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STUDENT PERCEPTIONS OF THE PREDICTORS OF CUSTOMER PURCHASE INTENTION OF COUNTERFEIT PRODUCTS

By TINASHE CHUCHU

STUDENT NUMBER: 731094

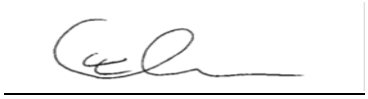
A Masters dissertation submitted in partial fulfilment of the requirements for the degree of the Master of Commerce (Marketing) in The School of Economic and Business Sciences, The University of the Witwatersrand.

Supervisor: Professor Richard Chinomona

19 MAY 2015

DECLARATION

- The work in this dissertation is my own original work.
- All of the sources which were used or referred to have been documented and recognised.
- This dissertation has not been previously submitted in full or partial fulfilment of the requirements for an equivalent or higher qualification at any other recognised education institution.



Tinashe Chuchu

19 May 2015

ACKNOWLEGDMENTS

Many people helped me throughout my research to make it the best it could possibly be. I cannot mention all of them by name but would like to thank them here. I would wish in particular, to thank my family for supporting me and giving me the opportunity to undertake my postgraduate studies – without my family I would not have been able to complete this dissertation. I also wish to thank my friends, who helped me throughout my studies, as well as all the participants who took part in my research. Most importantly, special mention goes to Mrs. Irma Cheval, and my supervisor, Professor Richard Chinomona. Through his guidance, wisdom and expertise in the areas of research I covered, completing this Masters dissertation was made possible.

ABSTRACT

The research investigated the use of the two potential predictors of customer purchase intention of counterfeit products (perceived behavioural control and price-quality inference of counterfeit products) as a means of establishing whether these were related to customer attitudes towards economic benefits of purchasing counterfeit products, which ultimately lead to purchase intention of counterfeit products. The study reviewed prior literature on counterfeits purchasing. Probability sampling was used to select respondents, and a research model was developed to measure the constructs used for the study. Field study was conducted in Johannesburg at the University of the Witwatersrand, and research data was collected from 380 registered students of the University of the Witwatersrand, 18 years and older. Using the SPSS 22 and AMOS 22 software program, structural equation modeling (SEM) was performed to analyse the data set. The results revealed that price-quality inference of counterfeit products had a stronger relationship with customer attitudes towards economic benefits of purchasing counterfeit products, than to perceived behavioural control implying that the customers were more likely to purchase counterfeits because of the perceived price bargain and not because of the perceived ease of purchasing counterfeits. The contribution of this study was to enhance the comprehension of existing literature on the relationship between the predictor variables (perceived behavioural control and price-quality inference of counterfeit products) and the outcome variable (purchase intention of counterfeit products).

Key words: counterfeits, attitudes, price-quality, purchase intention

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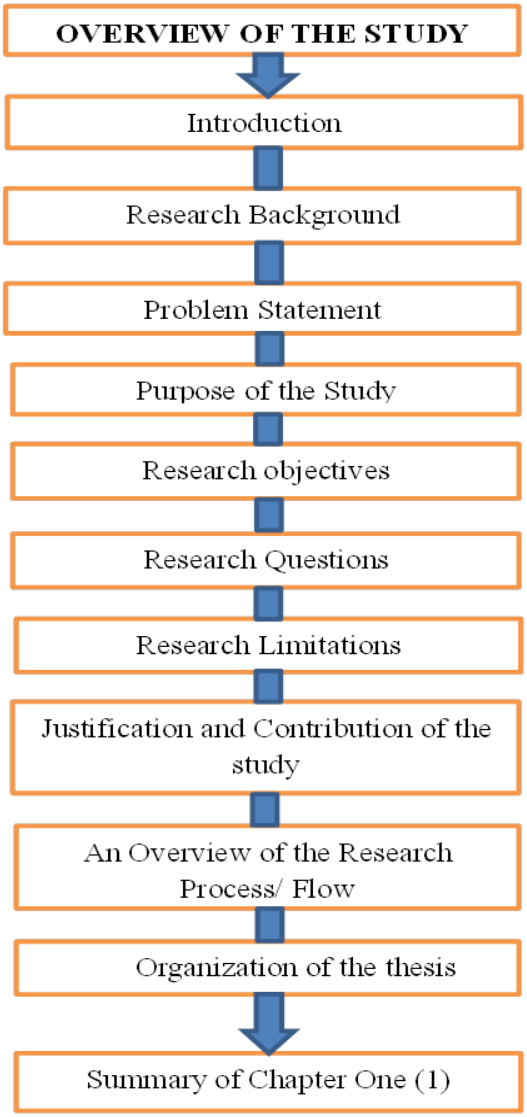


CHAPTER 1: OVERVIEW OF THE STUDY

1.1 INTRODUCTION

Counterfeiting which refers to the production and sale of imitation branded products that closely resemble the original, has emerged as a serious problem for global marketers (Penz, Schlegelmilch and Stöttinger, 2008). Due to the increased competition in the market, brand imitation or piracy is one of the main problems that brand leaders face (Samgir, Sharma, and Sharma, 2013). Counterfeiting is a concept that became prominent in the 1970s (Veloutsou and Bian, 2008). Counterfeits infringe upon the legal rights' of registered trademarks owners' intellectual property (Lambkin and Tyndall, 2009; Stravinskiene, Dovaliene and Ambrazeviciute, 2013; Liao and Hsieh, 2013; Hoecht and Trott, 2014). This study focuses on customers' purchase intention of counterfeit products. Purchase Intention is defined as the consumers' will for purchase (Inkon, 2013). The intention to purchase can be viewed as a link between the buying behaviour and attitudes in understanding the buying behaviour of consumers, thus purchase intention has been considered to have a deep connection with buying behaviour (Inkon, 2013). The intention to purchase counterfeit luxury brands is influenced by attitudes toward buying counterfeits (Yoo and Lee, 2009). Attitude towards counterfeits of luxury brands have been found to influence purchase intention (Phau, 2009). The combination of attitude toward behaviour, subjective norm, and perception of behavioural control, lead to the formation of behavioural intention (Ajzen, 2002). Perceived behavioural control refers to the perceived ease or difficulty of performing behaviour (Ajzen, 2002). It is useful to consider perceived behavioral control in relation to intention, since it affects purchase intentions (Ajzen, 2002). Price-quality inference is the universal assumption across product categories that the level of the price cue is related positively to the quality level of the product (Zhou, Su, and Bao, 2002). It is believed that consumers may assume a positive relationship between price and product quality and rely on this price-quality

relationship or price-quality schema as a shortcut to making purchase decisions (Zhou, Su and Bao, 2002). Consumers who purchase counterfeit products are opting to pay for visual attributes and functions, without paying for the quality associated with the genuine product (Phau, Tea and Lee, 2008). Consumers that prefer counterfeit products bearing famous brand names feel that such actions accrue a sense of prestige (Phau, Tea and Lee, 2008). Lysonski and Durvasula (2008) stated that it is of great concern that some consumers do not perceive counterfeit purchasing as harmful to a particular industry.

1.2 RESEARCH BACKGROUND

1.2.1 The Counterfeit Industry

Counterfeit products have become a chief concern in the luxury product market, due to the expensive and prestigious characteristics of luxury brands (Wang and Song, 2013). This study used the term that is found most commonly in the reviewed literature on counterfeiting or counterfeits (Stravinskiene, Dovaliene and Ambrazeviciute, 2013). Counterfeiting is most evident in China (Hung, 2003; Naim, 2005; Minagawa, Trott and Hoecht, 2007). In particular, counterfeiters attempt to infringe upon brands, and may generate distorted information complexities to mislead customers (Quin, 2014). According to Howie (2010), up to three million customers purchase counterfeit goods daily. Counterfeiting prevails across the globe, accounting for at least 10% of world trade or worth of about 500 billion U.S dollars (Heffes, 2008; Yoo and Lee, 2009). Wang and Song (2013) have stated that with a counterfeit global market, estimated at around US$600 billion, counterfeit luxury products account for 10% of this total (World Customs Organisation, 2004). According to Penz and Stöttinger (2008) counterfeiting occurs in two different forms, as deceptive and non-deceptive counterfeiting. Deceptive counterfeiting occurs in all the circumstances where the customer is unaware of being misled into buying a counterfeit product (Stravinskiene, Dovaliene and Ambrazeviciute, 2013). On the other hand, non-deceptive counterfeiting

occurs when customers are aware that the product is not genuine, but still make a conscious decision to purchase it (Eisend and Schuchert- Güler, 2006; Stravinskiene, Dovaliene and Ambrazeviciute, 2013). In discussing counterfeit items, scientific literature has used terms like counterfeiting, forging, brand piracy, imitation of brands or logos, fakes and replicas (Stravinskiene, Dovaliene and Ambrazeviciute, 2013). In 1997, the counterfeit market was worth $299 billion dollars globally, according to Chakraborty, Allerd, Sukhdial and Bristol (1997). Quin (2014) pointed out that The World Customs Organisation (WCO, 2004) estimated that traded world merchandise valued at €512 billion, may have been counterfeits (WCO, 2004). Industries have blamed counterfeits for their deleterious effect on business, and the ethical costs associated with counterfeiting (Gino et al., 2010). The International anti-Counterfeiting Coalition estimates that counterfeiting is responsible for $200 billion a year in lost jobs, taxes and sales (Furnham and Valgeirsson, 2007). It is likely that the demand for counterfeit products is caused by two main motives, namely, their relative affordability, and perceived quality (Budiman and Wijaya, 2014). Demand for counterfeits has been explored to some extent in the broader marketing literature (Kwong et al., 2003; Wilcox et al., 2009: Quin, 2014), with price, attitudes toward big branded companies, and the need for status signalling being cited as main factors driving counterfeit demand.

Past research has revealed that consumer's ethical attitudes can affect the likelihood of purchasing counterfeit goods (Norum and Cuno, 2011). Counterfeiting is considered to be an economic problem of international importance, which calls for a variety of counter-measures (Eisend and Schuchert-Güler, 2006). Counterfeit purchases are one of the most serious problems challenging luxury brand marketers (Hilton, Choi, and Chen, 2004; Poddar, Foreman, Banerjee, and Ellen, 2012). According to the International Chamber of Commerce (2008), the luxury brand industry reports a deficit in excess of $12 billion annually due to

counterfeits. Poddar et al. (2012) further state that counterfeiting has become a worldwide problem, valued at more than $250 billion, and accounting for almost 2% of world trade in 2009. Trade in counterfeit products poses severe negative consequences for customers, illicit manufactures and brand owners alike (Staake, Thiesse and Fleisch, 2009). Norum and Cuno (2011) have noted the production, distribution and consumption of counterfeit goods to be a global trend, escalating at an alarming rate. The IACC (2008) estimates that about five to seven percent of world's trade is in illegitimate goods (Norum and Cuno, 2011). Under deceptive counterfeiting, the customer is unaware of the purchasing of an imitation, rather than the original product, and cannot be held accountable for the behaviour, whereas with non-deceptive counterfeiting, the customer intentionally purchases fake products (Penz and Stöttinger, 2008). The Organisation for Economic Co-Operation and Development (OECD) covered the top 20 source economies for seizures of imported counterfeit and pirated products, noting that Asia is arising as the largest source for counterfeit and pirated products, with China as the single largest source economy (OECD, 2007). Table 1 below shows the seizures of imported counterfeit and pirated products from 20 nations in various regions.

Table 1: Seizures of Imported Counterfeit and Pirated Products from 20 source Economies

Region of top 20 source economies	**Number of source economies (countries) in region**	**Seizures (% of total)**
Asia (excl. Middle East)	12	69.7
Middle East	2	4.1
Africa	2	8
Europe	2	7
North America	1	1.1
South America	1	0.8
Top sources	**20**	**79.2**

Adopted from OECD (2007)

Table 2 below shows the top intellectual property rights commodities seized in the United States of America (USA) in 2006.

Table 2: Top Intellectual Property Rights Commodities Seized in the USA in 2006

Commodity	**Domestic value (USD)**	**Percent of total ***
Footwear	$ 63,445,619	41%
Apparel	$ 24,320,976	16%
Handbags/wallets/backpacks	$ 14,750,201	9%
Computers/hardware	$ 14,287,989	9%
Consumer electronics	$ 7,057,034	5%
Media	$ 6,965,156	4%
Headwear	$ 3,257,963	2%
Healthcare	$ 3,092,919	2%
Watches/parts	$2,832,364	2%
Pharmaceuticals	$2,298,694	1%
All other commodities	$13,060,321	8%
Total FY 06 Domestic Value	$155,369,236	
Number of seizures	$14,675	

Adopted from Chaudhry, Zimmerman, Peters and Cordell (2009)

1.3 PROBLEM STATEMENT

It is of pronounced concern that consumers generally do not perceive the purchase of counterfeit products as harmful consumer behaviour, but only perceive the social benefits

brought about by non-genuine products (Riquelme, Abbas and Rios, 2012). Lysonski and Durvasula (2008) have stated that it is of great concern that certain consumers do not perceive counterfeit purchasing as harmful to a particular industry. Counterfeiting ignores the effort of genuine manufacturers, and realises all profits without making any investment (Liao and Hsieh, 2013). In order to provide a sense of the magnitude of the counterfeit market, the number of illegitimate items seized at the European Union borders between 1990 and 2004 rose from 10 million to 103 million (Eisend and Schuchert- Güler, 2006). Although researchers Penz, Schlegelmilch and Stöttinger (2008) conducted a study on the purchase of counterfeit products, they focused on factors that drove the demand for fake products, as well as attempted to redress the imbalance that emerged from counterfeit demand attracting far less attention as compared to supply side remedies. However, Penz, Schlegelmilch and Stöttinger (2008) did not examine the way in which perceived behavioural control and price quality inference would possibly predict customers' intention to purchase counterfeit products. This dissertation intends to explore perceived behavioural control and price-quality inference of counterfeit products as predictors of customer attitudes towards the purchase of counterfeit products. This dissertation also attempts to address the relationship between perceived behavioural control, price-quality inference of counterfeit products, customer attitudes towards economic benefits of purchasing counterfeit products, and purchase intention of counterfeit products. According to Yoo and Lee (2009), counterfeit markets may help to stimulate demand for a product, and may provide symbolic benefits, such as providing consumers with social status through ownership of a brand name at a lower quality and cost, but counterfeiting's adverse socio-economic effects hinder innovation, employment, and trade.

1.4 PURPOSE OF THE STUDY

The purpose of this study is to investigate student perceptions of perceived behavioural control and price-quality inference of counterfeit products, as predictors of attitudes towards economic benefits of purchasing counterfeit products and purchase intention of counterfeit products.

1.5 RESEARCH OBJECTIVES

The section explores the theoretical and empirical research objectives of this study.

1.5.1 Theoretical Objectives

The following theoretical objectives were developed:

- to review literature on perceived behavioural control of counterfeit product purchase;
- to review literature on price-quality inference of counterfeit products;
- to review literature on attitudes towards economic benefits of purchasing counterfeit products; and
- to review literature on purchase intention of counterfeit products.

1.5.2 Empirical Objectives

Given the purpose of the study, the following empirical objectives were developed:

- to investigate the relationship between perceived behavioural control and purchase intention of counterfeit products;
- to investigate the relationship between perceived behavioural control and customer attitudes towards economic benefits of counterfeit product purchase;
- to investigate the relationship between price-quality inference of counterfeit products and customer attitudes towards economic benefits of counterfeit products purchase;

- to investigate the relationship between price-quality inference of counterfeit products and purchase intention of counterfeit products;
- to investigate the relationship between customer attitudes towards economic benefits of purchasing counterfeit products and purchase intention of counterfeit products.

1.6 RESEARCH QUESTIONS

1. Does perceived behavioural control have a relationship with customer purchase intention of counterfeit products?

2. Does perceived behavioural control have a relationship with customer attitudes towards economic benefits of purchasing counterfeit products?

3. Does the price-quality inference of counterfeit products have a relationship with customer attitudes towards economic benefits of purchasing counterfeit products?

4. Does the price-quality inference of counterfeit products have a relationship with customer purchase intention of counterfeit products?

5. Do customer attitudes towards the economic benefits of purchasing counterfeit products have a relationship with purchase intention of counterfeit products?

1.7 RESEARCH LIMITATIONS

Although this thesis is set to provide a contribution to both theoretical development and providing empirical evidence on the research constructs, there were limitations in terms of the population sampled. Since these respondents sampled were all registered students it implied that they had access to financial resources, and that a bias regarding their own perceptions of counterfeit products could have been created, due to education. The students' views can furthermore be generalised within the greater Johannesburg area. Other limitations were financial and time constraints, which lead the use of only registered students from the

University of the Witwatersrand as the sample frame. However, future research would have more informed results if conducted at a larger scale.

1.8 JUSTIFICATION AND CONTRIBUTION OF THE STUDY

This study will make a contribution to existing literature on:

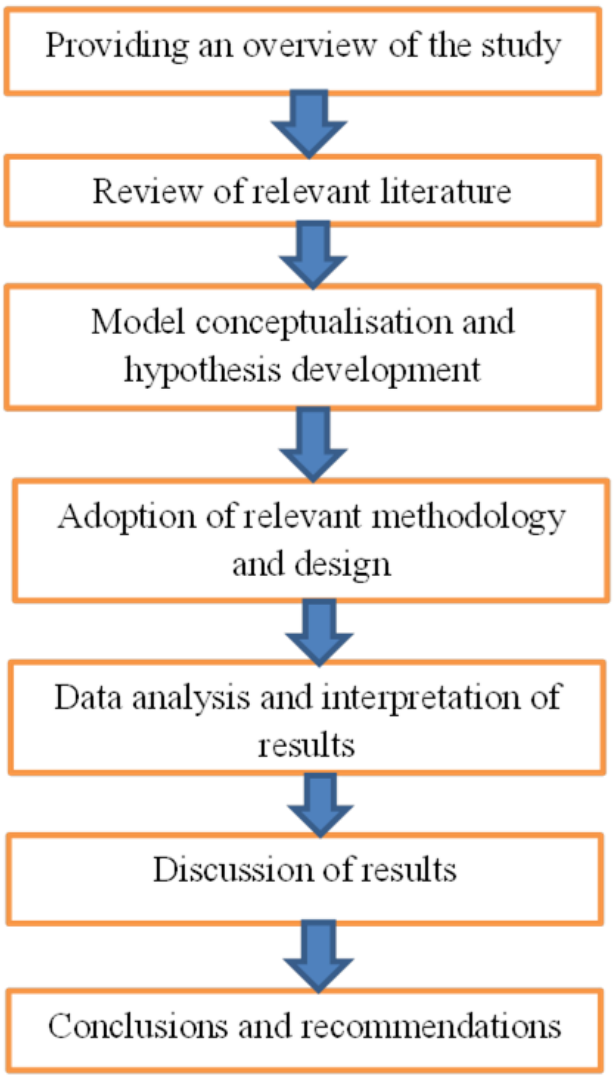
- the relationship between perceived behavioural control and purchase intention of counterfeit products;
- the relationship between perceived behavioural control and attitudes towards economic benefits of purchasing counterfeit products;
- the relationship between price-quality inference of counterfeit products and attitudes towards economic benefits of purchasing counterfeit products;
- the relationship between price-quality inference of counterfeit products and purchase intention of counterfeit products;
- The relationship between attitudes towards economic benefits of purchasing counterfeit products and purchase intention of counterfeit products.

1.9 OVERVIEW OF THE RESEARCH PROCESS

A scientific research approach was adopted for this thesis, which comprised of a well thought out logical, organised and robust sequence of identifying problems, collecting data, analysing the data, and drawing valid conclusions. Firstly, the impetus of the research and main purpose of the study are elucidated. Secondly, literature relevant to the problem of research interest is reviewed. Thirdly, drawing from the reviewed theoretical and empirical literatures, a conceptual framework was built, and research hypotheses developed. Fourth, the development of hypotheses was then followed by measure of methodology, and data was collected thereafter. Fifth, the conceptualised model and posited hypotheses were empirically

tested, using data collected, and the results were then interpreted. Lastly, closing remarks were provided, theoretical and practical implications of the thesis drawn, and suggestions for future research directions indicated. Figure 2 below illustrates the six-stage research procedure followed by the author of this thesis:

Figure 2: Research Flow



1.10 ORGANISATION OF THE THESIS

This study is composed of the following six chapters:

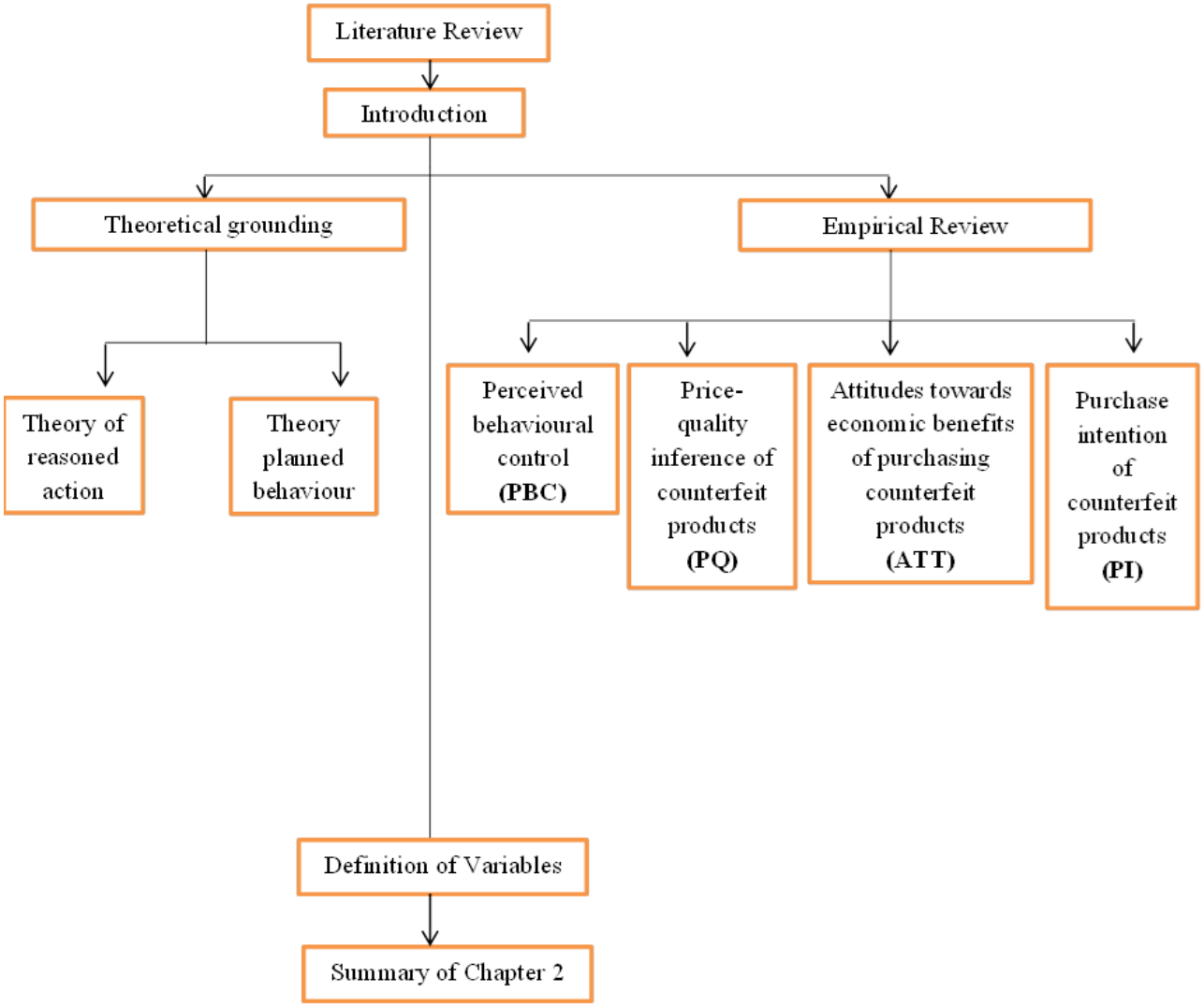
- An overview of the study in Chapter 1 provides the introduction and explores the research background. It also provides the purpose of this research, research objectives and research questions. Moreover, it illustrates the flow of the research and the structure of the thesis.
- Literature review in Chapter 2 reviews both theories and empirical studies related to the essence of the thesis. In particular, on the theoretical aspect of this thesis, theories such as the theory of reasoned action and the theory of planned behaviour. On the empirical aspect of this thesis, empirical studies regarding research constructs, i.e. perceived behavioural control, price-quality inference of counterfeit products, attitudes towards economic benefits of purchasing counterfeit products, and purchase intention of counterfeit products.
- Conceptual model and hypothesis development in Chapter 3, where, based on the research constructs grounded in theory, a conceptual model is built and research hypotheses developed.
- Research methodology, data analysis and results in Chapter 4 provides research sampling, measures and data collection procedure.
- Data measurement results in Chapter 5 details statistical techniques used to check for the measurement reliability, validity and the research model fit (confirmatory factor analysis - CFA) using SPSS 22 and AMOS 22 software. Hypotheses testing, where structural equation modeling (SEM), is used to empirically test the proposed research hypotheses. Finally, research findings are interpreted and presented.
- Conclusions, implications and overall thesis contributions are covered in Chapter 6: The overall concluding remarks informed by the findings of this thesis are thereafter

provided. Practical recommendations to the practice of distribution channel management are provided. Finally, future research directions are indicated, and the overall thesis contributions provided.

1.11 SUMMARY OF CHAPTER 1

Chapter 1 comprises ten sections. The first section begins with an introduction to the research, which focuses on the purchase intention of counterfeits, and thereafter explores the various definitions of counterfeit products. The second section explores the research background and takes a closer look at the counterfeit industry. The third section discusses the problem statement as the main motivation for this research. The forth section explores the purpose of the study. The fifth section outlines the research questions. In the sixth section, the limitations and challenges of the research are explored. The seventh section is made up of the justification of the study, as well as its intended contributions to the broader literature. The eighth section explores the overview of research, or the flow of research, that was used for this thesis. The ninth section details the organizational layout of the dissertation, and finally the tenth section of Chapter 1 concludes the chapter, by providing a summary.

Figure 3: Diagrammatic Representation of Chapter 2



CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

Baker (2000) considers reviewing the current literature relevant to a research topic to be an essential first step and foundation for undertaking the research project. The main aim of the literature review was to discuss key issues that relate to current literature relevant to theoretical grounding and empirical literature of this dissertation. This chapter provides a detailed analysis of the relevant empirical studies and theoretical grounding that have dealt with the research topic, namely, student perceptions of the predictors of customer purchase intention of counterfeit products. This chapter discusses in detail the theories that were consulted for this study, namely the theory of reasoned action, and the theory of planned behaviour. The empirical literature review is also discussed in this chapter, whereby all the research constructs that were utilised for this study are explored, perceived behavioural control, price-quality inference of counterfeit products, attitudes towards economic benefits of purchasing counterfeit products, and purchase intention of counterfeit products.

2.2 THEORETICAL GROUNDING

For the purpose of this study, the following theoretical framework is employed.

2.2.1 Theory of Reasoned Action

The Theory of reasoned action (TRA) provides an essential fundamental conceptual model for probing human behaviour (Mishra, Akman and Mishra, 2014). The TRA is a well-developed and validated intention model that has been established successfully in predicting and elucidating behaviour (Liao, Lin and Liu, 2009). According to TRA, an individual's behaviour is driven by the intention to perform a given behaviour; intention, in turn, is jointly determined by the individual's attitude toward the behaviour (Liao, Lin and Liu, 2009). Thus,

individuals who are highly motivated to engage in certain behaviour, are more likely to succeed at carrying it out (Christine, Henle, Reeve and Pitts, 2009). The purpose of the TRA is to investigate the relationship between attitude and behaviour (Mishra, Akman and Mishra, 2014). The Theory of Reasoned Action is arguably the most successful and well-validated psychological model for decision making for voluntary action to have been based on behavioural analysis (Houran, Lange and Lange, 2013). Phau, Sequeira and Dix (2009) have stated that the theory of reasoned action (TRA), in terms of counterfeit products purchase, would mean that the individual's decision to purchase counterfeit products is determined by that individual's intention to perform the act directly. The TRA posits the most immediate precursor of behaviour to be an individual's intention to behave, which is, in turn, determined by attitude toward target behaviour and subjective norms (Aleassa, Pearson and McClurg, 2011).

According to Hansen, Jensen, and Solgaard (2004), the theory of reasoned action considers a customer's behaviour as determined by the customer's behavioural intention, whereas behavioural intention of the customer is a role of attitude toward the customer's behaviour. Kim, Jeong and Hwang (2012) have stated that the theory of reasoned action, the theory of planned behaviour, and the integrative model of behavioural prediction, predict that behaviour is determined by behavioural intentions, which in turn are influenced by several psychological factors. According to Guo and Feng (2012), the theory of reasoned action postulates a model conceptually applicable to the totality of human activities. The theory of reasoned action specifies what consumers perceive, and how perceptions guide what consumers do, and that this is reminiscent of earlier studies on the drive toward conformity (Guo and Feng, 2012).

2.2.2 Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) is a philosophy used to predict human behaviour (Prapavessis, Gaston & DeJesus, 2015). The theory of planned behaviour is an extension of TRA, which has drawn sustained interest in social psychology (Conner and Armitage, 1998). The TPB arose due to the limitations of theory of reasoned action in its model when dealing with behaviours over which people have incomplete voluntary control (Ajzen, 1991). Henle, Reeve and Pitts (2009) have pointed out that when individuals have a stronger motivation or intention to engage in a particular behaviour, the TPB proposes that individuals are more likely to follow through with that behaviour. The TPB is an extensively applied expectancy-value model of attitude-behaviour relationships, which has seen a fair amount of success in predicting a variety of behaviours (Conner and Armitage, 1998), and has emerged as one of the most influential and prominent conceptual frameworks for the study of human action (Ajzen, 2002). Armitage and Conner (2001) have pointed out that the theory of planned behaviour (TPB) is essentially an extension of the theory of reasoned action (TRA), which includes measures of control belief and perceived behavioural control. It predicts the occurrence of a specific action, provided that the action is intentional (Francis, Eccles, Johnston, Walker, Grimshaw, Foy, Kaner, Smith, Bonetti, 2004). Cooke and Sheeran (2004) have stated that the theory of planned behaviour is perhaps the leading account of the relationship between cognitions and behaviour in social psychology. Francis et al. (2004) have pointed out that in order to predict whether an individual intends to do something, there is need to know whether that individual is in favour of performing that particular act, how much the individual feels the social pressure to do it, and whether the individual feels in control of the action in question. Ajzen (2002) has stated briefly, that according to the theory, human behaviour is guided by three kinds of considerations: beliefs about the likely consequences or other attributes of the behaviour (behavioural beliefs); beliefs about the

normative expectations of other people (normative beliefs); and beliefs about the presence of factors that may further or hinder performance of the behaviour (control beliefs).

2.3 EMPIRICAL REVIEW

The following empirical review of the research constructs was conducted.

2.3.1 Perceived Behavioural Control

Perceived behavioural control is the independently "perceived simplicity or difficulty of performing a specific behaviour" (Ajzen, 2002). Armitage and Conner (2001) have pointed out that Ajzen (1991) extended the TRA to include a measure of perceived behavioural control, a variable that had received a great deal of attention in social cognition models designed to predict health behaviours (e.g. health belief model, protection motivation theory). According to Ajzen (2001) perceived behavioural control has arisen as one of the most influential and prevalent conceptual frameworks for the study of human action (Ajzen, 2001). Perceived behavioural control (information, time, ability to solve problems) positively affects intention to purchase counterfeits (Penz and Stöttinger, 2005; Cheng, Fu and Tu, 2011). According to Cheng, Fu, and Tu (2011), as far as the purchase of counterfeits is concerned, the time required to access those counterfeits and the customer's ability to solve difficulties that may arise in product purchases, are both important factors.

2.3.2 Price – Quality Inference of Counterfeit Products

According to Huang, Lee, and Ho (2004), the two major differences consumers perceive between a counterfeit and genuine products, are the lower prices and the poorer guaranties, which are price and risk constructs that are likely to be important factors relating to attitude toward counterfeits. De Matos, Ituassu and Rossi (2007) have stated that price difference is an important variable when choosing a counterfeit. Inference of quality by price level is a common perception among customers, and an important factor in consumer behaviour (De

Matos, Ituassu and Rossi, 2007). In this sense, consumers' tendency to believe that "high (low) price means high (low) quality", becomes even more prevalent when there is little information about the product quality or the consumer is unable to judge product quality (De Matos, Ituassu and Rossi, 2007). Price-quality inference is the universal assumption across product categories that the level of the price cue is related positively to the quality level of the product (Zhou, Su, Bao, 2002). It is believed that consumers may assume a positive relationship between price and product quality, and that they may rely on this price quality relationship or price-quality schema as a shortcut to making purchase decisions (Lichtenstein et al., 1993; Zhou, Su and Bao, 2002).

According to Huang, Lee, and Ho (2004), counterfeits are usually sold at lower prices than original products, hence the greater the price-quality relationship for the consumer, the lower his/her perception of quality for the counterfeits. Huang, Lee, and Ho, (2004) added to state that customers who more strongly believe in the price-quality inference of products would have a more negative attitude toward counterfeits. According to the theory of planned behaviour, attitudes toward a particular action positively affect behavioural intentions (Yoo and Lee, 2009). Phau, Tea and Lee (2009) have established through research that consumers will select a counterfeit over a genuine product when there is a price advantage. Phau, Tea and Lee (2009) have mentioned that if counterfeit products are comparable to the genuine in all aspects and yet is superior in price offered, then consumers will choose counterfeits, as they provide the advantage of the status and quality attributes of brand-name products; and on the other hand, where other consumers might feel that although counterfeits are inferior to the original, their superior prices more than compensate for the shortfall in quality and performance.

2.3.3 Attitudes Towards Economic Benefits of Purchasing Counterfeit Products

Several researchers have explored the attitudes towards luxury goods and their counterfeit copies (Michaelidou and Christodoulides, 2011; Turunen and Laaksonen, 2011; Doss and Robinson, 2013). Michaelidou and Christodoulides (2011) have specifically focused on investigating the impact of ethical obligation and price consciousness on attitude towards counterfeit products, whilst Turunen and Laaksonen (2011) examined luxury consumption through exploring attributes of counterfeit branded products. Doss and Robinson (2013) focused on enhancing the comprehension of female consumers' luxury brand perceptions and counterfeits of that brand. Schiffman, Kanuk, and Wisenblit (2010) have defined attitude as a learned predisposition to behave in a consistently favourable or unfavourable manner with respect to a given object. Having an understanding about attitude is important, as it directly influences consumer behavior (Chaudary, Ahmed, Gill and Rizwan, 2014). According to Cheng, Fu and Tu (2011), attitudes towards purchasing counterfeits and perceived behavioural control both have a positive influence on the intention to purchase counterfeits and ultimately lead to behaviour.

Triandewil and Tjiptono (2013) have meanwhile pointed out that according to TRA and its extension, TPB, there is a connection between attitude, behavioural intention, and behaviour (Ajzen, 2005). Attitudes toward counterfeiting have been variously studied in the literature (Ang et al., 2001; Kwong et al., 2003; Wang et al., 2005) and are explained by TRA and TPB (Teah and Phau, 2008). In this regard, it is widely believed that human behaviour is determined by both social influences and dispositional (attitudinal) factors (Deci and Ryan, 2002; Aleassa, Pearson and McClurg, 2011). Yoo and Lee (2009) have stated that attitudes refer to the extent to which an individual has a favourable judgment of the behaviour in question, and are a direct indicator by which one's intention of conducting the specific behaviour can be predicted. Positive attitudes toward buying counterfeit products are

anticipated to affect purchase intention of genuine products negatively, and the purchase intention of counterfeit products positively (Yoo and Lee, 2009).

2.3.4 Purchase Intention of Counterfeit Products

According to the TRA, an individual's behavioral intention depends on his or her attitude toward the behaviour and the subjective norms associated with the behaviour (Zhan and He, 2012). The intention to buy counterfeit products is the tendency of individual willingness to buy and use the counterfeit products (Budiman and Wijaya, 2014). According to a study by Tan (2002), in which 377 Chinese software users where interviewed, it was established that purchase intentions are influenced by; the perceived moral intensity; degree of consequences; temporal use and social risk; the perceived commercial performance; and prosecution and moral judgment. Price is one of the most prevalent determinates of customer intention to purchase counterfeits over original brands (Triandewil and Tjiptono, 2013). Table 3 below shows the definitions of all the variables of the research model.

Table 3: Definition of Variables

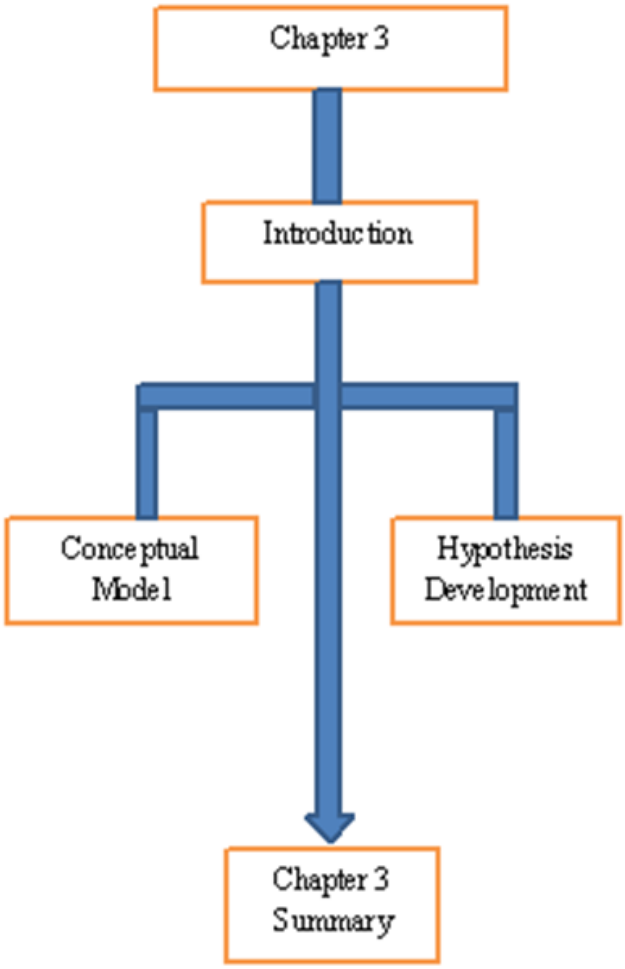
Construct	Definition	Sources	Item
Perceived behavioural control **(PBC)**	Perceived simplicity or difficulty of performing a specific behaviour.	Ajzen (2002)	PBC 1- PBC 9
Attitudes towards economic benefits of purchasing counterfeit products **(ATT)**	Consumer's psychological tendency to behave in a consistently favourable or unfavourable fashion with regards to counterfeit products.	Mathiesson et al. (2001)	ATT 1- ATT 6
Price-quality inference of counterfeit products **(PQ)**	The perceived price-quality relationship of a product.	Cronley and Posava (2005)	PQ 1- PQ 3

Purchase intention of counterfeit products **(P I)**	The desire for customers to purchase a grey market product.	Bai et al. (2008)	PI 1- PI 4

2.3 SUMMARY OF CHAPTER 2

Chapter 2 was divided into three main sections. The first section discussed the theoretical grounding of the study that comprised of two theories; the Theory of Reasoned Action (TBA) and the Theory of Planned Behaviour (TPB). The second main section explored the study's empirical literature review of the research constructs in great detail. The research constructs included perceived behavioural control, price-quality inference of counterfeit products, attitudes towards economic benefits of purchasing counterfeit products, and finally, purchase intention of counterfeit products. The relationships and links among all the above mentioned constructs were also explored in great detail.

Figure 4: Diagrammatic Representation of Chapter 3

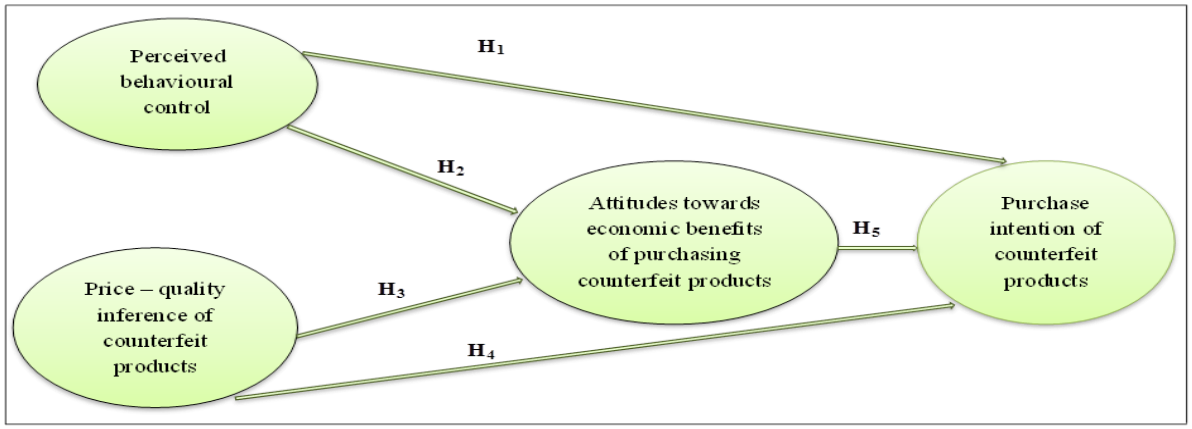


CHAPTER 3: RESEARCH MODEL AND HYPOTHESIS STATEMENT

3.1 INTRODUCTION

Drawing from the literature review explored in Chapter 2, in particular the theoretical and empirical literature, a research model was conceptualised. Hypothesised relationships between research constructs were developed for further empirical examination thereafter. In the conceptualised research model, perceived behavioural control (PBC) and price-quality inference of counterfeit products (PQ) are the predictor variables, attitudes towards economic benefits of purchasing counterfeit products (ATT) is the mediator variable, and purchase intention of counterfeit products (PI), the outcome variable. Figure 5 below illustrates the proposed conceptual model.

Figure 5: Research Model



3.2 HYPOTHESIS DEVELOPMENT

Based on the above conceptual model, the following hypotheses are stated in the table below.

3.2.1 Perceived Behavioural Control and Purchase Intention of Counterfeit Products

According to (Ajzen, 1991) perceived behavioural control refers to people's perception of the ease or difficulty of performing the action in question. It is useful to consider perceived behavioral control in relation to intention, since it affects purchase intentions (Ajzen, 2002).

Perceived behavioural control proposes that the extent to which intentions lead to actual behaviour, depends partially on the amount of control of that individual has over that particular behaviour (Eagly and Chaiken, 1993). Penz and Stöttinger (2005) have since suggested that the higher the perceived behavioural control, the stronger the intention to purchase counterfeits. Conner and Armitage (1998) have however noted that connection between perceived behavioural control (PBC) and behaviour is complex, suggesting that a person is more likely to engage in (attractive/desirable) behaviours that he or she has control over, and is moreover prevented from carrying out behaviours that he or she does not have control over. Conner and Armitage (1998) have further stated that the more perceived behavioural control increases, the more the behaviour is likely to be performed, given that intention is held constant. Perceived behavioural control (information, time, ability to solve problems) positively affect intention to purchase counterfeits (Penz and Stöttinger, 2005; Cheng, Fu and Tu, 2011). Therefore, inferring from the literature and the empirical evidence abovementioned, the study hypothesises that:

H1: Perceived behavioural control has a positive relationship with purchase intention of counterfeit products

3.2.2 Perceived Behavioural Control and Attitudes Towards Economic Benefits of Purchasing Counterfeit Products

Conner and Armitage (1998) have defined attitudes as the complete evaluations of a given behaviour by the individual. According to Cheng, Fu and Tu (2011) attitudes towards purchasing counterfeits and perceived behavioural control both have a positive influence on the intention to purchase counterfeits, and to ultimately lead to a given behaviour. The combination of attitude toward behaviour, subjective norm and perception of behavioural control, lead to the formation of behavioural intention (Ajzen, 2002). According to Yoo and Lee's (2009) conceptual framework, attitudes toward buying counterfeits by economic

benefits positively influence customers' purchase intention of those counterfeits. Ajzen (1991) has stated that attitudes toward behaviour can be used to predict intentions to perform behaviours of different kinds, with a high degree of accuracy. Ajzen (1991) has continued further to state that subjective norms, perceived behavioural control, and intentions, together with perceptions of behavioural control, account for considerable variance in actual behaviour.

Therefore, inferring from the literature and the empirical evidence mentioned above, the study hypothesises that:

H2: Perceived behavioural control has a positive relationship with attitudes towards economic benefits of purchasing counterfeit products

3.2.3 Price-quality Inference of Counterfeit Products and Attitudes Towards Economic Benefits of Purchasing Counterfeit Products

Price-quality inference is the universal assumption across product categories that the level of the price cue is related positively to the quality level of the product (Zhou, Su, Bao, 2002).

It is believed that consumers may assume a positive relationship between price and product quality, and may rely on this price-quality relationship or price-quality schema as a shortcut to making purchasing decisions (Zhou, Su and Bao, 2002). The price-quality schema performs a critical role in consumer decision-making, where it affects the judgments of perceived quality, influences perceived value and purchase intentions, and determines information search and other aspects of consumer decision-making processes (Zhou, Su and Bao, 2002). Based on past studies on counterfeits, it has been established that consumers are more inclined towards choosing a counterfeit product over a genuine one, if there is a price advantage (Phau, Teah and Lee 2009). However other prior studies as that of (Grossman and Shapiro, 1988), imply that counterfeits can be categorised into two groups: one that will

consider a counterfeit over a genuine product, due to the price advantage given that all that aspects are similar; and the other group would consider the counterfeit product simply for the lower price compensating for the shortfall in quality. Therefore, inferring from the literature and the empirical evidence mentioned above, this study hypothesises that:

H3: price-quality inference of counterfeit products has a positive relationship with attitudes towards economic benefits of purchasing counterfeit products

3.2.4 Price-quality Inference of Counterfeit Products and Purchase Intention of Counterfeit Products

According to Phau, Teah and Lee (2008), based on previous studies on counterfeit purchasing, consumers are more likely to purchase a counterfeit product over a genuine product if a price advantage exists. Grossman and Shapiro (1988) have meanwhile suggested that two types of counterfeit buyers exist, as far as price and quality inference is concerned. The first group perceives counterfeit products as being comparable to genuine products in all aspects, and yet is superior in price offered, then consumers will choose counterfeits, as they provide the status and quality attributes of brand-name products (Grossman and Shapiro, 1988). The second group perceive counterfeit products to be inferior to genuine products, where their superior prices more than compensate for the lack in quality and performance (Grossman and Shapiro, 1988). Therefore, inferring from the literature and the empirical evidence mentioned above, the study hypothesises that:

H4: Price-quality inference of counterfeit products has a positive relationship with purchase intention of counterfeit products

3.2.5 Attitudes Towards Economic Benefits of Purchasing Counterfeit Products and Purchase Intention of Counterfeit Products

According to Yoo and Lee (2009), attitudes are defined as to the extent to which one has a favourable judgement of the behaviour in question, and is an immediate indicator by which his or her intention of conducting the specific behaviour can be predicted. According to the assumptions of the theory of planned behaviour, attitudes toward an act positively affect behaviour (Yoo and Lee, 2009). Building on the theory of planned behaviour, Phau, Teah and Lee (2009) have suggested that attitudes determine purchase intention and purchase behaviour influences purchase intention. Yoo and Lee (2009) illustrated in their conceptual framework that attitudes towards the economic benefits of purchasing counterfeit products have an influence on purchase intention of counterfeit products. Cordell, Wongtada and Kieschnick (1996) have meanwhile stated that consumer involvement in counterfeit transactions facilitates illegal activity, and thus, an attitude-intention-behaviour linkage between the consumer's appreciation for lawfulness and willingness to buy counterfeits could explain consumer participation in the activity. Phau, Teah and Lee (2009) have pointed out that the accessibility of counterfeit products is necessary for purchase behaviour to occur, because the absence of access to counterfeit products would make their purchases difficult to perform. Therefore, inferring from the literature and the empirical evidence abovementioned, the study hypothesises that:

H5: Attitudes towards economic benefits of purchasing counterfeit products have a positive relationship with purchase intention of counterfeit products

Below Table 4 illustrates the hypotheses for the current study.

Table 4: Summary of Hypotheses

SUMMARY OF HYPOTHESES		
H/No.	**Hypothesis Statement**	**Hypothesized Relationship**
H1	Perceived behavioural control has a positive relationship with purchase intention of counterfeit products.	PBC→PI **(+)**
H2	Perceived behavioural control has a positive relationship with attitudes towards economic benefits of purchasing counterfeit products.	PBC → ATT **(+)**
H3	Price-quality inference of counterfeit products has a positive relationship with attitudes towards economic benefits of purchasing counterfeit products.	PQ → ATT **(+)**
H4	Price-quality inference of counterfeit products has a positive relationship with purchase intention of counterfeit products.	PQ → PI **(+)**
H5	Attitudes towards economic benefits of purchasing counterfeit products have a positive relationship with purchase intention of counterfeit products.	ATT→PI **(+)**

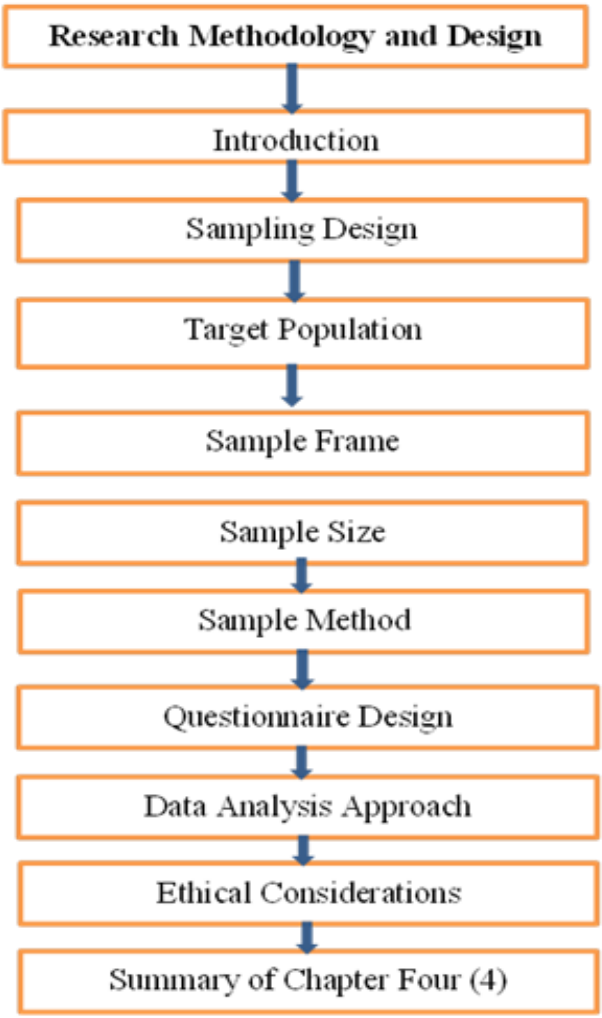
Key:

- PBC = Perceived behavioural control
- PQ = Price-quality inference of counterfeit products
- ATT = Attitudes towards economic benefits of purchasing counterfeit products
- PI = Purchase Intention of counterfeit products

3.3. SUMMARY OF CHAPTER 3

Chapter 3 provided the conceptualised model for the research study that constituted this thesis. Further to that, the research hypotheses for the research study were developed. The aim of this chapter was to illustrate the framework forming the basis of this study, as well as to formulate the proposed hypotheses, while supporting them with existing literature. The chapter comprised of two sections. In the first section, the research model was depicted and the hypothesised relationships indicated. In the second section, the hypothesised relationships were developed and further substantiated.

Figure 6: Diagrammatic Representation of Chapter 4



CHAPTER 4: RESEARCH METHODOLOGY AND DESIGN

4.1 INTRODUCTION

The previous chapter (Chapter 3) provided a detailed theoretical model that formed the basis of the research and explained the variables within the model that was adopted. Research methodology denotes the techniques used to acquire and analyse data to generate new knowledge (Petty, Thomson and Stew, 2012). Research methodologies have an influence on the validity and overview of a study, and play a crucial part in knowledge development (Yang, Wang and Su, 2006). A methodology maps out procedures for gathering information that will be used to answer questions and solve problems (Malhotra and Birks, 2007). The design of this study was quantitative in nature. Seven-point likert-scales were utilised in the collection of the data from respondents regarding their preferences and attitudes towards the purchase of counterfeit products. The researcher decided to use a seven-point likert-scale, because this study adopted questions from similar prior studies that had been measured by a seven point likert scale, where the researcher felt it was most appropriate to use the same measurement scales. A research questionnaire was self-administered to participants. The questionnaire was administered to students who had presented a University of the Witwatersrand student card to the researcher as proof of registration.

Understanding and use of relevant methodology for the study was essential in order to identify the unit of analysis, and to employ compatible methods that would provide the intended results. The research design explored:

- How data was to be acquired
- What instruments were employed
- How the instruments were utilised and
- The intended means for analysing data collected

4.1.2 Research Philosophy: Positivist Paradigm

According to Collins (2010), research philosophy refers to the advance and nature of knowledge. The concept of the paradigm is fundamental to the research process in all areas of study (Mangan, Lalwani and Gardner, 2004). The positivist paradigm is a philosophy in agreement with the empiricist view that knowledge sterns from human experience (Collins, 2010). Collins (2010) stated that positivism is an atomistic, ontological view (nature of reality) of the world comprising discrete, observable elements and events that interact in an observable, determined and regular manner.

4.1.3 Quantitative Research

A quantitative research approach was conducted for the purposes of this study. According to Polit and Hungler (1995), a quantitative approach utilises an organised procedure, along with techniques to gather information under controlled conditions, and highlights objectivity through statistical analysis. As such, a quantitative approach is more appropriate, given the nature of the current study.

4.1.4 Sampling Design

A sampling design should be simple to implement, efficient, and should cover various approaches to measure the sample to be generally applicable (Grafstrom, 2010).

4.1.5 Target Population

The identification of the study population is necessary for the formulation and running of any test (Klein and Meyskens, 2001). When defining a target population, a researcher should indicate clearly the characteristics of the target population that apply directly to the study. Students of the University of the Witwatersrand were used as the target population. Table 5 on the next page illustrates statistics on the characteristics of students of the University of the Witwatersrand, based on a survey conducted in 2010.

Table 5: Profile of University of the Witwatersrand Students

Total student enrolments	30833
Postgraduate students	31%
International students	10%
Male students	69%
Female students	31%

Source: (University of the Witwatersrand, 2010)

4.1.6 Sample Frame

A sample frame refers to the researched environment and the subjects used in a study (Yang et al., 2006). The sample used for purposes of the research was obtained from registered students of the University of the Witwatersrand. A random sample of 380 students who study at the University of the Witwatersrand, comprising those aged 18 and upwards, was used to collect data for this research, because these consumers would have the ability to make purchasing decisions independently, and are well suited to answer the questionnaire as it asks about purchasing behaviour.

4.1.7 Sample Size

Sample size determination is crucial in planning a statistical study, and is challenging as well (Length, 2001). The sample size was determined using the Raosoft® sample size calculator. Raosoft takes into account the following factors; the margin of error, the confidence level, the population size and the response distribution. Default settings on Raosoft® were utilised to calculate sample size and had a margin of error of 5%, confidence level of 95%, population size of 30 833, and a response distribution of 50 percent. Raosoft then calculated that the sample size needed for the survey would be 380 respondents.

4.1.8 Sample Method

The sampling method most appropriate for this research was probability sampling, as it provides every unit within the population an equal chance to be sampled (Gaplin, 2011; Daniel, 2011). The probability sampling method employed was the simple random sampling method. Daniel (2011) proposed six steps in selecting a simple random sample, which include, first: defining the target population; second: identifying a sampling frame of the target population; third: evaluating the sampling frame for under-coverage, coverage, multiple coverage and clustering and to make adjustments accordingly; fourth: assigning a unique number to each element in the frame; fifth: determining sample size, and lastly, the sixth step, which is to randomly select the targeted number of population elements.

4.2 QUESTIONNAIRE DESIGN (MEASUREMENT INSTRUMENT)

In any study, the theoretical constructs that are measured are the determining factors for the choice of measurement methodology (Fagarasanu and Kumar, 2002). The primary data collection instrument used for this dissertation was a research questionnaire. The questionnaire was self-administered to willing respondents at the University of the Witwatersrand, who were registered students of the University. The questionnaire comprised of five sections A, B, C, D and E. Section A asked the respondent about his or her biographical information, such as gender and age. Sections B, C, D and E employed a 7 point likert scale to ask the respondents questions that were based on the research model. Section B asked the respondents questions regarding their perceived ease or difficulty (perceived behavioural control) in the purchasing of counterfeit products. Section C asked after respondents' attitudes towards the economic benefits of purchasing counterfeit products. Section D asked about the respondents' perceptions of the relationship between price and quality of products (price-quality inference of counterfeit products). Section E asked the respondents questions about their intention to purchase counterfeit products. The

questionnaire was designed based on the study's research model. Table 6 below illustrates the questions that were adapted from published academic articles taken from accredited journals, that were used to develop the research questionnaire for the current study.

Table 6: Adapted and Original Measurement Items

Research Construct		**Adapted Measurement Item**	**Original Measurement Item**
Perceived behavioural control	**PBC 1**	For me to purchase a counterfeit product over the next two weeks would be difficult.	'For me to perform behaviour over the next 2 weeks would be difficult' (disagree completely/agree completely)
	PBC 2	If I wanted to, I would not have problems in succeeding to purchase a counterfeit product over the next two weeks.	'If I wanted to, I would not have problems in succeeding to *perform behaviour* over the next 2 weeks' (disagree completely/agree completely)
	PBC 3	I have full control over purchasing counterfeit products over the next two weeks.	'I have full control over *performing behaviour* over the next 2 weeks' (disagree completely/agree completely).
	PBC 4	It is completely up to me whether or not I purchase a counterfeit product over the next two weeks.	'It is completely up to me whether or not I *perform behaviour* over the next 2 weeks' (disagree completely/agree completely).
	PBC 5	It is first and foremost up to me whether or not I purchase a counterfeit product over the next two weeks.	'It is first and foremost up to myself whether or not I *perform behaviour* over the next 2 weeks' (disagree completely/agree completely).
	PBC 6	How easy or difficult would it be for you to purchase a counterfeit product over the next two weeks?	'How easy or difficult would it be for you to *perform behaviour* over the next 2 weeks' (very difficult/very easy).
	PBC 7	How confident are you that you could purchase a counterfeit product over the next two weeks?	'How confident are you that you could *perform behaviour* over the next 2 weeks' (completely unconfident/ completely confident);
	PBC 8	If you actually tried, how likely is it that you would succeed in purchasing a counterfeit product over the next two weeks?	'If you actually tried, how likely is it that you would succeed to *perform behaviour* over the next

			2 weeks' (very unlikely/very likely).
	PBC 9	How much control do you feel over purchasing counterfeit products over the next two weeks?	'How much control do you feel over *performing behaviour* over the next 2 weeks' (no control at all/complete control). **Source:** Kraft, Rise, Sutton and Røysamb (2005)
Attitudes towards economic benefits of purchasing counterfeit products	**ATT 1**	I buy counterfeit products if I think genuine designer products are too expensive.	I buy counterfeit products if I think genuine designer products are too expensive.
	ATT 2	I buy counterfeit products if I cannot afford to buy designer products.	I buy counterfeit products if I cannot afford to buy designer products.
	ATT 3	I buy counterfeit products without hesitation if I have a chance to buy the counterfeits.	I buy counterfeit products without hesitation if I have a chance to buy the counterfeits.
	ATT 4	I buy counterfeit products, instead of the designer products, if I prefer specific brands.	I buy counterfeit products, instead of the designer products, if I prefer specific brands.
	ATT 5	I boast about counterfeit products as if they are the genuine brand products.	I boast about counterfeit products as if they are the genuine brand products.
	ATT 6	I usually purchase counterfeits when it is difficult to distinguish between the counterfeits and the genuine products.	I usually purchase counterfeits when it is difficult to distinguish between the counterfeits and the genuine products. **Source:** Lee and Yoo (2009)
Price-quality inference of counterfeit products	**PQ1**	Generally speaking, the higher the price of a product, the higher the quality.	Generally speaking, the higher the price of a product, the higher the quality.
	PQ2	The price of a product is a good indicator of its quality.	The price of a product is a good indicator of its quality.
	PQ3	You always have to pay a bit more for the best.	You always have to pay a bit more for the best. **Source:** De Matos, Ituassu and Rossi (2007)
Purchase intention of counterfeit	**PI 1**	The likelihood of me purchasing a counterfeit product is…	The likelihood of purchasing this product is…

products			
	PI 2	My willingness to buy a counterfeit product is…	My willingness to buy the product is…
	PI 3	The probability that I would consider buying a counterfeit product is…	The probability that I would consider buying the product is…
	PI 4	At the price shown, the chances of me purchasing a counterfeit product are…	At the price shown, I would consider buying the product…
	PI 5	If I were going to buy a product, I would consider buying a model at the price shown…	If I were going to buy this product, I would consider buying this model at the price shown…
			Source: Dodds, Monroe and Grewal (1991)

4.3 DATA COLLECTION

4.3.1 Data Collection Techniques

The data collection technique that was used for purposes of this research included primary and secondary data collection techniques. Primary data refers to data that is collected specifically for the purpose of the investigation at hand (Churchill and Iacobucci, 2002). Secondary data, on the other hand, are statistics not gathered for the immediate study at hand but for some other purpose (Churchill and Iacobucci, 2002). The survey questionnaire was distributed to the students of The University of the Witwatersrand. To collect data from participants, a comprehensive questionnaire was developed, whereby random students from the University of the Witwatersrand were selected to answer questions on counterfeit products purchasing.

Primary Research

Primary research is usually conducted when a problem does not have a great deal of published information (Driscoll, 2011). Primary research was conducted by self-administering research questionnaires to a sample of 380 respondents, who were, as mentioned, registered students of the University of the Witwatersrand.

Secondary Research

Baines, Fill and Page (2011) defined secondary research as also referred to as desk research as a technique used to collect data previously collected for other intentions or purposes than that of the research at hand. Accredited academic journals that spoke to the current research were consulted for purposes of this study. Relevant theory was also obtained through secondary researchm and the sources used included Google Scholar™, the data bases available on the University of the Witwatersrand library website, as well as textbooks available in the libraries of the University of the Witwatersrand.

4.4 DATA ANALYSIS

4.4.1 Structural Equation Modeling (SEM)

Structural equation modeling (SEM) was engaged in the study for the purpose of analysing data. SEM has recently become a revered statistical technique to test theory in several fields of knowledge (Hair, Anderson, Tatham, and Black, 1998; Schumacker and Lomax, 2004; Nusair and Hua, 2010). Structural Equation Modeling (SEM) was applied so as to examine the hypothesised relationship in the research model (Liao and Hsieh, 2013). Qureshi and Kang (2015) defined structural equation modeling as a multivariate statistical technique, primarily engaged when studying relationships between latent variables (or constructs) and observed variables that constitute a model. SEM is a technique of multivariate statistical analysis, with the ability to measure the underlying latent constructs identified by factor analysis, and evaluating the paths of the hypothesised relationships between the constructs

(Nusair and Hua, 2010). According to He, Gai, Wu and Wan (2012) and Hair (2014), SEM is considered to be similar to regression analysis, but is more predominant, as it evaluates the causal relationships among constructs, while at the same time taking measurement error into consideration. The advantages of SEM can be summarised as follows; firstly it allows for the approximation of a series and multiple regression equations simultaneously (Nusair and Hua, 2010); secondly, it has the capability to incorporate latent variables into the analysis, and accounts for measurement errors in the approximation process (Hair et al., 1998, Nusair and Hua, 2010), and finally, SEM is a statistical approach that establishes measurement models and structural models to address intricate behavioural relationships (Nusair and Hua, 2010; Washington, Karlaftis and Mannering, 2003).

The SEM analysis was carried out employing a two-phase approach (Anderson and Gerbing, 1998; Hair et al., 1998). In the first phase, a confirmatory factor analysis was employed to measure the sufficiency of the measurement model (Nusair and Hua, 2010). Both construct reliability and item reliability were tested (Nusair and Hua, 2010). After establishing that the scale was reliable, the construct validity using convergent and discriminant validity was checked before the measurement model was evaluated and completed (Nusair and Hua, 2010). In the second phase of SEM, the structural model was assessed (Nusair and Hua, 2010). The overall model fit in both measurement and structural models was assessed utilising goodness-of-fit indices including c/df ratio, CFI, NFI, NFI, RFI, IFI and RMSEA (Hair et al., 1998; Jöreskog and Sörbom, 1993; Schumacker and Lomax, 2004; Nusair and Hua, 2010).

4.5 DATA ANALYSIS APPROACH

Data analysis is a statistical process in which raw data is prepared and structured so that valuable information can be extracted from it (Ullah, 2010). Firstly, the collected data was coded in an Excel spread sheet, before analysis. To gain comprehension of the attributes of

each variable, descriptive statistics analysis were utilised and indicated by the mean and standard deviation of each factor. The researcher had the full responsibility of analysing the data. The Statistical Package for the Social Sciences (SPSS) and Analysis of Moment Structures (AMOS) were employed to analyse the data. SPSS was used for Descriptive statistics, and AMOS was used to conduct confirmatory factor analysis and path modeling in order to check for reliability and validity of the data, as well as model fit of the data.

4.5.1 Data Processing and Analysis

Trochim (2000) pointed out that most social research involves the data analysis that occurs in three main stages, which are usually carried out in the following order:

1. Cleaning and sorting out the data for analysis (data preparation)
2. Describing the data (descriptive statistics)
3. Testing hypotheses and models (inferential statistics)
4. Structural equation modeling

    4.1 Confirmatory factor analysis (CFA)

    4.2 Path modeling (PM)

4.5.1.1 Data Cleaning and Coding

Before the data collected from study can be analysed, certain checks for the legitimacy of the data have to be conducted, and the researcher has to take this into consideration, so that if incorrect data was entered on the excel spread sheet it can be removed. Trochim (2000) has stated that immediately after receiving the collected data the researcher must screen it for accuracy. This will enable the researcher to identify any errors the sample might have. Trochim (2000) has added that the following questions had to be asked by the researcher in order to successfully check for discrepancies and inconsistencies:

- Are the responses written clearly?

- Did the respondent answer all important questions?
- Did the respondent complete the questionnaire?
- Does the questionnaire contain all the relevant contextual information, such as data, time, place and the researcher's details?

4.5.1.2 Descriptive Statistics

Trochim (2000) has defined descriptive statistics as information that is used to describe the basic characteristics of the data in the study. Descriptive statistics are used to provide behavioural patterns of respondents in general (Hsu and Shine, 2007). Descriptive statistics involve simple summaries about the samples and the dimensions of the data. The descriptive statistics could take the form of pie charts, or tables, that show the basic data of the main components of the study, for example demographic or biographical data. In the current study descriptive statistics have explored the demographic characteristics of the research data. The total number of participants were mentioned, and the distribution of gender, age, marital status, educational level and purchasing behaviour of participants was explored.

4.5.2 Reliability and Validity of Measurement Scales

Reliability and validity both relate to the logic and accuracy of a test (Wilckens, 2010). Reliability is the degree to which the instruments consistently measure what the instrument is supposed to measure (Dusick, 2011), and this is done numerically, with a coefficient greater than a Cronbach's alpha of 0.6, suggesting that the reliability of the research instrument is marginally acceptable.

A validity test is undertaken to identify whether an instrument of measurement tool has performed its intended measurement function (Budiman and Wijaya, 2014). Budiman and Wijaya (2014) have pointed out that to know the data consistency and accuracy collected from instrument use, a validity test is used by using the correlation of product moment

(Pearson). Reliability requires better comparable experiments, while validity asks the question as to whether the experiment is tailored to appropriately answer the questions being asked, i.e. if the experiment is valid in logical terms (Wilckens, 2010). In particular, the factor loadings, the Cronbach's alpha values and Composite Reliability (CR) values were determined using the Statistical Package for the Social Sciences (SPSS) 22.0 and Analysis of Moment Structures (AMOS) 22.0 software, in order to assess measurement items' reliability. Convergent and discriminant validity of the research constructs were determined by checking the inter-correlation between the research constructs, comparing the average variance extracted (AVE), and shared variance (discriminate validity). As for convergent validity, the item total correlation values, item loading and average variance extracted were utilised as indicators.

4.5.3 Tests of Measures and Accuracy Analysis Statistics

After demographic data analysis, the reliability and validity of the measuring scales need to be assessed so as to ensure valid data analyses. This was principally important for this study, as a few of the scales had been modified in order to adapt to the particular research context. The total error of a measurement entails of systematic errors, which involve with validity test, and random errors, which are measured by reliability test (Aaker, 2007).

4.6 RELIABILITY TESTS

Three methods, namely Cronbach's alpha test (Cronbach α), the composite reliability test (CR) and average variance extracted (AVE) test, were used in this thesis to check on the reliability of the research measures. Reliability refers to the extent to which the instruments consistently measure that which they ought to measure (Dusick, 2011) and this is done numerically, with a coefficient greater than a Cronbach's alpha of 0.6, suggesting that the reliability of the research instrument is marginally acceptable. Boyle (1991) stated that the term 'internal consistency' has been used expansively in classical psychometrics to refer to

the reliability of a scale based on the degree of within-scale item inter-correlation, as measured by the split-half method, or more adequately, by Cronbach's alpha. According to Dunn, Baguley and Brunsden (2013) the coefficient alpha is the most commonly used measure of reliability, and certainly of internal consistency reliability reported in psychological research.

4.6.1 Cronbach's Alpha Test

The Cronbach's alpha was developed by Lee Cronbach in 1951 to offer a measure of the internal consistency of a test or scale, and is expressed as a number between 0 and 1 (Tavakol and Dennick, 2011). In this study, the internal reliability of each construct was assessed using the standardised Cronbach's coefficient alpha. Cronbach's coefficient α is one of the most common internal consistency approaches (Dunn, Baguley and Brunsden, 2013). According to Chinomona (2011), a higher level of Cronbach's coefficient alpha indicates a higher reliability of the measurement scale.

Table 7 below is an illustration of reliability test criteria, description for each criteria and the acceptance level for each criteria.

Table 7: Reliability Test Criteria, Description and Acceptable Level

Reliability test criteria	**Description**	**Acceptable level**	**Source**
Cronbach's Alpha	Coefficient for determining internal consistency of items	Value must be equal to or greater than 0.7	Nunnally and Bernstein (1994)
Composite reliability (CR)	Method used to measure internal consistency of the measurement model	Value must be equal to or greater than 0.7	Hair *el al* (2006)

Average Variance Extracted (AVE)	Method used to measure reliability and validity of items	Value must be equal to or greater than 0.5	Fraering and Minor (2006)

For purposes of this research, the Cronbach's Alpha, Composite reliability (CR) and Average Variance Extracted (AVE) were conducted so as to assess the reliability of the measures.

4.6.2 Composite Reliability

According to Yang and Lai (2010) in reliability analysis, an acceptable CR value must exceed 0.7. The internal reliability of each construct was also evaluated using the Composite Reliability (CR) index test. It is calculated using the following formula:

(CR): $CR_{\eta} = (\Sigma\lambda yi)^2 / [(\Sigma\lambda yi)^2 + (\Sigma\varepsilon i)]$

Composite Reliability = (square of the summation of the factor loadings) / {(square of the summation of the factor loadings) + (summation of error variances)}.

The resultant coefficient is similar to that of Cronbach's α. The threshold for Composite Reliability (CR) index of 0.5 for basic research and 0.6 for exploratory research are suggested by Nunnally (Chinomona, 2011). The value is later adjusted to 0.7, and is recommended by Hair, Anderson, Tatham and Black (2006). Following the formula provided above to calculate Composite Reliability, the results that were found are illustrated in Table 10 above. According to the broader literature, a Composite Reliability index that is greater than 0.7 depicts an adequate internal consistency of the construct (Hair et al., 2006).

4.7 VALIDITY TESTS

Validity refers to the degree to which a test or instrument measures the attributes that it is supposed to measure (Easterby-Smith, Thorpe and Lowe, 2002). Its primary concern is with the accuracy of measurement. This section of the chapter is concerned with testing construct validity.

4.7.1 Construct Validity

Construct validity is a type of validity that has attracted the greatest amount of attention in social science (Churchill, 1979). To establish this type of validity, two categories of construct validity normally need to be determined, namely: convergent validity and discriminant validity.

4.7.2 Convergent Validity

According to Sarstedt, Ringle, Smith, Reams and Hair (2014), convergent validity measures the degree to which a construct comes together in its indicators by explaining the items' variance. Convergent validity is considered sufficient when the AVE value of each construct exceeds 0.5 (Yang and Lai, 2010). Peter (1981) stated that ideally, an item is expected to be related to other items that measure the same constructs (convergent validity), but to differ from items which measure different constructs (discriminant validity).

4.7.3 Discriminant Validity

Discriminant validity refers to the degree to which a measure is distinct from other measures, i.e. it shows heterogeneity between different constructs (Malhotra, 1996). According to Fornell and Larcker (1981), discriminant validity can be assessed using the average variance extracted (AVE). To confirm discriminant validity, the average variance extracted for each construct should be greater than the squared correlations between the construct and all other constructs in the model (Nusair and Hua, 2010).

4.7.3.1 Inter-construct Correlation Matrix

One of the methods used to check on the discriminant validity of the research constructs was the evaluation of whether the correlations among latent constructs were less than 1.0.. A correlation value between constructs of less than 0.7 is recommended in the empirical

literature to confirm the existence of discriminant validity (Bagozzi and Yi, 1991; Nunnally and Bernstein, 1994).

4.7.3.2 Average Variance Extracted (AVE) and Shared Variance (SV)

Discriminant validity was also established by checking if the average variance extracted (AVE) was greater than the highest shared variance (HSV) (Fornell and Larcker, 1981).

4.8 Model Fit/Acceptability

According to Schumacker and Lomax (2004), CFA and SEM fit indices have no sole statistical test of significance that identifies a correct model given the sample data, especially alternative models can exist that yield exactly the same data to model fit. It is recommended that various model fit criteria be used in combination to assess model fit as global fit measures (Hair et al., 1992).

4.8.1 Confirmatory Factor Analysis

Confirmatory factor analysis is an analytical tool that allows the researcher to explore hypotheses about what constructs the test in question is measuring and provides an empirical basis for clinical interpretation (Burton, Ryan, Axelrod, Schellenberger and Richards, 2003). A confirmatory factor analysis was performed to obtain the standard regression weights. Model fit indicators such as Chi-square/degrees of freedom, Goodness of Fit Index (GFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Composite Fit Index (CFI) and the Random Measure of Standard Error Approximation (RMSEA) will be used to assess the model fit.

This chapter used an eight model fit criteria to test the overall fit of the model. Table 8 on the following page presents the acceptable model fit criteria.

Table 8: Model Fit Criteria and Acceptable Fit Level

Model fit criteria	Description	Acceptable level	Source
Chi-square **(χ^2 /DF)**	Method used to assess the general fit of the model.	Value must be below 3	Chinomona (2011)
Goodness of Fit Index **(GFI)**	The (GFI) is the degree of fit between the hypothesized model and the observed covariance matrix.	Ranges between 0 and 1, with a cutoff value of 0.9	Baumgartner and Hombur (1996)
Normed Fit Index **(NFI)**	The (NFI) evaluates the discrepancy between the chi-squared value of the hypothesised model and the chi-squared value of the null model.	Value must be greater than 0.9	Bentler and Bonett (1980)
Tucker-Lewis Index **(TLI)**	The TLC utilises simpler models and is known to address the issue of sample size associated with NFI.	Value must meet or exceed 0.9	Hooper, Coughlan and Mullen (2008); Chinomona (2011)
Incremental Fit Index **(IFI)**	The IFI's purpose is to correct the issue of parsimony and sample size related to NFI.	Value must meet or exceed 0.9	Bollen, (1989), Chinomona (2011)
Comparative Fit Index **(CFI)**	The (CFI) assumes that all latent variables are uncorrelated and compares the sample covariance matrix with the null model.	Value must meet or exceed 0.9	Chinomona (2011), Hu and Bentler (1999), Hooper

			et al (2008)
Relative Fit Index **(RFI)**	The (RFI) compares the chi-square for the hypothesised model to one from a "null", or "baseline" model.	Value must meet or exceed 0.9	McDonald and Ho (2002)
Root mean square error of approximation **(RMSEA)**	The (RMSEA) informs how well the model, with indefinite but optimally selected parameter estimates, would fit the populations covariance matrix (Byrne, 1998).	Value must fall below 0.05 and 0.08	Byrne (1998)

4.8.1.1 Chi-square (χ^2 /DF)

According to Nevitt and Hancock (2000) the chi square fit statistic tests a hypothesis of precise fit of the proposed model in the population. A chi-square value below three (3) is considered to be an acceptable model fit as suggested by (Chinomona, 2011).

4.8.1.2 Goodness-of-fit Index (GFI)

The Goodness of Fit is one of many criterion values for indicating satisfactory model fit suggested by researchers (Cheung and Rensvold, 2002). GFI varies from 0-1, but theoretically can yield meaningless negative values. Through general consensus GFI should be equal to or greater than 0.90 to accept the model (Bollen, 1990).

4.8.1.3 Normed Fit Index (NFI)

The Normed Fit Index (NFI) assesses the inconsistency between the chi-squared value of the hypothesised model and the chi-squared value of the null model (Bentler and Bonett, 1980). It is generally agreed upon that NFI values below 0.90 indicate a need to re-specify the model (Hu and Bentler, 1999).

4.8.1.4 Tucker-Lewis Index (TLI)

The Tucker-Lewis Index (TLI) uses simple models and is known to address the issue of sample size associated with The Normed Fit Index (NFI). Recommended value must meet or exceed 0.9 (Hooper et al., 2008; Chinomona, 2011).

4.8.1.5 Incremental Fit Index (IFI)

Bollen (1989) introduced the IFI in order to address the issue of parsimony and sample size, which was known to be associated with the NFI. Chinomona (2011) stated that the recommended IFI should be equal to or greater than 0.9 in order to accept the model.

4.8.1.6 Comparative Fit Index (CFI)

According to Gatignon (2010) the comparative fit index (CFI) analyses the model fit through assessing the discrepancy between the data and the hypothesised model. The CFI is a revised version of the normed fit index (NFI), which is responsible for the sample size (Byrne, 1998). The CFI also addresses sample size issues normally associated with the chi-square test and the normed fit index (Bentler, 1990), and functions well, even when the sample size being used for the study is small (Tabachnick and Fidell, 2007). According to Hu et al. (1999) and Chinomona (2011), a value equal or greater than 0.9 is an indication of acceptable model fit.

4.8.1.7 Root Mean Square Error of Approximation (RMSEA)

The root mean square error of approximation (RMSEA) fit index was introduced by Steiger and Lind (1980) for evaluating covariance structure models (Steiger, 1998). It reduces problems and inconsistencies commonly found in testing models with large sample sizes, and have therefore become a helpful tool for guiding complex judgments about model utility, rather than functioning as a replacement for such judgements (Steiger, 1998). A good model fit if RMSEA is considered to be less than or equal to 0.5 and an adequate fit if RMSEA is less than or equal to 0.8 (Chinomona, 2011).

4.8.2 Path Modeling

Path modeling describes the relationships between observed or measured variables and theoretical constructs (Roche, Duffield and White, 2011) and tests the structural paths of the conceptualised research model. Once the model fit was assessed using confirmatory factor analysis (CFA), this study proceeded to perform path modeling using the AMOS 22 software package. The structural equation modeling (SEM) technique demonstrates and tests the theoretical underpinnings of a proposed study, and the significance of the relationships between models constructs. SEM stipulates a technique where separate relationships are allowed for each set of dependent variables, and provides an estimation technique for a series of separate multi-regression equations to be estimated concurrently. It further contains two mechanisms, namely the structural model, which is the path where independent and dependent variables are linked, and the measurement model, which enables this study to use several indicators for a single independent variable.

4.9 ETHICAL CONSIDERATIONS

An ethics clearance form was applied for and obtained, as it was one of the requirements of the research. This is the case because a human element was involved in the study, and therefore measures had to be put in place to ensure the protection of peoples' privacy as well as the reputation of the University of the Witwatersrand. The University of the Witwatersrand ethics committee made the decision to grant ethical clearance for the research and, if any fabrication, falsifying or misrepresenting of research data occurred, the committee had full authority to take appropriate action. No participant was forced to take part in the study, and no incentives were used to lure participants into taking part. Participants were free to pull out of the study at any given point. All the procedures as far as ethical conduct throughout the research were adhered to. All the collected data was kept as confidential, and none was used for any other purposes other than those of the research.

4.10 SUMMARY OF CHAPTER 4

Chapter 4 explored the research methodology and design used in this study, and defined this as a quantitative study. A self-administered questionnaire was used in order to assess how customers perceive the purchasing of counterfeit products. In total, 393 questionnaires were collected and 380 usable questionnaires were captured, cleaned and analysed. The chapter was divided into 12 sections. The first section was the introduction, the second, a discussion of quantitative research, in the third, a sampling design was presented, and the fourth explores the sample size. In the fifth section, the sample method was also discussed. Chapter 5 explores the data analysis process as well as discusses the results of the study. Chapter 5 also includes the interpretation of the results and ends with a summary of the entire chapter. Figure 7 and 8 on the following page illustrate the research methodology and data analysis approach respectively that was used for this dissertation.

Figure 7: Diagrammatic Representation of Research Methodology

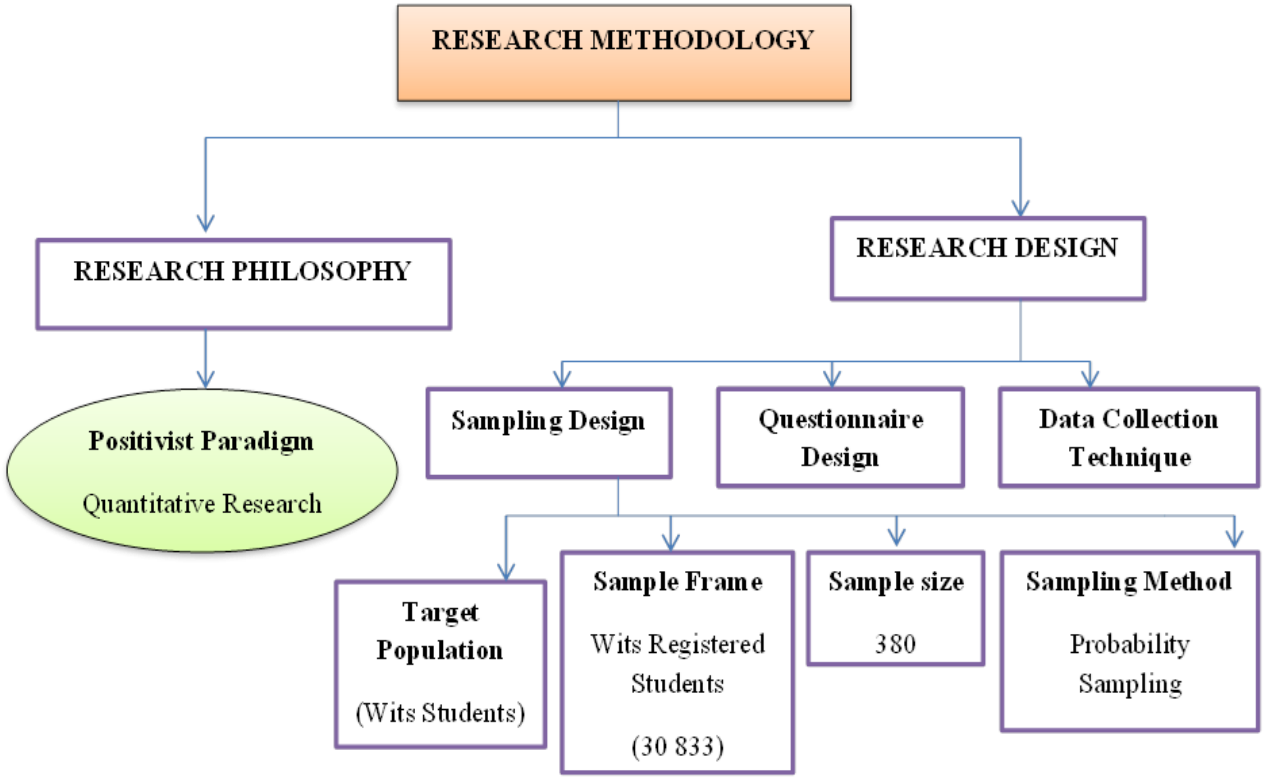


Figure 8: Diagrammatic Representation of Data Analysis Approach

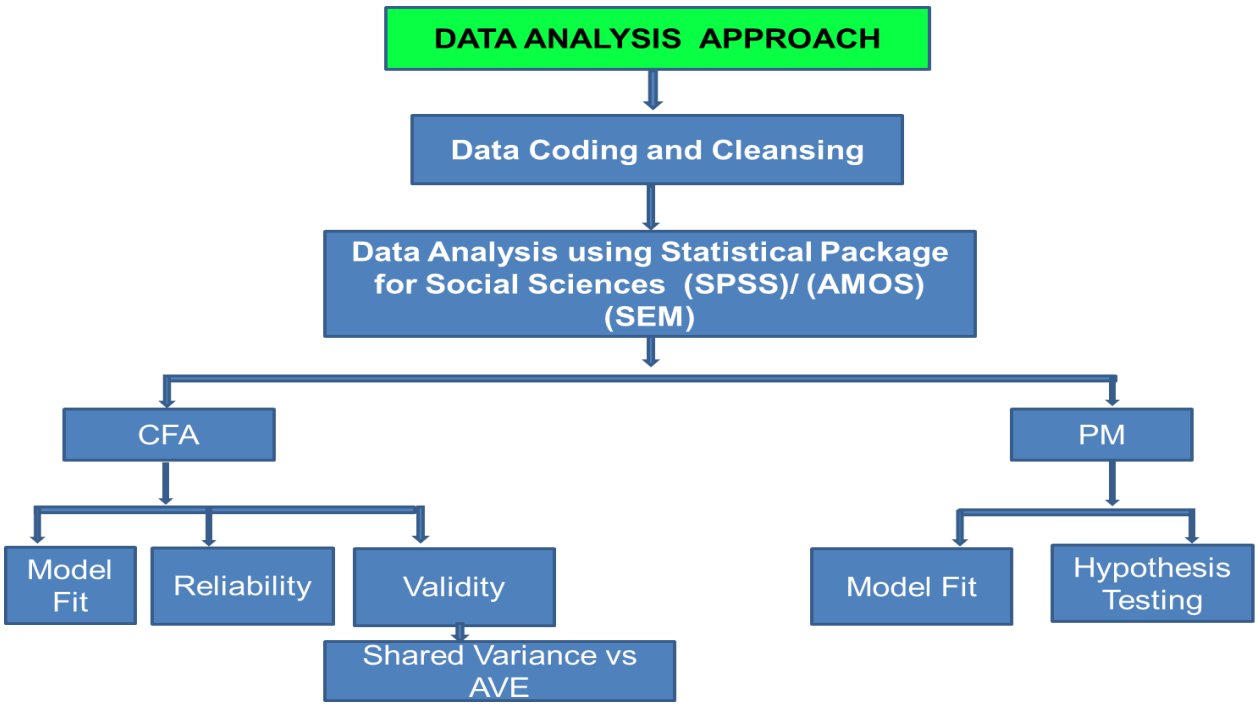
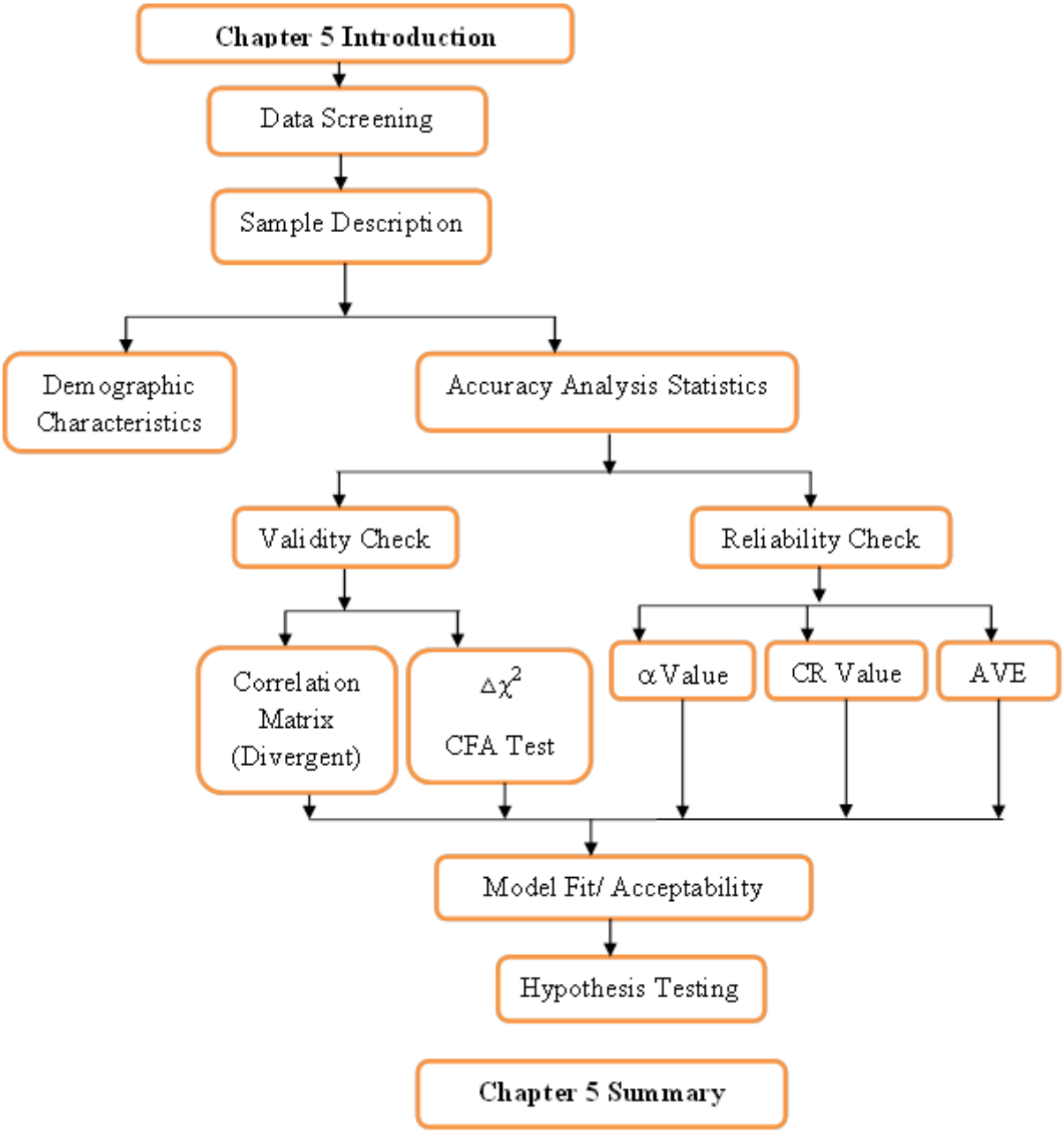


Figure 9: Diagrammatic Representation of Chapter 5



CHAPTER 5: DATA ANALYSIS AND DISCUSSION OF RESULTS

5.1 INTRODUCTION

Chapter 4 discussed the methods and techniques that were used to obtain the findings that will be presented in this chapter. This chapter presents and discusses the findings that were obtained through empirical investigation. This chapter presents statistical analysis of data that was collected through the data collection tool (research questionnaire). To analyse the data, the Statistical Package for the Social Sciences (SPSS) was utilised. In this chapter, descriptive statistics were discussed, and the reliability of all the constructs in the model used to develop the questionnaire was also discussed. Structural Equation Modeling was also conducted, where Confirmatory Factor Analysis and Path Modeling were conducted. Confirmatory Factor Analysis (CFA) was conducted so as to check for Model Fit, Reliability and Validity of the scales used in the research questionnaire. To check the validity of the scales, shared variance was compared to average variance extracted (AVE). Path Modeling (PM) was conducted to check for model fit, and to test the hypothesis of the study.

Chapter 5 will commence by exploring the data screening process, followed by the presentation of data analysis procedures employed by the current study. Thereafter, the sample description is provided. Following the sample description, a test of measures and accuracy analysis statistics is provided. This section of the chapter mainly tests for the measures' reliability and validity, using a variety of methods to ascertain accuracy. For measure reliability, the Cronbach's Alpha, the Composite Reliability (CR) value, and the Average Value Extracted (AVE) were used; whilst for validity, factor analysis was used to check convergent validity and correlation matrix and chi-square, where CFA difference was used to check for evidence of discriminant validity. This section is followed by a presentation of the research models fit. Numerous indicators such as the chi-square value, Goodness of Fit Index (GFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Comparative Fit Index

(CFI) and Root Mean Square Error of Approximation (RMSEA), were used to ascertain whether the research model fit the data. In conclusion, a summary of Chapter 5 is provided.

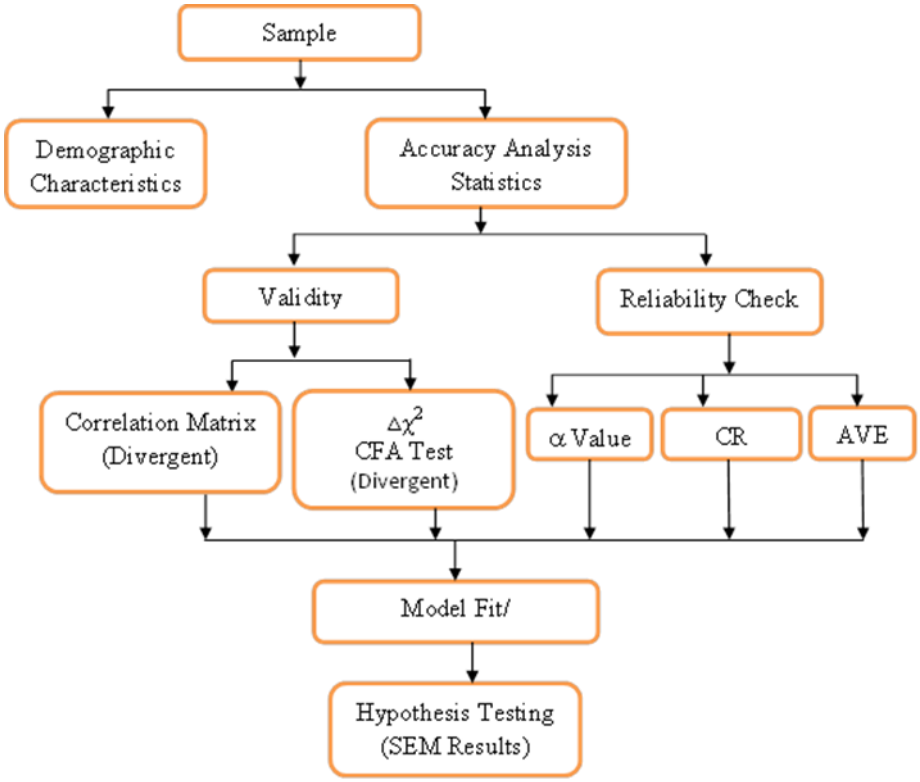
5.2. DATA SCREENING

After data collection, the researcher implemented the data screening process proposed by Malhotra (1993) and Churchill (1999), which was done to ensure data was cleaned before conducting any further statistical analysis. Screening the data is the initial step towards obtaining insight into the characteristics of the data. It is crucial to ensure the accuracy of data entries and assessment of outliers, before proceeding to analyse summary statistics for the survey responses. The major analytical tasks in the data screening process include questionnaire checking, editing, coding, and tabulation. Using SPSS, each data field was tested for mean and standard deviation, so as to detect any typographical errors and possible outliers. Data was cleaned after errors in data entry were rectified.

5.3. DATA ANALYTICAL PROCEDURES

To analyse the empirical data, several statistical methods were employed. Firstly, coefficient alpha and adjusted item-to-total correlations were used in assessing the internal consistency of each construct. Data was analysed using SPSS. For the assessment of final measures, confirmatory factor analysis was performed using the AMOS 22. Statistical procedures used to validate measures involved the assessment of items and scale reliability, convergent and discriminant validity. Details of structural equation modeling will be analysed in this chapter, along with the interpretation of results. Figure 10 demonstrates the procedures of statistical analysis, as well as the key tasks that will be undertaken in Chapter 5.

Figure 10: Statistical Analysis Procedures



5.4 DESCRIPTIVE STATISTICS

Kneale and Santy (1999) have stated that any study should commence by explaining the demographic or descriptive traits of the sampled population, and that it ought to present this in a comprehensible way. The purpose of descriptive statistics is to search for patterns, to put together and present a set of data describing the characteristics of the sample so as to make comparisons (Hsu and Shine, 2007). Descriptive statistics involve simple summaries about the samples and the dimensions of the data. The descriptive statistics could take the form of pie charts or tables, showing the basic data of the main components of the study for example demographic or biographical data.

5.4.1 Sample Description

Table 7 presents the profile of the participants. The University of Witwatersrand, which has a total population of 30 833 (University of the Witwatersrand, 2010), was used as the sample frame, and only registered students of the University of the Witwatersrand were surveyed.

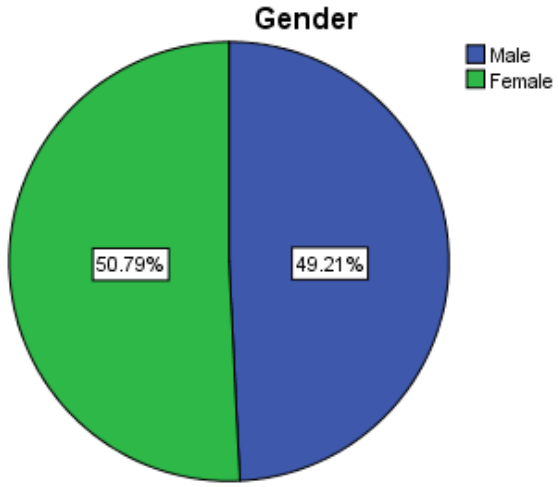
The profile indicates that the proportion of males to females was almost evenly split, with males representing 49,2% of the total sample and females accounting for 50,8% of the total sample. Most of the respondents were from the age group of (18-19 years) and the age group with the least number of respondents (26 years and older) was the represented by 26,6% of the total sample. Most of the respondents were single, a group comprising 94, 2% of the total sample, as compared to the married respondents, who only comprised 5,8% of the total sample. The results showed that most of the respondents indicated a high school education as their highest qualification, indicated by 47,1% of the total sample. All respondents were students, where 62.1% indicated that their purchase frequency was mostly on a monthly basis. Most of the respondents indicated that they spent less than R250 on luxury goods, which was represented by 104 out of the total 380 respondents. Table 9 below presents a profile of the participants.

Table 9: Sample Demographic Profile

Gender	**Frequency**	**Percentage**
Male	187	49,2 %
Female	193	50,8 %
Total	**380**	**100 %**
Age	**Frequency**	**Percentage**
18-19	158	41,6 %
20-25	121	31,8 %
26+	101	26,6 %
Total	**380**	**100 %**
Marital Status	**Frequency**	**Percentage**
Married	22	5,8 %

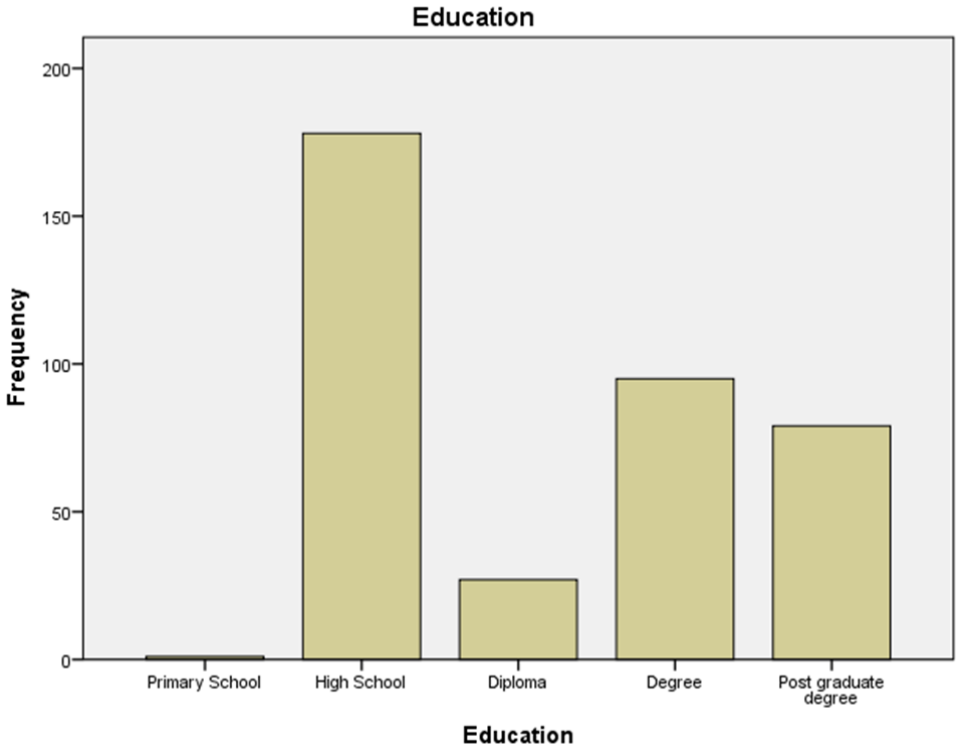
Single	358	94,2 %
Total	**380**	**100%**
Level of Education	**Frequency**	**Percentage**
High School	179	47,1 %
Diploma	27	7,1 %
Degree	95	25,0 %
Post Graduate	79	20,8 %
Total	**380**	**100%**
Occupation	**Frequency**	**Percentage**
Student	380	100,0 %
Total	**380**	**100%**
Purchase Frequency	**Frequency**	**Percentage**
Monthly	236	62,1 %
Seasonally	65	17,1 %
Annually	79	20,8 %
Total	**380**	**100%**
Amount of Money Spent	**Frequency**	**Percentage**
Less than R250	104	27,4 %
Between R250- R500	82	21,6 %
Between R501- R1000	96	25,3 %
More than R1000	98	25,8 %
Total	**380**	**100%**

Figure 11: Pie Chart Illustrating the Distribution of Males and Females in the Sample



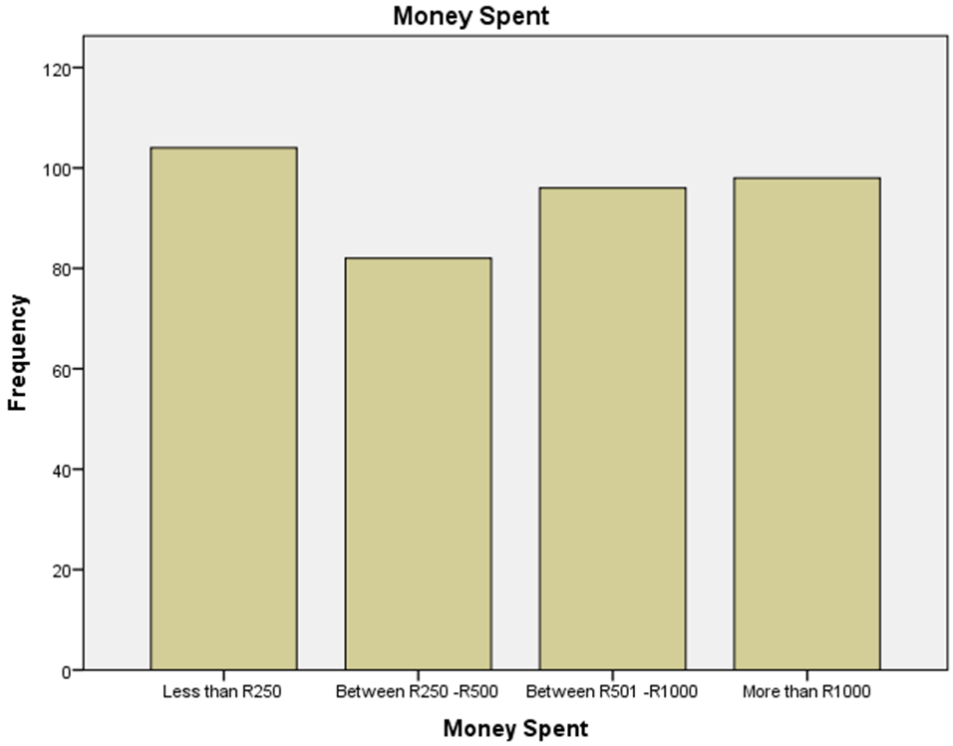
The Pie Chart in Figure 11 above illustrates the gender distribution of male to female of the sample. It can be observed that males accounted for 50,79% of the total sample number, and that females accounted for 49,21% of the total sample. Below Figure 12 presents a bar graph illustrating the educational levels of the respondents.

Figure 12: Bar Graph illustrating Educational Levels of the Respondents



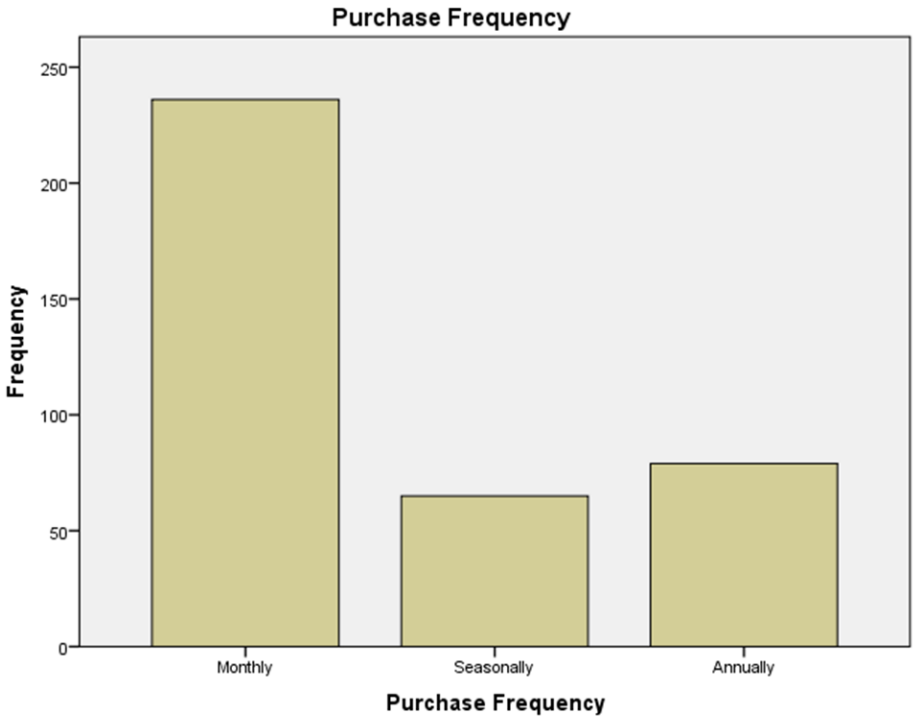
As can be seen in Figure 12 on the previous page, most of the respondents stated high school education as their highest education level, indicated by the range between 150 and 200 respondents, with the least number of respondents indicating a diploma as their highest education level, as indicated by 7.1% of the total sample. Figure13 shows a bar graph illustrating the amount of money spent by respondents on luxury products.

Figure 13: Bar Graph Illustrating Amount of Money Spent by Respondents



As can be seen in Figure 13 above, most of the respondents spend less than R250, which is indicated by a value above 100 respondents, where those respondents that spent between R250 and R500 had the lowest representation, only accounting for value close to 80 out of the total 380 respondents. Figure 14 on the following page illustrates the purchase frequency of respondents.

Figure 14: Bar Graph illustrating Purchase Frequency of Respondents



As can be seen in Figure 14 above, most of the respondents purchase luxury products on a monthly basis, which was represented by a range of 200 to 250 of the total 380 respondents. Thereafter, respondents who purchase luxury products annually, had the second highest representation, and were represented by a range between 50 to 100 respondents. Finally, the least number of respondents indicated that they purchase luxury products seasonally; and these were also around 50 to 100 respondents, but noticeably lower than those who purchase luxury products annually. The following section discusses the results of the questionnaire.

5.4.2 Questionnaire Results

All research constructs were measured on a seven-point Likert-type scale. There were a total number of 380 respondents. The first variable "Perceived Behavioural Control (PBC)" was measured with nine items, ranging from PBC1 to PBC9. The second variable, namely "Attitudes towards economic benefits of purchasing counterfeit products (ATT)" was measured with six items, ranging from ATT1 to ATT6. The third variable "price-quality

inference of counterfeit products (PQ)", was measured with three items ranging from PQ1 to PQ3. The forth variable, "purchase intention of counterfeit products (PI)", was measured with five items ranging from PI1 to PI5. Having measured the construct "perceived behavioural control (PBC)" with nine measurement items, results indicate that most of the respondents were neutral in their responses. This is evident in the following neutral responses for PBC: PBC1 obtained 173 (45.5%); PBC2 obtained 210 (53.5%); PBC3 obtained 195 (51.3%); PBC4 had 208 (54.7%); PBC5 achieved 177 (46.6%); PBC6 reached 196 (51.6%); PBC7 reached 199 (52.4%); PBC8 obtained 200 (52.6%); PBC9 obtained 202 (53.2%). The variable "attitudes towards economic benefits of purchasing counterfeit products (ATT)" showed that most of the respondents were leaning towards neutrality, or were agreeing with the statements/questions. For example, ATT2 had 217 (57.1%) neutral responses, and ATT1 had 115 (30.3%) respondents. Out of the possible 380 agreeing with the statement, this was significantly more than the other responses for the same statement, such as one respondent (0.3%) and four respondents (1.1%) strongly disagreeing and moderately disagreeing, respectively. The other variable, "price-quality inference of counterfeit products (PQ)", proved that most of the respondents were neutral. This was indicated by 206 (54.2%) neutral responses for PQ1. However, following the neutral responses, more respondents agreed with the statements/questions, as compared to disagreeing with them. For example, PQ3 had 97 respondents (25.5%), stating that they agreed with the statement, as compared to one respondent (0.3%), who strongly disagreed with the same statement. The final variable, "purchase intention of counterfeit products (PI)" had higher responses options 4 and 5, representing "neutral" and "high" respectively as compared to options 1 and 2, representing "very low" and "moderately low". For example 196 respondents (51.6%) indicated that they were neutral on PI5, while 109 respondents (27.8%) selected "high"; as compared to the respondents who chose "very low" and "moderately low" both of which were indicated by

one respondent (0.3%), respectively. Overally, it can be noted that there were no extremes, as few respondents indicated that they strongly disagreed with any of the statements/questions, with none stating that they strongly agreed with any of the statements/questions. Table 10 below illustrates the results for the tests to be explored in greater detail in the sections to follow.

5.5 RELIABILITY TESTS

Three approaches were employed to check for reliability of research measures used for this study, namely the Cronbach's alpha test (Cronbach α), Composite Reliability test (CR) and Average Value Extracted (AVE) test. Table 10 on the following page presents the results for all three tests used to check the research measure reliability.

5.5.1 Cronbach's Alpha Test

Internal reliability of each construct was measured using the standardized Cronbach's coefficient alpha. Higher values of Cronbach's coefficient alpha represented higher reliability of the scale. Furthermore, higher inter-item correlations revealed statistical agreement among the measured items. The results of scale reliability tests are shown in Table 10 above. As can be seen, item-to-total values ranged from 0.648 to 0.948 and therefore, were above the cut-off point of 0.3 (often ≦0.3) endorsed by Dunn, Seaker and Waller (1994). As can also be observed on Table 10 Cronbach's alpha coefficients ranged from to 0.838 to 0.960 surpassing the 0.7 threshold recommended by (Nunnally and Bernstein, 1994).

5.5.2 Composite Reliability (CR)

Internal reliability of each construct was also evaluated using the Composite Reliability (CR) index test. According to the literature a Composite Reliability index greater than 0.7 depicts a passable internal consistency of the construct (Hair et al., 2006). The results in Table 10

indicate that composite reliability (C.R.) indexes were between 0.835 and 0.959. These values exceeded the estimate criteria used by prior literature (Hair et al., 2006).

Table 10: Accuracy Analysis Statistics

Research Construct		Descriptive Statistics				Cronbach's Test		C.R. Value	AVE Value	Highest Shared Variance	Factor Loading
		Mean Value		Standard Deviation		Item-total	α value				
PBC	PBC1	3,858	3,901	0,776	0,741	,709	0,960	0,959	0,730	0.520	0,653
	PBC2	3,953		0,718		,719					0,655
	PBC3	3,966		0,756		,723					0,674
	PBC4	3,926		0,730		,772					0,738
	PBC5	3,863		0,794		,838					0,871
	PBC6	3,887		0,730		,941					0,991
	PBC7	3,884		0,724		,948					0,998
	PBC8	3,887		0,723		,941					0,994
	PBC9	3,887		0,719		,943					0,994
ATT	ATT1	4,068	3,987	0,755	0,740	,733	0,889	0,886	0,833	0.601	0,760
	ATT2	4,024		0,683		,731					0,749
	ATT3	3,989		0,737		,663					0,718
	ATT4	4,021		0,722		,730					0,788
	ATT5	3,958		0,747		,702					0,751
	ATT6	3,863		0,797		,686					0,745
PQ	PQ1	3,976	4,017	0,721	0,712	,706	0,838	0,835	0,757	0.601	0,826
	PQ2	4,029		0,713		,740					0,801
	PQ3	4,045		0,701		,657					0,748
PI	PI1	3,887	3,961	0,762	0,752	,713	0,869	0,859	0,798	0.566	0,771
	PI2	3,861		0,782		,707					0,746
	PI3	3,987		0,739		,710					0,735
	PI4	3,992		0,764		,648					0,686
	PI5	4,079		0,715		,691					0,769

* Scores: 1 – Disagree completely; 4 – Neutral; 7 –Agree completely.

* Scores: 1 – Very difficult; 4 – Neutral; 7 –Very easy.

* Scores: 1 – Completely unconfident; 4 – Neutral; 7 – Completely confident.

* Scores: 1 – Very unlikely; 4 – Neutral; 7 – Very likely.

* Scores: 1 – No control at all; 4 – Neutral; 7 – Complete control.

* Scores: 1 – Strongly disagree; 4 – Neutral; 7 – Strongly agree.

* Scores: 1 – Very low; 4 – Neutral; 7 – Very high.

C.R.: Composite Reliability; AVE: Average Variance Extracted; S.V.: Shared Variance.

[a] significance level $p<0.05$; [b] significance level $p<0.01$; [c] significance level $p<0.001$

Measurement model fits: $\chi^2/df = 2,456$; GFI= 0,901; CFI= 0,971; IFI=0,971; TLI= 0,964; RFI=0,941; NFI= 0,952; RMSEA= 0,062

5.5.3 Average Value Extracted (AVE)

The average variance extracted proved that the overall amount of variance in the indicators were accounted for by the latent construct. Values for the variance extracted greater than 0.40 demonstrated that the indicators adequately represented the latent construct. Overall, all average variance explained (AVE) values ranged from 0.730 to 0.833, thus within the marginal to acceptable threshold recommended by (Fraering & Minor, 2006). As can be seen in table 10 on the previous page, the average variance extracted (AVE) of perceived behavioural control (PBC) is 0.73 is greater that the square of the shared variance of perceived behavioural control (PBC) and attitudes towards economic benefits of purchasing counterfeit products (ATT), which is $[(0.6652)^2 = 0.425]$. This proves the existence of discriminate validity.

Table 11 below presents the calculations for Composite Reliability.

Table 11: Diagrammatic Representation of Composite Reliability Calculations

				Composite reliability (CR)			
					summation of error terms		
				$(\sum\lambda Yi)^2$	éi	∑éi	CR
PBC1	<---	PBC	0,653	57,27462	0,573591	2,432848	0,959254
PBC2	<---	PBC	0,655		0,570975		
PBC3	<---	PBC	0,674		0,545724		
PBC4	<---	PBC	0,738		0,455356		
PBC5	<---	PBC	0,871		0,241359		
PBC6	<---	PBC	0,991		0,017919		
PBC7	<---	PBC	0,998		0,003996		
PBC8	<---	PBC	0,994		0,011964		
PBC9	<---	PBC	0,994		0,011964		
ATT1	<---	ATT	0,760	20,34912	0,4224	2,605905	0,886478
ATT2	<---	ATT	0,749		0,438999		
ATT3	<---	ATT	0,718		0,484476		
ATT4	<---	ATT	0,788		0,379056		
ATT5	<---	ATT	0,751		0,435999		
ATT6	<---	ATT	0,745		0,444975		
PQ1	<---	PQ	0,826	5,64063	0,317724	1,116619	0,834752
PQ2	<---	PQ	0,801		0,358399		
PQ3	<---	PQ	0,748		0,440496		
PI1	<---	PI	0,771	13,74185	0,405559	2,246861	0,859472
PI2	<---	PI	0,746		0,443484		
PI3	<---	PI	0,735		0,459775		
PI4	<---	PI	0,686		0,529404		
PI5	<---	PI	0,769		0,408639		

According to Yang & Lai (2010) in reliability analysis, an acceptable CR value must exceed 0.7. The internal reliability of each construct was also evaluated using the Composite Reliability (CR) index test. It is calculated using the following formula:

(CR): $CR_{\eta} = (\Sigma\lambda yi)^2 / [(\Sigma\lambda yi)^2 + (\Sigma\varepsilon i)]$

Composite Reliability = (square of the summation of the factor loadings)/ {(square of the summation of the factor loadings) + (summation of error variances)}.

The results in Table 11 above indicate that composite reliability (C.R.) indexes were between 0.835 and 0.959. These values surpassed the estimate criteria used by past literature.

Using the results of the construct "Perceived behavioural control" to demonstrate, the calculation for Composite Reliability was conducted as follows:

Step1: $(\Sigma\lambda yi)^2 = (0.653+0.655+0.674+0.738+0.871+0.991+0.998+0.994+0.994)^2$

$= 57, 27462$

Step2: $\Sigma\varepsilon i = (1-0.653)^2 + (1-0.655)^2 + (1-0.674)^2 + (1-0.738)^2 + (1-0.871)^2 + (1-0.991)^2 + (1-0.998)^2 + (1-0.994)^2 + (1-0.994)^2$

$= 2,432848$

Step3: $CR_\eta = 57, 27462 / (57, 27462 + 2, 432848)$

$= 0,959254$

Table 12 below presents the calculations for Average Variance Extracted.

Table 12: Diagrammatic Representation of Average Variance Extracted Calculations

			Estimate	λyi²	∑λyi²	ėi	∑ėi	∑λyi² / (∑λyi² + ∑ėi)
PBC1	<---	PBC	0,653	0,426409		0,573591		
PBC2	<---	PBC	0,655	0,429025		0,570975		
PBC3	<---	PBC	0,674	0,454276		0,545724		
PBC4	<---	PBC	0,738	0,544644		0,455356		
PBC5	<---	PBC	0,871	0,758641	6,567152	0,241359	2,432848	0,729683556
PBC6	<---	PBC	0,991	0,982081		0,017919		
PBC7	<---	PBC	0,998	0,996004		0,003996		
PBC8	<---	PBC	0,994	0,988036		0,011964		
PBC9	<---	PBC	0,994	0,988036		0,011964		
ATT1	<---	ATT	0,76	0,5776		0,666378		
ATT2	<---	ATT	0,749	0,561001		0,685278		
ATT3	<---	ATT	0,718	0,515524	20,349121	0,734235	4,07417	0,83318506
ATT4	<---	ATT	0,788	0,620944		0,614429		
ATT5	<---	ATT	0,751	0,56400		0,681903		
ATT6	<---	ATT	0,745	0,555025		0,691947		
PQ1	<---	PQ	0,826	0,682276		0,534499		
PQ2	<---	PQ	0,801	0,641601	5,640625	0,588348	1,809803	0,757087389
PQ3	<---	PQ	0,748	0,559504		0,686955		
PI1	<---	PI	0,771	0,594441		0,64664		
PI2	<---	PI	0,746	0,556516		0,69029		
PI3	<---	PI	0,735	0,540225	13,741849	0,708157	3,473918	0,798212982
PI4	<---	PI	0,686	0,470596		0,778539		
PI5	<---	PI	0,769	0,591361		0,650292		

The average variance extracted estimate reveals the overall amount of variance in the indicators accounted for by the latent construct (Fraering and Minor, 2006). Higher values for the variance extracted estimate (greater than 0.50) reveal that the indicators well represent the latent construct (Fraering and Minor, 2006).

The formula below is used to calculate Average Variance Extracted (AVE):

$$\mathbf{V_\eta = \Sigma\lambda yi^2 / (\Sigma\lambda yi^2 + \Sigma\varepsilon i)}$$

AVE = {(summation of the squared of factor loadings)/{(summation of the squared of factor loadings) + (summation of error variances)}

Using the results of the construct PBC to demonstrate, the calculation for AVE was conducted as follows:

Step 1: $\Sigma\lambda yi^2 = (0.653^2+0.655^2+0.674^2+0.738^2+0.871^2+0.991^2+0.998^2+0.994^2+0.994^2)$

$= 6,567$

Step 2: $\Sigma\varepsilon i = (1-0.653)^2 + (1-0.655)^2 + (1-0.674)^2 + (1-0.738)^2 + (1-0.871)^2 + (1-0.991)^2 + (1-0.998)^2 + (1-0.994)^2 + (1-0.994)^2$

$= 2,433$

Step 3: $V_\eta = 6,567 / (6,567+2,433)$

$= 0,730$

The above demonstrated steps were carried out when calculating the AVE of each of the research constructs. As indicated in Table 12, a good representation of the latent construct by the item is identified when the variance extracted estimate is above 0.5 (Fraering and Minor, 2006). The results of AVE range from 0.730 to 0.833 in Table 12 thereby confirm an acceptable representation of the latent construct by the items.

Altogether, the construct reliabilities and the average variance extracted estimates suggest the scales are internally consistent. In this study, the average variance extracted estimate revealed that the overall amount of variance in the indicators was accounted for by the latent construct. All average variance explained (AVE) values ranged from 0.730 to 0.830, and were thus acceptable, if following from Fraering and Minor (2006). As indicated in Table 12, all the average value extracted (AVE) are above the shared values (SV) for all the research

constructs, for example, the average variance extracted (AVE) of purchase intention (PI), which is 0.80, is greater than the shared variance (SV) of purchase intention (PI) and price-quality inference (PQ), which is 0.752, where this further confirms the existence of discriminant validity.

5.6 VALIDITY TESTS

5.6.1 Convergent Validity

Convergent validity was assessed by checking if individual item loadings for each corresponding research construct were greater than 0.5 as recommended by (Anderson and Gerbing 1988). As indicated in Table 10 (see page 65) the factor loadings ranged from 0.6 to 0.9. All the items used for this study had a loading of more than the recommended 0.5, revealing acceptable individual item convergent validity as more than 50 percent of each item's variance was shared with its respective construct. This finding w supported the convergent validity of all scale items.

5.6.2 Discriminant Validity

5.6.2.1 Correlation Matrix

Another approach used to test for discriminant validity of the research constructs was the evaluation of whether the correlations among latent constructs were less than 1.0. As indicated in Table 10 (see page 65), the inter-correlation values for all paired latent variables were lower than 1.0, therefore positing the presence of discriminant validity. All the latent variables had values less the recommended 0.7 (Nunnally and Bernstein, 1994).

5.6.2.2 Inter-construct correlation matrix

The inter-construct correlation matrix was used to check for discriminant validity of the research constructs. Correlations among latent constructs were evaluated in order to see if

they were lower than 1.0. A value lower than 0.7 for research constructs is recommended to confirm discriminant validity (Nunnally and Bernstein, 1994). The values for the constructs presented below are marginally accepted as they range from 0.6 to 0.7. Below is Table 13 illustrates the relationships among constructs.

Table 13: Correlations between Constructs

Interconstruct Correlation Matrix				
	PBC	**ATT**	**PQ**	**PI**
Perceived behavioural control **PBC**	1			
Attitudes towards economic benefits of purchasing counterfeit products **ATT**	.652**	1		
Price – quality inference of purchasing counterfeit products **PQ**	.658**	.775**	1	
Purchase intention of counterfeit products **PI**	.721**	.740**	.752**	1
**. Correlation is significant at the 0.01 level (2-tailed).				

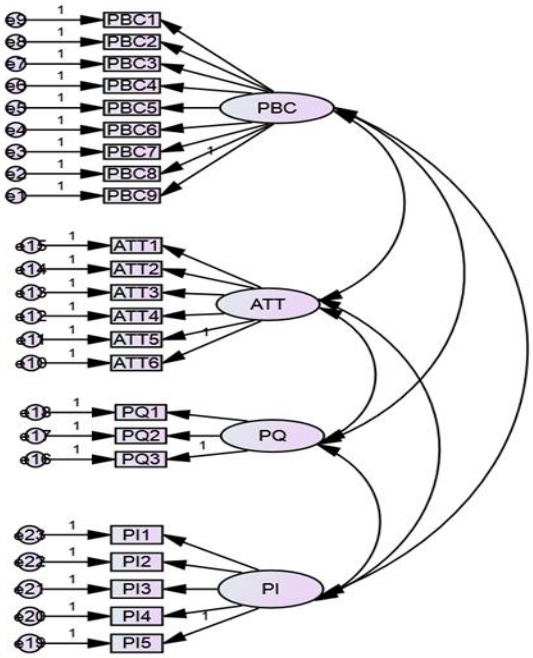
5.6.2.3 Average Value Extracted (AVE) and Shared Value (SV)

Discriminant validity was also confirmed by testing if the AVE value was greater than the highest shared variance (S.V.) value (Fornell and Larcker 1981). As indicated in Table 10, all the average variance extracted (AVE) values were above the shared values (SV) for all the research constructs, therefore further confirming the existence of discriminant validity. The average variance extracted (AVE) of (ATT) was 0.833 (see page 65) which is greater that the square of the shared variance of (PQ) and (ATT) which $[(0,775)^2] = 0.601$.This therefore proves the existence of discriminate validity (Nusair & Hua, 2010).

5.7 Confirmatory Factor Analysis (CFA) models

Figure 15 on the following page is an illustration of the confirmatory factor analysis model.

Figure 15: Confirmatory Factor Analysis (CFA) Model



Note:

- PBC= Perceived behavioural control
- ATT= Attitudes towards economic benefits of purchasing counterfeit products
- PQ= Price-quality inference of counterfeit products
- PI= Purchase intention of counterfeit products

The research model was run and had the following results.

Chi-square (χ^2/df) = 2.456, Goodness of Fit Index (GFI) = 0.901, Comparative Fit Index (CFI) = 0.971, Tucker Lewis Index (TLI) = 0.964, Incremental Fit Index (IFI) = 0.971, Relative Fit Index (RFI) = 0.941, Norm Fit Index (NFI) = 0.952, Random Measure of Standard Error Approximation (RMSEA) = 0.062

Table 14 below shows the model fit results.

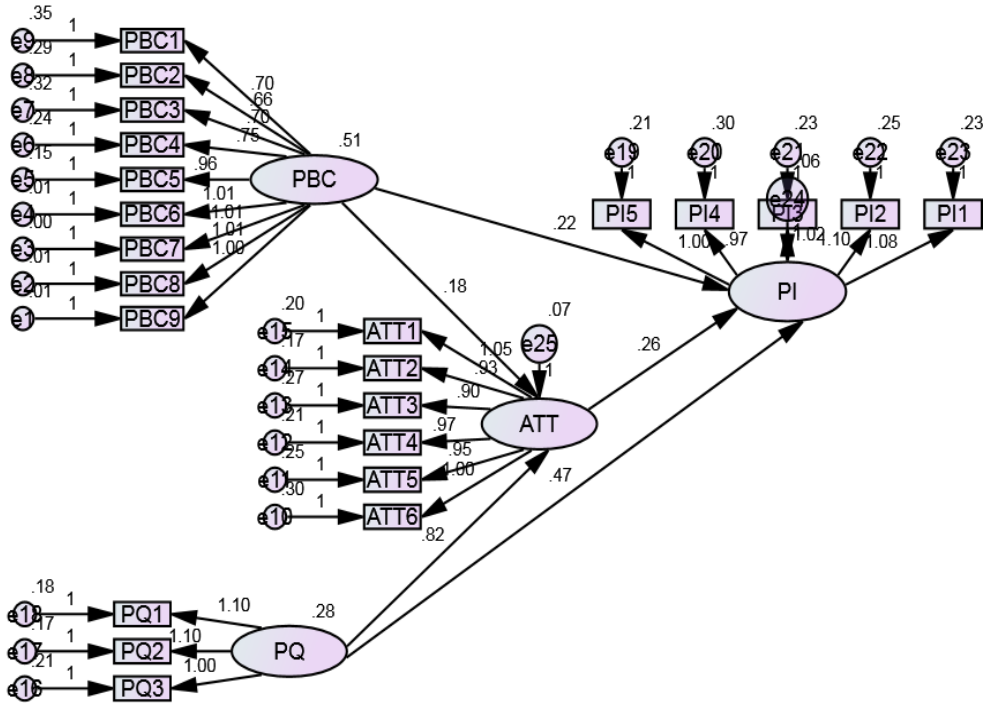
Table 14: Model Fit Results

Model fit criteria	Chi-square (χ^2 /DF)	GFI	CFI	TLI	IFI	RFI	NFI	RMSEA
Indicator value	2,46	0.901	0.971	0.964	0.971	0.941	0.952	0.062

5.8. CONCEPTUAL MODEL FIT ASSESSEMENTS

Anderson and Gerbing (1988) proposed a two-step procedure for assessing model fit comprising of confirmatory factor analysis (CFA) and hypotheses testing. Confirmatory factor analysis (CFA) was primarily performed to examine scale accuracy (including reliability, convergent validity, and discriminant validity) of the multiple-item construct measures using AMOS 22. Acceptable model fit was indicated by chi-square value over degree of freedom (χ^2/df) of value between 1 and 3, the values of Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Incremental Fit Index (IFI) Tucker Lewis Index (TLI), and equal to or greater than 0.90, and the Root Mean Square Error of Approximation (RMSEA) value to be equal to or less than 0.08. Recommended statistics for the final overall-model assessment revealed acceptable fit of the measurement model to the data. All correlation values were less than 0.8, the measurement model produced a ratio of chi-square value over degree-of-freedom of 2,46, and GFI, CFI, TLI, IFI, RFI, NFI and RMSEA were 0.901, 0.971, 0.964, 0.971, 0.941, 0.952 and 0.062, respectively. Since an acceptable CFA measurement model fit was obtained, the study proceeded to the hypothesis testing stage using structural equation modeling with AMOS 22 software program.

Figure 16: Structural Model



Key:

PBC= Perceived behavioural control

PQ = Price-quality inference of counterfeit products

ATT = Attitudes towards economic benefits of purchasing counterfeit products

PI = Purchase intention of counterfeit products

e = measurement error

Table 15: Results of Structural Equation Model Analysis

Proposed relationship hypothesis	Hypothesis	Factor Loading	P Value	Supported/ Rejected
Perceived behavioural control **(PBC)** ⟶ Purchase intention of counterfeits **(PI)**	H_1	0.22^c	0.01	Supported and significant
Perceived behavioural control **(PBC)** ⟶ Attitudes towards economic benefits of purchasing counterfeit products **(ATT)**	H_2	0.18^c	0.01	Supported and significant

Price – quality inference of counterfeit products **(PQ)** ⟶ Attitudes towards economic benefits of purchasing counterfeit products **(ATT)**	H_3	0.82[c]	0.01	Supported and significant
Price – quality inference of counterfeit products **(PQ)** ⟶ Purchase intention of counterfeits **(PI)**	H_4	0.47[c]	0.01	Supported and significant
Attitudes towards economic benefits of purchasing counterfeit products **(ATT)** ⟶ Purchase intention of counterfeits **(PI)**	H_5	0.26[c]	0.01	Supported and significant

Structural model fits: χ^2/df= 2,46; GFI= 0.901; CFI= 0.971; TLI= 0.964; IFI= 0.971; RFI= 0.941; NFI= 0.952; RMSEA= 0.062

[a] significance level p <0.05; [b] significance level <0.01; [c] significance level <0.001

5.10 Model Fit Results

The assessment of the proposed conceptual model proceeded using the same data set. The ratio of chi-square over degree-of-freedom was 2.46. This value is less than the recommended threshold of less than 3.0 and therefore, confirms the model fit (Chinomona, 2011). The GFI, CFI, TLI, IFI, RFI, NFI and RMSEA values were 0.901, 0.971, 0.964, 0.971, 0.941, 0.952 and 0.062. The model fits measures exceeded the recommended acceptable threshold of than 0.8 for GFI, CFI, TLI and for RMSEA the model fit was lower the recommended threshold of 0.08 (Bentler and Bonett, 1980; Bollen, 1989; Baumgartner and Hombur 1996; Byrne 1998; Hu and Bentler, 1999; McDonald and Ho, 2002; Hooper, Coughlan and Mullen, 2008; Chinomona, 2011). These results suggest that the proposed research conceptual model converged satisfactorily and could represent the underlying empirical data structure collected at the Universtiy of the Witwaterwatersrand. The model fit was acceptable and the study proceded to test the research hypotheses.

5.11 Discussion of Hypothesis Testing Results

As seen in figure 16 or table 15, all hypotheses coefficients were at least at a significant level of $p < 0.01$. Hypotheses one, four and five (H1, H4 and H5) posited that purchase intention of

counterfeits had a positive and direct relationship with perceived behavioural control, the price-quality inference of counterfeit products and attitudes towards economic benefits of purchasing counterfeit products. All these three hypotheses were supported, therefore, indicating that the customer's intention to purchase counterfeits has an important and significant impact on the customer's perceptions towards counterfeits.

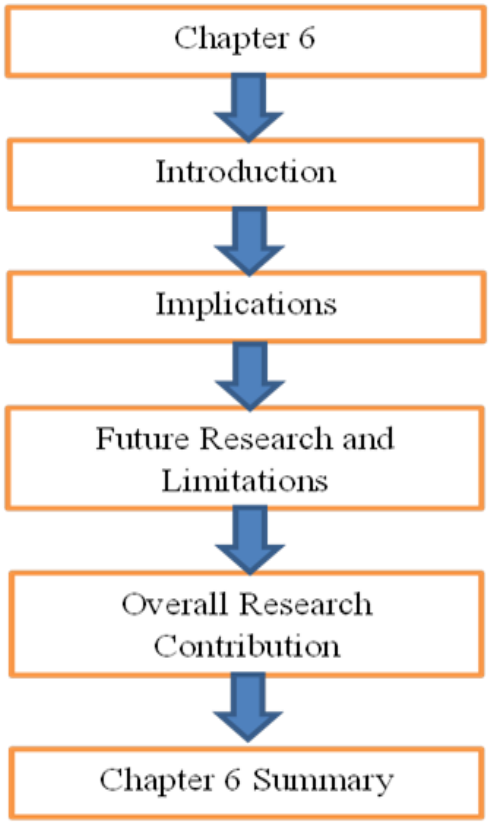
Hypothesis two (H2) posited that perceived behavioural control is positively and directly related to attitudes towards economic benefits of purchasing counterfeit products. This hypothesis was supported therefore, indicating that the ease or difficulty of performing behaviour has important and significant impact on the perceptions that customers might have towards purchasing counterfeit products. Hypothesis three (H3) posited that attitudes towards economic benefits of purchasing counterfeit products are positively and directly related to price–quality inference of counterfeit products. This hypothesis was supported therefore, indicating that the relationship that exists between the price and quality of a counterfeit product would have an impact on customer perceptions towards counterfeit products.

5.12 CHAPTER 5 SUMMARY

Chapter 5 is divided into six sections. The chapter provided the empirical results drawn from the study. The first section is the introduction which begins with a brief overview of chapter 4 and then proceeds to explore the data screening process followed by the data analytics procedures. A diagrammatic representation of the statistical analytical procedures is illustrated. The second section explores the descriptive statistics of the current study, which includes a detailed description of the sample, together with a diagrammatic illustration of the sample profile. Thereafter, in the third section, the reliability tests are discussed, including a diagrammatic illustration of the reliability tests. Initial and final analysis accuracy statistics are also illustrated diagrammatically in the third section. The forth section is comprised of the

reliability test; the Cronbach's alpha (α), Composite reliability (CR) and the Average variance extracted (AVE). The fifth section is comprised of the validity tests, construct validity, convergent validity and discriminant validity. Also included in the fifth section is a diagrammatic illustration of the inter-construct correlation matrix, a comparison of the average variance extracted (AVE) and the shared variance (SV). Model fit is explored include a diagrammatic representation of model fit criteria and acceptable fit level. The confirmatory factor analysis (CFA) Model is illustrated and discussed. Thereafter, the model fit results are discussed and illustrated diagrammatically. An introduction to structural equation modeling is provided followed by a diagrammatic illustration of the structural model. The structural model is followed by hypothesis testing and a discussion of results of structural equation model analysis. In Chapter 5, the proposed hypothesis for the study was a test requiring conducting structural equation modeling (SEM) using the AMOS 22 software program and then discussion the research findings. The study investigated the direct effects of perceived behavioural control and price quality inference on the attitudes towards economic benefits of purchasing counterfeit products, and the purchase intention of counterfeit products. In a nutshell, all the five posited hypotheses were supported, as expected. Finally the sixth section is made up of the summary of Chapter 5 and a brief discussion of Chapter 6.

Figure 17: Diagrammatic Representation of Chapter 6



CHAPTER 6: FINDINDGS, CONCLUSIONS, IMPILICATIONS AND FUTURE RESEARCH

6.1 INTRODUCTION

This chapter explores the findings of the study, limitations, implications and possible future research. Chapter 6 also provides a comprehensive conclusion of the entire study. The aim of this study was to examine the relationship that perceived behavioural control and price quality inference had with attitudes towards the economic benefits of purchasing counterfeit products and purchase intention of counterfeit products. Structural equation modeling (SEM) was applied to assess the proposed research model and hypothesis. The analytical results implied that all the proposed hypotheses were supported. It was observed that the influence of price-quality inference of counterfeit products (PQ) on attitudes towards economic benefits of purchasing counterfeit products (ATT) was the most important relationship, as it had the highest factor loading, indicated by 0.82 (see Table 15).

6.2 IMPLICATIONS

The current research has both academic and practical implications. Academically, the current study contributes to existing literature on the relationship between perceived behavioural control and purchase intention of counterfeit products. The implication of this relationship is that marketers need to understand the behaviour of counsumers in order to predict whether or not the are likely going to purchase counterfeit products. Still on the academic front it was observed that perceived behavioural control's relationship with attitudes towards the economic benefits of purchasing counterfeit products was positive. This implied that consumer attitudes towards purchasing counterfeits are directly impacted by consumers' perceived ease or difficulty of making the actual purchase therefore marketers of genuine brands have to increase the perceived ease of purchasing genuine products in order to make the purchase of genuine products more attractive for potential consumers.

The relationship between price-quality inference of counterfeit products and attitudes towards the economic benefits of purchasing counterfeit products was also positive. This relationship implied that perceptions of consumers towards counterfeits were a result of the relationship that existing between price and quality of products and thus marketers need to keep the price-quality relationship of genuine products at apropriate levels for most customers so as to attract customers and deter them from purchasing counterfeits. The relationship between price-quality inference of counterfeit products and purchase intention of counterfeit products was also positive. This implied that the ultimate decision for the consumer to purchase a counterfeit product was still determined by the perceived benefit of purchasing a lower priced product regardless of quality. This mearnt that marketers must ensure that their geniune products are not too expensive as customers will more likely overlook the inferior quality of counterfeits and purchase those counterfeits as they would perceive the relationship between quality and price would to be more balanced in the case of counterfeits.

On the practical front, the current study also has some implications for marketing practitioners in South Africa. According to the findings, price-quality inference of counterfeit products is seen to possess the highest impact on customer attitudes towards the purchase intention of counterfeit products. Price-quality inference in the current study was defined by Zhou et al. (2002) as a product's price cue, that is related positively to the quality level of the product. This would imply that marketers in South Africa should find ways of selling genuine products at prices that are not too high for customers, so as to discourage them from purchasing inferior quality products being offered at lower prices by conterfeit manufacterers.

6.3 FUTURE RESEARCH AND LIMITATIONS

The current study leaves room for further future research in the field of counterfeit products.

There are opportunities for researchers to either explore the same variables of this study in greater depth, or to add new variables that could potentially predict the purchase intention of counterfeit products. The fact that respondents were all registered students implied that they had access to financial resources and education, which may have created a bias in their own perceptions about counterfeit products. Their views can furthermore be generalised to the greater Johannesburg region. The researcher would recommend that similar studies be conducted on a larger scale, that is, with a larger sample size and within larger geographic regions, so as not to be limited to respondents of a certain demographic profile. For instance, the current study only used students from one university, and recommendations for future research would be for researchers to consider larger populations, possibly surveying respondents from more than one university, city or province. This would allow for more diversity in the sample and for more informed results. The study suffered greatly from financial and time constraints, and if this could be addressed in futures studies, the possibility of producing more informed results would be greater.

6.4 OVERALL RESEARCH CONTRIBUTION

The current study makes a contribution to literature on the purchase intention of counterfeit products. Based on the findings of the study, perceived behavioural control has a positive impact on consumers purchase intention of counterfeit products. Based on the definition of perceived behavioural control given by Ajzen (2002), this would imply that human behaviour is responsible for consumers' intent to purchase counterfeit products. According to Ajzen (2002), perceived behavioural control is the independently perceived simplicity, or difficulty of performing a specific behaviour. Another contribution to the literature made here was to confirm that perceived behavioural control has a direct impact on consumers' attitudes towards economic benefits of purchasing counterfeit products, as suggested by the opening hypothesis. A notable contribution to literature made by the current study was to confirm that

price-quality inference of counterfeit products has a direct and positive relationship with consumers' attitudes towards economic benefits of purchasing counterfeit products. This finding is supported by a study conducted by De Matos, Ituassu and Rossi (2007) that also found that the price-quality inference of counterfeit products had a positive relationship with consumers' attitudes towards counterfeit products. Finally, the last contribution to the literature of counterfeit purchases made by the current study is that attitudes towards economic benefits of purchasing counterfeit products proved to have a positive relationship with customers' purchase intention in relation to counterfeit products, as suggested by the hypothesis of the current study. This finding is supported by a study conducted by Yoo and Lee (2009), also in the field of counterfeit purchases. Yoo and Lee (2009) found that attitudes towards economic benefits of purchasing counterfeit products had a positive impact on the purchase intention of counterfeit products.

6.6 SUMMARY OF CHAPTER 6

The purpose of the study was to investigate the relationship of the following variables: "perceived behavioural control" and "price-quality inference of counterfeit products" on the following variables: "attitudes towards the economic benefits of purchasing counterfeit products" and "purchase intention of counterfeit products". This was done in an attempt to establish whether the former variables were predictors of the latter variables. Based on the above-mentioned variables, a conceptual research model was developed (see Figure 4). This final chapter provided four concluding sections, presenting a conclusion for the study that made up this thesis, noting the implications of these findings for study. The Chapter then suggested directions of future studies in the field of counterfeit products purchases and closed with an overall conclusion, noting the contributions made to broader enquiry.

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APPENDIX A

Participant Information Sheet

Good day,

My name is Tinashe Chuchu, student number 731094, and I am currently completing my Masters in Commerce (Marketing) at the University of the Witwatersrand, Johannesburg.

My current research is entitled "Predictors of Customer Purchase Intention of Counterfeit Products in Johannesburg". Through my research, I aim to explore customer behaviour, perceptions and attitudes that customers in the city of Johannesburg have towards the purchase of counterfeit products. The findings of this study will contribute to the literature of counterfeit products purchase intention.

I am inviting you to be a participant in my current research study. Your selection into this research was based on the fact that you are a potential customer of products in the city of Johannesburg. By being a participant in this research study I would request you to complete the questionnaire attached to this information sheet. With your permission, I ask that you complete this questionnaire and kindly return it to the researcher. This should not take more than 8 minutes of your time.

Your participation in this research is voluntary and I can guarantee that your personal details will remain anonymous throughout this research study as well as in the final research dissertation. You as the participant may refuse to answer any questions which you feel uncomfortable with and may also feel free to withdraw from this study at any time. By being a participant in this research you will not receive payment of any form and the information you disclose will be used in the research report.

This research will be written into a Masters Dissertation and will be available through the University's website. Should you require a summary of the research, the researcher can make this available to you.

Should you have any further questions or queries you are welcome to contact the researcher or the Supervisor, Professor Richard Chinomona at any time at the contact details provided below.

Researcher

Mr Tinashe Chuchu

731094@students.wits.ac.za

Tel: 0746920263

Supervisor

Professor Richard Chinomona

richard.chinomona@wits.ac.za

Consent Form for completing the research questionnaire

I, _____, acknowledge that I understand the research and that the research has been fully explained to me. I also understand that the information which I give to the researcher will be used in the research report.

I further acknowledge that the researcher has promised me the following:

- That my participation in this research is voluntary
- That my personal details will remain anonymous throughout the research study as well as in the research dissertation
- That I can refuse to answer any questions which I feel uncomfortable with

I hereby consent to completing the questionnaire provided for the research study, "Predictors of Customer Purchase Intention of Counterfeit Products in Johannesburg."

I agree / **I do not agree** to the completing the questionnaire.

_____ _____

Participant

Researcher

_____

Date Signed

QUESTIONNAIRE

Predictors of Customer Purchase Intention of Counterfeit Products in Johannesburg

Please answer the following questions by marking the appropriate answer(s) with an X. This questionnaire is strictly for research purpose only.

SECTION A: GENERAL INFORMATION

This section is asking about your background information. Please indicate your answer by ticking (X) on the appropriate box.

A1 Please indicate your gender

Male		Female	

A2 Please indicate your marital status

Married		Single	

A3 Please indicate your age category

18-19		20-25		26+	

A4 Please indicate your highest academic level

High School	
Diploma	
Degree	
Post graduate degree	
Other (Specify)	

A5 Please indicate your occupation

Student	
Employed	
Self-employed	
Unemployed	
Other (Specify)	

A6 Please indicate the frequency of your luxury product purchasing

Monthly	
Seasonally	
Annually	
Other (Specify)	

A7 Please indicate the amount of money spent on luxury product purchases

Less than R250	
Between R250- R500	
Between R501- R1000	
More than R1000	

Below are statements about Perceived behavioural control**,** Price-quality Inference of purchasing counterfeit products, Attitudes towards economic benefits of purchasing counterfeit products and Purchase intention measured on a 1 to 7 point likert scale.

SECTION B
PERCEIVED BEHAVIOURAL CONTROL

Please indicate to what extent you agree/disagree with each statement as the statement relates to your perceived ease or difficulty of performing the behaviour (Perceived Behavioural Control).

1 = **Disagree completely**, 4 = **Neutral** and 7 = **Agree completely**

1	For me to purchase a counterfeit product over the next two weeks would be difficult.	1	2	3	4	5	6	7
2	If I wanted to, I would not have problems in succeeding to purchase a counterfeit product over the next two weeks.	1	2	3	4	5	6	7
3	I have full control over purchasing counterfeit products over the next two weeks	1	2	3	4	5	6	**7**
4	It is completely up to me whether or not I purchase a counterfeit product over the next two weeks.	1	2	3	4	5	6	**7**
5	It is first and foremost up to me whether or not I purchase a counterfeit product over the next two weeks.	1	2	3	4	5	6	**7**

1= **Very difficult,** 4**= Neutral** and 7**= Very easy**

6	How easy or difficult would it be for you to purchase a counterfeit product over the next two weeks?	1	2	3	4	5	6	7

1= **Completely unconfident,** 4**= Neutral** and 7**= Completely Confident**

7	How confident are you that you could purchase a counterfeit product over the next two weeks?	1	2	3	4	5	6	7

1=**Very unlikely,** 4**= Neutral** and 7**= Very likely**

8	If you actually tried, how likely is it that you would succeed in purchasing a counterfeit product over the next two weeks?	1	2	3	4	5	6	7

1= **No control at all,** 4**= Neutral** and 7**= Complete control**

9	How much control do you feel over purchasing counterfeit products over the next two weeks?	1	2	3	4	5	6	7

SECTION C:
ATTITUDES TOWARDS ECONOMIC BENEFITS OF PURCHASING COUNTERFITS

1= **Strongly disagree,** 4=**Neutral** and 7= **Strongly agree**

10	I buy counterfeit products if I think genuine designer products are too expensive.	1	2	3	4	5	6	7
11	I buy counterfeit products if I cannot afford to buy designer products.	1	2	3	4	5	6	7
12	I buy counterfeit products without hesitation if I have a chance to buy the counterfeits.	1	2	3	4	5	6	7
13	I buy counterfeit products, instead of the designer products, if I prefer specific brands.	1	2	3	4	5	6	7
14	I boast about counterfeit products as if they are the genuine brand products.	1	2	3	4	5	6	7
15	I usually purchase counterfeits when it is difficult to distinguish between the counterfeits and the genuine products.	1	2	3	4	5	6	7

SECTION D: PRICE – QUALITY INFERENCE (relationship between the price and quality of products)

1**= Strongly disagree,** 4**=Neutral** and 7**= Strongly agree**

16	Generally speaking, the higher the price of a product, the higher the quality.	1	2	3	4	5	6	7
17	The price of a product is a good indicator of its quality.	1	2	3	4	5	6	7
18	You always have to pay a bit more for the best.	1	2	3	4	5	6	7

SECTION E: PURCHASE INTENTION

1=**Very low,** 4**= Neutral** and 7**=Very high**

19	The likelihood of me purchasing a counterfeit product is	1	2	3	4	5	6	7
20	My willingness to buy a counterfeit product is	1	2	3	4	5	6	7
21	The probability that I would consider buying a counterfeit product is	1	2	3	4	5	6	7
22	At the price shown, the chances of me purchasing a counterfeit product are	1	2	3	4	5	6	7
23	If I were going to buy a product, I would consider buying a model at the price shown	1	2	3	4	5	6	7

If you have any comments please write them below

_____

_____

Thank you for completing the questionnaire. All information will be treated as confidential and not disclosed without your discretion.

APPENDIX B: ETHICS CLEARANCE CERTIFICATE

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Chuchu

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER H14/07/06**
PROJECT TITLE	Predictors of customer purchase intention of counterfeit products in Johannesburg
INVESTIGATOR(S)	Mr T Chuchu
SCHOOL/DEPARTMENT	Economic & Business Sciences
DATE CONSIDERED	18 July 2014
DECISION OF THE COMMITTEE	Approved Unconditionally
EXPIRY DATE	29/07/2016

DATE 30/07/2014 **CHAIRPERSON** E.M. Tal (Professor T Milani)

cc: Supervisor : Prof R Chinomona

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10000, 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 procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

Signature **Date** 01/08/2014

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES