonic-utilitarian theory, and reflected in Table 9.1 and Table 9.2 below, has shown that there are significant overlaps of motivation constructs within the theories (refer also chapters 2 and 3). Given this overlap, this chapter combines a set of intrinsic and hedonic factors into a single hedonic-intrinsic perspective. The hedonic-intrinsic perspective presents a basket of factors that collectively capture the internal pleasure seeking basis for motivation.

Similarly, extrinsic and utilitarian motivations have significant overlap. Therefore, these factors are also combined into a single extrinsic-utilitarian perspective. The extrinsic-utilitarian perspective is a basket of factors that collectively capture the external reward seeking basis for motivation.

| Previous Research | Research Context | Hedonic Factors | Utilitarian Factors | IS Usage Variable | Research Method |
|---|---|---|---|---|---|
| Li (2009) | -Online shopping | -Enjoyment | -Convenience | -Intention to use | Cross-sectional study of consumers |
| Turel, Serenko and Bontis (2010) | -Digital artefacts | -Escapism,<br>-Enjoyment | | -Intention to use | Cross-sectional study of Mobile phone users |
| Chiu, Wang, Fang and Huang (2014) | -Online stores | -Adventure,<br>-Social interaction,<br>-Gratification | -Convenience,<br>-Product Offering,<br>-Monetary savings | -Repeat Purchase Intention | Cross-sectional study of consumers |
| Poyry, Parvinen and Malmivaara (2013) | -Facebook usage | -Hedonic motivations (joy, enjoyment) | -Utilitarian (convenience, usefulness) | -Purchase intention,<br>-Referral intention | Cross-sectional study of Facebook Users |
| Ernst, Pfeiffer and Rothlauf (2013) | -SNS | -Perceived enjoyment | -Perceived Usefulness,<br>-Ease of Use | -Intention to Use | Cross-sectional study of SNS users |
| Ryu, Han and Jang (2010) | -Restaurant Dinning | -Fun,<br>-Pleasant,<br>-Excitement | -Convenience.<br>-Economical, | -Intention to Use | Cross-sectional study of consumers |
| Li, Liu, Xu, Heikkila and Heijden (2015) | -Online games | -Enjoyment,<br>-Fantasy,<br>-Escapism,<br>-Social interaction | -Achievement,<br>-Self-presentation | -Continuance Intention | Cross-sectional study of users |
| Li and Mao (2015) | -Health Advisory Service | -Transparency,<br>-Engagement,<br>-Enjoyment | -Informativeness,<br>-Credibility | -Re-use Intention | Cross-sectional study of users |
| Allam, Biemel, Spiteri, Blusten and Ali-Hassan (2019) | -Social Tagging tools | -Curiosity<br>-Enjoyment | -Perceived usefulness | -Intention to Use | Cross-sectional study of users |
| Ashraf, Hou and Ahmad (2018) | -Social Media | -Fun,<br>-Enjoyment,<br>-Excitement | -Accomplishment,<br>-Usefulness,<br>-Satisfaction | -Continuance Intention | Cross-sectional study of active users |
| Moon, Khalid, Awan, Rasool and Kiran (2017) | -Online Shopping | -Role,<br>-Best deal,<br>-Social, | -Product information,<br>-Monetary savings,<br>-Convenience,<br>-Ease of use | -Purchase Intention | Cross-sectional study of consumers |

*Table 9.1: Past Application of Hedonic and Utilitarian Theory in Research*

| Previous Research | Research Context | Intrinsic Factors | Extrinsic Factors | IS Usage Variable | Research Method |
|---|---|---|---|---|---|
| Chang, Liang, Yan, and Tseng (2013) | -English Mobile Learning Systems | -Ease of use,<br>-Playfulness | -Convenience<br>-Usefulness | -Continuance Intention | e-book called Mebook of Studio Classroom users |
| Hung, Durcikova, Lai and Lin (2011) | -Knowledge sharing | -Altruism | -Economic reward<br>-Reputation<br>-Reciprocity | -Intention to Share knowledge | Cross-sectional study of MBA students using knowledge sharing system |
| Chong (2013 | -Mobile commerce | -Enjoyment<br>-Ease of use | -Usefulness | -Usage | Cross-sectional study of M-commerce users |
| Kong, Kwok and Fang (2012) | -Learning using online games | -Enjoyment | -Reward | -Intention to learn | World of Warcraft users |
| Poch and Martin (2014) | -User Generated Content | -Altruism | -Social benefits,<br>-Economic incentives | -Intention to Use | Cross-sectional study of users |
| Tang, Zhao and Liu (2013) | -Mobile Coupon | -Sense of Self-worth,<br>-Socializing | -Economic reward, -Reciprocity | -Intention to share | Cross-sectional study of users |
| Chung, Koo and Kim (2014) | -Booth Recommender System | -Escape,<br>-Event Attractions | -Information gain | -Usage Behaviour | Cross-sectional study of users |
| Rode (2016) | -Enterprise Social Media | -Enjoyment,<br>-Self-efficacy | -Reputation,<br>-Reciprocal benefits | -Usage Behaviour | Cross-sectional study of users |
| Cho, Park and Kim (2015) | -Facebook | -Information Self-efficacy,<br>-Self-presentation,<br>-Enjoyment | -Tangible rewards, -reciprocal relationship,<br>-Belonging | -Usage Behaviour | Cross-sectional study of users |
| Wamba, Bhattacharya, Trinchera and Ngai (2017) | -Social Media | -Perceived Enjoyment,<br>-Perceived Playfulness | -Image,<br>-Perceived usefulness | -Intention to use | Cross-sectional study of users |

*Table 9.2: Past Application of the SDT Theory in IS Research*

### 9.2.5 Conceptual Definitions of Constructs

The constructs used in this study and the proposed model were adopted from the reviewed literature. The conceptual definitions of the constructs and the theories that give rise to the constructs are outlined in Table 9.3. The meta-analysis in chapter 4 highlighted that enjoyment, playfulness, social interaction and entertainment are some of the hedonic and utilitarian motivations influencing information systems usage. Whereas image, reward, convenience, and usefulness were found to be extrinsic and utilitarian motivations influencing information systems usage. Further, the above tables confirm that there are certain motivations such as social interaction, escapism, image and reward that are not well established. The selection of the factors in the model balances inclusion of both well-researched and under-researched motivation factors. The inclusion of the under-researched factors may help to explain SNS usage behaviour more comprehensively. Omission of these factors in the past may have resulted in incomplete explanations.

| Construct | Variable | Conceptual definition | Theory |
|---|---|---|---|
| Intrinsic-Hedonic | Enjoyment | Is the excitement and happiness derived from information system use (van der Heijden, 2004) | SDT<br>HMSAM |
| | Entertainment | Anything that offers attainment of gratification, and that gratification can take the form not only of 'enjoyment', but also of other responses such as appreciation, suspense, amusement, serenity (Oliver and Bartsch, 2010; Zillmann and Vorderer, 2000) | SDT |
| | Escapism | Escaping reality and relief from daily cares, tasks or boredom (Close and Kukar-Kinney, 2009). | Hedonic |
| | Social Interaction | Refers to reference group affiliation, discussions, and communicating with others (e.g. family, friends or colleagues) having similar interests (O'Brien, 2010) | Hedonic |
| Extrinsic-Utilitarian | Image | Refers to an individual's tendency to be motivated partly by others' perceptions, including the rule of opinion in utility, i.e., the desire to be liked and respected by others and by one's self (Ariely, Bracha, and Meier, 2009; Brancheau and Wetherbe, 1990; Moore and Benbasat, 1991) | SDT |
| | Reward | Rewards are stimuli (tangible or intangible services or benefits) that are assumed to influence individual's behaviour (Malhotra, Budhwar and Prowse, 2007). Example promotion and monetary incentives | Utilitarian<br>SDT |
| | Convenience | The utilitarian value of time-saving (Jiang, Yan and Jun, 2013) | Utilitarian |
| | Perceived usefulness | The degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989) | SDT<br>Utilitarian<br>HMSAM |

*Table 9.3: Conceptual Definitions of Constructs*

Figure 9.2 depicts the two sets of motivations and their influence on SNS usage, which in turn affects outcomes. The next section expands on the model's constructs, and hypotheses are developed.

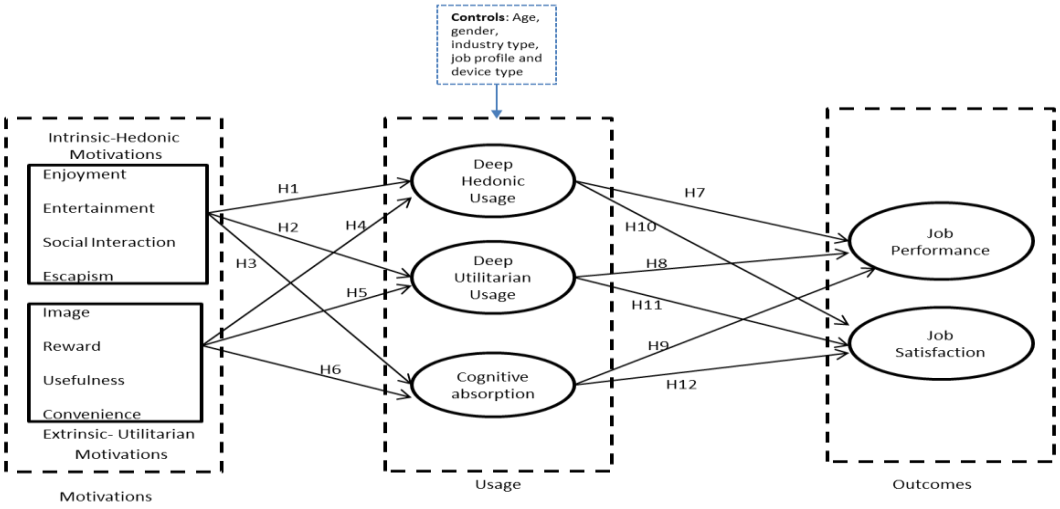



*Figure 9.2: Research Model showing the motivations that influence usage*

## 9.3 The SNS Usage Construct

System usage is an important construct in information systems research (Burton-Jones and Straub, 2006). However, system usage has too often been conceptualized as a one-dimensional construct with a diverse set of narrow measures such as features used, tasks supported, extent of use, frequency of use, and duration of use among others (Burton-Jones and Straub, 2006). Those simplistic views of system usage have resulted in insufficient knowledge about utilization and its effects on individual outcomes. More sophisticated conceptualizations of usage behaviour are required (Chin and Marcolin, 2001). In response, system usage behaviour has begun to be conceptualized as extended use (Hsieh and Wang, 2007), emergent use (Saga and Zmud, 1993), integrative use (Ahuja and Thatcher, 2005), exploratory use (Abdinnour-Helm and Saeed, 2006), and deep structure usage (Schwarz, 2003; Bala et al., 2019).

Among the above, the deep usage concept has been considered particularly promising (Saga and Zmud, 1993; Schwarz, 2003). This is because a systematic approach was followed in conceptualizing deep structure usage, and the usage measures were selected in a theoretically rigorous way (Burton-Jones and Straub, 2006). The deep structure usage of an SNS is defined as an activity involving (1) a user, i.e. the subject using the SNS, (2) the system being used, in this case the SNS, and (3) the task, i.e. the functions being performed.

Considering its hybrid qualities and unique characteristics, SNS usage could be viewed from this deep structure perspective and defined as an individual user's employment of one or more features of the SNS to perform a task. The hybrid nature of SNS requires that both its utilitarian and hedonic features are reflected in the conceptualisation of deep structure usage. Thus deep structure usage includes hedonic deep structure usage and utilitarian deep structure usage. Hedonic functions are for personal reasons and satisfaction such as fun, enjoyment and entertainment. An example here would include playing a game such as "Candy Crush" through the SNS. Utilitarian functions are performed to accomplish more productivity-based tasks that are typically work-related or

instrumental (Li, Wang and Chou, 2012). An example here would include recruiting potential employees using LinkedIn. Intrinsic-Hedonic and Extrinsic-Utilitarian motivations can be linked to different usage behaviours. Both the nature of the context as well as the motivation to use an information system will determine the kind of usage behaviour in which the user engages (Cotte et al., 2006, Van der Heijden, 2004). A user aiming to complete a work task at a given time uses a certain information system (e.g. SNS) with this task need in mind, but in another situation he/she might use the same information system (e.g. SNS) in order to pass time and to be entertained (Pöyry, Parvinen and Malmivaara, 2013). What users believe about the purpose of an information system has implications for their actual usage and SNS demonstrate a diversity of purpose (Wakefield and Whitten, 2006).

Burton-Jones and Straub (2006) have also distinguished deep structure usage from cognitive absorption, which is a user's engagement and immersion in the use of an IS (Burton-Jones and Straub, 2006). They consider both deep structure usage and cognitive absorption as necessary dimensions of the usage phenomenon. Cognitive absorption in the SNS context reflects user's engagement with the SNS (Burton-Jones and Straub, 2006). Taken together SNS usage can then be defined in terms of deep structure usage including hedonic deep structure and utilitarian deep structure usage, as well as cognitive absorption[9].

Hypotheses linking motivations to usage are developed next followed by hypotheses linking usage to work outcomes.

### 9.4 The Effects of Intrinsic-Hedonic Motivations on Usage

The first set of hypotheses (H1 to H3) relate to the effects of the four selected intrinsic-hedonic motivational factors on SNS usage. Specifically, the effects of enjoyment, entertainment, social interaction and escapism are considered. Enjoyment and entertainment are derived from SDT and HMSAM, while social interaction and escapism are from hedonic theory.

According to theory, these motivations exert powerful effects when they are predictors of user behaviour. For example, when the activity of using the information system is perceived to be enjoyable or entertaining in its own right, apart from any performance consequences that may be anticipated, or when certain features of the information system encourage social interaction or are therapeutic to the user.

Past work in the IS context has shown that enjoyment, entertainment, social interaction and escapism motivate hedonic usage behaviour. The effects are likely to be stronger especially in the context of hedonic SNS usage behaviour because the hedonic features of the SNS information system maybe well-suited to these user motivations. The expressed intent of such features of the information systems includes maximizing users' enjoyment or entertainment, social interaction or therapy from the use of the information system (Childers et al., 2001).

Social network sites have always provided features or functionality that provided for social interaction, fun, escapism and entertainment such as tagging, filters for pictures, or being 'poked' by friends, retweeting and sharing, and these have been enough to convert the infrequent users into

[9] The deep structure SNS usage construct was discussed in detail in Chapter 8.

everyday users. The hedonic-intrinsic functionalities provided by SNS have been improved to include share videos, check in at locations, and make virtual purchases, fun applications such face app, and poker games (http://thoughtreach.com).

Further, business press has highlighted the functionalities offered by SNS that motivate users. For example, https://www.hoganinjury.com/ states that 'SNS provide an additional avenue for connectivity, interaction, and creativity. Users are able to reach out to family and friends and stay up-to-date on their lives through their posts on SNS'.

Further, SNS functionality provides for fulfilment of motivations such as enjoyment, entertainment, escapism and social interaction. Users play games that are therapeutic and help them to escape from work activities, and they can also share and play against counterparts on SNS. Games such as "Candy Crush", madlips, hangman and gobble are highly played in SNS because of their entertaining features (www.socialmediatoday.com).

Different studies examining the impact of intrinsic and hedonic motivations on different uses of information systems concluded that intrinsic and hedonic motivations strongly influence the use of an information system for hedonic purposes (Atkinson and Kydd, 1997; van der Heijden, 2004). For example, the concept of enjoyment is crucial in determining the intention to use a hedonic information system for hedonic purposes (Van der Heijden, 2004), and entertainment or playfulness results in significant differences in intentions among users of mobile devices, both for hedonic and utilitarian purposes (Wakefield and Whitten, 2006).

Highly entertained users, those enjoying the SNS, those who are highly interacting with colleagues, friends and family on SNS and those who are driven by the escape they get from using the SNS are likely to use SNS for hedonic purposes. These intrinsic-hedonic motivations are likely to influence deep hedonic usage because of the hedonic features that are provided by the SNS. Thus:

*H1: Intrinsic-hedonic motivations [i.e. social interaction, perceived enjoyment, perceived entertainment, escapism] have a positive effect on deep hedonic SNS usage.*

While it may be counter-intuitive to theorise that these intrinsic-hedonic motivations would influence deep utilitarian usage, there is evidence to suggest that such effects are likely. For example, the usage of software such as a word-processor, which is highly valued for its utilitarian purpose, has been found to be driven by user enjoyment of the word-processor (Davis, et al., 1992). Moreover, in a study focused on an ostensibly utilitarian ERP system, it was found that the ERP's usage was often driven by hedonic pleasure or intrinsic motivation that encourages users to engage in sustained use (King, 2005). Perceived enjoyment encourages users to use information systems for work purposes (Ghani and Deshpande, 1994). Therefore, it may be that the drive to use information systems for purposes such as workplace communication or obtaining feedback on work products is not only driven by utilitarian motivation. Intrinsic and hedonic motivations which are the internal value of performing the activity are likely to influence the user's utilitarian usage behaviour (Gerow, Ayyagari, Thatcher and Roth, 2013). The basic rationale for such an association is that even though certain information systems e.g. ERP systems are used mainly for utilitarian purposes, users are encourage to use those systems through the enjoyment and pleasure derived

from using the system. The enjoyment and pleasure may encourage users to engage in sustained use (King, 2005). Intrinsic-Hedonic motivations can be relevant to understanding utilitarian tasks and activities because the task or activity can evoke hedonic feelings such as enjoyment and fun. Therefore, intrinsic-hedonic motivations are likely to influence deep utilitarian SNS usage. It can be theorised therefore that a user of a utilitarian system is influenced not only by utilitarian motives but also by the feelings (e.g. enjoyment) that are activated when using the information system in a utilitarian way (Sánchez-Franco and Roldán, 2005). Therefore, enjoyment, entertainment, social interaction and escapism are also likely to influence utilitarian focused SNS usage behaviours. Thus:

*H2: Intrinsic-hedonic motivations [i.e. social interaction, perceived enjoyment, perceived entertainment, escapism] have a positive effect on deep utilitarian SNS usage.*

These intrinsic-hedonic motivations are also likely to influence cognitive absorption dimension of usage because a cognitively absorbed user is often intrinsically motivated and driven by hedonic desires (Shang et al. 2005; Saade and Bahli, 2005). Psychological research suggests that intrinsic or hedonic motivations such as entertainment will drive user behaviour e.g. may lead to a state where the individual may lose awareness of outside events because they are so deeply engrossed with the software (Brooks and Longstreet, 2015). Other studies have shown the significance of individual factors like intrinsic or hedonic motivations in influencing the cognitive absorption (Agarwal and Karahanna, 2000). Entertainment offered by an information system has a positive effect on the user's absorption in the use of the information systems (Agarwal and Karahanna, 2000; Sharma, Joshi and Sharma, 2016). Most information system users, including SNS's users get immersed in using them because of the hedonic features that provide for entertainment or enjoyment (Turel and Serenko, 2012). Most users on SNS get immersed in games and messaging applications (e.g., chat-rooms) (PEW 2018). The features that fulfil the intrinsic-hedonic motivations are likely to require deep attention, involvement, and perceptual engrossment (Agarwal and Karahanna, 2000; Luo and Remus, 2014). When SNS users perceive a platform to be enjoyable, entertaining and a way to escape, they tend to put more time into its use, concentrate longer, process more information, and utilize it repeatedly in the future (socialmediaexaminer.com). Intrinsic-hedonic motivations are important in driving immersion and absorption in the use of an information system, especially ones used for communication purposes (Dimmick et al, 2000; Bourdeau et al, 2002). Therefore, it is hypothesized that enjoyment, entertainment, social interaction and escapism are likely to influence cognitive absorption in SNS usage. Thus:

*H3: Intrinsic-hedonic motivations [i.e. social interaction, perceived enjoyment, perceived entertainment, escapism] have a positive effect on cognitive absorption.*

### 9.5 The Effects of Extrinsic-Utilitarian Motivations on Usage

The second set of hypotheses (H4 to H6) relate to the effect of extrinsic-utilitarian motivations on different dimensions of usage. Extrinsic-utilitarian motivations reflected in two extrinsic motivations (reward and images), and two utilitarian motivations (convenience and perceived usefulness). Reward and images are derived from SDT while convenience and perceived usefulness are from HMSAM and hedonic and utilitarian theory.

Extrinsic and utilitarian motivations have been found to be important predictors of user behaviour (e.g. Feng, Fu and Qin, 2016; Shibchurn and Yan, 2015). These motivations are evident when users are performing activities on the information system because of expectations for performance consequences or the potential for external benefits.

While it may be counter-intuitive to theorise that these extrinsic and utilitarian motivations would influence deep hedonic usage, there is evidence to suggest that such effects are likely. For example, in a study examining acceptance of hedonic systems, it was found that extrinsic motivations (e.g. perceived usefulness) had an effect on hedonic usages of a website (van der Heijden, 2004). In a different study examining hedonic usage of product visualization technology it was shown that extrinsic-utilitarian motivations (e.g. usefulness) do play a role in the hedonic usage of information systems (Kim and Forsythe, 2008). Moreover, it was found that extrinsic-utilitarian motivations (e.g. usefulness, convenience, reward) influence hedonic usage of online shopping (O'Brien, 2010) and image influenced hedonic usage of video gaming (Mills et al., 2018). The basic rationale for such association is that even though the focus is using the information system to be in-touch with family and friends or share information that is fun-filled, the convenience and usefulness of the information system is likely to influence the sharing of fun-filled information and being in-touch with family and friends. When SNS is on a phone or mobile devices it can be easier and more saving time when sharing and communication with others. This suggests that hedonic usage of an information system may not only be because it is enjoyable or entertaining but other aspects do matter such as whether it is convenient or easily accessible. The links between image and reward have been established (e.g. Ariely et al., 2009). It has been identified that people who value social image tend to value or enjoy the effects of such image such as accolades (Shi, 2011). Therefore, perceived usefulness, reward, convenience and image are likely to influence deep hedonic usage of SNS. Thus:

*H4: Extrinsic-utilitarian motivations [i.e. reward, image, convenience, perceived usefulness] have a positive effect on deep hedonic SNS usage*

Past literature indicates that users' extrinsic-utilitarian motivations determine their usage behaviours (e.g. Cotte et al., 2006). Users who are looking for a reward or are looking for a convenient way to perform a task are likely to use information systems that have features that enable them to effectively and efficiently do these tasks. Users driven by extrinsic and utilitarian motivation are not likely to want to engage in time-consuming activities such as playing games or reading posts for fun-if it is not required, and rather are more concerned with finding content that suits their purposes especially work-related content (Poyry et al., 2013). Further, it is expected that utilitarian motivations for using SNS are related to obtaining useful information on the object of interest e.g. work-related topics, and making use-related decisions in a more efficient manner (Poyry et al., 2013).

Employees utilise SNS functionalities (e.g. search for an expert) especially those that make it possible for them to collaborate, share ideas and solve problems in the workplace. Research has shown that 60% of employees believe SNS support decision-making processes at work (PEWinternet.org). Employees have weaved SNS into their everyday work activities, the

convenience and usefulness of the SNS has contributed to the following utilitarian uses (https://www.pewresearch.org/internet/2016):

- 24% to make or support professional connections
- 20% to get information that helps them solve problems at work
- 17% to build or strengthen personal relationships with co-workers
- 12% to ask work-related questions of people outside their organization
- 56% say it is useful for connecting with experts.

Therefore, is hypothesized that perceived usefulness, reward, convenience and image are likely to influence deep utilitarian usage of SNS. Thus:

*H5: Extrinsic-utilitarian motivations [i.e. reward, image, convenience, perceived usefulness] have a positive effect on deep utilitarian SNS usage.*

These extrinsic-utilitarian motivations are also likely to influence cognitive absorption dimensions of usage. Users who find the use of SNS to be rewarding or find it useful or use it as a convenient way to perform activities are more likely to get immersed in using SNS. For example, a recruiter who is driven by the convenience and usefulness of an SNS such as LinkedIn is likely to spend more time searching for potential employees. Recruiters (94% of them) have indicated that they use SNS for recruiting, and they are drawn to spending more time on it searching for potential candidates (Forbes.com).

Fame and recognition, rewards associated with using the information, and effectiveness of using an information is likely to stimulate users to block out distractions and engage more with the information system. For example, when playing online games, rewards stimulate players to be immersed and engage more with the game (Liu, Suh and Wagner, 2016). The immersion and engagement is associated with earning more points, increasing their levels, and achieving more badges or trophies. A similar argument can be made with respect to 'likes', reactions, shares, reads, reposts etc. image associated with the use of SNS or image portrayed on SNS also drive the users to spend more time on SNS. The users spend a lot of time on platforms posting photos about themselves portraying a certain image. The other reason is the type of rewards associated with these platforms. SNS users spend a lot of time on these platforms modifying pictures (use of filters) or trying to write unique stories portraying success. The "cool image" or "the pursuit of a classy and stylish image" drives them to be absorbed in those platforms. These actions are driven by the chase for reactions e.g. likes, happy, love emoji (see Figure 9.3). This behavioural pattern, once constantly reinforced through rewards, promotes immersed use (Xanidis and Brignell, 2016). Specifically, Instagram users are immersed and absorbed in it for the following reasons: the act and habit of taking a picture, the immediate reward, the investment of sharing that picture and the fear of missing out on the moment (BusinessInsider.com). The image, reward, convenience and usefulness of SNS results in users engaging for extended hours with functions of the SNS that fulfil these motivations.

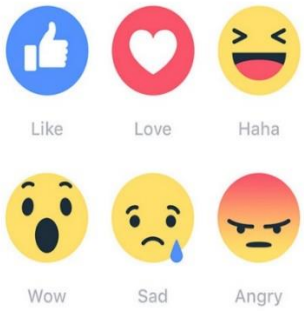



*Figure 9.3: Emojis Used to Show Reaction in SNS*

Hence, it is suggested that perceived usefulness, reward, convenience and image are likely to influence the immersion and absorption of the users in engaging with the SNS. That is, if using SNS saves time, if SNS use has a form of incentive or reward associated with it, if SNS use fulfils a sense of self-worth, then SNS users are likely to be absorbed in using SNS.

Thus:

*H6: Extrinsic-utilitarian motivations [i.e. reward, image, convenience, perceived usefulness] have a positive effect on cognitive absorption.*

Table 9.5 summarises the set of eight motivations and their impacts on the three dimensions of SNS usage.

| **Motivation** | **Definition** | **Impact on deep hedonic usage** | **Impact on deep utilitarian usage** | **Impact on cognitive absorption** |
|---|---|---|---|---|
| Enjoyment | The excitement, fun and happiness derived from information system use (van der Heijden, 2004). | The happiness and fun derived from using the SNS encourages the user to share and receive fun-related information. | The use of a utilitarian system has been shown to rely in part on feelings of enjoyment. | The amount of time and absorption in using the SNS may be due to the user enjoying the SNS. If it is enjoyable, there is a higher chance of being immersed in it. |
| Entertainment | Anything that offers attainment of gratification, and responses such as relaxation, relief, amusement and serenity (Oliver and Bartsch, 2010; Zillmann and Vorderer, 2000). | SNS as tool for relieving boredom is likely to encourage users to utilize, and also the entertainment offered by SNS might encourage use. | Using SNS as a tool to relax and relieve boredom may encourage interaction with others to obtain work advise and support. | The entertainment experienced in using SNS may result in the user not being aware of the high amount of time spent on SNS. |
| Escapism | Escaping reality and relief from daily cares, tasks or boredom (Close and Kukar-Kinney, 2009). | When users are stressed by work, they are likely to use SNS for purposes such as interacting in a social way with friends and family, as a way of "getting away" from the work. | Employees who needs a form of escape or distraction from work, are less likely to use SNS for work purposes. | Using SNS at work to "get away" from work may result in the user losing track of time. |

| | | | | |
|---|---|---|---|---|
| Social Interaction | Refers to reference group affiliation, discussions, and communicating with others (e.g. family, friends or colleagues) having similar interests (O'Brien, 2010). | The sense of belonging and sense of affiliation provided by SNS is likely to encourage the user to interact with friend and family on SNS. | The sense of belonging and sense of affiliation provided by SNS is likely to encourage the user to communicate and interact with others to obtain work advise and support. | The sense of belonging and sense of affiliation experienced by users on SNS might drive them to be immersed and lose track of time. |
| Image | Refers to an individual's tendency to be motivated partly by others' perceptions, including the rule of opinion in utility, i.e., the desire to be liked and respected by others and by one's self (Ariely, Bracha, and Meier, 2009; Brancheau and Wetherbe, 1990; Moore and Benbasat, 1991). | The reputation and recognition obtained from using hedonic features of an SNS is likely to encourage users to interact more or keep in touch with friends and family. | Users who are chasing reputation and recognition might use SNS to share work related information or engage in workplace communication, as a way of building the reputation and recognition. | SNS users who are after recognition are likely to spend more time on SNS, as a way of finding ways to be noticeable. |
| Reward | Rewards are stimuli (tangible or intangible services or benefits) that are assumed to influence individual's behaviour (Malhotra, Budhwar and Prowse, 2007). Example promotion and monetary incentives. | SNS users might be sharing fun-filled information because of the rewards they might get such as the number of likes and shares on SNS. | SNS users might be searching for job opportunities or obtaining feedback on work products through SNS because of the increased opportunities for finding a job on SNS or the progression at work as a result of improving work products. | Rewards associated with using SNS are likely to stimulate users to block out distractions and engage more with SNS. |
| Convenience | The utilitarian value of time saving and effort minimisation (Jiang, Yan and Jun, 2013). | While SNS are used for social interactions with family and friends, the users would like to do so within a short time or in a convenient way. | It is less effort and time saving to interact and communicate with colleagues or search for opportunities on SNS. The convenience provided by SNS drives users to undertake these activities. | Since using SNS requires less effort and its time saving, the user might get immersed in the SNS task he/she is performing because there is no pain or difficulty in using SNS. |
| Perceived Usefulness | The degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989). | Using SNS might be an effective way or enhances the user's interaction with friends and family on SNS. Users can be in touch with a lot of family and friends within a short period of time. | Using SNS is an effective and productive way of obtaining feedback on work products or obtaining work advice or support. Users can get a lot of feedback in a short period of time. | If SNS users are achieving more by using SNS, they might see it as the answer to many of their problems, thus spending a lot of time unaware, searching for solutions. |

*Table 9.4: Summary of the Narratives and Rationale for Impacts*

## 9.6 The Effects of SNS Usage on Job Performance and Job Satisfaction

Social support theory (SST) provides a lens to examine the relationship between SNS usage and workplace outcomes. The theory is focused on social capital, which is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less

institutionalized relationships of mutual acquaintance and recognition (Bourdieu, 1986). Social capital is a form of human capital that is embedded in the relationships between individuals, and can be measured at the individual or group level (Ellison, Steinfield and Lampe, 2011). The social capital can be in the form of bonding or bridging capital (Putman, 2000). Bonding social capital involves the support one gets from his/her network or close personal relationships. This includes emotional support, physical succour, or other 'large' benefits (such as willingness to loan a substantial sum of money) (Vitak, Ellison and Steinfield, 2011). On the other hand, bridging social capital is associated with information diffusion across networks (Ellison et al., 2011). The connections across networks involve people outside individual's network and acquaintances. They are more likely to provide tangible outcomes such as novel information from distant connections and broader world-views (Ellison et al., 2011; Vitak et al., 2011). Having been applied in prior social network research, social capital theory is not a new lens to understand the relationship between SNS usage and outcomes (e.g. Ali-Hassan et al., 2011; Ellison et al., 2007; Ellison et al., 2011; Moqbel, 2012; Moqbel et al., 2013; Vitak et al., 2011). However, prior studies only examined the relationship based on a uni-dimensional usage construct, and a limited number of outcomes. This study draws on social support theory to examine the relationship between each of the three dimensions of usage and the outcomes of job performance and job satisfaction.

### 9.6.1 SNS Usage and Job Performance

Job performance is a complex multidimensional variable because every job has distinct performance dimensions where work outcomes are a result of multiple interdependent work processes (Borman, 1991; Moqbel, 2012). Job performance can be defined as an overall outcome reflecting an individual's overall performance or task proficiency, or as their performance on specific dimensions, such as the quality and quantity of work (Meyer, Paunonen, Gellatly, Goffin and Jackson, 1989). Job performance is defined here as an individual's overall productivity and performance at work (Singh et al., 1994). It is argued below that job performance can arise from SNS usage.

First, job performance is known to be inversely affected by negative work related factors such as exhaustion, stress (LePine et al., 2016; Yan, Kim and Hur, 2019). SNS may impact on job performance by tempering these factors.

Most SNS users have indicated that using SNS at work for hedonic purposes can relieve stress and is rejuvenating (www.Forbes.com). For example, when stressed in the middle of work, a fun-filled post can help de-stress. When the employee gets back to work after disengaging due to the joke, he/she might have the energy or zeal to do more. Spending time on SNS for hedonic purposes may help reduce work related fatigue. Spending a bit of time on SNS may help the employee to rest the mind and to revive their energies. A relaxed mind is a productive mind (Harvard Business Review, 2015). In addition, in taking part in hedonic social interactions, the user might come across individuals or content that is relevant to their work. Hedonic usage may facilitate chances to develop strong relationships and may create new work-related connections (Ali-Hassan et al. 2015) that can provide information helpful for improving an individual's work performance. Social interactions that arise initially from hedonic interactions may provide users with information, ideas and work-related resources (Min, 2016), and enable communications that lead to collective action

and knowledge diffusion (Cousins et al., 2006). Employees can use all this SNS information to solve work related problems, find better ways of completing work related tasks and ultimately improve their work (Ali-Hassan et al., 2015; Moqbel and Nah, 2017). Hence, it is hypothesized that deep hedonic SNS usage may improve job performance. Hence,

*H7. Deep hedonic SNS usage is positively associated with job performance.*

SNS are well known for facilitating communication and collaboration between users, groups and organisations (Ali-Hassan et al., 2015). Further, they provide social capital, by representing resources or assets rooted in an individual's or group's network of social relations. Literature has indicated that through the resources and assets rooted in network relations, SNS may impact certain outcomes such as job performance (Moqbel, 2012; Al-Hassan et al., 2015).

Past literature has indicated that SNS users do not only use it for pleasurable purposes, they also use it for its instrumental purpose (Xu, Ryan, Prybutok and Wen, 2012). The rational and goal-oriented use of an information system (e.g. SNS) may be useful in improving individuals' job performance (Gu, Fan, Suh and Lee, 2010). The general idea is SNS allows individuals to stay connected over distance and time, and facilitates interaction, collaboration and knowledge exchanges.
SNS such as LinkedIn plays an important role in the work of a human resources personnel, especially those in the recruitment department. Employers use social media to screen candidates during the hiring process, and about 43 percent of employers use social media to check on current employees (CareerBuilder.com). SNS might help them to access a pool of potential employees and also the screening helps in selecting a better candidate. Human resources department go through these process efficiently and effective on SNS, resulting in good outputs and performance.

Further, SNS allows connections between individuals to occur and bridging ties to emerge at work and within the industry (Ellison et al., 2007). For example, users may be using SNS to learn and share knowledge related to work. They are exposed to a lot of information provided by the network on SNS. Some of the information may be important to their daily activities at work. Recently, there are SNS groups that are formed based on industries, and valuable industry information is exchanged in those groups. Therefore, members of those groups may draw from the exchanges and solve problems they encounter at work, or they can improve certain processes based on the advice they got from the SNS group. Hence,

*H8. Deep utilitarian SNS usage is positively associated with job performance.*

In the use of SNS, it is likely that some of the content obtained from SNS network or community may improve employees work activities. If they are highly immersed looking for solution to work problems on SNS, then it is likely that they will get some take-ways from the content that might highly impact their job performance.

This is based on the notion that cognitive absorption in the form of immersion, attention and concentration contributes to performance (Ho, Wong and Lee, 2011). Certain theories e.g. human information processing, have established that the greater the immersion and focus devoted to a task, the better performance will be because the individual can come up with more ideas and generate more alternatives or solutions to problems that are encountered (Kanfer et al., 1994;

Sonnentag, 2003). Therefore, it is anticipated that the immersion and focus on SNS might provide ideas, alternatives and solutions to work related problems.

Past research has indicated that when employees concentrate intensely on the job, they are better able to overcome obstacles that arise and, thus, become more successful and effective in getting work done, thereby leading to superior performance. For example, for an individual who is searching opinions, or expert on SNS, the more immersed and focused they are, the more they are likely to find solutions that are work related. This is because when employees are cognitively immersed in their work, they are not only less easily distracted by matters that are peripheral to the job, but also less easily deterred by problems or challenges that arise in the course of work (Sonnentag, 2003).

Therefore, the more immersed individuals are on SNS searching or reading work related content, it is more likely that the will find content that will improve their job performance. Hence,

*H9. Cognitive absorption is positively associated with job performance.*

### 9.6.2 SNS Usage and Job Satisfaction

Job satisfaction has varying definitions (Sook, 2008). It has been defined in literature as the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values (Locke, 1976) or employees' affective reactions to their jobs (Hackman and Oldham, 1975). Job satisfaction is a function of the perceived relationship between what one wants from one's job and what one perceives it as offering or entailing. These two definitions are close to each other, they emphasize satisfaction as an emotional or affective reaction. This affective reaction is said to arise from a positive/negative evaluative judgment one makes about one's job or job situation (Brief and Weiss, 2002). This includes the evaluation of pay and compensation, promotion, supervision, co-workers, job security, personal growth and the work itself (e.g. Hackman and Oldham, 1975; Porter, Steers, Mowday and Boulian, 1974).

Social related tasks are often related with hedonic and intrinsic needs of employees and are associated with job satisfaction. Hedonic motivated tasks are highly associated with job satisfaction. Hedonic usage of SNS has intrinsic aspect to it thus it is likely to influence job satisfaction. Hedonic usage of SNS such sharing fun-filled information, using SNS for personally fulfilling entertainment and accessing information on topics of personal interest while at work is likely to influence job satisfaction.

SNS can be used for social interaction. It is suggested that social interactions are likely to provide support. The support might be from family, friends, co-workers and supervisors. The support may include the evaluation of pay and compensation, job security, supervision and personal growth. If an employee receives positive support in relation to the aforementioned, there is a likelihood that they will be satisfied with their job. Users of SNS can receive support when they engage, share fun-filled information, and have social exchanges with colleagues, family and friends on SNS. This support is likely to translate into improved job satisfaction (Kock, Moqbel, Barton and Bartelt, 2018).

It has been demonstrated that hedonic SNS usage has positive influence on individuals work outcomes such as job satisfaction (e.g. Cao and Yu, 2019; Huang et al., 2012; Moqbel et al., 2013). It is suggested that 30% of workers believe that being allowed to use social media for social purposes at work greatly increases their job satisfaction (Robertson and Kee, 2017). Further, hedonic use of SNS at work helps employees to relax, they take breaks from strenuous and stressful work routine and engage in relaxing, interesting and enjoyable content including social interaction (Schreurs et al., 2017). The interaction with family and friends on SNS can help achieve work-life balance and reduce work-family conflict resulting in an employee who is satisfied with their job (Michel, Kotrba, Mitchelson, Clark and Baltes, 2011).

Despite some views that hedonic SNS usage might be negatively related to job satisfaction (e.g. APSC, 2011a; Demircioglu, 2018), there is a school of thought that subscribes to the perception that the two are positively related. Based on the positive benefits derived from hedonic SNS usage, it is likely that hedonic SNS usage will be positive for job satisfaction. This is supported by past findings that hedonic SNS usage positively influence job satisfaction (Cao and Yu, 2019; Huang et al., 2012; Moqbel et al., 2013). Therefore,

*H10. Deep hedonic SNS usage is positively associated with job satisfaction*
Using SNS for work-related purposes can also improve job satisfaction. Job satisfaction theories such Herzberg's "two-factor" theory have indicated that organisational factors can influence job satisfaction. Interaction, communication, assistance and support from colleagues is highly associated with job satisfaction (Hagihara et al., 1998). Therefore, it is likely that using SNS for interacting with others to obtain work advice or support, using features of the SNS that support workplace communication, and using SNS to obtain feedback on work products are likely to positively influence job satisfaction.

Further, the support the employee gets from colleagues and industry experts on SNS is likely to make his/her work easier and less strenuous thus increasing job satisfaction (Charoensukmongkol, 2014; Kock et al., 2018). The work related information will make it easy for the employee to get their work accomplished thus obtaining a sense of fulfilment and internal satisfaction. Use of SNS for work purposes tend to promote self-determination which is an important determinant of job satisfaction. (Hoffman and Novak, 2012). Using SNS for work purpose increase job satisfaction (Leftheriotis and Giannakos, 2014). Therefore, it is suggested that deep utilitarian SNS usage is likely to positively influence job satisfaction. Hence,

*H11. Deep utilitarian SNS usage is positively associated with job satisfaction.*

The amount of time, concentration and immersion by an employee when using SNS for work purposes and non-work purposes is likely to impact their job satisfaction. If the employee is immersed into reading content about work, there is a high chance that he/she might find more relevant work information. The higher the concentration, the higher the likelihood of find information about work thus making things easy for the employee. On the other hand, the more immersed the employee is, the high chance of getting support from other SNS users. If an employee gets sufficient support with regard to what they need in the work place, the level of employee satisfaction will increase (Lee, Lee and Schniederjans, 2011). For example, employees might consider relaxing, reading interesting and funny stories from SNS to be helpful and important. If

once in a while they are allowed to be immersed into SNS they are likely to be satisfied with their job. When they switch back to work, they are likely to completely concentrate and be happily engrossed in their work (Høigaard, Giske and Sundsli, 2012). Therefore, it is suggested that being immersed in using SNS at work can influence an individual's perception of their job. Hence,

*H12. Cognitive absorption is positively associated with job satisfaction.*

## 9.7 Control Variables

Controls for the model include age, gender, industry and job profile used as these variables might influence usage. For example, studies have indicated that males adopt and use information systems at a higher rate than females (Jackson, Yong and Kolenic, 2008). Others indicated that females tend to use information systems for more social reasons than males (Haferkamp, Eimler, Papadakis and Kruck, 2012). Further, studies show that females use the information systems for communication and connection with family and friends more than males do, whereas males spend more time playing online games, viewing others' profiles, searching for information, and doing commercial transaction (Correa, Hinsley and De Zuniga, 2010). With new hybrid information systems like SNS it is important to consider gender differences in the use of such information systems (Kuo, Tseng, Tseng and Lin, 2013).

Also, age has been found to be a factor. The elderly population has been found to be less familiar with information systems, and this impacts that adoption and use of information systems (D'Arcy, Hovav and Galletta, 2009). Further, they are likely to have different motivations driving their adoption and use of information systems e.g. certain motivations appear particularly relevant for the elderly as compared to younger working professionals in most previous literature for whom these antecedents have not been important (Phang, Sutanto, Kankanhalli, Li, Tan and Teo, 2006). Young citizens would be more frequent users of social media than older citizens (Holt, Shehata, Strömbäck and Ljungberg, 2013). Hence, it is important to understand the role played by age in the usage of SNS.

Past studies have indicated that the usage of different information systems is influenced by the type of device used to access the information system (Kang and Yoon, 2008). For example, individuals with personal devices such as mobile devices in the workplace maybe more likely to access SNS than those relying on workplace terminals and desktops. Therefore, it is expected that the devices used to access SNS are likely to have an impact on SNS usage.

Therefore, it is important to control for age, gender, and type of device in this study.

## 9.8 Methods

### 9.8.1 Measurement

The model has seven constructs. There are two (2) independent variables reflecting intrinsic-hedonic and extrinsic-utilitarian motivations. These constructs are second-order constructs that will be modelled as reflective second-order constructs with latent variable scores.

There are three usage variables, namely deep hedonic usage, deep utilitarian usage, and cognitive absorption. The last two variables are the outcomes, job satisfaction and job performance.

The chapter relied on prior literature, and past chapters for refined items. Job performance and job satisfaction items were adopted from Singh et al. (1994), usage items were taken from the refined items in chapter 8. All items were measured using seven (7) point Likert scale from strongly disagree (1) to strongly agree (7). The items were pre-tested and pilot tested.

9.8.1.1 Pre-Testing

The questionnaire was subjected to pre-testing. Five (5) experts in information systems evaluated the questionnaire, and two (2) of them were familiar with the SNS context. The evaluation went through one round only, largely because the items were adopted from past studies and adapted to SNS context, the items have been used and validated by many researchers in the past. The modifications for all the items were slight.

9.8.1.2 Pilot testing

The pre-testing was followed by a pilot test. The pilot test was administered to 136 employees of different companies in South Africa. A snowball approach was used to access potential respondents. There were no modifications on the wording of the items, but the questionnaire was a bit lengthy, and certain items were merged to reduce the number of items e.g. enjoyment and fun were merged, resulting in one construct (enjoyment). The estimated time of completion was narrowed to 20 minutes.

After these two processes the questionnaire with items shown in Table 9.5 were used for the final instrument.

| **Variable** | **Items** | **Literature Support** |
|---|---|---|
| **Hedonic-Intrinsic Motivation Factors** | | |
| A. Enjoyment | A1. SNS are enjoyable to use at work | Ayeh, Au and Law (2013); Igbaria, Schiffman and Wicckowshi (1994) |
| | A2. SNS give me pleasure to use at work | |
| | A3. Using SNS at work excites my curiosity | |
| | A4. SNS are fun to use at work | |
| | A5. Using SNS is amusing at work | |
| B. Entertainment | B1. SNS are relaxing at work | Oliver and. Raney (2011) |
| | B2. SNS relieve boredom at | |
| | B3. SNS are entertaining at | |
| C. Social Interaction | C1. Using SNS at work provides me with a sense of belonging | To, Liao and Lin (2007; Wu (2009) |
| | C2. Using SNS at work provides me with a sense of affiliation with others. | |

| | | |
|---|---|---|
| D. Escapism | D1. Using SNS at work helps me get away from it | Wu (2009) |
| | D2. Using SNS at work helps me get my mind off a problem | |
| | D3. Using SNS at work helps me to focus when stressed | |
| **Utilitarian-Extrinsic Motivation Factors** | | |
| E. Rewards | E1. SNS is used at work because there are rewards associated with its use for me | Lin (2007) |
| | E2. SNS is used because of expected promotion opportunities at work | |
| | E3. SNS is used because it contributes to my progression at work | |
| F. Image | F1. SNS is used at work for better image of myself | Lin (2007); Toubia and Stephen (2013) |
| | F2. SNS is used at work because there is fame and recognition associated with using it for me | |
| | F3. SNS use at work provides me with a sense of self-worth | |
| G. Convenience | G.1 Interacting with others on SNS would allow me to save time. | Toa, Liao and Lin (2007) |
| | G2. Using SNS would be a convenient way to interact with others | |
| | G3. Using SNS at work fits my schedule | |
| | G4. Using SNS at work is convenient to me | |
| H. Perceived Usefulness | H1. Using the SNS enhances my effectiveness at work | Venkatesh and Davis (2000) |
| | H2. Using the SNS enhances my productivity | |
| | H3. I find the SNS useful in my work activities | |
| | H4. Using the SNS improves my performance at work | |
| **Multi-dimensional Usage Factors** | | |
| I. Deep Hedonic SNS Usage | I1. When using SNS at work, I use features that help me to seek information about family and friends | Chapter 8 |
| | I2. When using SNS at work, I use features that help me share | |

| | | | | |
|---|---|---|---|---|
| | | | information that is fun-filled with friends or colleagues. | |
| | | | I3. When using SNS at work, I use features that fulfil my need to keep in touch with friends, family or colleagues. | |
| | | | I4. When using SNS at work, I use features that allow me to follow activities or events that are of personal importance. | |
| | | | I5. When using SNS at work, I use features that provide me with personally fulfilling entertainment. | |
| | | | I6. When using SNS at work, I use features that help me interact in a social way with friends, family or colleagues. | |
| | | | I7. When using SNS, I use features that help me access information on topics of personal interest. | |
| | | | I8. When using SNS at work, I use features that help me to be calm and relaxed at work. | |
| J. | Deep Usage | Utilitarian | SNS | J1. When using SNS at work, I use features that help me interact with others to obtain work advice or support | Chapter 8 |
| | | | | J2. When using SNS at work, I use features that support my need for workplace communication | |
| | | | | J3. When using SNS at work, I use features that help me search for job opportunities | |
| | | | | J4. When using SNS at work, I use features that help me gain assistance from others in order to improve my performance at work | |
| | | | | J5. When using SNS at work, I use features that help me obtain feedback on work products | |
| K. | Cognitive Absorption | | | K1. Time appears to go by very quickly when I am using the SNS at work | Chapter 8 |
| | | | | K2. While using the SNS at work, I am able to block out most other distractions | |
| | | | | K3. While on the SNS at work, I tend to get immersed in the SNS task I am performing | |

| **Individual Work Outcomes Factors** | | |
|---|---|---|
| L. Job performance | L1. My performance in my current job is of high level | Singh, Goolsby and Rhoads (1994) |
| | L2. My performance in my current job is excellent | |
| | L3. My performance in my current job is better than others | |
| | L4. My boss would rate my overall performance at work high | |
| | L5. My colleagues would rate my overall performance at work high | |
| M. Job satisfaction | M1. I am very satisfied with my current job | Lambert, Hogan and Altheimer (2010); Singh, Goolsby and Rhoads (1994) |
| | M2. My present job gives me internal satisfaction | |
| | M3. My job gives me a sense of fulfilment | |

*Table 9.5: Items Used in the Questionnaire*

### 9.8.2 Research context and sampling

The population of interest for this study is employees of South African firms. The number is estimated to be over 10 Million as per the Trading Economics report of 2018. The study was targeting all employees irrespective of the nature of work, type of SNS platform, or the type and amount of usage.

The study targeted a nationwide sample of respondents to avoid any geographic bias or differences in regional availability of SNS platform options. Because of this, a specific nationwide audience that was expected to use a wide range of SNS was targeted for data collection. The sampling frame consisted of a database of respondents from a research firm that specialized in academic surveys over the internet. The database consisted of employees of different firms across the industries and provinces.

It was presumed that this population would be more representative of the employees of South African firms. Although the sample may not cover the general population of employees in South Africa, it addresses the needs of this study. In addition, the sampling approach enabled us to collect data from a nationwide sample of employees in a timely and cost-effective manner.

The database comprises of more than 350 000 employees who signed up and agreed to complete online surveys (see Appendix A permission letter). A sample of 5 500 email addresses was randomly drawn from the 350 000 emails. The survey instrument was sent as a link on emails, emails were sent to the 5 500 members of the database notifying them of a survey and requesting their participation.

The survey was open for 6 weeks, and after the third week the first reminder was sent, followed by the second reminder a week later. The number of reminders and timing was based on past

studies' recommendations (e.g. Cook et al., 2000; Kittleson 1995; Nulty, 2008; Zuniga, 2004), who pointed out that more than three reminders may see inevitable diminishing return on this investment coupled with the possibility of irritating the survey population.

## 9.9 RESULTS

### 9.9.1 Data Preparation

After 6 weeks, a total of 293 responses were received. Since the questionnaire was online, the data was received in an electronic format and imported to SPSS version 25. The first step of data preparation was coding e.g. enjoyment was coded as ENJ, deep hedonic usage as HU. The next step was data cleaning which was used to identifying inconsistent responses, missing data and outliers (Malhotra & Birks, 2007). This is an important step because failure to do so creates potential problems that may affect the results of the statistical tests (Hair et al., 2010). Three response were missing more than 10% of the item values. The respondents answered the demographics questions only. These were deleted from the dataset. The remaining 290 responses were complete as regards to demographics and did not have large amounts of missing items nor were any outliers detected[10]. Only 10 respondents were each missing maximum of 2 item value (Likert scale). These values were replaced using series mean.

### 9.9.2 Respondent Profile

The total number of usable responses was 290 (from 5500 sent emails), and their demographics are summarized in Table 9.6. Considering that the survey was administered online, a response rate of 5.3% is not unexpected and is similar to other studies which have used the same method of data collection (e.g. Kuegler, Smolnik and Kane, 2015; Moqbel and Kock, 2018; Wilden and Gudergan, 2015). The sample was similar in representation to the working population in South Africa. For example, females account for 42% of the working class, and most of the working class are between the ages of 25 and 45 in South Africa (StatsSA Q2 2018). The structure of the sample was 46% female, 53% male and 1% preferred not to say their gender, and 2% of the respondents were aged below 25 years. The database is more likely to be skewed to 25 years and above because most people start employment towards their mid-twenties. Ages between 26-35 years accounted for 34%, 33% of the respondents were between 36-45 years, 20% between 46 to 55 years and 12% of the respondents were aged above 56 years. The frequencies at the two ends of the age spectrum are not surprising. Most of the retire in their mid-fifties thus the lower number.

The survey respondents had on average worked for the current company for 5 years. The educational level of the respondents was 2% some high school, 7% matric, 30% post matric certification/diploma, 22% undergraduate degree, 20% honours/ 4 year degree, and 19% higher degree (masters and phd degree). However, StatsSa (2018) has indicated that majority (51%) of employees in South Africa are matric and below holders, and most of them are in the lower end of the job spectrum e.g. informal sector. The variation might be because the thesis data was collected online and there is a higher chance that the members of the database had matric as a minimum

[10] Box plots visually show the distribution of numerical data and skewness through displaying the data quartiles (or percentiles) and averages (Hofmann, Wickham and Kafadar, 2017). Box plots will show values that are extreme i.e. 1.5 to 3 times greater than the inter-quartile range (Q1 - 1.5 * IQR or Q3 + 1.5 * IQR).

qualification, they are middle class group. Other demographics of the respondents are detailed in Table 9.6 such as type of employment, type of industry (was found to be similar to StatsSa, 2018), their report on working population indicated that manufacturing, construction and transportation combined are the highest employment sectors, followed by utilities and finance. Past literature suggest that irrespective of the industry under analysis, SNS use is likely to be similar (Schivinski and Dabrowski, 2016). Differences in workplaces across industries appears not to be a factor.

The majority of the respondents (80%) had access to SNS through their personal devices such as mobile phones and tablets, and 64% of them check SNS more than twice a day, including 18% who are Always-ON.
A large number of the respondents (69%) have been using SNS for more than 5 years, and Facebook remains the most used SNS, as expected (at work) followed by LinkedIn (see Figure 9.4).
Generally, SNS are mostly used for pleasure (fun and entertainment 43%), tailed by sharing work-related information, (37%) and social information sharing (32%), as shown in Figure 9.7.
63% report that their company has as SNS usage policy. Figure 9.8 shows the amount of time users spend on SNS a day.

The sample appears to mostly use SNS for utilitarian purposes (Figure 9.6). Out of the top five (5) uses, there is only one hedonic use. Chronologically, UU1[When using SNS at work, I use features that help me to interact with others to obtain work advice or support] is the highest used, UU2[When using SNS at work, I use features that support my need for workplace communication] is the second highest use, then followed by HU7[When using SNS at work, I use features that help me to access information on topics of personal interest] is the third highest use, but the highest amongst hedonic uses. The last two are UU4[When using SNS at work, I use features that help me gain assistance from others in order to improve my performance at work] and UU5[When using SNS at work, I use features that help me obtain feedback on work products].

Some of the demographics are shown as bar charts and pie charts below, followed by a table showing all the details.

After the demographics, the normality tests were carried out to analyse the shape of the data distribution. The skewness and kurtosis of the data was tested (see Table 9.7 below). The skewness values of the data were between -1 and +1, indicating that the data is not skewed (Hair et al., 2010). Further, the values for kurtosis were between -2 and +2, indicating that the data is not highly peaked nor too flat (Coakes and Steed, 2003).

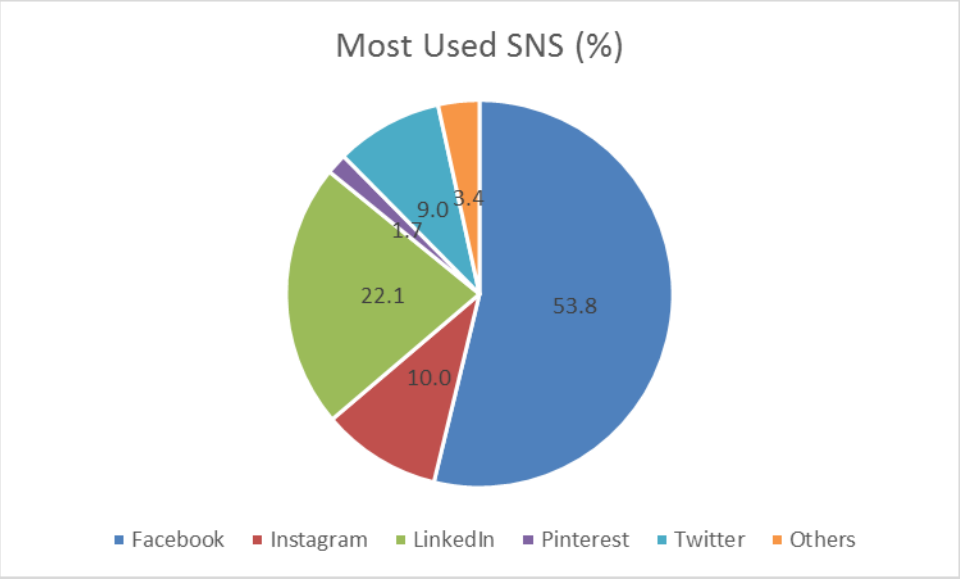



*Figure 9.4: A Chart of the Most Used SNS*

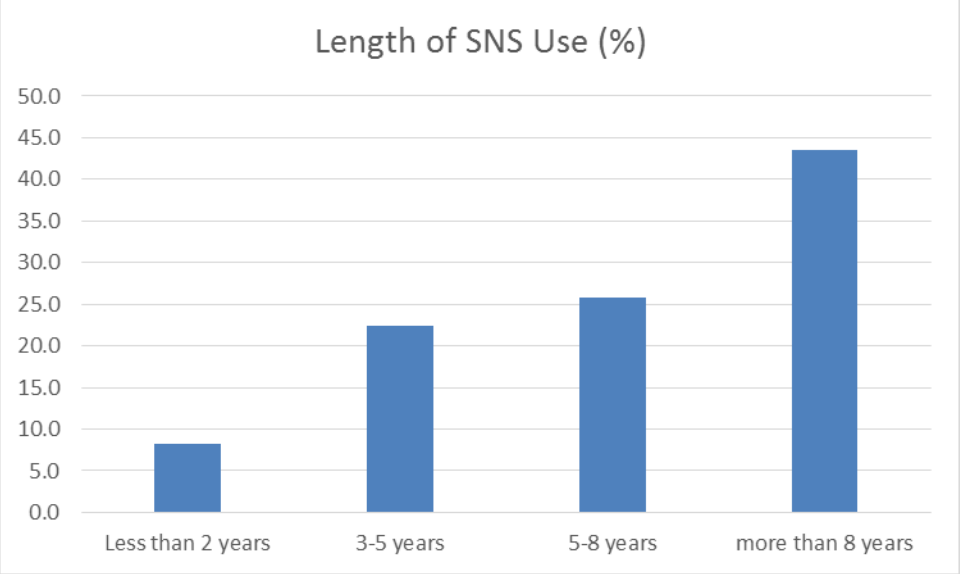



*Figure 9.5: A Graph showing the length of SNS Use*

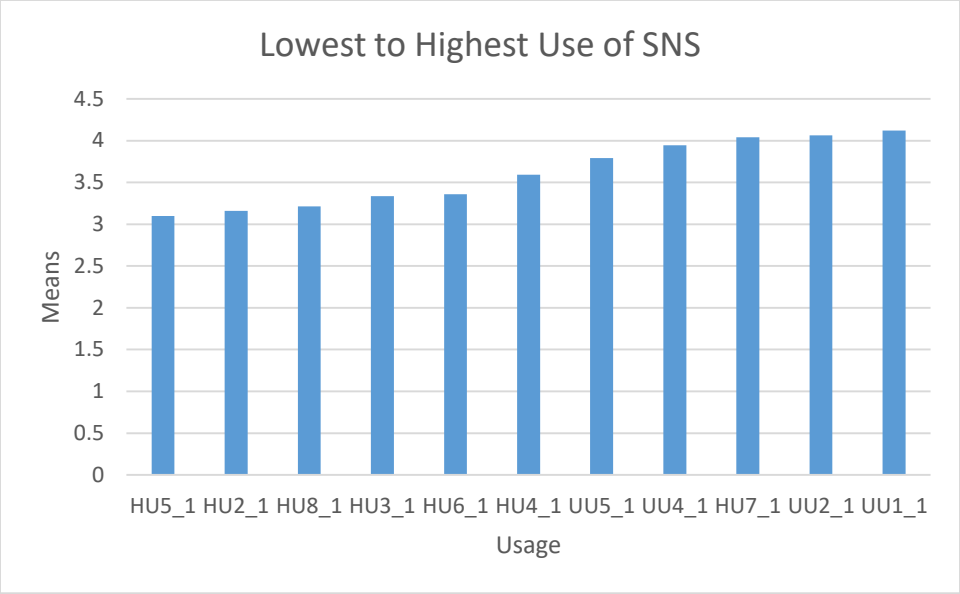



*Figure 9.6: A Graph Showing the Lowest and Highest SNS Use*

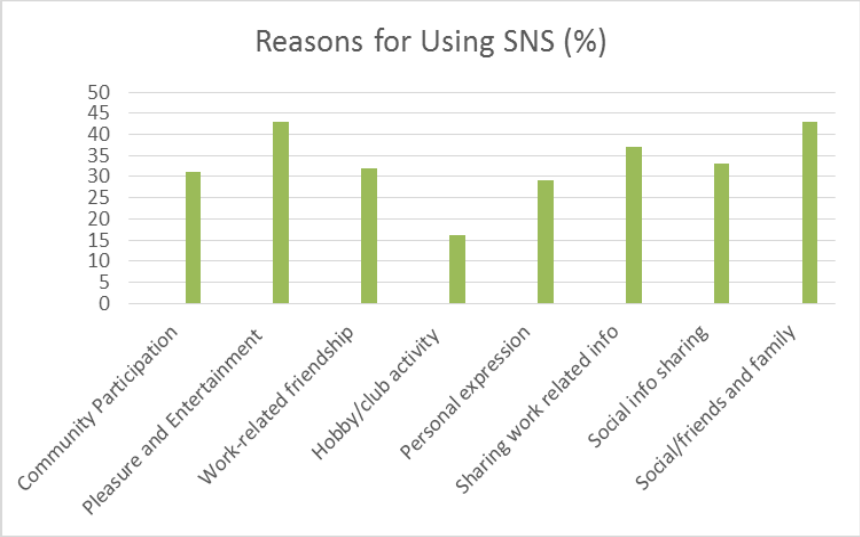



*Figure 9.7: A Graph Indicating what Respondents Use SNS for*

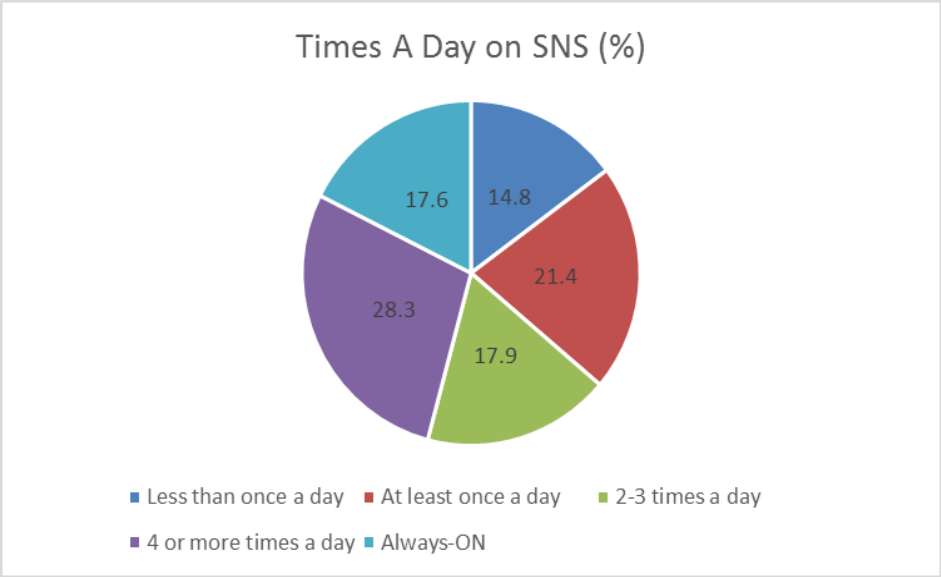



*Figure 9.8: A Chart Showing the Amount of Times SNS are viewed in a Day*

| | |
|---|---|
| Gender | Female: 132 (46%)<br>Male: 154 (53%)<br>Prefer not to say: 4 (1%) |
| Age | 18-25: 5 (2%)<br>26-30: 45 (16%)<br>31-35: 51 (18%)<br>36-40: 52 (18%)<br>41-45: 43 (15%)<br>46-50: 35 (12%)<br>51-55: 24 (8%)<br>56-60: 23 (8%)<br>61 and above: 12 (4%) |
| Education | Higher Degree (Masters/ PHD): 54 (19%)<br>Honours Degree/ 4 years: 58 (20%)<br>Undergraduate Degree: 65 (22%)<br>Post Matric Certificate/Diploma: 87 (30%)<br>Matric: 21 (7%)<br>Some high school: 6 (2%) |
| Employment Status | Working (Employed at an organisation): 267 (92%)<br>Working (Self-employed): 23 (8%) |

| | |
|---|---|
| Industry | Others (e.g. aviation, legal services, logistics, recruitment): 84 (29%)<br>Consumer goods (e.g. Automobile, Food and Beverages): 11 (4%)<br>Agriculture: 11 (4%)<br>Consumer services (e.g. Retail, Media, Tourism and Leisure): 9 (3%)<br>Education: 25 (9%)<br>Electricity, Water, Oil: 13 (5%)<br>Financial and insurance activities: 36 (12%)<br>Health: 14 (5%)<br>Industrial and Manufacturing (e.g. Construction, Transportation, Materials): 43 (15%)<br>Information, communication and technology: 33 (11%)<br>Mining and quarrying: 11 (4%) |
| SNS Policy | Don't know: 33 (11%)<br>No: 73 (25%)<br>Yes: 184 (63%) |
| Do you have SNS account | No: 10 (12%), using Enterprise Social Network<br>Yes: 280 (97%) |
| Most Used SNS | Facebook: 156 (54%)<br>Instagram: 29 (10%)<br>LinkedIn: 64 (22%)<br>Pinterest: 5 (2%)<br>Twitter: 26 (9%)<br>Others: 10 (3%) e.g. ESN |
| Length of SNS Use | Less than 2 years: 24 (8%)<br>3-5 years: 65 (22%)<br>5-8 years: 75 (26%)<br>More than 8 years: 126 (43%) |
| General Use | Community participation: 91 (31%)<br>Pleasure (Fun and Entertainment): 124 (43%)<br>Work-related friendship: 94 (32%)<br>Hobby/Club activity: 46 (16%)<br>Comments expression (Comments, status and update): 85 (29%)<br>Sharing work related info: 108 (37%)<br>Social information sharing: 98 (33%)<br>Social family/friendship: 125 (43%) |

| | |
|---|---|
| Times a day on SNS | Less than once a day: 43 (15%)<br>At least once a day: 62 (21%)<br>2-3 times a day: 52 (18%)<br>4 or more times a day: 82 (28%)<br>Always-ON: 51 (18%) |
| Devise use to access SNS | Personal device (e.g. my mobile, my tablet): 233 (80%)<br>Work device (e.g. office computer): 57 (20%) |

*Table 9.6: A Summary of the Demographics*

| | **Mean** | **Std. Deviation** | **Skewness** | **Kurtosis** |
|---|---|---|---|---|
| | Statistic | Statistic | Statistic | Statistic |
| HU1_1 | 2.902 | 1.8313 | 0.677 | -0.584 |
| HU2_1 | 3.161 | 1.9012 | 0.428 | -1.026 |
| HU3_1 | 3.338 | 1.8881 | 0.247 | -1.167 |
| HU4_1 | 3.593 | 1.9303 | 0.136 | -1.181 |
| HU5_1 | 3.1 | 1.8861 | 0.496 | -0.938 |
| HU6_1 | 3.361 | 1.837 | 0.235 | -1.017 |
| HU7_1 | 4.04 | 1.967 | -0.184 | -1.202 |
| HU8_1 | 3.212 | 1.9983 | 0.381 | -1.113 |
| UU1_1 | 4.122 | 2.0041 | -0.218 | -1.15 |
| UU2_1 | 4.064 | 2.0384 | -0.225 | -1.191 |
| UU3_1 | 3.509 | 2.0628 | 0.203 | -1.244 |
| UU4_1 | 3.944 | 2.0284 | -0.068 | -1.233 |
| UU5_1 | 3.79 | 2.0321 | 0.014 | -1.255 |
| CA1_1 | 3.536 | 1.9397 | 0.228 | -0.945 |
| CA2_1 | 3.129 | 1.8056 | 0.481 | -0.662 |
| CA3_1 | 3.04 | 1.86 | 0.511 | -0.793 |
| SI1_1 | 2.7 | 1.7071 | 0.635 | -0.631 |
| SI2_1 | 3.063 | 1.7928 | 0.369 | -0.918 |
| SI3_1 | 4.926 | 1.6674 | -0.662 | -0.211 |
| PI1_1 | 2.947 | 1.8056 | 0.541 | -0.769 |
| PI2_1 | 3.481 | 2.0044 | 0.188 | -1.216 |
| PI3_1 | 3.728 | 1.9984 | -0.029 | -1.242 |
| ENJ1_1 | 3.505 | 1.7218 | 0.075 | -0.836 |
| ENJ2_1 | 3.259 | 1.8209 | 0.288 | -0.933 |
| ENJ3_1 | 3.284 | 1.7745 | 0.187 | -1.067 |
| ENJ4_1 | 3.244 | 1.8272 | 0.319 | -0.911 |
| ENJ5_1 | 3.178 | 1.7841 | 0.351 | -0.84 |
| ENT1_1 | 3.154 | 1.7835 | 0.297 | -0.98 |
| ENT2_1 | 3.223 | 1.8196 | 0.271 | -0.985 |

| | | | | |
|---|---|---|---|---|
| ENT3_1 | 3.393 | 2.0069 | 0.225 | -1.286 |
| SOCINT1_1 | 2.707 | 1.7914 | 0.793 | -0.471 |
| SOCINT2_1 | 3.072 | 1.8117 | 0.415 | -0.888 |
| ESCP1_1 | 3.735 | 1.9714 | -0.087 | -1.247 |
| ESCP2_1 | 3.425 | 1.9887 | 0.246 | -1.167 |
| ESCP3_1 | 3.075 | 1.9219 | 0.49 | -0.936 |
| CON1_1 | 2.99 | 1.825 | 0.462 | -0.958 |
| CON2_1 | 4.172 | 1.8514 | -0.346 | -0.9 |
| CON3_1 | 3.091 | 1.8279 | 0.363 | -1.037 |
| USFUL1_1 | 3.131 | 1.7805 | 0.345 | -0.924 |
| USFUL2_1 | 3.119 | 1.8149 | 0.346 | -1.01 |
| USFUL3_1 | 3.434 | 1.9368 | 0.242 | -1.123 |
| USFUL4_1 | 3.183 | 1.8401 | 0.342 | -1.028 |
| REW1_1 | 2.63 | 1.7511 | 0.825 | -0.318 |
| REW2_1 | 2.538 | 1.7014 | 0.828 | -0.402 |
| REW3_1 | 2.686 | 1.8121 | 0.782 | -0.518 |
| IMG1_1 | 2.595 | 1.6622 | 0.704 | -0.585 |
| IMG2_1 | 2.381 | 1.6627 | 0.857 | 0.168 |
| IMG3_1 | 2.329 | 1.6772 | 0.975 | 0.399 |
| SAT1_1 | 4.919 | 1.8649 | -0.694 | -0.508 |
| SAT2_1 | 4.814 | 1.85 | -0.655 | -0.447 |
| SAT3_1 | 4.827 | 1.8212 | -0.633 | -0.492 |
| PERF1_1 | 5.632 | 1.366 | -1.31 | 1.812 |
| PERF2_1 | 5.576 | 1.3357 | -0.898 | 1.511 |
| PERF3_1 | 5.33 | 1.2683 | -0.562 | 0.309 |
| PERF4_1 | 5.507 | 1.351 | -0.907 | 0.839 |
| PERF5_1 | 5.672 | 1.1291 | -0.95 | 1.044 |

*Table 9.7: Summary of the Measurement Items' Results*

Table 9.7 shows descriptive analysis of the measurement items. The item with the highest mean is PERF5_1 [My colleagues would rate my overall performance at work high] with a mean of 5.6. Majority of respondents indicated that their colleagues would rate their overall performance at work high. Generally, the satisfaction and performance items have highest means. IMG3_1 [SNS provides me a sense of self-worth at work], has the smallest mean of 2.3, showing that respondents disagree with the statement. The highest standard deviation was 2.06 while the lowest was 1.1.

### 9.9.3 Analysis Method

After addressing normality tests, outliers and missing values the data was subjected to factor analysis. Since the items were adopted from different studies, it was necessary to perform factor analysis on them to determine the underlying structure of the proposed variables before proceeding with subsequent analysis. SPSS software was used to perform principal component analysis (PCA).

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was performed, the value was 0.930 which is above the threshold of 0.50 (Hair et al., 2010). The value indicates that the data is appropriate to be used for principal component analysis. A total of 51 items were loaded for principal component analysis and after three rounds 9 items were deleted. The deleted items were as follows: deep hedonic usage 3 items (HU5, HU7 and HU 8), deep utilitarian usage 1 item (UU3), social interaction 2 items (SOCINT1 and SOCINT2), convenience 2 items (CON1 and CON3) and job performance 1 item (PERF 1). The deleted items either cross loaded or had loadings below 0.50 (Pallant, 2005; Hair et al., 2010). The remaining 42 items together with their loadings are shown in Table 9.8, and they explain 75% of the total variance.

The deep hedonic SNS usage and deep utilitarian SNS usage items were adopted from chapter 8. They are further refined, resulting in dropping 3 items for deep hedonic SNS usage and 1 item for deep utilitarian SNS usage. Even though the dropped items were low loading and crossing loading, it seems like they relate more to individualistic interest e.g. HU5[personally fulfilling entertainment], UU3[search for job opportunities].

| | Component | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| HU1_1 | | | 0.744 | | | | |
| HU2_1 | | | 0.748 | | | | |
| HU3_1 | | | 0.812 | | | | |
| HU4_1 | | | 0.725 | | | | |
| HU6_1 | | | 0.749 | | | | |
| UU1_1 | | | | 0.858 | | | |
| UU2_1 | | | | 0.841 | | | |
| UU4_1 | | | | 0.801 | | | |
| UU5_1 | | | | 0.717 | | | |
| CA1_1 | | | | | | | 0.711 |
| CA2_1 | | | | | | | 0.708 |
| CA3_1 | | | | | | | 0.702 |
| ENJ1_1 | 0.762 | | | | | | |
| ENJ2_1 | 0.767 | | | | | | |
| ENJ3_1 | 0.729 | | | | | | |
| ENJ4_1 | 0.817 | | | | | | |
| ENJ5_1 | 0.825 | | | | | | |
| ENT1_1 | 0.841 | | | | | | |
| ENT2_1 | 0.867 | | | | | | |
| ENT3_1 | 0.761 | | | | | | |
| SOCINT2_1 | 0.701 | | | | | | |
| ESCP1_1 | 0.703 | | | | | | |
| ESCP2_1 | 0.701 | | | | | | |
| ESCP3_1 | 0.704 | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CON3_1 | | 0.712 | | | | | |
| USFUL1_1 | | 0.708 | | | | | |
| USFUL2_1 | | 0.747 | | | | | |
| USFUL3_1 | | 0.733 | | | | | |
| USFUL4_1 | | 0.783 | | | | | |
| REW1_1 | | 0.863 | | | | | |
| REW2_1 | | 0.816 | | | | | |
| REW3_1 | | 0.875 | | | | | |
| IMG1_1 | | 0.777 | | | | | |
| IMG2_1 | | 0.772 | | | | | |
| IMG3_1 | | 0.767 | | | | | |
| SAT1_1 | | | | | | 0.890 | |
| SAT2_1 | | | | | | 0.920 | |
| SAT3_1 | | | | | | 0.913 | |
| PERF2_1 | | | | | 0.758 | | |
| PERF3_1 | | | | | 0.842 | | |
| PERF4_1 | | | | | 0.871 | | |
| PERF5_1 | | | | | 0.847 | | |
| Extraction Method: Principal Component Analysis.<br>Rotation Method: Varimax with Kaiser Normalization. | | | | | | | |
| a. Rotation converged in 7 iterations. | | | | | | | |

*Table 9.8: Results of the Principal Component Analysis*

The PCA results were used for preliminary validity tests. The scales were assessed for discriminant validity. Higher loadings of the items were observed on constructs the items were intended to measure. The loadings of the items on factors they were supposed to measure were above 0.7 thus indicating a general unidimensional structure of the instrument (Hair et al., 1998).

The measurement items (those that survived the PCA) for each construct were computed into composites. The composites are presented below in Table 9.9 with their realibility, mean, standard deviations, skewness and kurtosis. The skewness values of the data were between -1 and +1 (Hair et al., 2010), and kurtosis were between -2 and +2 (Coakes and Steed, 2003), indicating that the data meets the requirements for normality tests. The reliability scores indicate that there is adequate reliability, the scores are above the 0.7 threshold (Nunnally and Bernstein, 1994).

| | No. Of Items | Cron-bach's Alpha | Min | Max | Mean | Std. Deviation | Skewness | | Kurtosis | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error | Statistic | Std. Error |
| CompIntHedMot | 12 | 0.906 | 1.00 | 7.00 | 3.2957 | 1.52580 | 0.197 | 0.143 | -0.857 | 0.285 |
| CompExtHutMot | 11 | 0.907 | 1.00 | 7.00 | 2.8288 | 1.48319 | 0.520 | 0.143 | -0.694 | 0.285 |
| CompoHedoUse | 5 | 0.900 | 1.00 | 7.00 | 3.2710 | 1.58757 | 0.283 | 0.143 | -0.884 | 0.285 |
| CompoUtiUse | 4 | 0.903 | 1.00 | 7.00 | 3.9799 | 1.78274 | -0.155 | 0.143 | -0.989 | 0.285 |
| CompPRFM | 4 | 0.888 | 1.00 | 7.00 | 5.5212 | 1.10183 | -0.927 | 0.143 | 1.166 | 0.285 |
| CompSAT | 3 | 0.962 | 1.00 | 7.00 | 4.8536 | 1.77877 | -0.668 | 0.143 | -0.410 | 0.285 |
| CompCA | 3 | 0.816 | 1.00 | 7.00 | 3.2360 | 1.59813 | 0.279 | 0.143 | -0.668 | 0.285 |

*Table 9.9: Statistics for the Composites*

### 9.9.3.1 Preliminary Analysis – SNS Usage to Outcomes

A one-way group analysis of variance was conducted to explore the impact of each level (low, mid and high) of usage for each type of usage (hedonic and utilitarian) on job satisfaction and on job performance. Each of the deep SNS usage variables (hedonic and utilitarian) was visual binned into equal percentiles using two cutpoints.

Group Analysis of Hedonic and Utilitarian Usage (Low, Med and High) and Job Satisfaction

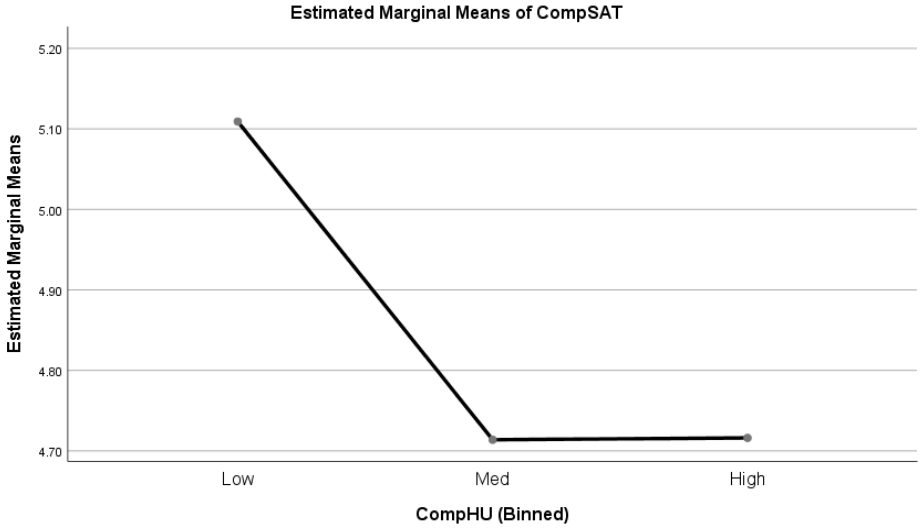



*Figure 9.9: Group Analysis of Hedonic Usage and Job Satisfaction*

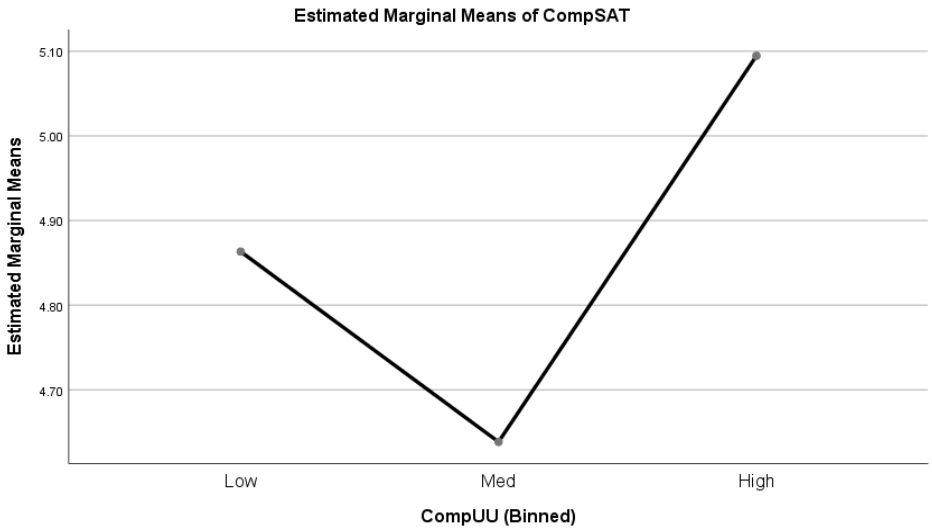



*Figure 9.10: Group Analysis of Utilitarian Usage and Job Satisfaction*

A Bivariate analysis between each of the three types of SNS usage namely deep hedonic, utilitarian and cognitive absorption, and each of the two outcomes namely job satisfaction and job performance was carried out. It was found that the relation between deep hedonic SNS usage and job satisfaction was the only significant one. The relationships between the different levels of deep hedonic SNS usage and job satisfaction were the only significant ones (Figure 9.9). The figure shows higher levels of job satisfaction are observed among the lower users. This hints at an unexpected negative/inverse relationship.

The three different levels of deep hedonic usage were compared against job satisfaction. It was found that the two have an inverse relationship. There was a statistically significant difference at the $p < .05$ level in satisfaction scores for three deep hedonic SNS usage groups.
When deep hedonic usage is low, job satisfaction is high. However, higher levels of deep hedonic use are associated with lower job satisfaction. There is no difference between the medium and high hedonic users on job satisfaction. Conversely, as shown in Figure 9.9, low deep utilitarian usage result in medium job satisfaction, but medium utilitarian usage result in a drop in job satisfaction. Surprisingly, post medium utilitarian usage, increasing utilitarian usage is associated with higher job satisfaction.

Taken together, the above preliminary analysis suggests that the highest levels of job satisfaction are observed among the low hedonic but high utilitarian users, while lower job satisfaction is observed among the higher hedonic and lower utilitarian users.

#### 9.9.3.2 Preliminary Analysis – SNS Usage and Motivations

For a preliminary analysis of motivations behind SNS usage, each of the motivation measurement items was correlated with each type of SNS usage (Table 9.10).

| Correlations | | | | |
|---|---|---|---|---|
| | | CompHU | CompUU | CompCA |
| SNS are enjoyable to use at work (ENJ1_1) | Pearson Correlation | .485** | .305** | .568** |
| SNS give me pleasure to use at work (ENJ2_1) | Pearson Correlation | .455** | .316** | .587** |
| Using SNS at work excites my curiosity (ENJ3_1) | Pearson Correlation | .479** | .305** | .561** |
| SNS are fun to use at work (ENJ4_1) | Pearson Correlation | .458** | .324** | .526** |
| Using SNS is amusing at work (ENJ5_1) | Pearson Correlation | .512** | .328** | .527** |
| SNS are relaxing at work (ENT1_1) | Pearson Correlation | .556** | .282** | .525** |
| SNS relieve boredom at work (ENT2_1) | Pearson Correlation | .473** | .222** | .472** |
| SNS are entertaining at work (ENT3_1) | Pearson Correlation | .541** | .141* | .463** |
| Using SNS at work provides me with a sense of affiliation with others (SOCINT2_1) | Pearson Correlation | .486** | .391** | .506** |
| Using SNS at work helps me get away from it (ESCP1_1) | Pearson Correlation | .504** | .184** | .463** |
| Using SNS at work helps me get my mind off a problem (ESCP2_1) | Pearson Correlation | .509** | .247** | .447** |
| Using SNS at work helps me to focus when stressed (ESCP3_1) | Pearson Correlation | .437** | .260** | .420** |
| Using SNS at work fits my schedule (CON3_1) | Pearson Correlation | .344** | .464** | .446** |
| Using the SNS enhances my effectiveness at work (USFUL1_1) | Pearson Correlation | .339** | .499** | .467** |
| Using the SNS enhances my productivity (USFUL2_1) | Pearson Correlation | .323** | .489** | .472** |
| I find the SNS useful in my work activities (USFUL3_1) | Pearson Correlation | .265** | .534** | .414** |
| Using the SNS improves my performance at work (USFUL4_1) | Pearson Correlation | .247** | .511** | .442** |
| SNS is used at work because there are rewards associated with its use for me (REW1_1) | Pearson Correlation | .309** | .401** | .446** |
| SNS is used because of expected promotion opportunities at work (REW2_1) | Pearson Correlation | .282** | .399** | .403** |
| SNS is used because it contributes to my progression at work (REW3_1) | Pearson Correlation | .215** | .410** | .357** |
| SNS is used at work for better image of myself (IMG1_1) | Pearson Correlation | .388** | .405** | .475** |
| SNS is used at work because there is fame and recognition associated with using it for me (IMG2_1) | Pearson Correlation | .235** | .354** | .422** |
| SNS use at work provides me with a sense of self-worth (IMG3_1) | Pearson Correlation | .351** | .360** | .498** |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | |
| *. Correlation is significant at the 0.05 level (2-tailed).<br>ENJ=Enjoyment, ENT=Entertainment, ESCP=Escapism, SOCINT=Social Interaction, IMG=Image, REW=Reward, USFUL=Usefulness, CON=Convenience, | | | | |

*Table 9.10: Correlations between items and SNS usage*

Surprisingly, it was found that from the hedonic-intrinsic motivations all enjoyment and social interaction items correlate highly with cognitive absorption, medially correlate with deep hedonic usage and lowest with deep utilitarian usage. The rationale may be that the more the SNS provides the user with a sense of belonging or it is fun, the higher chance of spending more time on it. People usually spend time on activities they are enjoying. As expected, entertainment and escapism items correlated highly with deep hedonic usage then followed by cognitive absorption.

From the utilitarian-extrinsic motivations, reward and the convenience items correlated highly with cognitive absorption followed by deep utilitarian usage. Even though it is surprising, it can be explained that if the SNS is allowing the user to save time or there are rewards associated with using the SNS, it is likely that the user will spend more time on the SNS. Further, it was found that recognition that comes with using SNS or the effectiveness of SNS is likely to drive user to spend more time on SNS.

9.9.3.3 The Test of the Measurement Model

Following the above preliminary analysis, PLS approach was used. Smart PLS3 software (Ringle, Wende and Becker, 2015) was used to assess the measurement model (psychometric properties of the scales used) and structural model (strength and directions of the relationships between variables). PLS is a variance based approach to modelling causal relationships among variables (Urbach and Ahlemann, 2010). PLS provides a good approximation of alternative covariance-based approaches to structural equation modelling in terms of final estimates (Gefen et al., 2011; Hair et al., 2011; Sun et al., 2013)

After the PCA on SPSS, the data was imported into the SmartPLS software which enabled the researcher to carry out further tests of the measures. The motivation variables were modelled as reflective variables. Hedonic-Intrinsic motivation was reflected by its items. The items were derived from enjoyment, entertainment, social interaction and escapism. On the other hand, the Utilitarian-Extrinsic motivation is reflected by its items, derived from reward, convenience, usefulness and image. The usage dimensions and outcomes were also modelled as reflective constructs (e.g. Charoensukmongkol, 2014; Moqbel, 2012: Moqbel et al., 2013)

A confirmatory factor analysis was carried out. The outer loadings are shown in Table 9.11 below. All the loadings were above the minimum threshold of 0.7, which is satisfactory as suggested by Hair, Black, Babin, and Anderson (2009). The results were also a good sign of convergent validity as per the average variance extracted (AVEs) below, all of them were above the threshold of 0.5 (Falk and Miller, 1992; Tenenhaus et al., 2005).

| | Cognitive-Abs | Hedonic-Intrinsic | Hedonic-Use | Performance | Satisfaction | Utilitarian-Extrinsic | Utilitarian-Use |
|---|---|---|---|---|---|---|---|
| CA1_1 | 0.835 | | | | | | |
| CA2_1 | 0.853 | | | | | | |
| CA3_1 | 0.876 | | | | | | |
| ENJ1_1 | | 0.859 | | | | | |
| ENJ2_1 | | 0.874 | | | | | |
| ENJ3_1 | | 0.831 | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ENJ4_1 | | 0.88 | | | | | |
| ENJ5_1 | | 0.89 | | | | | |
| ENT1_1 | | 0.898 | | | | | |
| ENT2_1 | | 0.884 | | | | | |
| ENT3_1 | | 0.816 | | | | | |
| ESCP1_1 | | 0.756 | | | | | |
| ESCP2_1 | | 0.754 | | | | | |
| ESCP3_1 | | 0.717 | | | | | |
| SOCINT2_1 | | 0.74 | | | | | |
| HU1_1 | | | 0.833 | | | | |
| HU2_1 | | | 0.834 | | | | |
| HU3_1 | | | 0.897 | | | | |
| HU4_1 | | | 0.823 | | | | |
| HU6_1 | | | 0.84 | | | | |
| SAT1_1 | | | | | 0.946 | | |
| SAT2_1 | | | | | 0.975 | | |
| SAT3_1 | | | | | 0.971 | | |
| IMG1_1 | | | | | | 0.838 | |
| IMG2_1 | | | | | | 0.772 | |
| IMG3_1 | | | | | | 0.808 | |
| REW1_1 | | | | | | 0.88 | |
| REW2_1 | | | | | | 0.809 | |
| REW3_1 | | | | | | 0.862 | |
| USFUL1_1 | | | | | | 0.847 | |
| USFUL2_1 | | | | | | 0.882 | |
| USFUL3_1 | | | | | | 0.84 | |
| USFUL4_1 | | | | | | 0.888 | |
| CON3_1 | | | | | | 0.784 | |
| UU1_1 | | | | | | | 0.903 |
| UU2_1 | | | | | | | 0.883 |
| UU4_1 | | | | | | | 0.896 |
| UU5_1 | | | | | | | 0.838 |
| PERF3_1 | | | | 0.809 | | | |
| PERF5_1 | | | | 0.83 | | | |
| PERF2_1 | | | | 0.897 | | | |
| PERF4_1 | | | | 0.914 | | | |
| | | | | | | | |
| AVEs | 0.731 | 0.684 | 0.715 | 0.746 | 0.929 | 0.702 | 0.775 |
| Cronbach's | 0.816 | 0.957 | 0.9 | 0.888 | 0.962 | 0.957 | 0.903 |
| Composite | 0.891 | 0.963 | 0.926 | 0.921 | 0.975 | 0.963 | 0.932 |

*Table 9.11: The Outer Loadings, AVEs, Cronbach's Alpha and Composite Reliability*

In addition to the factor loadings, Fornell and Larcker (1981) test of discriminant validity was used. The test for discriminant validity was performed using average variance extracted (AVE). As recommended by Fornell and Larcker (1981), the square root of the AVE of each construct must be greater than correlations between that construct and others in the model in order for discriminant validity to exist. This was found to be true as shown in Table 9.12 below. Further, Heterotrait-Monotrait Ration (HTMT) test was done. HTMT is an estimate of the correlation between two constructs. If the indicators of two constructs exhibit an HTMT value that is clearly smaller than one, the true correlation between the two constructs is most likely different from one, and they should differ (Henseler et al., 2014). The correlations were less than the threshold of 1

(Henseler et al., 2014), the highest was 0.693 (see Table 9.13). Therefore, this is an indication that the factors are different.

| | Cognitive-Abs | Hedonic-Intrinsic | Hedonic-Use | Performance | Satisfaction | Utilitarian-Extrinsic | Utilitarian-Use |
|---|---|---|---|---|---|---|---|
| Cognitive-Abs | **0.855** | | | | | | |
| Hedonic-Intrinsic | 0.615 | **0.827** | | | | | |
| Hedonic-Use | 0.493 | 0.594 | **0.846** | | | | |
| Performance | -0.085 | -0.117 | -0.068 | **0.863** | | | |
| Satisfaction | -0.044 | -0.103 | -0.107 | 0.482 | **0.964** | | |
| Utilitarian-Extrinsic | 0.533 | 0.585 | 0.364 | -0.028 | 0.102 | **0.838** | |
| Utilitarian-Use | 0.398 | 0.339 | 0.337 | 0.007 | 0.060 | 0.530 | **0.880** |
| Notes: The bold numbers on the leading diagonal are the square root of the variance shared between the constructs and their measures. Off diagonal elements are the correlations among constructs. | | | | | | | |

*Table 9.12: Inter Construct Correlations*

| | Cognitive Absorption | Hedonic-Intrinsic | Hedonic-Use | Performance | Satisfaction | Utilitarian-Extrinsic | Utilitarian-Use |
|---|---|---|---|---|---|---|---|
| Cognitive Absorption | | | | | | | |
| Hedonic-Intrinsic | 0.693 | | | | | | |
| Hedonic-Use | 0.579 | 0.641 | | | | | |
| Performance | 0.112 | 0.13 | 0.082 | | | | |
| Satisfaction | 0.059 | 0.112 | 0.115 | 0.495 | | | |
| Utilitarian-Extrinsic | 0.596 | 0.602 | 0.387 | 0.055 | 0.114 | | |
| Utilitarian-Use | 0.464 | 0.359 | 0.374 | 0.038 | 0.073 | 0.563 | |

*Table 9.13: Heterotrait-Monotrait Ratio Correlations*

The variables were tested for multicollinearity, which explain the degree to which an independent variable's effects can be predicted, or accounted for, by the other independent variables in the analysis. To assess how much the variance of an estimated regression coefficient increases if the predictors are correlated, the variance inflation factors (VIFs) were measured. All VIFs values were less than 5.0, which is an acceptable threshold (Steven, 2001; Williams, Roderick, Davies and Clement, 2017). The values indicate that multicollinearity does not exist.

The reliability of the data items was tested. The results indicate that all the constructs had Cronbach's alpha as a measure of internal consistency and composite reliability as per Fornell and Larcker (1981), above the 0.7 threshold (Nunnally and Bernstein, 1994). Next, the standardized root mean square residual (SRMR) of the model was measured. SRMR is a measure of the mean absolute value of the covariance residuals, the SRMR based on transforming both the sample covariance matrix and the predicted covariance matrix into correlation matrices. Since SRMR is the difference between the observed correlation and the model implied correlation matrix, it allows assessing the average magnitude of the discrepancies between observed and expected correlations as an absolute measure of (model) fit criterion (Hooper et al., 2008). The model fit was as indicated by SRMR of 0.073 and significant ($p<0.05$), which is a good fit below the 0.08 threshold (Hu and Bentler, 1999).

Based on the above tests, it is concluded that the scales are reliable and valid, thus suitable for hypotheses testing.

9.9.3.4 Structural Model Assessment and Hypotheses Testing

The model was tested as presented in Figure 9.11, and bootstrap results in Appendix G. A bootstrap resampling procedure (with 1000 samples) was used to test the proposed relationships in the research model. "Bootstrapping is a nonparametric approach for estimating precision which creates N samples to obtain N sets of parameter estimates" (Bliemel and Hassanein, 2007). The standardized path coefficients associated with each proposed hypothesis, significance of the path coefficients and the variance explained by the independent variables are presented. Summary of the results are presented in Table 9.14.

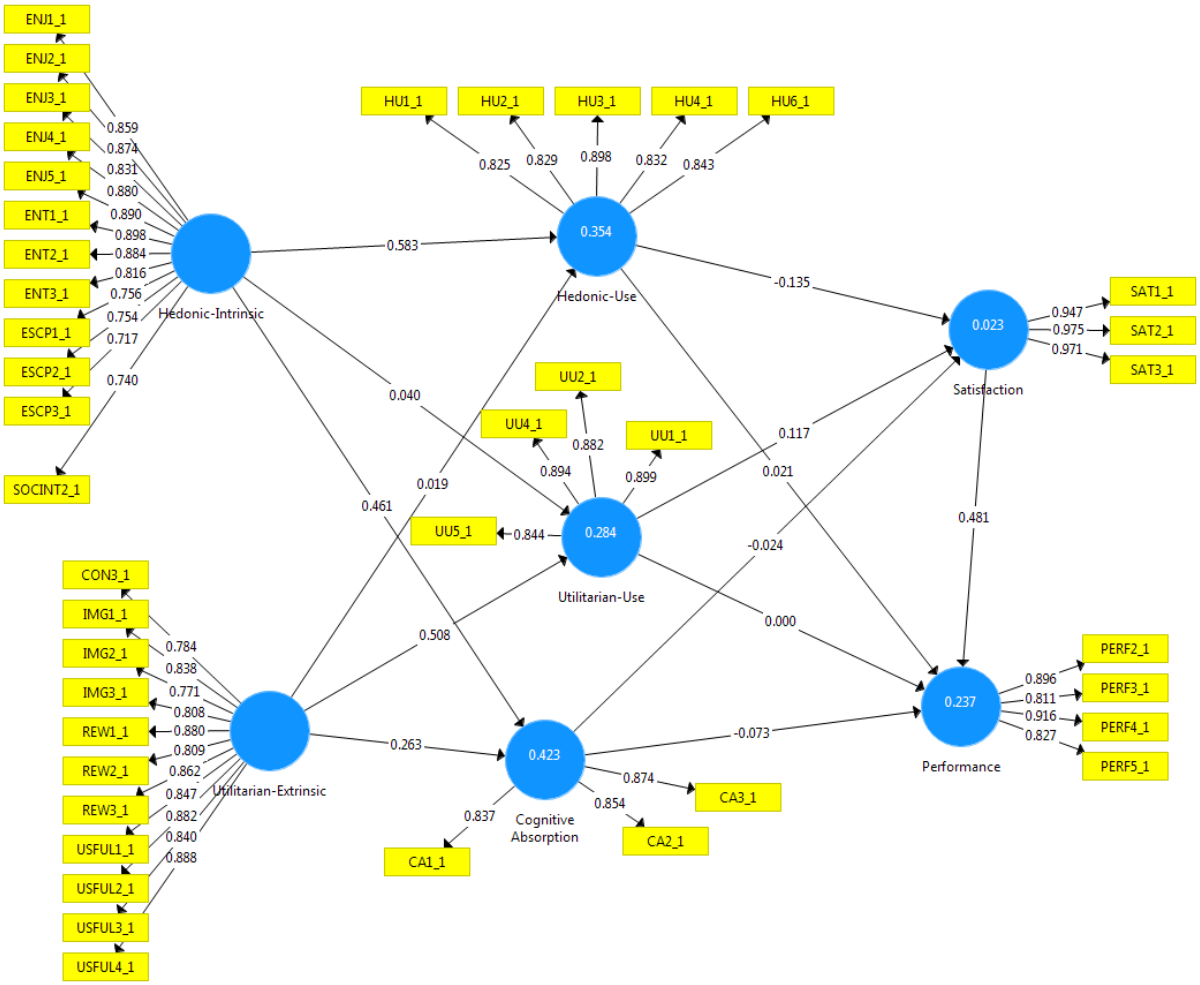



*Figure 9.11: Research Model*

The relationship between the SNS usage constructs was examined. The strongest effect is between cognitive absorption and deep hedonic SNS usage (0.493, $p<0.001$), followed by cognitive absorption and deep utilitarian SNS usage (0.398, $p<0.001$), and lastly, deep hedonic SNS usage and deep utilitarian SNS usage (0.337, $p<0.001$). Table 9.14 summaries the results of hypothesis testing. The right hand column shows that support was found for H1, H3, H5, H6. However, H2, H4 and H7-H12 were rejected.

| Hypothesis | Path | Path Coefficient (β) | T Statistics | P Values | Supported |
|---|---|---|---|---|---|
| H1 | Hedonic-Intrinsic -> Hedonic-Use | 0.583 | 10.194 | 0.000*** | Yes |
| H2 | Hedonic-Intrinsic -> Utilitarian-Use | 0.040 | 0.582 | 0.561 | No |
| H3 | Hedonic-Intrinsic -> Cognitive-Abs | 0.461 | 7.816 | 0.000*** | Yes |
| H4 | Utilitarian-Extrinsic -> Hedonic-Use | 0.019 | 0.29 | 0.772 | No |
| H5 | Utilitarian-Extrinsic -> Utilitarian-Use | 0.508 | 8.771 | 0.000*** | Yes |
| H6 | Utilitarian-Extrinsic -> Cognitive-Abs | 0.263 | 4.07 | 0.000*** | Yes |
| H7 | Hedonic-Use -> Performance | 0.021 | 0.337 | 0.736 | No |
| H8 | Utilitarian-Use -> Performance | 0.000 | 0 | 1.000 | No |
| H9 | Cognitive-Abs -> Performance | -0.073 | 1.132 | 0.258 | No |
| H10 | Hedonic-Use -> Satisfaction | -0.135 | 2.001 | 0.046* | No* |
| H11 | Utilitarian-Use -> Satisfaction | 0.117 | 1.766 | 0.078 | No |
| H12 | Cognitive-Abs -> Satisfaction | -0.024 | 0.307 | 0.759 | No |
| *Incorrect direction: hypothesis rejected | | | | | |

*Table 9.14: Summary of Results (notes: *p<0.05; **p<0.01; ***p<0.001).*

As seen in Figure 9.11, hedonic-intrinsic motivation has a significant effect on deep hedonic usage and cognitive absorption in the use of SNS. H1 ($\beta = 0.583$, $p<0.001$), the effect of hedonic-intrinsic motivation on deep hedonic usage is the strongest, and was expected. This finding supports the view that motivations such as enjoyment, entertainment, escapism and social interaction drive users to engage in non-work related use of SNS at work. H1 and H3 ($\beta = 0.461$, $p<0.001$) are supported. Hedonic-intrinsic motivation has no significant influence on deep utilitarian usage, H2 is rejected ($\beta = 0.040$). Utilitarian-extrinsic motivation has no significant influence on deep hedonic usage and H4 is also rejected ($\beta = 0.019$). However, utilitarian-extrinsic motivation has significant positive effect on utilitarian usage and cognitive absorption. Therefore, H5 ($\beta = 0.508$, $p<0.001$) and H6 ($\beta = 0.263$, $p<0.001$) are supported. All the three dimensions of usage (Deep hedonic usage, deep utilitarian usage and cognitive absorption) had no significant direct influence on job performance, hence H7, H8 and H9 are not supported. Similarly, cognitive absorption and utilitarian usage had no significant direct influence on job satisfaction. Hence, H11 and H12 are not supported. However, the relationship between deep hedonic usage and job satisfaction was found to be significant, H10 ($\beta = -0.135$, $p<0.05$). Surprisingly the relationship was found to be negative as opposed to being positive as hypothesized. Therefore, H10 is not supported. Even though the relationship between job satisfaction and job performance was not hypothesized, the relationship was found to be strong (high effect), and significant ($\beta = 0.481$, $p<0.001$). This is consistent with the general job satisfaction-performance literature (e.g. Alessandri, Borgogni and Latham, 2017) that describe job satisfaction as a primary determinant of job performance. The results are summarized in Table 9.14.

The structural model explains 43% of the variance in cognitive absorption, 36% of the variance in deep hedonic usage, 24% of the variance in job performance and 29% of the variance in deep utilitarian usage. As shown Table 9.15, all these R-squared results are significant ($p<0.001$), except for the variance explained in job satisfaction of just 3%.

| | Adjusted R-Square | T Statistics | P Values |
|---|---|---|---|
| Cognitive-Abs | 0.426 | 7.454 | 0.00 |
| Hedonic-Use | 0.357 | 7.318 | 0.00 |
| Performance | 0.238 | 4.763 | 0.00 |
| Satisfaction | 0.025 | 0.609 | 0.542 |
| Utilitarian-Use | 0.285 | 6.051 | 0.00 |

*Table 9.15: Results of the Adjusted R-Squared*

### 9.9.3.5 Controls

Controls namely age and gender were collected in this study to rule out rival hypotheses and help in the interpretation of the results. The hypotheses were compared across gender (male and female) and age (below 40yrs and above 40yrs).

| | Path Coefficients Original (Female) | Path Coefficients Original (Male) | Path Coefficients Mean (Female) | Path Coefficients Mean (Male) | STDEV (Female) | STDEV (Male) | t-Values (Female) | t-Values (Male) | p-Values (Female) | p-Values (Male) |
|---|---|---|---|---|---|---|---|---|---|---|
| Cognitive Absorption -> Performance | -0.161 | 0.047 | -0.161 | 0.052 | 0.09 | 0.094 | 1.793 | 0.502 | 0.073 | 0.616 |
| Cognitive Absorption -> Satisfaction | 0.039 | -0.03 | 0.037 | -0.034 | 0.117 | 0.095 | 0.332 | 0.317 | 0.74 | 0.751 |
| Hedonic-Intrinsic -> Cognitive Absorption | 0.486 | 0.436 | 0.488 | 0.441 | 0.094 | 0.079 | 5.172 | 5.526 | 0*** | 0*** |
| Hedonic-Intrinsic -> Hedonic-Use | 0.66 | 0.533 | 0.661 | 0.537 | 0.086 | 0.074 | 7.658 | 7.168 | 0*** | 0*** |
| Hedonic-Intrinsic -> Utilitarian-Use | 0.141 | -0.023 | 0.141 | -0.026 | 0.111 | 0.093 | 1.269 | 0.246 | 0.205 | 0.805 |
| Hedonic-Use -> Performance | 0.06 | -0.036 | 0.065 | -0.038 | 0.1 | 0.088 | 0.606 | 0.41 | 0.545 | 0.682 |
| Hedonic-Use -> Satisfaction | -0.288 | -0.015 | -0.29 | -0.01 | 0.102 | 0.088 | 2.837 | 0.173 | 0.005* | 0.863 |
| Satisfaction -> Performance | 0.397 | 0.536 | 0.401 | 0.539 | 0.076 | 0.066 | 5.207 | 8.158 | 0*** | 0*** |
| Utilitarian-Extrinsic -> Cognitive Absorption | 0.248 | 0.287 | 0.251 | 0.288 | 0.105 | 0.082 | 2.362 | 3.475 | 0.018** | 0.001*** |
| Utilitarian-Extrinsic -> Hedonic-Use | -0.033 | 0.071 | -0.037 | 0.075 | 0.107 | 0.087 | 0.311 | 0.822 | 0.756 | 0.411 |
| Utilitarian-Extrinsic -> Utilitarian-Use | 0.429 | 0.576 | 0.428 | 0.584 | 0.099 | 0.08 | 4.342 | 7.155 | 0*** | 0*** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Utilitarian-Use -> Performance | -0.054 | 0.023 | -0.054 | 0.02 | 0.082 | 0.078 | 0.658 | 0.298 | 0.511 | 0.766 |
| Utilitarian-Use -> Satisfaction | 0.025 | 0.162 | 0.025 | 0.159 | 0.1 | 0.097 | 0.251 | 1.673 | 0.802 | 0.095 |
| **Table continue below | | | | | | | | | | |

*Table 9.16: Detailed Gender Subgroup Analysis*

| Gender | Path Coefficients-diff ( \| Female - Male \|) | t-Value(Female vs Male) | p-Value(Female vs Male) |
|---|---|---|---|
| Cognitive-Abs -> Performance | 0.208 | 1.595 | 0.112 |
| Cognitive-Abs -> Satisfaction | 0.069 | 0.464 | 0.643 |
| Hedonic-Intrinsic -> Cognitive-Abs | 0.05 | 0.402 | 0.688 |
| Hedonic-Intrinsic -> Hedonic-Use | 0.127 | 1.054 | 0.293 |
| Hedonic-Intrinsic -> Utilitarian-Use | 0.164 | 1.093 | 0.275 |
| Hedonic-Use -> Performance | 0.096 | 0.716 | 0.474 |
| Hedonic-Use -> Satisfaction | 0.273 | 2.06 | 0.04** |
| Satisfaction -> Performance | 0.139 | 1.342 | 0.181 |
| Utilitarian-Extrinsic -> Cognitive-Abs | 0.038 | 0.285 | 0.776 |
| Utilitarian-Extrinsic -> Hedonic-Use | 0.105 | 0.744 | 0.458 |
| Utilitarian-Extrinsic -> Utilitarian-Use | 0.147 | 1.174 | 0.242 |
| Utilitarian-Use -> Performance | 0.077 | 0.689 | 0.492 |
| Utilitarian-Use -> Satisfaction | 0.137 | 0.978 | 0.329 |

*Table 9.17: Sub-group Analysis Based on Gender*

The influence of each control was tested. The impact of motivations on SNS usage were not different across age and gender. However, the results indicate that the effect of hedonic use on job satisfaction is only significant for females (Table 9.16). Furthermore, the same relationship was found to be significant for older users (Table 9.18).

The non-significant impact of the controls is consistent with other studies (e.g. Ali-Hassam et al., 2015; Huang, 2017).

| | Path Coefficients Original (Above 40 years) | Path Coefficients Original (Below 40 years) | Path Coefficients Mean (Above 40 years) | Path Coefficients Mean (Below 40 years) | STDEV (Above 40 years) | STDEV (Below 40 years) | t-Values (Above 40 years) | t-Values (Below 40 years) | p-Values (Above 40 years) | p-Values (Below 40 years) |
|---|---|---|---|---|---|---|---|---|---|---|
| Cognitive Absorption -> Performance | -0.056 | -0.09 | -0.056 | -0.097 | 0.085 | 0.094 | 0.661 | 0.956 | 0.509 | 0.339 |
| Cognitive Absorption -> Satisfaction | 0.111 | -0.111 | 0.106 | -0.12 | 0.099 | 0.11 | 1.117 | 1.015 | 0.264 | 0.311 |
| Hedonic-Intrinsic -> Cognitive Absorption | 0.455 | 0.441 | 0.458 | 0.451 | 0.089 | 0.081 | 5.089 | 5.414 | 0*** | 0*** |
| Hedonic-Intrinsic -> Hedonic-Use | 0.724 | 0.505 | 0.729 | 0.511 | 0.078 | 0.084 | 9.29 | 6.017 | 0*** | 0*** |
| Hedonic-Intrinsic -> Utilitarian-Use | 0.096 | 0.031 | 0.09 | 0.027 | 0.109 | 0.101 | 0.887 | 0.304 | 0.375 | 0.761 |
| Hedonic-Use -> Performance | 0.01 | 0.016 | 0.012 | 0.015 | 0.094 | 0.092 | 0.101 | 0.169 | 0.92 | 0.866 |
| Hedonic-Use -> Satisfaction | -0.217 | -0.043 | -0.219 | -0.037 | 0.092 | 0.099 | 2.351 | 0.434 | 0.019** | 0.664 |
| Satisfaction -> Performance | 0.498 | 0.472 | 0.506 | 0.471 | 0.068 | 0.068 | 7.282 | 6.959 | 0*** | 0*** |
| Utilitarian-Extrinsic -> Cognitive Absorption | 0.229 | 0.315 | 0.235 | 0.308 | 0.09 | 0.098 | 2.533 | 3.214 | 0.011** | 0.001*** |
| Utilitarian-Extrinsic -> Hedonic-Use | -0.112 | 0.08 | -0.113 | 0.076 | 0.093 | 0.104 | 1.207 | 0.774 | 0.228 | 0.439 |
| Utilitarian-Extrinsic -> Utilitarian-Use | 0.505 | 0.473 | 0.511 | 0.478 | 0.092 | 0.089 | 5.473 | 5.343 | 0*** | 0*** |
| Utilitarian-Use -> Performance | -0.017 | 0.027 | -0.017 | 0.028 | 0.077 | 0.08 | 0.226 | 0.334 | 0.821 | 0.739 |
| Utilitarian-Use -> Satisfaction | 0.018 | 0.152 | 0.027 | 0.153 | 0.092 | 0.098 | 0.199 | 1.541 | 0.843 | 0.124 |
| **Table continue below | | | | | | | | | | |

*Table 9.18: Detailed Age Subgroup Analysis*

| | Path Coefficients-diff ( \| Below 40 - Above 40 \|) | t-Value(Below 40 vs Above40 | p-Value(Below 40 vs Above 40) |
|---|---|---|---|
| Cognitive-Abs -> Performance | 0.034 | 0.252 | 0.801 |
| Cognitive-Abs -> Satisfaction | 0.222 | 1.464 | 0.144 |
| Hedonic-Intrinsic -> Cognitive-Abs | 0.014 | 0.114 | 0.909 |
| Hedonic-Intrinsic -> Hedonic-Use | 0.22 | 1.886 | 0.060 |
| Hedonic-Intrinsic -> Utilitarian-Use | 0.066 | 0.472 | 0.637 |
| Hedonic-Use -> Performance | 0.006 | 0.047 | 0.963 |
| Hedonic-Use -> Satisfaction | 0.174 | 1.305 | 0.193 |
| Satisfaction -> Performance | 0.027 | 0.275 | 0.783 |
| Utilitarian-Extrinsic -> Cognitive-Abs | 0.086 | 0.639 | 0.523 |
| Utilitarian-Extrinsic -> Hedonic-Use | 0.192 | 1.356 | 0.176 |
| Utilitarian-Extrinsic -> Utilitarian-Use | 0.031 | 0.259 | 0.796 |
| Utilitarian-Use -> Performance | 0.044 | 0.416 | 0.677 |
| Utilitarian-Use -> Satisfaction | 0.133 | 0.987 | 0.324 |
| | | | |

*Table 9.19: Sub-group Analysis Based on Age*

### 9.9.3.6 Moderation Effects

Past studies have suggested that there might be an interaction between intrinsic and extrinsic motivations (e.g. Calder and Staw, 1975). Recently, there is a call to better understand the interactions between these types of motivations in different contexts (Kuvaas et al., 2017). This study is considering the moderation effects of hedonic-intrinsic motivation on utilitarian-extrinsic motivation and the other way round.

To test the moderation effects hierarchical multiple regression analyses were conducted. The link between hedonic-intrinsic motivation and hedonic usage, was examined, using utilitarian-extrinsic motivation as a moderator (model 1). The, the link between utilitarian-extrinsic motivation and utilitarian usage was examined, using hedonic-intrinsic motivation as a moderator (model 2). For each potentially moderation effect, the PROCESS macro for SPSS (Hayes, 2018) was used. A bootstrap with 1000 samples, was run on the terms to examine the effect. PROCESS is a macro for SPSS that conducts observed-variable mediation, moderation, and conditional process analysis (Hayes, 2018).

First model, hedonic-intrinsic motivation was found to have a significant effect deep hedonic SNS usage ($\beta$ =0.65, $p<0.001$). However, the effect of the interaction term (hedonic x utilitarian motivations) on deep hedonic usage was not statistically significant. For details on the moderation effect see Figure 9.12

Second model, utilitarian-extrinsic motivation was found to have a significant effect on deep utilitarian SNS usage ($\beta$ =0.63, $p<0.001$). However, the effect of the interaction term (hedonic x utilitarian motivations) on deep utilitarian usage was not statistically significant. For details on the moderation effect see Figure 9.13.

Therefore, this suggests that the effects of the different motivations on the different types of usage are therefore independent of each other.

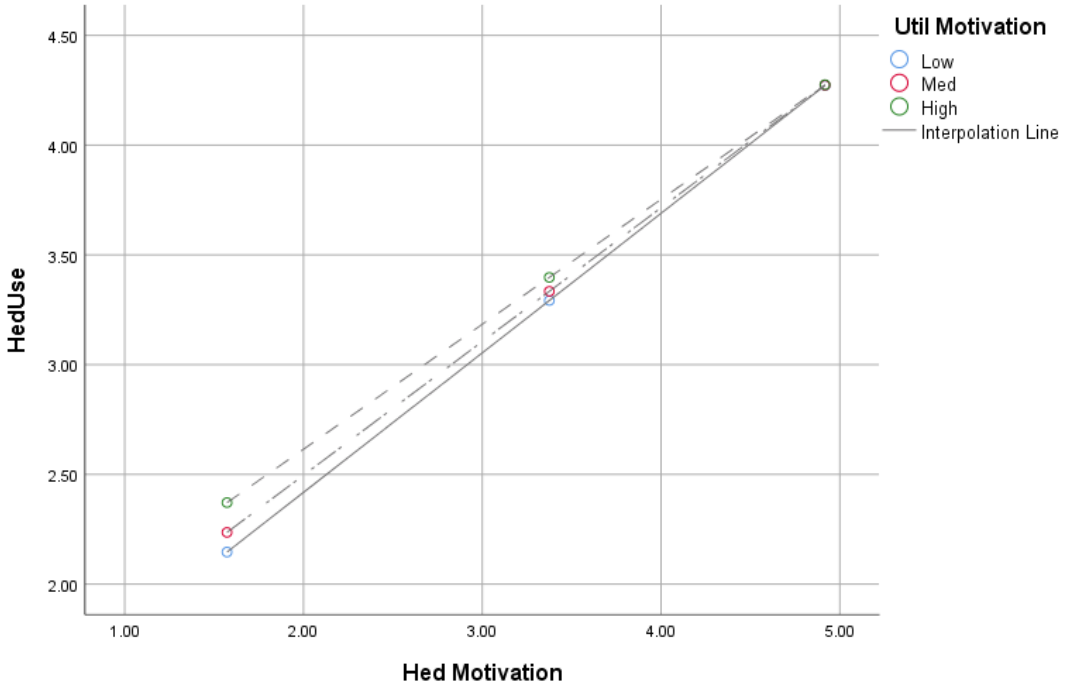



*Figure 9.12: Utilitarian-Extrinsic Motivation as a Moderator*

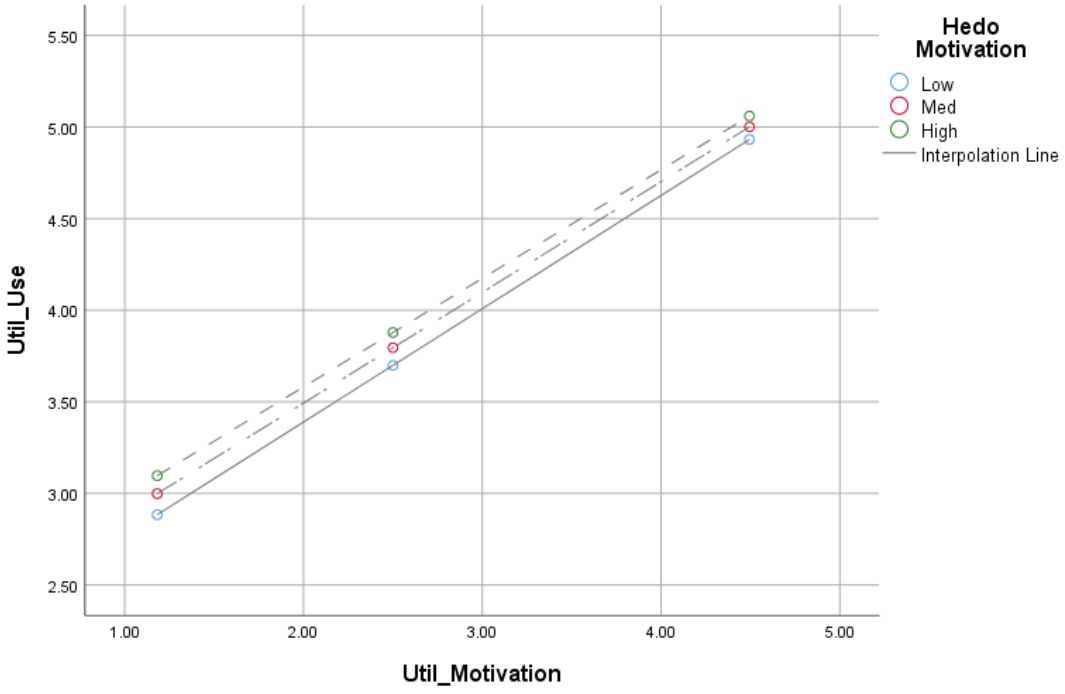



*Figure 9.13: Hedonic-Intrinsic Motivation as a Moderator*

## 9.10 Discussion

The purpose of this chapter was to determine the extent to which hedonic-intrinsic motivations and utilitarian-extrinsic motivations influence employees to use SNS for different types of usages, mainly deep hedonic usage, deep utilitarian usage and cognitive absorption, in the workplace. The research model was underpinned by hedonic motivation system adoption model (HMSAM), self-determination theory (SDT) and hedonic-utilitarian theory. To empirically test the model an online survey was used to collect data from employees of firms in South Africa. The employees were from different industries, different designations, varying ages, varying work experiences, academic qualifications and from different sections of the country.

Most of the past studies examining SNS usage and the use of information systems in general tend to use students as respondents. The use of employees as respondents helped shed light on the different ways of using SNS (e.g. for communication, sharing events), motivations driving SNS usage, and impacts of using SNS at work. The results indicate that SNS users mostly use the different platforms for pleasure or fun or entertainment (43%), social friendship and family (43%) and sharing work-related information (37%), also Facebook is still the highest used platform by employees in South Africa. Majority of the employees have been using SNS for more than 5 years. The time spent on SNS is spread between visiting the platforms once a day to always-on. Determining the factors that influence the different usages of SNS in the workplace is therefore important, and to ensure that the potential impacts of SNS use on workplace outcomes are positive. The employees prefer to use their personal devices to access SNS at work. This might be due to companies' policy discouraging the use of company resources to access SNS, or employees' perceptions regarding privacy.

Based on self-determination theory and hedonic-utilitarian theory it was hypothesized that motivations positively affect SNS usage. It is suggested that cognitive absorption, deep hedonic SNS usage and deep utilitarian SNS usage are driven by a set of motivations namely hedonic-intrinsic and utilitarian-extrinsic motivations. This is because user behaviour has a basis in motivations (Kast and Rosenzweig, 1985). Data collected from 290 individuals showed that hedonic-intrinsic motivations and utilitarian-extrinsic motivations positively influence SNS usage. Specifically, hedonic-intrinsic motivations and utilitarian-extrinsic motivations both positively influence cognitive absorption, i.e. the degree to which an individual becomes immersed when using SNS. Further, utilitarian-extrinsic motivations positively influence deep utilitarian use, while hedonic-intrinsic motivations positively influence deep hedonic usage, this is in accordance with past literature (e.g. Kim and Eastin, 2011; van der Heijden, 2004; Wang and Scheepers, 2012).

With respect to cognitive absorption, the findings suggest that motivations such as escapism, social interaction, convenience or usefulness may result in employees using the SNS for longer period of time or being absorbed in the use of the SNS. However, results showed that the hedonic-intrinsic motivations had a greater effect than utilitarian-extrinsic motivation on cognitive absorption. The results are consistent with the theory developed above and in agreement with previous studies focused on cognitive absoption, for example, a study titled "Time flies when you're having fun" indicated that intrinsic/hedonic motivations are important determinants of cognitive absorption (e.g. Agarwal and Karahanna, 2000; Reychav and Wu, 2015; Weniger and Loebbecke, 2011). This

suggests that employees are more likely to be immersed and be able to block distractions when using SNS if the SNS is found to be fun, relaxing, or providing a sense of belonging. Motivations such as recognition and usefulness are likely to have less impact on the potential for an employee to be immersed and absorbed in using an SNS. The rationale is that a user tends to be absorbed in an activity such as using an information system if the information system fulfils their need for fun, entertainment or provides pleasure.

With respect to hedonic use, findings complement the suggestion that hedonic and intrinsic motivations strongly influence the use of an information system for hedonic purposes (Atkinson and Kydd, 1997; Lin and Bhattacherjee, 2010; Teo, 2001; van der Heijden, 2004). Users seek information about family and friends, share information that is fun-filled, follow events or activities that are of personal importance and interact with family, friends and colleagues in a social way because they are motivated by enjoyment, entertainment, social interaction and escapism offered by the SNS. This suggests that employees seek information about family and friends, share information that is fun-filled with colleagues and friends, and search for personally fulfilling entertainment content on SNS because they are driven by the fact that SNS use is fun, enjoyable, relives boredom and relaxing.

With respect to utilitarian use, results confirm that potential for reward at work, possibility of recognition and enhanced effectiveness at work motivates usage of SNS to interact with others to obtain work advice and support and gain assistance. This confirms the meta-analysis results that utilitarian/extrinsic motivations are important for workers, and this confirms the results in chapter 4, and other studies (e.g. Gerow et al.,2013; Wu and Lu, 2013). Extrinsic motivations with a more internal locus of causality e.g. perceived usefulness, is stronger than those with more external locus of causality e.g. rewards on deep utilitarian usage.

Despite prior evidence suggesting that hedonic-intrinsic motivations positively influence deep utilitarian usage, and utilitarian-extrinsic motivations positively influence deep hedonic usage, the findings show effects are quite small and not statistically significant.

Taken together, the results indicate that deep hedonic SNS usage arises from hedonic-intrinsic motivations while deep utilitarian SNS usage arises from utilitarian-extrinsic motivations. This confirms the findings of two meta-analyses (chapter 4 and by Wu and Lu (2013), which indicate that even though intrinsic/hedonic motivations (especially enjoyment) have impact on both systems (hedonic and utilitarian), they have the highest effects on hedonic systems while extrinsic/utilitarian motivations have the highest on utilitarian systems.

Because the impact of SNS usage in the workplace is a topic of debate, this chapter sought to provide some preliminary evidence of SNS usage on workers. The relationship between the well-established workplace outcomes - job performance and job satisfaction - was examined and, as expected, the result was positive and significant, and consistent with past studies (e.g Moqbel 2012, Charoensukmongkol, 2014). However, this study found that employees' deep SNS usage (hedonic, utilitarian and cognitive absorption) has minimal effect and is not significantly related to job performance or satisfaction. The findings of the relationship between SNS usage and job performance contributes additional evidence and supports the results of past studies (e.g. Moqbel,

2012; Moqbel et al., 2013). This means that using SNS for social interactions or interacting with others to obtain work advice/support or getting immersed in the SNS does not have an impact on employee overall job performance or job satisfaction.

The use of SNS does not appear to have a simple predictable effect on an employee's job performance. Similar results were obtained in other studies (e.g. Moqbel, 2012). However, some studies found a positive and significant relationship between SNS use and performance (e.g. Charoensukmongkol, 2014) requiring that the relationship be examined further. For example, the inclusion or examination of mediating factors such as social support may help better account for effects. The next chapter of this thesis will explore such effects.

The relationships between job satisfaction and deep utilitarian SNS usage and cognitive absorption were also found to be non-significant. However, the relationship between deep hedonic SNS usage and satisfaction was found to be significant. Surprisingly though, the effect of deep hedonic SNS usage on job satisfaction is negative. This result was not expected and suggests a different rationale for the use of SNS than those of past studies (e.g. Moqbel, 2012; Moqbel et al., 2013; Robertson and Kee, 2017). Moqbel and others argued that occasionally using social media can help employees feel relaxed during work, and can promote job satisfaction of employees as it helps them achieve work-life balance and reduce work-family conflict (Michel, Kotrba, Mitchelson, Clark and Baltes, 2011).

In contrast, the finding presented above suggests that employees who are looking for a sense of fulfilment or internal satisfaction at work (i.e. have lower levels of satisfaction) might engage in SNS activities to take them away from work. For example, sharing fun-filled information with family and friends, following activities or events that are of personal importance or accessing information on topics of personal interest (i.e. higher hedonic usage). The explanation might be that employees who are not satisfied with their jobs tend to use SNS as a mechanism to escape. This negative relationship must however be confirmed by different studies using different datasets. This is unpacked further in the next chapter.

## 9.11 Implications

The study extends our theory of how and why SNS usage occurs in a workplace context. To understand how, SNS usage was conceptualized as a three dimensional construct. The different uses of SNS in the workplace were defined as deep hedonic usage, deep utilitarian usage and cognitive absorption. To understand why, the motivations driving the use of SNS in the workplace were examined. The motivations included hedonic and intrinsic (hedonic-intrinsic motivations), utilitarian and extrinsic motivations (utilitarian-extrinsic motivations). In understanding the how and why, several contributions were made.

First, this study contributes to the existing literature by clarifying the relationship between motivations and the different SNS usages in the workplace. Further, it clarifies the impact of the different SNS usages on the established workplace outcomes, namely job performance and job satisfaction. This study provides insights into the framework of SNS usage in the workplace, finding that both hedonic-intrinsic motivations (e.g. enjoyment, entertainment, social interaction and escapism) and utilitarian-extrinsic motivations (e.g. image, reward, usefulness and

convenience) positively influence the different types of SNS use. Moreover, the different types of SNS use have a less predictable impact on workplace outcomes. Interestingly, SNS users who are not satisfied with their jobs are more likely to use SNS in a hedonic manner. The relationship between deep hedonic SNS usage and job satisfaction needs to be considered in future.

Secondly, the results indicate that the motivations are closely related. For example, the dimensions of intrinsic-hedonic motivations e.g. enjoyment, entertainment, are highly correlated. Therefore, the use of a single construct made up of a set of items might be a better way to consider the motivations. Similar approach can be used for the extrinsic-utilitarian motivations because their dimensions are highly correlated too. Therefore, single construct proxies for all other dimensions in developing a more parsimonious model. This approach is in line with past researchers' suggestion that multidimensional constructs are conceptually ambiguous, explain less variance than explained by their dimensions taken collectively, and confound relationships between their dimensions and other constructs (Edward, 2001; Gerbing and Anderson, 1988; Hattie, 1985; Johns, 1998; Paunonen, Rothstein and Jackson, 1999; Schneider, Hough and Dunnette, 1996).

Thirdly, literature review indicated that there are limited studies that have integrated more than two motivation theories to understand information systems' usage. Specifically, this study is the first to integrate the three selected theories. The study integrates hedonic motivation system adoption model (HMSAM) with self-determination theory and hedonic-utilitarian theory, to explain SNS use and reinforce the speculation regarding an immediate theoretical correspondence between the different SNS uses and the different motivations. The empirical results indicate that SNS users are driven by hedonic-intrinsic motivations to take part in hedonic usage activities when using SNS at work. Similarly, their participation in utilitarian usage activities is driven by utilitarian-extrinsic motivations. Both motivations drive SNS users to be immersed and spend long hours when using SNS.

Fourth, majority of the past studies in information systems including those focused on SNS usage used students as respondents. This approach has been highlighted as one of the major limitations in many studies (e.g. Huang et al., 2014; Phua et al., 2017). Hence, this study is contributing by using employees as respondents, and the sample has breadth as shown by the demographics. The results of this study might be considered to be more representative of the population of workplace users because they use the actual sample frame of employees providing definite insights as opposed to using students.

Finally, the study further validated the measurement items of the three dimensions of SNS usage. The items were initially developed and validated in chapter 8. Validating them using a new dataset will help in refining the items and prepare them to be used by the research community.

The results of the study provided significant practical implications. From a practical viewpoint, demonstrating that different motivations drive different SNS uses provides a deeper understanding of user's behaviour. Since usage of any SNS is essential for its success, the results can help SNS developers to fully understand the critical factors that drive SNS use, which will allow them to develop better strategies to encourage usage.

The results indicate that hedonic-intrinsic motivations influence deep hedonic SNS usage and cognitive absorption positively. For more hedonic platforms like Instagram (Djafarova and Rushworth, 2017), the designers should develop strategies to increase deep hedonic usage of such platforms by enhancing and promoting hedonic-intrinsic features of the site. SNS developers can add functionality that provides high levels of enjoyment, entertainment, escapism and social interaction. Moreover, these motivations have been found to influence the absorption of users in SNS. Therefore, increasing hedonic/intrinsic functionalities will result in users spending more time on the platforms.

The study has found that utilitarian-extrinsic motivations contribute to utilitarian usage and cognitive absorption. SNS developers should also pay attention to the utilitarian aspect of the SNS. Features that make it possible for user to conveniently achieve tasks, features that provide for efficiency and effectiveness, may be enhanced on SNS since they drive employees to engage in activities such as obtaining work advice or support, or obtaining feedback on work products when employees use SNS at work.

The examination of the impact of motivation on the three discussed SNS usages will provide marketers and developers with insights. As stated above, different motivations for different SNS usages. Hence, marketers can use strategies that are platform specific and focused on certain type of uses. For example, when promoting games that are found on SNS, the focus might be on enhanced enjoyment and entertainment. Previously, usage was treated as a one-dimensional construct, which made it difficult for developers and marketers to segment and relate the different motivations with the different types of uses.

The results suggest that both hedonic-intrinsic and utilitarian-extrinsic motivations influence cognitive absorption. The designers of SNS platforms may note that users are immersed or absorbed into using these platforms because of both the hedonic-intrinsic and utilitarian-extrinsic motivations. Injecting more features that are associated with these motivations in SNS can encourage users to extend their sessions when using the platforms. The extended usage of SNS can result in more collaborations and sharing of work or non-work related information and tasks. Similarly, the results can contribute in providing evidence as to what drives users to spend more time or what leads to absorption in using SNS, and these can be used as a foundation for understanding complex user behaviours such as addiction.

With regard to the relationship between SNS usage and workplace outcomes, the study presents a notable contribution to managerial understanding of deep hedonic SNS usage and job satisfaction. While causal inferences should not be inferred at this point, the negative association may reflect that lower levels of existing job satisfaction are responsible for increased hedonic SNS usage behaviour and subsequent levels of satisfaction. Thus, the results offer some preliminary insight into why employees use SNS. The next chapter will build on these contributions.

## 9.12 Limitations

Despite all the novel ideas, the study presented in this chapter has some limitations. There is a potential of social desirability bias in questions about job performance, job satisfaction, cognitive absorption and use of SNS at work. However, the assurance provided to respondents that all

responses will remain anonymous and confidential is expected to have alleviated some of the risks (Ali-Hassan et al., 2015; Singleton and Straits, 2005).

The study relied on cross-sectional survey data to assess the relationship between the different constructs making up the research model. Cross-sectional data fails to establish temporoal precedence and limits the ability to draw causal inferences. To better establish causality, longitudinal studies could be used in the future. In addition, the participants were asked to self-report. To mitigate the self-report limitation, in future SNS usage may be recorded using social monitoring programs.

The study was conducted in South Africa. Given the context, the results may not be generalized to other countries. Usage behaviors may be influenced by culture and lifestyle factors.

Each of the new combined perspective motivations include items from only four constructs. In future some of the constructs may be added. For example, for hedonic-intrinsic motivation, items from therapy[11] can be added. This might give a different insight in relation to the therapeutic nature of SNS.

## 9.13 Conclusion

The relationship between the different types of SNS usages and workplace outcome was found not to be significant. It may important to examine the relationship in the presence of mediating factors such as social support. Also, there might be a mediating factor provided by job satisfaction in the relationship between SNS usage and job performance. This should be examined inclusive of different types of workplace outcomes which are usually omitted in different studies (especially information systems) e.g. absenteeism. Therefore, the next chapter builds on this chapter and goes further into examining the relationship between SNS usage and more workplace outcomes. The workplace outcomes examined include the established ones namely job performance and job satisfaction, and the less established such as absenteeism and burnout among others. Further, the chapter examines the role of social support in the relationship between SNS usage and workplace outcomes.

[11] Therapy is a dimension of hedonic motivation associated with relieving emotional distress and mental health problems (Berger and Buechel, 2012).

# CHAPTER 10: THE EFFECTS OF SOCIAL NETWORK SITE USAGE ON INDIVIDUALS' WORKPLACE OUTCOMES

## 10.0 Introduction

This chapter discusses the second main objective of the study, which is to establish the relationship between SNS usage and individual workplace outcomes, including examination of any mediating factors between SNS usage and these outcomes. Examining these links is important given the way social networking sites have become an integral part of the daily activities of many people and organisations (Charoensukmongkol, 2014). The question of how SNS usage impacts people in the workplace is still controversial. There are two school of thoughts, one side are those who believe SNS usage in the workplace is a positive for job performance, job satisfaction and knowledge sharing amongst others (e.g. AT and T, 2008; Bennett, Owers, Pitt and Tucker, 2010; Leidner, Koch and Gonzalez, 2010; Li and Bernoff, 2008; Patel and Jasani, 2010). On the other side are views that SNS usage in the workplace is negative for job performance and turnover intentions (e.g. Accountemps, 2010; Moqbel and Kock, 2018; Nucleus, 2009; O'Murchu, Breslin and Decker, 2004; Rooksby, Baxter, Cliff, Greenwood, Harvey, Kahn, Keen and Sommerville, 2009; Shepherd, 2011; Wavecrest, 2006).

To resolve this controversy, it is important for scholars and organisations to better understand the impact of SNS usage in the workplace. Organisations are concerned about employees' access to SNS during working hours. The lack of information and evidence regarding the impact of SNS usage has resulted in uninformed decisions such as the banning of SNS usage in organisations during working hours. Findings from studies such as this one will allow human resources departments to make better decisions about whether or not to allow SNS in the workplace, and how best to encourage use that is positive and discourage the types of use that are negative for performance in the workplace. Organisation will be able to categorise the different uses of SNS in the workplace, and how these different purposes lead to different effects (Zhang, Ma, Xu and Xu, 2018).

Past studies examining the relation between SNS usage and individual outcomes were largely focused on job satisfaction and/or job performance (e.g. Charoensukmongkol, 2014; Robertson and Kee, 2017; Moqbel et al., 2013; Kock and Moqbel, 2019). A number of less established and examined outcomes have been ignored. Moqbel (2012) and Zhang et al. (2018) have attempted to provide a better approach to examining the relationships. However, there is still a need to go beyond these two studies and provide a comprehensive understanding of the different types of SNS usage and their impacts on behavioural and psychological outcomes. The effects of SNS usage on workplace outcomes has been a source of confusion, inconsistent findings, and characterised by lack of theoretical frameworks leading to ad-hoc examination of outcomes.

Hence, this chapter contributes by examining the impact of deep hedonic SNS usage, deep utilitarian SNS usage and cognitive absorption on both psychological and behavioural outcomes in the workplace. The behavioural outcomes are job performance, innovative behaviour, absenteeism, knowledge sharing and turnover intentions. The psychological outcomes are job satisfaction, organisational commitment, burnout and work-life balance. Further, the study examines the mediating role of social support in the relationship between SNS usage and the selected workplace outcomes.

This chapter will develop and test a model to examine these relationships between SNS use and workplace outcomes.

## 10.1 Theoretical Underpinning

In the next section, social support theory as the underpinning theory of this chapter's research model is discussed, along with other prior studies into workplace outcomes. Thereafter, the chapter's research model (Figure 10.2) is presented together with hypothesized relationships

### 10.1.1 Social Support Theory

Social support is a form of emotional support derived from intimate and close relationships. Social support fulfils succourance needs, provides esteem support, meets needs for recognition and bolsters sense of self-worth and belonging. It also provides a sense of orientation in society and membership in a definite social group (Vaux, 1998). Social capital is a term often used interchangeably with social support. Social support is used mostly within the psychological literature, and social capital by sociologists and political scientists (Burke, Kraut and Marlow, 2011). In the context of SNS, social capital consists of emotional and informational resources accumulated through interactions with strong (e.g. bonding social capital) or weak social network ties (e.g. bridging social capital). SNS have been found to be a beneficial tool to gain social support and social capital (Lin, 2015).

Research into social network sites has frequently made reference to the link between SNS usage and social support and social capital constructs (see Table 10.1). For example, Ali-Hassan et al. (2015) and Charoensukmongkol (2014) indicate that SNS usage influences social support.

| Study | SNS and social support/social capital | Context | Finding/Conclusion |
|---|---|---|---|
| Phua et al. (2017) | Social support vary according to the different platforms | General SNS use, students | Twitter users had the highest bridging social capital, followed by Instagram, Facebook, and Snapchat, while Snapchat users had the highest bonding social capital, followed by Facebook, Instagram, and Twitter. |
| Kwon et al. (2013) | Facebook use is a predictor of social capital | General Facebook use, students | Intensity of Facebook use and the use of Facebook for social relations are positive predictors of bridging social capital, whereas the use of Facebook for escape is negatively linked to bonding social capital. |
| Kim et al. (2016) | Seniors' social capital has significant effects on attachments in SNS | Senior consumers, tourism | Social capital has impact on intention to use SNS. |
| Phua and Jin (2011) | The use of social networking sites (SNSs) and their positive influence on bridging and bonding social capital | Foreign students in the US | Intensity of SNS usage has the strongest impact on bridging social capital.. |
| DeAndrea et al. (2011) | SNS increases social support | Students' adjustment to college | Site usage increased students' perceptions that they would have a diverse social support network during their first semester at college. |
| Carr et al. (2016) | PDAs within social media offer social support | Paralinguistic digital affordances, five SNS | SNS facilitate and provides social support. |
| Charoensukmongkol (2014) | The relationship between SNS use and social support is positive | Social media in the workplace | Co-worker support and job demands are positively associated with social media use intensity, while supervisor support is negatively associated with it. |
| Ellison et al. (2007) | Facebook influences the formation and maintenance of social capital | General use, students | Strong association between use of Facebook and the three types of social capital, with the strongest relationship being to bridging social capital. |
| Moqbel and Nah (2017) | ESM and social support are related | Workplace, enterprise social media | ESM use contributes positively by helping employees to better use the human and social capital in organizations. |
| Moqbel and Bartelet | SNS use, social capital and work isolation | SNS in the workplace | SNS through social capital had been found to cultivate positive personal life attitudes and behaviours. |
| Ali-Hassan et al. (2015) | Social media use and social capital | SNS in the workplace | Social support fully mediated the links between SNS use and job performance. |

*Table 10.1: Past Studies Examining the Link Between SNS Use and Social Support/Capital*

In this study, support is conceptualized as the exchange of resources and mutual obligation to help others amongst a network of communicating individuals (Hupcey, 1998). This support includes instrumental and socioemotional aid (Thoit, 1982). Instrumental aid includes advice, information, and assistance with work tasks or responsibilities. Socioemotional aid includes affection, understanding or esteem (Moqbel, 2012). Social support has also been classified into emotional support, esteem support, informational support, and instrumental support and belonging (Cobb, 1976). The different dimensions of social support are discussed in Table 10.2.

| Dimensions of Social Support | Description |
|---|---|
| Emotional support | The expressions that include caring, concern, empathy, and sympathy. |
| Esteem support | The messages that help to promote one's skills, abilities, and intrinsic value. |
| Information support | The messages that include knowledge or facts, such as advice or feedback on actions. |
| Instrumental/Tangible support | Conceived as physically providing needed goods and services to recipients. |
| Belonging/Social support | The messages that help to enhance one's sense of belonging to a specific group with similar interests or situations. |

*Table 10.2: Definitions of Social Support Dimensions from Ko, Wang and Xu (2013)*

The support can be from work and non-work sources (Adams, King and King, 1996) and technologies often make it easier for support to be obtained from work and non-work sources. In particular, social network sites have been associated with social support (Moqbel, 2012). Employees who use SNS in high intensity or large extent will be exposed to high social support from their SNS community. Social support may often influence or translate into work outcomes (Fisher, 1985).

### 10.1.2 Models of workplace outcomes

Drawing from human resource management and organisational behaviour literature, different work outcomes exist and can be classified into psychological and behavioural outcomes (Rhoads, Singh and Goodell, 1994). Psychological outcomes include job satisfaction, organisational commitment, and burnout while behavioural outcomes include job performance, turnover intention, innovative behaviour, absenteeism, and knowledge sharing. The workplace outcomes have often been found to be inter-related. For example, burnout may influence absenteeism (Lambert, Hogan and Altheimer, 2010), job satisfaction may influence job performance (Moqbel et al., 2013), and organisational commitment may influence innovative behaviour (Jafri, 2010).

Prior studies which examined the impact of SNS use on work outcomes (e.g. Moqbel et al. 2013) made important inroads into connecting SNS use to work outcomes such as job satisfaction, job performance and organisational commitment. However, a majority of these studies did not include a comprehensive set of outcomes, omitting outcomes such as work-life balance, burnout, turnover intention, knowledge sharing and absenteeism. Therefore, to extend past SNS/outcomes models, this study will draw from organisational and human resources management e.g. Jafri (2010), Lambert, Hogan and Altheimer (2010), Puijenbroek (2014), Reio and Wiswell (2000) and Singh, Goolsby and Rhoads (1994). These are summarised in Figure 10.1 and Table 10.3

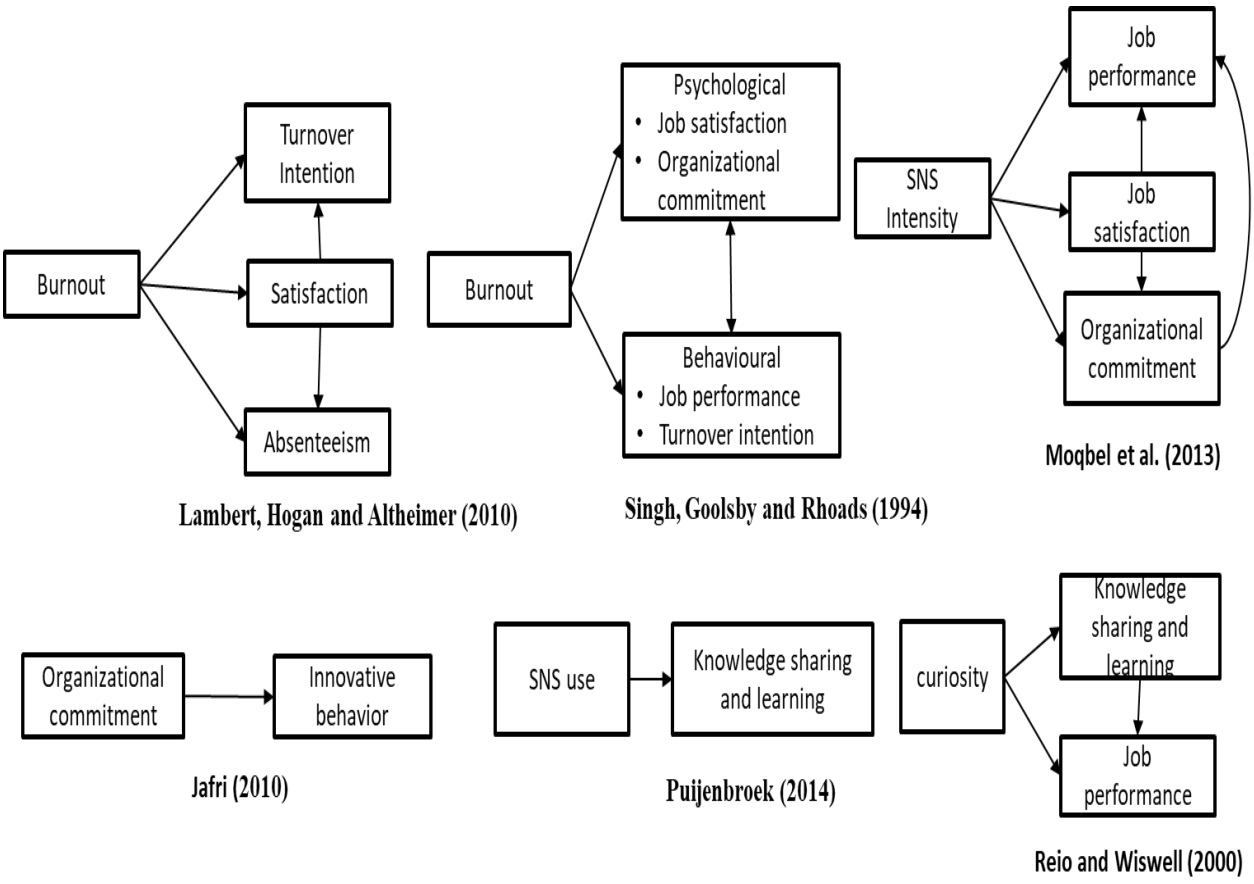



*Figure 10.1: Models of Workplace Outcomes*

Table 10.3 summarises the outcomes identified in the above frameworks.

| **Study** | **Psychological Workplace Outcomes** | **Behavioural Workplace Outcomes** | **Important inter-relationships** |
|---|---|---|---|
| Lambert et al. (2010) | Satisfaction | Turnover intention<br>Absenteeism | The psychological outcome of satisfaction was significant for absenteeism and turnover behaviours. |
| Jafri (2010) | Organisational commitment | Innovative behaviour | The psychological outcome of commitment was significant for innovation behaviours. |
| Singh et al. (1994) | Burnout<br>Job satisfaction<br>Organisational Commitment | Job performance<br>Turnover intention | Psychological outcomes such as burnout were important for other outcomes like satisfaction and in turn they were associated with behavioural factors like performance and turnover. The potential for reciprocal effects could not be ruled out. |
| Moqbel et al. (2013) | Job satisfaction<br>Organisational commitment | Job performance | Job satisfaction is a determinant of certain psychological outcomes e.g. organisational commitment, and also a determinant of certain psychological outcomes e.g. job performance. |
| Reio and Wiswell | None | Knowledge sharing<br>Job performance | Behaviourial outcomes such as knowledge sharing are importamt for job performance. |
| Puijenbrek (2014) | None | Knowledge sharing | None |

*Table 10.3: Summary of Outcomes*

Taken together, the above studies suggest:

- Psychological outcomes are often considered antecedent to behavioural outcomes, but reciprocal effects cannot be ruled out.
- The most studied psychological outcomes include job satisfaction and organisational commitment
- The most studied behavioural outcomes include job performance and turnover intentions

The above literature into workplace outcomes has provided a useful means to differentiate between outcomes such a satisfaction that reflect emotions versus a behaviour such as performance. Both sets of outcomes are important. Unfortunately, there is little literature that links SNS use to social support and to these subsequent workplace outcomes. Notable efforts in this regard are explored further below.

### 10.1.3 SNS and Outcomes

Literature review (e.g. chapter 2, chapter 6: SLR and Table 10.4) has indicated that significant studies that focused on SNS and outcomes did not provide sufficient insights into the effects of SNS use on outcomes. For example, Moqbel (2012), Moqbel et al. (2013), Charoensukmongkol et al. (2017) conceptualized usage as one-dimensional construct (SNS use intensity), and did not examine the mediating role of social support between usage and outcomes, also the study did not include other outcomes such as burnout and knowledge sharing. The study by Ali-Hassan et al. (2015) conceptualized use as a multi-dimensional construct even though they did not include a utilitarian dimension of use, the mediating role of social support is included. However, they only examine the impact of social support on job performance. A different approach was used by Zhang et al. (2018) who examined the impact of multi-dimensional usage on outcomes (job satisfaction and turnover intention), and suggested that the impact happens over a process/mediation that includes job engagement, organisational engagement and organisational commitment. While these past studies have helped establish that SNS use is likely to influence outcomes, the studies evidence limitations with regards to the mediating influence of social support.

Hence, this chapter thus provides an opportunity to gain insights into the link between multiple SNS usages, social support and multiple workplace outcomes. Also, this chapter examines the differential impact of SNS usage on two sets of work outcomes i.e. behavioural and psychological outcomes. The workplace outcomes from the studies identified in Figure 10.1 are synthesized and integrated into the research model (Figure 10.2).

| Authors | Theory | SNS Usage Construct/Usage Behaviour | Social Support Construct Included the model | Workplace Outcomes |
|---|---|---|---|---|
| Charoensukmongkol (2014) | Social Support | SNS Use Intensity | Antecedent of use | Job Satisfaction<br>Job Performance<br>Cognitive Absorption |
| Charoensukmongkol (2016) | Job-demands-resource Model | SNS Use Intensity | No | Burnout |
| Ali-Hassan, Nevo and Wade (2015) | Uses and Gratifications Theory, Social Support | Social Use<br>Hedonic Use<br>Cognitive Use | Yes | Job Performance |
| Moqbel et al. (2013) | Social support | SNS Use Intensity | No | Job performance<br>Job satisfaction<br>Organisational Commitment |
| Holland, Cooper and Hecter (2016) | Theory on Voice<br>Social Support | Social Media Use | No | Job Satisfaction |
| Kim and Chung (2014) | Personality Model | SNS Use | No | Job Satisfaction |
| Chung and Kim (2017) | Not clear | SNS Use | No | Innovative behaviour<br>Job Satisfaction |
| Moqbel and Kock (2018) | Social Cognitive Theory | SNS Addiction | No | Job Performance |
| Zhanga, Ma, Xu and Xu (2018) | Organisational Commitment Theory | Work-related use<br>Non-work related use | No [uses engagement] | Job Engagement<br>Organisational Engagement<br>Job Satisfaction<br>Turnover Intention<br>Organisational Commitment |
| van Zoonen, Verhoeven and Vliegenthart (2017) | Job-Demand and Resources Model | Social Media Use | No | Work-Life Conflict<br>Exhaustion<br>Engagement |
| Moqbel (2012) | Social Support | SNS Use Intensity | No | Innovative Behaviour<br>Turnover Intentions<br>Job Satisfaction<br>Organisational Commitment<br>Absenteeism<br>Job Performance |
| Leftheriotis and Giannakos (2014) | Motivation Theory | Social Media Use | No | Job Performance |
| Huang and Liu (2017) | Social Capital Theory | Information Utility | Social Capital | Job Satisfaction |

*Table 10.4: Past Studies Examining Workplace Outcomes*

Drawing on the theories, conceptualization of a multidimensional SNS usage construct, social support and behavioural and psychological outcomes, the research model (Figure 10.2) and associated hypotheses for this chapter are developed next.

## 10.2 Research Model and Hypotheses

Figure 10.2 presents the research model. It depicts the effects of SNS usage on behavioural and psychological outcomes directly as well as indirectly via social support.

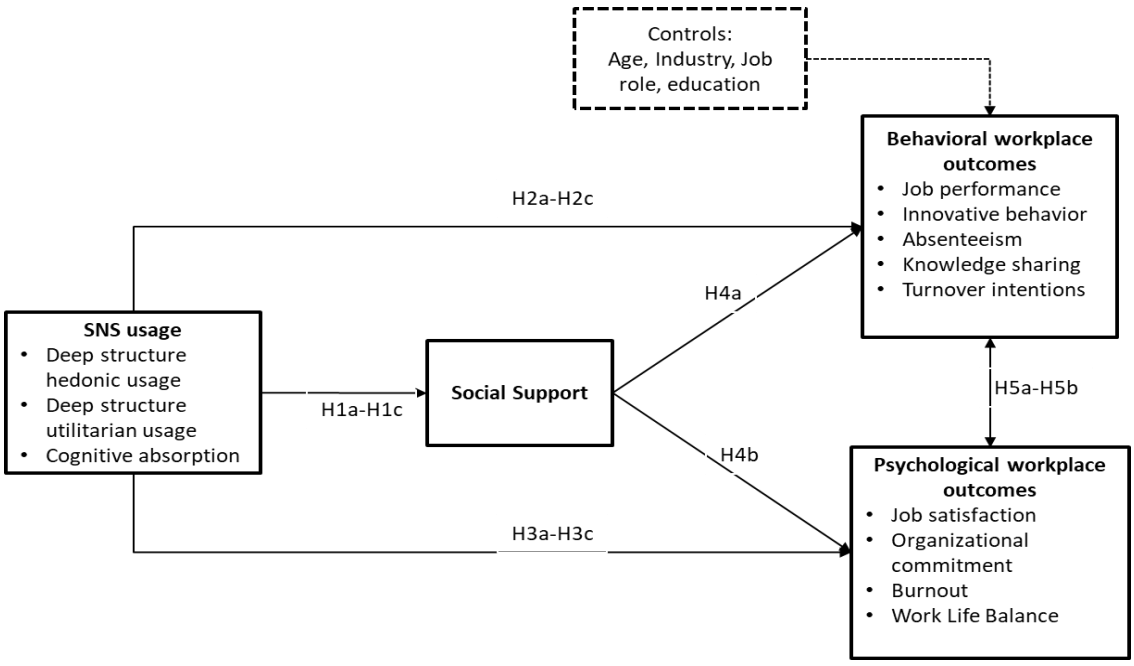



*Figure 10.2: SNS Usage and Outcomes Model*

### 10.2.1 SNS Usage

Chapter 7 argued that system usage is an important construct in information systems research (Burton-Jones and Straub, 2006). However, system usage has too often been conceptualized as a one-dimensional construct with a diverse set of narrow measures such as features used, tasks supported, extent of use, frequency of use, and duration of use among others (Burton-Jones and Straub, 2006). Those simplistic views of system usage have resulted in insufficient knowledge about utilization and its effects on individual outcomes. More sophisticated conceptualizations of usage behaviour are required (Chin and Marcolin, 2001). Chapter 7 showed that SNS usage is better conceptualized as a multi-dimensional SNS usage construct. This study adopts the deep structure use as suggested by Burton-Jones and Straub (2006), and segments SNS usage into three dimensions. The deep structure usage in this study includes hedonic deep structure usage, utilitarian deep structure usage and cognitive absorption. Hedonic usage is associated with using SNS for personal reasons such as seeking information about family and friends, share information that is fun-filled with friends and colleagues, follow events that are of personal importance and using features of the SNS are provide personally fulfilling entertainment (Lim, Heinrichs and Lim, 2017). Utilitarian usage is performed to accomplish more productivity-based tasks that are typically work-related or instrumental (Li, Wang and Chou, 2012). Cognitive absorption reflects a user's engagement with the information system (Burton-Jones and Straub, 2006).

Hypotheses linking SNS usage to social support (H1a-H1c) are developed next followed by hypotheses (H2a-H3c) linking usage to work outcomes, and then hypotheses linking social support to outcomes (H4a-H4b), along with those considering potential inter-relationships among workplace outcomes (H5a-H5b).

### 10.2.2 SNS Usage and Social Support

Social support includes emotional support, esteem support, informational support, and instrumental support and belonging (Cobb, 1976). Together, these feelings of social support derive from the extent to which an individual has an opportunity to communicate with others in a network, to exchange resources and receive help through mutual obligation (Moqbel, 2012). Social support relies on a social network (a social structure made up of a set of social actors such as individuals or organizations), social embeddedness (the extent to which human action of consumers takes place within a web of social attachments such as friendship and kinship) and social climate (the perceptions of a social environment that tend to be shared by a group of people) as antecedents (Berrera, 1986; Thoits, 1995; Weiss, 1974). SNS provides for the formation of a social network, for achieving social embeddedness and for fostering a social climate. It does so by providing a platform for communication and sharing of information, and tools for connecting people (Ali-Hassan et al., 2015). Thus, SNS may prove an effective vehicle through which social support occurs or can be provided. The relationship between the dimensions of SNS usage and social support is further explored next.

#### 10.2.2.1 Deep Hedonic Usage and Social Support

Deep hedonic usage implies the use of SNS for non-instrumental purposes. It includes using SNS for social purposes such as sharing information with others (Ali-Hassan et al., 2015), sharing information that is fun-filled or interacting in a social way with colleagues and friends. Using SNS to keep in-touch or interact in a social way is likely to largely influence belonging support, emotional support and information support. The social interactions on SNS may enhance one's sense of belonging to a specific group. Similarly, users might share expressions that include caring, concern, empathy, and sympathy on SNS. Additionally, SNS users might share knowledge or information on SNS. Using SNS for social purposes makes it possible for user to engage in conversations and share content. The sharing of social material creates networks and communities of friends. The community tends to support each other as friends based on the networks enabled by the social interactions (Ibarra and Andrews, 1993; Marsden, 1988). It has been found that support is more likely to cluster in dense networked communities that provide affective support (Consiglio, De Angelis and Costabile, 2018). There is a relationship between hedonic use of SNS and the development of social networks and social embeddedness (Ellison, 2007). SNS as a networking tool is likely to encourage and provide for the growth of emotional and stronger relationships. The emotional relationships and strong friendships offer various support to SNS users (Anderson and Raine, 2010; Ellison et al., 2007). Therefore, it is suggested that deep hedonic SNS usage is highly associated with social network, social embeddedness and social climate. Thus it is likely to have an impact on social support such as emotional support, esteem support, informational support, instrumental support and belonging. Hence,

*H1a: Deep hedonic SNS usage has a positive influence on social support (i.e. emotional support, esteem support, belonging support, instrumental support and informational support)*

10.2.2.2 Deep Utilitarian Usage and Social Support

Past literature has indicated that users do not only use SNS for social purposes, they also use it for its instrumental or utilitarian purpose (Xu, Ryan, Prybutok and Wen, 2012). Deep utilitarian usage includes interacting with others to obtain work advice or support, workplace communication, gaining assistance in order to improve performance at work or obtaining feedback on work products (Pöyry et al., 2013). The mentioned uses of SNS are likely to promote sharing of knowledge, help in promoting one's ability and skills, and promote provision of services such as consultancy. The rational and goal-oriented use of an information system (e.g. SNS) may be useful in improving individuals' work-related ties. Employees may have relationships with other users whom they do not have similar personal characteristics but only linked by work environment, discipline or industry (Granovetter, 1973; Hansen, 1999). SNS enable the establishment of links and ties amongst individuals in the same work environment and sharing of work related content (Schmidt et al., 2016), also can be used to create a community of experts who have instrumental ties and share work-related content (Ellison, 2007). The ties and links enable exchange of work-related information and resources (Raacke and Bonds-Raacke, 2008). SNS users search for experts, and seek advice using SNS (Kaplan and Haenlein, 2010). For example, an employee covering information systems matters on SNS may quickly be recognized as an expert on the topic, other members of the community may ask for his advice, and also may establish connections with those who have the same interest. This will build instrumental relations and ties. The ties in the community make it possible for the members to offer each other instrumental support and informational support in different forms such as work advice and work solutions (Oh et al., 2014). Further, even though the relations or the network is primarily for utilitarian purposes, the interactions will lead to members knowing each other and developing care, concern and sense of belonging. Therefore, it hypothesised that,

*H1b: SNS utilitarian usage has a positive influence on social support (i.e. emotional support, esteem support, belonging support, instrumental support and informational support)*

10.2.2.3 Cognitive Absorption and Social Support

Further, SNS users often use it to block out most distractions or are likely to lose track of time when using it. Users have a habit of getting immersed in the task they are performing when using SNS. This suggest that SNS users tend to be immersed in activities irrespective of the purpose of the activities. This suggests that absorption during the time spent on SNS is likely to encourage social network, social embeddedness and social climate which culminate as social support. User's social interactions, sharing of information, and communication on SNS is likely to last for longer periods of time or result in users losing track of time, however, these tasks e.g. social interactions for longer periods of time may lead to high support. The lengthy absorption and engagement in the use of SNS is likely to promote repeated interactions and social exchange including personal experiences and advice (Ali-Hassan et al., 2015). Since users have been engaged in exchanges for some time, they might develop empathy and sympathy for other members of the network, share

knowledge, develop a sense of belonging, and others might open up and share their skills, expertise and services. The absorption and engagement in SNS content is found to have a significant impact on perception of social support (Huang and Liu, 2017). Therefore, it is suggested that being more immersed when using SNS might make it possible for the user to create more networks and promote social support. Users may feel that greater engagement will lead to greater support. Hence,

*H1c: Cognitive absorption during SNS usage has a positive influence on social support (i.e. emotional support, esteem support, belonging support, instrumental support and informational support)*

### 10.2.3 SNS Usage and Workplace outcomes

Past literature has emphasized the need to examine the relationship between information systems (IS) use and workplace outcomes (e.g. DeLone and McLean, 1992, Devaraj and Kohli, 2003, Keen and Morton, 1978). The need extends to new IS such as SNS. The relationship between SNS usage and behavioural and psychological outcomes has been examined before (e.g. by Charoensukmongkol, 2014; Moqbel, 2012, Moqbel et al., 2013; Moqbel and Iftab, 2015; Moqbel and Nah, 2017). However, the relationships show mixed results (Kuegler, Smolnik and Kane, 2015).

Behavioural outcomes include job performance, innovative behaviour, absenteeism, turnover intention and knowledge sharing. The outcomes were derived from narrative literature review of workplace outcomes (chapter 5) and systematic literature review (chapter 6), the selection includes commonly studied outcomes such as job performance, with others pertinent to the potential value of SNS as shown elsewhere (e.g. Moqbel, 2012; Moqbel and Kock, 2018). These outcomes are defined in Table 10.5.

| Behavioural Outcome | Definition |
|---|---|
| Job Performance | An individual's overall task proficiency or performance on specific dimensions, such as the quality and quantity of work (Meyer, Paunonen, Gellatly, Goffin and Jackson, 1989). |
| Innovative Behaviour | The intentional generation, promotion and realisation of new ideas within a work role, work group or organisation, in order to benefit role performance, the group or the organisation (Kanter, 1988; Scott and Bruce, 1994; West, 1989; West and Farr, 1989). |
| Knowledge Sharing | Communication process involving the sharing of knowledge between co-workers (Siemsen, Roth and Balasubramanian, 2008). |
| Absenteeism | Failure of an employee to report for or to remain at work as scheduled, regardless of the reason (Casio, 2010). |
| Turnover intention | A conscious and deliberate wilfulness to leave the organisation (Tett and Meyer, 1993). |

*Table 10.5: Behavioural Outcomes*

Psychological outcomes include job satisfaction, organisational commitment, burnout and work-life balance. Similarly, they were derived from narrative literature review of workplace outcomes (chapter 5) and systematic literature review (chapter 6). The selection is made up of the commonly studied psychological outcome of job satisfaction alongside other psychological outcomes considered pertinent to the study of SNS (Moqbel, 2012). The psychological outcomes are defined below in Table 10.6.

| Psychological Outcome | Definition |
|---|---|
| Job Satisfaction | Pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values (Locke, 1976), or employees' affective reactions to their jobs (Hackman and Oldham, 1975). |
| Organisational Commitment | The extent to which the individual identifies with the organisation within which they work (Porter, Steers, Mowday, and Boulian, 1974). |
| Burnout | The extent to which an individual feels emotionally, physically and mentally drained from their work (Maslach and Jackson, 1981). |
| Work-Life Balance | The degree to which an individual is able to achieve their desired balance between the demands of work and the demands of family or personal life (Hochschild, 1997) |

*Table 10.6: Psychological Outcomes*

#### 10.2.3.1 Deep hedonic and Behavioural Outcomes

Hedonic use of SNS may enhance positive behavioural outcomes, such as job performance, knowledge sharing and innovation, and may temper negative outcomes such as absenteeism.

First, hedonic interactions may indirectly provide employees with information and work-related resources (Min, 2016). The resources are possibly an influential force for enhancing performance outcomes. The resources may be in a form of knowledge, therefore social exchanges and interactions propel knowledge diffusion (Cousins et al., 2006; Ghadirian et al., 2014). People learn through social interaction and the sharing of ideas and experiences (Ma and Chan, 2014). Innovative behaviour requires the creation and implementation of new ideas, which is highly associated with social interaction and sharing of information (e.g. Nonaka, 1994; du Plessis, 2007). Similarly, SNS users get ideas, and get content that is thought-provoking from people they share topics of interest with on SNS (Chung and Kim, 2017). Thus, hedonic usage could improve knowledge sharing and innovative behaviour and ultimately performance.

Second, absenteeism refers to employees missing work. Absenteeism is often caused by lack of personal fulfilment, belonging and relations, and lack of flexibility at work (Bacharach et al., 2005; Rentsch and Steel, 2003). Hedonic usage might allow for social interactions with colleagues, family and friends, which might provide pleasant feelings resulting from the exchanges, similarly, the social interactions might provide the opportunity to be in touch with those that are close to the user. The increased pleasant feeling (personal fulfilment) and the opportunity to interact with colleagues, family and friends (belonging) while at work (flexibility) are likely to decrease the report of missed work. Moreover, employees often change jobs or quit because of organisational, work or external issues (Takase, 2010). Social factors have also been found to be important in determining turnover intentions (O'Reilly, Chatman, and Caldwell, 1991). The social interactions, sharing of fun-filled information, keeping in-touch with colleagues will make one to feel welcome and identify with the organisation. If an employee can interact with colleagues on SNS in a certain way such as sharing-fun filled information, then the employee might feel close to co-workers, thus feel that they are an integral part the organisation (Thambusamy, Church, Nemati and Barrick, 2010). The warm, welcome and identification derived from SNS interactions is likely to reduce turnover intention. Indirectly, improvements in other areas of performance can reduce turnover intentions (Noe et al., 2007). Thus, hedonic usage could reduce both turnover intentions and absenteeism. Taken together it can be hypothesized that,

*H2a: Deep hedonic usage may positively influence behavioural outcomes of job performance, innovative behaviour, knowledge sharing, and reduce absenteeism and turnover intention.*

10.2.3.2 Deep Hedonic and Psychological Outcomes

Past research has indicated that organisation-employee relationship, co-workers-employee relationship, supervisor-employee relationship and all social relations at work, affects employee's psychological workplace outcomes (Tang, Siu and Cheng, 2014). The relationships might be both work and socially based (Alegre, Mas-Machuca and Berbegal-Mirabent, 2016). These relationships affect workplace attitudes. Workplace attitudes are opinions, beliefs, emotions and feelings about aspects of our work environment (Maslach, Schaufeli and Leiter, 2001). By enabling better communication and sharing, SNS can impact positively on psychological work attitudes such as job satisfaction and organisational commitment.

Employees use SNS to seek information, share fun-filled information with co-workers and supervisors, use it to keep in-touch with supervisor, family and co-workers, interact in a social way with family, supervisors and co-workers on SNS (Cao and Lu, 2019). Therefore, an employee's emotions towards the job can be shaped by the social relationships they have in the workplace (Elegre et al., 2016). For example, if the supervisors and co-workers have a good relationship with the employee, the employee may perceive the job in a better way and have pleasurable emotional state towards the job. Using SNS for hedonic purposes might encourage social interactions and exchanges, which may help in shaping one's emotional state, including their job satisfaction. Further, an employee's emotional response to, and identification with an organisation highly influences their organisational commitment (Porter et al., 1974). The social structures or social network in the workplace can help shape one's perception in relation to organisational identification (Kim, Chang and Ko, 2010). Identifying with a group of people in this case an organisation and its employees can enhance the identification. The sharing of information, seeking information about colleagues, keeping in-touch with colleagues and interacting in a social way with colleagues on SNS is likely to improve an individual's perception of organisational identity, thus improving organisation commitment.

The effects of SNS use on psychological outcomes such as burnout and work-life balance may however be more difficult to predict. Some argue that hedonic features contribute to addiction (Moqbel and Kock, 2018; Yang, Liu and Wei, 2016), which may add to exhaustion, burnout and contribute to difficulty with maintenance of a work-life balance (Charoensukmongkol, 2016; Liu and Ma, 2018), while others argue that SNS acts to reduce stress, relieving burnout and facilitating disengagement from work activities which could be positive for work-life balance (Moqbel, 2020; Zivnuska et al., 2019).

It is theorised here that burnout is largely due to emotional exhaustion (Quested and Duda, 2011), unhappiness and reduced sense of accomplishment (Shepard et al., 2010). Hedonic usage can act to reduce this exhaustion and unhappiness by providing light moments or fun-filled content and provide accolades from family, friends and colleagues, allowing others to offer support for frustrations, distracting users from the draining work (Charoensukmongkol, 2016).

In trying to balance work-to-family and family-to-work demand (Frone et al., 1992b), inter-personal factors such as employee's relationship with colleagues and supervisor, and employee's relationship with family and friends have been identified as important. SNS usage can promote healthier relationship building.

In summary, it is hypothesized that,

*H2b: Deep hedonic SNS usage may positively influence psychological outcomes namely job satisfaction and organisational commitment, and act to reduce burnout and work-life conflict.*

10.2.3.3 Deep Utilitarian and Behavioural Outcomes

Deep utilitarian SNS usage involves interacting with others to obtain work advice and support, workplace communication, work-related assistance and feedback on work products. Employees receive and send information on SNS that is related to work e.g. advice, communication (Leftheriotis and Giannakos, 2014). The information they receive due to the interaction on SNS may be related to certain work problems, work advice and work problem solutions. The solutions and advice might contribute to the employee's job performance. SNS usage for work-related purposes is positively related to job performance (Chung and Kim, 2017; DiMicco, Geyer, Millen, Dugan and Brownholtz, 2009; Skeels and Grudin, 2009).

The exchange of information, work related assistance and feedback and communication with colleagues are important antecedents of innovative behaviour (Janssen, 2000; Scott and Bruce, 1994). The exchange and interaction with colleagues is likely to encourage generation, promotion and realization of ideas (Stock, 2015). The use of SNS for work related tasks is likely to promote innovative behaviour (Chung and Kim, 2017).

Knowledge sharing in its simplest form is the exchange of information and knowledge (Siemsen et al., 2008). The workplace communications, feedback on work products, obtaining work advice and gaining assistance from others, are all related to sharing of experience or know-how with colleagues. SNS encourages the exchange of information and knowledge (Moqbel and Nah, 2017). SNS is predominantly used for information sharing and exchanges (Charoensukmongol, 2014). The utilitarian features of an SNS are primarily designed to promote improved knowledge sharing (Leonardi, 2014; Omotayo and Salami, 2018; Panahi et al., 2012).

Absenteeism is often associated with pressure, low morale, and lack of flexibility at work. Similarly, turnover intention is associated with unpleasant feelings, low morale and bad colleague relations (Fazio et al., 2017). Utilitarian SNS features allow for accessibility, efficient work related communication and sharing of advice (Cai, Liu, Zhao and Li, 2020). This usage will decrease unpleasant feeling by providing information and advice which might help in reducing the pressure and low morale, moreover, the efficient communication provided by SNS might help in creating good co-worker relations, which will most likely serve to lower absenteeism and turnover intentions (Meske, Wilms and Stieglitz, 2019).

Feedback received on SNS about work products or feedback regarding an employee's work activities can be a good motivation for an employee to stay in his or her current job (Zoonen et al., 2017). Other colleagues showing appreciation of your efforts, or involvement at work such as

giving advice and assistance to colleagues can an employee a sense of job significance. All these will be important in discouraging the employee to leave the organisation. Therefore,

*H3a: Deep utilitarian usage may positively influence behavioural outcomes namely job performance and knowledge sharing, and reduce absenteeism and turnover intention.*

10.2.3.4 Deep Utilitarian and Psychological Outcomes

Job satisfaction is highly influenced by interpersonal relations at work (Herzberg, 1950; Hanna et al., 2017). The interaction with colleagues to obtain work advice, workplace communication and gaining assistance from others on SNS are some of the interpersonal relations at work that are likely to improve individual's pleasurable emotional state. SNS use at work may improve an employee's emotional state (Kock and Moqbel, 2019). The sharing of content on SNS may lead to one's satisfaction of the job (Robertson and Kee, 2017; Vitak et al., 2012).

Organisational commitment is associated with organisational and supervisor support (Porter et al., 1974). Opportunities for social interaction at work influence organisational commitment (Sheldon, 1971). Felt participation in the work activities is one of the factors that lead an employee to identify themselves with the organisational (March and Simon, 1958). Utilitarian SNS usage provide for this support by enabling interaction with colleagues, work-related communication and exchange of work information and participation (Leftheriotis and Giannakos, 2014). Thus, the employee is likely to identify with the organisation as a result of the work related support that SNS provides.

Burnout is promoted by exhaustion, work-load and lack of communication, similarly, work-life balance is promoted by the same factors (Ferguson et al., 2016). SNS use can provide for communication and exchange of work related information which may reduce burnout by decreasing the work strain, the workload and improve communication (Liu and Ma, 2018). Improved communication might lead to distributed workload and improved team work thus reducing the strain and individuals work load. Further, using SNS at work for work purposes (e.g. sharing work advice and support, for improvement of performance) might reduce the work strain and work load, which may result in the employee not having to take the work and the stress home (Charoensukmongkol, 2016). Therefore, this could reduce the work-life conflict.

Hence,

*H3b: Deep utilitarian SNS usage may positively influence psychological outcomes namely job satisfaction and organisational commitment, and reduce burnout and work-life conflict.*

10.2.3.5 Cognitive Absorption and Behavioural Outcomes

Cognitive absorption implies deep level of engagement and immersion for an individual (Brooks and Longstreet, 2015). The absorption has a strong influence on the level of dedication and involvement that people put to their work activities (Ho et al., 2011). Hence, it is possible that using SNS at work can help employees to develop this absorption (Charoensukmongkol, 2014). The absorption might encourage employee to focus and have less distractions in their work, thus perform better in their work. Cognitive absorption in the use of SNS is likely to elevate job performance.

Fundamental uses of SNS is communication and knowledge sharing amongst friends, family and colleagues (Ellison, 2007). Employees who are immersed on SNS are likely to send and receive a lot of content that adds to their knowledge. Cognitive absorption has been found to greatly influence sharing of knowledge (Magni, Paolino and Cappetta, 2013). It is posited that cognitive absorption in the use of SNS is likely to positively influence knowledge sharing.

Innovative behaviour is associated with the exchange or ideas and knowledge (Dougherty and Heller, 1994). An employee's absorption in SNS encourages the exchange of information and content, and encourages the debates which might lead to discovering new concepts and ideas. Some of the content may be new ideas or stimulate the user to come up with new ideas and ways of doing things (Lam, Yeung and Cheng, 2016). Hence, the suggestion that cognitive absorption in the use of SNS is likely to positively influence innovative behaviour.

Some researchers argue that cognitive absorption may not be positive in the context of SNS (Barnes, Pressey and Scornavacca, 2019). The notion is that SNS could reflect an inability to disengage from the more addictive elements of SNS usage, for example, it may reflect a desire to escape work. SNS addictive behaviour results in friction between SNS users and their work environment (Moqbel and Kock, 2018). Individuals who are immersed and engaged in SNS use would be expected to have lower positive outcomes because they tend to put more effort and time in SNS and neglect other activities (Moqbel and Kock, 2018; Charlton, 2002). However, others argue that being immersed in SNS may expose employees to supportive information. Support gained from using SNS may help in reducing factors that have been associated with absenteeism and turnover intentions such as stress, unpleasant feeling and lack of flexibility (Bacharach et al., 2010), and it may encourage workplace integration (Moqbel et al., 2020). Therefore, SNS use may help in reducing absenteeism and turnover intention, by discouraging the factors which lead to these outcomes.

*H4a: Cognitive absorption in the use of SNS may positively influence behavioural outcomes namely innovative behaviour, knowledge sharing and job performance, and act to reduce absenteeism and turnover intentions.*

10.2.3.6 Cognitive Absorption and Psychological Outcomes

The amount of time employees gets to spend on SNS may influence their psychological outcomes. Job performance is associated with emotions and attitude towards a job. Through the use of SNS during work to balance their work-life activities, employees tend to develop favourable attitudes toward their job (Charoensukmongkol, 2014). The cognitive use of SNS at work may positively affect job satisfaction.

As stated above, organisational commitment is associated with healthy relations with colleagues at work (e.g. Jorde-Bloom, 1988). Access to information and exchanges involving work related matters may change or alter employee's attitude and behaviour towards the organisation (Zhang et al., 2018). The use of SNS may encourage exchange of information with colleagues which may result in building and maintaining relationships with colleagues, thus improving organisational commitment.

The influence of cognitive absorption on psychological outcomes may be difficult to predict. Some argue that spending too much time immersed may contribute to greater feelings of exhaustion (Sriwilai and Charoensukmongkol, 2016) as some tasks are deferred or ignored while employees use SNS as a means to escape. Absorption in SNS use may lead to lower levels of more meaningful conversations and less useful knowledge sharing as the nature of use may lack discernment and not always be relevant to workplace. Others suggest that spending too much time and being immersed in SNS may result in employees engaging in activities which may offer them support, which may reduce stress and emotional exhaustion. Reducing the elements which may increase burnout is likely to reduce burnout (Charoensukmongkol, 2016; Liu and Ma, 2018). Similarly, SNS use may help in reducing work-life conflict by enabling communication both at home and work, and encouraging healthy relationships both at home and work, and this might even prevent boundary crossing of stress, thus reducing the work-life conflict. Lack of communication has been found to be an important element that increase work-life conflict (Ferguson et al., 2016)

*H4b: Cognitive absorption in the use of SNS may positively influence psychological outcomes namely job satisfaction and organisational commitment, and act to reduce work-life conflict and burnout.*

### 10.2.4 Social Support and Workplace Outcomes

Past researchers have suggested that there is a relationship between social support and behavioural and psychological outcomes (Humphrey, Nahrgang and Morgeson, 2007; Morgeson and Humphrey 2006; Grant and Parker, 2009). Social support is an important predictor for behavioural and psychological outcomes through selected relational and emotional mechanisms (Raevi, 2011). Therefore, using SNS for social support may have implications for workplace outcomes.

#### 10.2.4.1 Using SNS for Social Support and Behavioural Outcomes

Knowledge sharing is prevalent in environments such as networks and communities (Kwahk and Park, 2016). The communities provide information support through knowledge-seeking and knowledge contribution, and these provide access to different knowledge pools (Kim et al., 2010, McAfee, 2009a). SNS through its user communities allow for exchange of information which may encourage the sharing of knowledge, facts or advice, thus increasing information support. Information support has been found to encourage knowledge sharing (Cao, Guo, Vogel and Zhang, 2016; Lamont, 2011). Hence, using SNS for social support in the form of information support is likely to increase knowledge sharing.

Using SNS for social support does not only impact knowledge sharing, it does impact job performance. An employee's job performance is associated with access to information (Cross and Cummings, 2004; Kanawattanachai and Yoo, 2007), interpersonal communications channels in the organisation, and employee's relations with business networks (Davenport, 2008; Kanter, 1988). These elements e.g. access to information, and communication in the organisation provides information support, while the relations in the business network might help to promote one's abilities and skills (esteem support) (Koroleva et al., 2011). SNS encourages communication, exchange of information and allows for nurturing of relations with business networks, hence

emboldening information and esteem support, which have been found to improve job performance (Ali-Hassan, 2015).

Moreover, socialization with colleagues and experts on SNS has been found to lead to the sharing of 'intricate technical experience and mental modes' (Ali-Hassan et al., 2015; Amar and Juneja, 2008), these elements are likely to provide the knowledge, facts (information support), and consultations with experts (instrumental support). Information and instrumental support contribute to innovative behaviour (Chung and Kim, 2017; Monica and Krishnaveni, 2019). Therefore, the use of SNS might add to information and instrumental support, which in turn might promote innovative behaviour.

Employees are at greater risk of absenteeism when found not to have support from those around them (Bacharach, Bamberger and Biron, 2010). Those around them are deemed to be more supportive to the extent that they provide belonging support (Unden, 1996), emotional or instrumental forms of assistance (House, 1981). SNS can offer the mechanism through which support or assistance is provided. The support provided by the SNS community may provide certain degree of relief from the work- or home-based stressors potentially underlying the individual's absenteeism. Drawing on the above it is suggested that using SNS for social support is likely to lower absenteeism.

Similarly, SNS can offer mechanism through which support or assistance is provided to lower turnover intention. Turnover intention can be lowered by having healthy relationship with co-workers and supportive co-workers (Fazio et al., 2017). SNS can lower turnover intentions by providing for communication and exchange of information amongst co-workers (information support), building of healthy relationships (belonging support), and offering empathy, care and sympathy (emotional support). Therefore, using SNS for social support is likely to lower turnover intentions.

In summary, it is hypothesised that,

*H5a: Using SNS for social support (i.e. emotional support, esteem support, belonging support, informational and instrumental support) may positively influence behavioural outcomes namely job performance, innovative behaviour, knowledge sharing, and reduce absenteeism and turnover intentions.*

10.2.4.2 Using SNS for Social Support and Psychological Outcomes

Similarly, a relationship has been established between social support and psychological outcomes. Job satisfaction is a pleasurable emotional state from the appraisal of one's job (Locke, 1976). SNS can allow for the expression of love (belonging support), empathy, sympathy and care (emotional support), and the promotion of one's intrinsic value (esteem support). Through these mechanisms, using SNS can improve one's emotional state, thus improving their job satisfaction (Huang and Liu, 2017; Sheer and Rice, 2016).

Personal relationships and support from co-workers is positively associated with organisational commitment (Dornstein and Matalon, 1989; Kirchmeyer, 1992). Using SNS may help employees to identify with the organisation by providing mechanisms such as social support. The personal

exchanges (information support) and interactions with co-workers (belonging support) might enhance the employees belonging, feeling of inclusion and identification with the organisation. Co-workers, even the organisation might use SNS to promote an individual's skills and abilities (esteem support), thus improving their identification with the organisation. Therefore, using SNS for social support might improve employee's organisational commitment (Limpanitgul, Boonchoo and Photiyarach, 2014).

Social support is also associated with lower levels of burnout. The support from co-workers, collectives and support groups tempers burnout. Burnout was found to be negatively correlated with social support (Alexander, Lichtenstein, Oh and Ullman, 1998; Etzion, 1984). Social support has been identified as both a preventive mechanism and a remedy for burnout (Cherniss, 1980; Maslach, 1976; Pines and Maslach, 1978). SNS use may promote sharing of work-related information (information support) which may reduce work stress, or the expression of caring, concern, empathy and sympathy (emotional support) to those who are experiencing burnout and thus reduce burnout (Charoensukmongkol, 2016; Charoensukmongkol, Moqbel and Gutierrez-Wirsching, 2016; Nabi et al., 2013).

Reduction of work-related or home-related stress, communication and exchange of information might reduce work-life conflict (Ferguson, 2016; Wadsworth and Owens, 2007). The use of SNS might provide assistance in reducing the elements which increase work-life conflict. SNS allows for the exchange of information, ideas, and communication with family or co-workers (informational support) which might reduce the work or home related stress and also bridge the communication gap. Moreover, family and colleagues can use SNS to provide esteem and emotional support. These forms of support have been found to promote work-life balance (Marcinkus, 2006), therefore, the use of SNS might provide support which is likely to reduce the work-life conflict.

In summary, it is hypothesised that,

*H5b: Using SNS for social support (i.e. emotional support, esteem support, belonging support, informational and instrumental support) may positively influence psychological outcomes namely job satisfaction and organisational commitment, and reduce burnout and work-life conflict.*

10.2.5 Relationship between Behavioural and Psychological Outcomes

In addition, positive and negative inter-relations between different outcomes have been reported (Bhuaian and Abdul-Muhmin, 1997; Judge et al., 2001; Lambert, 2000; Meyer et al., 2002; Riketta, 2002). For example, job satisfaction has been found to influence job performance (Judge et al., 2001), others indicating that behaviours can also be positive for psychological outcomes (Farris, and Lim 1969), such as when an employee is more satisfied and has higher commitment because they are performing well. Furthermore, organisational commitment can influence performance (Riketta, 2002), burnout can increase absenteeism (Jourdain and Chênevert, 2015). Moreover, past research has indicated that there are negative associations between organisational commitment and counterproductive work attitudes and behaviours, such as turnover intention and absenteeism (e.g. Cohen and Caspary, 2011; Limpanitgul et al., 2013; Limpanitgul et al., 2013; Meyer et al., 2002, Oyeniyi, 2013; Riketta, 2002; Yucel, 2012).

These inter-relationships may be explained by social exchange theory which posits that employees may perform better because they are satisfied with their jobs, suggesting that there is a certain form of reciprocity between the employee and the organisation. Therefore, it is hypothesized that behavioural and psychological outcomes may inter-relate, and outcomes may inter-relate within the same group when examined in the context of SNS. Therefore, the relationship hypothesized is a reciprocal one. Hence,

*H6: Behavioural outcomes and psychological outcomes are associated with each other.*

Potential influence of demographic factors such as age, industry, profession, education and gender may affect the above mentioned relationship (Moqbel, 2012). Therefore, these factors will be treated as control variables.

The hypothesized effects are summarised in Table 10.7 below.

| | **Deep Hedonic Usage** | **Deep Utilitarian Usage** | **Cognitive Absorption** |
|---|---|---|---|
| Social Support | + | + | + |
| Job Satisfaction | + | + | + |
| Organisational Commitment | + | + | + |
| Burnout | - | - | - |
| Work-life Conflict | - | - | - |
| Job Performance | + | + | + |
| Knowledge Sharing | + | + | + |
| Innovative Behaviour | + | + | + |
| Absenteeism | - | - | - |
| Turnover Intentions | - | - | - |

*Table 10.7: Summary of the Effects*

The next section presents the research methods required to test the hypothesized effects.

## 10.3 Methods

### 10.3.1 Constructs in the Model

The model has thirteen constructs. There are three (3) independent variables each reflecting deep hedonic usage, deep utilitarian usage and cognitive absorption. A single social support construct serves as the mediating construct. The last nine variables are the outcomes, five behavioural outcomes namely job performance, knowledge sharing, turnover intentions, absenteeism and innovative behaviour, and four psychological outcomes namely job satisfaction, burnout, organisational commitment and work-life balance. All items were measured using seven (7) point Likert scale from strongly disagree (1) to strongly agree (7).

The questionnaire was subjected to pre-testing. Five (5) experts in information systems evaluated the questionnaire, and two (2) of them were familiar with the SNS context. The evaluation went through one round only, largely because the items were adopted from past studies and adapted to SNS context, the items have been used and validated by many researchers in the past. The items for the three SNS usage constructs were taken from a published paper (refer to chapter 8), and

were tested and validated in that paper. The modifications recommended in the pre-test for the items were slight and helped to reduce completion time. Table 10.8 presents the final set of items following pre-testing.

| Variable | Items | Literature Support |
|---|---|---|
| **Multi-dimensional SNS usage items** | | |
| A. Deep Hedonic SNS Usage | A1. When using SNS at work, I use features that help me to seek information about family and friends | Chapter 8 |
| | A2. When using SNS at work, I use features that help me share information that is fun-filled with friends or colleagues. | |
| | A3. When using SNS at work, I use features that fulfil my need to keep in touch with friends, family or colleagues. | |
| | A4. When using SNS at work, I use features that allow me to follow activities or events that are of personal importance. | |
| | A5. When using SNS at work, I use features that provide me with personally fulfilling entertainment. | |
| | A6. When using SNS at work, I use features that help me interact in a social way with friends, family or colleagues. | |
| | A7. When using SNS, I use features that help me access information on topics of personal interest. | |
| | A8. When using SNS at work, I use features that help me to be calm and relaxed at work. | |
| B. Deep Utilitarian SNS Usage | B1. When using SNS at work, I use features that help me interact with others to obtain work advice or support | Chapter 8 |
| | B2. When using SNS at work, I use features that support my need for workplace communication | |
| | B3. When using SNS at work, I use features that help me search for job opportunities | |
| | B4. When using SNS at work, I use features that help me gain assistance from others in order to improve my performance at work | |
| | B5. When using SNS at work, I use features that help me obtain feedback on work products | |
| C. Cognitive Absorption | C1. Time appears to go by very quickly when I am using the SNS at work | Chapter 8 |
| | C2. While using the SNS at work, I am able to block out most other distractions | |
| | C3. While on the SNS at work, I tend to get immersed in the SNS task I am performing | |
| **Social Support** | | |
| D. Social Support | D1. Using SNS gives me a strong feeling that others have empathy or compassion for me at work | Rogers, Anthony and Lyass (2004) |

| | | |
|---|---|---|
| | D2. Using SNS gives me a strong degree confidence or encouragement | |
| | D3. Using SNS give me ready access to advice or information | |
| | D4. Using SNS gives me a strong sense of belonging or companionship | |
| | D5. Using SNS gives me ready access to concrete and direct assistance (e.g. financial, material or services) | |
| **Behavioral Outcomes** | | |
| E. Job Performance | E1. My performance in my current job is of high level | Singh, Goolsby and Rhoads (1994) |
| | E2. My performance in my current job is excellent | |
| | E3. My performance in my current job is better than others | |
| | E4. My boss would rate my overall performance at work high | |
| | E5. My colleagues would rate my overall performance at work high | |
| F. Knowledge Sharing | F1. I share my work reports and official documents with my colleagues | Chow and Chan (2008) |
| | F2. I share my experience or know-how from work with colleagues | |
| | F3. I share my expertise obtained from education and training with colleagues | |
| G. Innovative Behavior | G1. I am always looking for opportunities to improve existing processes, technology, product, service, or work relationship | Jafri (2010) |
| | G2. I always generate ideas or solutions to address problems that others could not solve at work | |
| | G3. I always experiment with new ideas and solutions as a regular function in my work | |
| H. Absenteeism | H1. I have missed work in the past 30 days | Lambert, Hogan and Altheimer (2010) |
| | H2. I have missed work for a short duration in the past 30days | |
| | | |
| | H3. I have frequently missed work in the past 30days | |
| | | |
| I. Turnover Intentions | I1. I expect to be working for my current employer one year from now | Singh, Goolsby and Rhoads (1994) |
| | I2. I am actively looking for another job | |
| | I3. I would prefer to be working at another organization | |
| **Psychological Outcomes** | | |
| J. Job Satisfaction | J1. I am very satisfied with my current job | Lambert, Hogan and Altheimer (2010) |
| | J2. My present job gives me internal satisfaction | |
| | J3. My job gives me a sense of fulfillment | |
| K. Organizational Commitment | K1. I would be very happy to spend the rest of my career with this organization | Jafri (2010) |
| | K2. I feel a strong sense of belonging to my organization | |

| | | |
|---|---|---|
| | K3. I feel 'emotionally attached' to this organization | |
| L. Burnout | L1. I feel emotionally drained from my work | Lambert, Hogan and Altheimer (2010) |
| | L2. I feel used up at the end of the workday | |
| | L3. I feel burned out from my work | |
| M. Work-Life Balance | M1. The time I must devote to my job keeps me from participating equally in household responsibilities and activities | Alexander, Lichtenstein, Oh and Ullman (1998) |
| | M2. I have to miss family activities due to the amount of time I must spend on work responsibilities | |
| | M3. The time I spend with my family often causes me not to spend time in activities at work that could be helpful to my career. | |
| | M4. I have to miss work activities due to the amount of time I must spend on family responsibilities | |

*Table 10.8: Items used in the Questionnaire*

### 10.3.2 Research context and sampling

The population of interest for this study is employees of South African firms. The number is estimated to be over 10 Million as per the Trading Economics report of 2018. The study was targeting all employees irrespective of the nature of work, type of SNS platform, or the type and amount of usage.

As per the empirical work presented in prior chapters, this chapter's study also targeted a nationwide sample of respondents to avoid any geographic bias or differences in regional availability of SNS platform options. Because of this, a specific nationwide audience that was expected to use a wide range of SNS needed to be targeted for data collection. The sampling frame used for the study was the same database as per prior chapters[12].

Overlap with individuals sampled for the previous study (Chapters 9) was avoided by first removing those from the sampling frame of 350 000 and a unique sample of 5 500 email addresses was randomly drawn. The survey instrument was sent as a link on email to the randomly drawn 5 500 members of the database (a different group from the one used in chapter 9 was targeted) notifying them of this survey and inviting their participation.

The survey was open for 6 weeks, and after the third week the first reminder was sent, followed by the second reminder a week later. The number of reminders and timing was based on past studies' recommendations (e.g. Cook et al., 2000; Kittleson 1995; Nulty, 2008; Zuniga, 2004),

[12] As described in previous chapters, the database consisted of employees of different firms across the industries and provinces in South Africa. The database comprises of more than 350 000 employees who signed up and agreed to complete online surveys. It was presumed that this population would be more representative of the employees of South African firms. Although the sample may not cover the general population of employees in South Africa, it addresses the needs of this study.

who pointed out that more than three reminders may see inevitable diminishing return on this investment coupled with the possibility of irritating the survey population.

## 10.4 Results

### 10.4.1 Data Preparation

After 6 weeks, a total of 284 responses were received. Since the questionnaire was online, the data was received in an electronic format and imported to SPSS version 25. The first step of data preparation was coding e.g. enjoyment was coded as ENJ, deep hedonic usage as HU. The next step was data cleaning which was used to identify missing data and outliers (Malhotra and Birks, 2007). This is an important step because failure to do so creates potential problems that may affect the results of the statistical tests (Hair et al., 2010). Six response were missing more than 10% of the item values. The respondents missed some of the demographics questions and other parts of the questionnaire. These were deleted from the data. The demographics did not have missing items. Only 7 respondents were each missing one measurement item value (Likert scale). The values were replaced using series mean.

Finally, the data was checked for outliers. Since the questionnaire was online and the Likert scale was used for most questions, there were no outliers in terms of responses[13].

### 10.4.2 Description of Respondents

The total number of usable responses was 278 (from 5500 sent emails), and their demographics are summarized in Table 10.9. Considering that the survey was administered online, a response rate of 5.3% is not unexpected, and is similar to the previous chapters (chapter 8 and 9) and other studies which have used the same method of data collection (e.g. Kuegler, Smolnik and Kane, 2015; Moqbel and Kock, 2018; Wilden and Gudergan, 2015). The sample was similar in representation to the working population in South Africa. It was also similar to the previous chapters, even though it was different sample. For example, females account for 42% of the working class, and most of the working class are between the ages of 25 and 45 in South Africa (StatsSA Q2 2018). The structure of the sample was 48% female, 51% male and 1% preferred not to say their gender, and 5% of the respondents were aged below 25 years. The database is more likely to be skewed to 25 years and above because most people start employment towards their mid-twenties. Ages between 26-35 years accounted for 32%, 27% of the respondents were between 36-45 years, 22% between 46 to 55 years and 14% of the respondents were aged above 56 years. The frequencies at the two ends of the age spectrum are not surprising. Most of the people start employment in their mid-twenties, also a lot retire in their mid-fifties thus the lower number. The majority of the respondents (78%) had access to SNS through their personal devices such as mobile phones and tablets, and 57% of them check SNS more than twice a day, including 18% who are Always-ON. A large number of the respondents (90%) have been using SNS for more than 5 years, and Facebook remains the most used SNS, as expected (at work) followed by LinkedIn. Generally, SNS are mostly used for pleasure (fun and entertainment 40%), tailed by social information sharing (37%) and sharing work-related information, (32%), as shown in Table 10.9. The educational level

[13] Box plots were used to detect the presence of extreme responses and potential outliers

of the respondents was 1% some high school, 7% matric, 31% post matric certification/diploma, 22% undergraduate degree, 21% honours/ 4 years' degree, and 19% higher degree (masters and phd degree). However, StatsSa (2018) has indicated that majority (51%) of employees in South Africa are matric and below holders, and most of them are in the lower end of the job spectrum e.g. informal sector. The variation might be because the thesis data was collected online and there is a higher chance that the members of the database had matric as a minimum qualification, they are a middle class working group.

| | |
|---|---|
| Gender | Female: 134 (48%)<br>Male: 142 (51%)<br>Prefer not to say: 2 (1%) |
| Age | 18-25: 14 (5%)<br>26-30: 45 (16%)<br>31-35: 44 (16%)<br>36-40: 37 (13%)<br>41-45: 37 (13%)<br>46-50: 41 (15%)<br>51-55: 20 (7%)<br>56-60: 28 (10%)<br>61 and above: 12 (4%) |
| Education | Higher Degree (Masters/ PHD): 54 (19%)<br>Honours Degree/ 4 years: 57 (21%)<br>Undergraduate Degree: 60 (22%)<br>Post Matric Certificate/Diploma: 85 (31%)<br>Matric: 19 (7%)<br>Some high school: 3 (1%) |
| Employment Status | Working (Employed at an organisation): 256 (91%)<br>Working (Self-employed): 25 (9%) |
| Most Used SNS | Facebook: 155 (56%)<br>Instagram: 23 (8%)<br>LinkedIn: 63 (23%)<br>Pinterest: 7 (3%)<br>Twitter: 30 (11%) |
| Length of SNS Use | Less than 2 years: 29 (10%)<br>3-5 years: 63 (23%)<br>5-8 years: 73 (26%)<br>More than 8 years: 113 (41%) |
| General Use | Community participation: 73 (26%)<br>Pleasure (Fun and Entertainment): 113 (41%)<br>Work-related friendship: 83 (30%)<br>Hobby/Club activity: 39 (14%)<br>Comments expression (Comments, status and update): 60 (22%)<br>Sharing work related info: 88 (32%)<br>Social information sharing: 102 (37%)<br>Social family/friendship: 110 (40%) |
| Times a day on SNS | Less than once a day: 55 (20%)<br>At least once a day: 65 (23%)<br>2-3 times a day: 42 (15%)<br>4 or more times a day: 65 (23%)<br>Always-ON: 51 (18%) |
| Devise use to access SNS | Personal device (e.g. my mobile, my tablet): 217 (78%)<br>Work device (e.g. office computer): 61 (22%) |

*Table 10.9: Demographics of Respondents*

### 10.4.3 Analysis Method

After addressing outliers and missing values, the data was subjected to factor analysis. Since the items were adopted from different studies, it was necessary to perform factor analysis on them to determine the underlying structure of the proposed variables before proceeding with subsequent analysis. SPSS software was used to perform principal component analysis (PCA).

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was performed, the value was 0.862 which is above the threshold of 0.50 (Hair et al., 2010). The value indicates that the data is appropriate to be used for principal component analysis. A total of 48 items were loaded for principal component analysis and after three rounds 7 items were deleted. The deleted items were as follows: deep hedonic usage 1 item (HU1), deep utilitarian usage 1 item (UU3), social support 2 items (SS1 and SS2), burnout 1 item (BUR1) and work-life balance 2 items (WLB1 and WLB 2). The deleted items either cross loaded or had loadings below 0.50 (Pallant, 2005; Hair et al., 2010). The remaining 41 items together with their loadings are shown in Table 10.10, and they explain 74% of the total variance.

**Rotated Component Matrix[a]**

| | Component | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| SMEAN(HU2) | | | 0.705 | | | | | | | | | |
| SMEAN(HU3) | | | 0.747 | | | | | | | | | |
| SMEAN(HU4) | | | 0.799 | | | | | | | | | |
| SMEAN(HU5) | | | 0.850 | | | | | | | | | |
| SMEAN(HU6) | | | 0.835 | | | | | | | | | |
| SMEAN(HU7) | | | 0.737 | | | | | | | | | |
| SMEAN(UU1) | | 0.824 | | | | | | | | | | |
| SMEAN(UU2) | | 0.840 | | | | | | | | | | |
| SMEAN(UU4) | | 0.849 | | | | | | | | | | |
| SMEAN(UU5) | | 0.836 | | | | | | | | | | |
| SMEAN(CA1) | | | | | | | | 0.696 | | | | |
| SMEAN(CA2) | | | | | | | | 0.715 | | | | |
| SMEAN(CA3) | | | | | | | | 0.706 | | | | |
| SMEAN(SS3) | | | | | | | | | | | 0.807 | |
| SMEAN(SS4) | | | | | | | | | | | 0.627 | |
| SMEAN(SS5) | | | | | | | | | | | 0.761 | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SMEAN(SAT1) | 0.891 | | | | | | | | | | | |
| SMEAN(SAT2) | 0.897 | | | | | | | | | | | |
| SMEAN(SAT3) | 0.872 | | | | | | | | | | | |
| SMEAN(OC1) | 0.842 | | | | | | | | | | | |
| SMEAN(OC2) | 0.869 | | | | | | | | | | | |
| SMEAN(OC3) | 0.799 | | | | | | | | | | | |
| SMEAN(TO1) | | | | | | | | | | | | 0.792 |
| SMEAN(TO2) | | | | | | | | | | | | 0.790 |
| SMEAN(TO3) | | | | | | | | | | | | 0.828 |
| SMEAN(PER1) | | | | 0.750 | | | | | | | | |
| SMEAN(PER2) | | | | 0.810 | | | | | | | | |
| SMEAN(PER3) | | | | 0.787 | | | | | | | | |
| SMEAN(PER4) | | | | 0.830 | | | | | | | | |
| SMEAN(PER5) | | | | 0.788 | | | | | | | | |
| SMEAN(KS1) | | | | | 0.719 | | | | | | | |
| SMEAN(KS2) | | | | | 0.853 | | | | | | | |
| SMEAN(KS3) | | | | | 0.846 | | | | | | | |
| SMEAN(ABT1) | | | | | | | 0.885 | | | | | |
| SMEAN(ABT2) | | | | | | | 0.847 | | | | | |
| SMEAN(ABT3) | | | | | | | 0.622 | | | | | |
| SMEAN(INB1) | | | | | | 0.716 | | | | | | |
| SMEAN(INB2) | | | | | | 0.821 | | | | | | |
| SMEAN(INB3) | | | | | | 0.815 | | | | | | |
| SMEAN(BUR2) | | | | | | | | | | 0.842 | | |
| SMEAN(BUR3) | | | | | | | | | | 0.792 | | |
| SMEAN(WLB3) | | | | | | | | | 0.839 | | | |
| SMEAN(WLB4) | | | | | | | | | 0.836 | | | |
| Extraction Method: Principal Component Analysis.<br>Rotation Method: Varimax with Kaiser Normalization.[a] | | | | | | | | | | | | |
| a. Rotation converged in 7 iterations. | | | | | | | | | | | | |

*Table 10.10: Results of the Principal Component Analysis (Loadings below 0.40 were supressed)*

The PCA showed that satisfaction and organisational commitment cross-loaded into one factor. The two constructs have been identified as psychological outcomes, therefore they have similar characteristics. This has led to studies to a number of studies examining their similarities and differences (e.g.; Curry et al., 1996; Glisson and Durick, 1998; Bateman and Strasser, 1984), and they concluded that they are similar when compared to other psychological outcomes. To determine whether or not to combine these items or proceed with them as separate constructs in the confirmatory phase, the items for these constructs were taken and ran through a PCA. The items converged into two separate factors (see Table 10.11). It was therefore decided that the two should be treated as separate constructs.

| | Component | |
|---|---|---|
| | 1 | 2 |
| SAT1 | 0.819 | |
| SAT2 | 0.838 | |
| SAT3 | 0.858 | |
| OC1 | | 0.701 |
| OC3 | | 0.877 |
| OC2 | | 0.703 |
| Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. | | |
| a. Rotation converged in 5 iterations. | | |

*Table 10.11: Principal Component Analysis for Job Satisfaction and Organisational Commitment*

For preliminary analysis of the SNS uses behind social support, the relationship between social support items and the three dimensions of SNS usage were examined (see Table 10.12). The social support items namely emotional support (SS1) and esteem support (SS2) correlated highly with cognitive absorption, while informational support (SS3), belonging support (SS4) and instrumental support (SS5) correlated highly with deep utilitarian SNS use. All the items correlated lower with deep hedonic SNS usage.

**Correlations**

| | | Compo_HedoUse | Compo_UtilUse | Compo_CA |
|---|---|---|---|---|
| SMEAN(SS1) | Pearson Correlation | .422** | .401** | .558** |
| SMEAN(SS2) | Pearson Correlation | .401** | .567** | .569** |
| SMEAN(SS3) | Pearson Correlation | .305** | .720** | .434** |
| SMEAN(SS4) | Pearson Correlation | .432** | .566** | .489** |
| SMEAN(SS5) | Pearson Correlation | .337** | .674** | .492** |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | |

*Table 10.12: Correlation Between Social Support and Usage*

As per recommendations of Gefen et al. (2011), following the exploratory analysis to refine the measurement items, the study proceeded with a confirmatory factor analysis using PLS. Results are reported in the next section.

10.4.3.1 The Test of the Measurement Model

Partial Least Squares (PLS) approach using Smart PLS3 software (Ringle, Wende and Becker, 2015) was used to assess the measurement model (psychometric properties of the scales used) and structural model (strength and directions of the relationships between variables). PLS is a variance based approach to modelling causal relationships among variables (Urbach and Ahlemann, 2010). PLS provides a good approximation of alternative covariance-based approaches to structural equation modelling in terms of final estimates (Gefen et al., 2011; Hair et al., 2011; Sun et al., 2013).

After the PCA on SPSS, the data was imported into the SmartPLS software which enabled the researcher to carry out further tests of the measures. The motivation variables were modelled as reflective variables, reflected by their items. The usage dimensions and outcomes were also modelled as reflective constructs (e.g. Charoensukmongkol, 2014; Moqbel, 2012: Moqbel et al., 2013).

A confirmatory factor analysis was carried out. The outer loadings are shown in Table 10.13 below. All the loadings were above the minimum threshold of 0.7, which is satisfactory as suggested by Hair, Black, Babin, and Anderson (2009). The results were also a good sign of convergent validity as the average variance extracted (AVE) for each construct was above the threshold of 0.5 (Falk and Miller, 1992; Tenenhaus et al., 2005).

| | Absent | Burnout | Cognitive | HedoUse | Innovative | Knowledge | Organisation | Performance | Satisfaction | Support | Turnover | UtiliUse | Work-Life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABT1 | 0.716 | | | | | | | | | | | | |
| ABT2 | 0.844 | | | | | | | | | | | | |
| ABT3 | 0.787 | | | | | | | | | | | | |
| BUR2 | | 0.943 | | | | | | | | | | | |
| BUR3 | | 0.944 | | | | | | | | | | | |
| CA1 | | | 0.847 | | | | | | | | | | |
| CA2 | | | 0.797 | | | | | | | | | | |
| CA3 | | | 0.867 | | | | | | | | | | |
| HU2 | | | | 0.819 | | | | | | | | | |
| HU3 | | | | 0.857 | | | | | | | | | |
| HU4 | | | | 0.775 | | | | | | | | | |
| HU5 | | | | 0.843 | | | | | | | | | |
| HU6 | | | | 0.885 | | | | | | | | | |
| HU7 | | | | 0.691 | | | | | | | | | |
| INB1 | | | | | 0.818 | | | | | | | | |
| INB2 | | | | | 0.887 | | | | | | | | |
| INB3 | | | | | 0.832 | | | | | | | | |
| KS1 | | | | | | 0.893 | | | | | | | |
| KS2 | | | | | | 0.846 | | | | | | | |
| KS3 | | | | | | 0.868 | | | | | | | |
| OC1 | | | | | | | 0.954 | | | | | | |
| OC3 | | | | | | | 0.881 | | | | | | |
| PER1 | | | | | | | | 0.948 | | | | | |
| PER2 | | | | | | | | 0.958 | | | | | |
| PER3 | | | | | | | | 0.697 | | | | | |
| PER4 | | | | | | | | 0.726 | | | | | |
| SAT1 | | | | | | | | | 0.995 | | | | |
| SAT2 | | | | | | | | | 0.929 | | | | |
| SAT3 | | | | | | | | | 0.874 | | | | |
| SS3 | | | | | | | | | | 0.865 | | | |
| SS4 | | | | | | | | | | 0.824 | | | |
| SS5 | | | | | | | | | | 0.900 | | | |
| TO2_1 | | | | | | | | | | | 0.951 | | |
| TO3_1 | | | | | | | | | | | 0.960 | | |
| UU1 | | | | | | | | | | | | 0.882 | |
| UU2 | | | | | | | | | | | | 0.894 | |
| UU4 | | | | | | | | | | | | 0.890 | |
| UU5 | | | | | | | | | | | | 0.856 | |
| WLB3 | | | | | | | | | | | | | 0.849 |
| WLB4 | | | | | | | | | | | | | 0.938 |
| | | | | | | | | | | | | | |
| AVEs | 0.615 | 0.89 | 0.701 | 0.663 | 0.715 | 0.755 | 0.843 | 0.707 | 0.872 | 0.746 | 0.912 | 0.775 | 0.800 |
| Cronbachs | 0.734 | 0.877 | 0.787 | 0.898 | 0.809 | 0.852 | 0.822 | 0.891 | 0.968 | 0.829 | 0.904 | 0.903 | 0.761 |
| Composite R | 0.827 | 0.942 | 0.876 | 0.921 | 0.883 | 0.902 | 0.914 | 0.904 | 0.953 | 0.898 | 0.954 | 0.932 | 0.889 |

*Table 10.13: Item Loadings, Cronbach's Alpha and Composite Reliability*

In addition to the factor loadings, Fornell and Larcker (1981) test of discriminant validity was used. The test for discriminant validity was performed by comparing the square root of the average variance extracted (AVE) for each construct against inter-construct correlations. As recommended by Fornell and Larcker (1981), the square root of the AVE of each construct must be greater than

correlations between that construct and others in the model in order for discriminant validity to exist. This was found to be true as shown in Table 10.14 below. This confirms that constructs share more variance with their own items than they do with other constructs in the model. Further, Further, Heterotrait-Monotrait Ration (HTMT) test was done. HTMT is an estimate of the correlation between two constructs. If the indicators of two constructs exhibit an HTMT value that is clearly smaller than one, the true correlation between the two constructs is most likely different from one, and they should differ (Henseler et al., 2014). The correlations were less than the threshold of 1 (Henseler et al., 2014), the highest was 0.875 (see Table 10.15). Therefore, this is an indication that the factors are different.

| | Absent | Burnout | Cognitive | HedoUse | Innovative | Knowledge | Organisation | Performance | Satisfaction | Support | Turnover | UtiliUse | Work-Life |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Absent | **0.784** | | | | | | | | | | | | |
| Burnout | 0.128 | **0.944** | | | | | | | | | | | |
| Cognitive | 0.165 | 0.122 | **0.837** | | | | | | | | | | |
| HedoUse | 0.178 | 0.059 | 0.541 | **0.814** | | | | | | | | | |
| Innovative | -0.04 | -0.127 | -0.027 | 0.017 | **0.846** | | | | | | | | |
| Knowledge | -0.105 | -0.073 | -0.125 | -0.049 | 0.348 | **0.869** | | | | | | | |
| Organisation | -0.125 | -0.477 | 0.005 | -0.075 | 0.253 | 0.161 | **0.918** | | | | | | |
| Performance | -0.093 | -0.103 | -0.095 | -0.145 | 0.474 | 0.522 | 0.326 | **0.841** | | | | | |
| Satisfaction | -0.084 | -0.411 | -0.043 | -0.1 | 0.299 | 0.177 | 0.796 | 0.386 | **0.934** | | | | |
| Support | 0.099 | 0.135 | 0.549 | 0.425 | 0.062 | -0.034 | -0.011 | -0.077 | -0.022 | **0.864** | | | |
| Turnover | 0.184 | 0.44 | 0.138 | 0.157 | -0.162 | -0.041 | -0.684 | -0.162 | -0.71 | 0.142 | **0.955** | | |
| UtiliUse | 0.086 | 0.127 | 0.445 | 0.378 | 0.073 | 0.025 | -0.031 | -0.068 | -0.012 | 0.759 | 0.118 | **0.881** | |
| Work-Life | 0.271 | 0.24 | 0.251 | 0.213 | -0.082 | -0.178 | -0.137 | -0.111 | -0.124 | 0.172 | 0.268 | 0.104 | **0.895** |
| Notes: The bold numbers on the leading diagonal are the square root of the variance shared between the constructs and their measures. | | | | | | | | | | | | | |
| Off diagonal elements are the correlations among constructs. | | | | | | | | | | | | | |

*Table 10.14: Inter-Construct Correlations*

| | Absent | Burnout | Cognitive | HedoUse | Innovative | Knowledge | Organisation | Performance | Satisfaction | Support | Turnover | UtiliUse |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Absent | | | | | | | | | | | | |
| Burnout | 0.134 | | | | | | | | | | | |
| Cognitive | 0.210 | 0.144 | | | | | | | | | | |
| HedoUse | 0.204 | 0.072 | 0.641 | | | | | | | | | |
| Innovative | 0.082 | 0.152 | 0.068 | 0.073 | | | | | | | | |
| Knowledge | 0.141 | 0.068 | 0.143 | 0.066 | 0.416 | | | | | | | |
| Organisation | 0.163 | 0.542 | 0.059 | 0.096 | 0.330 | 0.189 | | | | | | |
| Performance | 0.111 | 0.103 | 0.102 | 0.149 | 0.571 | 0.584 | 0.383 | | | | | |
| Satisfaction | 0.112 | 0.492 | 0.068 | 0.103 | 0.383 | 0.188 | 0.916 | 0.437 | | | | |
| Support | 0.103 | 0.159 | 0.679 | 0.481 | 0.077 | 0.088 | 0.049 | 0.063 | 0.024 | | | |
| Turnover | 0.198 | 0.493 | 0.166 | 0.174 | 0.189 | 0.054 | 0.785 | 0.197 | 0.756 | 0.165 | | |
| UtiliUse | 0.086 | 0.142 | 0.527 | 0.411 | 0.084 | 0.048 | 0.040 | 0.077 | 0.028 | 0.875 | 0.131 | |
| Work-Life | 0.310 | 0.310 | 0.322 | 0.248 | 0.133 | 0.203 | 0.177 | 0.105 | 0.138 | 0.210 | 0.321 | 0.123 |

*Table 10.15: Heterotrait-Monotrait Ratio (HTMT)*

The variables were tested for multicollinearity, which explain the degree to which an independent variable's effects can be predicted, or accounted for, by the other independent variables in the analysis. To assess how much the variance of an estimated regression coefficient increases if the predictors are correlated, the variance inflation factors (VIFs) were measured. Smart PLS provides a table of the VIFs as output. All VIFs values were less than 5.0, which is an acceptable threshold (Steven, 2001; Williams, Roderick, Davies and Clement, 2017). The values indicate that multicollinearity does not exist.

The reliability of the data items was tested. The results indicate that all the constructs had Cronbach's alpha as a measure of internal consistency and composite reliability as per Fornell and Larcker (1981), above the 0.7 threshold (Nunnally and Bernstein, 1994). Next, the standardized root mean square residual (SRMR) of the model was measured. SRMR is a measure of the mean absolute value of the covariance residuals, the SRMR based on transforming both the sample covariance matrix and the predicted covariance matrix into correlation matrices. Since SRMR is the difference between the observed correlation and the model implied correlation matrix, it allows assessing the average magnitude of the discrepancies between observed and expected correlations as an absolute measure of (model) fit criterion (Wong, 2019). The model fit was as indicated by SRMR of 0.053 and significant ($p<0.05$), which is a good fit below the 0.08 threshold (Hu and Bentler, 1999).

Based on the above tests, it is concluded that the scales are reliable and valid, thus suitable for hypotheses testing.

10.4.3.2 Structural Model Assessment and Hypotheses Testing

The model was tested as presented in Figure 10.7 and Figure 10.8. A bootstrap resampling procedure (with 1000 samples) was used to test the proposed relationships in the research model. "Bootstrapping is a nonparametric approach for estimating precision which creates N samples to obtain N sets of parameter estimates" (Bliemel and Hassanein, 2007). The standardized path coefficients associated with each proposed hypothesis, significance of the path coefficients and the variance explained by the independent variables are presented.

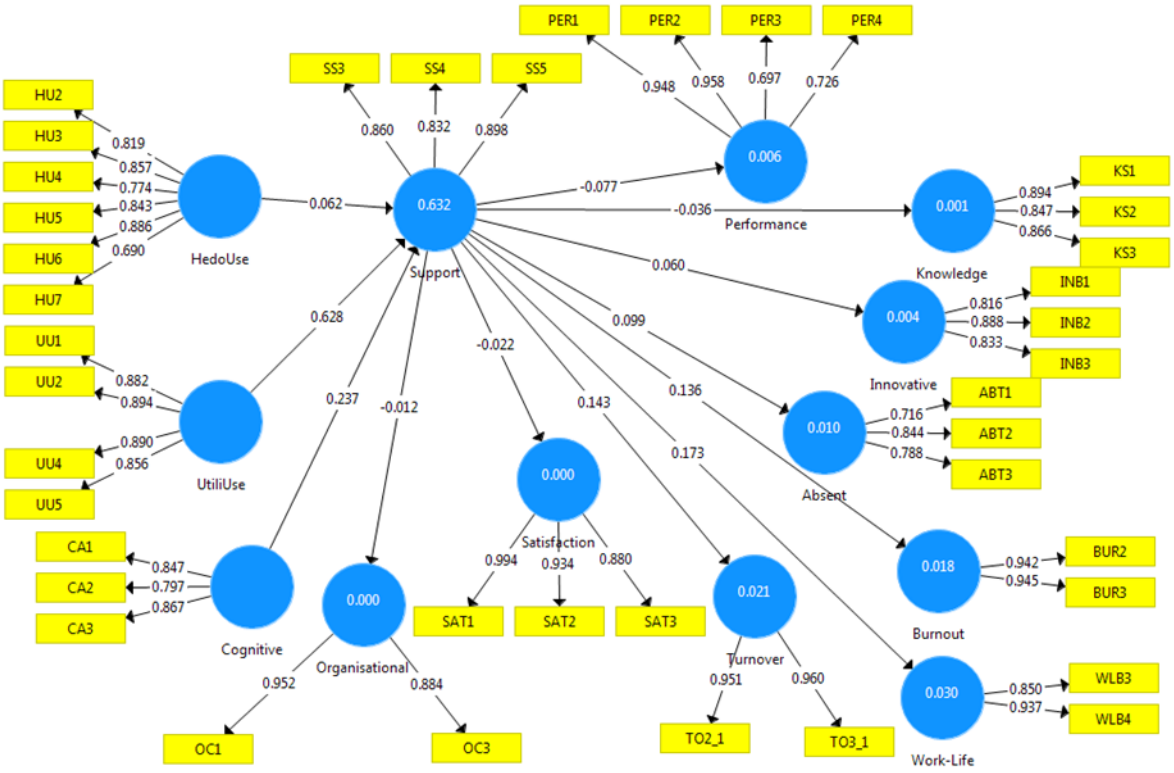



*Figure 10.3: Research Model, Factor Analysis Results*

### *10.4.3.2.1 In-depth Analysis*

The bivariate correlations between the three dimensions of SNS usage, social support and the workplace outcomes are shown below (Table 10.16). Further analysis then follows.

| Table of Correlations | | Compo_HedoUse | Compo_UtilUse | Compo_CA | Comp_SS |
|---|---|---|---|---|---|
| Comp_SS | Pearson Correlation | .409** | .761** | .544** | 1 |
| **Behavioural Outcomes** | | | | | |
| Comp_TO | Pearson Correlation | .118* | 0.091 | .166** | 0.104 |
| Comp_PER | Pearson Correlation | -.124* | -0.062 | -0.087 | -0.034 |
| Comp_INB | Pearson Correlation | 0.012 | 0.069 | -0.034 | 0.059 |
| Comp_KS | Pearson Correlation | -0.047 | 0.025 | -.118* | -0.026 |
| Comp_ABS | Pearson Correlation | .165** | 0.059 | .156** | 0.069 |
| **Psychological Outcomes** | | | | | |
| Comp_SAT | Pearson Correlation | -0.095 | -0.006 | -0.043 | -0.007 |
| Comp_OC | Pearson Correlation | -0.082 | -0.030 | 0.016 | -0.003 |
| Comp_BUR | Pearson Correlation | 0.064 | .127* | .119* | .134* |
| Comp_WLB | Pearson Correlation | .205** | 0.102 | .250** | .164** |
| Comp_SS=Socia Support; Comp_TO=Turnover Intention; Comp_PER=Job performance; Comp_INB=Innovative Behaviour; Comp_KS=Knowledge Sharing; Comp_ABS=Absenteeism; Comp_SAT=Job Satisfaction; Comp_OC=Organisational Behaviour; Comp_BUR=Burnout; Comp_WLB=Work-life balance. **. Correlation is significant at the 0.01 level (2-tailed). | | | | | |

*Table 10.16: Summary of Bivarate Correlations*

The results from the above table indicate that using SNS for social support is positively related with all the three types of usage, that is hedonic usage ($r=0.409$, $p<0.01$), utilitarian use ($r=0.761$, $p<0.01$) and cognitive absorptions ($r=0.544$, $p<0.01$). The results support the view that SNS usage is good for building relationships and networks, which result in increased social support.

The relationship between the using SNS for social support and behavioural outcomes i.e. turnover intentions, innovative behaviour and absenteeism was positive, but negative for job performance and knowledge sharing. However, these relationships were not statistically significant. For psychological outcomes and social support, there is a negative correlation between using SNS for social support and job satisfaction, and organisational commitment, and both were non-significant, however, the results were positive and significant for burnout ($r=0.134$, $p<0.05$) and work-life balance ($\beta=0.164$, $p<0.01$). The correlation results suggest that using SNS for social support is associated with individuals experiencing negative behaviours like burnout and work-life conflict.

Mixed results were obtained for the correlations between SNS usage dimensions and outcomes. The relationship between hedonic usage and behavioural outcomes, was positive for turnover intentions ($r=0.118$, $p<0.05$), absenteeism ($r=0.165$, $p<0.01$), and, positive but non-significant results for innovate behaviour. However, there was an inverse relationship between hedonic usage and job performance ($r=-0.124$, $p<0.01$), and an inverse but non-significant relationship with knowledge sharing. The findings indicate that using SNS for non-utilitarian purposes is likely to reduce an employee's job performance.

The results indicate that hedonic use has non-significant inverse relationship with psychological outcomes namely job satisfaction and organisational commitment. Conversely, the relationship between hedonic use and work-life balance is positive and significant ($r=0.205$, $p<0.01$), but the results for burnout indicate a positive non-significant relationship. Since the context of the study is the workplace, the findings suggest that using SNS at work for non-work purposes is likely to increase one's work-life conflict.

For utilitarian usage the following results were obtained. Even though the correlations were positive for all behavioural outcomes namely turnover intentions, knowledge sharing, innovative behaviour and absenteeism, it was negative for job performance, and the results were non-significant for all the relationships between behavioural outcomes and utilitarian use.

The correlations between psychological outcomes and utilitarian usage were non-significant and inverse for job satisfaction and organisational commitment, but positive and significant for burnout ($r=0.127$, $p<0.05$), and positive and non-significant for work-life balance. The findings suggest that using SNS for work-related purposes might increase exhaustion.

Behavioural outcomes namely turnover intentions ($r=0.166$, $p<0.01$) and absenteeism ($r=0.156$, $p<0.01$) have positive relations with cognitive absorption, while cognitive absorption has a significant and inverse relationship with knowledge sharing ($r=-0.118$, $p<0.05$). However, cognitive absorption had non-significant inverse relationship with job performance and innovative behaviour. The results indicate that being absorbed and engaged in SNS slows down the sharing of knowledge.

Psychological outcomes namely organisational commitment, burnout (r=0.119, p<0.05) and work-life balance (r=0.250, p<0.01) are positively related to cognitive absorption, the correlations are significant except for organisational commitment. Cognitive absorption has a non-significant negative effect on job satisfaction. The correlations suggest that being absorbed and engaged in SNS might increase exhaustion and work-life conflict. Cognitive absorption may reflect over-use of SNS in a manner that has negative implications. The idea is that cognitive absorption can be more like a distraction where people lose sense of time and as they get immersed in the tool.

*10.4.3.2.2 Usage, Social Support and Negative and Positive Outcomes*

To further examine the relationships between SNS usage constructs and workplace outcomes, the selected behavioural and psychological outcomes were classified into positive and negative outcomes. Absenteeism and turnover intentions were identified as negative behaviours, while positive behavioural outcomes were job performance, innovative behaviour and knowledge sharing. Absenteeism and turnover are negative in that the behaviours reflect negative attitude towards work. Absenteeism and turnover were modelled as reflected indicators of a single negative behaviour constructs. Similarly, a positive behavioural outcome construct was modelled in a similar approach as the negative construct.

With regards to psychological outcomes, burnout and work-life conflict were identified as negative outcomes. They reflect negative psychological states. Positive psychological outcomes were job satisfaction and organisational commitment. A positive psychological outcome construct was then modelled as reflected indicators of a single positive psychological construct. A negative psychological outcome construct was modelled in a similar manner.

The PLS path indicating the effects are shown in Table 10.17.

| | SS | NegBeh | NegBeh | NegBeh | PosBeh | PosBeh | PosBeh | PosPsy | PosPsy | NegPsy | NegPsy |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HU | 0.055 | 0.193** | 0.167 | 0.109 | -0.091 | -0.089 | -.0910 | -0.130 | 0.119 | -0.109 | -0.107 |
| UU | 0.635*** | 0.008 | 0.005 | 0.010 | 0.048 | -0.001 | 0.001 | 0.022 | -0.011 | -0.019 | -0.084 |
| CA | 0.235*** | 0.105 | 0.102 | 0.038 | -.0102 | -.0910 | 0.090 | -0.081 | 0.026 | 0.203** | 0.184** |
| SS | | | 0.008 | 0.068 | | 0.049 | 0.050 | | 0.035 | | 0.085 |
| PosPsy | | | | -0.741** | | | 0.349*** | | | | |
| NePsy | | | | 0.169*** | | | -0.065 | | | | |
| $R^2$ | 0.631*** | 0.061** | 0.046 | 0.019 | 0.013 | 0.004 | 0.130** | 0.015 | -.004 | 0.062* | 0.061* |
| SS=Social Support, NegBeh=Negative Behavioral Outcomes, PosBeh=Positive Behavioral Outcomes, PosSy=Positive Psychological Outcomes, NegPsy=Negative Psychological Outcomes, UU=Utilitarian Usage, HU=Hedonic Usage, CA=Cognitive Absorption | | | | | | | | | | | |

*Table 10.17: PLS Paths (Positive and Negative Outcomes)*

*10.4.3.2.2.2 SNS Usage and Social Support*

As depicted in the table above, both deep utilitarian usage (H1b: β=0.635) and cognitive absorption (H1c: β=0.235) have significant effect (p<0.001) on using SNS for social support, however, deep hedonic usage (H1a) has no significant influence on social support. The findings support the rationale that hedonic usage is likely to have less impact on social support in the context of work (Ali-Hassan et al., 2015). Compared to Table 10.16, where bivariate correlations were used, it

shows that with cognitive absorption and utilitarian usage included as determinants, hedonic use tends not to be the mechanism through which users aim to access social support.

*10.4.3.2.2.3 SNS Usage and Outcomes*

The influence of deep hedonic usage on behavioural outcomes (H2a) and psychological outcomes (H2b) were examined both on positive and negative workplace outcomes. The relationship was found to be positive for negative behavioural outcomes and positive for negative psychological outcomes. This effect suggests that hedonic use is associated with increased behaviours like absenteeism, and increased psychological states of work-life conflict. The direct relationship between hedonic usage and negative behavioural outcomes was found to be positive and significant ($\beta=0.193$, $p<0.05$).

Hedonic usage was found to have negative effects on positive behavioural outcomes and positive psychological outcomes. Although the effects are not statistically significant, there is some sense that hedonic use lowers outcomes such as job satisfaction and job performance.

The relationship between deep utilitarian usage and the behavioural outcomes (H3a) and psychological outcomes (H3a), was found to be positive for negative behavioural outcomes and positive psychological outcomes. Even though the results are non-significant, there is an indication that utilitarian usage is likely to increase negative behavioural outcomes such absenteeism and turnover intentions, and, may also increase psychological outcomes such as job satisfaction and organisational commitment.

The examined relationship between cognitive absorption and both behavioural outcomes (H4a) and psychological outcomes (H4b) indicates that negative behavioural outcomes and negative psychological outcomes are influenced by cognitive absorption. However, positive behavioural outcomes and positive psychological outcomes might be lowered by cognitive absorption. The results did not confirm significant effects of cognitive absorption on a number of outcomes, namely job satisfaction, organisational commitment, knowledge sharing, job performance and innovative behaviour.

*10.4.3.2.2.4 Social Support and Outcomes*

The relationships between use of SNS for social support and workplace outcomes were found not to be statistically significant. Similarly, the effects were found to be low ranging from ($\beta=0.022$ to $\beta=0.143$) on the outcomes (Figure 10.8). These finding suggests that using SNS for social support is not independently related to workplace outcomes, however, the correlations in Table 10.16 are such that it is positively correlated with negative psychological outcomes namely burnout and work-life conflict.

*10.4.3.2.2.5 Behavioural Outcomes and Psychological Outcomes*

The relationship between behavioural outcomes and psychological outcomes were examined (H6). The psychological outcomes were modelled as determinants of behavioural outcomes in line with literature such as Ferguson et al. (2016), Moqbel et al. (2020), Zhang et al. (2019) who describe

psychological outcomes (e.g. job satisfaction and burnout) as antecedent to behavioural outcomes such as performance and turnover.

Positive psychological outcomes (job satisfaction and organisational commitment) were found to reduce negative behavioural outcomes (absenteeism and turnover intention) ($\beta$=-0.741, $p<0.001$), and positively related to positive behavioural outcomes (job performance, innovative behaviour and knowledge sharing) ($\beta$=0.349, $p<0.001$). That is, employees who are satisfied with their jobs and committed, are less likely to miss work or change jobs, and, also, they are likely to perform better, share knowledge and come up with innovative ideas at work.

Negative psychological outcomes (burnout and work-life balance) are likely to increase negative behavioural outcomes ($\beta$=0.169, $p<0.001$. The effects suggest that burnout and unbalanced work-life situation are likely to elevate absenteeism and turnover intentions. SNS has indirect effects on performance through effects on outcomes like job satisfaction (Charoensukmongkol, 2014; Moqbel et al., 2013), absenteeism, turnover intentions and burnout (Zivnuska et al., 2019).

The structural equation model explains 63% of the variance in social support, 6% of the variance negative behavioural outcomes, 13% of the variance in positive behavioural and 62% of the variance in negative psychological outcomes.

The hypotheses and findings are summarised in Table 10.18.

| Hypothesis | Path | Outcome | Findings |
|---|---|---|---|
| H1(a) | Hedonic – Social Support | Accepted | As per Table 10.16, hedonic usage is significantly and positively related to social support. |
| H1(b) | Utilitarian – Social Support | Accepted | As per Table 10.16 and Table 10.17, utilitarian usage is significantly and positively related to social support. |
| H1(c) | Cognitive Absorption – Social Support | Accepted | As per Table 10.16 and Table 10.17, social support is significantly and positively related to social support. |
| H2(a) | Hedonic – Behavioural Outcomes | Limited support | As per Table 10.16 and Table 10.17, there is limited support, because of inconsistent links between hedonic usage and behavioural outcomes. The link between hedonic usage and negative behavioural outcomes is positive and statically significant, however, the link between hedonic usage and positive behavioural outcomes is not statistically significant. |
| H2(b) | Hedonic – Psychological Outcomes | Rejected | As per Table 10.16 and Table 10.17, hedonic usage is not significantly related to positive or negative psychological outcomes. |
| H3(a) | Utilitarian - Behavioural Outcomes | Rejected | As per Table 10.16 and Table 10.17, utilitarian usage is not significantly related to positive or negative behavioural outcomes. |
| H3(b) | Utilitarian – Psychological Outcomes | Rejected | As per Table 10.16 and Table 10.17, utilitarian usage is not significantly related to positive or negative psychological outcomes. |
| H4(a) | Cognitive Absorption - Behavioural Outcomes | Limited support | As per Table 10.16 and Table 10.17, there is limited support, because of inconsistent links between cognitive absorption and behavioural outcomes. The link between cognitive absorption and negative behavioural outcomes is positive and statically significant, however, the link between cognitive absorption and positive behavioural outcomes is not statistically significant. |

| | | | |
|---|---|---|---|
| H4(b) | Cognitive Absorption – Psychological Outcomes | Limited support | As per Table 10.16 and Table 10.17, there is limited support, because of inconsistent links between cognitive absorption and psychological outcomes. The link between cognitive absorption and negative psychological outcomes is positive and statically significant, however, the link between cognitive absorption and positive psychological outcomes is not statistically significant. |
| H5(a) | Social Support – Behavioural Outcomes | Rejected | As per Table 10.16 and Table 10.17, social support is not significantly related to positive or negative behavioural outcomes. |
| H5(6) | Social Support – Psychological Outcomes | Limited support | As per Table 10.16 and Table 10.17, there is limited support, because of inconsistent links between cognitive absorption and psychological outcomes. The link between social support and negative psychological outcomes is positive and statically significant, however, the link between social support and positive psychological outcomes is not statistically significant. |

*Table 10.18: Summary of Findings*

## 10.5 Discussion

The purpose of this chapter was to determine the impact of SNS usage on workplace outcomes. The chapter was cognisant of the important calls made in recent years (e.g. Ali-Hassan et al., 2015), regarding the need to clearly understand the positive and negative impact of SNS use in the workplace. Hence, the impacts of the different SNS usage dimensions on various workplace outcomes were examined. The SNS usage dimensions were deep hedonic SNS usage, deep utilitarian SNS usage and cognitive absorption. This chapter extends the findings of the previous chapter by examining both the commonly studied outcomes namely job satisfaction and job performance, and less studied outcomes such burnout and absenteeism. Further, social support was included in the model as a possible mechanism through which SNS usage was hypothesized to impact workplace outcomes. These hypothesized relationships were underpinned by social support theory. To empirically test the model, similar research methods to those in the previous chapter were used. Even though the methods were similar, the datasets were different.

The results of the demographics of the respondents confirmed the earlier findings (chapter 9) regarding the South African workforce. The results were also aligned with the South African national statistics report (2018) on workforce. The two chapters indicate that SNS users mostly use the different platforms for pleasure or fun or entertainment, social friendship and family and sharing work-related information, also Facebook is still the highest used platform by employees in South Africa. With the varied uses of SNS in the workplace, it is therefore important to understand the impact of the different uses on workplace outcomes. Understanding the impacts is a positive step in achieving better business performance through SNS.

It was hypothesized that SNS usage positively affects social support. With respect to social support, the findings suggest that SNS use can exert a positive effect on social support. In the workplace context of this study, utilitarian usage emerged as most important to social support. Employees take advantage of the myriad functionality of SNS such as interacting with others to obtain work advice or support, and consequently creating and maintaining social resources (Wang et al., 2016). Data collected from 278 employees of firms in South Africa showed that while it was

theorized that both hedonic usage and utilitarian usage would be important to social support, the results suggest that usage for the purposes of workplace communication and obtaining work advice is indeed important to social support, while hedonic usage focused on entertainment and interaction is not significant for social support in the work context. The results also confirmed prior studies examining the relationship between SNS usage and social support (e.g. Ali-Hassan et al., 2016; Chen and Li, 2017).

Correlations showed that hedonic usage was significant only for job performance, knowledge sharing (positive behavioural outcomes), turnover intention, absenteeism (negative behavioural outcomes) and work-life balance (negative psychological outcome). Subsequent, regression showed that hedonic usage had no effect on the combined sets of psychological and behavioural workplace outcomes, except for negative behavioural outcomes namely absenteeism and turnover intentions.

The results of the relationship between SNS usage and, workplace outcomes (behavioural and psychological) confirms results of prior studies (e.g. Charoensukmongkol, 2014; Moqbel 2012; Moqbel et al., 2013). However, the results presented here overcome the limitations of past research and contribute new findings. Specifically, prior studies had not considered combining the outcomes into sets e.g. combining negative behavioural outcomes into a set, or positive behavioural outcomes into a set. This study is the first to examine the relationships between SNS usage and combined sets of psychological and behavioural workplace outcomes.

With regards to the significant correlations, this confirms the view that using SNS for non-work purposes such as sharing fun-filled information may lower productivity and sharing of knowledge (Ali-Hassan et al., 2016), but increase employees chances of changing jobs or skipping work (Ferguson et a., 2016). The employee will have less time to perform mandated duties and tasks.

The relationship between behavioural outcomes such as job performance and utilitarian SNS usage as well as absorption in SNS usage were found not significant in both correlation and subsequent path analysis. The findings were consistent with e.g. Moqbel (2012) and chapter 9, suggesting SNS use does not have simple predictable effect on outcomes such as job performance. This suggests that employees who spend time on SNS do not necessarily observe loss of focus in a manner that detracts from overall performance, thus contrary to some views (Andreassen et al., 2014; Zivnuska et al., 2019). Surprisingly, it does appear from correlations that social support lowers behavioural outcomes (e.g. job performance and knowledge sharing) when they are taken in isolation, but when put together as one positive behavioural variable, the behaviours are likely to improve.

With respect to psychological outcomes, immersion in the use of SNS features at work might result in a conflict between social and work life, e.g. the social life disturbing work life. Employees might spend more time on SNS performing social activities. The conflict arises since they are bringing social/life context into the work context (Wang et al., 2016). The correlations suggest that being immersed in using SNS might lead to increased burnout (Charoensukmongkol, 2016) and work-life conflict. Being immersed in the use of SNS might result in excessive use and excessive consumption of content which might exhaust the user (Charoensukmongkol, Moqbel, and

Gutierrez-Wirsching, 2017; Dhir et al. 2018; Han 2018;). SNS exhaustion is related to negative psychological well-being (Satici and Uysal 2016; Seabrook et al., 2016). High levels of absorption in the use of SNS can lead to burnout and work-life conflicts (Ayyagari et al., 2011; van Zoonen et al., 2016).

Except for burnout, the relationships between utilitarian SNS usage and other behavioural and psychological outcomes were not significant. Using SNS for work-related purposes appears to increase exhaustion. The prolonged exposure to stress that drains one's emotions will increase burnout. This result contrasts to some degree with the view that using SNS for work related purposes will improve productivity (Kwahk and Park, 2016; Zhang et al., 2019). Instead, it appears from this study's findings that use promotes negative outcomes like burnout which is then, in turn, associated with other non-productive outcomes. Those who suggest that SNS for work related purposes will improve productivity, indicate that using SNS at work can have a positive impact on work performance because SNS makes it become more convenient and easier for employees to obtain advice from friends or colleagues who are in their network (e.g. Kwahk and Park, 2016; Zhang et al., 2019).

Cognitive absorption has been found to have significant correlations with a number of behavioural and psychological outcomes. The findings indicate that being immersed in using SNS results in employees missing work and reduced loyalty in the form of turnover intention. It also increases employee's emotional exhaustion and work-life conflict. Being absorbed in using SNS reduces the exchange of knowledge, ideas and expertise.

Taken together, the results indicate that different dimensions of SNS usage have different effects on social support and on workplace outcomes. Contrary to past literature, social support seems not important to outcomes. Furthermore, the chapter presents findings which are slightly different from those in chapter 6 (systematic literature review-SLR). The SLR indicated that SNS use might yield positive results for positive outcomes. However, its findings were not conclusive regarding the negative outcomes. The SLR indicated that certain outcomes might be important moderators e.g. the moderating role of job engagement and organisational engagement, maybe this approach might yield new insights. In addition, the deep structure usage and its impact might be understood better by segmenting and examining the relationships based on user groups e.g. in which user groups burnout increases and in which user groups it decreases.

## 10.6 Implications

The study extends our theory on the impact of SNS use on workplace outcomes. The study focused on the extent and varied impact of SNS usage on workplace outcomes, and the role of social support in the link between SNS usage and outcomes. To understand the varied impact of SNS usage on outcomes, SNS usage was conceptualized as multi-dimensional construct in a similar way to the earlier chapters. The outcomes were classified into four, namely negative behavioural outcomes, positive behavioural outcomes, negative psychological outcomes and positive psychological outcomes. In understanding the extent and varied impact of SNS usage, several contributions were made.

Firstly, the study contributes to the existing literature by clarifying the relationship between the different uses of SNS and social support. Past studies have examined a similar relationship (e.g. Charoensukmongkol et al., 2016; Choi and Shin, 2017), however, the majority of those studies considered SNS use as a unidimensional construct with generic items. Moreover, those studies either focused on social uses or work-related uses, very few studies examined both in a single study. SNS as a hybrid IS embeds different use dimensions (both utilitarian and hedonic), and examining the links between these SNS uses and social support and outcomes has provided a more in-depth understanding of the impacts of SNS usage in the workplace.

Second, this study contributes to the social support theory by clarifying the relationship between SNS use and social support, and outcomes. This research provides insights into the framework of SNS usage in the workplace, by confirming that SNS use (all dimensions) increase social support. In addition, the study attempted to clarify the role of social support as a mechanism through which SNS usage effect the different outcomes.

Thirdly, examining the link between the different uses of SNS and several outcomes including both frequent and seldom studied outcomes contributes to the ongoing discussions taking place within academia and organisations about the impact of SNS in the workplace. Extant studies examined the link but focused on only a few outcomes. This study examined eight outcomes, and went further to examine the relationship between SNS use and different types of behavioural and psychological outcomes. The selection and classification of the outcomes was systematic and based on the earlier presented literature as opposed to the relative ad-hoc selections made in the past studies.

The use of SNS in the work place does not however appear, on average, to increase the positive and reduce the negative workplace outcomes. This finding advances the knowledge on how SNS usages are different and how each might differently impact outcomes.

Further, prior studies have not examined the relationship between SNS usage and a set of combined positive behavioural outcomes, and a set of combined negative behavioural outcomes respectively. In addition, the relationship between SNS usage and each set of positive outcomes, a set of combined positive psychological outcomes, and a set of combined negative psychological outcomes respectively. This study is the first to take such an approach. Past studies were focused on the impact on each outcome e.g. on job performance or knowledge sharing or innovative behaviour as opposed to a combined positive behavioural outcome made up of job performance, knowledge sharing and innovative behaviour.

Fifth, similar to the previous chapter, but a different dataset, this chapters use employees of different companies in South Africa. Few studies use employees as respondents because it is difficult to access them. Studies like these are considered to be more representative of the population of workplace users.

Finally, the study complements the previous chapters by furthering the validation of the newly developed items of the multi-dimensional SNS usage construct.

The results of this chapter also provide some practical implications. The results provide insights for managers, and could help them to make informed decision regarding SNS usage in the workplace. The different dimensions of SNS lead to different effects. Therefore, the decision to allow SNS in the workplace should be based on the purpose of the SNS. For example, over-immersion of employees in SNS use even for utilitarian purposes may increase burnout, and over-immersion in its hedonic use will increase absenteeism and possibly also work-life conflict (reduce work-life balance).

Even though the results did not confirm significant effects of SNS usage on a number of positive outcomes, the role of SNS should not be ignored. SNS use can encourage psychological states such as organisational commitment, and behaviours such as innovative behaviour and knowledge sharing. These outcomes can be positive for job performance.

Managers should pay attention to the increase in levels of negative outcomes as a consequence of SNS use. SNS deserve a certain level of control in the workplace. Its use can result in employees missing work, changing jobs, increased emotional exhaustion and work-life conflict.

SNS use is an important source of support resources. Managers should not underestimate the importance of SNS use in growing social support in the organisation. However, the results did not confirm significant effects of social support on outcomes. This deserves further study and does not necessarily warrant managers banning SNS in the workplace.

Taken together, the study indicates that the decision to allow SNS use in the workplace depends on the type of use. It might be a challenge for managers to be able to control or manager SNS in the workplace. However, organisations can issue regulations to help strengthen the management of SNS usage, in addition, training employees on better ways of using SNS to improve outcomes can be helpful.

## 10.7 Limitations

Despite the contributions of this study, the results should be approached with caution. Firstly, in spite of the sampling techniques used, the results may not represent the whole populations of employees in South Africa.

Other limitations are generic to cross-sectional and survey studies as outlined in chapter 8 and 9. For example, limitations lie in the inability to confirm causality based on cross-sectional survey data, the social desirability bias inherent in survey responses, and the collection of data from a single source which can induce a methods bias.

This study has created opportunities for future research. For example, it might be useful to examine the relationship between social support and outcomes. The mechanisms through which SNS effect outcomes will deserve continued investigation.

## 10.8 Conclusion

This chapter examined the impact of the dimensions of SNS usage on social support. Utilitarian usage seems to be having the highest effect on social support. Further, social support is not related

to workplace outcomes. The chapter has outlined the relationships between SNS usage and outcomes, but we still do not have a well-developed framework to classify SNS users' and user behaviours. Therefore, the next chapter builds on this chapter and goes further into classifying SNS users into archetypes.

# CHAPTER 11: SOCIAL NETWORK SITE USER ARCHETYPES: AN EXPLORATORY STUDY OF IMPLICATIONS FOR WORKPLACE OUTCOMES

## 11.0 Introduction

This chapter addresses research question 6 (RQ6). It is focused on establishing a framework for SNS user archetypes and their implications for user outcomes. Previous chapters explored SNS usage through the constructs of hedonic deep usage, utilitarian deep usage and cognitive absorption. Usage was thus explored as a continuum. This chapter considers whether it is possible to classify SNS users into specific archetypes based on their levels of usage.

Initially, SNS was predominately for social use, however, it has extended into workplace uses with access now occurring in both contexts. For social purposes, SNS are often used to seek information about family and friends and to share content for entertainment. For work related purposes, SNS are used to interact with others to obtain work advice or support, to support workplace communication, search for job opportunities, to again assistance from others in order to improve performance work and obtain feedback on work products. The use of SNS can thus be classified into social/hedonic use and work-related/utilitarian use. The detailed background on SNS, and SNS usage is in chapter 2 and chapter 8 respectively.

Even though calls were made to enrich the theoretical and empirical conceptualization of usage (e.g. Barki et al., 2007), scant studies have classified SNS users (Luchman et al., 2014). In some past work, SNS users have been classified as socializers, debaters, lurkers, sporadics and actives (Altuwairiqi, 2019; Brandtzaeg and Heim, 2011; Brandtzæg, Heim and Karahasanovic, 2011; Johnson and Kulpa, 2007). Elsewhere, secure, intimate, escapist, narcissist and discrepancy SNS user archetypes were identified (Altuwairiqi, 2019). These classifications were based primarily on personal traits. However, there remains a dearth of research into SNS user behavior in the workplace, and none have classified SNS users based on hedonic vs utilitarian dimensions of usage. This chapter focuses on classifying SNS users into archetypes based on hedonic and utilitarian usage behavior and examining the implications for user outcomes. SNS use has been found to impact workplace outcomes differently (Ali-Hassan, 2015), including implications for job performance and job satisfaction.

SNS has created a new set of social norms where individuals try to create and maintain an online persona that complements their physical presence (Turkle, 2007). Cognisant of the complexity and multi-dimensionality of SNS, creating a framework of its users will be a critical step in clarifying SNS user behaviour.

## 11.1 Theoretical Background

### 11.1.1 SNS Usage

System usage is an important construct in information systems research (Burton-Jones and Straub, 2006). However, system usage has too often been conceptualized as a one-dimensional construct with a diverse set of narrow measures such as features used, tasks supported, extent of use,

frequency of use, and duration of use among others (Burton-Jones and Straub, 2006). Those simplistic views of system usage have resulted in insufficient knowledge about utilization and its effects on individual outcomes. More sophisticated conceptualizations of usage behaviour are required (Chin and Marcolin, 2001). In response, system usage behaviour has begun to be conceptualized as extended use (Hsieh and Wang, 2007), emergent use (Saga and Zmud, 1993), integrative use (Ahuja and Thatcher, 2005), exploratory use (Abdinnour-Helm and Saeed, 2006) and deep structure usage (Schwarz, 2003).

Among the above, the deep usage concept has been considered particularly promising (Saga and Zmud, 1993; Schwarz, 2003). This is because a systematic approach was followed in conceptualizing deep structure usage, and the usage measures were selected in a theoretically rigorous way (Burton-Jones and Straub, 2006). The deep structure usage of an SNS is defined as an activity involving (1) a user, i.e. the subject using the SNS, (2) the system being used, in this case the SNS, and (3) the task, i.e. the functions being performed.

Considering its hybrid qualities and unique characteristics, SNS usage could be viewed from this deep structure perspective and defined as an individual user's employment of one or more features of the SNS to perform a task. The hybrid nature of SNS requires that both its utilitarian and hedonic features are reflected in the conceptualisation of deep structure usage. Thus deep structure usage includes hedonic deep structure usage and utilitarian deep structure usage. Hedonic functions are for personal reasons and satisfaction such as fun, enjoyment and entertainment. An example here would include playing a game such as "Candy Crush" through the SNS. Utilitarian functions are performed to accomplish more productivity-based tasks that are typically work-related or instrumental (Li, Wang and Chou, 2012). An example here would include recruiting potential employees using LinkedIn. Both the nature of the context as well as the motivation to use an information system will determine the kind of usage behavior in which the user engages (Van der Heijden, 2004). A user aiming to complete a work task at a given time visits a certain information system (e.g. SNS) with this task need in mind, but in another situation he/she might visit the same information system (e.g. SNS) in order to pass time and to be entertained (Pöyry, Parvinen and Malmivaara, 2013). What users believe about the purpose of an information system has implications for their actual usage and SNS demonstrate a diversity of purpose (Wakefield and Whitten, 2006).

Taken together, SNS usage can then be defined in terms of the degree of deep structure hedonic use and deep structure utilitarian use.

### 11.1.2 User Archetypes

The concept of user segmentation was introduced by Cooper (1999) to the information systems and computer science community. Persona is a precise description of a user's characteristics and what he/she wants to accomplish (Altuwairiqi et al., 2019). It is a fictionalized representation of a hypothetical group of users based on needs, demographics and goals. Literature indicate that personas do not usually include behavioural patterns (Floyd et al., 2008; Mikkelson and Lee, 2000), while archetypes include a behavioural perspective, including emotions and psychological states.

The notion of archetypes has been used mostly in the marketing discipline and can be traced as far back as 1938. Archetypes exist in the collective unconscious, outside the physical world, and can only be seen when portrayed through physical media such as behaviour, cultural myths and art,

and advertisements (Jung, 1938). They have also been described as organising principle for things we see or do, or more specifically (Tsai, 2006).

Even though SNS usage has received increasing attention as well as fast dissemination, SNS user behavior is still not well understood. One of the contributing factor might be that SNS was initially a social tool that has found its way into the work context. Therefore, it is important to be able to segment workplace SNS users based on the social (hedonic) and work-related (utilitarian) content of use, and to explore the implications for workplace outcomes.

SNS users might thus be classified as follows in Figure 11.1:

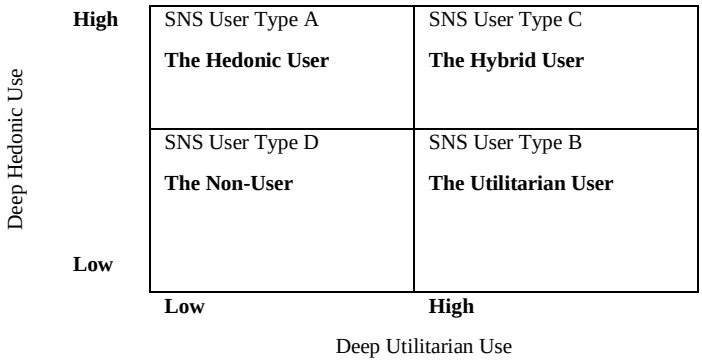



*Figure 11.1: Classification of SNS Users*

SNS User Type A is high hedonic user but makes little use of SNS for work-related purposes. Such individual is likely to use SNS features that enables him/her to share fun-filled information, but avoids interactions like using SNS to obtain feedback on work products.

SNS User Type B is the opposite user. This is an individual who engages almost exclusively with SNS for utilitarian and instrumental purposes. The user is likely to use SNS for information support and work-related advice. Such a user avoids SNS as a tools for entertainment.

SNS User Type C is the hybrid user, bringing together both the hedonic and utilitarian uses. Such an individual is likely to use SNS features that help him to interact in a social way with others for enjoyment, and similarly, use SNS features that help him/her to obtain work advice or support.

SNS User Type D is engaged in little to no SNS usage. This type of user makes little use of SNS for work-related purposes or social-related purposes. They rarely or never interact with friends, family or work colleagues on SNS, irrespective of the purpose of the interaction.

It can be further hypothesized that each of the four user archetypes will exhibit differing workplace performance outcomes. For example, Ali-Hassan et al. (2015) argued that use of SNS for utilitarian purposes can promote social support (consistent with chapter 10). Social support such as information support has been found to be positive for job performance (Lee et al., 2013). While other argued that the hedonic use of SNS can provide social support, such as belonging and emotional support (Ellison et al., 2007). These type of support positively affect job satisfaction and job performance (Moqbel and Nah, 2017; similar to chapter 9). The support is likely to reduce absenteeism, stress and burnout (Moqbel et al., 2013). However, some of the findings in chapter 10 were not consistent with prior studies. For example, the results did not confirm significant

effects between social support and outcomes, and between SNS usage and certain outcomes. SNS usage and outcomes might be better understood if explored further through the archetypes.

Two high level workplace outcomes explored in prior chapters that are potentially useful for determining the implications of these archetypes is job performance and job satisfaction. Consistent with the conceptualisations used in prior chapters, job performance is defined as an individual's overall task proficiency or performance on specific dimension e.g. quality or quantity of work (Meyer et al., 1989). Job satisfaction is defined as pleasurable emotional state resulting from the appraisal of one's job (Locke, 1976). Based on the argument that deep hedonic usage allows for social and non-work related use, and that deep utilitarian allows for work related use, it can be theorized that user type C (i.e. the hybrid user) would achieve higher levels of performance and satisfaction than the other archetypes. Therefore, it can be hypothesized that:

Hypothesis 1: Hybrid SNS users will exhibit higher job satisfaction than the other archetypes.

Hypothesis 2: Hybrid SNS users will exhibit higher job performance than the other archetypes.

## 11.2 Methods

### 11.2.1 Measurements Items

An online questionnaire was used to collect data from participants. The usage items were developed and refined in previous chapters (chapter 8, 9, 10). Eight items measured deep hedonic SNS usage reflecting the degree to which users use SNS in the workplace to interact in a social way with others e.g. sharing information that is fun-filled.

Five items measured deep utilitarian SNS usage reflecting the degree to which users use SNS in the workplace e.g. to interact and communicate with others to obtain work advice or support.

Two workplace outcomes were identified. Job performance was measured as five items reflecting self-assessment of performance at work (Singh, Goolsby and Rhoads, 1994). Job satisfaction was measured as three items reflecting the individual's sense of fulfilment at work (Lambert, Hogan and Altheimer, 2010; Singh, Goolsby and Rhoads 1994).

### 11.2.2 Research Context and Sampling

The population of interest for this study is employees of South African firms. The number is estimated to be over 10 Million as per the Trading Economics report of 2018. The study was targeting all employees irrespective of the nature of work, type of SNS platform, or the type and amount of usage.

As per the empirical work presented in prior chapters, this chapter's study also targeted a nationwide sample of respondents to avoid any geographic bias or differences in regional availability of SNS platform options. Because of this, a specific nationwide audience that was

expected to use a wide range of SNS needed to be targeted for data collection. The sampling frame used for the study was the same database as per prior chapters[14].

Overlap with individuals sampled for the previous study (Chapters 9 and 10) was avoided by first removing those from the sampling frame of 350 000 and a unique sample of 5 500 email addresses was randomly drawn. The survey instrument was sent as a link on email to the randomly drawn 5 500 members of the database (a different group from the one used in chapter 9 was targeted) notifying them of this survey and inviting their participation.

The survey was open for 6 weeks, and after the third week the first reminder was sent, followed by the second reminder a week later. The number of reminders and timing was based on past studies' recommendations (e.g. Cook et al., 2000; Kittleson 1995; Nulty, 2008; Zuniga, 2004), who pointed out that more than three reminders may see inevitable diminishing return on this investment coupled with the possibility of irritating the survey population.

## 11.3 Results

### 11.3.1 Data Preparation

After 6 weeks, a total of 214 responses were received. Since the questionnaire was online, the data was received in an electronic format and imported to SPSS version 25. The first step of data preparation was coding e.g. deep hedonic SNS use was coded as HU, deep utilitarian SNS use as UU, job satisfaction as SAT and job performance as PER. The next step was data cleaning which was used to identifying inconsistent responses, missing data and outliers (Malhotra and Birks, 2007). This is an important step because failure to do so creates potential problems that may affect the results of the statistical tests (Hair et al., 2010). Four response were missing more than 10% of the item values. The respondents missed some of the demographics questions and other parts of the questionnaire. These were deleted from the dataset. The remaining 210 responses were complete as regards to demographics and did not have large amounts of missing items nor were any outliers detected[15]. Only 7 respondents were each missing on average two items value (Likert scale). These values were replaced using series mean.

### 11.3.2 Respondent Profile

The total number of usable responses was 210 (from 5500 sent emails). Considering that the survey was administered online, a response rate of 4.2 % is not unexpected and is similar to previous chapters (chapter 8, 9 and 10) and other studies which have used the same method of data collection (e.g. Kuegler, Smolnik and Kane, 2015; Moqbel and Kock, 2018; Wilden and Gudergan, 2015).

[14] As described in previous chapters, the database consisted of employees of different firms across the industries and provinces in South Africa. The database comprises of more than 350 000 employees who signed up and agreed to complete online surveys. It was presumed that this population would be more representative of the employees of South African firms. Although the sample may not cover the general population of employees in South Africa, it addresses the needs of this study.

[15] Box plots visually show the distribution of numerical data and skewness through displaying the data quartiles (or percentiles) and averages (Hofmann, Wickham and Kafadar, 2017). Box plots will show values that are extreme i.e. 1.5 to 3 times greater than the inter-quartile range (Q1 - 1.5 * IQR or Q3 + 1.5 * IQR).

The respondents included 119 males, 90 females and one respondent preferred not to state their gender.

### 11.3.3 Analysis Method and Results

After addressing the outliers and missing values the data was subjected to factor analysis. Factor analysis was performed on the items to determine the underlying structure of the proposed variables before proceeding with subsequent analysis. SPSS software was used to perform principal component analysis (PCA).

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was performed, the value was 0.850 which is above the threshold of 0.50 (Hair et al., 2010). The value indicates that the data is appropriate to be used for principal component analysis. A total of 19 items were loaded for principal component analysis. All the factors loaded above the 0.7 threshold, and none of them cross-loaded (Pallant, 2005; Hair et al., 2010). The remaining 19 items together with their loadings are shown in Table 11.1, and they explain 76% of the total variance.

**Rotated Component Matrix[a]**

| | Component | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| SMEAN(HU1) | 0.769 | | | |
| SMEAN(HU2) | 0.796 | | | |
| SMEAN(HU3) | 0.858 | | | |
| SMEAN(HU4) | 0.847 | | | |
| SMEAN(HU5) | 0.876 | | | |
| SMEAN(HU6) | 0.867 | | | |
| SMEAN(HU7) | 0.738 | | | |
| SMEAN(UU1) | | | 0.783 | |
| SMEAN(UU2) | | | 0.886 | |
| SMEAN(UU3) | | | 0.934 | |
| SMEAN(UU4) | | | 0.869 | |
| SMEAN(SAT1) | | | | 0.908 |
| SMEAN(SAT2) | | | | 0.934 |
| SMEAN(SAT3) | | | | 0.917 |
| SMEAN(PER1) | | 0.768 | | |
| SMEAN(PER2) | | 0.861 | | |
| SMEAN(PER3) | | 0.800 | | |
| SMEAN(PER4) | | 0.757 | | |
| SMEAN(PER5) | | 0.854 | | |

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

*Table 11.1: Principal Component Analysis Results*

The results of the PCA indicate that the items converged, and the Cronbach's alphas were good, all above 0.7 threshold (Nunnally and Bernstein, 1994). The composite variables were created by calculating the average score of the indicator variables' scores (Lin and Kim, 2016).

11.3.3.1 Segmenting the Archetypes

K-means clustering is usually used for market segmentation in marketing (e.g. Kim and Ahn, 2008; Wu, 2009; Yi et al., 2013), to segment customers to get a better understanding of them.

As described by Steinley (2006), the K-means method is designed to partition two-way, two-mode data (that is, N objects each having measurements on P variables) into K classes (C1, C2, ::: ,CK), where Ck is the set of nk objects in cluster k, and K is given. If XN£ P ¼ {xij}N£ P denotes the N £ P data matrix, the K-means method constructs these partitions so that the squared Euclidean distance between the row vector for any object and the centroid vector of its respective cluster is at least as small as the distances to the centroids of the remaining clusters. The centroid of cluster Ck is a point in P-dimensional space found by averaging the values on each variable over the objects within the cluster.

In this study *k*-means cluster analysis is performed on a table of *raw data,* where each row represents an object and the columns represent quantitative characteristics of the objects. These quantitative characteristics are called *clustering variables.* For example, in the table below there are 210 objects (SNS users), and there are four clustering variables, **hedonic, utilitarian, job satisfaction** and **job performance**.

The first step was to create standardised variables for each of the four clustering variables, as a way of making sure the variables are on equal scales. The cluster membership numbers and the ANOVA tables were created. The iteration and classify method was used, with 10 iterations. Four (4) clusters were selected because it seemed to provide better variation compared to others (e.g. 2,3 and 5).

The results of the k- means clustering confirm that the clustering model is stable with four clusters. The iteration converged after 8 iterations (Table 11.2).

**Iteration History[a]**

| | Change in Cluster Centers | | | |
|---|---|---|---|---|
| Iteration | 1 | 2 | 3 | 4 |
| 1 | 3.642 | 3.360 | 2.617 | 2.566 |
| 2 | 0.714 | 0.822 | 0.388 | 0.177 |
| 3 | 0.981 | 0.351 | 0.428 | 0.232 |
| 4 | 0.431 | 0.239 | 0.281 | 0.385 |
| 5 | 0.202 | 0.248 | 0.149 | 0.257 |
| 6 | 0.053 | 0.135 | 0.043 | 0.076 |
| 7 | 0.000 | 0.045 | 0.000 | 0.066 |
| 8 | 0.000 | 0.000 | 0.000 | 0.000 |

a. Convergence achieved due to no or small change in cluster centers. The maximum absolute coordinate change for any center is .000. The current iteration is 8. The minimum distance between initial centers is 7.902.

*Table 11.2: Iteration History*

The final cluster centers provided detailed information regarding the different clusters (Table 11.3). The cluster centers show the relative amplitude between the clusters (Charry, Coussement, Demoulin and Heuvinck, 2016). For example, cluster 3 on standardized scale has the highest utilitarian usage, while 4 has the lowest and cluster 2 has the highest job satisfaction levels. Based on the final cluster centers, and the categorisation in Figure 11.1, Cluster 1 reflects non-user, cluster 2 is the hybrid user, cluster 3 is a utilitarian user and cluster 4 is a hedonic user. The non-standardized variables were used for easy presentation of the clusters in Figure 11.2.

| **Final Cluster Centers** | | | | |
|---|---|---|---|---|
| | Cluster | | | |
| | 1 | 2 | 3 | 4 |
| Zscore(Compo_HU) | 0.73254 | -0.79661 | 0.93331 | -0.00702 |
| Zscore(Compo_UU) | -0.31695 | -0.18280 | 0.98194 | -0.59275 |
| Zscore(Compo_SAT) | -0.17597 | 0.35396 | 0.37889 | -1.96885 |
| Zscore(Compo_PER) | -0.41413 | 0.24727 | 0.66747 | -1.60869 |

*Table 11.3: Final Cluster Centers*

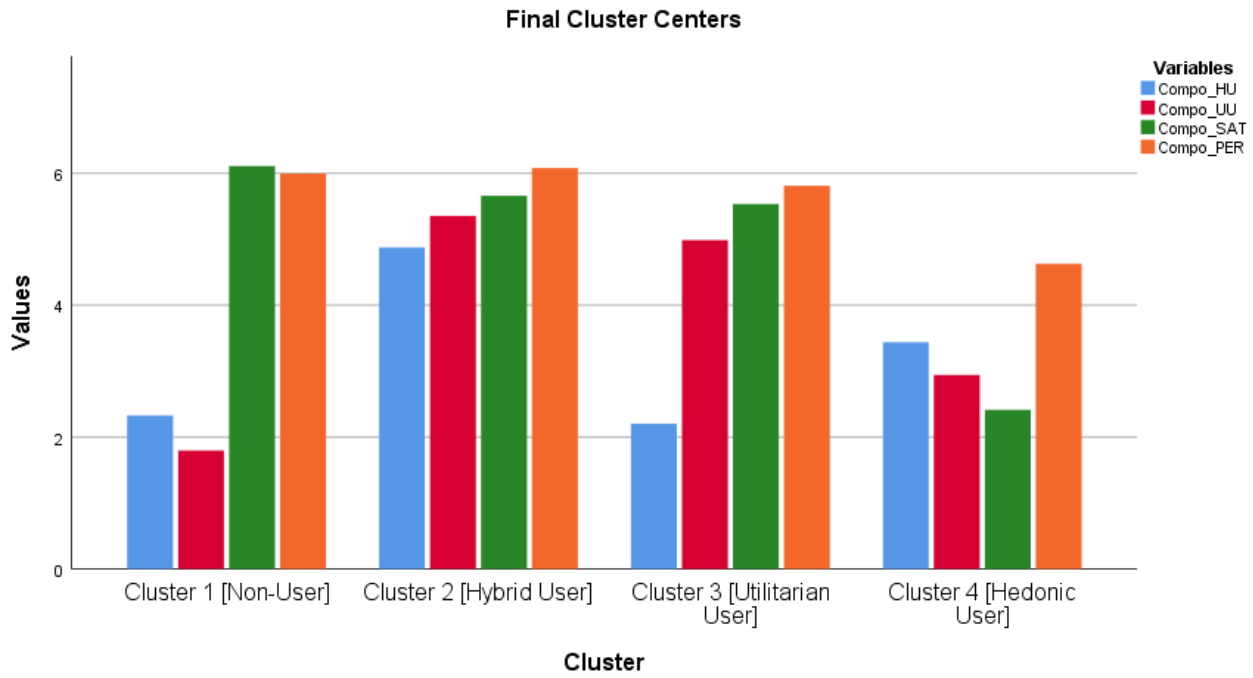



*Figure 11.2: Graphical Representation of the Final Cluster Centers*

Furthermore, the number of cases per cluster were reported, see Table 11.4. Cluster 1 (non-users) had 22 members, cluster 2 (hybrid users) had the highest members at 96, cluster 3 (utilitarian users) had 46 members, and the lowest members were in cluster 4 (hedonic user), with 22.

| Number of Cases in each Cluster | | |
|---|---|---|
| Cluster | 1 | 46.000 |
| | 2 | 96.000 |
| | 3 | 46.000 |
| | 4 | 22.000 |
| Valid | | 210.000 |

*Table 11.4: Table of Number of Cases Per Cluster*

As shown above, there are difference between the clusters. The ANOVA test was used to verify the differences in terms of the variable's means between the clusters. The results are in Table 11.5.

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| | Cluster | | Error | | | |
| | Mean Square | df | Mean Square | df | F | Sig. |
| Zscore(Compo_HU) | 41.892 | 3 | 0.404 | 206 | 103.569 | 0.000 |
| Zscore(Compo_UU) | 19.971 | 3 | 0.724 | 206 | 27.594 | 0.000 |
| Zscore(Compo_SAT) | 35.112 | 3 | 0.503 | 206 | 69.774 | 0.000 |
| Zscore(Compo_PER) | 30.395 | 3 | 0.572 | 206 | 53.147 | 0.000 |
| The F tests should be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and | | | | | | |

*Table 11.5: ANOVA Results*

The results indicate that the four variables each had significant impact on determining which cluster was allocated to them, the F-statistics are all above 2.58 threshold, and significant ($p<0.001$), similarly, there is a significant difference in terms of each of the four variable's means between the clusters.

Finally, the difference of means test (One-way ANOVA) was done to examine the difference of the four variables across the clusters. The results are shown in Table 11.5 (high level) and Table 11.6 (detailed).

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| | | Sum of Squares | df | Mean Square | F | Sig. |
| Zscore(Compo_HU) | Between Groups | 110.583 | 3 | 36.861 | 77.155 | 0.000 |
| | Within Groups | 98.417 | 206 | 0.478 | | |
| | Total | 209.000 | 209 | | | |
| Zscore(Compo_UU) | Between Groups | 142.285 | 3 | 47.428 | 146.446 | 0.000 |
| | Within Groups | 66.715 | 206 | 0.324 | | |
| | Total | 209.000 | 209 | | | |
| Zscore(Compo_SAT) | Between Groups | 118.921 | 3 | 39.640 | 90.653 | 0.000 |
| | Within Groups | 90.079 | 206 | 0.437 | | |
| | Total | 209.000 | 209 | | | |
| Zscore(Compo_PER) | Between Groups | 48.551 | 3 | 16.184 | 20.778 | 0.000 |
| | Within Groups | 160.449 | 206 | 0.779 | | |
| | Total | 209.000 | 209 | | | |

*Table 11.6: One-Way ANOVA Results*

Table 11.6 confirms that the differences between the groups/clusters is significant ($p<0.001$). However, drilling into the details (Table 11.7), some of the differences of the variables between the clusters are not significant. For example, SNS hedonic usage for non-users and utilitarian users is not statistically significant, but it is significant for other clusters. Similarly, the job satisfaction levels for non-users and hybrid users is not statistically significant.

**Multiple Comparisons**

Bonferroni

| Dependent Variable | | | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound |
| Zscore(Compo_HU) | 1 | 2 | -1.68107939* | 0.13557969 | 0.000 | -2.0422606 | -1.3198982 |
| | | 3 | 0.08145940 | 0.12509842 | 1.000 | -0.2517999 | 0.4147187 |
| | | 4 | -.73314880* | 0.15187393 | 0.000 | -1.1377375 | -0.3285601 |
| | 2 | 1 | 1.68107939* | 0.13557969 | 0.000 | 1.3198982 | 2.0422606 |
| | | 3 | 1.76253879* | 0.12650341 | 0.000 | 1.4255366 | 2.0995410 |
| | | 4 | .94793059* | 0.15303329 | 0.000 | 0.5402534 | 1.3556078 |
| | 3 | 1 | -0.08145940 | 0.12509842 | 1.000 | -0.4147187 | 0.2517999 |
| | | 2 | -1.76253879* | 0.12650341 | 0.000 | -2.0995410 | -1.4255366 |
| | | 4 | -.81460820* | 0.14382958 | 0.000 | -1.1977669 | -0.4314495 |
| | 4 | 1 | .73314880* | 0.15187393 | 0.000 | 0.3285601 | 1.1377375 |
| | | 2 | -.94793059* | 0.15303329 | 0.000 | -1.3556078 | -0.5402534 |
| | | 3 | .81460820* | 0.14382958 | 0.000 | 0.4314495 | 1.1977669 |
| Zscore(Compo_UU) | 1 | 2 | -1.98230745* | 0.11162792 | 0.000 | -2.2796817 | -1.6849332 |
| | | 3 | -1.77779765* | 0.10299829 | 0.000 | -2.0521827 | -1.5034126 |
| | | 4 | -.63843689* | 0.12504358 | 0.000 | -0.9715501 | -0.3053236 |
| | 2 | 1 | 1.98230745* | 0.11162792 | 0.000 | 1.6849332 | 2.2796817 |
| | | 3 | 0.20450980 | 0.10415507 | 0.306 | -0.0729569 | 0.4819765 |
| | | 4 | 1.34387056* | 0.12599813 | 0.000 | 1.0082144 | 1.6795267 |
| | 3 | 1 | 1.77779765* | 0.10299829 | 0.000 | 1.5034126 | 2.0521827 |
| | | 2 | -0.20450980 | 0.10415507 | 0.306 | -0.4819765 | 0.0729569 |
| | | 4 | 1.13936077* | 0.11842037 | 0.000 | 0.8238916 | 1.4548299 |
| | 4 | 1 | .63843689* | 0.12504358 | 0.000 | 0.3053236 | 0.9715501 |
| | | 2 | -1.34387056* | 0.12599813 | 0.000 | -1.6795267 | -1.0082144 |
| | | 3 | -1.13936077* | 0.11842037 | 0.000 | -1.4548299 | -0.8238916 |
| Zscore(Compo_SAT) | 1 | 2 | 0.27170859 | 0.12970930 | 0.224 | -0.0738340 | 0.6172512 |
| | | 3 | .34738711* | 0.11968185 | 0.025 | 0.0285574 | 0.6662168 |
| | | 4 | 2.23021686* | 0.14529802 | 0.000 | 1.8431463 | 2.6172875 |
| | 2 | 1 | -0.27170859 | 0.12970930 | 0.224 | -0.6172512 | 0.0738340 |
| | | 3 | 0.07567852 | 0.12102600 | 1.000 | -0.2467320 | 0.3980890 |
| | | 4 | 1.95850828* | 0.14640718 | 0.000 | 1.5684829 | 2.3485337 |
| | 3 | 1 | -.34738711* | 0.11968185 | 0.025 | -0.6662168 | -0.0285574 |
| | | 2 | -0.07567852 | 0.12102600 | 1.000 | -0.3980890 | 0.2467320 |
| | | 4 | 1.88282975* | 0.13760198 | 0.000 | 1.5162612 | 2.2493983 |
| | 4 | 1 | -2.23021686* | 0.14529802 | 0.000 | -2.6172875 | -1.8431463 |
| | | 2 | -1.95850828* | 0.14640718 | 0.000 | -2.3485337 | -1.5684829 |
| | | 3 | -1.88282975* | 0.13760198 | 0.000 | -2.2493983 | -1.5162612 |
| Zscore(Compo_PER) | 1 | 2 | -0.08375781 | 0.17311258 | 1.000 | -0.5449258 | 0.3774102 |
| | | 3 | 0.17735910 | 0.15972975 | 1.000 | -0.2481573 | 0.6028755 |
| | | 4 | 1.32350635* | 0.19391760 | 0.000 | 0.8069143 | 1.8400984 |
| | 2 | 1 | 0.08375781 | 0.17311258 | 1.000 | -0.3774102 | 0.5449258 |
| | | 3 | 0.26111690 | 0.16152368 | 0.645 | -0.1691785 | 0.6914123 |
| | | 4 | 1.40726416* | 0.19539791 | 0.000 | 0.8867286 | 1.9277997 |
| | 3 | 1 | -0.17735910 | 0.15972975 | 1.000 | -0.6028755 | 0.2481573 |
| | | 2 | -0.26111690 | 0.16152368 | 0.645 | -0.6914123 | 0.1691785 |
| | | 4 | 1.14614726* | 0.18364631 | 0.000 | 0.6569177 | 1.6353768 |
| | 4 | 1 | -1.32350635* | 0.19391760 | 0.000 | -1.8400984 | -0.8069143 |
| | | 2 | -1.40726416* | 0.19539791 | 0.000 | -1.9277997 | -0.8867286 |
| | | 3 | -1.14614726* | 0.18364631 | 0.000 | -1.6353768 | -0.6569177 |

*. The mean difference is significant at the 0.05 level.

*Table 11.7: Multiple Comparisons*

## 11.4 Discussion

### 11.4.1 Archetypes of SNS users

As a result of the k-means cluster analysis, four different user types were identified. These different user types were distinguished by their deep use of SNS namely deep hedonic SNS usage and deep utilitarian SNS usage (see Figure 11.3). Each of the four identified user types is discussed.

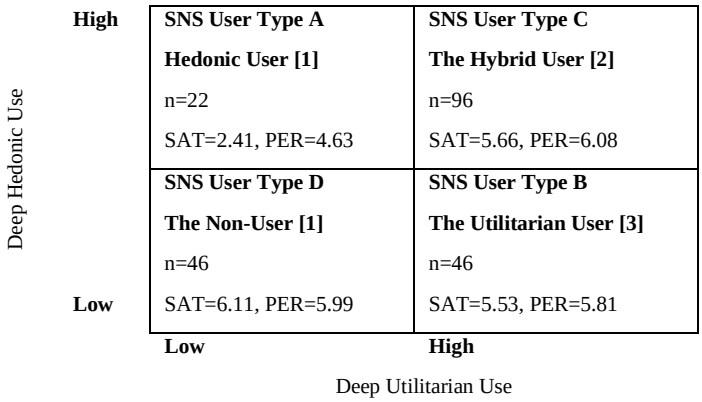



*Figure 11.3. Archetypes of SNS users*

Quadrant A is the upper left side of Figure 11.3 and represents low deep utilitarian SNS usage/high deep hedonic SNS usage. Users in this quadrant highly use SNS for hedonic purposes but rarely use it for work related purposes. They are likely to interact in a social way with friends, family and colleagues, as opposed to workplace communications on SNS. Job performance (PER) and job satisfaction (SAT) of users in this quadrant are the lowest (satisfaction is the lowest, mean=2.41, and performance is lowest, mean=4.63). The quadrant is made up of 22 users. It is the smallest quadrant in terms of the size of users. This is a hedonic user archetype.

Quadrant B is in the lower-right side of Figure 11.3 and represents low deep hedonic SNS usage/high deep utilitarian SNS usage. The quadrant is made up of employees who are less likely to use SNS for hedonic purpose but are more likely to use it for utilitarian purposes. They are more likely to use SNS for workplace communication or to obtain feedback about work products, more than using it to follow events that are of personal interest. Users in this quadrant, their job satisfaction and job performance are both rated third compared to others (SAT mean=5.53, PER mean=5.81). There are 46 users in this quadrant. This is a utilitarian user archetype.

Quadrant C is in the upper right side of Figure 11.3 and represents high deep hedonic SNS usage/high deep utilitarian SNS usage. Employees in this quadrant use SNS highly for both hedonic and utilitarian purposes. They are likely to highly use SNS to interact or share information with family and friends, similarly, they are like to use SNS to gain assistance from others on work related tasks. This is the largest quadrant with 96 users. Users in this quadrant have been found to be highly satisfied with their work (mean=5.66, second highest) and performance even more (performance is the highest=6.08 among the clusters). This is a hybrid user archetype.

Quadrant D is the lower left side of Figure 11.3 and represents low deep hedonic SNS usage/low deep utilitarian SNS usage. This quadrant is made up of users SNS at a lower level for both deep hedonic and deep utilitarian SNS usage. For example, these are users who seldomly uses SNS to

seek information about family and friends, and they rarely use it to gain assistance from others. Employees in this quadrant have been found to have the highest levels of job satisfaction (mean=6.11) and second highest job performance (mean=5.99). This suggests that emloyees who do not use SNS at work might be focused on doing their job, and they have less distractions, hence, the improved performance. Similarly, results from chapter 9 and chapter 10 suggested that employees who are not satisfied with their jobs tend to use SNS as a way to escape from work activities. The results of this study are consistent with those in chapter 9 and 10, since the employees are highly satisfied, they tend to use SNS seldomly. This is the second largest quadrant, with 46 users, a similar membership to quadrant B. This a little or non-user.

Taken together, the results indicate that highest hedonic usage will yield the lowest level of job satisfaction and lowest job performance (i.e. hedonic user). Non-users have the highest satisfaction, followed hybrid users. Hybrid users have the highest performance, but not satisfaction. Therefore, hypothesis 1 is rejected. Altogether, the results clearly indicate that the differences are statistically significant between clusters 1, 2, and 3 on performance. Therefore, in terms of statistical significance hypothesis 2 would also be rejected.

## 11.5 Implications and Limitations

The implications for this study are both theoretical and practical. Theoretically, this study contributes to the discussion around the SNS usage behaviour, user archetypes, and the implication for user outcomes. Past studies have not segmented user archetypes based on hedonic and utilitarian user behaviour. The approach taken by this study will contribute to addressing calls made, to enrich the theoretical and empirical conceptualization of usage. Further, other researchers can refine their understanding of SNS usage behaviour guided by the archetypes proposed.

Practically, SNS providers and organizations are still searching for answers regarding the use and impacts of SNS in the workplace. The archetypes will guide the providers to present SNS which are based on a particular user in mind. This can only happen, provided that a user has been accurately composed and constitutes a valid representation. Organisations, can formulate policies and introduce mechanism such as support based on the archetypes. For example, organisations might discourage the use of SNS for hedonic purposes at work. The results indicated that using SNS highly for hedonic purposes but rarely using it for work related purposes is likely to result in poor job performance and poor job satisfaction. Further, to be on the safe side and obtain better outcomes employees can ignore SNS while at work (e.g. a non-user). As users of SNS, the archetypes will guide us on how best to use SNS. For example, hedonic users (cluster 4) are lowest in satisfaction and performance. SNS solely for hedonic use has no useful workplace outcomes (chapter 10 results suggested the same). However, when combined with utilitarian use, it can improve performance (cluster 2).

This study has limitations. The study survey was conducted in South Africa, thus it might not be generalized to the world population. Examining the relationships in different geographical context might yield more answers because of the different cultures. The study used gender as the only demographic, more demographics such as age can be used.

## 11.6 Conclusions

The study extended previous research by creating SNS user archetypes based on hedonic and utilitarian usage behavior and examining the implications for user outcomes. The results suggest that using SNS at a high level for both hedonic and utilitarian purpose is likely to yield high

workplace outcomes, such as job performance. However, these performance levels are comparable to non-users. Based on the theorisation of past studies (e.g. Zhang et al.,2016), the results are expected. They suggested that the use of SNS leads to improved social support which in turn improves job performance and job satisfaction. However, other studies have not found significant links between SNS and performance (e.g. chapter 10; Moqbel, 2012). Past studies suggested that hedonic use is positive for job satisfaction (e.g. Ali-Hassam et al., 2015), conversely, this study goes beyond those findings and suggests that hedonic use has to be paired with utilitarian use for it to yield improved job satisfaction, this is consistent with user archetype C (hybrid user). Consistent with the results in chapter 9 and 10, users who are not satisfied with their jobs tend to use SNS highly for hedonic purposes (i.e. hedonic users). This hints at an unexpected inverse relationship. The next chapter summarise and concludes the thesis. It addresses and discusses the research questions, as formulated in chapter one, drawing upon the research findings and will be followed by implications and suggestions for future research, and finally the conclusions of the thesis.

# CHAPTER 12: SUMMARY AND CONCLUSION

## 12.0 Summary of the Thesis

This doctoral thesis has contributed to the following questions:

RQ 1: What is the available evidence regarding the effects of motivation on technology user behaviour?

RQ 2: What is the available evidence regarding the impact of SNS usage behaviour on work outcomes?

RQ 3: What is the appropriate conceptualization of SNS usage behaviour given its hybrid hedonic and utilitarian nature?

RQ 4: What are the effects of motivation on SNS usage behaviour?

RQ 5: What is the impact of SNS use on individual work outcomes?

RQ 6: What are the SNS user archetypes, and their implications for user outcomes?

The study has addressed the motivations and outcomes of SNS usage in the workplace. More specifically, it carried out a narrative review of existing work (Chapters 3 and 5), synthesized the literature on motivations and outcomes (Chapters 4 and 6), developed and validated a multi-dimensional SNS usage construct (Chapter 8), tested the effects of hedonic-intrinsic motivation and utilitarian-extrinsic motivation on SNS usage (Chapter 9), examined the effects of SNS usage on social support, behavioural and psychological workplace outcomes (Chapter 10), and finally developed a set of SNS user archetypes (Chapter 11). To do so, this thesis adopted three research designs namely the systematic literature review, meta-analysis and cross-sectional survey methods. A more detailed summary of the work follows.

To identify the shortcomings of existing literature, a comprehensive narrative literature review was carried out on utilitarian vs hedonic information systems and the hybrid nature of social network system. Prior works on SNS usage, the motivational determinants of usage and the notion of workplace outcomes were also explored. These were presented in Chapters 2, 3 and 5.

Building on that narrative literature review, a meta-analytic study on the effect of motivation on information systems usage was carried out and presented in Chapter 4. The meta-analytic study was used to address research question 1 and aggregate the empirical findings from across prior studies examining the link between intrinsic, extrinsic, hedonic and utilitarian motivations and information systems usage. Bare bones and true score correlations were calculated and moderation analysis was performed. The results showed that enjoyment has the strongest effect on behavioural intentions in hedonic systems and reward exerts a strong effect in the context of utilitarian systems. The review thus highlighted motivations to subsequently be explored in the context of hybrid SNS systems.

A systematic literature review on the impact of SNS use on psychological and behavioural outcomes in the workplace was undertaken to address research question 2 (Chapter 6). SNS use in the workplace was found to be positively associated with job satisfaction, job performance, innovative behaviour, employee engagement, and knowledge sharing, with knowledge sharing the most supported workplace outcome. The evidence does not support SNS use as being associated with negative behaviours like absenteeism and turnover intentions. Evidence of effects on behavioural outcomes such as presenteeism, organisational citizenship behaviour, and psychological outcomes such as employee involvement were limited.

Further, Chapter 8 presented results of qualitative and quantitative approaches used to develop and validate the measurement items of a multi-dimensional SNS usage construct. This construct was composed of deep hedonic usage, deep utilitarian usage and cognitive absorption. The study addressed research question 3 and presented the results of a multi-phase process used to develop and validate measures of the deep structure SNS usage construct from both hedonic and utilitarian perspectives. Through the cross-sectional approach, the results show that deep structure usage is best modelled as a reflective second order construct with three first order dimensions reflecting hedonic use, utilitarian use, and cognitive absorption. In so doing, research question 3 was addressed.

Through a cross-sectional study focused on motivations as determinants of system use, the study addressed research question 4 and explained the influence of selected motivations on SNS user behavior (Chapter 9). The thesis chapter showed that hedonic-intrinsic motivations and utilitarian-extrinsic motivations, positively influences SNS usage. Specifically, hedonic-intrinsic motivations and utilitarian-extrinsic motivations both positively influence cognitive absorption. Further, utilitarian-extrinsic motivations positively influence deep utilitarian motivations, while hedonic-intrinsic motivations positively influence deep hedonic usage. Despite prior evidence suggesting that hedonic-intrinsic motivations positively influence deep utilitarian usage, and utilitarian-extrinsic motivations positively influence deep hedonic usage, the results on each of these relationships reflect quite clearly that the effect is quite small and not statistically significant. This chapter also found that employees' deep SNS usage (hedonic, utilitarian and cognitive absorption) has minimal effect on job performance. The relationships between deep utilitarian SNS usage and job satisfaction, cognitive absorption and job satisfaction were found to be none significant. However, the relationship between deep hedonic SNS usage and satisfaction was found to be significant. Surprisingly, this effect of deep hedonic SNS usage on job satisfaction was negative.

Through the cross-sectional study focused on workplace outcomes (research question 5, chapter 10), the study established the relationship between SNS usage and individual workplace outcomes, including examination of any mediating factors between SNS usage and these outcomes. The thesis showed that utilitarian usage seems important in the workplace. Further, all the three dimensions of usage promote social support. However, the link between using SNS for social support and outcomes was not significant, thus suggesting that there might be other intervening mechanisms playing a role. The direct effects of SNS use on outcomes indicate that SNS use tends largely to promote negative outcomes like burnout, absenteeism and work-life conflict.

Finally, the study addressed research question 6 and extends previous research by creating SNS user archetypes based on hedonic and utilitarian usage behavior and examining the implications for user outcomes (Chapter 11). SNS users we segmented into four (4) quadrants. Each quadrant indicates SNS usage behaviour and its implication on job satisfaction and job performance. The quadrants are hedonic users, utilitarian users, hybrid users and non-users. The results indicate that SNS solely for hedonic use has no useful workplace outcomes (i.e. hedonic users). However, when combined with utilitarian use, it can improve performance. Next, the theoretical and methodological limitations of this study are discussed.

### 12.1 Implications for Theory and Research

This thesis has several valuable implications for theory and research. First, this thesis undertook a comprehensive review of motivations as determinants of use and, workplace outcomes. Research in the field of information systems and business is accelerating at a tremendous speed while at the same time remaining fragmented and interdisciplinary (Lamb et al., 2018; Synder, 2019). The narrative review was inclusive and interdisciplinary and provided important insights into areas in which the research is deficient and disparate and on which future work could build.

Through the meta-analytic approach, the thesis confirmed that enjoyment, playfulness, enjoyment, reward, interaction, and entertainment do, on average, exert strong effects on IS usage constructs, most notably on behavioural intention and perceived usefulness. Also, enjoyment as a motivation has, on average, the highest correlation with behavioural intention, and social interaction motivation has the highest correlation with usage. Extending Wu and Lu (2013), this study observed how different motivations interact with TAM constructs. Enjoyment had the highest correlation with PU and PEOU. This meta-analysis also included hedonic motivations (e.g. social interaction), utilitarian motivations (e.g. convenience), and other intrinsic motivations (e.g. entertainment and curiosity) not considered in their work.

Further, the meta-analysis provided a benchmark against which future studies can compare their effect sizes. The results obtained in chapter 9 were consistent with the results (effect sizes) obtained in the meta-analysis. For example, intrinsic-hedonic motivations had higher effects on hedonic usage (similar to higher effects on hedonic systems, obtained in the meta analysis). The influences of moderating effects were identified, through the examination of the heterogeneity of effect sizes. In addition to the heterogeneity of effect sizes, the moderating effects were identified. In particular, intrinsic motivation may be more important in student samples, and based on Gu, Fan, Suh and Lee (2010) that extrinsic and utilitarian motivations may be more important to non-student samples e.g. workers (chapter 9 confirmed this for workers). The study established that culture may be an important moderator of effect sizes and might explain differences in findings across studies. Further, the mobility of a system may be a moderator of effect sizes and similarly may explain why studies report varying effect sizes, such as between enjoyment and intention which was shown to be higher for hedonic systems. Therefore, studies of motivations and usage should be carried out across different country contexts.

Through the systematic literature review, the thesis reviewed the state of the existing evidence regarding the impact of SNS use on individuals' outcomes in the workplace. The review provided

the theoretical rationale and evidence regarding the impact of SNS on individuals' outcomes in the workplace. Ten (10) workplace outcomes were identified from the reviewed literature. Of these, knowledge sharing and job performance are two outcomes that have been examined most often. On the other hand, less attention has been paid to study of outcomes such as absenteeism.

The findings indicate that SNS has been associated in past work with certain types of behavioural and psychological outcomes, and that its hybrid nature suggests that it can contribute to behaviours such as knowledge sharing, performance and innovation. Novel insights generated include the classification of outcomes into behavioural and psychological work outcomes, and the identification of negative and positive impacts of SNS usage on these outcomes in the workplace. It has been found that SNS usage can have positive and negative results depending on how it is used.

Through the cross-sectional approaches, the thesis proposed and validated a multi-dimensional social network site usage construct. Usage has been conceptualised as a multi-dimensional construct consisting of deep structure hedonic usage, deep structure utilitarian usage and cognitive absorption (Burton-Jones and Straub, 2006). The conceptualization of SNS usage in past studies was largely atheoretical and not context dependent. This resulted in those works using narrow measures of SNS usage. In an attempt to address the shortcomings in conceptualization of SNS usage this study proposes a multi-dimensional SNS usage construct, consisting of hedonic deep structure usage, utilitarian deep usage and cognitive absorption. Findings from past studies examining the relationship between SNS usage and work outcomes are also not consistent. With the proposed SNS usage, each dimension can be associated with certain outcomes thus improving how we can explain the relationships between use, motivations and outcomes.

The thesis further contributed by extending theory of how and why SNS usage occurs in a workplace context. The thesis integrates hedonic motivation system adoption model (HMSAM) (Lowry et al., 2013) with self-determination theory (Deci and Ryan, 2000) and hedonic-utilitarian theory (Batra and Ahtola, 1991; Hirschman and Holbrook, 1982), to explain SNS use and reinforce the speculation regarding an immediate theoretical correspondence between the different SNS uses and the different motivations. This thesis is the first to integrate the three selected theories. The motivations studied included hedonic and intrinsic (hedonic-intrinsic motivations), utilitarian and extrinsic motivations (utilitarian-extrinsic motivations). The intrinsic motivations include enjoyment, entertainment (Deci and Ryan, 2000), and hedonic motivations considered were social interaction and escapism (Wu, 2009). Rewards were considered as extrinsic motivations (Deci and Ryan, 2000), while convenience and perceived usefulness were utilitarian motivations (Toa et al., 2013). In understanding the how and why, the relationship between motivations and the different SNS usages in the workplace were clarified.

The empirical results indicate that SNS users are driven by hedonic-intrinsic motivations to take part in hedonic usage activities when using SNS at work. Similarly, their participation in utilitarian usage activities is driven by utilitarian-extrinsic motivations. Both motivations drive SNS users to be immersed and spend long hours when using SNS.

This thesis also contributes to social support theory by clarifying the relationship between SNS use and social support, and outcomes. Spending too much time absorbed in SNS detracts from knowledge sharing, adds to absenteeism, burnout, work life conflict, and is associated with turnover. All together it seems cognitive absorption is a negative usage behaviour in the context of SNS as it does not promote positive outcomes. Hedonic use also does not seem to support positive outcomes because it seems linked to turnover and absenteeism, while utilitarian use results in burnout. Taken together results seem to suggest SNS use has limited positive outcomes for individuals in the workplace is not a good thing. While SNS use promotes social support, using SNS for social support is not associated with higher performance, innovation or other positive outcomes or behaviours. Therefore, social support is not a sufficient reason to justify employee engagement in SNS use.

The four archetypes developed provide a new lens that can help researchers better explain SNS user behaviour. Although the four archetypes developed in this research came from SNS context, they are likely to apply well to other contexts, especially hybrid hedonic-utilitarian systems. The identified SNS archetypes indicate that the SNS user base consists of very different users with respect to usage behaviour and outcomes. Notably, the study has revealed that hedonic users have lowest satisfaction and lowest performance, non-users have highest satisfaction, followed by hybrid users, and hybrid users have highest performance. This study is a foundation for future research aiming to improve SNS usage. It provides an overview of differences in SNS usage that SNS technologies need to cater for.

Moreover, the thesis consistently (chapter 9, 10, 11) revealed there is an inverse relationship between hedonic SNS usage and job satisfaction. That is, employees who are not satisfied with their jobs tend to use SNS as a mechanism to escape. This is a noteworthy finding, it is providing an explanation different from past studies (e.g. Charoensukmongkol, 2014; Moqbel et al., 2013; Zhang et al., 2019).

### 12.2 Implications for Practice

The findings of this thesis have the following practical implications.

First, because hedonic motivations have been found to be key in using information systems, developers have to consider how to include hedonic features. Organisations should not only focus on development of systems that are solely utilitarian in nature, they have to try and fulfil employees' hedonic motivations. When designing information systems, the focus has been the system's usefulness and ease of use, however, enjoyment can influence both. Therefore, users who find the information system to be enjoyable are likely to find it useful and ease to use.

Second, the meta-analytic review found culture to have a moderating role on the relationship between certain motivations e.g. reward and user behavior. This finding cannot be ignored, particularly within global firms. Practitioners need to build different promotion strategies across different cultures or countries when thinking about how to motivate individuals to use information systems.

Third, the results of the study are useful to firms who approach the use of SNS in the workplace with scepticism. A number of organisations have implemented policies aimed to curb SNS use under the assumption that SNS use is largely associated with negative outcomes such as poor job performance and presenteeism. The findings seem to confirm that using SNS for social support does not increase positive outcomes, and that SNS use is largely associated with negative outcomes. However, the results are not sufficiently conclusive to support the recommendation that SNS usage should be banned.

Managers should pay attention to the increase in levels of negative outcomes as a consequence of SNS use. SNS deserve a certain level of control in the workplace. Its use can result in employees missing work, changing jobs, increased emotional exhaustion and work-life conflict.

Fourth, the multi-dimension SNS usage can help companies and human resource managers to better understand the association between SNS usage and workplace outcomes. Segmenting SNS usage will be helpful in instituting SNS regulations in organisations. Managers should not just group SNS usage or bundle it together, and ban the platforms. There may be specific categories of works for whom outcomes may be stronger and that needs to still be determined.

Fifth, the thesis showed that different motivations drive different SNS uses. Since usage of any SNS is essential for its success, the results can help SNS developers to fully understand the critical factors that drive SNS use, which will allow them to develop better strategies to encourage usage when warranted. The results indicate that hedonic-intrinsic motivations influence deep hedonic SNS usage and cognitive absorption positively. Most of the utilitarian systems are focused on the work-related features and often pay less attention to hedonic features. However, this study has indicated that hedonic features (e.g. those that provide for enjoyment, entertainment) are important to both hedonic and utilitarian systems. Similarly, increasing hedonic/intrinsic functionalities will result in users spending more time on the platforms. SNS developers should also pay attention to the utilitarian aspect of the SNS.

The study on archetypes supports practical audiences and policy makers to better understand SNS user base. The different SNS user needs should also be reflected in SNS design. SNS providers must not only design new SNS platforms, rather, align with users' SNS preferences. They should include features that fit the specific needs of relevant user groups. Further, the study offers a framework that allows managers to better understand SNS user behaviors and their outcomes. It thus contributes to provide managers with the insight needed to develop appropriate management strategies. Based on the results, the suggestion is that users be allowed to customise their SNS interface based on their archetype such that the interface and features align to their primary user archetype. For example, a primarily utilitarian user should have the option for work-related features (e.g. a link to Facebook Workplace) and not to see entertainment features (i.e. hedonic features), while a primarily hedonic user may prefer not to see work-related features but instead have easier access to entertainment features (e.g. movies and music).

### 12.3 Methodological Implications

By bringing together systematic review protocols, meta-analysis, survey research with path modeling, moderation and mediation tests, along with the formulation of a framework for user

archetypes, this thesis has made several important methodological contributions to the study of SNS usage.

The development and validation of the multi-dimensional SNS usage construct measures is a methodological contribution. The items enabled empirical testing of the hypothesised structural models. The conceptualization of SNS usage into multi-dimensions based on theory of deep structure usage (Burton-Jones and Straub, 2006) is still new. Especially, based on SNS purpose namely deep hedonic and deep utilitarian usage. Therefore, the measures had to be defined and modified accordingly. The measures were validated in three chapters, using established methods, hence, it could be argued that the current research is among the very few to have done this.

The other contributions are through the use of (i) a meta-analysis, which provides a benchmark against which future studies can compare their effect size. Also, examining the heterogeneity of effect sizes helped in reaching a conclusion about the impact of moderators, (ii) the systems literature review (SLR) which is a scientific way of trying to resolve inconsistencies or questions that cannot be solved using traditional ways of research. These approaches are new in the information systems discipline but are common in fields such as medicine. This research through the meta-analysis verified the moderating role of culture, system type and sample.

The cross-sectional study (chapter 9) focused on motivations plotted the moderator effects using the Process Macro. The use of the Process Macro is still an innovative way of examining moderation (Hayes, Montoya and Rockwood, 2017). The study indicates that the effects of the different motivations on the different types of usage are independent of each other. Therefore, hedonic and utilitarian usage do not moderate each other.

The cross-sectional study focused on outcomes verified the mediating role of social support in the relationship between SNS usage and outcomes. The results seem to indicate that social support does not play any mediating role in the relationship.

The study is the first to segment SNS users into four quadrants based on deep hedonic and deep utilitarian usage. K-means clustering was used to segment SNS users into archetypes. This approach (segmenting SNS users in to archetypes) is rare in IS literature, but as evidenced in this study, it has been proven to be uniquely useful for understanding SNS usage behaviours and their implications for user outcomes. Therefore, the developed framework (SNS archetypes) can be used to guide future IS researchers.

### 12.4 Limitations and Future Research

It is important to note some limitations of this thesis. The limitations of the meta-analytic approach were detailed in chapter 4. A meta-analysis aggregates findings from studies that reported correlations and sample sizes, therefore certain relevant studies might have omitted because they did not report the correlations or sample size. As well, qualitative studies have been excluded. These studies might have provided useful insights into SNS user behavior. Access to a variety of databases has been identified as a challenge, the resource constraint limit access to a certain number of databases. Furthermore, in aggregating the findings, the meta-analytic approach results in losing the original study context.

Despite all the efforts to undertake a comprehensive search and review of the articles, a few limitations are noted in the undertaking the systems literature review. Some of the articles were excluded due to the language barrier. They were not in English and this may have resulted in the authors omitting important papers. The articles which met the inclusion criteria were all published papers and other papers which were not published may have been left out. This may result in missing of important studies due to the problem of publication bias.

The cross-sectional studies (chapter 8, 9, 10, 11) have limitations such as causal inferences which were detailed in each chapter. While longitudinal designs can provide better evidence of temporal precedence in the data, there is a practical difficulty in surveying an anonymous user group in multiple study rounds. While this was initially attempted, the response rates are low due to the difficulty in retaining participants in longitudinal work and matching their early and later round responses. Future research might also consider longitudinal designs.

Other limitations are typical of a survey work such as social desirability bias, acquiescing bias, non-response bias, and sampling bias amongst others. Respondents are more likely to endorse and exaggerate responses if the question relates to socially acceptable/unacceptable behavior. For example, asking an employee if they use SNS for non-work purposes at work. The employees will have propensity to provide the socially desirable response over the true response. To minimise this bias, the survey was delivered online (no physical contact between the researcher and the respondents) and anonymous.

Acquiescing is when the respondent shows a tendency to agree with whatever it is being asked. Respondents are likely to acquiescence as they try to spend less time and effort on the survey. This was mitigated by making the survey short and precise. The phenomenon of SNS is taken to be an interesting and simple one, thus effortless to respondent to its questions.

Non-response bias is a major limitation especially when using online surveys. It occurs due to the discrepancy in characteristics between the respondents and non-respondents. It is difficult to avoid non-response bias, however, this study mitigated it by aiming for a reasonably high overall response rate consistent with prior work. Getting a higher response increased the chances of participation by enough people in the target groups thus reducing the risk of nonresponse bias. More than one reminder was sent to encourage participation.

Sampling bias is likely to occur when some members of the intended population are less likely to be surveyed than others. The study mitigated this through the use of large database and a random selection of the respondents from a randomly selected sample from the database.

The self-reporting done by respondents in surveys, and collection of data at the same point in time and via the same instrument is a concern. There is a potential for common method variance. The use of more objective measures to mitigate the problems of biases in self-reported data is needed in future research.

In relation to external validity / generalisability, the external validity of research i.e. its generalisabilty to the population under study based on results obtained in the sample is always a

concern in survey work. By including randomisation in sample selection and in use of a large database, the thesis has attempted to reduce threats to the external validity of the findings.

## 12.5 Future Research

First, the items for the multi-dimensional SNS usage construct can be validated and refined further. The study was focused on SNS and not individual platforms, hence, the items can be validated in platform specific studies.

Second, in future, the proposed archetypes can be refined and validated empirically. The concept of archetypes can be extended by examining specific underlying structures of SNS user mindsets and their associated behaviour.

Third, cross-sectional study designs were used in this study. In future works, researchers may consider adopting supplementary longitudinal designs in order to examine and observe the long-term impacts of motivations on SNS usage, or the long-term impacts of SNS usage on outcomes. The approach was attempted in this study, however, it was not effective, as explained earlier. Longitudinal studies can be useful for additional, richer, insights into the examined relationships over an extended period of time, and as a methodological supplement to cross-sectional studies.

Fourth, future studies might consider different moderators or mechanisms which might play a role in the relationship between SNS usage and outcomes. Further, the idea of sub-group analysis might be helpful in trying to understand this relationship.

## 12.6 Conclusion

This study addressed the question of the impact of motivations on deep structure SNS usage, and the impact of SNS usage on outcomes. Through the use of different approaches, this study constitutes a significant contribution to an understanding of the motivations impelling SNS user behaviour, and mechanisms through which SNS impacts workplace outcomes, with far reaching implications for research and practice.

The study aggregated the available evidence, and confirmed the salience and impact of enjoyment on both utilitarian and hedonic system. Moreover, the study tested a model which was underpinned by three motivations theories, and suggests that intrinsic-hedonic motivations increase the usage of SNS. Further, the nil interaction effect of intrinsic-hedonic motivations and extrinsic-utilitarian motivations on SNS usage were confirmed.

Furthermore, the study confirmed the effect of SNS usage on social support, however, the results did not confirm significant effects of using SNS for social support on other workplace outcomes.

The findings of this study are essential to addressing the debate around the negative impact of SNS in the workplace by employing rigorous methodologies to provide evidence-based conclusions. As a consequence of this study, researchers and practitioners can better understand and explain the mechanisms through which SNS impact individual's workplace outcomes, and by extension, impact organisations. As a result of this work we are now better positioned to explain user behaviour, and design better SNS systems. Taken together, SNS usage is complex and multi-

dimensional, we have various motivations influencing these SNS usage behaviours, but usage does not itself seem to lead to any favourable outcomes.

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Zolkepli, I. A., & Kamarulzaman, Y. (2015). "Social media adoption: The role of media needs and innovation characteristics". Computers in Human Behavior, 43, 189-209.

Zolkepli, I. A., & Kamarulzaman, Y. (2015). "Social media adoption: The role of media needs and innovation characteristics". Computers in Human Behavior, 43, 189-209.

# 12. APPENDIX

## Appendix A: Database Permission Letter



iFeedback

Keep Track of Change, Trends and Opinions

15 March 2018

To Whom it may concern

RE: Interactive Direct Database

The database we proposed to use for this project is the Interactive Direct Database, It is a Business to Business database made up of 350,000 business people in South Africa. The reason for the use of this database is the accuracy and the research experience of the staff and ownership.

The agreement for this project will be in the form of a rental agreement for use for this project only. iFeedback will rent the database on Nugi Nkwe's behalf. He has permission to use it once the agreement has been concluded between Mr. Nkwe or WITS.

Please feel welcome to contact me for any further information

Regards

Adriaan Buys

## Appendix B: Interview Questions

**Qualitative Study: Interview Questions**

**Interview Guiding Questions**

Tell me a little about your work

What do you understand by SNS?

How do you think SNS can be used for work related purposes in general?

| **Overview** | **Guiding Question** |
|---|---|
| Hedonic and social | Describe your usage of SNS for social reasons e.g. entertainment or social interactions |
| | From the different social usages mentioned above, which is the most frequent and why? |
| | Describe the features provided by SNS that support your social SNS usage e.g. comments/updates/status |
| | |
| Workplace (utilitarian) | Describe your usage of SNS for work-related reasons e.g. work- related information |
| | From the different work usages mentioned above, which is the most frequent and why? |
| | Describe the features provided by SNS that support your work-related SNS usage e.g. getting assistance, learning |

## Appendix C: Quantitative Survey Motivations

# Questionnaire 1: Determinants of SNS usage

### Demographics

**Job role / Profession** (e.g. Accountant, Marketing officer etc.)_____

**Work Experience (**in total how many years**) _____**

**Number of years working in your current organization_____**

**You organisation's industry**

| | | |
|---|---|---|
| ☐ Oil & Gas | ☐ Basic Materials | ☐ Industrials |
| ☐ Consumer Goods | ☐ Health Care | ☐ Consumer Services |
| ☐ Telecommunications | ☐ Utilities | ☐ Financials |
| ☐ Technology | ☐ Other_____ | |

### General social network site use

*For the following questions, an SNS refers to a **S**ocial **N**etwork **S**ite such as Facebook, Twitter, Instagram, Pinterest, and LinkedIn among others.*

| **Does your current organizationhave an SNS usage policy?** | ☐ **Yes** | ☐ **No** | ☐ **Do not know** |
|---|---|---|---|

| **Do you have one or more SNS accounts**? | ☐ **Yes** | ☐ **No** |
|---|---|---|

If NO, survey continues to demographic questions at the end. If YES,

**How long have you been using social network sites?**

| | | | | | |
|---|---|---|---|---|---|
| ☐ Less than 1year | ☐ 1 to 2yrs | ☐ 3 to 4yrs | ☐ 5 to 6yrs | ☐ 7 to 8yrs | ☐ More than 8years |

**Which SNS account do you use most?**

| | | | | | |
|---|---|---|---|---|---|
| ☐ *Facebook* | ☐ *Twitter* | ☐ *LinkedIn* | ☐ *Instagram* | ☐ *Pinterest* | ☐ *Other(s) specify_____* |

**How many times in a typical week do you access your most used SNS account(s)?**

| | | | | |
|---|---|---|---|---|
| ☐ *Every day/ Always on* | ☐ *Just about everyday* | ☐ *Every other day* | ☐ *Twice a week* | ☐ *Once a week at the most* |

**How long have you been using social network sites?**

| | | | | | |
|---|---|---|---|---|---|
| ☐ Less than 1year | ☐ 1 to 2yrs | ☐ 3 to 4yrs | ☐ 5 to 6yrs | ☐ 7 to 8yrs | ☐ More than 8years |

**Purpose(s) of SNS use (you can tick more than one)**

| | | |
|---|---|---|
| ☐ Community participation | ☐ Hobby/club activity | ☐ Social Information sharing |
| ☐ Pleasure (fun and entertainment) | ☐ Personal Expression (comments or status update) | ☐ Social friendship |
| ☐ Work- related friendship | ☐ Sharing work-related information | Others, please specify_____ |

| Which device (s) do you mostly use to access SNS at work? (You may tick more than one) | ☐ Personal device (e.g. my mobile) | ☐ Work device(e.g. my office computer) |
|---|---|---|

## Factors influencing use of social network site (SNS)

**The next set of questions asks about your use of SNS at work and your perceptions of using an SNS at work.**

**Please place a "✓ " in the appropriate box to rate the following items using a scale of 1-7:**
**1= Strongly Disagree 2= Disagree 3= Somewhat Disagree 4= neither (agree nor disagree)**
**5= Somewhat Agree 6=Agree 7=Strongly Agree**

| | No | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| SNS usage (**indicative items, to be finalised after interviews*) | 1 | | | | | | | |
| *Hedonic usage* | 2 | | | | | | | |
| *When using SNS at work, I tend to use features that help me interact with others | 3 | | | | | | | |
| * When using SNS at work, I tend to use features that provide me with entertainment | 4 | | | | | | | |
| *When using SNS at work, I tend to use features that keep me in touch with others | 5 | | | | | | | |
| | | | | | | | | |
| *Utilitarian usage* | | | | | | | | |
| * When using SNS at work, I tend to use features that help to interact with others to obtain work advise or support | 6 | | | | | | | |
| *When using SNS at work, I tend to use features that help me receive endorsements from others | 7 | | | | | | | |
| * When using SNS at work, I tend to use features that help to obtain feedback on work products | 8 | | | | | | | |
| *When using SNS at work, I tend to use features that help to gain assistance from others | 9 | | | | | | | |
| | | | | | | | | |
| *Cognitive absorption ( Agarwal and Karahanna, 2000)* | | | | | | | | |
| Time appears to go by very quickly when I am using the SNS at work | 10 | | | | | | | |
| While using the SNS at work, I am able to block out most other distractions | 11 | | | | | | | |
| While on the SNS at work, I tend to get immersed in the SNS task I am performing | 12 | | | | | | | |
| | | | | | | | | |
| SNS Intensity or use ( Agarwal and Karahanna, 2000; Venkatesh and Davis, 2000) | | | | | | | | |
| At work, I spend many hours on SNS per week | 13 | | | | | | | |
| At work, I use SNS many times a week | 14 | | | | | | | |
| At work, SNS have become part of my daily routine | 15 | | | | | | | |
| | | | | | | | | |
| Social Influence (Venketash et al., 2003) | | | | | | | | |
| People who influence my behavior think that I should use SNS at work | 16 | | | | | | | |
| My colleagues think that I should use SNS at work | 17 | | | | | | | |
| A good number of my colleagues use SNS at work | 18 | | | | | | | |
| | | | | | | | | |
| Enjoyment / Fun (Ayeh, Au and Law, 2013; Igbaria, Schiffman and Wicckowshi, 1994) | | | | | | | | |
| SNS are enjoyable to use at work | 19 | | | | | | | |
| SNS give me pleasure to use at work | 20 | | | | | | | |
| Using SNS at work excites my curiosity | 21 | | | | | | | |
| SNS are fun to use at work | 22 | | | | | | | |
| Using SNS is amusing at work | 23 | | | | | | | |
| | | | | | | | | |
| Entertaining (Oliver and. Raney, 2011) | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SNS are entertaining at work | 24 | | | | | | | |
| SNS are relaxing at work | 25 | | | | | | | |
| SNS relieve boredom at work | 26 | | | | | | | |
| | | | | | | | | |
| Rewards /Promotion (Lin, 2007) | | | | | | | | |
| SNS is used at work because there are rewards associated with its use for me | 27 | | | | | | | |
| SNS is used because of expected promotion opportunities at work | 28 | | | | | | | |
| SNS is used because it contributes to my progression at work | 29 | | | | | | | |
| | | | | | | | | |
| Image (Lin, 2007; Toubia and Stephen, 2013) | | | | | | | | |
| SNS is used at work for better image of myself | 30 | | | | | | | |
| SNS is used at work because there is fame and recognition associated with using it for me | 31 | | | | | | | |
| SNS use at work provides me with a sense of self-worth | 32 | | | | | | | |
| | | | | | | | | |
| Social Interaction (To, Liao and Lin, 2007; Wu, 2009) | | | | | | | | |
| Using SNS at work provides me with a sense of belonging | 33 | | | | | | | |
| Using SNS at work provides me with a sense of affiliation with others. | 34 | | | | | | | |
| | | | | | | | | |
| Therapeutic (Wu, 2009) | | | | | | | | |
| Using SNS at work helps me get away from it | 35 | | | | | | | |
| Using SNS at work helps me get my mind off a problem | 36 | | | | | | | |
| Using SNS at work helps me to focus when stressed | 37 | | | | | | | |
| | | | | | | | | |
| Convenience (Toa, Liao and Lin, 2007) | | | | | | | | |
| Interacting with others on SNS would allow me to save time. | 38 | | | | | | | |
| Using SNS would be a convenient way to interact with others | 39 | | | | | | | |
| Using SNS at work fits my schedule | 40 | | | | | | | |
| Using SNS at work is convenient to me | 41 | | | | | | | |
| | | | | | | | | |
| Perceived Usefulness (Venkatesh and Davis, 2000) | | | | | | | | |
| Using the SNS enhances my effectiveness at work | 42 | | | | | | | |
| Using the SNS enhances my productivity | 43 | | | | | | | |
| I find the SNS useful in my work activities | 44 | | | | | | | |
| Using the SNS improves my performance at work | 45 | | | | | | | |
| | | | | | | | | |
| Personal Innovativeness ( Agarwal and Karahanna, 2000) | | | | | | | | |
| Among my friends and colleagues, I am usually the first to explore new information systems such as SNS | 46 | | | | | | | |
| I like to experiment with new communication tools such as SNS | 47 | | | | | | | |
| I like to try new communication tools such as SNS | 48 | | | | | | | |
| | | | | | | | | |
| Job satisfaction ( Lambert, Hogan and Altheimer, 2010; Singh, Goolsby and Rhoads ,1994) | | | | | | | | |
| I am very satisfied with my current job | 49 | | | | | | | |
| My present job gives me internal satisfaction | 50 | | | | | | | |
| My job gives me a sense of fulfillment | 51 | | | | | | | |
| | | | | | | | | |
| Job performance (Singh, Goolsby and Rhoads ,1994) | | | | | | | | |
| My performance in my current job is of high level | 52 | | | | | | | |
| My performance in my current job is excellent | 53 | | | | | | | |
| My performance in my current job is better than others | 54 | | | | | | | |

**Final Demographics**

| **Gender** | ☐ Female | ☐ Male | ☐ Prefer not to say |
|---|---|---|---|

| **Age** | | | | | | |
|---|---|---|---|---|---|---|
| | ☐ 18 - 25 | ☐ 26 – 30 | ☐ 31 - 35 | ☐ 36 - 40 | ☐ 41 - 45 | ☐ 46 - 50 |
| | ☐ 51- 55 | ☐ 56 - 60 | ☐ 60+ | | | |

| **Your highest education qualification?** | ☐ Matric | ☐ Undergraduate | ☐ Post-graduate |
|---|---|---|---|

| **I mostly access SNS from** | ☐ Smartphone | ☐ Tablet | ☐ PC |
|---|---|---|---|

**Any other comments you would like to make**

| |
|---|
| |

**Sample of questions and answers to be used for matching across the 4 questionnaires (all the 4 questionnaires to have these questions)**

| **Question** | **Answer** | **Code** |
|---|---|---|
| First letter of mother's first name | Mary-M | M |
| Number of older brothers (living and deceased)? | One-01 | 01 |
| Number representing the month you were born? | May-05 | 05 |
| First letter of middle name (if none, use X) | Ann- A | A |
| **Subject-Generated Identification Code** | | **M0105A** |

## THANK YOU FOR YOUR TIME

## Appendix D: Quantitave Survey Outcomes

# Questionnaire 2: Impacts of SNS usage

### Demographics

**Job role / Profession** (e.g. Accountant, Marketing officer etc.)_____

**Work Experience (**in total how many years**) _____**

**Number of years working in your current organization_____**

**You organisation's industry**

| | | |
|---|---|---|
| ☐ Oil & Gas | ☐ Basic Materials | ☐ Industrials |
| ☐ Consumer Goods | ☐ Health Care | ☐ Consumer Services |
| ☐ Telecommunications | ☐ Utilities | ☐ Financials |
| ☐ Technology | ☐ Other_____ | |

### General social network sites use

*For the following questions, an SNS refers to a **S**ocial **N**etwork **S**ite such as Facebook, Twitter, Instagram, Pinterest, and LinkedIn among others.*

| **Does your current organizationhave an SNS usage policy?** | ☐ **Yes** | ☐ **No** | ☐ **Do not know** |
|---|---|---|---|

| **Do you have one or more SNS accounts**? | ☐ **Yes** | ☐ **No** |
|---|---|---|

If NO, survey continues to demographic questions at the end. If YES,

**How long have you been using social network sites?**

| | | | | | |
|---|---|---|---|---|---|
| ☐ Less than 1year | ☐ 1 to 2yrs | ☐ 3 to 4yrs | ☐ 5 to 6yrs | ☐ 7 to 8yrs | ☐ More than 8years |

**Which SNS account do you use most?**

| | | | | | |
|---|---|---|---|---|---|
| ☐ *Facebook* | ☐ *Twitter* | ☐ *LinkedIn* | ☐ *Instagram* | ☐ *Pinterest* | ☐ *Other(s) specify_____* |

**How many times in a typical week do you access your most used SNS account(s)?**

| | | | | |
|---|---|---|---|---|
| ☐ *Every day/ Always on* | ☐ *Just about everyday* | ☐ *Every other day* | ☐ *Twice a week* | ☐ *Once a week at the most* |

**How long have you been using social network sites?**

| | | | | | |
|---|---|---|---|---|---|
| ☐ Less than 1year | ☐ 1 to 2yrs | ☐ 3 to 4yrs | ☐ 5 to 6yrs | ☐ 7 to 8yrs | ☐ More than 8years |

**Purpose(s) of SNS use (you can tick more than one)**

| | | |
|---|---|---|
| ☐ Community participation | ☐ Hobby/club activity | ☐ Social Information sharing |
| ☐ Pleasure (fun and entertainment) | ☐ Personal Expression (comments or status update) | ☐ Social friendship |
| ☐ Work- related friendship | ☐ Sharing work-related information | Others, please specify_____ |

## Individual work outcomes

**The next set of questions asks about your SNS use at work and how you feel it affects you**

**Please place a "✓ " in the appropriate box to rate the following items using a scale of 1-7:**
**1= Strongly Disagree 2= Disagree 3= Somewhat Disagree 4= neither (agree nor disagree)**
**5= Somewhat Agree 6=Agree 7=Strongly Agree**

| | No | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| SNS usage (**indicative items, to be finalised after interviews*) | | | | | | | | |
| *Hedonic usage* | | | | | | | | |
| *When using SNS at work, I tend to use features that help me interact with others | 1 | | | | | | | |
| * When using SNS at work, I tend to use features that provide me with entertainment | 2 | | | | | | | |
| *When using SNS at work, I tend to use features that keep me in touch with others | 3 | | | | | | | |
| | | | | | | | | |
| *Utilitarian usage* | | | | | | | | |
| * When using SNS at work, I tend to use features that help to interact with others to obtain work advise or support | 4 | | | | | | | |
| *When using SNS at work, I tend to use features that help me receive endorsements from others | 5 | | | | | | | |
| * When using SNS at work, I tend to use features that help to obtain feedback on work products | 6 | | | | | | | |
| *When using SNS at work, I tend to use features that help to gain assistance from others | 7 | | | | | | | |
| | | | | | | | | |
| *Cognitive absorption ( Agarwal and Karahanna, 2000)* | | | | | | | | |
| Time appears to go by very quickly when I am using the SNS at work | 8 | | | | | | | |
| While using the SNS at work, I am able to block out most other distractions | 9 | | | | | | | |
| While on the SNS at work, I tend to get immersed in the SNS task I am performing | 10 | | | | | | | |
| | | | | | | | | |
| Social support (Rogers, Anthony and Lyass, 2004; Shaw, Krause, Chotter, 2004; Veiel, 1998) | | | | | | | | |
| Using SNS gives me a strong feeling that others have empathy or compassion for me | 11 | | | | | | | |
| Using SNS gives me a strong feeling that others have empathy or compassion for me at work | 12 | | | | | | | |
| Using SNS gives me a strong degree confidence or encouragement | 13 | | | | | | | |
| Using SNS gives me a strong degree confidence or encouragement at work | 14 | | | | | | | |
| Using SNS give me ready access to advice or information | 15 | | | | | | | |
| Using SNS give me ready access to advice or information at work | 16 | | | | | | | |
| Using SNS gives me a strong sense of belonging or companionship | 17 | | | | | | | |
| Using SNS gives me a strong sense of belonging or companionship at work | 18 | | | | | | | |
| Using SNS gives me ready access to concrete and direct assistance (e.g. financial, material or services) | 19 | | | | | | | |
| Using SNS gives me ready access to concrete and direct assistance (e.g. financial, material or services) at work | 20 | | | | | | | |

**The next set of questions relate to your perceptions of yourself in yourself in your job and your organisation**

| **An extended Jafri (2010), Lambert, Hogan and Altheimer (2010) and Singh, Goolsby and Rhoads (1994) work outcomes model** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Job satisfaction ( Lambert, Hogan and Altheimer, 2010; Singh, Goolsby and Rhoads ,1994) | | | | | | | | |
| I am very satisfied with my current job | 21 | | | | | | | |
| My present job gives me internal satisfaction | 22 | | | | | | | |
| My job gives me a sense of fulfillment | 23 | | | | | | | |
| | | | | | | | | |
| Organisational commitment (Jafri, 2010; Singh, Goolsby and Rhoads ,1994) | | | | | | | | |
| I would be very happy to spend the rest of my career with this organization | 24 | | | | | | | |
| I feel a strong sense of belonging to my organization | 25 | | | | | | | |
| I feel 'emotionally attached' to this organization | 26 | | | | | | | |
| | | | | | | | | |
| Turnover intention (Singh, Goolsby and Rhoads ,1994) | | | | | | | | |
| I expect to be working for my current employer one year from now | 27 | | | | | | | |
| I am actively looking for another job | 28 | | | | | | | |
| I would prefer to be working at another organization | 29 | | | | | | | |
| | | | | | | | | |
| Job performance (Singh, Goolsby and Rhoads ,1994) | | | | | | | | |
| My performance in my current job is of high level | 30 | | | | | | | |
| My performance in my current job is excellent | 31 | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| My performance in my current job is better than others | 32 | | | | | | | |
| | | | | | | | | |
| Knowledge Sharing and Growth (Chow and Chan, 2008) | | | | | | | | |
| I share my work reports and official documents with my colleagues | 33 | | | | | | | |
| I share my experience or know-how from work with colleagues | 34 | | | | | | | |
| I share my expertise obtained from education and training with colleagues | 34 | | | | | | | |
| | | | | | | | | |
| Absenteeism ( Lambert, Hogan and Altheimer, 2010) | | | | | | | | |
| I have missed work in the past 30 days | 36 | | | | | | | |
| I have missed work for a short duration in the past 30days | 37 | | | | | | | |
| I have frequently missed work in the past 30days | 38 | | | | | | | |
| | | | | | | | | |
| Innovative behaviour ( Jafri, 2010) | | | | | | | | |
| I am always looking for opportunities to improve existing processes, technology, product, service, or work relationship | 39 | | | | | | | |
| I always generate ideas or solutions to address problems that others could not solve at work | 40 | | | | | | | |
| I always experiment with new ideas and solutions as a regular function in my work | 41 | | | | | | | |
| | | | | | | | | |
| Burnout ( Lambert, Hogan and Altheimer, 2010; Singh, Goolsby and Rhoads ,1994) | | | | | | | | |
| I feel emotionally drained from my work | 42 | | | | | | | |
| I feel used up at the end of the workday | 43 | | | | | | | |
| I feel burned out from my work | 44 | | | | | | | |

**Final Demographics**

**Gender** ☐ Female ☐ Male ☐ Prefer not to say

**Age**

| | | | | | |
|---|---|---|---|---|---|
| ☐ 18 - 25 | ☐ 26 – 30 | ☐ 31 - 35 | ☐ 36 - 40 | ☐ 41 - 45 | ☐ 46 - 50 |
| ☐ 51- 55 | ☐ 56 - 60 | ☐ 60+ | | | |

**Your highest education qualification?** ☐ Matric ☐ Undergraduate ☐ Post-graduate

**I mostly access SNS from** ☐ Smartphone ☐ Tablet ☐ PC

**Any other comments you would like to make**

## THANK YOU FOR YOUR TIME

# Appendix E: Hold-out Survey Archetypes

## Individual work outcomes

**The next set of questions asks about your SNS use at work and how you feel it affects you**

**Please place a "✓ " in the appropriate box to rate the following items using a scale of 1-7:**
**1= Strongly Disagree 2= Disagree 3= Somewhat Disagree 4= neither (agree nor disagree)**
**5= Somewhat Agree 6=Agree 7=Strongly Agree**

| | No | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| SNS usage (**indicative items, to be finalised after interviews*) | | | | | | | | |
| *Hedonic usage* | | | | | | | | |
| *When using SNS at work, I tend to use features that help me interact with others | 1 | | | | | | | |
| * When using SNS at work, I tend to use features that provide me with entertainment | 2 | | | | | | | |
| *When using SNS at work, I tend to use features that keep me in touch with others | 3 | | | | | | | |
| | | | | | | | | |
| *Utilitarian usage* | | | | | | | | |
| * When using SNS at work, I tend to use features that help to interact with others to obtain work advise or support | 4 | | | | | | | |
| *When using SNS at work, I tend to use features that help me receive endorsements from others | 5 | | | | | | | |
| * When using SNS at work, I tend to use features that help to obtain feedback on work products | 6 | | | | | | | |
| *When using SNS at work, I tend to use features that help to gain assistance from others | 7 | | | | | | | |
| | | | | | | | | |
| *Cognitive absorption ( Agarwal and Karahanna, 2000)* | | | | | | | | |
| Time appears to go by very quickly when I am using the SNS at work | 8 | | | | | | | |
| While using the SNS at work, I am able to block out most other distractions | 9 | | | | | | | |
| While on the SNS at work, I tend to get immersed in the SNS task I am performing | 10 | | | | | | | |
| | | | | | | | | |

**The next set of questions relate to your perceptions of yourself in yourself in your job and your organisation**

| | **An extended Jafri (2010), Lambert, Hogan and Altheimer (2010) and Singh, Goolsby and Rhoads (1994) work outcomes model** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Job satisfaction ( Lambert, Hogan and Altheimer, 2010; Singh, Goolsby and Rhoads ,1994) | | | | | | | | |
| I am very satisfied with my current job | 21 | | | | | | | |
| My present job gives me internal satisfaction | 22 | | | | | | | |
| My job gives me a sense of fulfillment | 23 | | | | | | | |
| | | | | | | | | |
| My performance in my current job is of high level | 30 | | | | | | | |
| My performance in my current job is excellent | 31 | | | | | | | |
| My performance in my current job is better than others | 32 | | | | | | | |
| | | | | | | | | |

**Final Demographics**

| **Gender** | ☐ Female | ☐ Male | ☐ Prefer not to say |
|---|---|---|---|

**Any other comments you would like to make**

## THANK YOU FOR YOUR TIME

## Appendix F: Ethics Clearance

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Nkwe

| | |
|---|---|
| CLEARANCE CERTIFICATE | PROTOCOL NUMBER: H16/08/25 |
| PROJECT TITLE | Social network site usage in the workplace: Cross-sectional and longitudinal investigations of motivations and outcomes |
| INVESTIGATOR(S) | Mr N Nkwe |
| SCHOOL/DEPARTMENT | Economics and Business Science/ |
| DATE CONSIDERED | 19 August 2016 |
| DECISION OF THE COMMITTEE | Approved |
| EXPIRY DATE | 18 September 2019 |

DATE 19 September 2016 CHAIRPERSON J. Knight
(Professor J Knight)

cc: Supervisor : Professor J Cohen

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and ONE COPY returned to the Secretary at Room 10004, 10th Floor, Senate House, University.

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research

## Appendix G: Bootstrap Results

| | Original Sample (O) | T Statistics | P Values | Supported |
|---|---|---|---|---|
| HedoUse -> Support | 0.062 | 1.267 | 0.205 | No |
| UtiliUse -> Support | 0.628 | 14.44 | 0.000 | Yes |
| Cognitive -> Support | 0.237 | 4.101 | 0.000 | Yes |
| Support -> Performance | -0.077 | 0.75 | 0.453 | No |
| Support -> Innovative | 0.060 | 0.719 | 0.473 | No |
| Support -> Knowledge | -0.036 | 0.404 | 0.686 | No |
| Support -> Turnover | 0.143 | 2.381 | 0.017 | NO |
| Support -> Absent | 0.099 | 1.223 | 0.222 | No |
| Support -> Satisfaction | -0.022 | 0.299 | 0.765 | No |
| Support -> Organisational | -0.012 | 0.154 | 0.878 | No |
| Support -> Burnout | 0.136 | 2.338 | 0.020 | No |
| Support -> Work-Life | 0.173 | 3.222 | 0.001 | No |