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# The influence of online brand communities on brand purchase decisions in South Africa .

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**2017**
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# The influence of online brand communities on brand related purchase decisions in South Africa

**Dhiren Ramdayal**

**A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration**

**Johannesburg, 2016**

# ABSTRACT

One of the most revolutionising changes in the world in recent history has, undoubtedly, to be the invention of the internet. It has impacted the way people communicate and has had a tremendous impact on the way firms conduct their businesses. It has given rise to much higher levels of connectedness and social interaction which has had significant impact on the way companies market themselves and interact with their consumers. One such opportunity for companies to engage with consumers more closely is that of the online brand community.

This study sought to understand what factors are at play motivating consumers to participate in online brand communities, and how online brand community participation subsequently influences the consumer's purchase decision process. The literature review suggested that the brand community concept has been extensively researched, however, its effect on the consumer purchase decision process had not. This research employed a quantitative approach with data being collected via a structured online questionnaire and analysed using factor and regression analysis.

The findings of the study rejected the framework proposed by the literature review but demonstrated that there were four factors, namely brand loyalty, brand community identification, brand image and information gathering that were significant in influencing the purchase process of a brand community member. The study also showed a demographic profile that was much younger and highly skewed to the male gender.

Although this research is relatively new in the South African context, it may add significant value to the bodies of knowledge in the brand community and consumer behaviour categories. It provides key insights to firms, brand community owners and consumers alike in understanding how purchase decisions may be affected in the online brand community platform. Finally, it provides a good starting point for further research to be conducted on the relationship between the online brand community and the consumer purchase decision process.

# DECLARATION

I, Dhiren Ramdayal, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

---

Dhiren Ramdayal

Signed at ……

On the …….. day of …… 2016.

# DEDICATION

***"Respect for the parents who brought you into this world is the first lesson in right conduct. And gratitude is the spring which feeds that respect" Sri Satya Sai Baba***

***To my parents, Mr Ishwarlal Ramdayal and Mrs Lalitha Ramdayal,***

***Thank you for instilling in me the morals and values that you have, laying a solid foundation for my academic pursuits, and for teaching me the importance of education.***

***And***

***To my wife, Charlene Ramdayal***

***Thank you for your motivation and your never-ending belief in me.***

***This would not have been possible without your support.***

# ACKNOWLEDGEMENTS

I would like to thank and acknowledge those people who through their contribution have played a vital role in the completion of this dissertation.

Firstly to my parents, Mr Ishwarlal and Mrs Lalitha Ramdayal, thank you for your prayers, encouragement and belief in me. I have always been and continue to be thankful for your support in all of my undertakings.

To my wife, Mrs Charlene Ramdayal, for your words of encouragement, infinite love and for summarising those numerous articles during my coursework and final research report, I could not have achieved this without you.

To the University of Witwatersrand and more specifically, the Wits Business School, thank you for the financial support offered to me during what has been the best and most challenging academic undertaking yet and for the patience with the final submission of this report.

To my supervisor, Mr Neale Penman, thank you for not giving up on me during this arduous journey and for your support, guidance and valuable input on my research.

To my friends and families, thank you for the advice, encouraging words and well wishes for the successful completion of this report.

To my manager, Mr Anesh Kassen and colleagues at BMW SA, a great thank you for your continued support, understanding and motivation during these last few months.

To the owners and management of the BMWfanatics forum, thank you for providing me with the permission and opportunity to complete my research on your platform.

Finally to the members of the BMWfanatics forum, thank you for your participation in the study and your support on this topic, without which none of this would have been possible at all.

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# CHAPTER 1. INTRODUCTION

## 1.1 Purpose of the study

The purpose of this research is to determine how members of a South African online brand community are influenced in making purchase decisions as a result of their participation in an online brand community.

## 1.2 Context of the study

The digital dimension has become a dynamic source of competitive advantage for firms as a result of the increasing worldwide adoption of the internet. In the past decade, much attention has been given to the significant opportunities that digital marketing offers, however, this revolution in society and marketing presents companies with many challenges (Leeflang, Verhoef, Dahlström, & Freundt, 2014). We live in an information rich world and, to some extent, the internet has helped to commoditise information. Smart phones and tablets have enabled consumers to access information on the go, as and when they wish. The internet offers an effective communicating platform for brands by means of forums, blogs and social networks, and in order for firms to develop sustainable brand strategies, marketers need to adapt to this environment and "create dialogue, where the consumer is able to experience the brand" (Uzunoglu, 2011, p. 139). As a result, the interaction between brands and consumers is becoming ever more important in marketing and therefore internet-based communities play an essential role in this context.

The internet has revolutionised how consumers communicate with each other as well as how they consume information. These communication patterns however are heavily predicated on consumers' access and use of the internet. According to North, Mostert, and Du Plessis (2003), the internet was introduced to South Africa in the late 1980s and has experienced significant adoption among South Africans. In 2000 there were approximately 2.4 million users connected to the internet and

this number had increased to more than 4.5 million users by 2008 (Senatore, 2010). With the uptake of mobile devices and smartphones, internet users have increased exponentially in recent years. In their South Africa Telecommunications Report, Business Monitor International (2014) maintains that at the end of 2012 South Africa had reached 21.3 million internet users which equated to approximately 42% of the estimated population at the time. Based on the penetration that the internet has had in the South African context, it is clear that there are a significant number of consumers that can be reached via this medium. As a result, firms in the South African market are in a position to take advantage of communicating directly with consumers, specifically for the purposes of creating brand awareness and marketing.

A relatively new platform that has gained much momentum regarding brand-customer interaction and communication is that of an online brand community. According to Von Loewenfeld (2006, p. 133), cited by Meister (2012, p. 2), an online brand community is “a virtual, special interest venue that offers the potential for the company to connect with those consumers who either show high identification with a specific brand or exhibit at least a general interest in the brand”. Brand communities have reached a high level of popularity and success within the South African online environment albeit in the automotive sector. One of the most prevalent and widely known brand communities has to undoubtedly be the Harley-Davidson motorcycle owners and enthusiasts club. Other communities that have gained traction within South Africa include the Land Rover Owners Club of Southern Arica and 4X4 Community Forum for the off-road enthusiasts, as well as VW GTI Club and BMWfanatics Club for performance enthusiasts.

Conventional online marketing initiatives tend to adopt an above the line approach and concentrate on the customer-brand relationship. However, an important aspect that this approach overlooks is the customer-customer interaction. Sustainable brand strategies need to encompass both of these relationships as these various dynamics may have effects on each individual customer’s behaviour. Muniz and O’Guinn (2001), in their research, therefore envision the brand community as a customer-customer-brand triad. Customers’ interactions on

the brand community platform will impact on how the brand is viewed and therefore will ultimately have an effect on the consumers' purchasing decisions considering the brand.

## 1.3 Problem statement

### 1.3.1 *Main problem*

The research problem is to determine how a member's purchase decision process is influenced as a result of them participating in the BMWfanatics online brand community.

### 1.3.2 *Sub-problems*

The first sub-problem is to determine the factors that influence members' participation in the BMWfanatics online brand community.

The second sub-problem is to determine how participation in the BMWfanatics online forum influences its members' purchase decision process.

## 1.4 Significance of the study

The study may provide insights to various brand managers and their marketing teams on the importance of online brand communities and the relevance of brand communities' effects on consumers' purchase decision process. It may further help online brand communities' co-ordinators and owners in understanding the extent to which they have the ability to affect their members' purchasing decisions. Finally this study could possibly assist consumers in understanding how they are influenced and, more specifically, how their purchase decisions may be affected by participating in an online brand community.

## 1.5 Delimitations of the study

- The study is limited to the BMWfanatics brand community only.
- The findings in the study may not necessarily apply to other online brand communities as the study focuses on a single specific population.
- The use of an online brand community limits the findings to a demographic that has access to the internet
- The study is based on a South African online brand community and the applicability of the findings to an international population may be limited and depends on the online brand community's international presence.

## 1.6 Assumptions

- An assumption made when choosing an online brand community for the study is that an online brand community may have a more engaged set of members compared to other types of brand communities.

# CHAPTER 2. LITERATURE REVIEW

## 2.1 Introduction

In this chapter, a review of brand community and consumer purchase decision literature is conducted. Brand communities and consumer purchase behaviour have been extensively researched in prior studies, however upon conducting the literature review, it was found that the effect of brand community participation on consumers' purchase decision process has not been investigated previously and therefore presents an ideal opportunity for this study.

The literature review is divided into two major sections. The first part looks at brand communities and begins by defining a brand community, then moves on to the case of online brand communities. A brief description of the online brand community under investigation for this study is provided after which the factors influencing online brand community participation is reviewed. The second section of the chapter starts by defining the consumer decision process, thereafter presenting the purchase decision process in the context of brand communities. Finally, a conclusion of the literature review is presented, highlighting the key propositions and the framework for the study.

## 2.2 Brand community

This section aims to define a brand community and present a case for the online brand community. It then proceeds to review the current brand community literature available after which it discusses the motivations of brand community members to participate in the brand community.

### 2.2.1 *What is a brand community?*

In order to define a brand community, it is necessary to look at the two constituents of the term brand community, namely, “the brand” and “the community”.

The brand, according to The American Marketing Association, as cited by Meister (2012, p. 8), is defined as “a name, term, sign, symbol, or design, or some combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors”. In layman’s terms, branding enables companies to effectively identify and differentiate their products from other products in the market. In addition, branding allows marketers to cultivate long lasting relationships with consumers. This is confirmed in the research conducted by Fournier (1998), which indicates that consumers are prone to forming emotional bonds with their preferred brands. Many companies such as Proctor and Gamble, Starbucks and IBM have benefited from high levels of brand equity and shareholder value as a result of successfully connecting with consumers (Madden, Fehle, & Fournier, 2006). It can therefore be assumed that creating strong relationships between brands and consumers is a key source of success for companies.

The community has its roots in sociology research. There are many definitions of community that can be found in literature. In his article entitled “Definitions of community: Areas of agreement”, Hillery (1955) classified 94 different definitions of a community, highlighting social interaction as the fundamental building block with strong bonding and physical proximity also playing a vital role. According to McAlexander, Schouten, and Koenig (2002), communities are made up of their members and the relationships that exist between them. Furthermore, a community is identified on the basis of commonality, the extent to which they contribute to human well-being and finally, the shared understanding of creation and negotiation of meaning. From these various definitions in literature regarding communities, it is evident that communities are predicated on the social networks of its members and the prevailing effect that members have on one another

through social interaction. This is in keeping with the definition provided by Algesheimer, Herrmann, and Dimpfel (2006), cited by Meister (2012).

The term “brand community” was originally used by Muniz and O'Guinn (1995) in their article entitled “Brand community and the sociology of brands”. They defined a brand community as “a specialised, non-geographically bound community which is built upon a structured set of social relationships among admirers of a branded good or service” (Muniz & O’Guinn, 2001, p. 412). They further maintain that a brand community is a group of individuals who come together and participate voluntarily as a result of their interest in a specific brand or product. The definition provided by Lin, Ming, and Bin (2011) however, states that a brand community evolves from a consumer community when members contact each other based on a product and gradually shape their product issues into a particular brand.

Brand communities are particularly important when it comes to creating customer lifetime value. One of the most effective strategies for firms to develop and maintain strong relationships with their customer base is to use brand communities (Fournier & Lee, 2009). “Brand communities provide an ideal venue to fulfil an individual’s needs” (O'Donnell & Brown, 2012, p. 108) and as a result, companies like Jeep and Harley-Davidson have seen great success in creating and maintaining effective brand communities (Schouten & McAlexander, 1995).

The main characteristic that makes brand communities different from other online communication platforms is the social interaction between the brand community members. According to Lee and Kang (2013), brand community interactions can have significant value in the social context as members share information, past experiences and knowledge.

### 2.2.2 *Online brand community*

With the introduction of the internet and the uptake of social media in recent years, brand communities have transcended the boundaries of geography. This has given rise to online brand communities. The vast reach of the internet coupled

with consumers' need to connect and share information and knowledge has made the online brand community an important marketing tool (Lee & Kang, 2013).

The notion of an online community, sometimes referred to as a virtual community, was first proposed by Rheingold (1993). An online brand community is defined as "an aggregation of people who share a common interest and communicate through electronic mailing lists, chat rooms, internet user groups or any other computer-mediated mechanism" (Kim, Choi, Qualls, & Han, 2008, p. 410). Some of the advantages that online brand communities offer companies include "the opportunity of effective communication with customers and obtaining valuable ideas" at a relatively low cost (Jang, Olfman, Ko, Koh, & Kim, 2008, p. 60). The relative ease of interaction and minimal cost of participation makes online brand communities much more accessible to consumers. Furthermore, Kim et al. (2008) maintain that members in an online brand community exhibit greater mutually beneficial relationships and stronger social ties than traditional brand communities.

Online brand communities may be grouped into two major categories (Kim et al., 2008), namely consumer-initiated communities, built by their members with the intention of exchanging information and establishing relationships, and company-initiated communities, built by the company who owns the brand with the intention of establishing relationships with their consumers and inducing feedback from them (Jang et al., 2008). In the past decade, online brand communities have gained much attention and have been the focus of many research initiatives (Chang, Hsieh, & Tseng, 2013; Jang et al., 2008; Kim et al., 2008; Lee & Kang, 2013; Shang, Chen, & Liao, 2006). Due to the popularity and increasing uptake of online brand communities, this research focuses on an online based brand community.

### 2.2.3 *BMWfanatics*

BMWfanatics is the chosen online brand community for the purposes of this research. It is an independent, consumer-initiated, enthusiast forum that is not

owned, affiliated or endorsed by BMW in any way. The BMWfanatics community was established in 2009 and today boasts over 30000 members of which 10000 are actively participating, 70000 threads and more than a million posts (BMWfanatics.co.za, 2016, 12 July). The aim of this online community is to provide a platform for its members to share knowledge and information based on their individual and combined past experiences regarding the BMW brand and its products. With a mission to "be the ultimate site for the BMW enthusiast in Africa", the forum features a homepage that is updated daily with relevant articles, stories of members' experiences and gatherings, and current pictures and videos of "the local and international world of BMW" (BMWfanatics.co.za, 2016, 15 July).

### 2.2.4 *Factors influencing online brand community participation*

The development and sustainability of online brand communities depends heavily on participation. Koh and Kim (2004) maintain that knowledge and ideas are shared and discussed much more readily when levels of participation in an online community are high. According to Kim et al. (2008), online brand communities are becoming a prominent feature in the marketing strategies of firms as they have been found to successfully build brand loyalty, thereby increasing market penetration and boosting sales. Lin et al. (2011) further suggest that the strengthening of brand loyalty is a direct consequence of online community participation. As a result, participation and the motivations behind online brand community participation become vitally important. In this study, brand community participation forms a second-order construct and in the subsections that follow, constructs that influence brand community participation are identified and discussed.

#### a. *Brand community identification*

Brand community identification is an indication of how strong the consumer's relationship with the brand community is and it represents how the person sees himself or herself as a member. This is sometimes referred to as the "belonging" a

consumer feels towards the brand community (Algesheimer, Dholakia, & Herrmann, 2005).

Social identity theory (Tajfel & Turner, 1979) provides some insights as to how brand community identification is formed. Ellemers, Kortekaas, and Ouwerkerk (1999) build on the social identity theory proposed by Tajfel (1978), claiming that a person's social identity is comprised of 1) a cognitive component referring to self-awareness of their membership within the group; 2) an emotional component referring to identification with, involvement in, and emotional attachment to the group; and 3) an evaluative component referring to the positive or negative connotations attached to group membership. In order for individuals to define themselves as a member of a brand community and to attribute characteristics of the brand community upon themselves, these three components need to be activated (Marzocchi, Morandin, & Bergami, 2013).

Cova and Pace (2006), in their case study, concluded that the online brand community identification was reinforced by sharing consumption experience through symbols and rituals related to the brand. This sentiment is reinforced by Schau, Muñiz Jr, and Arnould (2009) who claim online brand community identification can be established and strengthened through "community engagement practices such as retelling and sharing milestone memories of the brand" for example. Furthermore, Algesheimer et al. (2005) suggest and confirm that brand community participation, which is defined as a members' inherent drive to interact with other brand community members, is a consequence of brand community identification. This leads to the first proposition of this investigation.

> Proposition 1: Brand community identification influences members' participation in the BMWfanatics online brand community.

### b. *Brand community commitment*

Based on the concept of organisational affective commitment conceived by Mowday, Steers, and Porter (1979) and Meyer and Allen (1991), commitment may be explained as the process in which loyalty is developed between individuals or

an individual and an organisation. It further maintains that commitment can be viewed as the attitude an individual adopts toward the organisation based on his or hers belief in and acceptance of the organisation's goals. According to Morgan and Hunt (1994), commitment appears when community members value their relationships with other members, maintaining mutual trust and effort to sustain the relationship. Kim et al. (2008) extend the definition of commitment within the online community context and maintain that community commitment refers to the extent of psychological attachment the member feels toward the online community as well as their perceived value of the relationship with the online community.

Commitment within the online environment is of great importance as the cost of switching from one website to another is low (Kim et al., 2008). In consumer-initiated brand communities, such as BMWfanatics, members are allowed to freely express their experiences and information regarding products, building trust and strengthening commitment. An environment such as this would therefore promote online participation. This notion is shared by Jang et al. (2008, p. 62) who maintains that "commitment may predict member's actual behaviours in an online community such as community participation" and forms the second proposition for this study:

> Proposition 2: Brand community commitment influences members' participation in the BMWfanatics online brand community.

### c. *Brand loyalty*

According to Shang et al. (2006), brand loyalty was formerly described as a consumer's choice to repurchase a specific brand. The drawback with this definition however, is that it refers only to the short term acceptance of the brand and as a result, brand loyalty was then defined to include both behavioural and attitudinal loyalty aspects (Jacoby & Kyner, 1973). Chaudhuri and Holbrook (2001), in their research, make a clear distinction between behavioural loyalty and attitudinal loyalty. The former, behavioural loyalty, is defined as the consumer's repeated purchasing of a product or brand, whereas the latter, attitudinal loyalty, represents the consumer's acceptance of the unique values associated with the

product or brand. Uncles, Dowling, and Hammond (2003) build on these distinctions within brand loyalty and maintain that behavioural loyalty is a consequence of attitudinal loyalty. This view is shared by Gounaris and Stathakopoulos (2004), who also maintain that attitudinal loyalty is an antecedent to behavioural loyalty.

According to Griffin (1996), brand loyalty is a pre-requisite for any kind of relationship marketing while Jang et al. (2008) note that brand loyalty can be increased through online brand community participation. This, combined with the above discussion, may imply that online brand community participation may facilitate transitioning from attitudinal loyalty to behavioural loyalty. Considering that the online brand community is a relatively new concept to South African consumers, it is more than likely that consumers would have a pre-existing relationship and some loyalty to the brand upon which the online community is based. This gives rise to the next proposition.

> Proposition 3: Brand loyalty influences members' participation in the BMWfanatics online brand community.

**d. *Brand involvement***

Involvement refers to a person's perception towards an object based on inherent needs, values and interests (Krugman, 1966). Sirgy (1982) indicates that there are many factors that bring about involvement with a product or brand. These may include the perceived risk, importance and value of the product or brand, as well as its capability to improve the consumer's lifestyle and self-image.

According to Bloch and Richins (1983), certain products and brands may appeal to consumers' ego or self-image and as a result, this involvement leads to information searching. Shang et al. (2006) therefore maintain that the ultimate motivation for a consumer to participate in an online brand community may be involvement. In layman's terms what this translates to is that a consumer with high brand involvement will be more likely to search for information relating to the brand and because brand communities are a significant source of information, this

will impact brand community participation. This provides the fourth proposition for this study.

> Proposition 4: Brand involvement influences members' participation in the BMWfanatics online brand community.

## 2.3 The purchase decision process

Olshavsky and Granbois (1979), in their study, maintain that within the research area of consumer behaviour, the most pervasive and influential assumption is that purchases are preceded by a decision process. Furthermore, they report that essentially all theory on consumer behaviour comprises in some way or form a model of consumer decision processes. This is confirmed by Dolan (1999), where he states that by studying consumer behaviour, we are basically evaluating how consumers make purchase decisions. This section looks at the purchase decision process of consumers and how participation within an online brand community affects the purchase decision process.

### 2.3.1 *What is the purchase decision process*

There are many models that are reported in theory regarding consumer behaviour as noted by Du Plessis, Rousseau, and Blem (1994), Lamb, Hair, McDaniel, Boshoff, and Terblanche (2008) and Kotler, Keller, Ancarani, and Costabile (2014). The common factor within all of these theories is the fact that they all have the consumer purchase decision process as a central point. Cunningham, Gerlach, Harper, and Young (2005), however, maintain that the buying process begins much earlier that the actual purchase and has consequences that last long afterwards.

Shapiro, Rangan, and Sviokla (1992) says that in order for smart companies to remain relevant, they need to fully understand the customers' buying process – all the experiences in learning, choosing, using and disposing of a product. The many factors described above are imperative in consumers' complete buying

process (Russo & Carlson, 2002). According to Kotler et al. (2014), marketing scholars of the consumer purchase decision process have developed a “stage model” that sees consumers passing through five phases: problem recognition, information search, evaluation of alternatives, purchase decision and post purchase behaviour. Figure 1 shows the diagrammatic representation of this consumer buying process.

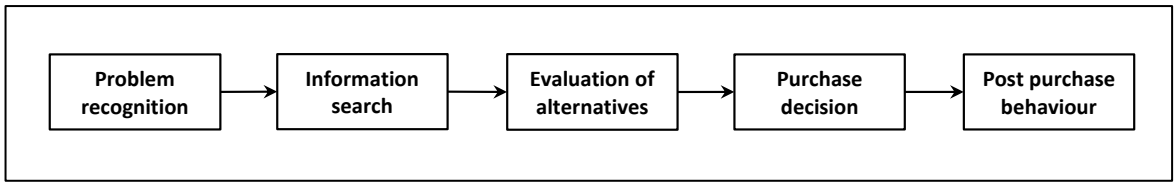


**Figure 1: Five stage model of the consumer purchase decision process**

### 2.3.2 *Online brand community and the purchase decision process*

The online brand community provides a platform for members to interact and communicate openly, thereby impacting on consumers’ purchase decision process relating to the specific brand. Figure 2 shows how the brand community influences the various stages of the purchase decision process. In this section, each of the stages in the purchase decision process is subsequently expanded theoretically and within the context of the online brand community.

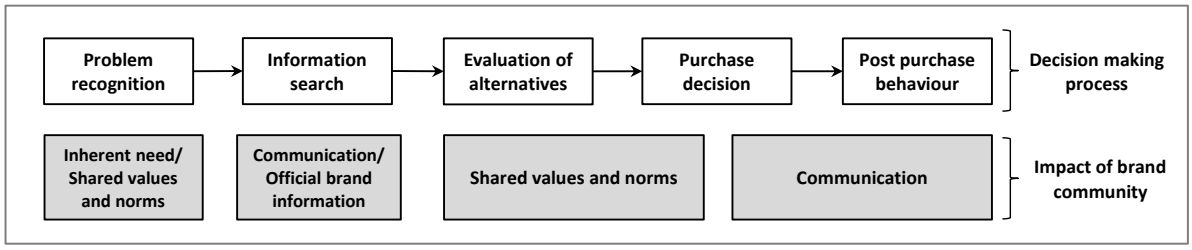


**Figure 2: Impact of brand community on purchase decision process**

### a) Problem Recognition

The first stage in the purchase decision process is realising that there is an unfulfilled need that exists because a consumer may have a desire for something new. It begins with the recognition of a single or multiple problems which could be 1) easily identified and solved, such as hunger and the need to eat or; 2) unexpected and much more complex to solve, such as the purchase of a new car (Li & Darban, 2012). It is important to note that with the examples above, the recognition of a need can arise through both an internal or external motivation.

It is very possible that by virtue of belonging and participating in a specific brand community, the need for a product of that brand may arise. This may be as a result of wanting to conform more to the individuals within the brand community or simply out of the need to replace an existing product. This is corroborated by Li and Darban (2012), as they maintain that online reference groups may play a vital role in the "problem recognition" stage of the purchasing process. This leads to the fifth proposition of this study.

> Proposition 5a: Participation in the BMWfanatics online brand community influences the "problem recognition" step in its members' purchase decision process.

### b) Information search

Subsequent to identifying a need or want for a product or service, consumers search for information regarding the different options available to satisfy these wants. A consumer may search for information at two distinct levels of engagement, firstly, a "heightened attention" state whereby the consumer basically becomes more receptive to information about a product and secondly, an "active information search" state whereby the consumer consciously gathers information regarding a product from the various sources available to them (Kotler et al., 2014). The internet has become a great source of information and is usually

the first place consumers refer to when searching for information. According to Frambach, Roest, and Krishnan (2007), the internet effectively and efficiently presents information that is organised and allows for quick and convenient comparison.

This is true in the case of online brand communities. Jang et al. (2008) view online brand communities as platforms that allow members to share beneficial information as well as valuable experiences regarding brands and products. One may even argue that information sharing is the single most prevalent consequence of online brand community participation. The online brand community therefore becomes a rich source of information regarding a product or brand that a consumer may wish to purchase. This leads to the next proposition in the research.

> Proposition 5b: Participation in the BMWfanatics online brand community influences the “information search” step in its members’ purchase decision process.

**c) Evaluation of alternatives**

According to Huneke, Cole, and Levin (2004), the concept of adaptive decision making sees consumers transition from an attribute to an alternatives based search as they progress in the purchase decision process. As a result, consumers become a lot more focused on comparing the various alternatives available to satisfy their needs or wants, and will have to evaluate all of their options prior to the actual purchase decision. It is imperative to be cognisant of the fact that there is no single process that consumers employ to evaluate their options. Most of the factors that affect consumer behaviour surfaces within this stage of the purchase decision process, therefore one may argue that this stage in the model is the most significant in making the final purchase decision.

Online brand communities may be significantly influential in helping consumers evaluate their alternatives. Enthusiast initiated communities have the benefit of offering a more objective view when it comes to a product of the same brand,

however this may be somewhat biased when compared to alternative products offered by competitive brands. This gives rise to the next proposition.

> Proposition 5c: Participation in the BMWfanatics online brand community influences the “evaluation of alternatives” step in its members’ purchase decision process.

**d) Purchase decision**

Kotler et al. (2014) maintain that between evaluating the available options and actually deciding to purchase the product, a consumer may form preferences among the various brands in the choice set and may form an “intention” to purchase the most preferred brand. It is further proposed that a consumer may make five sub-decisions in executing a purchase intention: brand, dealer, quantity, timing and payment method. Upon finally evaluating the available options, the consumer decides which product appropriately suits their needs and purchases that product or the consumer may decide not to buy any product altogether.

In their research, Xia and Sudharshan (2002) maintain that due to the complexity of the purchase decision process, consumers are not entirely comfortable with making decisions by themselves. Therefore this may lead to consumers seeking some sort of assistance in their decision making. What the online brand community is able to offer in this regard, for example, is the past experience that they may have with regard to a preferred outlet or specific salesperson. This referral and influence regarding the actual purchase of a product or service leads to the next proposition.

> Proposition 5d: Participation in the BMWfanatics online brand community influences the “purchase decision” step in its members’ purchase decision process.

**e) Post purchase behaviour**

Following a purchase, consumers tend to evaluate their actual purchase decision. The impact of the decision becomes vital as consumers assess their satisfaction

or discontent for the product or service they have acquired. For example, George and Edward (2009) note that, following a purchase a consumer may experience mental unsettledness from recognising both positive attributes of alternative products or services and negative attributes of the chosen product or service. As a result, consumers will be alert to any and all information that supports or undermines their decision.

To this effect, the online brand community is especially effective as members can influence the perception of the purchase decision of a consumer. The interactive nature of the online brand community provides an ideal platform for individuals to share both positive and negative experiences of the brand. Meister (2012) maintains that because brand communities in general are comprised of members who are brand enthusiasts, they are able to provide consumers with additional information and support regarding their purchase decision. This leads to the final proposition under investigation.

> Proposition 5e: Participation in the BMWfanatics online brand community influences the “post purchase behaviour” step in its members’ purchase decision process.

## 2.4 Conclusion of Literature Review

The adoption of the internet and an online social presence has created the opportunity for consumers to easily interact and communicate. Online social networks such as the online brand community make it possible for like-minded individuals and consumers with common interests to share their experiences, knowledge and opinions. These platforms have opened the door to an overload of information to which consumers are exposed and as a result, have major implications for consumer purchasing behaviours. As demonstrated above, the online brand community has the potential to influence all of the stages of the purchase decision process.

In conclusion, the propositions that are investigated in this study are summarised below. Following the propositions, Figure 3 outlines the framework that forms the foundation of this investigation. It demonstrates factors that have been identified as precursors to online brand community participation and the subsequent effect on the consumer purchase decision process.

### 2.4.1 *Proposition 1:*

Brand community identification influences members' participation in the BMWfanatics online brand community.

### 2.4.2 *Proposition 2:*

Brand community commitment influences members' participation in the BMWfanatics online brand community.

### 2.4.3 *Proposition 3:*

Brand loyalty influences members' participation in the BMWfanatics online brand community.

### 2.4.4 *Proposition 4:*

Brand involvement influences members' participation in the BMWfanatics online brand community.

### 2.4.5 *Proposition 5:*

Proposition 5a: Participation in the BMWfanatics online brand community influences the "problem recognition" step in its members' purchase decision process.

Proposition 5b: Participation in the BMWfanatics online brand community influences the “information search” step in its members’ purchase decision process.

Proposition 5c: Participation in the BMWfanatics online brand community influences the “evaluation of alternatives” step in its members’ purchase decision process.

Proposition 5d: Participation in the BMWfanatics online brand community influences the “purchase decision” step in its members’ purchase decision process.

Proposition 5e: Participation in the BMWfanatics online brand community influences the “post purchase behaviour” step in its members’ purchase decision process.

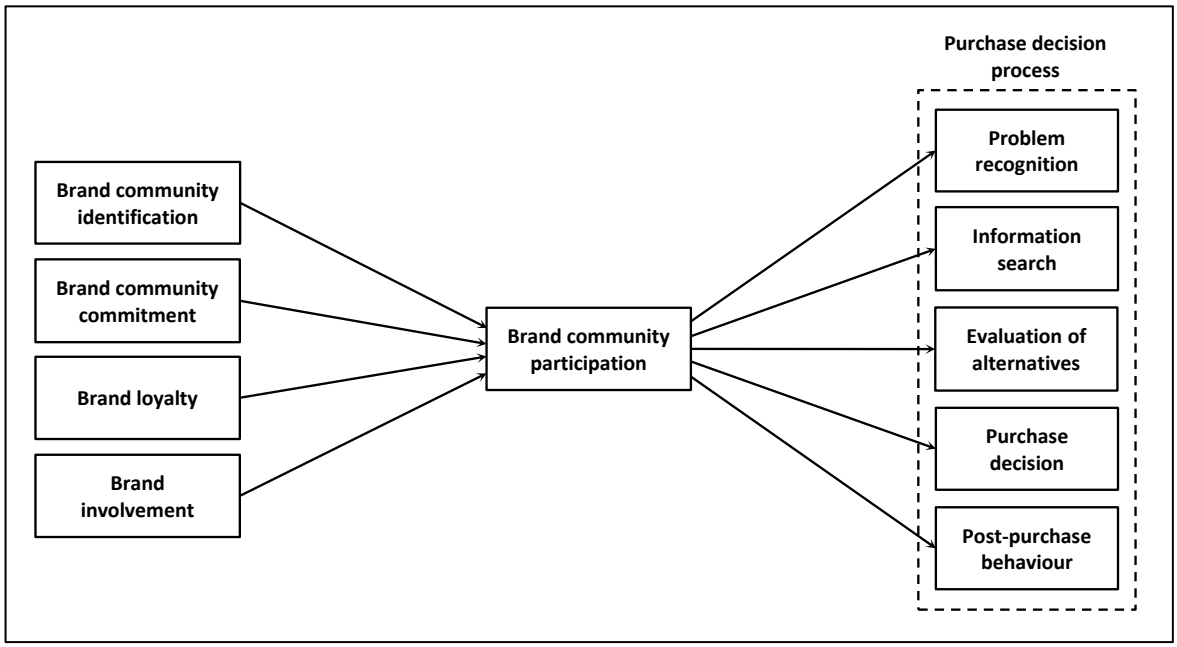


**Figure 3: Framework for this study**

# CHAPTER 3. RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter outlines the methodology that was employed to conduct the research and investigate the propositions posed in the literature review. The objectives for this research were to determine the factors that motivate consumers to participate in online brand communities and investigate how this participation subsequently impacts the purchasing purchase decision process of consumers.

This section starts with outlining the research method that was used in this study and then moves on to describing the research design, the sample population and the research instrument employed. Following that, it looks at the procedures for collecting, analysing and interpreting the data. Finally, the limitations, validity and reliability of the research is discussed.

## 3.2 Research methodology / paradigm

In this study, a quantitative research strategy was adopted to determine what drives consumers to participate in online brand communities and how the consumer purchase decision process is influenced by participation in an online brand community. According to Creswell (2003), quantitative methods is a research approach that determines the relationships between variables and uses this to prove or disprove hypotheses or to answer research questions. In addition, Leedy and Ormrod (2005) and Bryman (2012) both concur with this and maintain that quantitative research can be used to explain and predict phenomena, which is the greatest benefit derived from this method. Quantitative methods have been used extensively in previous research where brand communities are concerned. Bagozzi and Dholakia (2002), McAlexander et al. (2002) and Marzocchi et al. (2013) have all used quantitative research methods to investigate and explain

findings within their research regarding brand communities, albeit not in the South African context.

## 3.3 Research Design

In this study, an explanatory cross-sectional approach was employed with data being collected via an online questionnaire. The aim of this investigation is to determine the factors that affect consumers' participation in online brand communities and investigate how brand community participation impacts the consumer purchase decision process. Theoretically, the aim of this research is to develop a temporal appreciation of social phenomena and their subsequent interconnections within the brand community and consumer purchase behaviour space and as such, an explanatory cross-sectional approach is most fitting. Babbie (2013) defines explanatory research as research where the problem is not entirely known or clearly understood and cross-sectional research as research that is conducted on a sample for a specific point in time.

## 3.4 Population and sample

### 3.4.1 *Population*

According to Bryman (2012), the population is defined as the entire items of interest that are relevant to the study and is the subset from which the sample for the investigation will be extracted. For the purpose of this study, the population consisted of all registered members of the BMWfanatics online brand community. There were no restrictions applied to the population in terms of demographics or lifestyle factors. In order to ensure that the research meets its ethical conditions, the owners and management of the BMWfanatics website had been approached and permission to complete this investigation had been granted.

### 3.4.2 *Sample and sampling method*

Bryman (2012) defines a sample as a subset of the population and according to Mansourian and Madden (2007, p. 94), in order "to carry out a valid quantitative study it is necessary to have a sample which is sufficiently large to be statistically representative of the whole research population". For the purpose of this study a non-probability technique, specifically the convenience sampling technique was employed. Convenience sampling is the preferred technique due to accessibility, limited resources and time constraints. It was also chosen in an attempt to get the maximum number of respondents to participate in the study. The shortfall of this method is that findings based on the sample cannot be extrapolated to the entire population (Babbie, 2013). In order to achieve the required number of respondents, a lucky draw prize in the form of a BMW wrist watch to the value of R700 was raffled to one of the respondents. A sample size of at least 100 was targeted as this would ensure that sufficient data is available to conduct the appropriate meaningful analysis.

## 3.5 The research instrument

The research instrument that was used for the purpose of this study was an online questionnaire. A questionnaire is a research instrument that is used to collect specific information from a range of respondents and is one of the most frequent research instruments employed for quantitative research (Bryman, 2012). The advantages that online questionnaires have to offer include accessing respondents from a wide range of locations, saving time for the researcher, automated data collection and cost effectiveness. Some of the disadvantages however, include possible misrepresentation of the research questions, internet access issues and a degree of uncertainty over the validity of the data (Wright, 2005). Considering this study centres on respondents already active within the online space, it was decided that an online questionnaire would be the best research instrument to employ.

The research instrument comprised three major parts which included demographic questions, questions relating individual members' involvement on the online forum and questions relating to the purchase decisions that have been made by members of the forum regarding the brand.

The questionnaire began with an introduction highlighting the purpose of the study and the topic under investigation. It also highlighted the fact that participation was entirely voluntary and results would be kept strictly confidential, as well as that participating would enter the respondent into a draw for a BMW watch.

The questions in the survey were administered randomly to prevent respondents from gauging the actual factors that were being measured. Demographic questions were however, posed together at the end of the survey. Most items in the survey were posed as closed-ended questions or structured as statements due to the use of Likert scale style of measurement. This however did not include some of the items that were used to measure brand involvement and online brand community participation. Brand involvement was measured using a 13 point scale whereas three of the brand community participation measures required the use of open ended questions. In order to assist with the data analysis, all items that were not on a seven point scale were rescaled to a seven point scale. The actual instrument administered can be found in APPENDIX A.

## 3.6 Procedure for data collection

The data for the research was collected through a structured survey by means of online questionnaires administered through the online survey tool Qualitrics (www.qualtrics.com). A link to the survey was posted onto a thread on the BMWfanatics forum designated exclusively for the purpose of the research and members were requested to follow the link to complete the survey. In order to direct members of the forum to the thread, a mass private message service available on the forum was used to send out a private message to each member notifying them of this thread and requesting their participation. According to Kotler et al. (2014), online questionnaires are used to collect primary data and is the

most commonly used instrument owing to its flexibility and its ability to assess how people think, their beliefs, preferences and satisfaction levels. The drawback however that an online questionnaire generates is the misinterpretation of questions and statements.

## 3.7 Data analysis and interpretation

The data collected through the online questionnaires was analysed by means of Cronbach's Alphas, confirmatory factor analysis, exploratory factor analysis and finally, regression analysis.

The construct validity and reliability of scales used in the study was assessed by Cronbach's Alpha coefficient methods. Cronbach (1951) suggests that the alpha coefficient is a measure of internal reliability and how closely related a set of items are as a group. A scale is internally consistent if all its items are strongly correlated and an alpha coefficient for each construct greater than 0.70 would suggest a significantly high level of internal reliability indicating that the items in the construct are all measuring the same "thing".

Following the Cronbach's Alpha, factor analysis was conducted on the data collected. The factor analysis was computed by firstly conducting a confirmatory factor analysis to confirm the model that was posed in the literature review. Creswell (2013) describes confirmatory factor analysis as an analysis technique that is employed to verify a pre-determined hypothesised model that may arise from previous research or theory. Following this, exploratory factor analysis was conducted on the data set. Exploratory factor analyses are used in order to examine whether multiple items within each variable comprises only one dimension (Bryman, 2012). According to Hair, Anderson, Tatham, and Black (1998), factors with eigenvalues greater than 1.0 and factor loading of 0.50 can be considered to be significant and was used as the criteria for retaining items.

The data that was collected was finally analysed using simple and multiple linear regression. Linear regression is most commonly used as a method of modelling

relationships between dependent and independent variables by using linear predictor functions. Model parameters for the linear predictor functions in linear regression analysis are estimated from the set of observed variables. In the case of simple linear regression, there is one dependent and one predictor variable whereas in the case of multiple linear regression there is a single dependent variable and multiple predictor variables (Chatterjee & Hadi, 2015).

## 3.8 Limitations of the study

- Due to a single brand community being used in the study, the findings in the study may not necessarily apply to other online brand communities as the study focused on a single specific population.

## 3.9 Validity and reliability

Validity and reliability are two of the most important criteria for the evaluation of social research and therefore, when conducting social research, it is imperative that these concepts are given due consideration to ensure that conclusions drawn from the study are relevant and meaningful (Bryman, 2012). Zikmund, Babin, Carr, and Griffin (2012) maintain that the reason that validity and reliability hold such importance is that they determine the degree of confidence that other researchers will have in the study's results.

### 3.9.1 *External validity*

External validity refers to the extent to which the results of the study can be generalised to a population beyond that of the study (Leedy & Ormrod, 2005). One of the simplest ways to ensure external validity in any research is to ensure that the sample is as representative as possible. To this effect, the decision to reward the participation of members in the study by means of a lucky draw prize was done in an attempt to obtain a fairly representative sample. Care was also taken to ensure that the reward is not too high as to encourage participation

purely for the sake of the reward. The external validity of the study is further supported by using a questionnaire that is compiled from validated questionnaires employed in previous research.

### 3.9.2 *Internal validity*

Internal validity refers to how efficient the research is in measuring what it intended to measure and as such, is associated with the integrity of the conclusions drawn from the data (Bryman, 2012). The framework that has been proposed for the purposes of this study is based on individual constructs that have been identified in the current available literature on brand communities. The measures that have been used to investigate the various factors have been used previously in literature and have been found effective in measuring and evaluating these constructs.

### 3.9.3 *Reliability*

Reliability, on the other hand, is concerned with whether results of the study are repeatable and therefore refers to the consistency of measures developed for concepts in the research (Bryman, 2012). Once again, the reliability of this study is supported by the fact that the questionnaire that was developed was done by using measures that were previously used and in instances used in more than just one study. Furthermore, care was taken to ensure that measures which were found as unreliable in previous studies were not employed for the purposes of this investigation.

# CHAPTER 4. PRESENTATION OF RESULTS

## 4.1 Introduction

In the previous chapter, the foundation for the results and data analysis was set and in this chapter they are presented. No attempt is made to analyse and explain the results in this chapter. Analysis and explanation of the results are covered in the following chapter.

The research results have been presented in five subsections and begin by looking at the demographic profile of the respondents. They then proceed to present the reliability of the scales by means of Cronbach's Alphas. Following this, the confirmatory and subsequently, exploratory factor analysis results are described, after which the regression analysis results are presented. Finally, the chapter concludes with a summary of the results.

For the purposes of this research, all data analysis was conducted using SAS9.3®, a multivariate statistical software program, and Microsoft Excel®.

## 4.2 Demographic profile of respondents

Respondents were asked six questions at the end of the questionnaire, in an attempt to gain insight into their demographic profile. These included questions on their gender, age, education, occupation, geographical location and finally, the duration of their membership to the BMWfanatics brand community. These demographics were considered essential for this study whereas additional demographic measures such as income, race, etc. were deemed irrelevant as they would not add any significant value to the research, and as a result, were omitted from the survey. Demographic analysis on the respondents was completed using the Microsoft Excel® program by calculating the number of respondents within each category as a percentage of the total number of respondents which was 135.

The demographic profile of respondents is presented in Table 1 below:

**Table 1: Demographic profile of respondents**

| Characteristic | Category | Frequency | Percentage (%) |
|---|---|---|---|
| Gender | Male | 135 | 100 |
| | Female | 0 | 0 |
| Age | Below 20 years | 0 | 0 |
| | 20-24 years | 17 | 12.59 |
| | 25-29 years | 30 | 22.22 |
| | 30-34 years | 46 | 34.07 |
| | 34-39 years | 23 | 17.04 |
| | 40-44 years | 9 | 6.67 |
| | 45-49 years | 6 | 4.44 |
| | Over 50 years | 4 | 2.96 |
| Highest educational qualification | None | 0 | 0 |
| | Primary School | 0 | 0 |
| | Secondary school | 2 | 1.48 |
| | Matric | 36 | 26.67 |
| | Diploma/degree | 83 | 61.48 |
| | Master's degree | 13 | 9.63 |
| | Doctorate degree | 1 | 0.74 |
| Occupation | Student | 7 | 5.19 |
| | Freelancer or contractor | 5 | 3.7 |
| | Private sector | 69 | 51.11 |
| | Public sector | 19 | 14.07 |
| | Self employed | 25 | 18.52 |
| | Other | 10 | 7.41 |
| Province | Eastern Cape | 1 | 0.74 |
| | Free State | 1 | 0.74 |
| | Gauteng | 88 | 65.19 |
| | KwaZulu-Natal | 22 | 16.3 |
| | Limpopo | 0 | 0 |
| | Mpumalanga | 3 | 2.22 |
| | North West Province | 0 | 0 |
| | Northern Cape | 2 | 1.48 |
| | Western Cape | 18 | 13.33 |
| Duration of membership to BMWfanatics | Less than 1 year | 16 | 11.85 |
| | 1-2 years | 24 | 17.78 |
| | 3-4 years | 38 | 28.15 |
| | 4-5 years | 23 | 17.04 |
| | More than 5 years | 34 | 25.19 |

One of the most interesting statistics regarding the demographic profile of respondents is the fact that all 135 respondents are male, indicating that no females participated in the survey.

From the table above, it is evident that 76 of the respondents, which accounts for approximately 56%, are of the ages 25 to 34 years old. Age groups 34 to 39 years and 20 to 24 years account for 17.04% and 12.59% of the respondents respectively with 14.07% of the respondents older than 40 years old. None of the respondents was younger than 20 years old.

The majority of the respondents, up to 72%, have completed some form of tertiary education. 26.67% of the respondents have matriculated with only 2 respondents, 1.48% having completed secondary school education.

A sizable portion of the respondents, close to 19%, are found to be self-employed and over half, 51.11%, are employed in the private sector. Furthermore, over 5% of the respondents are students and approximately 14% are employed in the public sector.

Geographical location of respondents saw Gauteng, KwaZulu-Natal and Western Cape account for almost 95% of the respondents with the majority, 65.19%, residing in the Gauteng area. Following Gauteng was KwaZulu-Natal at 16.3% and subsequently, Western Cape at 13.33%. The remainder of the provinces account for 5.2% of the respondents, with none of the respondents coming from Limpopo and North West Province.

A quarter of the respondents have been members of the BMWfanatics forum for more than 5 years, however the membership duration category with the most number of respondents is 3 to 4 years with 38 respondents at 28.15%. A significant portion of the respondents, almost 12%, see themselves as members for less than a year. Respondents with membership durations of 1 to 2 years and 4 to 5 years tally at 17.78% and 17.04% respectively.

## 4.3 Validation of measures

The data analysis included the calculation of Cronbach's Alphas to measure the internal consistency and subsequently, the reliability of the data. As alluded to previously, in Section 3.7, the Cronbach's Alpha is a measure of how closely related a set of items are as a group and an alpha coefficient of 0.70 would suggest an acceptable measure for internal consistency. The Cronbach's Alphas were computed using the PROC CORR procedure in the SAS9.3® software program. The output from SAS9.3® was then exported to Microsoft Excel® to arrange it into a more presentable format. Table 2 summarises the standardised Cronbach's Alpha for factors in this study.

It is clear from Table 2 that the Cronbach's Alphas for all of the factors are well above the acceptable limit of 0.70. The Cronbach's Alpha obtained for brand community identification (BCI) is 0.910. This is significantly high and demonstrates an excellent measure of internal consistency as the Cronbach's Alphas do not show significant increase or decrease should an item be deleted.

The brand community commitment (BCC) standardised Cronbach's Alpha amounts to 0.841 which is not excellent however is it is still significantly good. This is evident as the standardised Cronbach's Alpha does not show significant changes with the deleted variables.

Brand loyalty (BL) shows an excellent standardised Cronbach's Alpha of 0.949 however the correlation with total for item BL 7 shows a considerably low correlation when compared to other items as well as an improved alpha should the item be deleted. As a result this item was deleted in order to further improve the Cronbach's Alpha to 0.956.

The standardised Cronbach's Alpha for brand involvement (BI) was excellent at 0.918, and showed no increase in the standardised Cronbach's Alpha if any measure is deleted. As a result, all the items in the brand involvement construct were left unchanged.

## Table 2: Standardised Cronbach's Coefficient Alpha

| Standardised Cronbach's Coefficient Alpha with Deleted Variable | | | | | |
|---|---|---|---|---|---|
| **Factors** | **Deleted Variable** | **Correlation with Total** | **Alpha** | **Original Alpha** | **Improved Alpha** |
| **Brand Community Identification** | **BCI 1** | 0.642 | 0.910 | 0.910 | 0.910 |
| | **BCI 2** | 0.631 | 0.911 | | |
| | **BCI 3** | 0.733 | 0.897 | | |
| | **BCI 4** | 0.828 | 0.883 | | |
| | **BCI 5** | 0.839 | 0.881 | | |
| | **BCI 6** | 0.837 | 0.882 | | |
| **Brand Community Commitment** | **BCC 1** | 0.693 | 0.801 | 0.841 | 0.841 |
| | **BCC 2** | 0.613 | 0.817 | | |
| | **BCC 3** | 0.677 | 0.804 | | |
| | **BCC 4** | 0.555 | 0.828 | | |
| | **BCC 5** | 0.539 | 0.831 | | |
| | **BCC 6** | 0.640 | 0.811 | | |
| **Brand Loyalty** | **BL 1** | 0.875 | 0.937 | 0.949 | 0.956 |
| | **BL 2** | 0.872 | 0.937 | | |
| | **BL 3** | 0.808 | 0.942 | | |
| | **BL 4** | 0.881 | 0.937 | | |
| | **BL 5** | 0.858 | 0.938 | | |
| | **BL 6** | 0.836 | 0.940 | | |
| | **BL 7*** | 0.577 | 0.956 | | |
| | **BL 8** | 0.787 | 0.943 | | |
| **Brand Involvement** | **BI 1** | 0.695 | 0.909 | 0.918 | 0.918 |
| | **BI 2** | 0.727 | 0.907 | | |
| | **BI 3** | 0.691 | 0.909 | | |
| | **BI 4** | 0.650 | 0.912 | | |
| | **BI 5** | 0.655 | 0.911 | | |
| | **BI 6** | 0.651 | 0.912 | | |
| | **BI 7** | 0.636 | 0.912 | | |
| | **BI 8** | 0.760 | 0.905 | | |
| | **BI 9** | 0.785 | 0.904 | | |
| | **BI 10** | 0.673 | 0.910 | | |
| **Brand Community Participation** | **BCP 1*** | 0.298 | 0.843 | 0.824 | 0.905 |
| | **BCP 2** | 0.685 | 0.780 | | |
| | **BCP 3** | 0.747 | 0.769 | | |
| | **BCP 4** | 0.622 | 0.791 | | |
| | **BCP 5** | 0.773 | 0.765 | | |
| | **BCP 6*** | 0.494 | 0.812 | | |
| | **BCP 7*** | 0.390 | 0.829 | | |
| **Purchase Decision Process** | **PDP 1** | 0.708 | 0.909 | 0.917 | 0.917 |
| | **PDP 2** | 0.664 | 0.911 | | |
| | **PDP 3** | 0.586 | 0.914 | | |
| | **PDP 4** | 0.699 | 0.909 | | |
| | **PDP 5** | 0.694 | 0.909 | | |
| | **PDP 6** | 0.600 | 0.913 | | |
| | **PDP 7** | 0.669 | 0.910 | | |
| | **PDP 8** | 0.668 | 0.910 | | |
| | **PDP 9** | 0.659 | 0.911 | | |
| | **PDP 10** | 0.649 | 0.911 | | |
| | **PDP 11** | 0.674 | 0.910 | | |
| | **PDP 12** | 0.674 | 0.910 | | |

***Deleted items**

Brand community participation (BCP) demonstrated a significantly good standardised Cronbach's Alpha of 0.824 however due to two of the items, BCP 1 and BCP 7, showing improvements in the standardised Cronbach's Alphas if deleted, and coupled with lower than average correlation with total values, these items were deleted. This was done and the second iteration of the Cronbach's Alpha was computed which showed further improvement upon deleting BCP 6. On deleting BCP 6, the standardised Cronbach's Alpha was improved to a value of 0.905 which is a significant improvement on 0.824.

Table 2 shows the purchase decision process (PDP) as a single combined construct, as opposed to a construct for each of the steps in the purchase decision process. Standardised Cronbach's Alphas were computed for each of the constructs individually, however these yielded somewhat poor values for the evaluation of alternatives (EA) and purchase decision (PD) steps. As highlighted in Table 3, these factors demonstrated Cronbach's Alphas of 0.488 and 0.572 respectively. Problem recognition (PR) and information search (IS) yielded good factors of 0.827 and 0.803 respectively and post purchase behaviour (PPB) yielded a marginally acceptable Cronbach's Alpha of 0.715. Table 4 highlights the improvement of the individual Cronbach's Alphas with deleted variables and what this data demonstrates is that the Cronbach's Alphas of all of the PDP factors cannot be improved any further by deleting any of the items. As a result of this, the factors were combined into a single PDP factor for which the standardised Cronbach's Alpha was calculated. The combined PDP factor, as contained in Table 2, yielded a value of 0.917 which is a significant improvement on any of the individual values. The value of 0.917 demonstrates an excellent measure of internal consistency for the PDP factor as the Cronbach's Alphas in Table 2 do not show significant increase or decrease should an item be deleted for the PDP factor.

Based on the Cronbach's Alpha analyses, four items (BL 7, BCP 1, BCP 6 and BCP 7) were deleted and all purchase decision process steps were consolidated into one factor. As a result, all subsequent analyses excluded these items and treated purchase decision process as a single construct.

**Table 3: Individual Cronbach's Coefficient Alphas for PDP Factors**

| Cronbach's Coefficient Alpha | | |
|---|---|---|
| **Factors** | **Raw Alpha** | **Standardised Alpha** |
| **Problem Recognition** | 0.824 | 0.827 |
| **Information Search** | 0.790 | 0.803 |
| **Evaluation of alternatives** | 0.488 | 0.488 |
| **Purchase Decision** | 0.510 | 0.572 |
| **Post Purchase Behaviour** | 0.712 | 0.715 |

**Table 4: Cronbach's Alpha with deleted variables for PDP factors**

| Cronbach's Coefficient Alpha with Deleted Variable | | | |
|---|---|---|---|
| **Factors** | **Deleted Variable** | **Correlation with Total** | **Alpha** |
| **Problem Recognition** | **PDP 1** | 0.705 | . |
| | **PDP 2** | 0.705 | . |
| **Information Search** | **PDP 3** | 0.623 | 0.757 |
| | **PDP 4** | 0.708 | 0.667 |
| | **PDP 5** | 0.617 | 0.763 |
| **Evaluation of Alternatives** | **PDP 6** | 0.323 | . |
| | **PDP 7** | 0.323 | . |
| **Purchase Decision** | **PDP 8** | 0.401 | . |
| | **PDP 9** | 0.401 | . |
| **Post Purchase Behaviour** | **PDP 10** | 0.503 | 0.663 |
| | **PDP 11** | 0.497 | 0.671 |
| | **PDP 12** | 0.605 | 0.536 |

## 4.4 Confirmatory factor analysis

In order to test the factor model that was hypothesised in the literature review, a confirmatory factor analysis was conducted on the collected data. The objective of confirmatory factor analysis is to test and confirm the relationship that exists between the observed variables and the underlying latent constructs that exist between them (Creswell, 2013).

According to the literature review, this study hypothesises four latent constructs related to brand community participation (BCP), namely brand community

identification (BCI), brand community commitment (BCC), brand loyalty (BL) and brand involvement (BI). Subsequently, the model hypothesises BCP further influences purchase decision process (PDP).

Confirmatory factor analysis on this model was computed using the PROC CALIS procedure in SAS9.3®. The LINEQS statement was used to specify the linear relationships between the observed and latent variables and the maximum likelihood estimation method was used to estimate parameters. By conducting confirmatory factor analysis, multiple statistical tests are conducted on the data to determine the adequacy of the model fit to the data. Goodness of fit results, which is the output of the confirmatory factor analysis, was computed for each of the variables individually as well as the overall model. Table 5 highlights the goodness of fit results for this study.

**Table 5: Fit summary for confirmatory factor analysis**

| Fit Summary | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Measures** | **BCI Fit** | **BCC Fit** | **BL Fit** | **BI Fit** | **BCP Fit** | **PDP Fit** | **Overall Fit** |
| **Number of Observations** | 135 | 135 | 135 | 135 | 135 | 135 | 135 |
| **Number of Variables** | 6 | 6 | 7 | 10 | 4 | 12 | 45 |
| **Pr > Chi-Square** | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 |
| **Chi-Square** | 44 | 51 | 42 | 344 | 72 | 318 | 3637 |
| **Chi-Square DF** | 9 | 9 | 14 | 35 | 2 | 54 | 945 |
| **SRMR** | 0.05 | 0.07 | 0.03 | 0.10 | 0.08 | 0.10 | 0.12 |
| **GFI** | 0.89 | 0.89 | 0.91 | 0.67 | 0.80 | 0.68 | 0.40 |
| **RMSEA** | 0.17 | 0.19 | 0.12 | 0.26 | 0.51 | 0.19 | 0.15 |
| **CFI** | 0.94 | 0.86 | 0.97 | 0.69 | 0.85 | 0.73 | 0.51 |
| **NFI** | 0.93 | 0.84 | 0.96 | 0.67 | 0.85 | 0.70 | 0.43 |
| **NNFI** | 0.90 | 0.77 | 0.96 | 0.60 | 0.55 | 0.67 | 0.48 |

There are many goodness of fit indices that are commonly used in research and for this study, the model was assessed with the chi-square tests, the standardised root mean square residual (SRMR), the goodness of fit index (GFI), the root mean square error of approximation (RMSEA), comparative fit index (CFI) and the non-normed fit index (NNFI). Acceptable fit to a model can be confirmed by non-significant chi-square tests (p-value greater than 0.05), SRMR and RMSEA values

lower than 0.08 and GFI, CFI, NFI and NNFI values greater than 0.90 (Bagozzi & Dholakia, 2002).

Based on the above criteria, none of the factors or overall model meets the RMSEA and chi-square criteria in that all RMSEA values are greater than 0.08 and all chi-square values are significant at a p-value less than 0.05. The brand community identification and brand loyalty factors do exhibit acceptable SRMR, GFI, CFI, NFI and NNFI fits which might suggest that these factors exhibit acceptable fits even though the chi-square and RMSEA were not acceptable. The rest of the factors all show unacceptable fits with the overall model standing out with a significantly unacceptable fit.

## 4.5 Exploratory factor analysis

As mentioned previously, confirmatory factor analysis aims to confirm or reject a hypothesised model based on the underlying factor structure. In contrast to this, exploratory factor analysis, as the term suggests, aims to explore the relationships that exists between the observed variables and the underlying latent constructs without imposing a predetermined factor structure (Creswell, 2013).

In the previous subsection, results for the confirmatory factor analysis were presented, indicating an unacceptable fit to the model hypothesised in the literature review. Based on this outcome, an exploratory factor analysis was conducted on the data in an attempt to determine what the factor structure based on the data is.

The exploratory factor analysis was computed using the PROC FACTOR procedure in SAS9.3®. Factors were extracted using the principal factor method with the Kaiser-Guttman criterion being used to determine the number of factors extracted. This criterion limits the number of factors extracted to those with eigenvalues greater than one (Hair et al., 1998). The factor analysis was run specifying the rotation method as Varimax for orthogonal rotation. This allows the researcher to understand and explain the factors that are extracted.

Figure 4 depicts the scree plot and the variance explained for the extracted factors. The scree plot presents the eigenvalues as a function of the different factors whereas the variance explained shows the proportion and cumulative variance that is accounted for by each factor extracted.

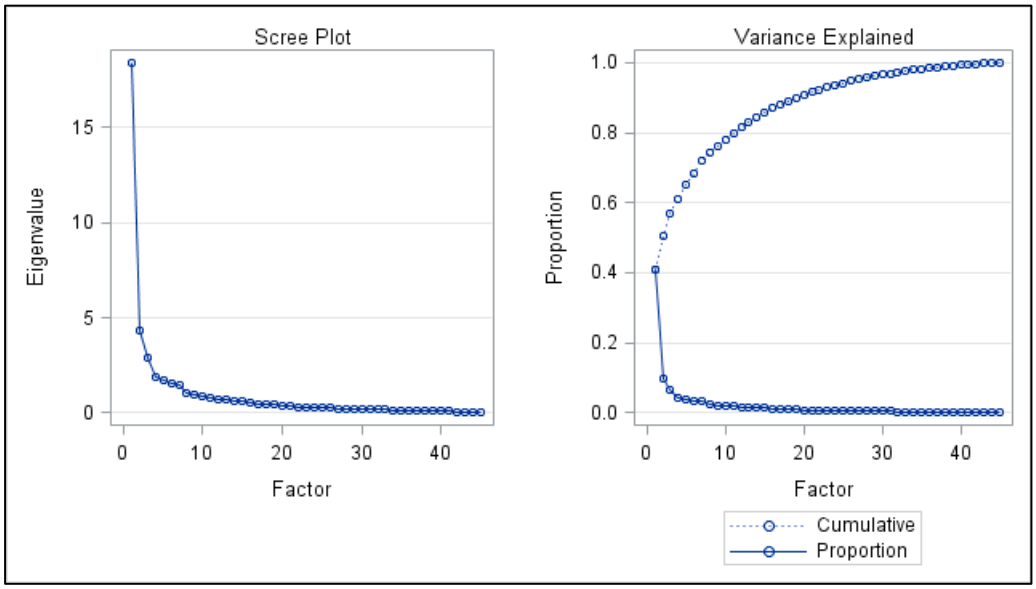


**Figure 4: Scree plot and percentage variance explained**

Table 6 presents the eigenvalue properties for the factors extracted, yielding eight factors with eigenvalues greater than one, accounting for 74% of the variance.

**Table 6: Eigenvalue properties**

| Number of Eigenvalues | Eigenvalue | Cumulative Eigenvalue | Proportion of Variance (%) | Cumulative Variance (%) | Difference |
|---|---|---|---|---|---|
| **1** | 18.416 | 18.416 | 40.930% | 40.930% | 14.072 |
| **2** | 4.345 | 22.761 | 9.650% | 50.580% | 1.439 |
| **3** | 2.906 | 25.667 | 6.460% | 57.040% | 1.014 |
| **4** | 1.892 | 27.558 | 4.200% | 61.240% | 0.169 |
| **5** | 1.722 | 29.280 | 3.830% | 65.070% | 0.147 |
| **6** | 1.575 | 30.856 | 3.500% | 68.570% | 0.080 |
| **7** | 1.496 | 32.351 | 3.320% | 71.890% | 0.494 |
| **8** | 1.002 | 33.353 | 2.230% | 74.120% | 0.066 |

Table 7 shows the results for the rotated factors with the associated factor loadings yielded from the exploratory factor analysis. For easy identification of the respective factors and associated loadings, a ten colour spectrum ranging from red to green was used. A more favourable factor loading will appear with a darker shading of green whereas a less favourable factor loading will appear with a darker shading of red. Intermediate factor loadings however are highlighted in shades of yellow or orange. As discussed previously, factor loadings greater than 0.50 indicate an acceptable loading.

From Table 7, it is evident that all factor loadings for the eight rotated factors, with the exception of items PDP 6 and BCC 3 in factors four and seven respectively, exhibit loadings greater than 0.50. These items, PDP 6 and BCC 3 indicate loadings of 0.485 and 0.440 respectively which is only marginally below the accepted limit of 0.050 and as a result, were not deleted from the analysis. The significant loadings for all other items indicate that the exploratory factor analysis yields a good factor structure for the set of observed variables.

As can be seen from Table 7, factors one and two are very strongly biased towards the brand loyalty and brand community commitment factors discussed in the literature review and therefore are labelled as such. Factors three and four appear to be comprised predominantly of items from the purchase decision process with factor three leaning more towards information search and gathering and factor four leaning more towards the actuals purchase process. As such, factors three and four are labelled information gathering and purchase process respectively. Finally, the last three factors, factors six, seven and eight, seem to have split the brand involvement factors and based on their items, are labelled brand image, brand meaning and brand feelings respectively. Items making up the original brand community commitment factor appear to have been split amongst the brand community identification, information gathering, purchase process and brand meaning factors. A summary of the constructs emanating from the exploratory factor analysis along with the new renamed factors is provided in Table 8.

## Table 7: Rotated factor pattern for factors extracted

| Factor | Items | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 | Factor 8 |
|---|---|---|---|---|---|---|---|---|---|
| Factor 1 | BL 4 | 0.838 | 0.116 | 0.227 | 0.204 | 0.072 | 0.132 | 0.178 | 0.097 |
| | BL 2 | 0.830 | 0.168 | 0.187 | 0.276 | 0.034 | 0.135 | 0.129 | 0.041 |
| | BL 1 | 0.804 | 0.175 | 0.209 | 0.234 | 0.026 | 0.142 | 0.196 | 0.087 |
| | BL 6 | 0.751 | 0.235 | 0.242 | 0.149 | -0.029 | 0.241 | 0.184 | 0.044 |
| | BL 5 | 0.727 | 0.215 | 0.259 | 0.196 | 0.052 | 0.231 | 0.197 | 0.080 |
| | BL 3 | 0.705 | 0.150 | 0.426 | 0.074 | 0.028 | 0.164 | 0.105 | 0.220 |
| | BL 8 | 0.587 | 0.227 | 0.273 | 0.343 | -0.055 | 0.274 | 0.251 | 0.140 |
| Factor 2 | BCI 6 | 0.185 | 0.844 | 0.039 | 0.121 | 0.273 | 0.049 | 0.061 | 0.016 |
| | BCI 5 | 0.228 | 0.821 | 0.055 | 0.070 | 0.281 | 0.067 | 0.098 | 0.032 |
| | BCI 4 | 0.204 | 0.794 | 0.146 | 0.167 | 0.101 | 0.216 | 0.163 | -0.005 |
| | BCI 3 | 0.295 | 0.674 | 0.163 | 0.256 | 0.178 | 0.188 | 0.025 | 0.072 |
| | BCC 6 | 0.074 | 0.663 | 0.208 | 0.222 | 0.093 | -0.092 | 0.348 | -0.111 |
| | BCI 2 | -0.078 | 0.632 | 0.249 | 0.272 | 0.116 | 0.138 | 0.144 | 0.126 |
| | BCI 1 | 0.241 | 0.612 | 0.136 | 0.138 | 0.157 | 0.058 | -0.065 | 0.295 |
| | BCC 1 | 0.239 | 0.520 | 0.441 | 0.257 | 0.088 | 0.272 | 0.098 | 0.057 |
| Factor 3 | PDP 4 | 0.247 | 0.143 | 0.817 | -0.043 | 0.009 | 0.054 | 0.073 | 0.061 |
| | PDP 7 | 0.073 | 0.094 | 0.749 | 0.274 | 0.107 | 0.123 | 0.020 | 0.287 |
| | PDP11 | 0.295 | 0.072 | 0.718 | 0.124 | 0.032 | 0.247 | 0.066 | 0.195 |
| | BCC 5 | 0.178 | 0.135 | 0.698 | 0.130 | 0.033 | 0.170 | 0.080 | -0.199 |
| | PDP 5 | 0.186 | 0.200 | 0.663 | 0.273 | -0.212 | 0.049 | 0.255 | -0.180 |
| | PDP 3 | 0.185 | 0.052 | 0.653 | 0.383 | 0.001 | -0.022 | 0.167 | 0.078 |
| | PDP 8 | 0.283 | 0.307 | 0.582 | 0.197 | -0.165 | -0.057 | 0.336 | -0.054 |
| | BCC 2 | 0.383 | 0.254 | 0.531 | 0.202 | 0.072 | -0.093 | 0.304 | -0.080 |
| Factor 4 | PDP 2 | 0.243 | 0.157 | 0.145 | 0.775 | 0.087 | 0.196 | 0.083 | 0.180 |
| | BCC 4 | 0.250 | 0.387 | 0.086 | 0.703 | 0.155 | 0.003 | 0.017 | 0.064 |
| | PDP10 | 0.240 | 0.141 | 0.202 | 0.667 | 0.108 | 0.169 | 0.228 | -0.026 |
| | PDP 1 | 0.322 | 0.162 | 0.264 | 0.637 | 0.096 | 0.179 | 0.149 | 0.175 |
| | PDP 9 | 0.057 | 0.232 | 0.320 | 0.604 | 0.043 | 0.215 | 0.220 | -0.022 |
| | PDP12 | 0.297 | 0.275 | 0.284 | 0.567 | 0.027 | 0.075 | 0.201 | 0.090 |
| | PDP 6 | 0.467 | 0.260 | 0.141 | 0.485 | -0.079 | 0.336 | 0.007 | -0.003 |
| Factor 5 | BCP 5 | 0.036 | 0.234 | -0.034 | 0.033 | 0.932 | -0.002 | 0.038 | 0.016 |
| | BCP 3 | 0.030 | 0.146 | 0.049 | 0.087 | 0.899 | 0.040 | 0.018 | 0.007 |
| | BCP 2 | -0.035 | 0.195 | 0.133 | 0.062 | 0.830 | 0.094 | 0.001 | 0.046 |
| | BCP 4 | 0.032 | 0.192 | -0.162 | 0.083 | 0.750 | -0.199 | 0.006 | -0.092 |
| Factor 6 | BI 4 | 0.200 | 0.178 | 0.109 | 0.166 | 0.004 | 0.791 | 0.106 | 0.096 |
| | BI 5 | 0.212 | 0.002 | 0.105 | 0.113 | 0.004 | 0.785 | 0.236 | 0.096 |
| | BI 8 | 0.336 | 0.171 | 0.150 | 0.209 | -0.057 | 0.670 | 0.236 | 0.186 |
| | BI 1 | 0.461 | 0.210 | 0.061 | 0.278 | -0.037 | 0.538 | 0.116 | 0.218 |
| Factor 7 | BI 6 | 0.255 | 0.052 | 0.268 | 0.074 | -0.006 | 0.182 | 0.791 | 0.128 |
| | BI 7 | 0.175 | 0.141 | 0.151 | 0.145 | 0.056 | 0.252 | 0.770 | 0.066 |
| | BI 9 | 0.389 | 0.185 | 0.182 | 0.327 | 0.007 | 0.247 | 0.565 | 0.273 |
| | BI 10 | 0.260 | 0.238 | 0.099 | 0.256 | 0.041 | 0.243 | 0.564 | 0.200 |
| | BCC 3 | 0.198 | 0.404 | 0.293 | 0.330 | 0.026 | -0.102 | 0.440 | -0.374 |
| Factor 8 | BI 2 | 0.306 | 0.115 | 0.081 | 0.172 | -0.023 | 0.267 | 0.364 | 0.693 |
| | BI 3 | 0.331 | 0.188 | 0.053 | 0.227 | -0.038 | 0.314 | 0.191 | 0.684 |

**Table 8: Renamed factors**

| Construct | Renamed factor |
|---|---|
| Factor 1 | Brand Loyalty |
| Factor 2 | Brand Community Identification |
| Factor 3 | Information gathering |
| Factor 4 | Purchase Process |
| Factor 5 | Brand Community Participation |
| Factor 6 | Brand Image |
| Factor 7 | Brand Meaning |
| Factor 8 | Brand Feelings |

Table 9 presents the Pearson correlation matrix for the output factors from the exploratory factor analysis. As in the rotated factor results, a ten colour spectrum has been used to highlight the inter-correlations between each of the factors in the matrix. Darker shades of green indicate a higher inter-correlation with darker shades of red indicate a poor inter-correlation. Factor correlations are regarded as insignificant for values significantly lower than one. From the data, it is clear that the inter-correlations for all combinations of variables are significantly lower than one and therefore confirm that factors are not significantly correlated.

**Table 9: Pearson correlation matrix for exploratory factor analysis**

| Pearson Correlation Coefficients, N = 135 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **BL** | **BCI** | **IG** | **BCP** | **BI** | **BM** | **BF** | **PP** |
| **BL** | 1.000 | 0.551 | 0.659 | 0.088 | 0.660 | 0.649 | 0.573 | 0.692 |
| **BCI** | 0.551 | 1.000 | 0.544 | 0.403 | 0.448 | 0.495 | 0.381 | 0.636 |
| **IG** | 0.659 | 0.544 | 1.000 | 0.075 | 0.426 | 0.565 | 0.354 | 0.646 |
| **BCP** | 0.088 | 0.403 | 0.075 | 1.000 | 0.026 | 0.086 | 0.035 | 0.199 |
| **BI** | 0.660 | 0.448 | 0.426 | 0.026 | 1.000 | 0.613 | 0.636 | 0.589 |
| **BM** | 0.649 | 0.495 | 0.565 | 0.086 | 0.613 | 1.000 | 0.576 | 0.604 |
| **BF** | 0.573 | 0.381 | 0.354 | 0.035 | 0.636 | 0.576 | 1.000 | 0.508 |
| **PP** | 0.692 | 0.636 | 0.646 | 0.199 | 0.589 | 0.604 | 0.508 | 1.000 |

## 4.6 Regression analysis

In the previous subsection, exploratory factor analysis was conducted on the set of observed variables which resulted in eight extracted factors with significantly good factor loadings. These factors form the basis of the regression analyses that are presented in this subsection.

As previously explained, linear regression is most commonly used as a method of modelling relationships between dependent and independent variables by using linear predictor functions. The regression analysis conducted on the constructs yielded from the exploratory factor analysis was done so using the PROC REG procedure in the SAS9.3®. The regression analysis was done twice, firstly testing a two stage model and then testing a one stage model. Each of these regression analyses is presented in the sections that follow.

### 4.6.1 *Two stage model*

The regression analysis was computed on a two stage model in an attempt to replicate the model that was originally hypothesised in the literature review using the new factors yielded by the exploratory factor analysis. The first stage of the two stage model included running a multiple regression analysis by setting brand community participation as the dependent variable with brand loyalty, brand community identification information gathering, brand image, brand meaning and brand feelings as independent variables. Results for this analysis are highlighted in Table 10.

**Table 10: Summary of multiple regression analysis – two stage model**

| Analysis of Variance | | | | | |
|---|---|---|---|---|---|
| **Source** | **DF** | **Sum of Squares** | **Mean** | **F Value** | **Pr > F** |
| **Model** | 6 | 13.766 | 2.294 | 5.720 | <.0001 |
| **Error** | 128 | 51.323 | 0.401 | | |
| **Corrected Total** | 134 | 65.090 | | | |

| Overall Model Fit | | | |
|---|---|---|---|
| **Root MSE** | 0.633 | **R-Square** | 0.212 |
| **Dependent Mean** | 1.343 | **Adjusted R-Square** | 0.175 |
| **Coefficient of Variation** | 47.132 | | |

| Parameter Estimates | | | | | |
|---|---|---|---|---|---|
| **Variable** | **DF** | **Parameter Estimate** | **Standard Error** | **t Value** | **Pr > \|t\|** |
| **Intercept** | 1 | 1.622 | 0.448 | 3.620 | 0.000 |
| **BL** | 1 | -0.011 | 0.073 | -0.150 | 0.883 |
| **BCI** | 1 | 0.279 | 0.049 | 5.680 | <.0001 |
| **IG** | 1 | -0.128 | 0.092 | -1.400 | 0.165 |
| **BI** | 1 | -0.082 | 0.074 | -1.110 | 0.268 |
| **BM** | 1 | 0.004 | 0.069 | 0.060 | 0.951 |
| **BF** | 1 | -0.018 | 0.056 | -0.320 | 0.752 |

By examining the F-test in Table 10, with a p-value of zero to four decimal places, it is clear that the overall model is significant. The R-square value however is significantly low at 0.212, implying that the independent variables only account for 21% of the variability of brand community participation. The parameter estimate column presents the coefficient for the respective independent variable and indicates the effect on the dependent variable for a unit change in the respective dependent variable. The p-value for a respective dependent variable indicates the significance of that variable and is considered significant for values less than 0.05. Based on these criteria, it is evident that only the brand community identification variable is significant with a p-value considerably less than 0.05 with all other variables demonstrating p-values that are extremely high.

The second stage of the two stage model comprised running a simple regression analysis by setting purchase process as the dependent variable and brand community participation as the independent variable. Results for the simple regression analysis are presented in Table 11 below

**Table 11: Summary of simple regression analysis – two stage model**

| Analysis of Variance | | | | | |
|---|---|---|---|---|---|
| **Source** | **DF** | **Sum of Squares** | **Mean** | **F Value** | **Pr > F** |
| **Model** | 1 | 9.018 | 9.018 | 5.460 | 0.021 |
| **Error** | 133 | 219.834 | 1.653 | | |
| **Corrected Total** | 134 | 228.851 | | | |

| Overall Model Fit | | | |
|---|---|---|---|
| **Root MSE** | 1.286 | **R-Square** | 0.039 |
| **Dependent Mean** | 5.074 | **Adjusted R-Square** | 0.032 |
| **Coefficient of Variation** | 25.338 | | |

| Parameter Estimates | | | | | |
|---|---|---|---|---|---|
| **Variable** | **DF** | **Parameter Estimate** | **Standard Error** | **t Value** | **Pr > \|t\|** |
| **Intercept** | 1 | 4.574 | 0.241 | 18.980 | <.0001 |
| **BCP** | 1 | 0.372 | 0.159 | 2.340 | 0.021 |

The F-test p-value for the simple regression analysis contained in Table 11 measure at 0.021 and is below the acceptable value of 0.05 which indicates a significant fit to the overall model. The R-square value for the model fit is 0.039 which is extremely low, implying that the brand community participation accounts for less than 4% of the variability in purchase process. Because this is a simple regression, there is only one independent variable and with a parameter estimate p-value of 0.021 for the brand community participation factor, is significant and accounts for a 0.372 change in the dependent variable for every unit change in brand community participation.

Analysing the results from the two stage model suggests that with significant F-tests, the independent variables reliably predict the dependent variables. However the low R-square values of 0.212 and 0.039 for the first and second stages respectively indicate a poor association between the dependent and independent variables.

### 4.6.2 *One stage model*

Following the regression analysis on the two stage model and the subsequent results emanating from the analysis, it was decided that a one stage model for the observed variables should be investigated. As such, a multiple regression analysis was computed on the collected data with setting the purchase process factor as the dependent variable and all other variables as the independent variables. Table 12 below presents the results yielded from the one stage model multiple regression analysis.

**Table 12: Summary of multiple regression analysis – one stage model**

| Analysis of Variance | | | | | |
|---|---|---|---|---|---|
| **Source** | **DF** | **Sum of Squares** | **Mean** | **F Value** | **Pr > F** |
| **Model** | 7 | 144.719 | 20.674 | 31.210 | <.0001 |
| **Error** | 127 | 84.132 | 0.662 | | |
| **Corrected Total** | 134 | 228.851 | | | |

| Overall Model Fit | | | |
|---|---|---|---|
| **Root MSE** | 0.814 | **R-Square** | 0.632 |
| **Dependent Mean** | 5.074 | **Adjusted R-Square** | 0.612 |
| **Coefficient of Variation** | 16.041 | | |

| Parameter Estimates | | | | | |
|---|---|---|---|---|---|
| **Variable** | **DF** | **Parameter Estimate** | **Standard Error** | **t Value** | **Pr > \|t\|** |
| **Intercept** | 1 | -1.506 | 0.604 | -2.490 | 0.014 |
| **BL** | 1 | 0.214 | 0.094 | 2.270 | 0.025 |
| **BCI** | 1 | 0.215 | 0.071 | 3.040 | 0.003 |
| **IG** | 1 | 0.376 | 0.119 | 3.160 | 0.002 |
| **BCP** | 1 | 0.102 | 0.114 | 0.900 | 0.369 |
| **BI** | 1 | 0.172 | 0.095 | 1.810 | 0.073 |
| **BM** | 1 | 0.087 | 0.088 | 0.980 | 0.329 |
| **BF** | 1 | 0.070 | 0.072 | 0.970 | 0.333 |

Looking at the F-test in Table 12 with a p-value significantly less than 0.05 indicates that the model fit is significant and that the independent variables reliably predict the dependent variables. The R-square value for the regression analysis stands at 0.632 which indicates that the independent variables explain 63% of the variability in the purchase process which may appear marginally low however, is significant. The R-square also indicates that there is an association

that exists between the independent and dependent variables that cannot be ignored. P-values for parameter estimates indicate that brand community participation, brand involvement, brand meaning and brand feelings are statistically insignificant. This is evident as the parameter estimates indicate much lower effects on the purchase process factor by these four factors when compared to all other factors. The remainder of the factors are statistically significant with p-values much lower than 0.05 and much higher effects on the purchase process factor as indicated by the corresponding parameter estimates.

The results coming out of the regression analysis for the one stage model are considerably more acceptable than those of the two stage model.

## 4.7 Summary of the results

In this chapter, the results from the various data analysis techniques were presented. It began by firstly presenting the results pertaining to the reliability of the scales by means of Cronbach's Alphas. A total of four items were deleted from the study to improve the brand loyalty and brand community participation factors. Due to poor Cronbach's Alphas, the factors for each of the purchase decision steps were consolidated into one purchase decision process factor.

Confirmatory factor analysis results were presented, indicating that the hypothesised model emanating from the literature review was not confirmed. As a result, an exploratory factor analysis was conducted in order to determine what the factor structure for the dataset was. The exploratory factor analysis yielded eight factors disseminating the brand community commitment factor, splitting the purchase decision process factor into two and splitting the brand involvement factors into three separate factors.

Finally, results for the regression analysis performed on the one stage and two stage models were presented. The two stage model exhibited poor associations between the independent and dependent variable, whereas the one stage model exhibited relatively higher associations.

# CHAPTER 5. DISCUSSION OF THE RESULTS

## 5.1 Introduction

In Chapter 4, the results pertaining to this study was presented and in this chapter the results are interpreted and discussed. The main purpose of this chapter is to analyse and delineate the findings of this study in the context of the literature reviewed in Chapter 2.

The chapter begins with discussing the demographic profile of the respondents and then moves on to discussing each of the propositions put forward in the literature review. Each of the propositions is discussed based on the respective Cronbach's Alphas, the confirmatory and exploratory factor analysis and finally, the regression analysis. In order to better understand the implications of the research, the results are contrasted to the literature reviewed for each of the propositions. Finally, the chapter discusses the overall model and conclusion.

## 5.2 Demographic profile of respondents

As mentioned previously, all of the respondents that participated in the research were male. This is quite interesting as it could indicate one of two things, namely either there were no females that participated in the survey, or that the population is very male dominated. Considering that this research falls within the automotive sphere that is historically a very male dominated space, it is very possible that the BMWfanatics community has a strong male membership bias. Algesheimer et al. (2005) and Jang et al. (2008) both investigated the case of online brand communities in the automotive sector with a male constituency of 87% and 83% respectively. This shows a significant male bias, albeit not as strong as that in this study.

The age profile of respondents shows a relatively young membership base, with approximately 86% of the respondents between the ages of 20 and 40. According

to Statistics South Africa (2015), the national population estimates for this specific age group is approximately 34%. This indicates that there is a substantial bias towards a younger demographic among online brand communities, at least in the case of BMWfanatics. This could further demonstrate that the online brand community concept is relatively new in South Africa with a higher adoption among a younger demographic that is much more inclined to adopt an online platform.

The majority of the respondents, up to 72%, had completed some form of tertiary education which indicates that the BMWfanatics membership profile is skewed towards individuals of a professional nature. Although BMWfanatics is an online brand community that places no restriction on the type of vehicles their members own, this finding may very well speak to the characteristics of the BMW brand. The BMW brand is known for its superior luxury and quality and as such is regarded as a premium brand. The fact that most of BMWfanatics' members are professionals speaks directly to the target market the brand would appeal to.

The geographical location of respondents is highly biased towards the densely populated metropolitan areas. As mentioned previously, almost 95% of the respondents are from Gauteng, KwaZulu-Natal and Western Cape which houses the three largest cities in South Africa, namely, Johannesburg, Durban and Cape Town respectively, in order of decreasing population estimates (Statistics South Africa, 2016). This potentially demonstrates that the uptake of the online brand community platform, at least in the case of BMWfanatics, is significantly greater in urbanised areas within South Africa. This is further confirmed by the fact that lesser developed areas such as Limpopo and North West Province yielded no respondents. Another factor that one could expect to influence this finding is the access to internet outside the greater metropolitan areas. As mentioned previously, at the end of 2012 South Africa had reached 21.3 million internet users which equated to approximately 42% of the estimated population at the time (Business Monitor International, 2014). It is therefore the belief of the researcher that access to the internet would have a lesser effect to this finding than proximity to urbanised areas.

## 5.3 Discussion pertaining to brand community identification

Proposition 1 is restated here for ease of reference.

> Brand community identification influences members' participation in the BMWfanatics online brand community.

As stated, proposition 1 looks at the relationship between brand community identification and online brand community participation. As described in the literature review, brand community identification is defined as how strong a member's relationship is to the brand community and constitutes three parts, namely, the cognitive, affective and evaluative identification components. Brand community identification has been investigated and confirmed to successfully influence brand community participation in previous research (Algesheimer et al., 2005; Ellemers et al., 1999).

In this study, the brand community identification construct was investigated using questions 8 to 13 in the survey and, judging by the Cronbach's Alpha results, has been measured quite effectively. Highly correlated items and a Cronbach's Alpha of 0.910 suggest that the items were excellent in measuring the brand community identification variable. The good results achieved are most definitely attributed to the items having been extensively used and confirmed in previous research.

The confirmatory factor analysis results for the brand community identification factor yields acceptable goodness of fit indices although the chi-square p-value is lower than required. The contrasting indices from the goodness of fit tests made it difficult to confirm whether the factor structure was in fact consistent with the data that was collected. This led to some contemplation on whether or not, the brand community identification factor should be excluded from the exploratory factor analysis. Eventually, it was decided that due to the contrasting results, it would be better to include brand community identification in the exploratory factor analysis.

Upon conducting the exploratory factor analysis, all six of the brand community identification measures were grouped together. This was not entirely unexpected

as it was in line with the extremely good Cronbach's Alpha and borderline confirmatory factor analysis results for the construct. Surprisingly, there were two of the brand community commitment items that were included in the brand community identification group. These two items were BCC 1 measuring a member's sense of belonging and BCC 6 measuring a member's view on how actively they participate in the BMWfanatics brand community. The brand community identification construct essentially looks at the members "belonging" to the brand community and therefore it can be expected that BCC 1, which measures this specifically, should be combined with this construct. The cognitive aspect of brand community identification looks specifically at the self-awareness of membership within the community and perceived similarities with other members (Schau et al., 2009). Upon close examination of the BCC 6 measure, it is clear that this measure does have aspects congruent with the cognitive component of brand community identification. The brand community identification construct and the insignificant inter-correlations with other factors emanating from the exploratory factor analysis therefore indicate a strongly measured variable.

In the two stage model, brand community identification was set as an independent variable to the second order brand community participation construct, whereas in the one stage model, it was set as an independent variable to the purchase process construct. Brand community identification showed an extremely strong influence on the respective dependent variables indicating its importance in both models. The two stage model indicates that brand community identification, compared to all other factors, influences brand community participation the most. However, the poor overall fit for the two stage model leads to this conclusion, and by extension proposition 1, being rejected. The one stage model indicating a much better overall fit, illustrates that brand community identification is one of the strongest influencers directly on the purchase process, at least for the study at hand. This is a significant finding as it demonstrates the impact that brand communities can have on its members' purchase process. Furthermore, it can be confidently deduced that in the case of BMWfanatics, members have a strong relationship and a high sense of "belonging" with the brand community.

## 5.4 Discussion pertaining to brand community commitment

Proposition 2 is restated for ease of reference.

> Brand community commitment influences members' participation in the BMWfanatics online brand community.

As stated, proposition 2 looks at the relationship between brand community commitment and brand community participation. According to Kim et al. (2008), brand community commitment in the online community context can be defined as the extent of psychological attachment the member feels toward the online community, as well as the perceived value of the relationship with the online community. Brand community commitment develops when members value their relationships with other members and is important, especially in online brand communities, as the cost of switching in online brand communities is low (Kim et al., 2008).

Questions 14 to 19 in the research instrument were used to collect data on brand community commitment and were based on research items employed by Kim et al. (2008) and Hur, Ahn, and Kim (2011). The Cronbach's Alphas for the brand community commitment construct measure at 0.841 with relatively high correlations with totals ranging from 0.539 to 0.693. This reveals that the individual items measure exactly what they are supposed to which is the brand community commitment construct. Once again, the use of previously tried and tested items prove effective in measuring the construct.

The GFI goodness of fit index showed a slightly lower than acceptable value of 0.89 with all other indices sizeably below the accepted figures. The poor fit indices obtained demonstrate that the factor structure for brand community commitment was not confirmed. What this means is that the set of observed variables do not have a significantly strong relationship with the brand community commitment construct. Considering the good Cronbach's Alphas achieved for this factor, this observation comes as a surprise. The exploratory factor analysis that was run sheds more light on this observation.

After conducting exploratory factor analysis on the data set, it was found that brand community commitment did not feature at all as a separate construct. All of its measures were split up and included in other factors. BCC 1 and BCC 6 relating to member's sense of belonging and a member's view on how actively they participate in the BMWfanatics brand community respectively, were included in the brand community identification construct and were discussed in the previous subsection. BCC 2, measuring if a member will continuously visit the brand community, and BCC 5, measuring how important the member thinks that exchanging opinions with other members is, emerged with the information gathering construct, whereas BCC 4 and BCC 3 appeared with the purchase process and brand meaning factors. Each of these measures are discussed with the discussion of each factor, however what is important to note is the fact that the brand community commitment factor was dissolved with measures surfacing in other constructs.

This dissolution of the brand community commitment construct demonstrates an extremely weak factor, refuting proposition 2. The re-surfacing of brand community commitment measures with other factors demonstrates their relevance to other constructs. The brand community commitment construct has been used extensively in previous research by Jang et al. (2008), Kim et al. (2008) and Hur et al. (2011), with successful results. This suggests the question as to why it does not apply to this study. Careful examination of the previous research reveals that the only common constructs between the previous research and this study are brand loyalty and brand community participation. This may lead to the conclusion that the introduction of the other factors when developing the framework for this study had led to the introduction of measures that clash with those of the brand community commitment factor. This is evident from the discussion in the previous subsection whereby BCC 1 measures the sense of "belonging" to the brand community as a brand community commitment measure, however it is highly correlated to the brand community identification factor which also looks at "belonging". This could prove a valid argument for the dissolution of the brand community commitment factor and its distribution over the other constructs.

## 5.5 Discussion pertaining to brand loyalty

Proposition 3 is restated for ease of reference.

> Brand loyalty influences members' participation in the BMWfanatics online brand community.

As stated, proposition 3 looks at the relationship between brand loyalty and brand community participation. Brand loyalty, as alluded to in the literature review, is defined in two parts, namely, attitudinal loyalty which relates to the consumer's acceptance of the brand's values and behavioural loyalty, which relates to the consumer's repeat purchase of the brand (Chaudhuri & Holbrook, 2001). In the literature review, it was hypothesised that due to online brand communities being a relatively new concept to South Africa, consumers would have a pre-existing relationship with the BMW brand and therefore, brand loyalty would be a factor influencing the online brand community participation.

The brand loyalty construct was measured using questions 20 to 27 of the questionnaire and based on the Cronbach's Alpha coefficient of 0.956 was the best measured construct in the model. This alpha was achieved by deleting the BL 7 measure related to recommending the BMW brand to friends and acquaintances which showed poor correlation with the total compared to the other items. With seven other measures that performed extremely well, it was decided that BL 7 could be deleted due to the poor correlation with the total even though the original Cronbach's Alpha was already excellent.

The confirmatory factor analysis results for the brand loyalty construct yields acceptable goodness of fit indices although the chi-square p-value is lower than required and RMSEA above the allowed limit. As with the brand community identification factor, the conflicting goodness of fit results emanating from the confirmatory factor analysis created a level of uncertainty as to whether the brand loyalty factor was confirmed or not. After some deliberation and due to the contrasting results, it was decided to include brand loyalty in the exploratory factor analysis.

The exploratory factor analysis yielded brand loyalty as the first factor output with extremely high factor loadings and comprised only the seven remaining brand loyalty items. This finding was in keeping with the excellent Cronbach's Alpha and uncertain confirmatory factor analysis results for the brand loyalty factor. The fact that the brand loyalty construct comprised entirely of brand loyalty measures and that all factor loadings were sufficiently high indicated an exceptionally well measured variable, indicating that the factor structure was highly consistent with the data collected. This conclusion was further confirmed by the Pearson correlation results demonstrating low inter-correlations with other factors.

The brand loyalty factor was included in both the two stage model and one stage model regression analysis. In the two stage model, brand loyalty was set as an independent variable influencing the dependent variable brand community participation which in turn, influences the purchase process variable. The result for this regression model showed extremely poor fits and as a result, was abandoned. More specifically, the brand loyalty construct in the model showed a statistically insignificant influence on the brand community participation construct. This finding meant that brand community participation was not influenced by the brand loyalty a member possesses and as a result, disproves the hypothesis regarding brand loyalty and brand community participation.

The one stage model saw brand loyalty set as the dependent variable with only one dependent variable, purchase process. The multiple regression analysis demonstrated a marginally accepted one stage model with brand loyalty showing a significant influence over the purchase process construct. This implies that the purchase process is, in fact, directly influenced by brand loyalty in the case of BMWfanatics and not via brand community participation as hypothesised in the literature review. That being said, it can be safely concluded that from the factors investigated in this study, brand loyalty is one of the strongest influencers of the purchase process. Within the scope of this study, it can also be gathered that members of the BMWfanatics brand community have a great degree of brand loyalty to the BMW brand.

## 5.6 Discussion pertaining to brand involvement

Proposition 4 is restated for ease of reference.

> Brand involvement influences members' participation in the BMWfanatics online brand community.

As stated, proposition 4 looks at the relationship between brand involvement and brand community participation. As described in the literature review, brand involvement can be defined as a person's perception towards a product or brand based on inherent needs, values and interests (Krugman, 1966; Sirgy, 1982). A high brand involvement may lead to an increased need for information relating to the brand and therefore motivating brand community participation.

Brand involvement was measured by questions 28 to 37 and judging by the excellent Cronbach's Alpha of 0.918 obtained for the construct, one can deduce that the items indeed measure the brand involvement variable accurately and reliably. This is further confirmed by the significantly high correlation with the total ranging from 0.636 to 0.785. The good results yielded from this analysis can be attributed to using items to measure brand involvement that have been used and confirmed previously in research by Shang et al. (2006) and Chang et al. (2013).

All goodness of fit indices coming out of the confirmatory factor analysis for the brand involvement factor show a poor fit for the factor. This denotes that the factor structure was not at all consistent with the observed variables. This was odd given the Cronbach's Alpha for the construct demonstrated that each measure successfully measured the variable and the measures employed confirmed the factor structure in previous research. This suggests that it is possible that these measures in the context of this study may have been ambiguous or interpreted other than intended. The fact that questions were also posed in a somewhat random method could have added to this finding.

The results from the exploratory factor analysis for brand involvement revealed a split into three distinct factors which were labelled brand image, brand meaning

and brand feelings. The Pearson correlations had also revealed low inter-correlations for all related factors indicating acceptable constructs. The breaking up of the brand involvement factor however does not come as a total surprise because in their research, Shang et al. (2006) reported a similar finding. Chang et al. (2013), on the other hand, had confirmed the brand involvement factor in its entirety in their study. This variety of results reported on the brand involvement factor may indicate a high sensitivity to the sample under investigation. The splitting of brand involvement into different factors disproves proposition 4, however, each individual factor is discussed in the paragraphs that follow in relation to proposition 4.

The brand image factor revealed an average factor loading of 0.696 and was made up of measures BI 1 measuring the relevance of the BMW brand to the members, BI 4 measuring the importance of the BMW brand, BI 5 measuring the appeal of the BMW brand and BI 8 measuring how fascinating or mundane the BMW brand is. The reason this factor was labelled as brand image was due to the fact that two of the four measures, appeal and fascination, pertained to the image of the BMW brand as BMWfanatics members perceive it. In the two stage model regression analysis, brand image was set as an independent variable and displayed no effect on the brand community participation factor. In the one stage model regression analysis, brand image showed a marginally insignificant effect on the purchase process construct, but only just. Therefore, it was decided that brand image would be included in the model with the smallest impact.

The brand meaning factor showed an average factor loading of 0.626 and was made up of measures BI 6 measuring how boring or interesting the BMW brand is, BI 7 measuring how worthless or valuable the BMW brand is, BI 9 measuring how much the BMW brand means, BI 10 measuring how needed the BMW brand is and BCC 3 measuring the extent to which a member would exchange information and opinions on the BMWfanatics brand community. This construct was named brand meaning as the measures depict what the BMW brand means to the BMWfanatics members, namely means a lot, valuable and interesting. The BCC 3 measure being included in this construct was extremely odd as it had no relation

to the other measures and is further corroborated by the low factor loading of 0.440. This value was marginally below the accepted factor loading of 0.5 and as a result was not deleted from the subsequent regression analyses. As with the case of the brand image factor, brand meaning was set as an independent variable in both regression models and the results demonstrate an extremely insignificant effect by brand meaning on the respective dependent variables, brand community participation and purchase process. Once again, this validates the fact that brand meaning is also not a substantial factor in this study.

Finally the brand feelings factor displayed an average factor loading of 0.688 and was made up of measures BI 2 and BI 3 measuring the extent to which the BMW brand creates feelings of excitement and involvement respectively. The brand feelings factor was so named because the measures within this factor were comprised of items measuring the feelings the BMW brand creates within the BMWfanatics members. Once again, the brand feelings factor was set as an independent variable in both regression models with brand community participation and purchase process as the independent variables respectively. The results from both regression analyses indicate an insignificant effect of brand feelings on the independent variables. This further suggests that brand feelings as a variable has a very low importance in the context of this study.

From the above discussions, it is clear that brand involvement most definitely does not influence members' participation in the BMWfanatics online brand community in its entirety or through its individually fragmented constructs. This is important as the two stage model depicts a poor model fit to the data. The one stage model on the other hand has a relatively acceptable model fit to the data, however, in this case, the effects of the fragmented constructs, brand image, brand meaning and brand feelings, described by the statistical data, show that they are negligible and therefore can be ignored. This demonstrates that for this study, and the members of the BMWfanatics brand community, brand involvement and its fragmented constructs play no vital role.

## 5.7 Discussion pertaining to brand community participation

The previous four subsections have discussed the factors influencing online brand community participation, their associated propositions and corresponding results. In this study, brand community participation formed a second order construct influenced by the abovementioned factors which subsequently influenced the purchase decision process. This subsection discusses the specific results obtained concerning the brand community participation construct.

As the name suggests, brand community participation looks into members' online participation behaviour on the BMWfanatics brand community. Brand community participation is vital to firms as it promotes the sharing of ideas and knowledge, and has significant effect on market penetration and sales (Kim et al., 2008; Koh & Kim, 2004).

Questions 38 to 44 in the online survey were used to measure the participation behaviour of members. The first iteration for scale reliability yielded a Cronbach's Alpha of 0.824 with three items BCP 1, BCP 6 and BCP 7 displaying considerably low correlations with totals of 0.298, 0.494 and 0.390 respectively. Although the Cronbach's Alphas achieved were good, due to the low correlations for the three items, they were computed again deleting these variables, yielding a result of 0.905. This result shows that the remaining items were effective in measuring the brand community participation construct.

Results from the confirmatory factor analysis conducted on the brand community participation factor generated acceptable RMR and SRMR results with all other goodness of fit indices demonstrating an unacceptable fit. The unacceptable fit indices attest to the fact that factor structure for brand community participation was not confirmed, implying that the construct was not consistent with the data collected. The Cronbach's Alpha for brand community participation was excellent following the removal of the deleted items and therefore the unconfirmed factor structure originating the confirmatory factor analysis was unexpected.

The average factor loading for brand community participation amounted to 0.853 which was the highest value yielded from the exploratory factor analysis for any of the factors and comprised only the four remaining brand community participation measures. This result was congruent with the excellent Cronbach's Alpha obtained after deleting the lowly correlated items. The Pearson correlation cross-loadings for brand community participation against all other factors were extremely low, indicating an extremely well-defined construct. All of the abovementioned results speak to the fact that the underlying factor structure for brand community participation has a significantly strong relationship with the observed variables.

In the two stage model, brand community participation featured as a second order construct and with the regression analysis showing that only brand community identification significantly influenced the brand community participation factor albeit with a very poor model fit. The influence of brand community participation on purchase process which formed the second stage of the two stage model showed a significant influence but yet again with a poor overall model fit. This demonstrates that this orientation of the factors in the model does not explain the data sufficiently in order to be regarded as acceptable.

Subsequently, regression analysis was conducted on a one stage model setting purchase process as the dependent variable and all other variables as independent variables. Although the overall model fit revealed an acceptable fit to the data, brand community participation showed an insignificant effect on the purchase process.

The findings from both the regression analyses have a profound implication on this study. It not only reveals that brand community participation does not fit a second order construct model influencing the purchase process, but also that in itself, it does not influence the purchase process directly. This may suggest that the level of participation of the BMWfanatics members has no bearing on their purchase processes.

## 5.8 Discussion pertaining to purchase decision process

The propositions relating to purchase decision process are restated for ease of reference.

> Proposition 5a: Participation in the BMWfanatics online brand community influences the “problem recognition” step in its members’ purchase decision process.
>
> Proposition 5b: Participation in the BMWfanatics online brand community influences the “information search” step in its members’ purchase decision process.
>
> Proposition 5c: Participation in the BMWfanatics online brand community influences the “evaluation of alternatives” step in its members’ purchase decision process.
>
> Proposition 5d: Participation in the BMWfanatics online brand community influences the “purchase decision” step in its members’ purchase decision process.
>
> Proposition 5e: Participation in the BMWfanatics online brand community influences the “post purchase behaviour” step in its members’ purchase decision process.

As stated, propositions 5a to 5e looks at the relationships between brand community participation and each of the individual stages in the purchase decision process. The purchase decision process can be regarded as the core of consumer behaviour theory and is of particular importance as all consumer purchases are preceded by a decision process in some way (Dolan, 1999). The purchase decision process consists of five different stages, as described in the propositions and understanding how each of these are influenced helps companies remain relevant (Shapiro et al., 1992). As discussed in the literature review, each of the stages in the purchase decision process can be potentially influenced by brand community participation, due to its varying characteristics.

The purchase decision process factors were measured by questions 45 to 56. The problem recognition, information search and post purchase behaviour factors displayed acceptable Cronbach's Alphas of 0.824, 0.790 and 0.712 respectively, whereas the evaluation of alternatives and purchase decision factors showed unacceptable Cronbach's Alphas of 0.488 and 0.510 respectively with extremely low correlations with the total. Following this, the Cronbach's Alphas were computed, combining all purchase decision process items and yielded an excellent result of 0.917. As a result, it was decided to treat the purchase decision process as a single construct with subsequent analyses. This finding shows that the items measure the combined purchase decision process factor more accurately than they do the respective associated factors. The poor results achieved for the individual factors can be attributed to the fact that these measures have not been used previously in any literature and are being tested for the first time. In the context of this study, this finding further disproves propositions 5a to 5e that propose brand community participation influences each of the purchase decision process stages.

The single combined purchase decision process factor was then subjected to a confirmatory factor analysis to determine whether the underlying factor structure does, in fact, fit the observed data. All goodness of fit indices and the p-value demonstrated that the relationship between the factor structure and data was weak and thus the factor structure was not confirmed. Once again, as with some of the other factors, this was surprising as the good Cronbach's Alphas suggested that the items measured the factors in the way they intended to, however the factor structure had failed to be confirmed by the confirmatory factor analysis. This could be attributed to the fact that the items used had not been confirmed before and therefore created some confusion in the minds of the respondents.

The results from the exploratory factor analysis show a divide in the purchase decision process construct into two separate factors, renamed as information gathering and purchase process. The inter-correlations for both these new constructs with the other factors under investigation imply that the new constructs are acceptable. The separation of the purchase decision process factor can be

explained by the fact that this construct was originally comprised of five individual factors that were combined to form the purchase decision process. Additionally, the fact that the survey questions were administered in a randomised order may also have some impact on the splitting up of the purchase decision process factor.

The information gathering factor showed an average factor loading of 0.676 and was made up of six purchase decision process measures and two brand community participation measures. The purchase decision measures included in the factor were PDP 3 measuring how important a source of information the BMWfanatics forum is, PDP 4 measuring how helpful information shared on the BMWfanatics forum is, PDP 5 measuring the extent to which a member will use the BMWfanatics forum to collect information, PDP 7 measuring if a member will use the BMWfanatics forum to decide on what product to purchase, PDP 8 measuring how readily other members share their experiences when making purchases, and PDP 11 measuring the extent to which sharing in members' experiences helps a member reaffirm his purchase. The two brand community commitment measures included in the factor were BCC 2 measuring if a member will visit the BMWfanatics forum continuously and BCC 5 measuring how important a member thinks exchanging opinions with other member are. The reason this construct was labelled information gathering was due to the fact that many, if not all, of these items relate to the collecting or sharing of information in some way or form. The inclusion of BCC 2 and BCC 5 in the factor can be explained by the similarity these measure share with items PDP 5 and PDP 3 respectively.

The purchase process factor revealed an average factor loading of 0.634 and comprised six purchase decision process measures and one brand community commitment measure. The purchase decision measures included in the factor were PDP 1, measuring if participating in the BMWfanatics forum encourages a member to buy a BMW over other brands, PDP 2 measuring if participating in the BMWfanatics forum has helped a member identify the need to buy a BMW, PDP 6 measuring whether BMWfanatics provide objective information, PDP 9 measuring if a member will use the BMWfanatics forum to decide on which dealership to

purchase from, PDP 10 measuring if member are able to offer support and comfort if a member is unhappy with a purchase, and PDP 12 measuring if speaking to other members helps members feel good about their purchase. The brand community commitment measure included in the factor was BCC 4, measuring the extent to which a member has a psychological attachment to the members of the BMWfanatics brand community. The purchase process factor was so named because the measures within this factor were comprised predominantly of purchase decision process factors, less those that related to collecting and sharing of information. The inclusion of BCC 4 in this construct seemed odd, however upon close examination this measure seemed to have some congruency with PDP 10 and PDP 12, all of which looks at an emotional aspect of a member's relationships with members of the BMWfanatics forum. The purchase process factor, based on the measures it comprises, can be seen as a combination of the problem recognition, evaluation of alternatives, purchase decision and post purchase behaviour factors originally proposed in the literature review.

Both of these newly emerged factors, information gathering and purchase process, were subjected to the regression analysis for both the two stage and one stage models. In the two stage model, information gathering was set as an independent variable to brand community participation and purchase process was then set as a dependent variable to brand community participation. Information gathering displayed an insignificant impact on brand community participation whereas brand community participation demonstrated a significant impact on the purchase process construct. However, due to the poor overall model fit, this regression model was rejected, refuting these findings.

In the one stage model, information gathering was set as an independent variable with purchase process set as the dependent variable. Information gathering exhibited the most significant influence over purchase process and with the acceptable model fit, deems the finding as valid. This is an important finding as it shows that information collected on the BMWfanatics forum significantly impacts the purchase process of its members, and considerably more than any of the other factors within this study.

## 5.9 Discussion pertaining to overall research model

The factors and propositions that were outlined in the literature review form the framework as summarised and reiterated in Figure 5. In this subsection, this model is discussed in relation to the results that emanated from the research. At the end of this section, the model is revised, based on the results achieved.

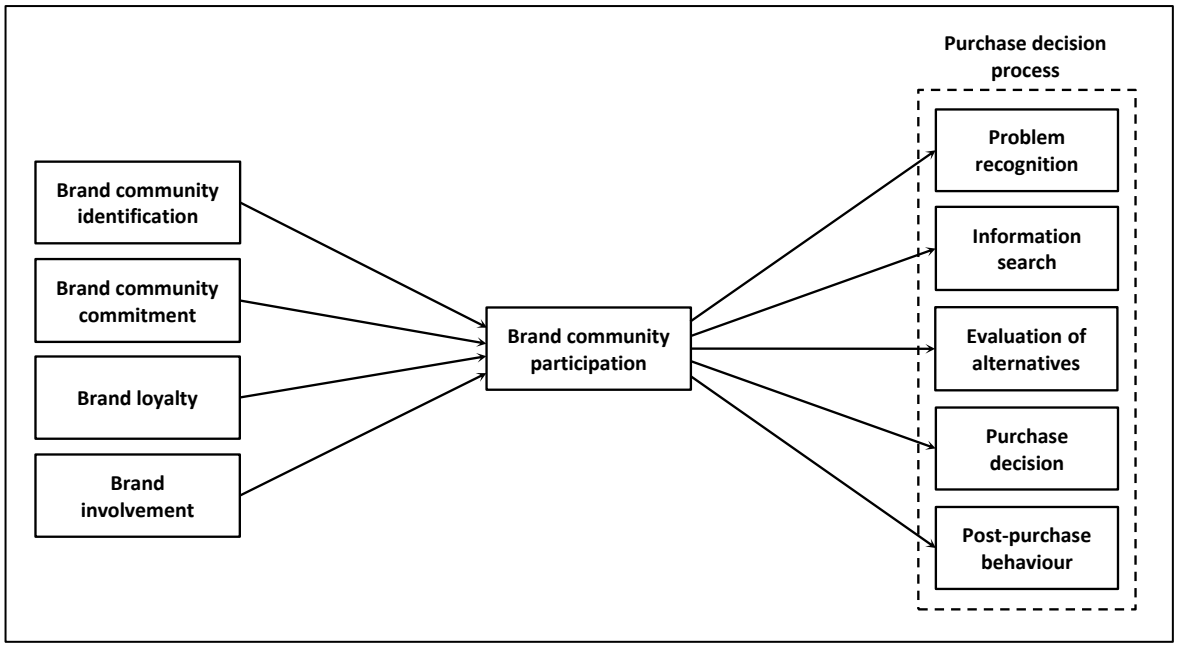


**Figure 5: Hypothesised framework based on literature review**

One of the key findings regarding brand community identification is how well the factors fitted the data which indicates that the members of the BMWfanatics forum have a keen sense of "belonging" with the brand community. This would suggest that all three components, that is the cognitive, emotional and evaluative, of the brand community identification factor are activated and that members attribute the characteristics of the BMWfanatics community upon themselves (Marzocchi et al., 2013). The strong sense of belonging evident in this study may be credited to the sharing of brand related experiences and memories among the members of BMWfanatics, as concluded by Cova and Pace (2006) and Schau et al. (2009) in

their research on brand communities. This has further major implications for both the brand community and the brand itself. This could indicate that the brand community has a strong relationship with its members and can therefore have a much greater influence on them (McAlexander et al., 2002). From the perspective of the brand, this platform could essentially be used as an alternative advertising medium to get closer to its customers due to the emotional bond members of BMWfanatics community have with the BMW brand (Fournier, 1998). The strong relationship that members share with the brand community could imply a much more effective solution and could even assist companies to venture into the relationship marketing realm that could result in increased brand equity and shareholder value (Madden et al., 2006). Due to the poor variance explained, the two stage model was rejected and instead the one stage model was accepted. This reveals that brand community identification has a stronger direct influence on the purchase process than on brand community participation.

The dissolution of the brand community commitment factor, despite the high Cronbach's Alpha, indicates that the measures for these items were significantly influenced by other measures. The alternative explanation is that brand community commitment is low among members, which is a short-sighted conclusion to draw. As described in the literature review, commitment appears when members in a brand community value their relationships with each other (Meyer & Allen, 1991; Morgan & Hunt, 1994), which is more prone in a consumer-initiated brand community such as BMWfanatics (Jang et al., 2008). This, coupled with the high levels of brand community identification, further weakens the argument that brand community commitment is low among members. As a result of this discussion, there can be no concrete conclusions drawn regarding this factor. This finding does however demonstrate that measuring brand community commitment amidst the other factors under investigation may have a negative bearing on the results that follow unless the measures are well differentiated.

The results obtained for brand loyalty helps establish the fact that members of the BMWfanatics brand community are extremely loyal to the BMW brand and demonstrate both behavioural and attitudinal loyalty (Gounaris & Stathakopoulos,

2004; Uncles et al., 2003). Yet again, this is an imperative result as it has significant impact for companies or their brands and in this case, for BMW. Griffin (1996) maintains that brand loyalty is a pre-requisite for relationship marketing and considering that brand communities are becoming a prominent feature in marketing strategies (Kim et al., 2008), this strong brand loyalty that members of the BMWfanatics community possess can be used to the advantage of BMW. The strong brand loyalty further helps establish that members of BMWfanatics exhibit a strong acceptance of the values that the BMW brand stands for and that there exists a strong possibility that these members will engage in repeat purchases of BMW products (Shang et al., 2006). The brand loyalty factor showed no impact of brand community participation, however demonstrated significant influence over the purchase process factor.

Brand involvement for the case of BMWfanatics had split into three separate factors, brand image, brand meaning and brand feelings, indicating a somewhat weak factor. Importance and value of a brand (Sirgy, 1982), as well as a brand's appeal to its consumers' ego or self-image (Bloch & Richins, 1983), bring about a high sense of brand involvement and combined with the extremely strong brand loyalty among the BMWfanatics members as discussed above, one would expect an equally high level of brand involvement. However, as mentioned earlier in the chapter, this factor had yielded a variety of results previously in literature (Chang et al., 2013; Shang et al., 2006) which may indicate a high sensitivity to the sample under investigation. All three of the factors revealed insignificant impacts on brand community participation with only brand image indicating a marginally accepted impact on purchase process.

Brand community participation, looking at members' participation trends on the forum, indicated a strong influence on the purchase process in the two stage model, albeit with only 4% of the variance explained. This resulted in a rejection of this proposition. In the one stage model, there was an insignificant relationship between these factors yet again and therefore brand community participation and its effects were ultimately excluded. Despite brand community participation being rejected from the models, one cannot discount the impact of the factor especially

considering that the factor correlated well with the data implying its importance. This is further validated by the fact that members of BMWfanatics exhibit strong brand loyalty and according to Lin et al. (2011) brand loyalty is strengthened through brand community participation. O'Donnell and Brown (2012) maintain that online brand communities provide an ideal platform that satisfies its members' needs which, from the discussion above, would explain why one can conclude high brand community participation. This is important as brand community participation is the first pre-requisite for companies and brands to connect to its customers via the brand online community platform.

The purchase decision process factors, as alluded to earlier, was combined into one factor and subsequently split into two factors, namely, information gathering and purchase process, so named as the former factor comprised mainly of measures related to the collecting of information and the latter comprised mainly of measures related to the rest of the purchase process. Information gathering displayed an insignificant effect on brand community participation, but the strongest influence on purchase process among all factors in the one stage model. This is understandable as information searching forms part of the purchase process (Shapiro et al., 1992) and should have a definitive effect on this process (Kotler et al., 2014; Russo & Carlson, 2002). The extremely close fit of the data to information gathering may further suggest that members of the BMWfanatics brand community use the forum as an important and vast source of information (McAlexander et al., 2002). This speaks to the fact that BMWfanatics is an enthusiast owned and operated online community where information regarding the brand ought to be more objective (Jang et al., 2008).

Figure 6 summarises the factors and their relationships based on the results and findings coming out of this study. It further summarises the discussion that has been presented regarding each of the propositions put forward in the literature review.

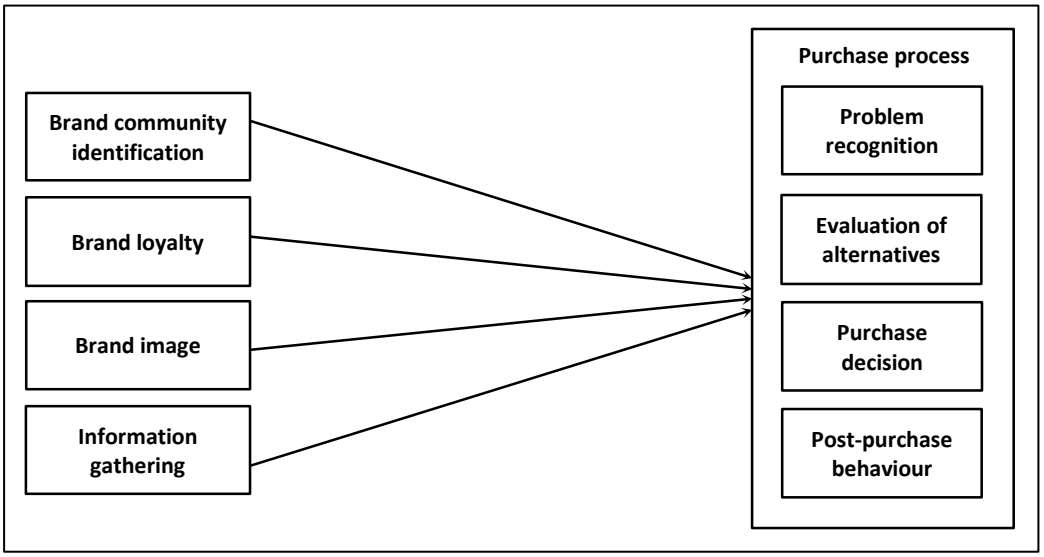


**Figure 6: Actual framework based on research findings**

## 5.10 Conclusion

In this chapter, the results from this study were discussed in the context of the literature review presented earlier. It began with an introduction and then looked at the demographics after which it discussed each of the propositions individually.

It was found that all of the respondents were male, skewed to a much younger demographic, most having completed some tertiary education and located in major metropolitan areas. An analysis of each of the propositions indicates that the two stage model hypothesised in the literature review was not confirmed. Brand community identification and brand loyalty showed the strongest relationships with the data collected. The brand community commitment factor was dissolved with brand involvement fragmenting into three separate factors. The purchase decision process factor was split into two factors, one centred on information and the other on the purchase process. The one stage model emerged as the best fit to the data with brand community identification, brand loyalty, brand image and information gathering as independent variables and the purchase process as the dependent variable. This model explained 63% of the variance with a significant influence on the purchase process.

# CHAPTER 6. CONCLUSIONS & RECOMMENDATIONS

## 6.1 Introduction

The aim of this study was to determine how members of a South African online brand community are influenced in making purchase decisions as a result of their participation in the online brand community. In order to address this objective, the problem was broken down into two parts, the first, looking at what influences members to participate in a South African online brand community and the second, looking at how this participation affects the purchase decision process.

In the previous two chapters, the results emanating from the study was presented and discussed. In this chapter, the conclusions and recommendations of the study are discussed in relation to the problem stated above. Finally, the chapter ends with suggestions for further research emerging from the research and provides a conclusion to the chapter.

## 6.2 Conclusions of the study

As mentioned earlier, the internet has revolutionised the way people consume information and, combined with the uptake of smartphones, has empowered consumers in a way, such that when making purchase decisions, all information regarding brands and products are literally at the fingertips of consumers. One such platform for collecting brand related information is that of online brand communities. What makes brand communities different from other platforms is the social interaction between brand community members. This customer-customer interaction is an important element that should be incorporated in the marketing strategies of firms as this is often overlooked. As a result, brand communities and their impact on consumers has become important for companies.

The first conclusion that is drawn from the research is that the respondents were all male. This is a significant conclusion as it may draw to the notion that brand

communities in South Africa, specifically in the automotive sector, are a very male dominated area. Based on the findings of this study, it may very well be concluded that the brand community platform tends to attract a younger consumer base, more than likely residing in a highly urbanised area. Based on this, it can be further deduced that areas with a better internet connection and accessibility would demonstrate a higher uptake of the online brand community concept.

Another conclusion to be drawn from this study is that brand community identification and brand loyalty demonstrated extremely strong relationships with the data collected. The strong association with the brand community identification factor shows that the members have a very strong sense of “belonging” with the of the BMWfanatics brand community. The strong brand community identification may further suggest a strong relationship between the members of the brand community and not just the brand community itself. The strong relationship with the brand loyalty factor demonstrates a high acceptance of the BMW brand’s values, further indicating a great possibility of repeat purchase of the BMW brand.

The dissolution of the brand community commitment factor indicates that it is possible that members do not have a strong commitment to the brand community, which may speak to the fact that there is very little switching cost associated with moving to other brand communities in the online space. This however is highly unlikely as the brand loyalty and brand community identification factors suggest otherwise. What is a more likely conclusion is that, as alluded to earlier, this factor was highly influenced by measures of other factors.

The brand involvement factor showed fragmentation into three separate factors and as explained earlier, this is most likely as a result of sensitivity to the sample under investigation. This is surprising as one would expect a highly correlated brand involvement factor based on the significantly valid brand loyalty factor.

The combining of the purchase decision process factors into one factor could lead us to conclude that the items measuring the individual factors were not enough to measure those constructs effectively. The subsequent fragmenting of the combined factor into the information gathering and purchase process factors

demonstrates that within the BMWfanatics context, there is a distinct difference between the information searching step and the rest of the steps in the purchase decision process.

Regarding the models tested, it can be concluded that the model hypothesised in the literature review did not fit the data well enough and as a result, was rejected. This leads to the conclusion that brand community participation, within the context of this study, is not influenced by the brand community identification, brand loyalty, brand community commitment and brand involvement factors, as suggested by the literature. Furthermore, brand community participation does not influence each of the steps in the purchase decision process individually.

The results from the one stage model analysis help conclude that brand community identification, brand loyalty, information gathering and brand involvement show a direct influence over the purchase process. It helps to further conclude that brand community participation, brand meaning and brand feelings show no influence on the purchase process.

## 6.3 Recommendations

The brand community and purchase decision concepts have been studied extensively, both theoretically and empirically, as literature would suggest. However upon conducting the literature review for this study, there was no indication of the relationship that exists between these two concepts having been investigated. In that sense, it makes this study unique in its own right.

The first set of implications that this study could provide benefit to, would have to be brand managers and their respective marketing teams. Griffin (1996) maintains that brand loyalty is a pre-requisite for any kind of relationship marketing. The finding indicating a significant level of brand loyalty among the subjects in this study clearly demonstrates that brand communities may have much to offer brand managers in the way of relationship marketing. Understanding the various levels of brand loyalty that online brand community members have, may shed light on

their purchase behaviours, due to the high positive relationship between these variables, as suggested by this study.

The findings of this research may also provide insightful information to the owners and co-ordinators of brand communities. The high sense of “belonging” that members feel when it comes to the brand community indicates a high perceived value of their relationship and psychological attachment to the online brand community. Due to this, it is imperative that brand communities have strong processes and procedures in place for monitoring member interactions to ensure that these are within the scope and rules of the community. The strong relationship that members hare with the brand community may indicate that they are highly invested in the community and are therefore impressionable. Due to the level of brand community commitment, the owners of the forum could use this to their advantage in offering advertising services to companies at a premium.

Over and above providing insights to marketing teams and online brand community owners, the study has many implications for consumers. The strongest factor influencing the purchase process was found to be the information gathering construct. This suggests that members view the brand community as a vital source of information. What this implies for consumers is that when searching for information related to brands and their products, visiting a brand community could possibly provide them with relevant and objective information, at least if the brand community is enthusiast owned and operated.

## 6.4 Suggestions for further research

During the course of this study, some areas have been identified which may require further investigation to shed more light on the topic of brand communities and their influence on members’ purchase decisions.

Firstly, this study consisted of looking at the BMWfanatics online brand community only. It would be worthwhile completing a replication study of other online brand communities. These may include communities similar to BMWfanatics in that they

are within the automotive sector or communities outside of this sector. This would assist in firstly, understanding whether the results obtained in this study can be replicated within a similar context and secondly, understanding whether or not the effects of brand community participation on purchase decisions in other sectors are similar.

Based on the results obtained in this study, and in order to understand the effects of brand community participation on each of the steps in the purchase decision process, it may be useful to employ measures that have been used previously in research and at least three measures for each of the stages in the process. This may result is strongly correlated constructs from which one could draw more meaningful conclusions for each of the purchase decision process steps.

A longitudinal study looking at the evolution of the online brand community with time may provide insights as to how members' decision making process changes with longer membership in the brand community.

## 6.5 Conclusion

In this chapter, the conclusions and recommendations arising from the study were presented and discussed. Although the model hypothesised in the literature review was not confirmed, the study did provide valuable information regarding how the purchase process of members are influenced and the importance of brand communities when it comes to the gathering and sharing of brand related information. Finally, suggestions for future research were presented that, if conducted, ought to shed further light on the brand community effects on the purchase decision process.

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# APPENDIX A

## Actual Research Instrument

### Introduction

This research is being conducted by Dhiren Ramdayal, currently a part-time student at the University of the Witwatersrand as a requirement towards the completion of an MBA qualification. You are humbly requested to participate in this investigation that looks at the motivations behind participating on the BMWfanatics forum and its effect on purchase behaviour.

All information in this study will be treated as **strictly confidential** and used **solely** for the purposes of this study. Taking part in this survey is entirely voluntary and should use a maximum of 15 minutes of your time. Your participation will automatically enter you into a prize draw for a BMW watch.

Thank you for your time.

## PART A: DEMOGRAPHIC QUESTIONS

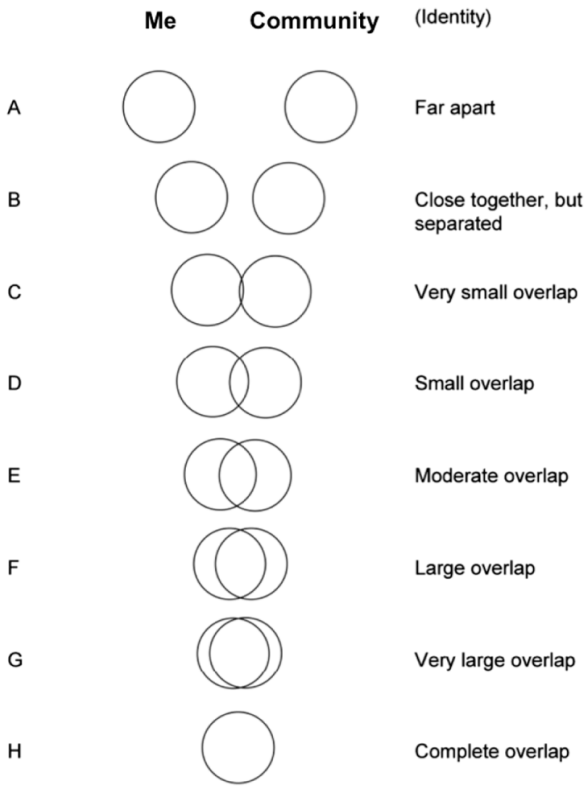
| | | | | |
|---|---|---|---|---|
| 1. Please supply your BMWfanatics username | | | | |
| 2. Please indicate your gender | Male | ☐ | Female | ☐ |
| 3. Please indicate your age group | Below 20 years | ☐ | 20-24 years | ☐ |
| | 25-29 years | ☐ | 30-34 years | ☐ |
| | 35-40years | ☐ | 40-44 years | ☐ |
| | 45-50 years | ☐ | Over 50 years | ☐ |
| 4. Please indicate your highest level of education | None | ☐ | Primary school | ☐ |
| | High school | ☐ | Matric | ☐ |
| | Diploma/Degree | ☐ | Masters | ☐ |
| | Doctorate | ☐ | | |
| 5. Please indicate your current occupation | Between jobs | ☐ | Student | ☐ |
| | Public sector | ☐ | Private sector | ☐ |
| | Self-employed | ☐ | Freelancer | ☐ |
| | Other | ☐ | | |
| 6. How long have you been a member of BMWfanatics | Less than a year | ☐ | 1-2 years | ☐ |
| | 3-4 years | ☐ | 4-5 years | ☐ |
| | Greater than 5 years | ☐ | | |
| 7. Which province do you currently live? | | | | |

**PART B: BMWfanatics PARTICIPATION QUESTIONS**

**Brand community identification**

*Cognitive*

8. Please express your degree of identification with the BMWfanatics community. Imagine that one of the circles at the left in each row represents your own identity and the other circle on the right represents the BMWfanatics community. Please indicate which case (A, B, C, D, E, F, G or H) best describes the level of overlap between your own and the community's identity.




9. Please indicate the degree to which your self-image overlaps with the BMWfanatics community identity, as you perceive it (7-point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Not at all | Slightly | Somewhat | Moderately | Largely | Significantly | Very much |

*Affective*

10. How attached are you to the BMWfanatics community? (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Not at all attached | Slightly attached | Somewhat attached | Moderately attached | Largely attached | Significantly attached | Attached very much |

11. How strong would you say your feelings of belongingness are toward the BMWfanatics community? (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Not at all strong | Slightly strong | Somewhat strong | Moderately strong | Largely strong | Significantly strong | Very much strong |

*Evaluative*

How well do the following statements describe you?

12. I am a valuable member of the BMWfanatics community (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Does not describe me at all | Describes me slightly well | Describes me somewhat well | Describes me moderately well | Describes me largely well | Describes me significantly well | Describes me very well |

13. I am an important member of the BMWfanatics community (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Does not describe me at all | Describes me slightly well | Describes me somewhat well | Describes me moderately well | Describes me largely well | Describes me significantly well | Describes me very well |

**Brand community commitment**

Please indicate the degree to which you agree with the following statements.

14. I feel a sense of belonging in the BMWfanatics brand community (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

15. I will visit the BMWfanatics brand community continuously (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

16. I will exchange information and opinions with the members of the BMWfanatics brand community.

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

17. I have psychological attachment to the members of the BMWfanatics forum (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

18. I think that exchanging opinions with other members of the BMWfanatics forum is important (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

19. I am an actively participating member of the BMWfanatics forum (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

**Brand loyalty**

Please indicate the degree to which you agree with the following statements.

20. I feel better about BMW than other brands (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

21. I pay more attention to BMW than other brands (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

22. I feel more attached to BMW than other brands (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

23. I am more interested in BMW than other brands (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

24. I will purchase the BMW brand the next time I purchase a vehicle (7 point Likert scale)

| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|

25. I intend to keep purchasing a BMW vehicle (7 point Likert scale)

| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|

26. I will recommend the BMW brand to my friends or acquaintances (7 point Likert scale)

| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|

27. I try to convince friends or acquaintances of mine to buy BMW's or BMW products (7 point Likert scale)

| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |
|---|---|---|---|---|---|---|

**Brand involvement**

Please mark the appropriate box for each of the statements below to indicate your involvement with the BMW brand.

I think the BMW brand is _____ to my life.

28. Relevant ☐☐☐☐☐☐☐☐☐☐☐☐☐ Irrelevant

When talking about the BMW brand, I feel _____.

29. Excited ☐☐☐☐☐☐☐☐☐☐☐☐☐ Unexcited
30. Involved ☐☐☐☐☐☐☐☐☐☐☐☐☐ Uninvolved

To me, BMW is a(n) _____ brand.

31. Important ☐☐☐☐☐☐☐☐☐☐☐☐☐ Unimportant
32. Appealing ☐☐☐☐☐☐☐☐☐☐☐☐☐ Unappealing
33. Boring ☐☐☐☐☐☐☐☐☐☐☐☐☐ Interesting
34. Worthless ☐☐☐☐☐☐☐☐☐☐☐☐☐ Valuable
35. Fascinating ☐☐☐☐☐☐☐☐☐☐☐☐☐ Mundane

To me, the BMW brand _____.

36. Means nothing ☐☐☐☐☐☐☐☐☐☐☐ Means a lot

37. Is not needed ☐☐☐☐☐☐☐☐☐☐☐ Is needed

**Brand community participation**

38. On average, how many minutes would you say you have spent online each time you visited the BMWfanatics forum? ( 5 X MCQ)

| | | | | |
|---|---|---|---|---|
| Less than 15 minutes | 15-29 minutes | 30-44 minutes | 45-59 minutes | More than 60 minutes |

39. How many posts would you say you have posted within the last week? (Open ended)
40. How many posts would you say you have posted within the last month? (Open ended)
41. According to your BMWfanatics profile, what is your current "Time Spent Online"? (Open ended – Weeks, Days, Hours, Minutes)
42. According to your BMWfanatics profile, what is your current "Total Posts"? (Open ended)
43. How many times would you say you have logged onto the BMWfanatics forum within the last week? (5 X MCQ)

| | | | | |
|---|---|---|---|---|
| Less than 5 times | 5-9 times | 10-14 times | 15-20 times | More than 20 times |

44. How many times would you say you have logged onto the BMWfanatics forum within the last month? (5 X MCQ)

| | | | | |
|---|---|---|---|---|
| Less than 10 times | 10-19 times | 20-29 times | 30-39 times | More than 40 times |

**PART C: PURCHASE DECISION QUESTIONS**

**Purchase decision process**

Please indicate the degree to which you agree with the following statements.

*Problem recognition*

45. Participating on the BMWfanatics forum makes me feel like I should buy a BMW over other brands (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

46. Participating on the BMWfanatics forum has helped identify that I need to purchase a BMW (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

*Information search*

47. BMWfanatics is an important source of information regarding BMWs (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

48. Information shared on the BMWfanatics platform is extremely helpful (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

*49.* When purchasing a BMW, I will use the BMWfanatics forum to collect information (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

*Evaluation of alternatives*

50. BMWfanatics members provide objective information when comparing BMW to other brands (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

51. I will use the BMWfanatics forum to help me decide which BMW to buy (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

*Purchase decision*

52. BMWfanatics members readily share their experiences (regarding service quality, preferred suppliers, etc.) when purchasing products (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

53. I will use the BMWfanatics forum to help me decide which dealership to purchase the BMW I want (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

*Post-purchase behaviour*

54. BMWfanatics members are able to offer me support and comfort if I am unhappy with the BMW I have purchased (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

55. Sharing in the experiences that members have with their BMW products helps reaffirm my purchase of a BMW (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

56. Speaking to BMWfanatics members about my BMW makes me feel good about my purchase. (7 point Likert scale)

| | | | | | | |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Disagree | Strongly disagree |

# APPENDIX B

## Consistency matrix

The aim of the consistency matrix in context of this study will be to align the various factors that have been identified in the literature review, the references used to investigate each factor and the hypothesis that has resulted from that investigation. Table 13 below outlines the consistency matrix adapted for this study.

**Table 13: Consistency matrix**

| **The research problem is to identify and evaluate how a consumer's purchase decision process is influenced as a result of them participating in an online brand community forum.** | | | | | |
|---|---|---|---|---|---|
| **Sub-problem** | **Literature Review** | **Propositions** | **Source of data** | **Type of data** | **Analysis** |
| The first sub-problem is to identify the factors that influence consumers' choice to participate in an online brand community. | Fournier and Lee (2009)<br>Muniz and O'Guinn (2001)<br>Schouten and McAlexander (1995)<br>Jang et al. (2008)<br>Algesheimer et al. (2005)<br>Kim et al. (2008)<br>Shang et al. (2006) | **1:** Brand community identification influences members' participation in the BMWfanatics online brand community.<br>**2:** Brand community commitment influences members' participation in the BMWfanatics online brand community.<br>**3:** Brand loyalty influences members' participation in the BMWfanatics online brand community.<br>**4:** Brand involvement influences members' participation in the BMWfanatics online brand community. | Questionnaire | Ordinal | Cronbach's Alpha, confirmatory factor analysis, exploratory factor analysis and regression analysis. |

| **The research problem is to identify and evaluate how a consumer's purchase decision process is influenced as a result of them participating in an online brand community forum.** | | | | | |
|---|---|---|---|---|---|
| **Sub-problem** | **Literature Review** | **Propositions** | **Source of data** | **Type of data** | **Analysis** |
| The second sub-problem is to determine how participation in the online forum influences a consumer's purchase decision process. | Cunningham et al. (2005)<br>Olshavsky and Granbois (1979)<br>Shapiro et al. (1992)<br>Kotler et al. (2014)<br>Li and Darban (2012)<br>Frambach et al. (2007)<br>Jang et al. (2008)<br>Huneke et al. (2004)<br>Xia and Sudharshan (2002)<br>George and Edward (2009) | **5a:** Participation in the BMWfanatics online brand community influences the "problem recognition" step in its members' purchase decision process.<br>**5b:** Participation in the BMWfanatics online brand community influences the "information search" step in its members' purchase decision process.<br>**5c:** Participation in the BMWfanatics online brand community influences the "evaluation of alternatives" step in its members' purchase decision process.<br>**5d:** How does online brand community participation affect the purchase decision in the purchase decision process?<br>**5e:** Participation in the BMWfanatics online brand community influences the "post purchase behaviour" step in its members' purchase decision process. | Questionnaire | Ordinal | Cronbach's Alpha, confirmatory factor analysis, exploratory factor analysis and regression analysis. |