Research Paper

A quantitative analysis on the effect of housing prices in South Africa due to the expansion of the black middle class between the period of 2004-2015.

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29 October 2018

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Word count: 12,536

Declaration

I hereby declare that the Research Report submitted for the BCom Honours in Business Management degree to The Independent Institute of Education is my own work and has not previously been submitted to another University or Higher Education Institution for degree purposes.

Signature…………………………………..Date………………………………………

ABSTRACT

Since the end of apartheid in 1994, wealth distribution has become a major topic in South Africa as the previously disadvantaged majority of the population are now able to move up in their social classes. As more and more of the previously disadvantaged population enter the middle class, a greater number of people are now able to afford housing in middle class markets and so in theory, demand for housing should increase due to new entries in the market.

Studying the growth of the black middle class in South Africa has become a subject of major interest to many scholars, economists and investors globally as they see the potential impact that an expanding black middle class has on the South African economy.

Literature identifies several key factors that looks at national housing prices, as well as grouping the black middle class. This research paper investigates who is considered to be in the black middle class, based on income and what effect they have on housing prices. The research paper incorporates quantitative analysis on the relationship between the black middle class and housing prices in South Africa, in order to identify the level of significances between the two variables.

Based on 2 correlation coefficient tests, the outcomes are contradictive. The first test results using nominal figures showed a strong relationship between the independent and dependant variable, however when adjusting housing prices for real growth numbers, the second test results show an insignificant relationship between the two variables.

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1 INTRODUCTION

1.1 Contextualisation

It has been 24 years since the end of apartheid and although the majority of the country is still struggling financially due to the lack of employment opportunities, the fall of apartheid has however given rise to the new and highly unknown black middle class (Mngaza, 2016). With the social imbalances that were created during the apartheid era still evident, the transformation models set out by the post-apartheid government have created the opportunity for the black middle class to grow (Mngaza, 2016). With the black middle class doubling every 5 years, there is a huge rise in consumer spending in South Africa and the black middle class is the driving force of this increase (Africa Check, 2018). Expenditure in the housing market has also seen a rise since the end of the apartheid era and there is considerable evidence suggesting that this trend is related to an increase in the population that now have access to finance (Steyn, 2013).

This research focuses particularly on the spending of the black middle class in the housing market and sets out to find what impact this has on property prices. For the purpose of this paper, grouping the black middle class will be based on the study conducted by the UCT Unilever Institute of Strategic Marketing (2013) as cited by Steyn (2013), where they group middle class as households that earn between R16 000 and R50 000 per year. The UCT Unilever Institute of Strategic Marketing research paper was published in 2013, however data for 2014 and 2015 was added at a later stage.

Golding (2015) argues that regardless of economic variables such as interest rates, exchange rate, and inflation; population growth remains the biggest driver of housing demand. In Golding's (2015) analysis, population growth in South African cities is largely driven by urban migration thereby limiting the supply of housing due to excess demand. Golding (2015) also noted that growing affluence plays a huge part in housing demand. According to Nhlahla (2014) the demand for housing in South Africa has been showing persistent growth and has created opportunities for the private sector to meet these demands. With demand on the rise and the constant increase in the black middle class, the research conducted strives to find a correlation between the two.

The researcher will follow a basic model of Adam Smith’s supply and demand theory (1776) as cited by Agnar (2014), with an understanding that there is an increase in demand being created by the black middle class and thus housing prices will increase due to this. The researcher will not take into account any other variables that could affect house prices except for inflation. Inflation will be used in a separate test in order to compare real and nominal housing values.

1.2 Rationale

Despite a lot of literature on the current increase of the black middle class in South Africa and their expenditure trends, there are limited empirical studies about their spending and the effects in the housing market. Mngaza (2016) did a study on understanding the increase in demand for accommodation in the Johannesburg Northern suburbs from the black middle class. The study itself focused only on a specific area within the country and the sample size used to report the findings with respect to this research being conducted is limited and cannot be used to generalise the movement of housing prices based on the black middle class’s demand in the whole country.

There has also been additional research conducted with regards to the housing market in South Africa and what are the drivers of the price such as studies done by Chipswa (2016) who conducted a quantitative analysis looking at factors that influences housing demand in South Africa and Simo-Kengne, Bittencourt and Gupta (2012) whose study covered housing prices and economic growth in South Africa. However, none of these studies attempted to empirically estimate the degree as to how much the black middle class’s expansion has impacted housing prices. These studies focused mainly on interest rates and access to capital.

This research study is therefore significant as it seeks to determine a new variable that impacts housing prices based on an increase of new demand from the black middle class. This study was also undertaken because the housing market in South Africa is practically and fundamentally different from that of a developed country and the history of South Africa has created new wealth that is not based on generational factors. These sorts of wealth opportunities have changed the way the economy functions in South Africa (Makhunga,

2008) and this study furthermore sets out to match these new trends with housing prices for the future.

This research study therefore aims to bridge the gap in the current literature on housing markets in South Africa and prove that the expanding black middle class is an important variable to consider when understanding prices in the housing market based on supply and demand. The key beneficiaries of this research will be financial institutions such as banks, The National Housing Corporation, investment companies and the private sector who want to invest in personal properties, property development and construction. Investors who seek growth opportunities with their properties will be able to benefit the most as they will see trends that will affect property prices and use these to expand on their knowledge in the market.

1.3 Problem Statement

This quantitative study is designed in order to determine if the expanding black middle class, which according to a study done by The UCT Unilever Institute of Strategic Marketing (2013) "has grown from 1.7 to 5.61 million in the period between 2004-2015" has an impact on housing market prices in South Africa.

1.4 Research Goal and Aim

1.4.1 Research Purpose Statement

The purpose of this study is to give a clear definitive answer as to if there is a correlation between the growth of the black middle class and the movement of housing prices between the period of 2004-2015.

1.4.2 Research Hypothesis (H0)

An increase in the black middle class will lead to an increase of housing prices in South Africa.

1.4.3 Null Hypothesis (H1)

The increase of the black middle class has no effect on housing prices in South Africa

1.5 Research Question

Does the increasing size of the black middle-class impact housing prices?

1.5.1 Sub Question

Who are the black middle class?

How much has the black middle class grown?

2 THEORETICAL FRAMEWORK

In this section the theoretical basis of the middle class and housing prices is discussed. This section specifically reviews the theories that are related to the housing market. In this case the supply and demand theory enhanced by Adam Smith in 1776 as cited by Agnar (2014) is the basis of the research being conducted. It will also discuss theories related to the increases in social classes, here being the middle class and in particular the black middle class. This research sets out to define the black middle class through valid determinants and use these within the framework of the supply and demand theory on the impact of housing prices.

2.1 Supply and Demand

Haworth (2007) suggests that prices in housing markets are influenced by the economic laws of supply and demand. These are two basic laws of economics and have been defined as:

"Law of Demand: The negative relationship between price and quantity demanded: As price rises, quantity demanded decreases. As price falls, the quantity demanded increases" (Case and Fair, 2004: G-5).

“Law of Supply: The positive relationship between price and quantity of goods supplied. An increase in the market price will lead to an increase in quantity supplied, and a decrease in market price will lead to a decrease in quantity supplied” (Case and Fair, 2004: G-5).

Agnar (2014) states that, the law of supply and demand was first noted by John Locke, a philosopher from the 17th century, however he did not use the term supply and demand. Sir James Stuart who in 1767 cited by Agnar (2014) focused a lot on labourers in his economic theories is credited with using and inventing the term as he believed that when supply was greater than demand levels, then prices were lowered, which lowered profit and thus resulted in the inability to pay workers and further more created higher unemployment. Adam Smith in 1776 often referred to as ‘the father of economics’ was the next philosopher and the most notable to cement the theory of supply and demand as he described it as when supply meets demand, then an economy will be able to benefit everyone (Agnar, 2014).

Kirzner (2000) states that the theory of supply and demand is the first step to understanding how market prices are determined, and that Adam Smith’s theory is recognized globally amongst economists. Smith’s model as cited by Agnar (2014) relies on perfect competition, with a capitalist view existing of no interference from external sources, meaning that all parties with in a market are either buyers or sellers and the amount of demand and supply with no other variables, determines prices. Investec Wealth’s chief investment strategist, Prof Brian Kantor cited by Cairns (2017) supports Adam Smith’s theory, especially with reference to South Africa, as he states that government interference, such as transformation models, affects the economy negatively rather than encourages growth. Kantor as cited by Cairns (2017) believes that a simple model like the invisible hand, will work well within a South African context based on the current market.

However, Kirzner (2000) an Austrian economist, critiques Adam Smith’s theory of supply and demand and says that the theory is widely unrealistic due to the fact that it only works within an environment where competition is perfect. In another article written in the same year Kirzner (2000) states that Austrian economists don’t necessarily disagree with Smith’s theory, they simply point out that even with ‘perfect competition ‘in the market, they find that his theory is inconsistent in today’s economy.

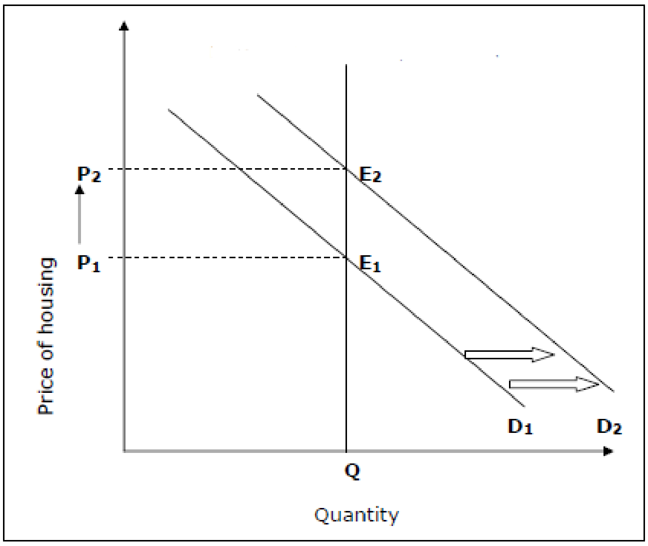
Kirzner (2000) elaborates that Austrian economist’s analysis of the perfect-competition assumption adequately shows that there cannot be two curves on the supply and demand graph. They believe that the supply and demand diagram is inconsistent with the operating conditions set out by Smith’s theory under perfect competition.

This research paper will follow the basis of the supply and demand theory with an understanding that there is an increase in demand being created by the black middle class and thus housing prices will increase due to this, without taking into account any other variables besides inflation that can have an impact on the demand side for middle class housing.

Below are basic supply and demand graphs representing housing prices that give an understanding from (McKenzie and Betts, 2006). In figure 1 which is the effect on demand increase on housing prices, we see as demand shifts from D1 to D2, price increases from P1 to P2 and thus cause a new equilibrium of E2. Note that these graphs do not take into account any other factors and view the quantity as a set number (McKenzie and Betts, 2006).

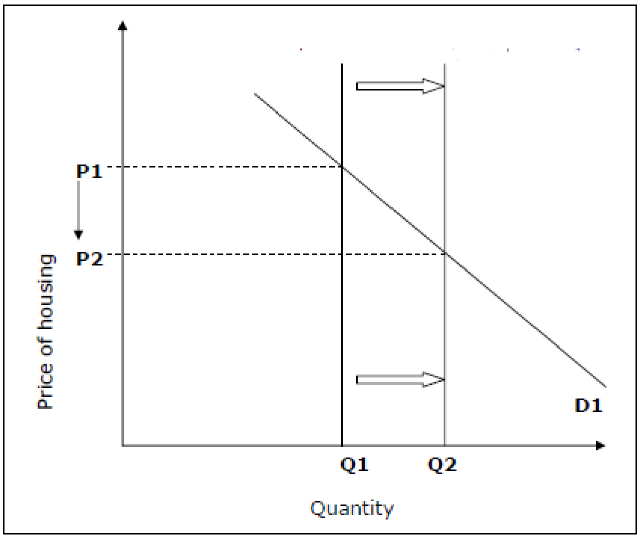
In figure 2, which is the effect on supply increase on housing prices, we see that as supply increases from Q1 to Q2, there is a drop in price from P1 to P2. This explains the theory that when there is too much supply, then the price of houses will decrease due to excess supply over demand. Note that this graph does not take into account other factors and only concentrates on the number of buyers and the number of houses in a market.

Figure 1: The effect of demand increase on housing prices



Source: McKenzie and Betts (2006:111)

Figure 2: Effect of supply increase in housing prices



Source: McKenzie and Betts (2006:111)

In order for this research paper to answer the hypothesis, the theory of supply and demand is the best theory to use as it only has two variables on an x and y axis that correlate with each other and react to each other's movements (McKenzie and Betts, 2006). With the hypothesis of this paper being that an increase in the black middle class will lead to an increase of housing prices in South Africa, having a clear understanding of what defines the black middle class for this research paper and taking into account the law of supply and demand, will give a clear indication and an answer to the hypothesis set out in this research.

3 REVIEW OF PAST LITERATURE

3.1 Introduction

Although there are many factors that are believed to affect housing prices, there is a constraint on the amount of literature that relates to the black middle class having an effect on housing prices. Simo-Kengne, Bittencourt and Gupta (2018) found that there is a large body of useful literature on housing, particularly in developed countries, however they offer mixed conclusions of housing prices and the way in which economic forces impact them. There is also a lack of literature that has a clear consensus on defining the black middle class. Based on Adam Smith's law of supply and demand (1776) as cited by Agnar (2014), with the increase of the black middle class and the assumption that they demand middle class classified housing, then demand for housing should increase market prices.

Rawson (2018) suggests that the housing market is a great alternative way to invest your own capital, however investors need to have a clear understanding as to which direction the market is heading. This paper sets out to determine if the factor of an increased black middle class, is adding to property values. There are many factors that can influence property prices, thus there is always a sense of uncertainty as to the unknown. Subbramoney (2018) of FNB private bank lending, states that there is no concrete determinant of what drives property values, however studies have shown that certain factors have more of an impact and there is more of a chance to predict the direction of the market. However, "The answer is more complex than it would seem at face value," says Paul Stevens, CEO of Just Property. With there being an increase in the black middle class which according to a study done by The UCT Unilever Institute of Strategic Marketing "has grown from 1.7 to 6 million in the previous five years", this research paper wants to find if this astronomical increase has affected or will affect housing prices in the future and to give people a better understanding of the supply and demand factors in the market.

The researcher identifies 3 themes associated with the topic in order to engage in depth and gather a better understanding of the phenomena. Firstly, the literature review will cover studies done on housing prices and the factors that need to be taken into account when conducting this research. Secondly, the research paper looks at housing market studies related to economist Adam Smith's supply and demand theory from 1776 as cited by (Agnar, 2014). Lastly, the research paper will set out to define the middle class in South Africa, and more so the black middle class based on past literature and studies.

3.2 Determinants of housing prices with relation to demand

The housing market in South Africa has constantly been a steady place to invest capital over the past couple decades, but future predictions based on past literature look glumly as many factors such as reserve bank policies and global forces are not at the stages where clear price growth within the housing market can be predicted (Golding, 2015). A report by the Lightstone Property Group (2018) titled, Residential Property Indices in South Africa uses the country's inflation index vs housing price inflation index in order to gain a clearer understanding as to the real growth within the housing market and to determine if it is a good place to invest capital. FNB property strategist John Loos cited by Brown (2018) said that 'the level of house price inflation was likely to increase to about 5.9% in 2018' up from 5.3% in 2015 stated by the Pam Golding Residential Property Index (2015) cited by Smith (2015). This suggested by FNB property strategist John Loos cited by Brown (2018) is "on the back of improved sentiment and confidence in the country, up from real property price declines in 2017 and 2016". Loos (2018) cited by Brown (2018) notes that inflation was expected to be 4.9% for 2018 and thus there will be marginal real growth within in the property market. However, Paul-Roux De Kock, who is the analytics director at Lightstone Property states that although more and more people are moving from informal housing to formal housing thus creating demand, factors such as a tough economic environment and the high levels of year on year inflation has slashed all hopes currently of a property price boom in South Africa (Brown, 2018). Golding (2015) believes that there are 3 fundamental drivers in order to achieve house price growth above general inflation. Golding (2015) suggests that a limited supply of housing, an increase in affluence and a growing population base are the 3 key factors to house price increase.

3.3 Supply and Demand

Haworth (2007) suggests that prices in housing markets are influenced by the economic laws of supply and demand. These are two basic laws of economics and have been defined as:

"Law of Demand: The negative relationship between price and quantity demanded: As price rises, quantity demanded decreases. As price falls, the quantity demanded increases" (Case and Fair 2004: G-5). "Law of Supply: The positive relationship between price and quantity of goods supplied. An increase in the market price will lead to an increase in quantity supplied, and a decrease in market price will lead to a decrease in quantity supplied" (Case and Fair 2004: G-5).

A paper conducted by Niu and Chow (2014) on Housing Prices in Urban China used the standard supply and demand theory of consumer demand and adjusted it slightly in order to explain demand and supply for housing. Niu and Chow (2014) studied the supply and demand effect on urban residential property in China by using supply and demand graphs together based on real income and relative price and state that speculation is the real cause for price fluctuations.

However, from a completely different view, a study done by van Dijk , Geltner , van de Minne (2018) used a slightly adjusted supply and demand model, based on reservation prices and they backed this up by arguing that the method was more accurate than using just demand from consumers in order to set prices in a housing market. Reservation price as described by, Tou Wang, R. Chatterjee, V. and Chatterjee, R. (2007, p.200), “is the maximum price a consumer is willing to pay for a good or service”. By using this variable in their real estate study, Van Dijk et al (2018) generated findings that argued another point being that supply and demand should be studied separately, as they believe that supply moves slower due to the loss of aversion and other issues.

Studies done by Jordaan (2013), Ndahiriwe (2011) and Hay (2009) all accommodate inflation and interest rates as factors influencing supply and demand within an economy. The South African Reserve Bank sets interest rates in order to control inflation (Fedderke, 2016) Although these studies relate more to consumer spending, they are vital to the housing market as interest rates set out by the South African Reserve Bank influence the price for people to borrow money from banks (Salmanpour & Bahloli, 2011). Inflation is caused by many factors that affect the supply and demand for products and services within an economy and a simple understanding is that inflation is the result of excess demand (Keitumetse, 2017).

3.4 Black Middle Class

Although there are government statistics compiled by STATS SA (2018) and other literature published by researchers about the black middle class, they all seem to fail in agreeing on one set of factors that define the black middle class. The UCT Unilever Institute of Strategic Marketing’s study (2013) as cited by Steyn (2013) called 4 Million and Rising, has found that South Africa’s black middle class has increased in size by over 2-fold within the period between 2004 and 2012, expanding from 1.7-million South Africans to an estimated 4.2-million. The study was conducted with 6000 participants who earned between R16 000 and R50 000 per month before tax. The study has found that the annual expenditure of the country's black middle class began pulling ahead of their white middle class counterparts in 2008 and has since skyrocketed to over R400-billion per annum (Atid). The UCT Unilever Institute of Strategic Marketing's study (2013) as cited by Steyn (2013) conducted their research and defined their black middle class by adults that have a household income of between R16 000 and R50 000 a month as well as, own a car, have a tertiary qualification, own a business or work in a white-collar or professional industry.

Other studies have been conducted that use different factors when measuring the middle class. One study done by the World Values Survey (2013) cited by Africa Check (2018) found that a total of 29.7% of South Africans and 24.4% of black South Africans identified themselves as belonging to the middle class in 2013. Of that middle-class group, 61.7% were black. The foundation of grouping the middle class was based purely on subjective responses by participants, who were asked the question of what class do they think they fit into (World Values Survey, 2013). With there being a lack of a consensual definition of middle class, Visagie (2013) believes that, "any definition of the middle class is subjective and value-laden". However, Visagie (2013) goes on to say that the literal middle class cannot be subjective and should be based on household income in order for a global understanding.

Whilst a study by Credit Suisse (2017) as cited by Africa check (2018) "determines the global middle-class to be that group of people whose net worth is between US$10,000-US$100,000 (approximately R119 500-R1 195 000 currently)" and it estimated the size of South Africa's middle-class at 28.5% of the population in 2017. A study done by the African Development Bank (2011) as cited by Africa check (2018) also determines a global middle class, however the study was based off daily consumption of US$2-US$20 (approximately R24-R240) as opposed to using net worth. Based on the research methods used, the study found the middle class in South Africa to be sitting at 19.8% of the population. However, both these studies can be questionable in terms of relating it to South Africa, a developing country, as Bird (2015) states that there is no single definition and measurements that can be used to determine the different wealth levels around the world or defining a consensual middle class.

A paper conducted by Mngaza (2016) explores the reasons why there is an increase in demand for accommodation in the Johannesburg northern suburbs from the black middle class. He goes on to analyse what factors have led to this increase in demand from the black middle class. Mngaza (2016) points to sub questions such as, "What are the theoretical explanations to the movement of the black middle class?" And "Who are the black middle class?". These two sub questions set out by Mngaza (2016) are vital to this research paper being conducted as the past literature gives a better insight to defining the black middle class for this study. Unilever Institute director John Simpson said in a statement cited by Business Tech (2013), "Despite setbacks caused by the recent recession, South Africa's black middle class continues to rapidly expand and is more influential and powerful than ever before."

The literature available on the different determinants that are used by researchers to define the black middle class is vast and mostly subjective to each researcher. However, this paper believes that The UCT Unilever Institute of Strategic Marketing's study (2013) as cited by Steyn (2013) will best fit the research methods in order to unpack the hypothesis.

3.5 Conclusion

The aim of the past literature review was to identify all sources with regards to the topic of the research paper. In conducting the review, the researcher was able to find multiple reports, studies and articles published by both the private and government sector within the real estate industry as well as national population statistics. With both government and private data available, the researcher will be able to identify sufficient findings from previously published documents in order to conduct the present study. In looking at past literature with regards to housing prices, supply and demand theories and the black middle class, there are a few important points that are worth highlighting.

Firstly, research pertaining to defining the black middle class, is subjective and determinants are based on the ideas of the researchers conducting their studies. O'neil (2011) argues that there can be no global consensual definition of the black middle class, due to individual factors affecting each nation's economy.

Secondly with regards to Adam Smith's supply and demand theory from 1776 as cited by Agnar (2014), it can be adjusted in order to work with a specific set of determinants with regards to the housing market, although some critiques believe his theory is outdated (Kirzner, 2014). However, this theory is best suited for this study based on it only taking into account two variables.

Lastly when looking at housing price inflation, Du Toit (2014) states that nominal prices are not accurate enough and that real prices need to be used when determining the change in property value. Several real estate studies used these methods and factors in order to create a clear understanding of housing prices.

All literature that was reviewed gave substantial knowledge with regards to the research problem of this paper and has created a clear understanding of the methods the researcher will use to conduct in order to generate reliable findings.

4 METHODOLOGY

4.1 Research Design

4.1.1 Research Paradigm / Tradition or Worldview

The research being conducted will follow a positivist paradigm. According to Shwandt (2001), “A paradigm is a shared world view that represents the beliefs and values in a discipline and that guides how problems are solved”. “Positivism in general refers to philosophical positions that emphasize empirical data and scientific methods. The researcher should be more concerned with general rules than with explaining the particular” (Jackson, 2013). The research being conducted in this paper will be dealing with stats and analytical data in order to answer the questions. A positivist approach to this paper will allow for the discovery of causal relationships and will then gather data in order to predict and control (Kawulich and Chilisa, n.d.). This paper is being conducted as to know the relationship of 2 variables and their impact for the future on the certain topic. The researcher wants to establish a relationship between the black middle class and housing prices with the study that will be conducted. The researcher sets out to find a correlation between the black middle class and housing prices and seeks to find a relationship between housing demand by the black middle class and housing prices in South Africa.

According to Du Plooy-Cilliers, F, Davis, C & Bezuidenhout, R (2014), epistemology is referred to as the study of knowledge that deals with the nature of knowledge and the different ways of knowing. As suggested by Du Plooy et al (2014) all research contributes to a body of knowledge. The research conducted in this paper will fall along the lines of factual, hard and secure evidence. The researcher seeks to create a greater understanding of phenomena and to contribute to the literature already available.

Ontology as Smith (2003) explains, is the study of "being, existence or reality". Ontology deals with questioning what is real and how do we know that it is real (Du Plooy et al, 2014). The study has been set out to identify a clear research topic and a hypothesis. The research will be done quantitively and therefore results will be numerical.

Axiology is explained by Biddle and Schafft (2014) as being, "the study of values and value judgement". When conducting research, it is important to be neutral and not contain a bias. The researcher will remain independent from the data and maintain an objective stance on the research process, by not allowing personal cultural differences to interfere with data collection and analysis.

4.1.2 Conceptual Approach and Design

4.1.2.1 Quantitative

According to Marczyk, DeMatteo and Festinger (2005), quantitative research uses statistical analysis to obtain findings on the relationship between dependent and independent variables. Quantitative research is used in almost every sphere of life, such as in clinical, biological, epidemiological, sociological and business research (Adams, 2007). This research document will follow a quantitative approach as the research questions and hypothesis will need to have numerical evidence in order to verify the findings. Barnham (2015) states that quantitative research "is seen as offering hard, factual data". This research paper intends to provide facts and data between the correlation of the black middle class and housing prices. This study will be able to produce more accurate results and findings from a quantitative perspective rather that a qualitative one because the study consists of desktop research only, and because from an audience point of view, numerical findings will be much more credible.

4.1.2.2 Line of Reasoning

This study uses a quantitative strategy with a deductive approach Bryman & Bell (2007) cited by Chipswa (2016). This is due to the fact that the research is based on an economic theory and looks to explain the empirical relationship between the increasing black middle class and housing prices. According to The California State University (n/d), deductive reasoning is, “a basic form of valid reasoning as it starts out with a general statement, or hypothesis, and examines the possibilities to reach a specific, logical conclusion”. Therefore, quantitative information will be used in order to verify the hypothesis of this paper and so the study will be based on a deductive research methodology.

4.1.2.3 Type of Study

This study will follow a descriptive research design as the research is trying to describe the correlation between the black middle class and housing prices. According to The Centre for Innovation in Research and Teaching (n/d) descriptive research is “research used to describe a situation, subject, behaviour, or phenomenon”. It is used to answer questions of who, what, when, where, and how something is associated with a particular research question or problem”. Descriptive studies try to gather quantifiable information that can be used to analyse a target audience or a particular subject statistically (Shuttleworth, 2008). Description research is used to observe and describe a research subject or problem without influencing or manipulating the variables in any way (Shuttleworth, 2008).

4.1.2.4 Type of Approach

The study will be a desktop study as the researcher will analyse existing data in order to try and answer the hypothesis (Boslaugh,2007). A desktop study is conducted when there is no physical population or when the researcher wants to make use of already existing information (Johnston, 2014). Based on data collected online, the research will empirically test the information against the hypothesis. A desktop research study will be the most beneficial approach for this research as using secondary data will allow the researcher to gain maximum amount of knowledge within the time constraints.

4.1.2.5 Time Dimension

The researcher will follow a cross sectional approach to gathering data as the study will not exceed one year (Setia, 2016). However, the study will take into account data that has been collected over the past years in order to arrive at a conclusion where the findings are verifiable. According to Setia (2016), “In a cross-sectional study, the investigator measures the outcome and the exposures in the study participants at the same time. Unlike in case–control studies (participants selected based on the outcome status) or cohort studies (participants selected based on the exposure status), the participants in a cross-sectional study are just selected based on the inclusion and exclusion criteria set for the study (Setia, 2016).

5 RESEARCH PLAN

5.1 Population

5.1.1 Unit of Analysis

Statistical

5.1.2 Target Population

As this is a desktop study that made use of statistical data through online resources, there was no physical population (Johnston, 2014).

5.1.3 Accessible Population

The accessible population was the data available online with regards to the housing market and the black middle class in South Africa

5.1.4 Population Parameters

Middle class black South Africans who fell within the bracket set out by The UCT Unilever Institute of Strategic Marketing's' study (2013) as cited by Steyn (2013). The income bracket that was set out to group middle class is R16 000 – R50 000 per household income.

5.2 Sampling

Because there was no physical population that this research looked at, there was no sample size.

5.3 Data Collection Methods

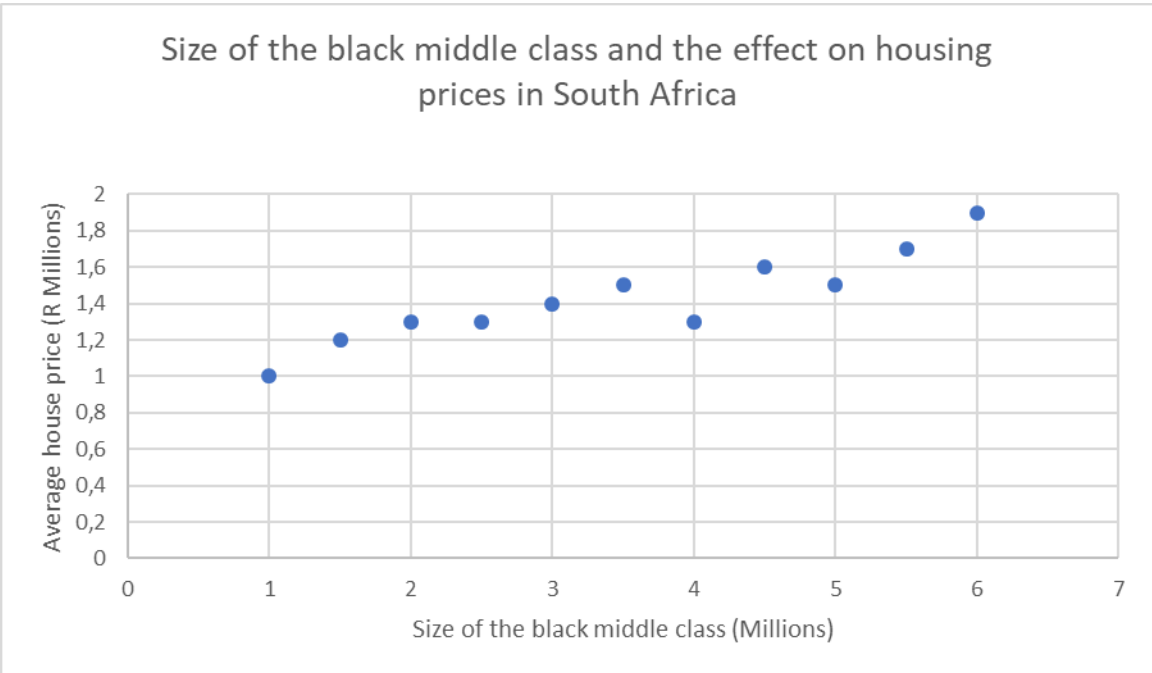
5.3.1 What actual data collection tools will be utilised?

The study makes use of government data, private company research as well as educational studies done that are available online, such as the UCT Unilever Institute of Strategic Marketing's study on the size of the black middle class in South Africa (2013) as cited by Steyn (2013), Inflation, EU, ABSA banks Housing index, as well as documents on STATS SA and other private real estate companies that release public data on the housing market. There have been many studies and reports released by the private real estate industry and most of these studies have been partly funded by government in order to gather research and use the findings as official government data (Golding, 2015). Beaudry and Allaoui (2012) state that private sector studies are far more accurate and efficiently conducted as companies are liable for the cost of the research conducted. They therefore have strict time limits and goals that are set in order to gather findings. On many occasions private real estate companies use data provided by the Deeds office and then conduct further research in order to gain a better understanding of the data and to verify it for the private industries purpose (Golding, 2015).

5.4 Data Analysis Methods

The researcher uses a Pearson R technique also known as a Pearson correlation coefficient in order to analyse the data that has been collected for the study. Hall (2015) explains that a Pearson R is a data analysis method that measures direction and strength of a linear relationship between two variables. A Pearson R is a technique used for understanding the relationship between two quantitative variables that are continuous (Sari et al, 2017). As this research paper looks at the relationship between the increase in the black middle class and housing prices, the Pearson R is the most efficient and effective method to use in order to understand the correlation between the two variables. Goodwin and Leech (2006) state that the advantages of using the Pearson R include being able to show the strength of a relationship between two variables and to gain quantitative data which can be easily analysed. There are also disadvantages of using this method, such as the fact that you cannot show cause and effect as well as not being able to control a third variable that might affect the correlation (Goodwin and Leech, 2006). The benefits far outweigh the disadvantages for using a Pearson R for this research and so this method has been utilised in order to analyse data collected for this study.

The best way to represent the data that has been collected is to display it using a scatter plot diagram (Moore, Notz & Flinger, 2013). This will allow for the researcher to determine if there is a positive or negative correlation between the two variables of the study. When displaying the two variables on a scatter plot, the black middle-class will be on the X-axis and housing prices will be on the Y-axis. The title of the graph is “Size of the black middle class and the effect on housing prices in South Africa”. The hypothesis of this study is that there will be a positive relation between the black middle class and housing prices, however, the results of the research will determine the correlation. Below is an illustration of this study’s hypothesis and the predicted results.



6 FINDINGS AND INTERPRETATION OF RESULTS

6.1 Findings

6.1.1 House Prices

Housing data in South Africa has always been hard to measure as there is no publicly centralised system that captures and evaluates house prices (McGaffin & Kirova, 2016), unlike in other countries such as the USA who have a federal system that records housing data (Federal Housing Finance Agency, n.d). According to Els & Von Fintel (2008) South Africa relies mainly on private banks and other data agencies to compile data, however all of these institutions display contrasting results as they use their own set of criteria to collect data. For example, of the different results from the different institutions, from the period of 2007-2008; Standard Bank's numbers show a 1.8% decline in house prices; Absa indicates an average house price growth of 1.7%; FNB states an average house price growth of 2.3% and Ooba shows that the average house price has fallen by 5.5% for the time period (Business Tech, 2008).

This study makes use of ABSA Bank's Housing index as the institution has one of the oldest data bases on housing prices in South Africa (ABSA Bank, 2016). Jacques du Toit, a Senior Economist at ABSA Bank (2016) states that ABSA Bank's research is used by multiple financial institutions and real estate companies such as Trading Economics and Private Property. ABSA Bank's housing index is used in this study as they have grouped 3 different house sizes, that would relate directly with the middle class in South Africa, who are earning between R16 000 and R50 000 per month. The 3 categories defining house size are as follows; Small homes (80m²-140m²); Medium-sized homes (141m²-220 m²) and Large homes (221m²-400m²) (ABSA Bank, n.d.). ABSA Bank have compiled their data in nominal terms and this study used this research to generate findings by comparing nominal and real house price values.

This study used reference to The UCT Unilever Institute of Strategic Marketing's study (2013) as cited by Steyn (2013) that based the middle class on salary earned before tax, that being R16 000 – R50 000 per month. With an average nominal home valued of R992 058 for the period from 2004 – 2015 and on a standard 20-year bond at prime interest rate of 10%, based on First National Bank's lending calculator (FNB,n.d.) you would need a monthly salary before tax of R32 112 and regards to Property 24's affordability calculator, you would need a salary of R32 167 per month before tax (Property 24, n.d.).

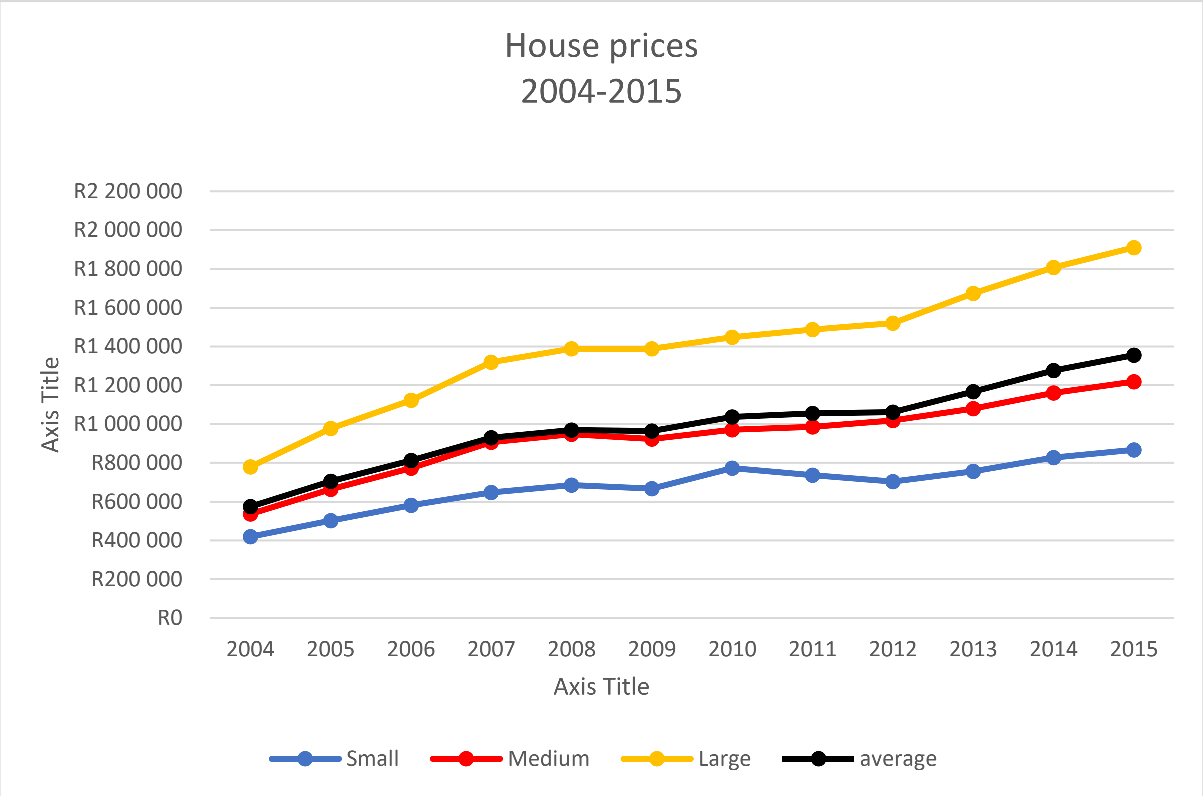


Figure 1: House prices in South Africa, Source: ABSA Bank housing index

This graph is referenced to ABSA Bank's Housing Index as it shows the 3 different home sizes at nominal price over the period between 2004-2015. The blue line represents small-sized homes ($80m^2$-$140m^2$), the red line medium-sized homes ($141m^2$-220 m^2) and the yellow line represents large homes ($221m^2$-$400m^2$) (ABSA Bank, n.d.). Included as the black dotted line is the average price of the 3 different sized homes over the time period. The graph visibly reflects an upwards trend of nominal price value throughout the time period and at face value indicates that there is a steady constant increase in house prices from 2004-2015. All 3 different house sizes show an upwards trend in price over the period. All homes sizes show a decrease between 2008-2009 with only small homes showing a decrease in price later on between 2010-2012. Although there was a slow-down in price increase for medium and large homes, they still managed to show nominal growth over the same period between 2010-2012. Verick & Islam (2010) state that the decrease from 2008-2009 is due to the United States housing crisis which saw an impact on economic and housing markets all around the world.

6.1.2 Inflation and Interest Rates

With regards to inflation, this study unpacked the effect that inflation has on nominal house prices, in order to get real house price values. According to Coopersmith (2001) inflation is the long term rise in the prices of goods and services caused by the devaluation of a country's currency. Nominal house price is the numerical value of a home at a specific point in time, whereas real price is the value of the home after the price has been adjusted for inflation (Fin24, 2016). If a home costs R900 000 in 2015, then the nominal value of the home will be R900 000. However, to get a better understanding of the true value of the home, inflation will need to be incorporated in the price and so if inflation rose by 5% in 2015, the real value of the home will be R900 000 - (R900 000 x 5%) = R855 000. Real value gives a clearer picture of consumer demand and supply for homes as we are able to see real patterns in the markets and not just numerical upward trends based on nominal home values (McGaffin & Kirova, 2016).

There are many variables that have a direct and indirect impact on inflation in South Africa. However, the 2 main factors that contribute the most and have the biggest impact is the price of oil and exchange rates (Berganza, Del Rio & Borrallo, n,d.). Hay, (2009) states that most variables have an impact on each other as well and the price fluctuates constantly based on internal and external contributing factors. These 2 factors influences consumer expenditure, which is linked to inflation (Atid).

South Africa, being a developing country that relies heavily on the import of goods to run the economy is extremely vulnerable to high inflation as external factors have nearly full control of the currency value of the South African Rand (Keitumetse, 2017). It is up to the South African Reserve Bank to implement monetary policies in order to control inflation (Atid). The Reserve Bank does this by changing the borrowing rate of money (Atid). In the case of inflation being too high for the economy, the Reserve Bank will tend to increase interest rates in order to slow down the amount of expenditure that is creating an excess of demand over supply. In a balanced economy a Reserve Bank looks to keep inflation at around 2%-3% (Coopersmith, 2011). Jordaan (2013) states that as South Africa is considered an emerging economy, inflation is harder to control due to the lack of internal control over the local currency. When demand is greater than supply, the price of goods tends to increase, thus leading to higher inflation (Jordaan, 2013).

When measuring inflation, the Consumer Price Index (CPI) is the primary tool used by the reserve bank in South Africa, (Fedderke, 2016). The CPI is a collection of staple goods and services that are purchased by households (Hay, 2009). The CPI is a statistical estimate that uses a sample of items that represent goods and services that are collected periodically (Atid). The CPI basket includes household goods that are measured over the years in terms of their price. This allows the reserve bank to monitor price changes that are based on a wide variety of factors that cause goods in the market to become more expensive or cheaper (Atid).

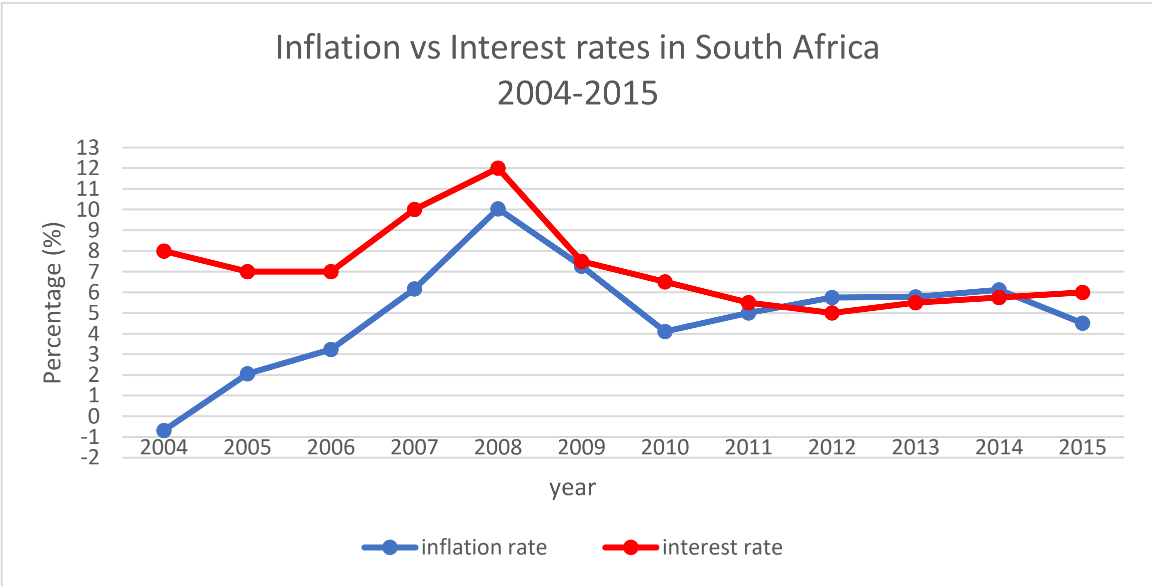


Figure 2: Inflation rate vs Interest rates in South Africa, Source: SARS, Inflation.eu

Inflation between the periods of 2004-2015 has fluctuated dramatically. This has been caused by many factors that influence the economy in South Africa. Factors such as oil prices, foreign trade and exchange rates play a huge role towards inflation (Berganza, Del Rio & Borrallo, n,d). The inflation between 2004 and 2015 changes quite a lot. The data shown has been taken from Inflation.eu and shows average inflation for each year, rather than year on year inflation. Average inflation is best suited for this study as data used for housing prices has been taken by yearly averages. From 2004 to 2008 there is a huge rise in inflation. The global housing crisis caused by the United States of America affected South Africa dramatically during those times and it is evident by the high inflation rate in 2008. Measures were taken by government in order to control inflation after 2008 and since 2010 there has been a steady yearly average of around 5,2% for the period of 2010-2015.

6.1.3 Black Middle Class

Before 1994 during apartheid, non-white citizens were oppressed and did not have the opportunity to acquire wealth the same way white citizens were allowed to (Makhunga, 2008). Due to apartheid, a huge gap in wealth and ownership of assets grew between whites and non-whites (Atid). When the apartheid ended in 1994, policies were drawn up and put into place to help distribute wealth between non-whites and whites (Krugell, 2015). Mariotti & Fourie (2014) state that there has been a lot of questions raised with regards to these policies within the ruling party as well as the opposition. Many believe that the polices in place are the wrong way to distribute wealth, whilst others suggest that the system in place is correct but needs to be accelerated (Atid).

The UCT Unilever Institute of Strategic Marketing's study (2013) as cited by Steyn (2013) were able to conduct research on the growth of the black middle class between 2004 and 2015, based on total income before tax of an individual of R16 000 – R50 000 per month. The study was published in 2013, however further data on the black middle class was added later on for the years 2014 and 2015. The study shows that the black middle-class has more than tripled in size over the period of 2004-2015, whilst the other 3 races have shown close to single digit stagnant growth and in the case of the white population there has been a huge decline (UCT Unilever Institute of Strategic Marketing's study, 2013). Since the turn of apartheid, wealth across all race groups has slowly spread out (Krugell, 2015). Black South Africans were previously confined to townships and informal settlements all across the country (Krugell, 2015). Slowly through changes to the constitution in South Africa, the country became a democratic nation, a change was able to take place and a new ruling government took charge (Mpeta, Fourie & Inwood, 2018). Through polices set out by the new government, they were able to put measures into place to try and distribute wealth equally between all race groups and especially the previously disadvantaged majority (Mpeta, Fourie & Inwood, 2018).

Kruger (2011) suggests that the black population has been most advantaged by the new Broad Based Black Economic Empowerment polices that look to increase the black representation in businesses throughout lower, middle and upper management. This has created a huge increase in black middle-class income earners between R16 000 - R50 000 per month. Within a short period of time, the black middle class has tripled in size and is the leading force in consumer spending in the country (UCT Unilever Institute of Strategic

Marketing's study, 2013). It is evident that the white, coloured and indian middle-class population showed close to stagnant growth over the period from 2004-2015, whereas growth from the black middle class has been constantly expanding (UCT Unilever Institute of Strategic Marketing's study, 2013). Studies conducted by Makhunga (2008) and Krugell (2011) both found that wealth trends within the white middle class are generational, whereas trends in the black middle class are people moving up from the lower class.

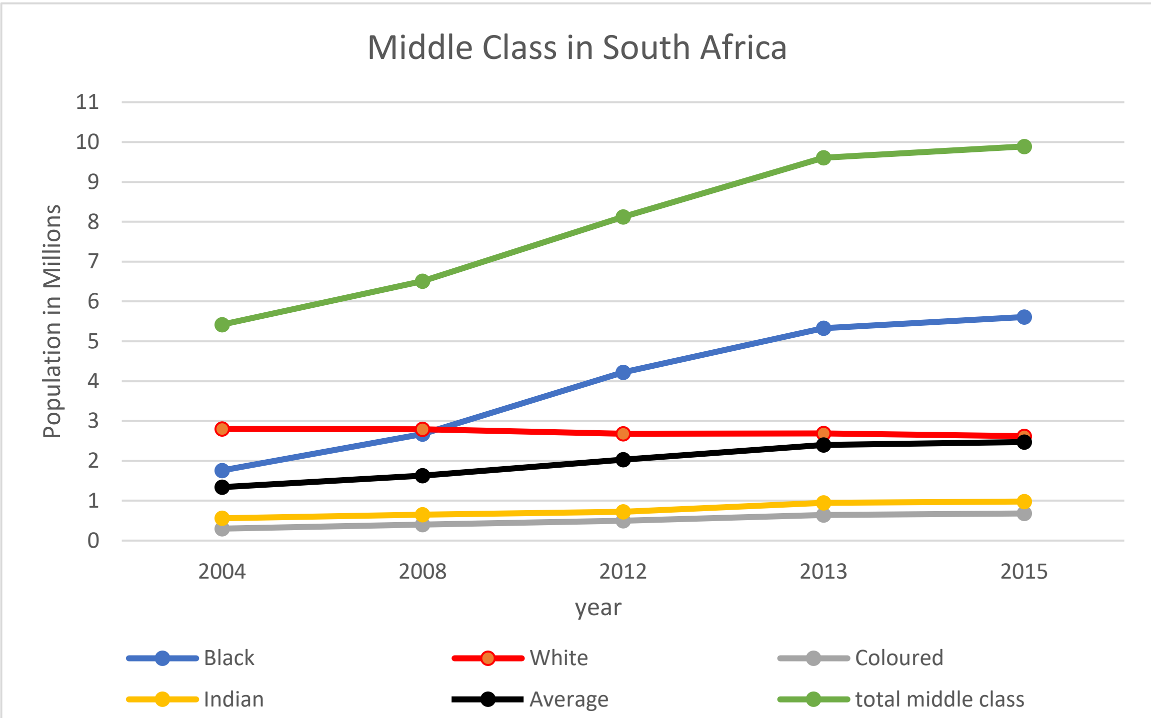


Figure 3: South African middle-class size, source: The UCT Unilever Institute of Marketing Study (2013)

Data compiled by the UCT Unilever Institute of Marketing about the black middle class in South Africa shows the growth that has taken place between 2004-2015. The study uses income before tax in order to group the middle class in South Africa. They have grouped the middle class as individuals that earn between R16 000 – R50 000 per month. From 2004-2008, the black middle class has grown from 1,7m to 2,67m people. This sort of growth is far above the other race groups in South Africa. During the same period, the white middle class decreased from 2,8m to 2,79m whilst there was slow growth from the indian and coloured middle classes. Over the 11-year period from 2004-2015, the black middle class has tripled in size whilst the white middle class has decreased by 6,4%. The indian and coloured middle classes both showered an overall increase throughout the period, however they averaged low single digit growth.

When looking at the total size of the middle class in South Africa over the same period, it is quite evident that the black middle class is solely driving growth. It is quite important to recognise that the black middle class is extremely important for the economy of South Africa as the white minority continues to decrease (The UCT Unilever Institute of Strategic Marketing's study, 2013). The new consumer spending patterns by the black middle class is slowly being adopted by businesses as the driver of economic growth (Burger, R, Louw, M, De Oliviera Pegado, B, B, I & Van Der Berg, S, 2014). Burger et al (2014), states that although there is still a huge gap between the size of the different middle classes within their own race population, the data in figure 3 shows that in 2012 the black middle class made up more that 50% of the whole middle class within the total population and in 2015 the black middle class is close to 60% of the total middle class. (please refer to annexure 1).

6.2 Results

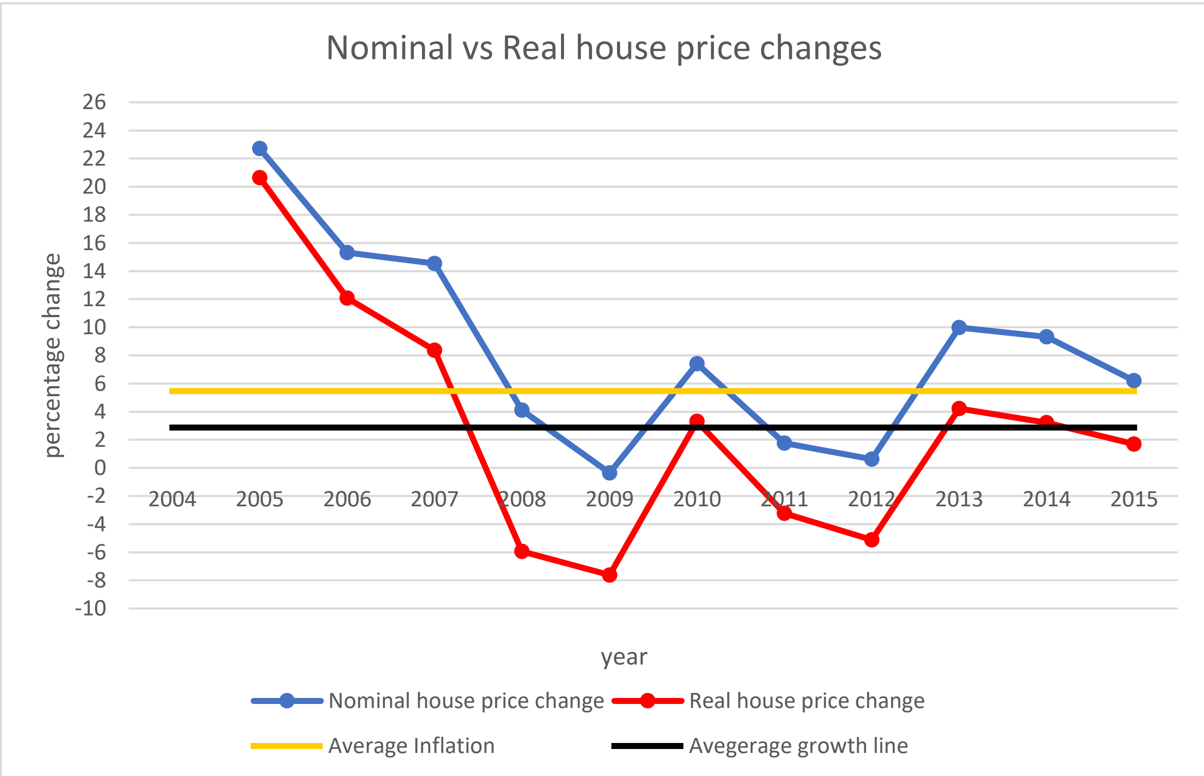


Figure 4: Nominal vs real house prices in South Africa

When looking at the data compiled by ABSA bank (n.d) that groups 3 different house sizes, them being, small homes ($80m^2$-$140m^2$); medium-sized homes ($141m^2$-$220\ m^2$) and large homes ($221m^2$-$400m^2$), this report interpreted the data and turned the house prices into year on year percentage growth. As you can see in 2005 there was a 22,71% change in home prices from 2004-2005 and from 2005-2006, that growth slowed to only 15,31% year on year change.

The yellow line shows average inflation which the yearly values from 2004-2015 was previously reflected in figure 2. When adjusting the nominal growth percentages for inflation, real growth figures become evident. The red line shows real percentage growth changes. Looking at the period around the United States of America housing crisis of 2008 and 2009, data recorded shows that nominal growth was 4,1% and -0,36% respectively. However, when you adjust for inflation, real growth shows a steep decline in housing prices, where in 2008 growth was at -5,94% and -7,62% in 2009.

The black dotted line represents the average inflation from between the period of 2004-2015. You can see that in 2015 nominal growth was at 6,2% while inflation was at 4,51%. When adjusting for real growth then the percentage change is only 1,69%. This is well below the average real growth line for the period of 2004-2015 which was 2,87%. This graph shows that although the housing market seems healthy in South Africa in terms of nominal, face value growth, when adjusting for real values, it is evident that the market although showing growth is not very efficient and returns on investments (ROI) are not that great. When you look at average real growth (black line) vs average inflation (yellow line) there is a sizeable gap of 2,61% on average as the average real growth is 2,87% and average inflation is 5,45% over the period form 2004-2015. Average growth over the period of 2004-2015 indicates that a person investing in real estate would have lost real value of the house price over the time period.

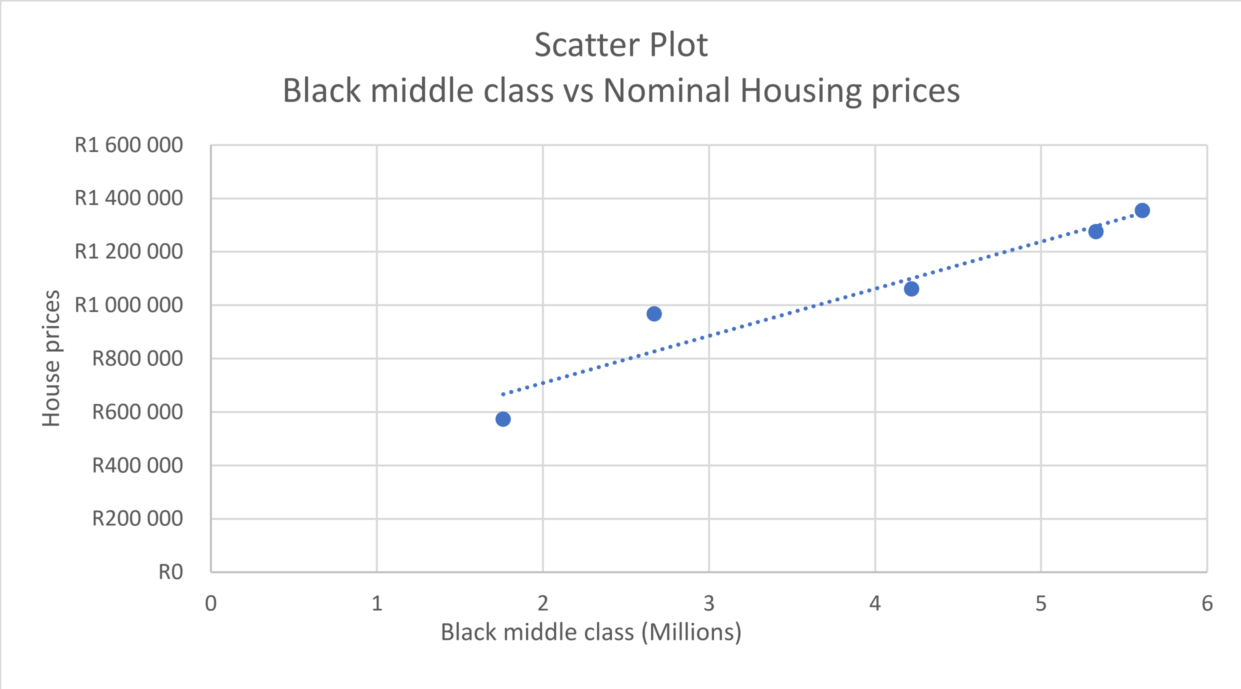


Figure 5: Scatter Plot: Black middle-class vs nominal housing prices

Conducting a Pearson correlation co-efficient on the relationship between house prices (millions) and the black middle-class size (millions) over the period form 2004-2015, a strong correlation is visually evident. As the black middle class increases, nominal housing prices increase over the same period. The data collected answers the research papers hypothesis by proving that there is a significant relationship between the black middle class and housing prices. The P value is equal to 0,010008588 (please refer to annexure 1). Since the P value is less than 5% ($P < 0,05$), the null hypothesis is rejected. This implies that there is sufficient evidence supporting that the independent variable (black middle class) in the analysis is jointly significant in explaining the dependent variable (average housing price). The R value of the correlation coefficient is 0,958711282 (please refer to annexure 1). The R value displays a strong positive correlation between the black middle class and the housing prices over the period of 2004-2015. This tells us that when the black middle class increases, housing prices tend to do the same. The trendline shows a positive movement and predicts that housing prices will continue to rise as the black middle class continues to grow.

The Scatter plot in figure 5 confirms the hypothesis of the research paper and without taking any other variables into consideration shows that the black middle class has a huge impact on the future of the housing market. In short, in order for house prices to increase, the black middle class will need to continue to grow and by the black middle class growing, demand for housing will increase. Based on supply and demand factors set out by Adam Smith as cited by Agnar (2014), when demand is greater than supply, prices will rise.

Although the data collected and represented in figure 5 confirms the hypothesis, the research is not yet backed up. In order to gain a true understanding of the housing market, real values need to be calculated. Figure 5 reflects nominal housing prices (R millions) vs the black middle-class population (millions). The scatter plot represents housing prices at face value and does not include inflation to arrive at real prices.

The researcher collected further data and used nominal house price growth as a percentage as well as the size of the black middle-class growth as a percentage. This allowed for the researcher to argue figure 5 in order to get real house price values over the period of 2004-2015.

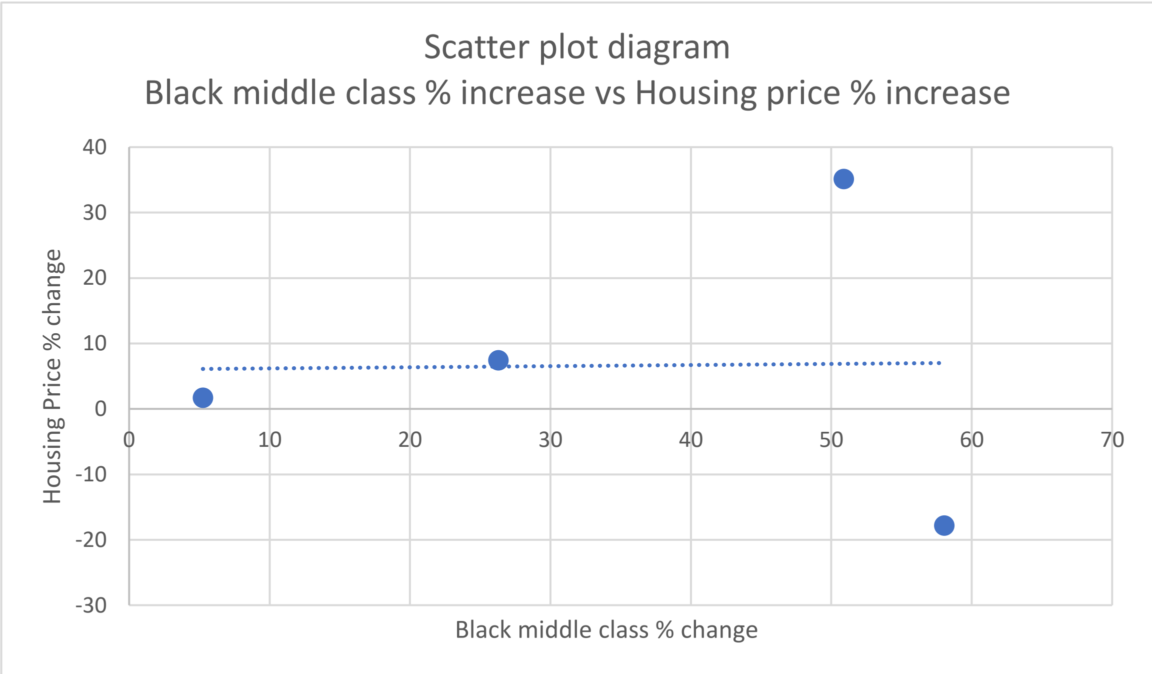


Figure 6: Scatter Plot: Black middle-class vs Real Housing Prices

The scatter plot in figure 6 also displays data of a Pearson correlation co-efficient. Sets of data ranging from 2004-2008, 2008-2012, 2012-2014 and 2014-2015 are represented (refer to annexure 2). Data shows the percentage change over a set of years correlating the black middle-class and housing prices. From 2004-2008 the black increased by 50,89% and over the same period real housing price increased by 35,15%. This set shows that there is a strong correlation for that period. However, when considering the different periods within 2005-2015, there is a much different reading of the data. For the next period between 2008-2012 the black middle class showed even greater growth than the previous 4-year period. The black middle class increased by 58,05%, whereas real housing prices dropped by 17,81% during that time. This shows a negative relationship between the 2 variables.

When looking at the 4 sets of data over the period of 2004-2015, the P value is equal to 0,981136713 (please refer to annexure 2). Since the P value is greater than 5%, we reject the hypothesis. This shows that there is sufficient evidence supporting that the independent variable (average black middle-class growth) in the analysis has no effect on the dependent variable (average house price growth).

The R value of the correlation co efficient is equal to 0,018863287 (please refer to annexure 2). The low R-value shows there is a very weak correlation between the 2 variables and that the hypothesis should be rejected. Although it indicates there is still a slight positive correlation between the black middle class and housing prices, the R value is too weak to judge it sufficient and there is no real significant relationship between the independent variable and the dependant variable.

When adding real housing value growth with the size of the black middle class, it is evident that there is no real connection and thus the relationship between the 2 variables is insufficient. In order to substantiate the data collected, real values were needed to have more sufficient findings.

6.3 Interpretation & Discussion

The research study aimed to confirm that there is a positive relationship between the black middle class and housing prices. The researcher set out to determine if housing prices increased when the black middle class grew in size. This method was based solely on Adams Smith's demand and supply theory (1776) as cited by Agnar (2015), stating that when demand increases whilst supply remains the same, then prices will increase.

Using data from The UCT Unilever Institute of Strategic Marketing (2013) as cited by Steyn (2013) for the size of the black middle class, data from ABSA Bank's Housing Index (ABSA, n.d.), data from the South African Reserve bank for interest rates and data from Inflation.eu for the South African inflation rate, the study was conducted analysing the period of 2004-

2015. The researcher conducted 2 correlation co-efficient tests both based on data where the black middle class was the independent variable and housing prices was the dependant variable.

In the first correlation test (figure 5) where the black middle-class size (millions) and housing prices (millions) were used, the findings show that there was a positive correlation and a significant relationship between the size of black middle class and housing prices in nominal terms. The scatter plot diagram evidently shows that when the black middle class increases in size then nominal housing prices increase, based on demand. The findings of the correlation thus reject the null hypothesis and so the researcher answers the hypothesis.

However, the researcher believed that when looking at housing prices, in order to determine more accurate findings, real house prices would need to be used within a correlation (Kuang & Liu, 2015). The researcher set out to conduct a further study, where the black middle-class growth as a percentage and real housing prices growth as a percentage were represented in a correlation coefficient (figure 6). The findings of the 2nd correlation contradicted the previous results and showed that there is in fact no relationship between the black middle class and housing prices and thus the hypothesis should be rejected.

Previous literature such as studies done by the UCT Unilever Institute of Strategic Marketing (2013) cited by Steyn (2013) and (Mngaza, 2016) suggests that the black middle class is constantly growing and will continue to grow over the next decade or so. Another study done by Mdlekeza (2016) also state that the black middle class's growth is vitally important for the economy of South Africa, however Keitumetse (2017) believes that wealth distribution efforts are needed to be increased in order to create a balanced society where government can relax on fiscal policy.

Inglesi-Lotz & Gupta, R (2011) state that Inflation continues to be slightly high which effects real returns on investments, particularly with regards to property. McMahon (2009) states that when inflation is high and continues to rise, businesses have to raise their prices, banks are forced to raise interest rates in order to maintain a profit margin and this means that companies with small profit margins will be unable to borrow capital and inevitably will go out of business, leading to unemployment and a negative effect on the economy as a whole. Consumers will be hit hard as consumer spending will slow down due to less disposable income (Walsh & Yu, 2012).

When looking at current demographical trends with regards to the increase of the black middle class, one would think that an increase in housing demand would lead to high house prices and intern the housing market would become a good place to invest in. However due to the high inflation rate and unstable economy, the housing market in a national context is not as lucrative as it should be (Golding, 2015). Studies conducted on the housing market argue that housing prices are showing growth year on year in nominal terms, however real house prices continue to show near stagnant growth and over certain periods negative growth was recorded. Loos (2018) cited by Brown (2018).

6.4 Validity and Reliability

According to Heale (2015) validity is the extent to how accurately data is measured in a quantitative study whereas reliability refers to the consistency of measuring data. Stewart (2014) states that when using secondary data available online, failing to check the reliability of that data could lead to inaccurate analyses and a lack of quality findings for a study. In order to verify reliable documents published online, the researcher needs to do background checks on the publishers of the data that he plans to utilize (Stewart, 2014). With the necessary background checks on sources used not being conducted, the research paper could lose it’s validity in the eyes of future researchers who want to make use of the study, as they will not be able to verify the study with inaccurate sources (Stewart, 2014). Noble & Smith (2015), who compared reliability, validity and generalisability from a quantitative study to a qualitative study, agree that the lack of sufficient checks by the researcher will lead to the findings being invalid for future research purposes. This research study made use of already published documents from government and the private sectors in South Africa. Stewart (2014) states that types of documents such as annual reports and long-term research will have been audited by the publisher or a 3rd party auditor before it gets released, making the data highly more reliable. Stewart (2014) continues to say that stakeholders and interested parties will conduct further reliability and validity tests in order to verify the published information.

7 CONCLUSION

7.1 Contributions

Previous literature such as studies done by Chipswa (2016) and Simo-Kengne, Bittencourt and Gupta (2012) with regards to housing prices in South Africa, have taken into account the many different variables such as, interest rates, inflation and GDP factors with regards to understanding the current and future trends within the housing market. However, there is a limited amount of literature that incorporates the expenditure trends of the emerging black middle class. This study contributes to existing literature in order to gauge a better understanding of the direction of the housing market in South Africa. Although there is literature on the black middle class and their expenditure patterns, there is a lack of empirical research done about the black middle class's expenditure within the housing market and the impact their spending will have on supply and demand factors affecting housing prices. In order to have a better understanding of the economic environment in the 'new' South Africa, one needs to understand the shifting of wealth and the cultural patterns of expenditure that takes place (Shennan, 2011). This study adds value to existing knowledge on emerging economic trends with regards to housing as it takes into account the new patterns taking place within the market in order to gain a greater insight into future trends. This research uses existing knowledge in order to create new knowledge within the realm of the paper's topic. From a methodological point, this study adds more literature to the variables already used to determine possible movements with regards to housing prices in South Africa.

7.2 Ethical Considerations

Due to the fact that this research study only collected secondary data through the form of a desktop study, there were no ethical considerations as the data did not lead to the identification of individuals or companies involved (Triphathy, 2013). With regards to the accessible information through the private sector, fees were needed to be paid in order to have access to full reports, however enough free online data was available for the researcher to conduct the relationship test between the two variables. The researcher did not require a letter of consent, as this desktop study was able to make use of all free data online. As this study was conducted with a quantitative approach, all data was gathered through online publications from both the public and private sector.

The use of secondary data is considered to be a highly ethical practice as it limits the amount of private information from participants (Grinyer, 2009). Studies using secondary data allow for findings of future studies to be replicated, and therefore there is much greater transparency with the research conducted (Morrow, Boddy & Lamb, 2014). The true value of secondary research is only realised if the benefits outweigh the risks, such as the disclosure of sensitive information and the identification of individuals (Morrow et al, 2014). So as stated by Triphathy (2013) there is a need to create guidelines for the re-use of secondary data but in certain cases, consent may need to be given for the use of data that will need to stay anonymous and not affect individuals. However, in this research, consent was not needed as both private and public reports pertaining to this study were made freely available online and accessible information did not require the researcher to keep information anonymous.

7.3 Limitations

There were a number of limitations that affected the outcome of this study. According to Price and Murman (2004) the limitations of a study are the characteristics and variables of the methods or the design of the study that can influence or impact the way in which findings are interpreted from the research. Due to the type of study that was conducted, there were limitations that were needed to be identified before and after the study had been done, in order to provide reliable information for future studies to be conducted within the realm of the topic.

Before the study was conducted, it was evident that it would only be limited to a South African context and would not be applicable to other countries, due to South Africa's past racial segregation history and economic trends.

Firstly, the research was limited to testing only one variable with regards to the effect on housing prices in South Africa, that being the size of the black middle class. Although the study did include inflation to create real prices for the 2nd correlation test, it did not unpack the true drivers of inflation in South Africa and so from the demand side the study was unable to link a significant relationship between the black middle class and inflation. The study excluded other variables that could have a significant impact on housing prices such as, exchange rates, GDP factors and future construction that would increase the supply of housing (Chipswa, 2016).

With regards to housing prices over the period of 2004-2015, ABSA Bank's housing index was the only index used in this research study and so the use of only one index creates a lack of diverse data that was used to structure the dependant variable. Many other banks and private institutions release their own indices on a monthly basis however their criteria in determining house prices differs to that of ABSA Bank. Limiting the data to just one index narrows the scoop of the studies dependant variable, that being housing prices.

Available data for the research paper was limited to the period between 2004-2015, as this was the only data available for the black middle class and so previous data closer to the beginning of the post-apartheid era in South Africa was not able to be analysed. The researcher was also unable to conduct the study for the period of 2015-2018 as data was limited due to online sources available. The researcher was limited to sets of data, with regards to the black middle class instead of more accurate yearly statistics. The lack of time to analyse the data was also limited due to the fact that the research paper was compiled within the period of 8 months.

Other limitations need to be noted as well, such as, the lack of accessibility to the full report of 4 million and counting conducted by the UCT Unilever Institute of Strategic Marketing (2013) due to the price of the report. Government documents were available online, however private studies with regards to this topic were more critical when gathering information and generating the findings.

With the study setting out to find a correlation between the black middle class and housing prices in South Africa and with the researcher being of a different race and culture, cultural and racial bias could limit the legitimacy of the overall research paper.

7.4 Final Conclusion

The study was able to make use of a Pearson R correlation coefficient in order to answer the hypothesis stating that when the black middle class increases in size, then housing prices will rise based on demand. Furthermore a 2nd correlation coefficient test was conducted in order to determine real values for housing prices and to add more data to the findings. The 2nd test did contradict the original test and so thus leaves the research problem unanswered due to the inclusion of inflation as a variable to housing prices.

In the first test (figure 1, annexure 2) nominal average house prices were compared to the population of the black middle class. The data showed a significant relationship between the two variables. The hypothesis of the research paper was thus accepted as it states that when there is an increase in the black middle class, this will lead to an increase of housing prices in South Africa. In nominal terms, this shows there is growth in the housing market as long as the black middle class continues to increase in size and create demand for middle class housing.

However, in the 2nd test (figure 2, annexure 3), when taking inflation into account and generating real average house prices, the data shows that there is an insignificant relationship between the black middle class's growth and real average house price growth. When factoring in inflation, real growth is stagnant and in fact reflects that there is no significant relationship between the black middle class and housing prices in South Africa.

Although inflation was used to create real growth housing prices, it is suggested that further research needs to be conducted in order to gauge a better understanding of the effect that the black middle class has on inflation in terms of demand. The relationship between inflation and the black middle class needs to be explored further as the researcher believes that this specific study will create greater insight into the extent that inflation driven by the black middle class has on housing prices. Although the sets of data available online were sufficient in order to generate a correlation test, in order to gauge a complete and deeper understanding of the relationship between the black middle class and housing prices, data is need where year on year changes can be recorded rather than sets of years that were available for this study. For future studies, research will need to be conducted where more factors and more housing indices will need to be used to interpret more accurate results that accommodate all variables that could affect the studies outcome.

In 2015, the black middle class made up over 56% of the middle-class population in South Africa and expenditure by the black middle class outweighs the rest of the middle class quite significantly (Stats SA, n.d) (refer to annexure 3). Keitumetse (2017) states that the black middle class is one of the main drivers of the current economy in South Africa as consumer spending by the black middle class has increased dramatically over the last 10 years.

The study has found that the relationship between the black middle class and housing prices is inconclusive as when inserting different factors into the analysis, results are distantly apart. Salmanpour & Bahloli (2011) state that there are many variables that affect housing prices, inflation rates and financial growth of demographical groups. This study was conducted as a desktop study and so information available was limited to online sources. In order to gain clearer findings for the outcome of this study, further research will need to be conducted where more factors and more housing indices will need to be used for future research to interpret more accurate results that accommodate all variables that effect the study's outcome.

In conclusion although the study was able to answer the hypothesis through nominal values that the majority of the population interpret as the face value price, setting up a second test including inflation, resulted in contradictive findings. Further research on the black middle class being an important factor in inflation needs to be analysed as the researcher believes that having a better understanding of all factors of inflation will be able to determine a more accurate relationship of the black middle class's effect on housing prices. The research is deemed to be inconclusive as more variables will need to be used in order to determine if there is a significant effect by the black middle class on housing prices.

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9 ANNEXURES

Annexure 1

Year	Black middle class	Average housing price
2004	1,76	R573 871
2008	2,67	R968 282
2012	4,22	R1 061 273
2014	5,33	R1 276 252
2015	5,61	R1 355 401
P Value	**0,010008588**	
R Value	**0,958711282**	

Table 1, Pearson Correlation Coefficient results

Annexure 2

Year	Black middle class	Average housing price
2004-2008	50,89	35,15
2008-2012	58,05	-17,81
2012-2014	26,3	7,43
2014-2015	5,25	1,69
P Value	**0,981136713**	
R Value	**0,018863287**	

Table 2, Pearson Correlation coefficient results

Annexure 3

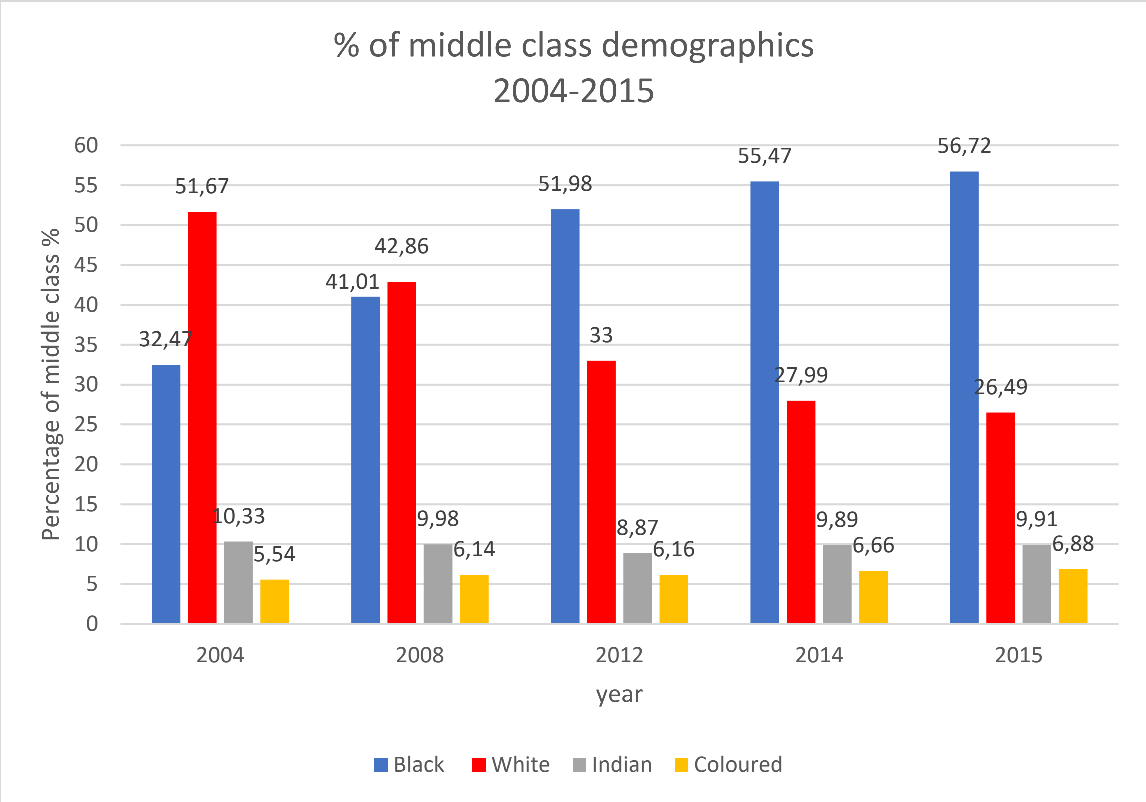
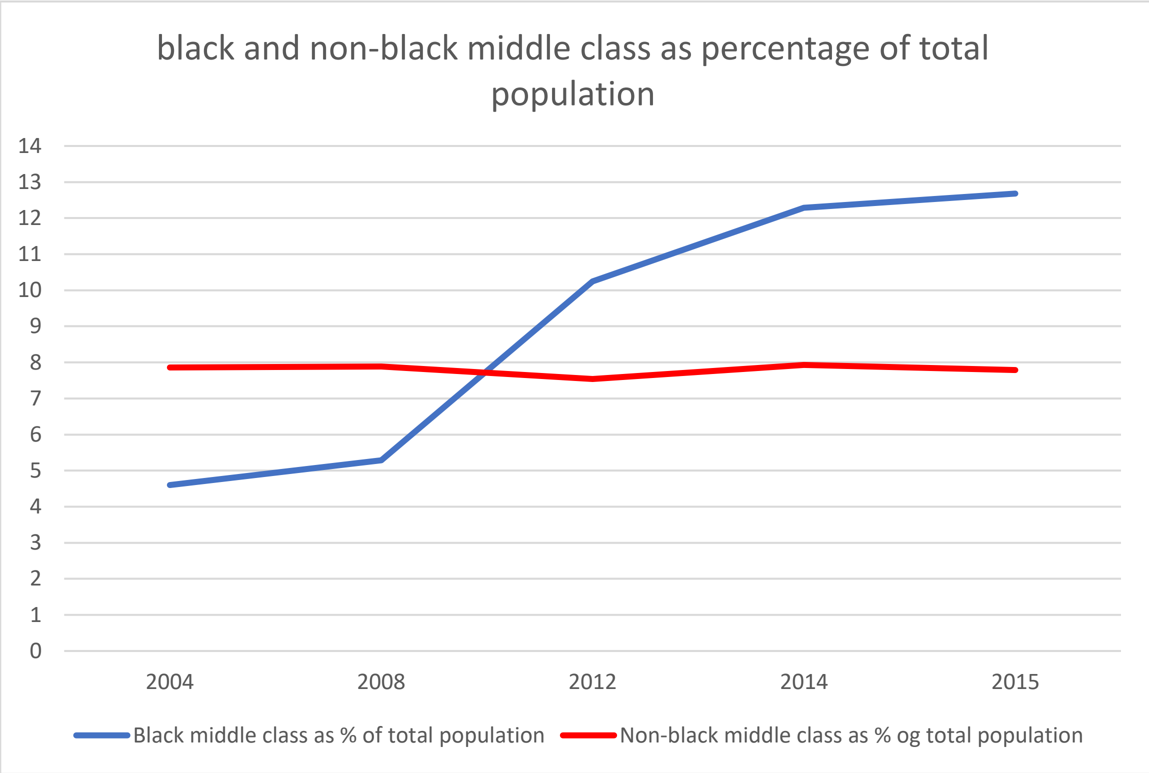


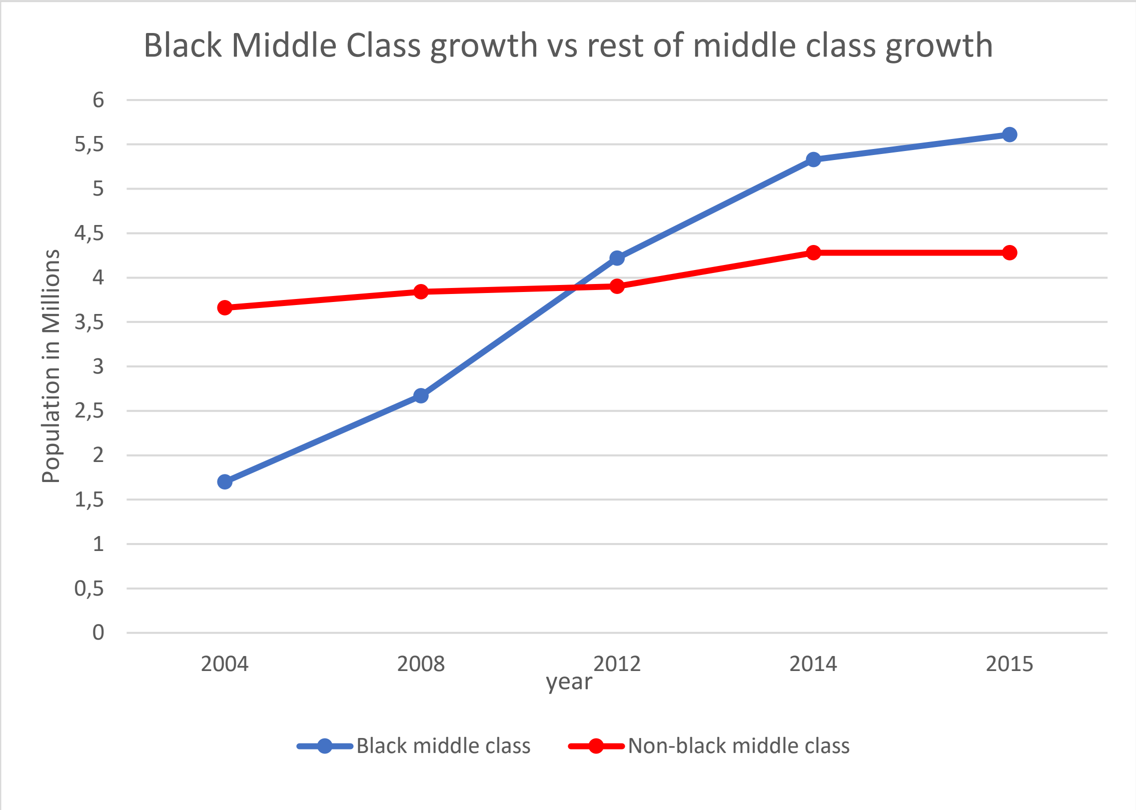
Chart: Middle class demographics

Annexure 4



Graph: Middle class growth as a percentage of the total population

Annexure 5



Black vs rest of middle-class growth

Final Research Summary Document Table:

What is my study about?

Research Purpose/ Objective	Primary Research Question	Research Rationale	Seminal Authors/ Sources	Literature Review – Conceptual Framework	Paradigm	Approach	Data Collection Method(s)	Ethics	Key Findings	Recommendations
conduct research in order to gain a better understanding of the housing markets direction To verify that there Is a correlation Between the 2 Variables	Does the increasing size of the black middle-class impact housing prices	To gain better insight of the black middle class's effect on housing prices this research will give a better view of the direction of where the housing market is heading	Adam Smith demand theory (1776) cited by Agnar (2014). Adam Smith and modern economics. Norwegian School of Economics	Theme 1: Housing market Theme 2: Black middle class Theme 3: Demand	Paradigm Positivist Epistemology A correlation based on hard, factual evidence Ontology Reality is governed by laws Axiology Research should be objective and based on real evidence	Quantitative **Population** The Black middle class based on income – UCT Unilever study	Desktop Study: Secondary research	Government documents Permission for Private reports Cultural bias	Strong relationship between the black middle class and nominal housing prices No relation when real housing prices are used. Inflation has a big impact on housing prices	Expand literature on the relationship between the black middle class and inflation. Consumer spending from the black middle class and their effect on inflation with relation to housing prices
Research Problem	**Secondary Questions/ Hypotheses/ Objectives**	**Key Concepts**	**Key Theories**			**Sampling**	**Data Analysis Method(s)**	**Limitations**	**Key Contribution**	
To verify if the black middle class is a factor that impacts housing prices.	A continued increase in the black middle class will lead to a continued increase of housing prices	Black middle class Housing prices Income bracket Inflation	Adam Smith Law of demand			Non-probability	Unit of analysis Scatter Plot Data analysis methods Pearson R coefficient correlation	Quantitative Cultural background 1 housing index used 1 middle class study used Limited variables used	it will help in the determination of which direction the housing market is heading in. new variable for drivers of housing prices expanded literature on the South African housing market	