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Evaluating market potential in emerging markets using marketing data

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Abstract

This research focuses on the use of marketing data as a tool with which to evaluate potential in emerging markets. The literature reviewed gave valuable insight into existing approaches to evaluation of market potential, and some of the limitations these approaches face in emerging markets. Specifically, these focus on the data deficit in emerging markets, and lack of granularity in the data that exist. The literature also highlights the expertise and information which is available within the marketing fraternity, which has failed to be translated into strategic business insight in the context of new market entry. The integration of the two disciplines of marketing and market entry provides market-seeking firms with valuable new data on which to base decisions, as well as offering marketers with an opportunity to demonstrate their value as a source of strategic insight.

The literature reviewed resulted in the formulation of hypotheses predicting a relationship between the independent variable, marketing data, and the dependent variable, market potential. These were further evaluated in terms of relative strength when compared to existing tools: macro economic data, and the Market Potential Index. Finally the data was analysed at a regional level to determine whether marketing data could be used to analyse market potential at a finer level of granularity than was previously possible.

The study relied on secondary data, collected from a number of freely available online databases covering ten African countries over a period of six-years. This was in line with the objectives of the study, which aim to provide market-seeking firms with an alternative tool for evaluating potential without making significant investments in upfront data gathering. Regression analysis was conducted to determine the nature of each of the relationships specified in the hypotheses, and the results were assessed to determine statistical significance and the strength of correlation.

It was found that marketing data shows a strong, and statistically significant relationship with market potential. This exhibited greater correlation than either of the existing tools – as well as be applied at a regional level. This finding indicates the value of adding marketing data to the set of tools used for market evaluation, and demonstrates the value that exists within the marketing fraternity as a source of relevant and reliable data and strategic insight.

Keywords

Market potential, marketing data, emerging markets.

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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1. Introduction to research problem

1.1. Introduction

Companies wishing to expand into emerging markets need a system by which to determine which markets show the greatest potential to be a source of future business. There are a number of factors to consider in this process before making a final decision. Prior to conducting field research, firms need a process through which a broad set of opportunities can be compared so as to select those with the greatest market potential.

Traditionally this process has relied on macro-economic data such as Gross Domestic Product (GDP). However, these data present some challenges as they can be inaccurate, represents historical activity and depicts markets at a national level not allowing for granular evaluation at a regional level. This is exacerbated in the case of emerging markets, which suffer from a significant data deficit and are characterised by heterogeneity within each country and overlaps across national boarders.

As interest in these markets continues to grow, so the need for an alternative tool to measure potential in emerging markets becomes more acute. To respond to this, researchers have developed tools such as the Market Potential Index (MPI). This provides a composite score across 26 emerging markets allowing firms to compare prospective opportunities. While this offers a useful lens with which to consider the 26 countries analysed, the MPI is limited in its application. The index only covers two African countries and extrapolating this model to additional countries would require significant data, often not available for African countries and if so at significant expense. The index has also been criticised for the subjective weighting of its scores, which have been shown to have limited predictive power. Furthermore, the index only offers national results and cannot be applied at a regional level.

In this context, academics and businesses have called for an alternative approach. Sheth (2011, p.179) argues that what is needed is "comparative empirical research on the actual behaviour of consumers using marketing analytics."

Such data are available at a consumer level for many African countries in the form of marketing data. This includes information such as cellphone usage and literacy levels. Possibly because data exist within the marketing function, and not the business development space, it not been considered in the context of foreign market entry strategy

and has therefore been neglected in the decision making process. By considering a country's potential in terms of consumer-orientated marketing data, businesses can get ahead of the trends and identify opportunities before they happen. Marketing data act as lead indicators of future growth and can be evaluated at regional level, which is not possible with the more broad macro-economic data. The evaluation of data as an indicator of market potential could add a valuable new filter for market-seeking firms.

This study seeks to evaluate the relationship between marketing data and market potential, and consider this in the context of existing measures such as macro-economic data and the MPI. Using regression analysis, this research will establish the accuracy which each of these tools are able to evaluate potential. In order to quantify the actual existence of market potential, the study uses number of businesses opened and Foreign Direct Investment (FDI) as lag indicators – i.e. we can confirm that potential in fact existed if these factors are present.

The opportunity to use empirical evidence of consumer-based activity could improve firms' ability to evaluate markets, improve our understanding of emerging markets – specifically in Africa – and at the same time elevate the position of the marketing fraternity as contributors to business strategy.

1.2. Research problem

This paper proposes a new approach to evaluating market potential in emerging markets through the use of consumer marketing data. In so doing it aims to provide a mechanism to create market specific information at a more granular level than is currently possible using macro-economic data.

Market-seeking firms require information to assess the benefits of one market over another. One of the critical variables to consider is market potential — a measure of the firm's likelihood of success given the current and future characteristics of the market (Robertson & Wood, 2001). Due to the many variables affecting market potential, this analysis is a complex process.

Historically, macro-economic measures such as GDP have been central to many management decisions when evaluating market potential. More recently this has been augmented by the introduction of other factors such as cultural and geographic dimensions (Perks, Hogan & Shulka, 2013). However, the literature suggests that many businesses still struggle to achieve a level of information resolution that can adequately differentiate

potential at a regional rather than national level, and give them the insight needed to fully understand the dynamics of these markets (Khanna, Palepu & Sinha, 2005).

According to Hassan & Craft (2012), country level indicators have three major limitations:

1.   Segmentation is based on country-specific variables, particularly macro-indicators such as GDP, rather than consumer variables.
2.   Countries are aggregated to homogenous entities, failing to recognise variation from one regional market to another.
3.   Overlaps across national boundaries are ignored.

The limitations of this approach are particularly evident when applied to emerging markets. Characterised by heterogeneity, lack of readily available data and rapid change, emerging markets present a unique challenge (Sakarya, Eckman & Hyllegard, 2006). The traditional macro indicators, such as GDP, fail to provide the level of resolution needed to evaluate countries which have multiple regional markets of very different natures, or where all economic activity is located in the capital with vast areas of underdeveloped rural space. More complex tools such as aggregate indexes like the MPI suffer from different challenges, such as a lack of necessary data for application to less developed markets, and the affect of subjective weighting on each country's score. Furthermore, having yet to establish many of the market institutions of developed economies, there is limited access to secondary market and economic data which might be able to fill in some of these gaps, and the information that is available is quickly irrelevant due to the accelerated rate of change that characterise these markets (Natchum, 1994).

At the same time, marketers have been collecting consumer data at a very granular level – such as number of cellphone subscribers, and regional energy consumption — but have failed to translate this into strategically relevant information.

This study aims to analyse the possibility of taking available data at the consumer level and, by evaluating their predicative capability, test whether marketing data can serve as an alternative measure of market potential. The most recent example of this type of approach was in 1974 when Schooler and Ferguson proposed that specific regional market factors such as energy consumption and number of radios represented such a significant cross-section of micro-economic data that only four metrics were required to evaluate market potential. This research aims to uncover similar patterns within the marketing data available

across a set of African counties and in so doing, evaluate the possibility of creating a new filter though which to compare countries' potential for market-seeking firms.

1.3. Research motivation

The growth of emerging markets continues to provide international businesses with highly attractive opportunities. For these opportunities to be realised, firms require information that will enable strategic decision making and risk mitigation. In Africa in particular, there are an increasing number of countries that have crossed the threshold into the "emerging market club" (Okonjo-Iweala, 2013) and the demand for measures by which to evaluate them has become increasingly important.

In conducting marketing data analysis, this research aims to provide market-seeking firms in emerging markets with a more refined tool to evaluate market potential, and in so doing encourage additional investment into these markets.

At the same time, the use of marketing data for strategic decision-making will elevate the role of the marketing fraternity within the corporate environment and demonstrate the value of the available data. This tool will also add value to the ability to understand African markets, characterised by a data deficiency.

1.4. Research scope and objectives

The addition of a marketing data lens to the evaluation of market potential does not replace the value of the existing models, and should rather be seen as an additional filter through which to conduct market analysis.

This can be seen in the context of the multistage approach advocated by Cavusgil (1985). This model proposes three stages, including:

1. Preliminary screening,
2. Identification/in-depth screening and
3. Final selection.

While the details of this approach will be discussed in the literature review, it is useful to refer to this model in specifying the scope of the research problem being addressed here. This approach does not consider the macro-economic factors that determine market

feasibility, nor the final decision on a specific country. This research paper specifically aims to improve the second stage: identification and in-depth screening, through use of marketing data as a lens to assess market potential.

Furthermore, upon final selection there are important further steps which need to be taken to develop a go-to-market strategy, such as mode of entry. Again this falls outside of the scope of this paper.

While this approach aims to address issues facing market-seeking firms across various industries and emerging markets, this study will be limited to businesses in specific African markets.

Figure 1. Three stages of market selection.
(Cavusgil, 1985, p.29)

| Stage 1 Preliminary screening | | Stage 2 Identification/ In-depth screening Composite marketing data | | Stage 3 Final selection |
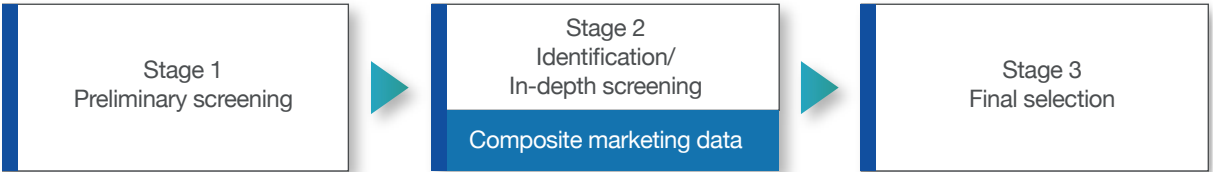
1.5.   Relevance to South Africa

South Africa is considered by many as the regional representative for Africa. South Africa has been one of the largest investors in the continent, and the country's trade with the rest of Africa was approximately a third of China's despite having an economy one-tenth its size (Carmody, 2012). South Africa accounts for 17 of the top 20 companies in Africa, and the majority of South Africa's biggest firms generate significant portions of their revenue from their business beyond the borders. By 2005 only eight of the biggest 100 companies quoted on the Johannesburg Stock Exchange did not have operations in Africa (Carmody, 2012). South Africa also acts as the gateway for investment into the rest of Africa – 90% of portfolio investment in Africa goes through the Johannesburg Stock Exchange (Noury, 2011).

South African businesses have a significant interest in understanding the factors that underpin emerging markets, both in terms of their own investments, and as a way to analyse South Africa's performance in comparison with these countries. A more systematic approach to the analysis of the data available on these markets could help our business and

political leaders direct interest more strategically and improve South Africa's position as a source of valuable insight into other emerging markets.

1.6. Conclusion

Market-seeking firms need tools by which to evaluate the relative potential of the countries they might consider entering. Traditionally this has focused on the use of macro-economic evaluation, and more recently, more complex tools such as the MPI have been developed to provide more detailed analysis of market potential. However, in the context of emerging markets, the existing tools face certain challenges – particularly around availability of data, and the ability to apply this assessment at a level of granularity beyond national data.

To address this gap, this report proposes the use of marketing data as an additional filter through which to assess market potential. By considering consumer-oriented information, firms have the opportunity to evaluate demand and apply this at a much finer level of granularity – such as by province or city. The marketing fraternity has access to numerous sources of consumer data, such as cellphone subscriptions and energy consumption, but has failed to translate the available data into strategically valuable information for new market evaluation.

In order to determine the viability of this proposition, statistical research has been conducted to assess correlation between marketing data and market potential, and to determine whether this relationship is stronger than those with existing tools such as economic data and the MPI. In so doing, this report aims to establish the value of marketing data as a source of market intelligence, and improve market-seeking firms' ability to evaluate potential in emerging markets in Africa.

2. Literature review

2.1. Introduction

This research aims to use marketing data as an alternative model for evaluating market potential in emerging markets. While literature has been published on each topic separately (entry into emerging markets, market potential and marketing metrics), the combination of these factors into a single framework is a new approach on which there has yet to be any significant literature published. In this absence, this paper will consider relevant information from the available literature on each separate topic. The opportunity to bridge these fields and demonstrate the efficacy of using marketing data to evaluate market potential offers value to both market-seeking firms and the marketing fraternity from a business and academic perspective.

2.2. Defining key terms

2.2.1. Marketing data

Quantified measures of past marketing performance, and indicators of future potential. These range from lead to lag indicators such as consumer attitudes, to consumer behaviour, distribution statistics, competitive analysis, internal metrics and financial data (Ambler, 2003).

2.2.2. Market potential

The capacity of a location, such as a country, to be a source of future business success given the current and future characteristics of the market. Various measures of market potential are provided especially for emerging economies, intended as guides to exports and foreign direct investment (Robertson & Wood, 2001).

2.2.3. Emerging markets

Emerging economies are characterised by rapid growth, industrialisation and rising per capita income. This development is associated with higher living standards such as increases in education and healthcare, and a growing middle class. This growth is often a result of a transition to increased political and market freedom and greater interaction with the global economy (Kvint, 2009).

2.2.4. Lead indicators

Leading indicators show a reasonably consistent predictive relationship with a reference series. They are used as an early indication of turning points in the reference series (Main Economic Indicators, 2000). In marketing this is known as a causal forecast, where independent variables are used to predict dependent variables in order to take advantage of future opportunities or emerging trends (Davis, 2007).

2.2.5. Lag indicators

An economic factor that changes after the reference measure has already changed, often used to confirm the strength of the trend (Main economic indicators, 2000).

2.3. Emerging markets

2.3.1. Terminology

According to Mady (2011), the term 'emerging market' is used to designate a national economy which promises significant future growth, has recently been opened to foreign direct investment, and has the necessary institutional infrastructure to support market transactions — but without the efficiency and effectiveness of a developed market.

The classification first appeared on Wall Street in the 1980s, coined by Antoine van Agtemael of the World Bank's International Financial Corporation, to distinguish a new class of assets using a term that sounded more optimistic for investors than third-world or developing countries (Ins and outs, 2008). During the 1990s many of these markets opened their stock exchanges for the first time. This however coincided with a series of economic crises in a number of markets, making investors increasingly nervous. Despite this setback, the emerging markets recovered quickly with the global boom in 2003. In the decade since then emerging markets' share of global GDP has grown from 20 percent to 34 percent – including a recovery from the 2008 recession in just a year (Sharma, 2012).

Today, Morgan Stanley Capital International's market classification framework plays a deciding role in which countries are classified under which category. Countries are ranked according to three criteria: economic development, size and liquidity, and market accessibility. The results determine whether a country is defined as developed, emerging or frontier. To be classified as developed, a country must have per capita income 25% above the World Bank high-income threshold for three consecutive years. Size and liquidity refers

to the type of companies that are included in the investment with less developed countries having a lower market capitalisation requirement. Third, market access measures investors' experience in terms of ease of investment such as foreign ownership, capital flows and institutional framework (MSCI, 2013).

Figure 2. MSCI market classification framework
MSCI (2013)

MSCI All Country World & Frontier Markets Index (ACWI FM)				

Developed Markets

Americas	Europe & Middle East	Asia & Pacific
Canada U.S.A.	Austria Belgium Denmark Finland France Germany Ireland Israel Italy Netherlands Norway Portugal Spain Sweden Switzerland U.K.	Australia Hong Kong New Zealand Singapore

Emerging Markets

Americas	Europe & Middle East	Africa	Asia
Brazil Chile Columbia Mexico Peru	Czech Rep. Greece Hungary Poland Qatar Russia Turkey U.A.E.	Egypt South Africa	China India Indonesia Korea Malaysia Philippines Taiwan Thailand

Frontier Markets

Americas	Europe & CIS	Africa	Middle East	Asia
Argentina Jamaica Trinidad & Tobago	Bosnia Herzegovina Bulgaria Croatia Estonia Lithuania Kazakhstan Romania Serbia Slovenia Ukraine	Bostwana Ghana Kenya Morocco Mauritius Nigeria Tunisia Zimbabwe	Bahrain Jordan Kuwait Lebanon Oman Palestine Saudi Arabia	Bangladesh Pakistan Sri Lanka Vietnam

2.3.2. New terminology

More recently, the term 'emerging market' has been starting to lose its appeal. Some of the original emerging market stars such as China, now the world's forth-biggest economy, have arguably now emerged. As a result new terms have come into fashion.

In 2001, Jim O'Neill, chief economist at Goldman Sachs, published a paper entitled "Building Better Global Economic BRIC's." It described the growth potential of Brazil, Russia, India and China and predicted that, based on their size, population and growth rates, this group would overtake the combined economies of the developed world by 2050 (Noury, 2011).

The Gordon Institute of Dynamic Markets prefers the term 'dynamic market' — used to indicate those countries with high growth potential, innovative capacity, and the ability to overcome gaps in the institutional framework (White, 2013). These markets are found in

traditionally underdeveloped nations which, over the past decade or so, have shown much more dynamic growth than the developed economies of Europe and North America. It does not extend to all developing nations, specifically excluding those where institutional voids prohibit market functions and human development.

In 1992 Farida Khambata of the International Finance Corporation coined the term 'frontier market' as a sub-set of the emerging markets at an earlier stage of development but with the same potential. These countries had limited market infrastructure and higher degrees of instability (Guerrero Blanco, 2013). Home to one-in-six people on the planet, they only account for five percent of the economy. However, this gap is closing quickly as these markets grow at rates much faster than the developed world (Sharma, 2013).

These markets are particularly attractive to investors looking for diversity in their portfolio, as these new players traditionally do not follow the same trends as the developed world. They represent an even more complex and heterogeneous group than the more developed emerging markets, especially due to the level of political and security instability that characterise these nations. While key financial institutions monitor the financial development of these economies through a set of investment indices, there is tremendous room for improvement especially due to the institutional voids which make data collection challenging (Guerrero Blanco, 2013). The lack of available data, combined with the high degree of turbulence, means that sometimes the only way to get relevant information is by having feet on the ground (Sharma, 2013).

In the context of this study, the term 'emerging market' will be used to refer to both the primary emerging markets, as well as the subset of frontier markets.

2.3.3. Interest in emerging markets

These conditions create business environments that present highly attractive opportunities for companies looking for growth, as they are contributing an increasingly significant portion of global GDP. Specifically, as the purchasing power of individuals within these countries grows, these markets become increasingly attractive consumer markets with millions of new consumers emerging to demand Western goods (Cavusgil, Ghauri & Akcal, 2013). In 2010, international corporations such as Cola-Cola and Toyota attributed a third of their operating income to their emerging market operations (Guo, 2013), and these may well account for around 80% of global economic activity by 2050 (Kaynak & Zhou, 2010).

The rapid acceleration of emerging market growth can be attributed to several factors. These include the opening up and reform of previously socialist markets, the liberalisation of trade agreements and policies internationally, the decline in growth of developed markets, and the development of an enormous middle class of potential consumers (Sheth, 2011). This growth has continued relatively unabated in all emerging markets for the past decade. Between 2003 and 2007 the average GDP growth rates in these countries rose by 50 percent, from 3.6% in the 1980s and 90's, to 7.2%. In the period leading up to 2008, apart from a handful of notable exceptions such as Zimbabwe and the DRC, the entire developing world experienced the most impressive cycle of growth in history (Sharma, 2012).

Figure 3. Regional growth data
International Monetary Fund, World Economic Outlook Database, April 2013
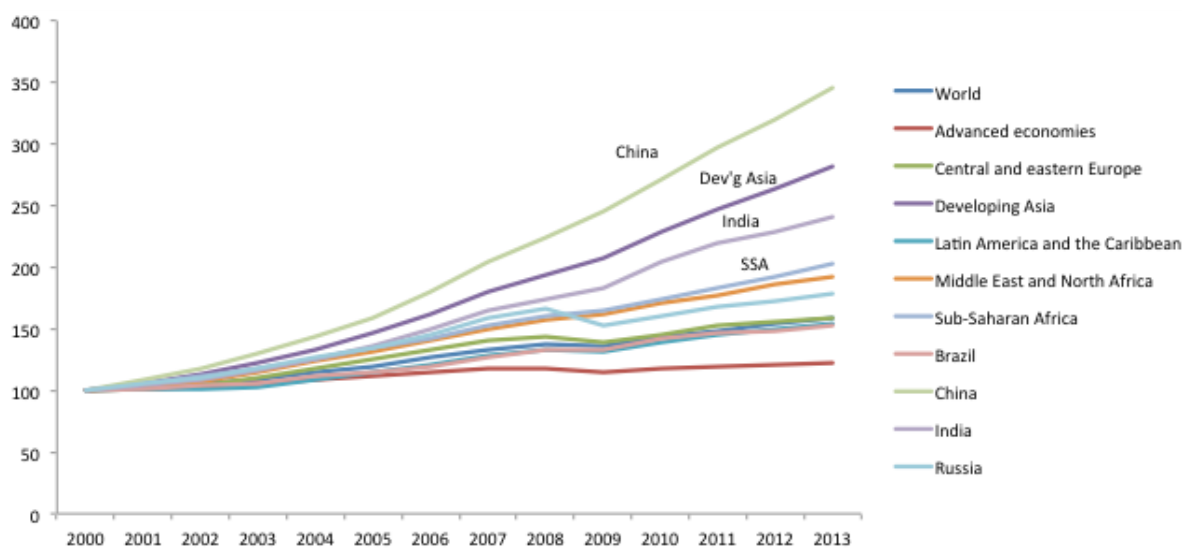
Sheth (2011) proposed a model to highlight the five factors that characterise emerging markets:

1. Market heterogeneity: there is a particularly wide distribution of consumer behaviour across all products and services. This can be attributed to significant fragmentation and localisation within each market. This is further exaggerated by the influence of large portions of 'bottom-of-the-pyramid' consumers who have limited access to the financial means to participate fully in the economy, or who lack geographical access to products and services.

2. Sociopolitical governance: weak national governments give rise to strong local players who determine the characteristics of their markets. Often coupled with limited

competition, this results in asymmetry of market power and compromised consumer choice.

3. Unbranded competition: rural communities in particular continue to rely on local producers and informal markets, supplemented by subsistence production. There is also a large second-hand and rental market for everything from cellphones to newspapers, as well as the use of non-financial means of transaction, such as bartering.

4. Chronic shortage of resources: lack of resources constrains production, consumption and exchange – resulting in diseconomies of scale, limitations to use and high transaction costs. The solution to these challenges is innovative products that adapt to these local market conditions.

5. Inadequate infrastructure: in addition to poor physical infrastructure, emerging markets also suffer from limited information systems such as market research or consumer data. This is exaggerated the further away the consumer is from urban centres — making it very challenging to conduct business in these areas.

These factors result in a marketing environment that is fundamentally different from traditional developed markets. Understanding the consumers in these markets is central to the ability to predict their behaviour and develop a firm strategy that responds effectively. In order to do this, Sheth (2011, p. 179) recommends "comparative empirical research on the actual behaviour of customers using marketing analytics."

2.3.4. Entering emerging markets

Khanna & Palepu (2010) advise that in determining which emerging markets to enter, firms should look deeper than the conventional wisdom of size or growth, and attempt a more granular understanding of the market structure so that firms will be better equipped to gauge their potential, avoid mistakes and define and execute winning business strategies.

To match their high potential for reward, emerging markets are also characterised by a high degree of risk. Unsurprisingly market-seeking firms are looking to maximise this reward at the lowest risk. The ability to quantify potential and risk helps firms manage their decisions, and the introduction of a more systematic approach to the analysis of market potential could encourage more conservative firms to consider investment in emerging markets (Sakarya et al., 2006).

2.3.5. Measuring emerging markets

This increased interest has created a greater need to understand the specific characteristics of these markets and to develop measures by which those looking to enter new markets can evaluate appropriate targets. Natchum (1994) proposes that a combination of factors makes the evaluation of market potential in these markets particularly challenging. First, these markets are highly heterogeneous with many cultures, vast wealth inequality and varied consumer habits. This means a single metric to describe an entire region will not account for the significant variance within the region. Second, without a well-established retail and media base there are not much marketing data available through marketing research firms and the like.

Academics and business analysts increasingly need to differentiate between the various emerging markets, rather than characterise them together under a single term. Discussing the potential of the combined emerging markets might have been possible a decade ago when their combined economic value was less than a fifth of the global economy. As the combined and individual value of these markets have grown, so an understanding of the specifics of the individual markets has become necessary (Sharma, 2012).

Emerging market consumers are not following the expected patterns of behaviour that marketers have grown accustomed to in developed nations. Businesses selling luxury goods are used to waiting for customers to achieve a specified level of income to be classified as middle-class before introducing nonessential goods such as hair conditioner into the market. New patterns indicate that access to modern media has accelerated demand for aspirational goods in regions long before they reach traditional income levels (Sharma, 2012). If income per capita is no longer an appropriate lead indicator of demand, it is necessary to find alternatives.

These factors are combined with a significant data deficit when it comes to the accuracy and availability of standard national data, such as GDP. In the recent work of Morten Jerven, *Poor Numbers* (2013: p. xi), he describes the state of Africa's statistics as follows: "The short answer is that the numbers are poor. This is not just a matter of technical accuracy. The arbitrariness of the quantification process produces observations with very large errors and levels of uncertainty ... the resulting numbers are used to make critical decisions that allocate scare resources."

The low quality of African statistics can be attributed to a number of factors, the most prevalent being a lack of resources, infrastructure and skilled record keepers. The situation

is further exasperated by a high degree of subjectivity in determining the methodology behind statistics that are generally thought of as universal – such as GDP. In an analysis of the data available from three widely recognised sources of national accounts – the World Development Indicators, the Penn World Tables, and the databases of Angus Maddison – the results show significant variation. This is attributed to an absence of foundational data resulting in significant gaps being filled though extrapolation and guess work (Jerven, 2013). Furthermore, with each country using a different base year, and various agencies then adjusting the numbers up and down to compensate for variances, the ability to compare numbers across countries is further compromised. Jerven argues that the results are fundamentally flawed in both their validity and reliability and that little attempt is being made to make these issues transparent when accessing the data from the international databases. As such, academics, governments and business are often misled by the numbers and are unable to make informed decisions.

2.3.6. African markets

Much of the activity in emerging markets is taking place in Africa. With a billion people and a $1.7 trillion market, there certainly is enough potential (Sharma, 2012). As enticing as it has become to refer to a single African market with the impressive combined figures, it is very important to recognise that the continent is not one homogenous market and that it is necessary to consider each nation independently. Investors and market seekers need to understand which are commodity economies, those where conflict still plays a major role, and where market institutions have started to take shape. Furthermore, while it is helpful to cluster similar countries when developing market strategy, firms must not lose sight of the fact that each country has its own unique challenges and opportunities and that it is equality possible to find commonalities across borders as differences within national boundaries (Cavusgil, Kiyak & Yeniyurt, 2004).

Africa's recent growth can be attributed to a few fundamental factors. The past decade has seen a dramatic decrease in conflict, and the development of political stability and democracy in many countries. Education and literacy are rising fast, albeit off a low base. The introduction of mobile telecommunications has transformed the continent's connectivity, and mobile data looks set to further enhance the development that has been seen as a result (Sharma, 2012).

At the same time, there is still much work to be done. The gaps in infrastructure limit the speed and efficiency of trade and undermine the growth in commerce across the continent. This can be seen particularly in the low levels of trade between African countries. In the

absence of established stores and malls, a large portion of Africa's trade is done on the informal market through street vendors and traditional markets (Sharma, 2012).

2.4. Market potential

To establish a systematic and robust approach to market evaluation, market-seeking firms should consider a phased approach to the evaluation process. This is not to say that more ad hoc methods are to be discounted, as there is tremendous value to be added from leveraging networks, responding to unsolicited enquiring and seizing opportunity when it presents itself. In order to manage the complexity of emerging markets it can be very useful to have certain tools with which to make decisions (Cavusgil, 1997). Cavusgil (1997: p. 88) suggests that a "formal and systematic analysis of aggregate market potential can be particularly fruitful," as it allows managers to make objective comparisons between emerging markets, so as to reduce the consideration set to a more manageable number for in-depth analysis.

2.4.1. Stages in market evaluation

Following the model presented in the research problem section, "three stages of market selection", it is valuable to consider the role of market potential as one of three phases of market evaluation (Cavusgil, 1985). Due to the complexity involved in selecting new markets in which to trade or invest, it is advisable that the process be divided into phases at varying levels of detail. In this process, the first stage would serve as a screening process, using macro-level indicators to assess alignment with the firm's objectives, for example market size, growth rate and market intensity (Cavusgil, Kiyak & Yeniyur, 2004). During this process the firm would also evaluate the political and economic conditions and potentially eliminate those countries where the degree of political instability is too high (Kumar, Stam & Joachisthaler, 1994).

In stage two, those that meet the initial criteria are assessed in terms of market attractiveness (market potential). Tools such as the MPI form part of this phase and involve a process which selects relevant variables, allocates weights to each variable based on perceived importance to assessing market potential, and compares the scores of countries on an overall index (Baker & Hart, 2008).

A final evaluation takes place in stage three to determine congruence with the firm's resources and strategy.

In the final evaluation stage, further complexity is added when considering the strategy and capabilities of the firm. At this stage the strategic decision to enter a new market takes into account firm-level factors such as the appropriate mode of entry, the external factors to be faced, and the internal capabilities of the firm (Perks et al., 2013).

2.4.2. Factors in determining market success

Figure 4. Evaluation of market success.
(Perks, Hogan & Shulka, 2013, p.135)
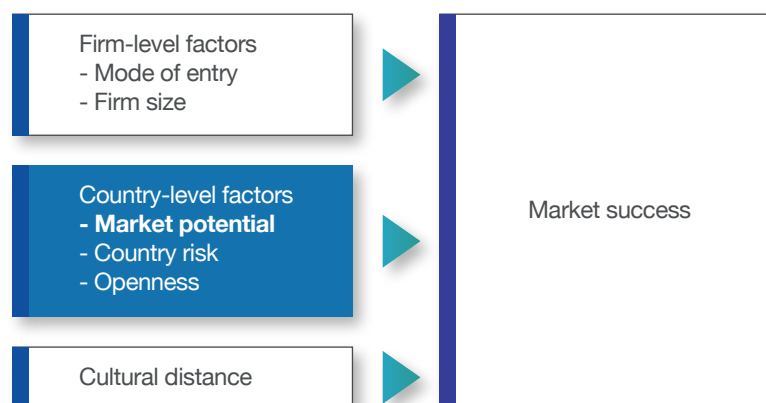
Perks et al. (2013) suggest that market success is affected at the levels of firm, country and culture. At the firm level, the characteristics of the business (such as size and risk appetite) will influence strategic decisions. A particularly important decision is that of mode of entry, on which there is significant literature. Mode of entry considers factors such as available resources, networks and alliances, and degree of control, among others (Koch, 2001).

The literature on market selection gives particular attention to the role of culture and distance in establishing new markets. In 2004, Ghemawat developed a comprehensive framework to analyse these factors. The CAGE (culture, administration, geographic and economic distance) theory suggests that, while most country portfolio analysis is based on an evaluation of future sales using economic indicators such as GDP and consumer wealth, these metrics fail to consider the costs and risks of doing business in new markets (Ghemawat, 2004: p. 3). Despite the significant academic interest in the role of cultural distance in selecting new markets, the broader literature seems to suggest that this is not a primary driver of market selection — in fact, Wood & Robertson's 2000 empirical study of managers' decision criteria found this to be the least important factor. In addition, Malhotra, Sivakumar & Zhu (2008: p. 651) found that the "market potential of countries compensates and sometimes even overrides the role of distance."

At the country level, Perks et. al. (2013) suggest that three factors are critical to evaluating business fit: potential (measured by looking at size and growth), risk and openness. These are congruent with the factors described by Ojala & Tyrväinen (2008): cultural distance, geographic distance, country risk and market potential. Wood & Robertson (2000) found that in general market potential was considered the most important criteria in selecting new markets.

Figure 5. Mitigating effect of market potential on uncertainty.
(Rothaermal, Kotha & Steensma, 2006, p.58)

While it is undoubtedly important to consider all factors when evaluating new markets, the literature seems to agree that the most important variable is market potential, with the ability to mitigate the possible negative effects of some other factors (Rothaermal, Kotha & Steensma, 2006). Malhotra, Sivakumar & Zhu (2009, p. 668) argue "companies making foreign acquisitions in today's globally competitive arena should place less emphasis on distance and focus more on the market attractiveness or the potential of the target country."

There is relatively little literature on the topic of market potential despite the empirical evidence linking market potential with market entry (Malhotra & Sivakumar, 2011). Sakarya et al. (2006, p. 211) argue that, "Despite its importance, knowledge about the initial market entry decision is limited. The literature review suggests that research on the topic remains fragmented, overshadowed by work on market entry mode selection and that integrated frameworks and comprehensive studies of market selection process have been rare."

Furthermore, there is no clear formula for determining which factors provide the best measure of market potential. Managers tend to look at some arbitrary combination of GDP, consumer wealth and growth rates (Ojala & Tyrväinen, 2008). Wood & Robertson (2000) found that decision makers predominantly rely on economic data to evaluate market potential due to its wide availability, while less accessible micro information has been underused. While these macro-economic indices are undoubtedly useful, they lack the ability to differentiate between more subtle market characteristics, specifically when looking

to make decisions at the firm level. In emerging markets these traditional measures raise additional challenges, as they tend to overlook some of the complexity of these environments. Some examples include: consumer income can be very misleading when denominated in a reference currency, as this fails to account for purchasing power variances between countries; the lack of data on the often significant contribution of the informal market; the exclusion of subsistence consumers who are not involved in the market at all; and the misrepresentation of economic data by governments for political reasons (Cavusgil, Knight & Risenberger, 2007).

In knowledge intensive industries, the size of the specific product or service market is a key determinant in predicting market entry (Ojala & Tyrväinen, 2008), and the use of country level indices are too broad to provide the resolution needed for accurate evaluation.

Kock (2001) argues that the evaluation of market potential is based on judgement rather than statistics and suggests that greater emphasis should be placed on the use of product market specific variables. He advocates a "holistic perspective [that] would help bridge the gap between the narrowness of most current models and the immense complexity of global business decisions" (Koch, 2001, p.360).

2.4.3. Data used for evaluation

The information used to make these decisions can be based on qualitative or quantitative data, depending on the number of countries under consideration. When firms are considering a limited number of countries in particular, they opt for a qualitative evaluation. If the analysis is broader, quantitative methodologies are favoured (O'Farrell & Wood, 1994). Across both approaches, the data used tend to rely on evaluation of certain key variables, including:

1. Market size
2. Geographical and cultural proximity between home and host country
3. Risk and reward
4. Intensity of competition
5. Similarities between current customer needs and new market requirements.

While these variables have been found to be the most prevalent, O'Farrell and Wood (1994, p. 247) conclude, "There is little evidence that firms use any method on a systematic basis to choose target markets."

Sakaya et. al. (2006, p. 215) go on to explain that while macro-indicators such as market size and growth rate have traditionally been used in the preliminary screening stage, there is "little consensus on what criteria to use to measure market potential." Kumar et. al. (1993) proposes a quantitative statistic model to address this problem, using a multi-criteria methodology drawing on significant data relating to market size, growth, margins, competition, diversity and concentration. These data are mathematically processed using an APU (analysing and processing unit) to produce objective recommendations on market potential. While this offers an attractive option to those in markets where all the necessary data are available, it fails to address the requirements of evaluating emerging markets with limited economic and market data.

2.4.6. Market Potential Index

S. Tamer Cavusgil, along with the Michigan State University's globalEDGE programme has developed the Market Potential Index (MPI) to assess 26 emerging market's comparative attractiveness as business destinations. Each nation is ranked according to several dimensions and a composite index is presented ranking the countries' relative attractiveness. The weight of each factor is determined using a Delphi process based on the assessments of international business professionals and educators (Cavusgil, Kiyak & Yeniyur, 2004). This tool provides valuable information for market-seeking firms, allowing direct comparison between countries and thus reducing the complexity of evaluating relative attractiveness. It also provides insight into additional non-financial factors such as risk, economic freedom and market receptivity. However, it is unable to address the two major concerns raised in this paper: it requires significant data that is unavailable for many emerging markets, especially in Africa, and it is unable to give granular analysis at a regional level. A 2004 study also found it to have limited predictive power, explaining only nine percent of the variability in FDI. Waheeduzzaman reported that the "low explanatory power of the models can be attributed to the extraneous variables and the Delphi methodology where the subjective judgements of the evaluators are likely to offer biased scores" (2004:218).

2.5. Marketing data

To supplement the existing economic data with analysis at a much finer resolution, it is necessary to consider alternative sources of information. The marketing fraternity is another discipline that use data to predict consumer trends. Marketers have traditionally collected data on consumers, both from internal and external sources, and – by considering patterns

of behaviour, demographics and psychographics factors – developed tools to better understand the markets they serve (Lin, 2002). Using the data, marketers have been able to formulate plans to invest in certain segments, approach different markets using varied marketing mixes, and select new markets in which to trade.

This approach has a lot in common with the technique recommended by Cavusgil in terms of using available data to objectively evaluate and compare markets to assess relative attractiveness (Cavusgil, Kiyak & Yeniyur, 2004). Furthermore, data at a consumer level provide a much finer level of detail than is available using national macro-economic data and can build on some of the principles used in the Market Potential Index using new sources of data to extend the scope of application.

The combination of marketing data and market potential analysis presents an exciting opportunity for those looking to analyse emerging markets. To take advantage of this opportunity is it essential to shift the perspective of both the marketing fraternity and the business strategy community to consider the mutual benefit that could be derived from combining these disciplines. To do so it is necessary to look at the role of marketers and how this can be re-evaluated in the context of this new contribution.

2.5.1. Marketing as 'demand management'

For corporations, the primary objective is generating shareholder value, which traditionally has been measured on the income statement and balance sheet. In the current highly competitive business environment where margins are squeezed and profits eroded, it is necessary to focus increasing attention on demand generation. Ambler (2003) suggests that demand generation is a synonym for marketing, and that marketers have a significant role to play in producing shareholder value through their demand management function. The focus on demand generation also helps link marketing metrics with strategy, as decisions that affect customer preference and buying behaviour will have a direct influence on future revenue. In particular, a focus on consumer trends can alert the organisation to shifts in demand that will affect top-line revenue long before it is felt on the bottom line – where most of the measurement is traditionally focused (Srivastava, Shervani & Fahey, 1999).

There has, however, traditionally been a disconnect between marketing metrics and business objectives. To address this misalignment, many marketers and academics have recommended linking marketing metrics with strategy so as to measure customer behaviour that will predict future performance (Ambler, 2003). According to Srivastava, Shervani & Fahey (1999), marketing strategy needs to play a central role in winning and retaining

customers, ensuring business growth and renewal, developing sustainable competitive advantage and driving financial performance though business processes.

Mintz & Currim (2013a) suggests that market-oriented firms, those that keep the customer at the forefront of their decision making processes, have a better understanding of how their top line is generated and produce better results than those that focus only on the bottom line. This can be attributed to a better understanding of customers' needs, purchasing decisions, and likely future behaviour by monitoring those activities that most closely represent end-user behaviour (Ambler, 2000).

Using empirical data that measures these trends helps to facilitate better understanding of the link between business decisions and performance. This is not to say that historical data can forecast the future – rather that managers who learn to understand the metrics are in a better position to make informed decisions than those who act on instinct alone. This includes using non-financial measures such as consumer behaviour analysis combined with traditional financial data.

2.5.2. Role of marketing in predicting potential

While traditional marketing metrics are used to evaluate performance in terms of the marketing mix, the available data can be extended to decisions that go beyond marketing functions. Ambler (2000) suggests firms should monitor customer information to predict business trends – including using this information as a measure of market potential. For example, the number of retail outlets carrying a specific good could predict the spread of demand for this good in various regions across the country and thus indicate variance in the market. This type of geo-demographical analysis is proving valuable in developing nations in order to provide necessary detail in fragmented markets (Putler, Kalyanam & Hodges, 1996). This approach to marketing data as a source of strategic information poses an enormous opportunity to extend the role of the marketing department into areas of business focused on strategy, development and growth. This could present a particularly useful approach in emerging markets, as an attractive alternative to the highly aggregated economic data currently being used to evaluate market potential.

2.5.3. Selecting variables

When looking at consumer data, the set of available variables is considerable. Marketers' responsibility has been to translate this enormous source of data into market intelligence, selecting those variables that predict relevant changes and interpreting the analysis into

marketing plans. The challenge is to select the smallest set while accounting for the maximum range of results in the dependent variable (Nachum, 1994).

This approach to quantitative marketing measurement has been used since the 1960s, when Frank & Green proposed that by analysing the appropriate metrics, marketers could use limited data to make informed decisions, thus reducing the costs of error in decision making (Frank & Green, 1967). This resulted in a significant shift in marketing's approach, as the use of mathematical analysis was uncommon at the time.

The challenge now is to apply the existing thinking around forecasting and segmentation to market selection. Nachum states "different country characteristics are commonly used as bases for segmentation of the international markets. The guiding criterion for the choice of these variables is their performance as measures of demand of various countries" (1994: p54). Instead of looking for proxies for segmentation based on intuitive judgments, the research suggests that it is more useful to find statistically relevant variables. In particular it is important to understand the correlation between related variables, and to eliminate those that overlap. It concludes that it is possible to predict import demand through a limited set of variables, including consumption and production of energy, monetary stability, and income measures. By refining the list of variables, companies are able to reduce the cost of data collection while still achieving a finer distinction in their evaluation of the potential within a market.

In 1974, Schooler and Ferguson used this approach to analyse the relative potential of foreign markets. They claimed that the "need for a reliable ranking technique is particularly acute in developing areas due to scarcity of secondary data and the often volatile environment" (Schooler & Fergus, 1974: 129). It seems not much has changed in 40 years. The study proposed a set of indices to cover political, economic, social and infrastructure conditions. After analysing data across the 22 variables for 41 African countries, the authors reviewed the results and determined the same outcome could have been achieved with fewer variables, as many were strongly correlated with each other. After further investigation it was determined that only four variables needed to be included in the analysis to achieve 93 percent reliability. These four inputs were: imports, energy consumption, adult literacy and number of radios.

While this study represents a very novel approach to market evaluation, the original Schooler and Ferguson (1974) article did not receive significant attention and has failed to penetrate mainstream thinking. In the context of renewed interest in emerging markets, the

need for an alternative methodology has become increasingly important and it is therefore very worthwhile to reconsider this study and its application in the current context.

2.5.4. Marketing's ability to contribute to strategy

In addition to the contribution this study could make to the evaluation of market potential, the ability to use marketing data to evaluate new markets would contribute to the esteem afforded to the marketing fraternity. As far back as 1979, Churchill had predicted that the role of marketing would depend on its ability to develop variables that added value. This was echoed by Rust in 2004, who called for marketing to play a more strategic role in directing the growth of the business by using marketing research as a source of business intelligence, and in 2011, Pimenta de Gama, stated, "it is our belief that if companies develop an integrated set of relevant measures and systematically collect, analyse and disseminate information about them, then marketing could be viewed as a more informed, objective and recognised discipline." More recently Mintz & Currim report that the Marketing Science Institute, Institute for the Study of Business Markets and Journal of Marketing all call for further research on the use of metrics for decision making, to elevate the importance of marketing in the firm (2013b). In the recent South African Brand Barometer survey, results showed that both agencies and clients believe that marketers are not taken seriously in the boardroom. A quote from the study summarised this view as follows, "Marketing may be viewed more as 'artists' than serious business people who are obsessed with business results – we need to be seen as both" (BCSA, 2013).

In order for marketers to be taken seriously, they need to establish their value as analytical thinkers. The value that marketing data can add to firm strategy presents a compelling opportunity to demonstrate that marketing is a source of reliable, objective and highly relevant information.

2.6. Conclusion

Economic growth in emerging markets over the past decade has demonstrated the significant business opportunities these countries have to offer. The definition of an emerging market refers to future potential: high growth rates, an expanding consumer market and increased openness to trade. It also signals some of the challenges of a market that is not yet fully developed: institutional voids, lack of data and turbulence.

In these environments, market-seeking firms require information on which to evaluate risk and reward, prior to making significant investments of time or capital. It is not possible to

rely on traditional tactics to serve these new types of consumers. It is therefore essential that firms find data through which to understand the consumer and evaluate the potential of each market, not just at a national level, but also on a regional level.

This presents a challenge, due to the data deficit that characterises emerging markets and the high levels of heterogeneity within each country. In the absence of established marketing research firms, market-seeking businesses rely on crude measures such as GDP and growth rates to assess potential. The data can be unreliable and highly aggregated, limiting firms' ability to make well-informed decisions.

Existing literature on the evaluation of market potential suggests that this process should be considered in phases, at varying levels of detail – from high level screening to in-depth evaluations. At each of the stages, firms might consider internal and external factors such as firm-level advantages, culture and country-level analysis. While each of these factors plays an important role, the literature argues that the most important is that of market potential.

Critical to the process of market potential analysis is the ability to objectively compare opportunities based on their potential. The variables selected for evaluation have typically focused on macro-economic data. However, there is no consistent approach and the results are compromised due to the quality of the data in emerging markets.

As a result of these challenges, researchers have developed alternative tools to evaluate potential in emerging markets. Cavusgil's MPI is one such tool, which uses an aggregate score across a number of dimensions, weighted based on expert assessment. This complex index provides valuable information on additional factors such as risk, economic freedom and market receptivity, and establishes a score by which firms can easy compare various markets. Due to the level of complexity, the index is only available for 26 countries, and extrapolating the model to additional countries would be very challenging considering the data requirements. The index is also only available at a national level and therefore does not address the need to evaluate potential at a more granular level.

These finding point to the need for a new approach to the assessment of market potential in emerging markets. This approach should be consumer focused and should provide a fine level of granularity. As such, this study proposes the use of marketing data as an alternative filter through which to access market potential. Marketers are primarily concerned with monitoring consumer tends, and looking at data to predict demand in specific market segments. This demand management function is critical to marketers' ability to contribute to

businesses bottom fine, by stimulating and anticipating future sales. This also links marketing to strategy, to help inform decisions that will encourage positive consumer responses.

This link between marketing and business strategy, and the metrics that drive these decisions and evaluate their performance, has been a major area of interest for the marketing fraternity. By establishing marketing's ability to contribute relevant, empirical data that will help businesses make informed decisions and demonstrate their ability to engage in strategic business decisions, it might be possible to define a new role for marketers in business strategy. Part of marketers' expertise is in selecting and analysing variables that are the best predictors of future trends. Using this knowledge and the available data could provide a new way to assess market potential, particularly in emerging markets where firms often have more accurate data than is available nationally. Previous studies have demonstrated the efficacy of this approach. Based on these findings, particularly the work of Natchum, and Schooler & Fergus, this study will consider the correlation between marketing data and market potential, and establish whether this provides a useful tool in the assessment of market potential.

3.   Research proposition

3.1.   Research proposition

This study looks to evaluate the ability of marketing data to serve as an indicator of market potential. Based on an analysis of the available data, this study aims to evaluate the correlation between selected variables and market potential.

While models exist for evaluating market potential, each has shortcomings which are particularly pronounced in the context of emerging markets, with their specific challenges. First, due to the high degree of aggregation, these measures lack the resolution to describe the heterogeneity that is characteristic of emerging markets. It is therefore necessary to find new ways of looking at the question of market potential. Second, the complexity of traditional indexes require significant data for each market, much of which is not available for many emerging markets, especially in Africa.

The intention is to create an alternative filter through which market-seeking firms can evaluate emerging markets. In order for this model to be of value to businesses, the data need to be easily accessible and freely available, and the analysis needs to be simple enough to be applied without advanced statistical training or software. The prerequisites for the research problem are that they:

- must rely on secondary data available for free, online,
- can be analysed using data analysis tools available on Microsoft Excel.

The research considers four sets of variables – one dependent, and three independent.

3.2.   Dependent variable: Market potential

Markets which have potential can be identified by considering lag indicators that demonstrate the realisation of this potential through the opening of new businesses, and the investment of foreign funds (FDI). These variables indicate both local market factors which influence the number of new businesses, as well as international perceptions reflected in FDI. For the purpose of this study, number of new businesses opened is the primary source of data, as FDI can be affected by international fluctuations unrelated to market potential. However, in cases of limited internal data on businesses, FDI has been used to supplement the data.

3.3. Independent variable: Marketing data

In order to evaluate consumer trends, marketing data was used. Nachum, (1994) and Schooler & Ferguson (1974) both propose that certain metrics represent such a significant cross-section of data and that, if properly selected, a very limited number of variables can be used to accurately evaluate market potential. By specifically looking at consumer-oriented metrics that predict future trends rather than reflect historical events, these variables reflects potential rather than past performance. To cover the broadest array of information with the fewest metrics, this study proposes looking at modern equivalents of the variables found to be most effective in the research of Nachum and Schooler & Ferguson, namely:

1. Trade / imports

2. Consumption of energy

3. Literacy

4. Consumer products

The validity of these variables was re-evaluated in the current context and, after analysis of each variable independently and combined with others, certain amendments were made, as follows:

1. Imports: No amendments.

2. Consumption of energy: No amendments.

3. Literacy: Due to a lack of data on changes in literacy over the period in question, and lack of variation in the results reported across the various countries, this variable has been excluded.

4. In the 1974 study by Schooler & Ferguson, consumer products were evaluated using number of radios. However, with the rise in cellphone penetration in emerging markets, and the documented links between the growth in mobile and other demand factors such as population density and per capita income (Aker & Mbiti, 2010), it was felt that cellphone subscriptions would be more appropriate at this time.

3.4. Independent variable: Macro-economic data

The strength of the marketing data's relationship with market potential is evaluated against traditional macro-economic data. A combination of macro-economic variables were considered, based on the recommendations from the literature. According to Ojala & Tyrväinen (2008) the most common set include a combination of GDP, consumer wealth and growth rates.

3.5. Independent variable: Market Potential Index

These results are also compared with the Market Potential Index, a more comprehensive index constructed by the University of Michigan, to determine if the limited set of marketing variables can generate similarly accurate results. As the MPI only covers 26 emerging markets, including only South Africa and Egypt from the sample for this study, additional data was collected on all of the 26 countries in the index for this analysis.

3.6. Research hypotheses

This study proposes evaluation of the following hypotheses:

3.6.1. Hypothesis 1: Marketing data

- H_0: Marketing data are correlated with market potential in a country.
- H_1: Marketing data are not correlated with market potential in a country.

3.6.2. Hypothesis 2: Macro-economic data

- H_0: Marketing data show a stronger relationship with market potential than does macro-economic data.
- H_1: Marketing data do not data show a stronger relationship with a market potential than does macro-economic data.

3.6.3. Hypothesis 3: Market Potential Index

- H_0: Marketing data show a stronger relationship with market potential than does the MPI.
- H_1: Marketing data do not show a stronger relationship with market potential than does the MPI.

Based on these findings, the results are then be applied to local regions to evaluate the effectiveness of a limited set of variables in evaluating potential at a regional level. This was conducted for one country, South Africa, to evaluate if the principle can be applied to all.

3.6.4. Hypothesis 4: Application at a regional level

- H_0: Variables for national market potential can be used to evaluate regional market potential.
- H_1: Variables for national market potential cannot be used to evaluate regional market potential.

The research paper attempts to answer the hypotheses using statistical analysis, as described in Chapter 4.

3.7. Conclusion

Based on the finding from the literature, there appears to be a gap in the ability of existing tools to evaluate market potential in emerging markets. Using the data that is available from consumer-oriented marketing sources, this study aims to establish whether this might offer a viable alternative. The research therefore proposes measuring the correlation between marketing data and market potential, and then comparing these results to findings for the relationship between market potential and existing tools – economic data and the MPI. Should marketing data prove to be statistically significant, it will finally be tested at a regional level to determine whether this tool is able to address the challenges around market heterogeneity.

4.   Research methodology

4.1.   Introduction

The intention of this study is to evaluate the application of readily available secondary marketing data as an alternative for evaluating market potential. The data used in this research were collected from publicly available online databases. By selecting and analysing quantitative data from a variety of sources, this research aims to create a model which can serve as a tool for evaluating market potential in emerging markets.

4.2.   Research design

The research is structured as a quantitative study. The selection of this approach was due to the nature of the data relevant for this study. As this research looks at numerical information, it was appropriate to opt for a quantitative study. Using longitudinal secondary data from various public sources, a desktop study was undertaken to statistically analyse the relationships between consumer marketing data and market potential.

Figure 6. Types of secondary data.
(Saunders & Lewis, 2012)
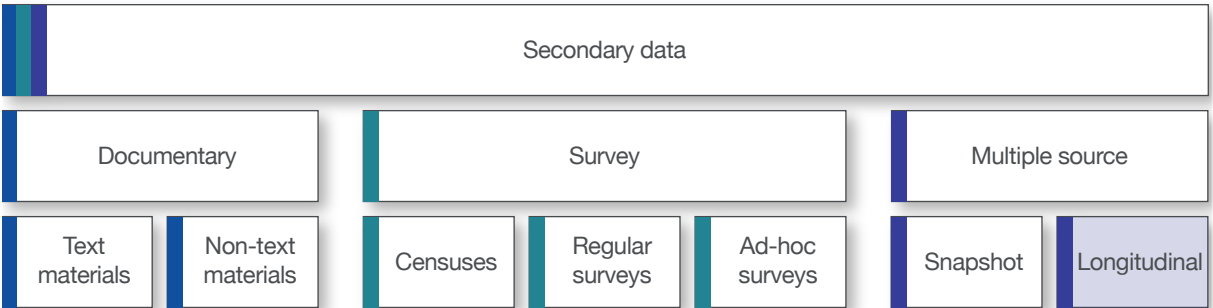
The marketing data, macro-economic data and MPI are the independent variables, and market potential is the dependent variable. The study describes the relationship between these variables in order to establish correlation, rather than to develop a controlled environment where causality can be determined. The relationship between the variables is not presumed to be causal, and the existence of numerous additional variables which would influence market potential is acknowledged. This does not undermine the validity of this study, which aims to establish which of the many variables relating to the market potential can be used as its strongest predictor. It is this correlation, and not a causal relationship, that the research aims to uncover.

4.3. Variables

For each of the three independent variables, lead indicators were selected that offer a lens through which market-seeking firms could evaluate the future potential of a market. In order to establish which of these offers the more accurate tool, they have been measured against lag indicators – empirical data of events that have already transpired to confirm that the predicted potential was realised – in this case the number of businesses opened and FDI.

Figure 7. Lead and lag indicators
Original model

The selection of variables was based on the insights gained during the literature review. As described in the research proposition above, the four variables each comprise of a set of data, as follows:

Table 1. Dependent and independent variables

Dependent variable: market potential	Independent variable: marketing data	Independent variable: macro-economic data	Independent variable: Market Potential Index
Businesses opened	Consumption of energy	GDP	Composite score
FDI	Cellphone subscriptions	Income per capita	
	Imports	GDP growth	
	Literacy (excluded)		

The first hypothesis tests the relationship between independent variable one: marketing data, and the dependent variable: market potential. This study tests if these variables are still valid, as the original paper by Schooler & Ferguson dates back to 1974 and looked to analyse import markets rather than predict potential for market-seeking firms.

Once a relationship between these variables was established, the second hypothesis was tested. This looked to establish whether marketing data provides as strong an evaluation tool as macro-economic data. In the third hypothesis marketing data was again evaluated , this time against the existing Market Potential Index. The macro-economic data and MPI were tested using the same methodology as Hypothesis 1 against the dependent variable, market potential.

The MPI has already conducted extensive research and complied data to rank emerging markets. This methodology uses eight factors to evaluate market potential and assigns a weighting to each factor to create an aggregate score for each country, as described in the table below (GlobalEDGE, 2013). By adding factors such as infrastructure, market receptivity and country risk to the framework, the MPI builds on traditional macro-economic data to provide a more complex evaluation of potential. The result of this model is a score out of 100 which describes the predicted future potential of each country. This is not the same as an empirical measure of actual performance.

Table 2. MPI score composition

Dimension	Weight	Measure Used
Market size	10/50	Urban population (million) Electricity consumption (billion kWh)
Market growth rate	6/50	Average annual growth rate of primary energy use (%) Real GDP growth rate (%)
Market intensity	7/50	GNI per capita estimates using PPP (US Dollars) Private consumption as a percentage of GDP (%)
Market consumption capacity	5/50	Percentage share of middle-class in consumption/income
Commercial infrastructure	7/50	Main Telephone lines (per 100 habitants) Cellular mobile subscribers (per 100 habitants) Number of PC's (per 1000 habitants) Paved road density (km per million people) Internet users (per 100 habitants) Population per retail outlet Percentage of Households with TV
Economic freedom	5/50	Economic Freedom Index Political Freedom Index
Market receptivity	6/50	Per capita imports from US (US Dollars) Trade as a percentage of GDP (%)
Country Risk	4/50	Country risk rating

The fourth hypothesis evaluates the use of marketing data at a regional level. This used the same approach as Hypothesis 1, but selected data at a municipal or regional level, rather than a national level. This was tested at a regional level using South African data, to determine if the principle is valid and could be applied to other markets.

Table 3. Hypotheses and variables

	Independent Variable	**Dependent Variable**
Hypothesis 1	Marketing data (national)	Market Potential (national)
Hypothesis 2	Macro-economic data (national)	Market Potential (national)
Hypothesis 3	Market Potential Index (national)	Market Potential (national)
Hypothesis 4	Market Metric Index (regional)	Market Potential (regional)

4.4. Scope

The research aims to describe market potential in emerging markets. Emerging markets have been classified using the criteria developed by the MSCI market classification framework. For the purpose of this study the list of countries includes both emerging and frontier markets, and is limited to African countries, specifically:

1. Botswana
2. Egypt
3. Ghana
4. Kenya
5. Mauritius
6. Morocco
7. Nigeria
8. South Africa
9. Tunisia
10. Zimbabwe

Because data are not available on all emerging markets, it was not possible to use a probability sample and the results of the study are therefore not fully representative of the

entire population. However, in the context of this study, it was more important to establish the viability of the proposed framework than to prove that the results are fully generalisable.

4.5. Universe

The universe is emerging markets where foreign retail businesses have an interest in market entry. This study specifically focuses on emerging markets in Africa, due to their heterogeneity and the limited marketing intelligence available.

4.6. Unit of analysis

The unit of analysis is countries—specifically emerging markets in Africa.

4.7. Sample

The selection of countries was based on access to data within the time available. This took the form of a non-probability purposive sample of the countries where sufficient data was available to analyse both dependent and independent variables. As data are only available for certain countries, probability sampling is not possible. It was therefore unnecessary to develop a sampling frame of all countries that are classified as emerging markets. This would however simply have been a reflection of the comprehensive list of countries on the MSCI market classification framework.

4.8. Research instrument

The secondary data were extracted from the relevant online platforms. Datasets were selected, cleaned and in some cases combined to create new datasets that acted as independent variables with the ability to indicate market potential.

4.9. Data collection

This study is based on secondary data. Secondary data is defined as "data used for a research project that were originally collected for some other purpose" (Saunders & Lewis, 2012: 84) This decision was informed by the objectives of the research, which aims to propose an alternative to the coarse information currently used by market-seeking firms, while at the same time offering the cost and time advantages of publicly available data. There exist numerous research and public information portals which freely share the results of significant bodies of research, that would be very difficult to generate privately.

In addition to the convenience benefits, secondary data also offer quality advantages. These databases offer measures over time and across various markets, all with the same measurement criteria, thus enabling comparison and analysis. They have been used and analysed in other research and are thus critically evaluated, suggesting their quality is more reliable than an independent study. Furthermore, as this information is already publicly available there are also no issues of access or human impact. The data sources are anonymous and there is no chance of infringing on privacy or other ethical issues (Saunders & Lewis, 2012).

At the same time it is important to be cognisant of the disadvantages associated with secondary data. As the data were collected for another purpose, the definition and criteria might not be well aligned to the research. Issues of recency and relevance need to be considered, as well as any bias in the original data collection. This is especially the case for institutional data that are used to promote an agenda (Saunders & Lewis, 2012). In order to overcome these challenges, the data has been selected from reputable sources and the criteria carefully scrutinised to ensure alignment with the research objectives.

Data were accessed from the following online sources:

Table 4. Data sources

Data	Source	Website
New businesses	World bank	*http://data.worldbank.org/indicator/IC.BUS.NREG*
Foreign Direct Investment	United Nations Conference on Trade and Development	*http://unctadstat.unctad.org/TableViewer/tableView.aspx*
Import data	International Monetary fund	*http:elibrary-dat.imf.org*
Energy consumption	International Energy Agency	*www.iea.org*
Literacy	UNESCO	*stats.uis.unesco.org*
Cellphone subscriptions	International Telecommunication Union	*www.itu.int*
Macro-economic data	International Monetary fund	*www.imf.org*
Market Potential Index	GlobalEDGE	*http://globaledge.msu.edu/knowledge-tools/mpi*

4.10. Data analysis

The quantitative data available are numerical in nature. The data were first arranged according to variables and years. This was then repeated for each of the ten countries. Missing data points were noted, and estimates of an average of the existing data used, based on a statistical extrapolation of the available data. While this is an imperfect solution, it was the best alternative in the absence of the true data.

The data were then analysed using descriptive statistics and regression analysis. Based on the research objectives of this study it was important that the analysis rely on tools that are readily available, and that the complexity of the statistical process be practical enough for marketing managers to replicate. All analysis was conducted in Microsoft Excel, using the data analysis plug-in.

It was decided to follow the methodology described in a previous study which had untaken to measure the relationship between similar variables. Waheeduzzaman & Pradeep's 2006 paper investigates the relationship between the MPI and FDI to determine if in fact the MPI provides an accurate measure of market potential. The study outlines its research objectives as follows: "Does MPI as a composite explain the FDI in emerging markets? How good is this as a measure? What can we say about its validity or predictive ability? Would MPI show better results than the traditional variables measuring the market potential like GDP, per/ capita income, or population? This study explores these questions" (Waheeduzzaman & Pradeep, 2006: 48). These questions are answered using regression analysis to determine the statistical significance of the finding, looking at the P-values, and the strength of the explanatory power of the independent variable (the MPI) indicated by the R-squared value.

Multiple regression describes a set of techniques that can be used to explore the relationship between one dependent variable and a number of independent variables (Pallant, 2001). Multiple regression is based on correlation and can be used to conduct a sophisticated exploration of the interrelationship between a set of variables (Pallant, 2001).

The multiple regression equation $y = b_0 + b_1 x_1 + b_2 x_2 + ... b_x x_x$ tests whether there is a relationship between y and any of the x variables. If there is no relationship, all the regression coefficients ($b_1, b_2, ..., b_x$) will equal zero. This is the basis on which we test the significance of the regression equation (Weiers, 2011).

The results of a regression analysis can be interpreted using an Analysis of Variance (ANOVA). The ANOVA is to test for significant differences between means (Hill & Lewicki,

2007). A large F-significance result indicates that there is more variability between the groups than there is within each group – and therefore it can be concluded than any relationship could be attributed to random chance rather than statistical probability.

The results of these were analysed, and considered the following outputs:

- **R-squared:** R-square is the percentage of variation of the dependent variable explained by an explanatory or a set of explanatory variables. R-square measures the goodness of the linear fit. The better the linear fit is, the closer R-square is to 1.
- **F-significance value or P-value:** The critical probability in choosing between the null and alternative hypotheses. The P-value of a sample is the probability of seeing a sample with at least as much evidence in favour of the alternative hypothesis as the sample actually observed. The smaller the P-value, the more evidence there is in favour of the null hypothesis. If a P-value is less than 0.1, it provides strong evidence that the null hypothesis is true.
- **Degrees of freedom:** The number of degrees of freedom is equal to the number of observations minus the number of constraints or assumptions needed to calculate a statistical term. (Albright, Winston & Zappe, 2009 and Zikmund, 2003).

This approach can be linked to the marketing function of demand forecasting. Part of the marketers' responsibility is to predict demand, using data to forecast future sales. These forecasts rely on lead indicators – such as an increase in pregnancies to predict increased nappy sales. The most common technique to represent this relationship is regression, which looks at the influence of the independent variable(s) on another dependent variable. An analysis of this relationship can determine the strength of the correlation between the variables, with the variation measured by the coefficient of determination, represented by the R-squared function. The closer the relationship, the larger the R-squared, up to a value of 1.0 (Davis, 2007).

4.11. Limitations of study

The study is limited to African emerging markets and did not cover the full spectrum of countries. This was largely due to time constraints. However, should the approach prove valid, this study could be replicated for other markets. As a result of the specified sample, the data set was limited to ten countries over six years. This is a relatively small sample and outliers can have a significant impact on the statistical findings. The data used were also

susceptible to inaccuracy and bias, and as the study used secondary data there was not an opportunity to scrutinise the raw data or their sources.

All financial data is reflected in a base currency, US dollars. This does not account for currency fluctuations during the period, which might influence the accuracy of the data. Other external factors have also influenced the dependent variable, and while this study seeks only to infer correlation and not causation, factors such as the 2008 economic crisis and the 2011 Arab Spring, could have influenced the patterns and relationships between variables.

In certain instances, data was not available for each of the years, and inferences had to be drawn to complete the data set. In these cases the existing data were extrapolated to estimate the missing data. This compromises the integrity of the data, but to complete the analysis this proved to be the most accurate method available.

4.12. Ethical consideration

Ethical issues have been considered throughout the study. No human being or animals were used in addressing the research problem as the study was conducted entirely on secondary data made available to the general public online. No prior permission was required to use the data and no physical or psychological harm has been caused to anyone during the study. The study was granted clearance by the Gordon Institute of Business Science ethical clearance board prior to commencement.

4.13. Conclusion

This research intends to provide market-seeking firms with an alternative tool with which to conduct market evaluation. In order for this tool to be most useful, it is important that it rely on freely and easily accessible data, which can be analysed using widely available statistical tools such as Microsoft Excel. This established the parameters for the research design – with a focus on the use of secondary data.

In order to evaluate the strength of each of the variables under consideration, the study elected to consider quantitative data to establish an empirical, objective basis for comparison. Variables were selected based on the literature, which suggested that market-seeking firms have traditionally considered macro-economic data and indexes such as the MPI as a basis for market evaluation. To evaluate the strength of marketing data as a tool, four sets of data were considered, based on a review of previous research. Each of the three

independent variables is comprised of a bundle of data from different sources. This was analysed in its raw form, with the exception of the MPI which takes the form of a composite index and as such the raw data were not available.

The study is limited to ten African countries – those classified as emerging or frontier according to the MSCI market clarification framework. This purposive sample was based on the ability to collect the necessary data in the time allowed. Data were collected from a range of online databases. This allowed for ease of access, consistency of data and avoidance of any ethical implications, but also created certain challenges relating to the original intention of the data and gaps in data sets.

The primary focus of the research was to evaluate the efficacy of marketing data in evaluating market potential. This was achieved using regression analysis to determine correlation between the dependent (market potential) and independent variable (marketing data). This was supported by further consideration of the strength of marketing data compared to traditional variables: macro-economic data and MPI. The methodology followed the same approach as a 2006 study by Waheeduzzaman & Pradeep. Finally, the marketing data was tested at a regional level to determine whether the model could be applied at a more granular level.

The analysis is limited in its scope, and the results are therefore only an indication of the validity of the proposed approach. Should the findings be significant, it would be valuable to extend this research to additional countries and a broader data set.

5. Research Findings

5.1. Introduction

This chapter will present the consolidated finding for analysis applied to the dependent and independent variables across the ten countries. Based on the methodology described in chapter four, each of the hypotheses were tested using multiple regression analyses. Results were considered significant based on a confidence level of 90%, and the strength of the relationship between the variables was determined by the R-squared statistic.

5.2. Sample data

Secondary data collected from a range of freely available online sources were consolidated into a spreadsheet, covering the ten African countries specified in the research approach, over a period of six-years – from 2008 to 2013.

Each of the 60 data points (ten countries across six years) across the ten variables (three sets for macro; one for MPI; four for marketing; and two for market potential) were treated as independent units, as trends over time were not relevant to the study's ability to measure the relationship between independent and dependent variables. For each independent variable the data was presented in its raw format, with no attempt to normalise or standardise the data into a common unit of measure. For the dependent variable, however, a standardised index score was computed using a z-score as described below.

The various data points for the dependent and independent variables were then considered. For the dependent variable, it was preferable to use the number of businesses opened as the primary data point, as this presented a more direct measure of potential. However, in cases where data was limited, it was necessary to also consider FDI. To aggregate the number of businesses opened and FDI it was necessary to standardise the data. Standardisation is a statistical process that enables comparison of variables with very different distribution. To translate the various data sources into a single score, each variable was transformed into z-scores. This was necessary to normalise the different scales across the data to prevent any implicit weighting. The z-score were formulated using a standard normal distribution equation:

$$z = \frac{x - \mu}{\sigma}$$

where:

- z = the distance from the mean, measured in standard deviation units
- x = the value of x in which we are interested
- μ = the mean of the distribution
- σ = the standard deviation of the distribution

By applying the standard normal distribution the data was translated into standardised units which could be added together into a single market potential score.

For the independent variables no such aggregation was required, as the regression analysis uses coefficients to adjust for the various data units.

5.3. Descriptive statistics

The data was then analysed using descriptive statistics. Scatter plots depicted the relationship between sets of variables, and indicated where patterns were apparent. A scatterplot for the relationship between businesses opened (on the y-axis) and each of the dependent variables (on the x-axis) was considered. These graphic depictions indicate a predominantly linear relationship between the variables, with some clustering resulting from the variance between countries. An additional test was run to assess the distribution of the data using a histogram. These were analysed to determine whether the data was normally distributed.

The tests were first run for each of the data sets used as part of the marketing variable, and then for the components of the macroeconomic variable. The results were analysed to determine linearity to evaluate the suitability of linear regression analysis, as well as the distribution of the data to assess normality. An example of this process is illustrated below, using cellphone data.

Graph 1. Cellphone subscriptions - in relation to businesses opened (inclusive)
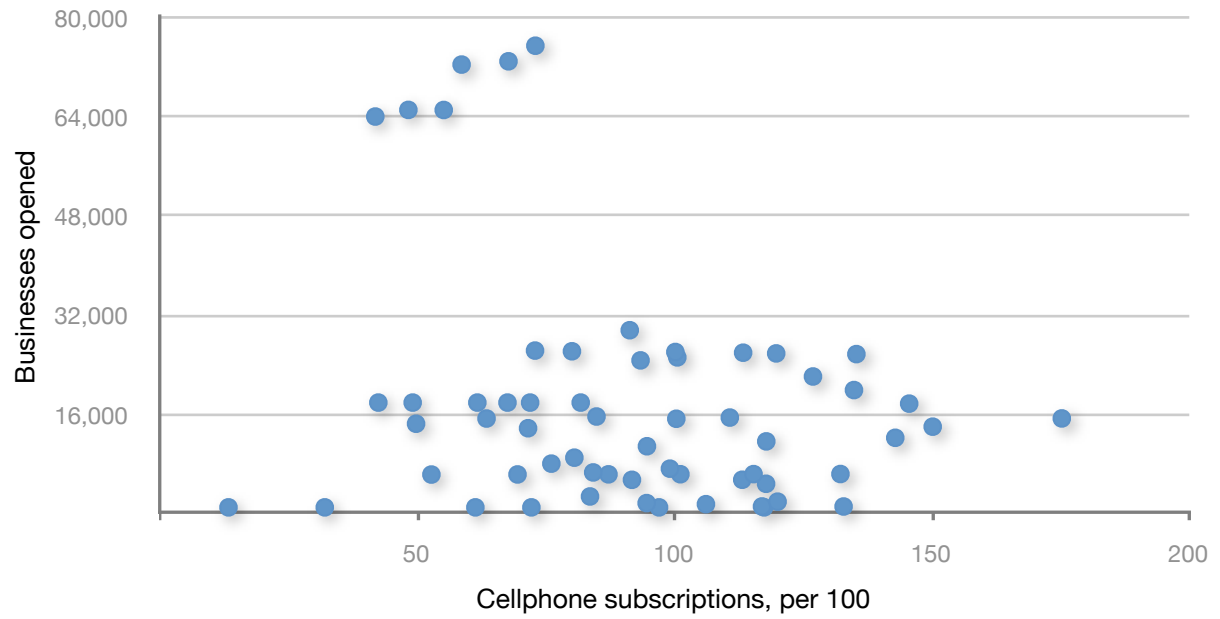
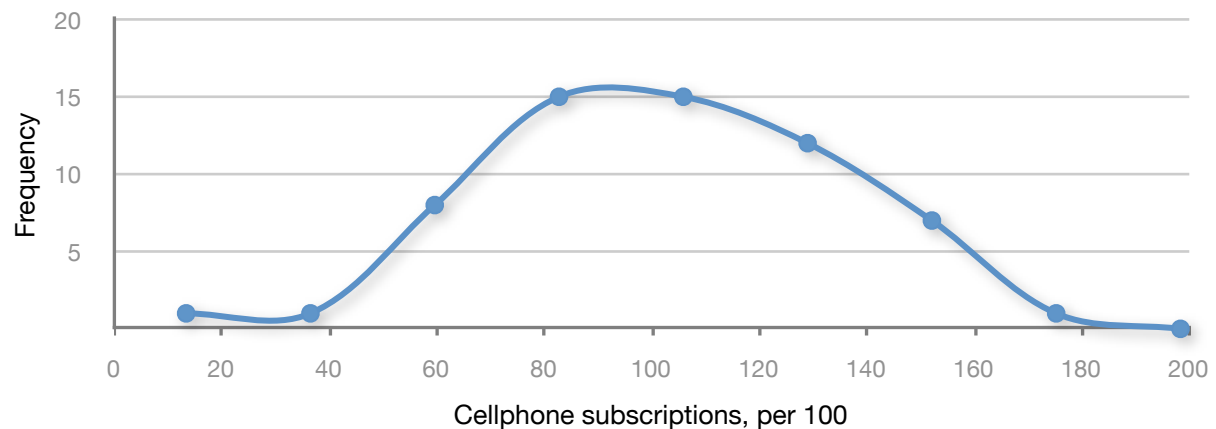*Graph 2. Cellphone subscriptions - in relation to businesses opened (excluding Nigeria)*
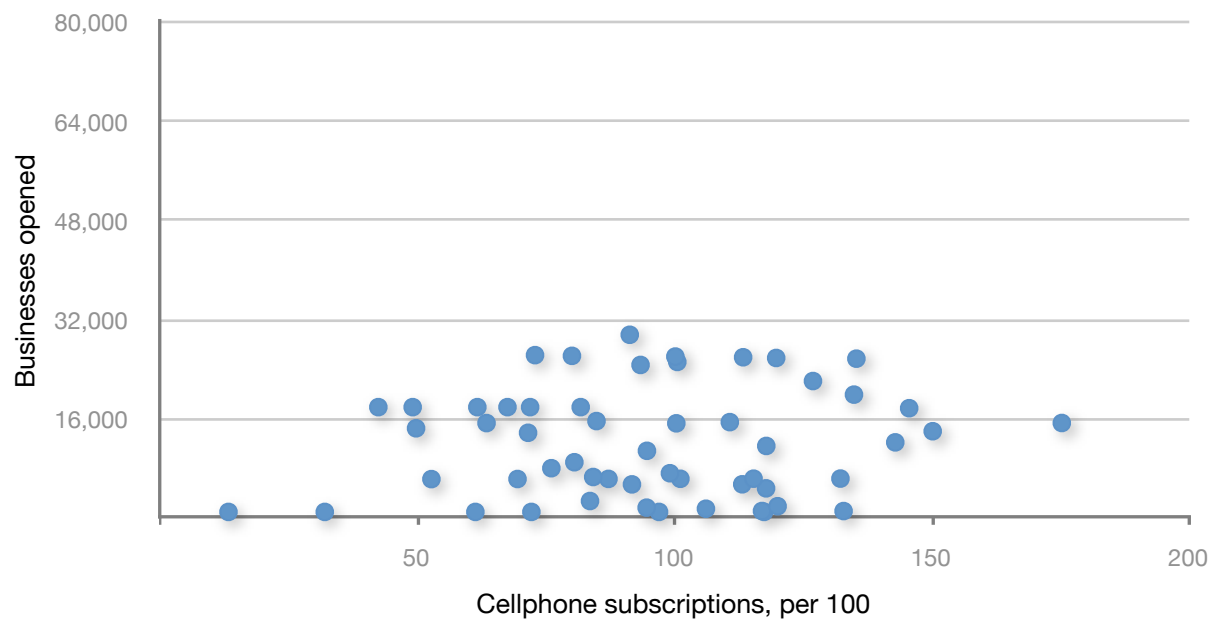
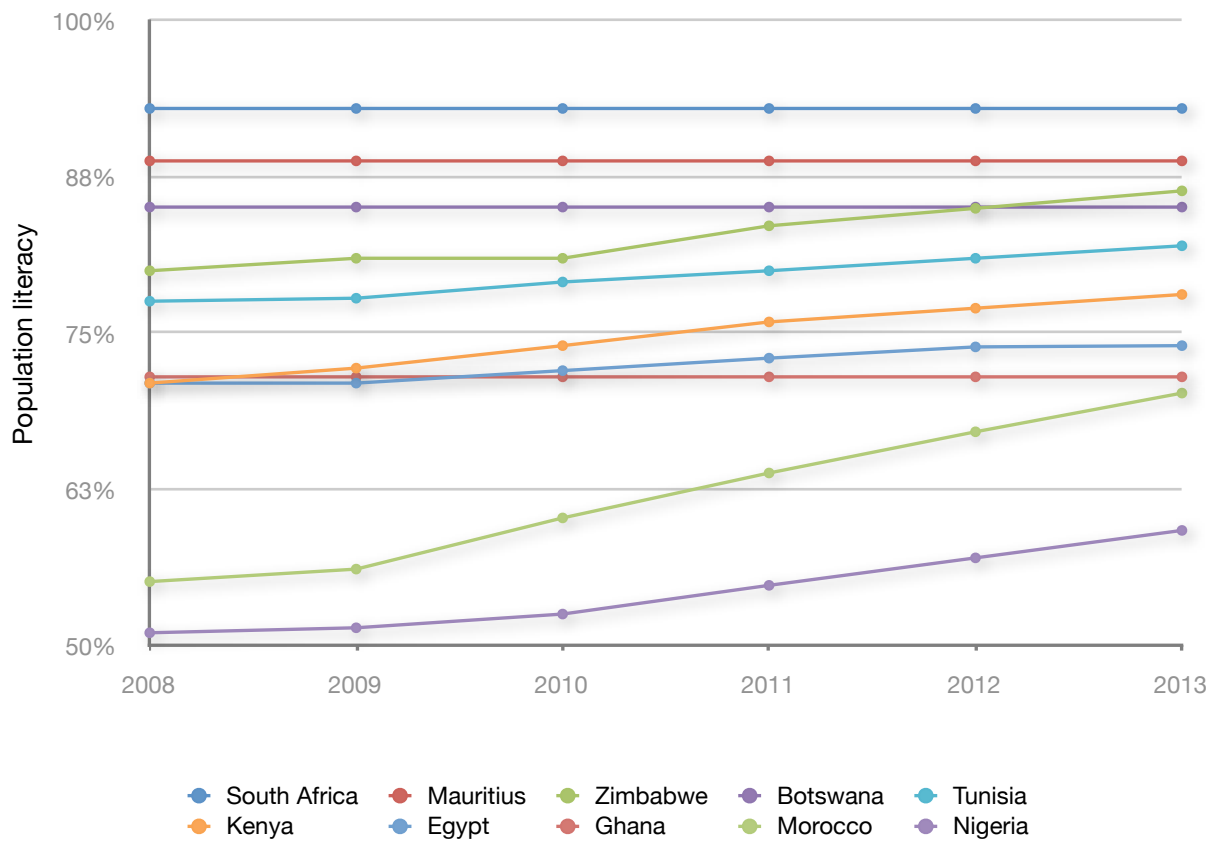*Graph 3. Cellphone subscriptions - data distribution*

A visual analysis of these graphs indicates that there is a linear relationship between cellphone subscriptions and businesses opened, approximated by the best-fit line. the data distribution is in a mound shape, suggesting a relatively normal distribution.

The scatterplot also revealed outliers. The number of businesses opened in Nigeria (ranging from 64,017 – 75,436) is significantly higher than the mean of 17,891. However, the exclusion of these data points does little to influence either the linearity or distribution of the data and were therefore included in the data set.

The overall conclusions to be drawn from a visual analysis of the macro-economic data were limited, due to the restricted number of data points being unable to create clear patterns. In general the data appeared to be linear in nature, with some clustering occurring around each of the countries. Preliminary analysis could not determine clear trends in the relationship between each of the variables and market potential. As no clear results were found in this analysis is was necessary to continue the assessment at a more sophisticated level of analysis.

This process confirmed the earlier suggestion that it would be prudent to exclude literacy rates from the marketing data, due to the static nature of scores over time for all countries except Nigeria and Morocco where reporting is more regular, and a lack of distinction exists in the scores across different countries. This can be seen in the graphs below, showing the difference between literacy rates and cellphone subscriptions which reflects greater variation.

Graph 4. Scatterplot - literacy rates

Legend: South Africa, Mauritius, Zimbabwe, Botswana, Tunisia, Kenya, Egypt, Ghana, Morocco, Nigeria

Graph 5. Scatterplot - cellphone subscription
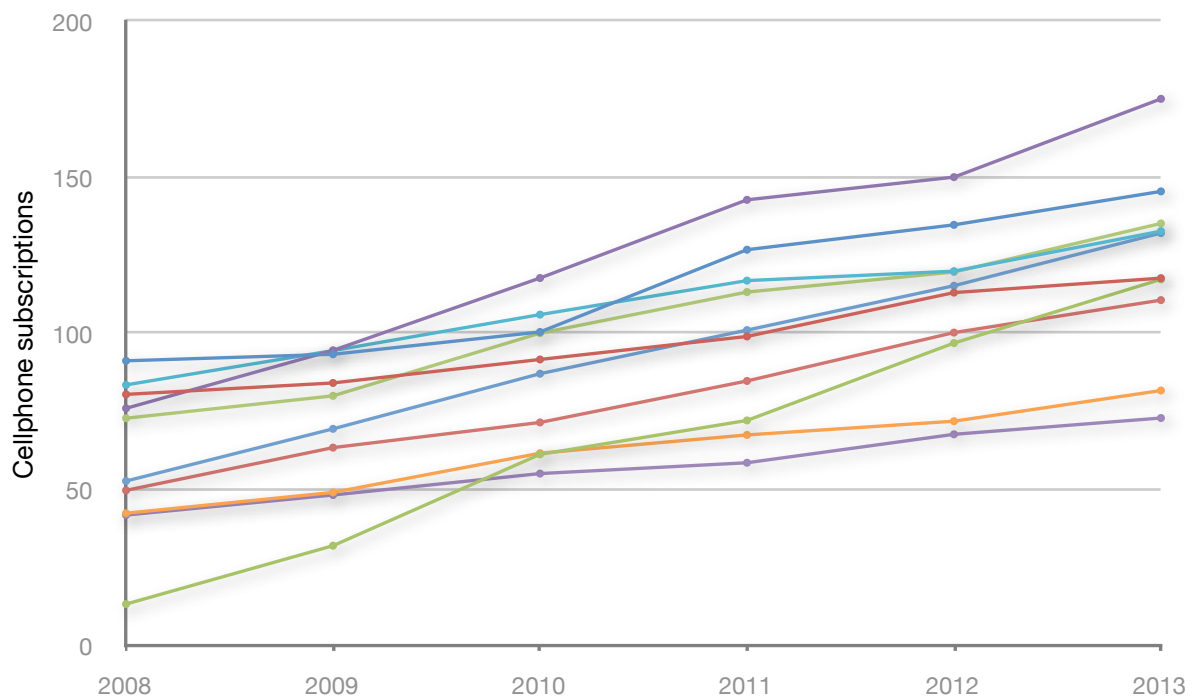
Due to the numerous data sets under consideration, and the limited number of data points for each (six years per country, across ten countries, and ten variables) it was not necessary to conduct further descriptive statistics of means and variance. In fact, the relationship of data points within each set were not relevant to the study and did not need to be analysed in comparison to one another.

Multiple regression analyses were conducted to test each of the three independent variables against the dependent variable to prove or disprove hypotheses one through three.

To understand these results further, the marketing data were then investigated per country and per data set – cellphone subscriptions, energy usage and imports – to determine the best possible combination of data.

This final set of data was used to test Hypothesis 4, looking at regional data from South Africa to determine if the model could be applied at a more granular level.

5.4. Hypothesis 1: Marketing data

- H_0: Marketing data are correlated with the market potential in a country.
- H_1: Marketing data are not correlated with market potential in a country.

To test Hypothesis 1: Marketing data are correlated with market potential in a country, the data were analysed using a regression analysis. The 60 data points for both dependent (businesses opened) and independent variable (cellphone subscription, energy consumption, and imports) were considered, and the results of the analysis were evaluated.

Table 5. Results of regression analysis - Hypothesis 1

Measure	Value
R-square	0.446876
P-value	0.000000
Degrees of freedom	59

The table above depicts a summary output of the analysis, and indicates that the test is statistically significant, with a P-value of 0.00, which is less than the confidence level value of 0.1. This result indicates the relationship can be attributed to the data, and not mere coincidence. It can therefore be inferred that there exists a statistically significant

relationship between the marketing data and market potential, and that Hypothesis 1 can be accepted, and the alternate hypothesis, that marketing data is not correlated with market potential in a country is rejected.

To evaluate the strength of the relationship between marketing data and businesses opened, one can consider the R-Squared value of 0.4469. This indicated that the independent variable is able to account for 44.69% of the changes in the independent variable.

Table 6. Results of regression analysis - Coefficients

Measure	Coefficient
Imports	0.53
Energy	-7.86
Cellphones	-132.299

To further understand the practical significance of the R-squared Cohen's effect size was calculated using the following formula (Cohen, 1998):

$$f^2 = \frac{r^2}{1 - r^2}$$

$$f^2 = \frac{0.45}{1-0.45} = 0.81$$

The f^2 for the results shown in this analysis is 0.81. By convention, f^2 effect sizes of greater than 0.35 are defined as large. As such, it can be concluded that the effect of marketing data on market potential is large.

Of the three data sets used in the analysis, the variable with the largest absolute value for the coefficient was cellphones, indicating this has the most pronounced effect. Imports account for the smallest impact. The negative value indicates that as cellphone subscriptions increase, so market potential decreases. This result is contrary to conventional thinking, and requires further discussion in Chapter Six.

5.4.1. Analysis per country

To test the validity of these findings, the analysis was then applied at a country level. Initially regression analysis was run to determine the relationship between market potential and marketing data, over the five-year period per country. However, the limited data set (just five data points) impaired the quality of the test and the significance of the results was compromised, as indicated by high P-values.

In order to compensate for the limited data set, the combination of variables used as part of the marketing data set was reduced from three to two – excluding imports, which had been shown to have to smallest impact.

The regression analysis was then run using cellphones and energy use as the independent variable and businesses opened as the dependent variable, and then with the market potential standardised score in a second test for those countries where the data available on number of businesses opened was limited (Ghana, Kenya & Zimbabwe).

Table 7. Results of regression analysis - Individual country analysis

Country	F-significance	R-square
Botswana	0.0170	0.9938
Egypt	0.000	0.999
Ghana*	0.0755	0.8213
Kenya*	0.104	0.7781
Mauritius	0.0873	0.8032
Morocco	0.0004	0.9948
Nigeria	0.0605	0.8459
South Africa	0.0020	0.9844
Tunisia	0.0787	0.8163
Zimbabwe*	0.0792	0.8155

The results across all ten countries show the statistical significance of the analysis and confirm the correlation between marketing data and market potential. The R-square values of between 77% and 99% demonstrate that the degree of fit between the two variables is very strong.

5.5. Hypothesis 2: Macro-economic data

- H_0: Marketing data show a stronger relationship with market potential than does macro-economic data.
- H_1: Marketing data do not show a stronger relationship with market potential than does macro-economic data.

The analysis of Hypothesis 2, followed the same process as Hypothesis 1. The 60 data points for both dependent (businesses opened) and independent variable (GDP, income per capita and GDP growth) were considered, and the results of the analysis were considered.

Table 8. Results of regression analysis - Hypothesis 2

Measure	Value
R-square	0.3470
P-value	0.000000
Degrees of freedom	59

The table above depicts a summary output of the analysis, and indicates that the test is statistically significant, with a P-value of 0.00, which is less than the confidence level value of 0.1.

Again, the Cohen's effect size was calculated (Cohen, 1998) and determined to be 0.53, which is also defined as a large effect.

However, in comparison with the R-squared indicated in the regression analysis for marketing data, the fit is not as strong (34.7% versus 44.7%). These results indicate that marketing data show a stronger relationship with market potential than does macro-economic data, and that the null hypothesis can be accepted.

5.6. Hypothesis 3: Market Potential Index

- H_0: Marketing data show a stronger relationship with market potential than does the MPI.
- H_1: Marketing data do not show a stronger relationship with market potential than does the MPI.

The Marketing Potential Index offers market-seeking firm a comprehensive index by which to evaluate potential. Some of the drawbacks of this tool have been discussed in the literature. It was therefore relevant to test the proposed marketing data against the strength of the MPI. As the MPI only covers 26 emerging markets, the majority of the countries covered in this study were excluded – only South Africa and Egypt are ranked in the MPI. To conduct the analysis it was necessary to supplement this with additional data points from other emerging markets outside of Africa. To do this, additional data was gathered for businesses opened in all the countries on the MPI list – with the exception of China, Israel, Saudi Arabia, Taiwan and Venezuela for which there was no or insufficient data. This left a list of 21 countries, including South Africa and Egypt, for analysis over six years with a total of 126 data points.

Regression analysis was then conducted and the results reviewed, as per the table below:

Table 9. Results of regression analysis - Hypothesis 3

Measure	Value
R-square	0.006134
P-value	0.414047
Degrees of freedom	109

The P-value of 0.41 is greater than 0.1, the confidence level, and therefore the analysis is found to be statistically insignificant – indicating that the correlation between the independent variable, MPI, and the dependent variable, market potential, could be a result of chance rather than statistically probability. Further to this, the strength of the relationship between the variables is less than 1%, and the Cohen's effect size was calculated as 0.006 which is classified as small (Cohen, 1998). As such, the null hypothesis, that marketing data have a stronger relationship with market potential than does the MPI, is accepted.

5.7. Hypothesis 4: Application at a regional level

- H_0: Variables for national market potential can be used to evaluate regional market potential.
- H_1: Variables for national market potential cannot be used to evaluate regional market potential.

To test the validity of these findings at a more granular level, the variables from Hypothesis 1 were considered at a provincial level, using South Africa as a sample. Further data were collected on cellphone subscriptions, energy use and number of businesses per province – drawing on published articles which reference this data. The data collection presented some challenges, as it was not always possible to find current data. As data on the total number of businesses opened were not available, potential was measured using number of non-VAT registered businesses per province. However, the final data set used was consistent across the sample, and therefore the limitations did not significantly compromise the results of the analysis.

Data were accessed from the following sources:

Table 10. Data sources

Data	Source	Website
New businesses	Stats SA (2009) Survey of Employers and the Self-employed	*http://www.statssa.gov.za/publications/P0276/P02762009.pdf*
Cellphone usage	Stats SA (2011) General Household Survey	*http://www.statssa.gov.za/publications/P0318/P0318April2012.pdf*
Energy consumption	Department of Minerals and Energy (2002) Energy Efficiency Baseline Study	*http://www.energy.gov.za/EEE/Projects/Energy%20Efficiency%20Baseline%20Study/Main%20Report.pdf*

The dependent variable, market potential, was analysed compared to the independent variable, marketing data using regression analysis, and the results were considered as per the table below:

Table 11. Results of regression analysis - Hypothesis 4

Measure	Value
R-square	0.804267
P-value	0.007499
Degrees of freedom	8

The P-value of 0.00 is less than 0.1, the confidence level, and therefore the analysis is found to be statistically significant – indicating that there is a statistical correlation between the

independent variable, marketing data, and the dependent variable, market potential at a provincial level. The R-square of 0.80 indicates that marketing data is able to account for 80% of the changes in the independent variable. The Cohen's effect size was calculated as 4.00 which is very large (Cohen, 1998).

Based on these finding the null hypothesis is accepted: variables for national market potential can be used to evaluate regional market potential.

5.8. Summary of results

The research objective aimed to evaluate the ability of marketing data to serve as indicators of market potential. The results of the regression analysis suggest that there exists a correlation between marketing data and market potential. This was first tested across all the countries as a single data set. The results were both statistically significant, and indicated a strong relationship between the dependent and independent variables. The data was then analysed on an individual country basis using the two strongest data sets – cellphone subscriptions and energy consumption – and the results for each country demonstrated a strong correlation between marketing data and market potential.

The analysis indicated that this relationship is stronger than the correlation between macro-economic data and market potential, but that macro-economic data nonetheless show statistically significant correlation with market potential.

The analysis found that the relationship between the Market Potential Index and actual market potential in the ten African countries measured was not statistically significant.

Based on these findings the most compelling independent variables (cellphone subscriptions and energy consumption) were analysed at a regional level across the nine provinces of South Africa. The results show that the relationship remains statistically significant when considered at this level of granularity.

Table 12. Summary of findings for Hypotheses 1 - 4

	Null hypothesis	**Alternate hypothesis**	**Result**
Hypothesis 1: marketing data	Marketing data is correlated with market potential in a country.	Marketing data is not correlated with market potential in a country.	Null hypothesis accepted
Hypothesis 2: macro-economic data	Marketing data shows a stronger relationship with than macro-economic data.	Marketing data does not show a stronger relationship with market potential than macro-economic data.	Null hypothesis accepted
Hypothesis 3: Market Potential Index	Marketing data shows a stronger relationship with market potential than the MPI.	Marketing data does not show a stronger relationship with market potential than the MPI.	Null hypothesis accepted
Hypothesis 4: marketing data at a regional level	Variables for national market potential can be used to evaluate regional market potential.	Variables for national market potential cannot be used to evaluate regional market potential.	Null hypothesis accepted

5.9. Conclusion

The research findings describe the outcomes of the four hypotheses using regression analysis. Based on the methodology used in Waheeduzzaman & Pradeep's 2006 paper, the independent variables – macro-economic data, the MPI, and marketing data – were analysed to determine the nature of their relationship with the dependent variable – market potential. This process involved the collection of data from a number of free online databases, for each of the ten African counties for a period of six years. To preserve the integrity and detail of the data, the research recorded all the data points in their raw form, with the exception of the creation of a standardised index for the market potential that combined both FDI and businesses opened, which was used to analyse potential on an individual country basis when there was insufficient data on businesses opened.

Preliminary analysis considered descriptive statistics to identify patterns, test for linearity and normality of distribution. The results produced limited insight, with the restricted number of data points unable to create clear patterns. In general the data appeared linear in nature. Data points for each country tended to cluster together, creating some fluctuation in the distribution. However, in order to generate more conclusive insight it was necessary to engage in more sophisticated statistical analysis. This took the form of regression analysis,

as was the case in the Waheeduzzaman & Pradeep paper. The same test was performed for hypothesis one through three, which each of the independent variables tested individually to determine if a relationship exists between marketing data and market potential, and whether this relationship provides greater explanatory power than those of macro-economic data, and the MPI. A final test looked at the relationship between marketing data and market potential at a regional level.

Hypothesis 1 evaluated the correlation between marketing data and market potential. this was found to be statistically significant, with 45% explanatory power. This was further tested at a country level, using the standardised index in cases where data on businesses opened were dubious. The results proved significant for each of the ten countries, with 77% to 99% degree of fit between marketing data and market potential in each case. The analysis of hypothesis 2 showed a statistically significant relationship between macro-economic data and market potential, but accounting for 10% less of the explanatory power (35%). In the case of hypothesis 3, the relationship proved to not be statistically significant, indicating that the MPI is not correlated with market potential. As such, the null hypothesis for each of the three hypotheses was accepted – marketing data is correlated with market potential in a country, and shows a stronger relationship than macro-economic data or the MPI. This was further tested at a regional level, using cellphone subscriptions and energy use correlated with number of non-VAT businesses per province. As the data were collected from alternate sources than country data, the exact data descriptions varied from hypothesise one through three, but as there was consistency within the analysis, it did not compromise the results significantly. The results prove statistically significant, and indicate that marketing data are able to account for 80% of the changes in the market potential at a provincial level. As such the null hypothesis for hypothesis four was accepted.

These results support the findings described in the literature review and provide the basis for meaningful consideration of a the value of marketing data in assessing market potential – to be presented in the chapter to follow.

6. Discussion of results

6.1. Introduction

The objective of the study was to evaluate the ability of marketing data to serve as indicators of market potential.

A review of the literature on the evaluation of market potential indicated that, while there exist numerous methods by which to evaluate new markets, there is no standard approach and the existing tools are limited in their application to emerging markets. This research proposed an alternative approach, using consumer focused marketing data as an additional filter through which to consider market potential.

6.2. Hypothesis 1: Marketing data

The research aimed to assess four hypotheses in addressing the overall research problem. First, the data were analysed to determine if in fact a relationship does exist between marketing data and market potential. Marketing data include a wide range of sources that might be useful in such analysis. It was therefore decided to focus the analysis of four variables specified in the study by Schooler and Ferguson (1974), modified for the current context to just three. This data were collected for the ten African countries included in the sample, and analysed in relation to the dependent variable, market potential – indicated by the number of businesses opened.

The results of the regression analysis confirm that there is a statistically significant relationship, and that marketing data have 45% explanatory power. Based on these finding it can be concluded that marketing data provide a viable source of intelligence in assessing market potential – and thus the null hypothesis is accepted.

This result both confirms the determination of the Schooler and Ferguson study and addresses Sheth's (2011, p. 179) recommendation that market evaluation should be based on "comparative empirical research on the actual behaviour of customers using marketing analytics."

Furthermore, the ability for marketing data to contribute to market potential assessment gives further support to the arguments of academics such as Ambler, who argue that marketing has knowledge and information that can be shared on a strategic level and that

the marketing fraternity needs to use the data available to elevate their position and demonstrate their value as custodians of demand management (Ambler, 2003).

To assess the validity of these findings, further analysis was conduced on an individual country basis. Each of the ten African countries was analysed – taking into consideration both the number of businesses opened and a composite score including both businesses opened and FDI in countries where the data on businesses opened was compromised.

The data set was limited to six points per country, across the dependent variable and independent variable consisting of data for cellphones, imports and energy. This analysis failed to produce a statistically significant result. To compensate for the small data set, the variables were reduced to two (excluding imports which had been shown to have the smallest impact). The regression was then run again, producing statistically significant results for each country – and R-squared values ranging from 77% and 99%, indicating the degree of fit between the two variables was very strong.

Based on the initial analysis, it would therefore be possible to consider the sample of African countries and, by comparing their cellphone and energy use, be able to make an objective judgement as to which present the most attractive opportunities for further consideration. The equation produced by the regression analysis can be applied to the data to predict the likelihood of businesses opening, as follows:

$$y = b_0 + b_1 x_1 + b_2 x_2 + ... b_x b_x$$

where:

- x_1 = imports
- x_2 = energy consumption
- x_3 = cellphone subscription

therefore, when referencing the intercept and coefficient from the regression analysis the equation for market potential would be:

$$y = 25329 + 0.53 x_1 + 7.86 x_2 + 132.3 x_3$$

Using the data for 2013, the predicted number of businesses opened would result in a comparative ranking shown below:

Table 13. Input data per country for regression equation

	Energy	Cellphones	Imports	Predicted businesses opened	Rank	Actual businesses opened
Nigeria	143	72	65,208	49,205	1	75,436
Morocco	837	135	48,996	26,917	3	25,700
Kenya	164	81	18,574	23,105	5	17,897
South Africa	4,539	145	104,520	25,992	4	17,724
Ghana	342	110	21,961	19,677	6	15,479
Botswana	1,683	175	9,208	-6,182	10	15,340
Egypt	1,795	132	72,752	32,433	2	6,376
Mauritius	1,727	117	2,985	-2,239	9	4,803
Tunisia	1,580	132	26,805	9,600	7	1,136
Zimbabwe	1,022	117	5,150	4,508	8	1,000

The results offer a relatively accurate indication of the actual number of businesses opened – with the exceptions of Botswana where the high cellphone subscription data results in an anomaly, and Egypt which is ranked second highest due to its high import numbers but performed second from last.

Based on this analysis, combined with insights from other data sources, a market-seeking firm might select top candidates (in this example, Nigeria, Egypt, Morocco, South Africa and Kenya) as a subset on which to conduct further analysis and invest time and resources to understand the dynamics of each market in greater detail. At this stage, the firm would enter the third phase of the market evaluation process: final evaluation (Cavusgil, 1985).

The ability to use marketing data, which represent an empirical set of evidence based on actual events rather than subjective judgements or future prediction, also offers a significant step towards addressing some of the concerns around the inaccuracy of African statistics, as raised by Jerven and others.

It is important to note that the regression analysis indicates a negative correlation between both cellphone penetration and energy consumption, and the number of businesses opened. This contradicts the literature which points to a positive link between the growth in mobile and other demand factors such as population density and per capita income (Aker &

Mbiti, 2010). While this finding falls outside of the scope of this study, it would be worthy of further consideration in future research.

6.3. Hypothesis 2: Macro-economic data

To assess the strength of the results presented for marketing data, the second hypothesis set out to evaluate the relative strength of macro-economic data when correlated with market potential. The methodology used followed the same process as Hypothesis 1, with marketing data replaced by macro-economic data including GDP, income per capita, and GDP growth as the independent variable.

The results of the regression analysis confirm that there is a statistically significant relationship between the variables. However, the strength for macro-economic data is 10% weaker than that recorded for marketing data. This confirms that the marketing data shows a stronger relationship with market potential than macro-economic data.

Table 14. Results of regression analysis - Hypotheses 1 & 2

Measure	Value - marketing data	Value - macro-economic data
R-square	0.446876	0.3470
P-value	0.000000	0.000000
Degrees of freedom	59	59

The high degree of significance indicates that macro-economic data can still serve a valuable role in contributing to market potential analysis. However, it is important to consider macro-economic data as part of a broader set of tools for analysis.

Some of the relative weakness of the results can be attributed to some of the findings described in the literature review regarding the quality of national statistics for African countries. Data such as GDP suffer from serious inaccuracy and variation across different sources due to a lack of basic data, inconsistency in measurement and aggregation, variance in base years and the effects of adjustments in all directions to compensate for the above. The data used for this analysis were taken from the World Development Index database which Jerven argues is heavily affected by these problems (Jerven, 2013).

Macro-economic data also provides insight into trends at a national level, and do not offer the same level of consumer-demand orientation as is evident in the marketing data.

(Srivastava, Shervani & Fahey, 1999. Mintz & Currim 2013a). By focusing on the evaluation of demand factors, marketing data are able to provide additional information not accounted for by pure economics.

It is also worth considering the link between the macro-economic data and marketing data, as this research does not propose these two sets of data to be mutually exclusive. In fact a regression analysis of the relationship between GDP growth, the variable with the largest coefficient from the macro-economic set, and marketing data show a statistically significant relationship with a 20% fit between the variables.

Table 15. Results of regression analysis - Correlation between macro-economic data and marketing data

Measure	Value
R-square	0.202078
P-value	0.005206
Degrees of freedom	59

This points to an overlap in the findings between the two independent variables, where some of the patterns observed in the marketing data will also be present for macro-economic data. However, the higher R-squared for marketing data indicates that marketing data is able to account for elements in market potential that cannot be found in macro-economic data alone. It therefore remains important to consider both sets of information in order to achieve the most comprehensive analysis possible.

Figure 8. Relationship between marketing data and macro-economic data
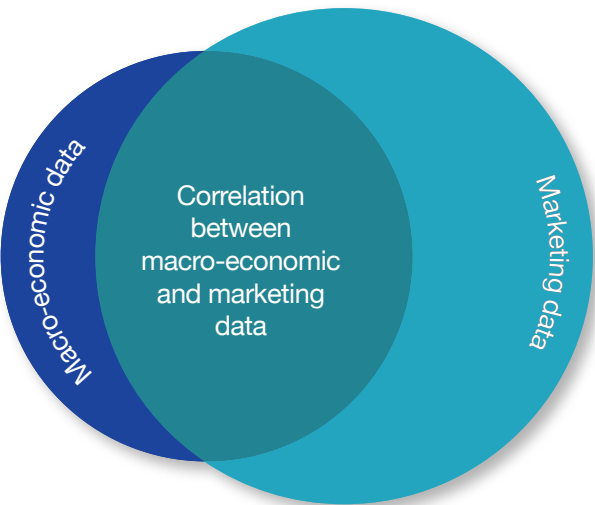
6.4. Hypothesis 3: Market Potential Index

The analysis of the relationship between the Market Potential Index as the independent variable and market potential as a dependent variable was shown as not statistically significant, with a P-value higher than the specified level of confidence of 10%. As such, the strength of the relationship does not provide any meaningful information, as any correlation in the data considered could be a result of random chance and not statistical probability.

These results reflect the findings of Waheeduzzaman's 2004 study which found the MPI to have limited predictive power, explaining only nine percent of the variability in FDI. The limitations of this tool could be due to the aggregation of multiple data sets, weighted according to a subjective process, into a highly simplified score – and in so doing stripping the empirical value from the raw data.

The MPI also provided a limited contribution for analysis of African markets, only covering two countries in the index. The complexity of the model would make the inclusion of additional countries very challenging, as the index relies on data drawn from numerous sources, often not available for African countries.

This is not to say that there is no value to be found in the MPI. As a highly complex index, it considers a range of factors such as risk, economic freedom and market receptivity which are not accounted for in the marketing data. This therefore acts as an important additional filter through which to assess market potential for the countries where it is available – but, as in the case of macro-economic data, it should be considered in conjunction with other tools.

6.5. Hypothesis 4: Application at a regional level

A major limitation of the current market analysis tools is their inability to assess markets at a regional level. Khanna, Palepu & Sinha (2005) suggest the available data lack the granularity to help businesses fully understand the dynamics of markets at a regional rather than national level. This is particularly important in emerging markets due to the high degree of heterogeneity within each country, and overlaps across national boundaries (Hassan & Craft, 2012). Sakarya, Eckman & Hyllegard (2006) suggest traditional macro indicators, such as GDP, fail to provide the level of resolution needed to evaluate countries which have multiple regional markets of very different natures, or where all economic activity is located in the capital with vast areas of underdeveloped rural space.

To address these concerns, Hypothesis 4 attempted to apply the findings from Hypothesis 1 at a regional level – using South Africa as the sample. The collection of data per province provided some challenges, as this information cannot be accessed from the international databases which were used for analysis at a national level in the previous hypotheses. However, some desk research uncovered reports which referenced relevant data which could be used. This meant that the dates for each set were not consistent. Furthermore, data on number of businesses opened were not available and had to be substituted with number of non-VAT businesses per province. These data provide a suitable substitute for businesses opened as it indicated small, start-up enterprises whose existence would be informed by the same market potential as businesses opened in general (Statistics South Africa, 2008). Nonetheless, the data was consistent across all provinces and therefore provided a fair basis for evaluation.

The data was limited to one entry per province, which restricted the size of the data set to just nine points. The analysis was affected by the same limitation as was seen when marketing data were applied per country – the quality of the test was impaired and the significance of the results was compromised as indicated by high P-values.

To compensate for the limited data set, the combination of variables used as part of the marketing data set was reduced from three to two – excluding imports, which had been shown to have the smallest impact. The results of this analysis proved to be statistically significant and produced an R-squared of 80%, indicating a high degree of fit.

The reduced number of variables is also positive in terms of the usefulness of the methodology for further application, as it is able to use the smallest set of data to account for the maximum range of results in the dependent variable (Nachum, 1994).

These results reflect the findings of studies on geo-demographical analysis, which is proving valuable in developing nations in order to provide necessary detail in fragmented markets (Putler, Kalyanam & Hodges, 1996). It is encouraging to see that this approach can be extrapolated to emerging markets where the need for granular analysis is acute due to the high degree of heterogeneity within each market Sheth (2011).

6.6. Further application of the approach

The outcome of this study indicates the viability of marketing data as a tool to assess market potential. The analysis here has considered three data sets – cellphone subscriptions, energy consumption and imports – as the basis for this study. This is not to

say that these variables are the only consumer data sets worth investigating. The technique used here was specifically selected to illustrate the potential for marketing managers to add additional secondary data to the process, and apply the same analysis technique to generate a customised index that reflects the factors which have the greatest bearing on their market. In this way, firms can use a ranking approach to determine the specific countries that deserve in-depth attention for their offering (Cavusgil, Kikay &Yeniyurt, 2004).

The marketing fraternity has specific knowledge that will allow selection and analysis of the basket of variables that represents the unique characteristics of each industry. This can then be tested using empirical evidence and statistical analysis to conclude whether the selected variables are strongly correlated with market potential in each case. By using the knowledge and information at their disposal, marketers will be able to contribute to strategic business decisions and demonstrate their value at the boardroom table.

This approach also has merit in its application to African development research. Decisions relating to investment, aid and growth are based on flawed statistics which rely on data that is absent or unreliable (Jerven, 2013). The use of consumer data, which measure real events rather than subjective assessments, presents a unique opportunity to elevate the quality of data used to measure growth and development in Africa.

6.7. Conclusion

The results of this study present conclusive evidence to support the research proposition that marketing data can be used in the evaluation of market potential. The analysis across the ten countries in the sample, on combined and individual levels, indicates that marketing data demonstrate a significant degree of fit between the two variables. The data set selected was based on the study by Schooler & Fergus which concluded that four key variables account for the greatest explanatory power. These were modified to the current context to include cellphone subscriptions, imports and energy consumption. This bundle served as the independent variable, analysed in the context of the dependent variable, market potential, indicated by business opened. The results of the regression analysis indicate that marketing data account for 45% of the change in market potential. This is a statistically significant, and weighty result. It confirms the recommendations of the literature, that consumer data should serve as a source of market assessment intelligence, and helps promote the agenda of marketing academics such as Ambler who advocate a more strategic role for the marketing fraternity.

This analysis was then extended to the evaluation of market potential for individual countries. While the analysis failed to produce meaningful results when all three data sets were included in the bundle, when limited to just cellphones and energy, the analysis proved statistically significant, with the degree of fit between the variables ranging from 77% to 99%. Based on these finding, it was possible to develop an equation to estimate the number of businesses opened based on the cellphone and energy data. The results for the equation were compared to actual data and the predicted ranking was found to be relatively accurate. This tool could serve as a useful filter through which to assess future potential, and base decisions regarding which markets deserve further analysis. This offers an exciting alternative to the highly subjective evaluations often conducted, and the reliance on empirical data overcomes many of the challenges of Africa's data deficiency, as described by Jerven.

When compared to traditional measures such as economic data and the MPI, the results for marketing data proved to be stronger and more statistically significant. Macro-economic data prove to be statistically significant, but with lower explanatory power. This reflects the concerns raised in the literature regarding the quality of data available, and also reflects the value of consumer-oriented data in accounting for a greater degree of demand prediction than macro-economic data can alone. The results for the MPI's relationship with market potential were not statistically significant. This echoes the results of Waheeduzzaman's 2004 study which found the MPI to have limited predictive power. This was attributed to the effect of weighting in the aggregation of the index, and the simplification of significant data to a single score which is unable to represent the full value of the original data. The conclusion is not to do away with existing tools, but rather to supplement the assessment process with an additional filter which can contribute insight that was previously absent.

Based on the positive outcome of the first three hypotheses, further analysis was done to determine whether marketing data can help assess market potential at a regional level. Some modifications of the data collection process were required, as the data was not available on international databases. This meant amendments to some of the variables, but the final data were consistent across the sample of South Africa's nine provinces and therefore did not compromise the integrity of the study. As was the case for individual country analysis, the limited data set compromised the results of the analysis and, as such, the basket of data included in the independent variable was reduced to two – cellphones and energy. The results of this analysis proved to be statistically significant and produced an R-squared result of 80%, indicating a high degree of fit.

This offers particular value in the context of emerging markets, due to the specific challenges around the data deficit, and the heterogeneity of these markets. The ability to apply marketing data analysis at a regional level presents a level of granularity that has been missing from market potential evaluation.

For members of the marketing fraternity looking for opportunities to demonstrate the value of the knowledge and information available in this field, these findings pose an opportunity to engage with senior executives on matters of business strategy, and to claim a seat at the boardroom table to share this valuable insight. The variables selected in this study do not represent the full scope of this approach, and in their capacity as demand managers, marketers should investigate the specific variables that relate to their industry and develop customised models for their unique requirements.

7. Conclusions and Recommendations

7.1. Summary of findings

This study set out to evaluate the tools currently used in the assessment of market potential, and to determine whether the addition of marketing data as a new tool would provide meaningful benefit. A review of the literature on market potential suggests that market-seeking firms are in need of reliable tools with which the compare prospective markets, and that while numerous approaches exist, there is no definite approach to this analysis. Most evaluations are based on subjective assessments, or a reliance of ad-hoc sources of data.

In the context of emerging markets, this presents a particularly challenging prospect. Emerging markets are, by definition, lacking in formal institutions with readily available data. This data deficit presents itself in the difficulty of accessing certain information, and the quality of the data that is available. The more granular the analysis, the more challenging, with very little public data available on a provincial or city level. This makes it very difficult for market-seeking firms to create an accurate picture of a country's potential, as most emerging markers are characterised by a high degree of heterogeneity so that cities within a country might vary tremendously. Furthermore, emerging market consumers are different in their behaviour to the trends expected in developed markets, and as such require more detailed analysis on a consumer-oriented level than is possible using just national economic data.

At the same time, emerging markets are a source of tremendous growth and opportunity, and firms need ways to quantify both the risks and rewards of market entry so as to make informed decisions. In the absence of alternatives, firms have relied on traditional macro-economic data – looking at GDP, growth, consumer income and other generic measures of size and growth. While there is value in this analysis, in the context of emerging markets, the quality of the data are so compromised that the results can be misleading. It is also generally not possible to find data at a regional level, making the necessary level of granular analysis impossible.

In more recent years, this has been supplemented by the introduction of assessment indexes, such as the MPI, which augment the macro-economic data with more qualitative analysis on factors such as infrastructure, risk and market receptivity. This adds valuable dimensions to the evaluation of these markets, and the simple aggregate score makes country comparison much easier. It is not without its challenges, though. Like macro-

economic data, it cannot be applied at a regional level. Furthermore, the index is only available for 26 countries (two in Africa) and the data requirements make extrapolating the model to additional countries very challenging. There have also been criticisms of the accuracy of the index ability to predict potential due to the subjective weighting of the aggregate score.

Based on the the evident gap in the literature relating to effective market potential assessment tools, this study proposed the introduction of a new approach – using marketing data as an additional filter though which to assess market potential. There exists tremendous alignment between the needs of market-seeking firms and the expertise of marketers. The role of marketers is to predict and stimulate demand, using available data to analyse trends that will eventually grow the bottom line. Marketers have both the data and expertise to translate consumer-level data into market intelligence. However, this has yet to be applied at the level of market-entry strategy. Marketers' ability to contribute relevant, empirical data to assist in business decisions has been strongly advocated by numerous marketing researchers and academics, who call for the use of marketing metrics to elevate the role of marketing and establish its strategic significance and business value.

As such, this study set out to establish the efficacy of marketing data in the evaluation of market potential in emerging markets. The strength of this relationship was then considered in comparison to the existing tools – macro-economic data and the MPI – and analysed at a regional level to determine if this approach could be applied at a finer level of granularity. Based on these research objectives, four hypotheses were formulated:

1. Marketing data are correlated with market potential in a country.
2. Marketing data show a stronger relationship with market potential than does macro-economic data.
3. Marketing data show a stronger relationship with market potential than does the MPI.
4. Variables for national market potential can be used to evaluate regional market potential.

The methodology was designed to be replicable by market-seeking firms and marketing practitioners, and therefore relied on freely available sources of secondary and standard analysis tools such as Microsoft Excel. The sample was determined according the the MSCI framework, and included all African countries classified as emerging or frontier. For each of the four hypotheses dependent and independent variables were specified and a basket of data was selected based on the recommendations in the literature. All of the data were

sourced from online databases, and consolidated into a single set for analysis. For marketing data the basket included cellphone subscriptions, energy consumption and imports. Macro-economic data looked at GDP, GDP growth and income per capita, while the MPI was reflected by the single aggregate score per county. The dependent variable – market potential – was represented by the lag indicators, businesses opened and FDI.

Preliminary analysis included descriptive statistics. However, due to the restricted data set, few clear patterns emerged and the findings were limited. As such, more sophisticated analysis was employed. Based on the approach described by Waheeduzzaman, regression analysis was conduced for each of the four hypotheses. This tested for correlation between the dependent and independent variables, and the results were analysed to determine statistical significance and the strength of fit between the variables. The findings of the analysis indicated strong statistical significance between marketing data and market potential, and a high degree of fit with marketing data accounting for 45% of the changes in market potential. This results were reinforced by further testing at an individual country level which produced R-squareds of between 0.77 and 0.99.

Based on the output of the regression analysis, an equation was constructed to predict businesses opened based on cellphone subscriptions, energy consumption and imports. The results were ranked and compared to actual numbers of businesses opened with positive results. This application demonstrated the efficacy of the approach as a filter for evaluating market potential.

The results for macro-economic data also proved statistically significant, but indicated a weaker relationship, of 35% explanatory power. This reflects the findings in the literature, which indicated that, while macro-economic data provides a valuable source of insight, it is limited in its accuracy due to the quality of data available. It would also not have been possible to apply the data at a regional level.

In the case of MPI, the relationship was not found to be statistically significant and it was therefore concluded that the MPI is not correlated with market potential. The findings for MPI confirm the research of Waheeduzzaman, which suggested that the use of weighted scored compromised the predictive power of the index. This is not to say that the MPI and macro-economic data do not add value to the analysis of market potential, but rather that they should be considered as one tool in a set, each able to add unique value to the evaluation process.

Finally, the analysis was applied at a regional level for each of South Africa's nine provinces, using a smaller data set of cellphone subscriptions and energy consumption. The results here were particularly strong, indicated by an R-squared of 0.8. The application at a regional level is of particular interest, as it addresses the concerns raised in the literature relating to the heterogeneity of emerging markets, and provided market-seeking firms with a new way of looking at markets at a much finer level of granularity.

These results provide conclusive evidence that marketing data can be used in the evaluation of market potential. The analysis was conducted at the aggregate, national and regional level and in each case produced statistically significant results. These findings confirm the recommendations of the Schooler and Fergus report from 1974, and provide support to the arguments in the literature for marketing to be used as a source of market intelligence.

The potential to use marketing data provides a filter through which to assess market potential offers significant opportunities to members of the marketing fraternity. This study reinforces the statements by researchers such as Ambler who have called for marketing to be a source of consumer insight and business strategy. By demonstrating marketing's ability to provide relevant, empirical data that can assist in business decisions, it is possible to reaffirm the value of the marketing department and advocate for marketers to claim a seat at the boardroom table.

The selection of variables and the scope of the sample used in this study are by no means exhaustive. The challenges for marketers is now to apply this approach, and using their expertise and the data available to them, select and analyse the set of variables that is most relevant to their industry so as to create a customised model for their specific purposed.

7.2. Limitations of this study

The data and results presented in this study represent a small sample of African countries, over a limited period of time. The intention was to demonstrate the validity of the approach and in so doing confirm the efficacy of marketing data as a new tool in evaluation market potential. However, the results of the statistical analysis are subject to imperfections in the data set, and the influence of anomalies which might influence the results significantly in such a small sample. It is therefore important that any predictions on market potential using this approach are not considered in isolation, and that market-seeking firms consider a broad set of tools including qualitative data before making any decisions.

The quality of the data was determined by the availability of secondary data from online databases. It was not possible to scrutinise the origins and methodology behind this data collection, and any irregularities would have influenced the results of this study. This is of particular relevance in African countries, where the quality of data can be severely compromised.

The sample was limited to African countries classified under the emerging markets classification. This study has not explored the application to other African countries, nor emerging markets outside of Africa. It would also be worthwhile considering the strength of this approach for developed markets.

7.3.   Recommendations for future research

The notion that marketing data could serve as an alternative source of insights on market potential bridges two disciplines in a new way. While the potential overlap between these disciplines represents an exciting new opportunity, there is still much work to be done to understand the connections between the needs of market-seeking firms, and the abilities of marketers to address these. An important step to better understanding these dynamics would be to conduct qualitative research into the motivations, capabilities and experiences of both groups. This would help uncover what had prevented this type of collaboration in the past, and give insight into steps that could be taken to encourage further work in this area.

The findings in this study broadly outline the validity of the proposition of using marketing data for market analysis. Further work would be valuable in understanding how this might apply in various industries, if there would be differences in the application to service firms, or business-to-business organisations, compared to consumer product businesses. The selection of variables can be exhaustively explored and more detailed recommendations put forward as to which data sets provide the greatest explanatory power for each set of circumstances.

Additionally, investigations into the relationships between individual variables and improved market potential should be considered. This was highlighted in the case of cellphone subscriptions which showed a negative correlation, in contrast to the findings in the literature. Further investigation into this finding might yield interesting results.

The set of variables described in this study are by no means conclusive, and the recommendation for top ranking countries is merely a demonstration of the methodology,

and not a conclusive recommendation. As explained in the research done by Cavusgil, the finding of this study should not be considered in isolation, but rather as an additional filter through which to understand the potential of certain markets. Cavusgil explains in his research, "The aim of this study is not merely to provide a list of countries that are meritorious candidates for market entry. Rather, the objective is to reduce the complexity of market selection by demonstrating the use of analytical approaches based on readily available secondary data. Finally, it should be emphasised that [this] represent an excellent start for country screening and evaluation, but more detailed and refined analysis is necessary once the candidate countries are reduced to a manageable number. Such in-depth analysis is also imperative for the subsequent formulation of an international market entry program" (Cavusgil, Kikay &Yeniyurt, 2004: 616).

The approach of using marketing data as an alternative for economic data also opens up possibilities for other fields, such as growth and development studies. Considering that significant investments into African development are currently based on imperfect and often absent data, this offers development agencies a new tool to better understand the needs of the communities they serve. The application of this approach to other fields presents interesting possibilities.

This is also worth considering from a marketing perspective, to understand which other disciplines are in need of consumer or market related insight that could benefit from the data and knowledge that resides in the marketing fraternity. By defining the role of marketing more broadly, as custodians of demand management, it is possible to reposition the marketing fraternity in terms of their strategic contribution to business decisions.

7.4. Concluding remarks

The use of marketing data to evaluate market potential in emerging markets represents an important step in addressing some of the shortcomings evident in traditional approaches. The methodology described in this study focuses on freely available secondary data and common analytical tools, allowing market-seeking firms to easily adopt this approach as part of the set of tools used in market evaluation.

The implications for the analysis of emerging markets extend further than just market intelligence, and demonstrates the efficacy of consumer marketing data as a source of new information with which to better understand these markets.

For members of the marketing fraternity, this study hopes to highlight the worth in the data and knowledge held in these departments, and to encourage marketers to redefine their role as a source of valuable business intelligence.

This presents exciting possibilities for the academic fraternity, through the linking of knowledge from two disciplines and demonstrating the value this collaboration offers to both. Furthermore, this research offers valuable insight to business which would be well served by a more accurate measure of marketing potential in emerging markets, as well as the markets themselves which might benefit from increased understanding and investment.

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