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of Business Science**
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**Sustaining skills development in Sub-Saharan Africa through private
sector in-house skills programmes: Its' benefits and impact.**

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Masters in Business Administration.

10 November 2014

Abstract

Skills development and training is becoming an increasingly important concern in developing countries. Not only can it impact local economic platforms, but it can also increase international competitiveness, employment and prosperity. Disarticulations of public policy can however undermine public sector delivery of skills development initiatives and opens up opportunities for private provision to be, under certain circumstances, more responsive to the challenges of skills shortages.

The purpose of this research is firstly to substantiate the need for a more active engagement by the private sector in the development and training of technical skills. Subsequently, it aims to identify the impacting factors that either promote or inhibit such engagement, specifically within the construction and mining industries of Sub-Saharan Africa. In identifying the most significant factors, a conceptual framework can be compiled and recommended to facilitate a more sustainable approach to the implementation of in-house initiatives, specifically within the private sector of these industries.

A descriptive quantitative research approach was implemented for this study. This was facilitated through an online survey questionnaire distributed to a population comprising of top, middle and junior management, as well as general employees, permanently employed within the construction and mining industries in Sub-Saharan Africa.

The research results revealed a definite lack of confidence in the public sector's ability to adequately provide technical skills within these industries, and thus within Sub-Saharan Africa. This stresses the need for a more active participation by the private sector in developing such technical skills. Further analysis also identified the critical inhibitors and benefits associated with current private sector initiatives. It suggests that effective in-house skills development and training initiatives within these industries can not only beneficially impact companies, but also the socio-economic environment in which they operate.

Finally, the research concludes with the introduction of a conceptual framework targeting three core areas as a base to implement skills on a sustainable platform within the private sector. These include the concepts of benefits realisation, risk management and government intervention.

Keywords

- Absolute skills scarcity:*** A skills scarcity brought on by the fact that suitably skilled people are not available, for example, there are few, if any, people in the country with the requisite skills.
- Technical skills:*** Skills possessed by artisans, technicians, tradesmen, etc. usually functioning as part of the labour force of a company.
- Skills development:*** Any type of formal educational or training programmes that aims to develop new technical skills under unskilled employees, or further enhance and develop the existing technical skills of existing semi-skilled or skilled employees.
- In-house programmes:*** Voluntary, non-legislative and non-subsidised skills development initiatives or programmes implemented and sponsored by the company itself.

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Masters 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.

Francois van Vuuren

Signed: _____

Date: _____

Acknowledgements

Firstly, a sincere thank you to my devoted wife who's unwavering support carried me through the last two years of my life. Her continuous encouragement, extra contribution at home, and undivided attention to our son, provided me with the time and re-assurance needed to complete this research successfully. The dedication and perseverance demanded by my studies was as real for her as it was for me, and I am truly blessed to have had someone by my side who shares in my career aspirations and was, at all times, as determined as me to make things work.

Secondly, a heartfelt thank you to my supervisor who shared my passion for this research topic. She always engaged with excitement and enthusiasm, and her knowledge, insights, ideas and guidance helped me shape this project from the onset. She kept me inspired and focused on my objectives at all times.

Lastly, I would like to extend a special word of gratitude to my employer for accommodating my leave requirements, especially towards the end of my MBA. Without your understanding I would not have been able to achieve the onerous deadlines and commitments of this research. I trust I will be able to compensate for the time off it in the years to come.

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CHAPTER 1: Introduction to the Research Problem

1.1 Introduction

This chapter is an introduction to the study. Here, the persisting problem of skills shortages in developing countries is introduced, and the need for the research is discussed. This is followed by an elaboration of the business relevance of the research and the research scope and objectives are outlined.

1.2 Research Title

Sustaining skills development in Sub-Sahara Africa through private sector in-house skills programmes: Its' benefits and impact.

1.3 Research Problem

This section will focus on the actual need for the research. It introduces the two main sources of skills development on national level, namely public and private providers. It further aims to provide some context on the current state of skills within the two industries considered for this study, being construction and mining.

Technical and vocational skills development is becoming an increasingly important policy issue in developing countries (King, 2009). Not only on a local economic platform, but according to McGrath and Akoojee (2009), skills and knowledge even help build international competitiveness, employment and prosperity. They however go on to state that disarticulations of the public policy can undermine public sector delivery of skills development initiatives and open up opportunities for private provision to be, under certain circumstances, more responsive to the challenges of national development (McGrath & Akoojee, 2009).

Allais (2012) supports this by stating that “numerous [public] policy interventions and the creation of new institutions and systems for skills development in South Africa (SA) are widely seen as having failed to lead to an increase in numbers of skilled workers”

(p.632). This has in fact led to a severe lack of confidence in the public sector's ability to adequately provide skilled individuals to satisfy an increasing skills demand brought on by continual economic growth of developing nations.

With this in mind, it is incumbent on the business sector to try and facilitate a shift away from the expectation that the public sector should take ownership and responsibility for technical and vocational skills development. It is also suggested that through the effective participation, and potentially a more collaborative approach, of both public and private providers, a more sustainable solution to the required skills development needs in Sub-Saharan African economies can be achieved.

Africa is generally perceived as a pool of developing economic potential that has long been plagued by the adverse effects of skills shortages. Not only is this seen as impacting the local national economies (McGrath and Akoojee, 2009), but it can possibly impede on the good standing of the entire continent in the eyes of the global economy, which currently has the development potential of Sub-Saharan Africa in its investment crosshairs. It is thus suggested that a concerted effort is needed to eradicate such inhibitors to economic growth, in order to unleash the true development potential of the economies within the geographical confines of Sub-Saharan Africa.

Sub-Saharan Africa encompasses a total of 53 countries. The most noteworthy being the four largest economies, according to total Gross Domestic Production (GDP). These countries are Nigeria, South Africa, Kenya and Angola. (Forbes.com, 2014)

The mining and construction industries in South Africa and within Sub-Saharan Africa are significant contributors to the local GDP (Worldbank.org, 2013). There are however no exceptions when it comes to the detrimental effects of a scarcity of technical skills on these industries' performance (Van Zyl, 2009). It is further suggested that the inherent nature of its project driven environment, as well as the cyclical macro-economic dependency of both industries, exasperate the challenges faced when implementing skills development initiatives on a long-term basis. The private sectors within these industries are however attempting to adopt innovative approaches to skills development, especially within South Africa, and these initiatives, some of which are mentioned later (see section 2.5, p. 23), need adequate support to develop further.

Considering the aforementioned statements, this research aims to highlight the importance of effective skills development within developing economies. In addition, the study aims to substantiate the need for a more pro-active private sector involvement due to the lack of confidence in the ability of the public sector to sustainably develop technical skills.

The study lastly aims to identify both the beneficial and inhibiting factors associated with private sector skills development initiatives and programmes within the construction and mining industries in Sub-Saharan Africa. Here, a basic framework will be recommended to promote more sustainable implementation of such initiatives and programmes across the private sector of the respective industries.

Albeit, the implementation of these skill development initiatives and via collaborative private-public processes, or as an intrinsic drive by private companies to fulfill the persisting technical skills gap in Sub-Saharan African countries, the impact of the private sector's contribution towards attaining the required levels of technical skills within the respective industries deserves specific focus and should be investigated in order to find more sustainable solutions to a potentially catastrophic situation.

1.4 Scope of the Research

This section briefly stipulates the extent of the scope considered essential to focus on the most relevant aspects of the research problem as described in the aforementioned section. The scope of the research is limited to address the specific research objectives as described in Section 3.2, p. 25. It only therefore only encompasses in-house skills development and training initiatives implemented by companies operating in the private sector of the construction and mining industries, within Sub-Saharan Africa. Furthermore, the research only considered those initiatives and programmes specifically aimed at developing, training and certifying technical and vocational skills at NQF levels two to five in South Africa; as well as programmes and initiatives comprising similar skills development levels as formally acknowledged by the relevant countries, within Sub-Saharan Africa, that formed part of this research.

1.5 Business Relevance of the Research

The business relevance of this research is considered pivotal in relating the theoretical concept of skills shortages to the actual impact thereof on the business sector and, to a lesser extent, the national economy. The following section provides a brief overview of the typical effects together with the impact of skills shortages on the relevant industries.

It is a common occurrence to find companies within the mining and construction sectors concerned about the critical skill shortages and the undesirable impact it has on potential company growth, as well as on the national economy in developing nations. According to Reuters (2012), the shortage of skilled workers is actually getting worse and seems to be one of the main concerns for mining executives on a global scale, as industry competition dictates companies to endeavor on projects in increasingly complex and distant locations.

Van Zyl (2009) further emphasises the fact “that greater involvement by businesses in South Africa – not just bemoaning the crippling shortage of skills but rather getting their hands dirty and finding solutions – is increasingly being called for as 60% of SA’s business growth is being hampered by a lack of skills of new and existing workers.” (p. 1). While this statistic should invoke a pro-active response to alleviating what is commonly seen as a critical skills shortage, the involvement and commitment from private companies seems to remain limited. However, the main reasons therefore remain somewhat unclear.

A report by Mpyatona (2013) further stresses the general shortage of skilled individuals within the construction industry of South Africa and that this is hampering aspiring infrastructure developmental plans introduced by the state. He continues to highlight that this lack of skills is unfortunate, especially after the introduction of a trillion-rand infrastructure development plan, which is scheduled to be implemented within South Africa over the next 10 years. The author concludes that these “skills shortage scenarios casts serious industry doubts on the government’s ability to follow through with such infrastructure plans in the way it was intended” (Mpyatona, 2013, p. 1).

The private sector of the construction industry is responsible for executing a major portion of the work introduced by these public infrastructure development plans. The main current challenge is simply finding enough skills to support the execution this work. The state is limited to the amount of infrastructure it can develop by this lack of resources available to execute the work. This, in turn, limits the amount of work generated by government for the private sector. In other words, the private sector can theoretically generate more work for itself through an increased development of the skills required to increase industry capacity to such a level as to satisfy the demand for work generated by these anticipated infrastructure development plans.

Sustained alleviation of the current skills shortages can thus benefit both private and public sectors within the economy. The public sector can therefore realise increased infrastructure delivery to the ultimate satisfaction of the growing population it serves. In addition, the private sector can financially benefit through the availability of more work, in turn created by an increased capacity to undertake and satisfy the demands set by the market.

There is thus evidently a more pro-active participation required from the private sector when it comes to sustained skills development, and this can be facilitated through in-house initiatives. Such participation can possibly substantially alleviate skills shortages and employment challenges faced in Sub-Saharan African countries, whilst ultimately creating long-term benefits for both the companies who commit to undertake such initiatives and for the respective industries and economies as a whole.

In a broader sense, although the ultimate accomplishment remains the sustainable development of technical skills on a national level, the benefits realisation process needs to include from the smallest startup businesses to the listed multinationals. This inclusive environment is believed to be a key factor in ensuring the well-being of the respective industries in the long-run.

Further to this, with many of the current private sector skills development programmes still believed to be focused on simply attaining regulatory compliance, there needs to be a radical change in the way the public and private sectors interact when it comes to skills development. It is by no means suggested during this research that the public sector

reduce its commitment to skills development on a national level, but rather that it might have to change its focus from an obligatory approach, towards a more collaborative one, when it comes to engaging the private sector.

Therefore, rather than enforcing statutory requirements, the focus should be on making companies realise the long-term benefits of proper skills development initiatives for a company and at industry level, and supporting them wherever possible. Without such awareness, understanding, and effective support, companies will continue to engage in the bare minimum to satisfy their internal short-term needs or simply just adhere to obligatory targets and comply with legislative requirements imposed by governing bodies.

1.6 Conclusion

This section provided an introduction to the research problem, as well as the context, scope and relevance of skill shortages experienced within the construction and mining industries of Sub-Saharan Africa. Both the effect and extent thereof is considered a real and present threat to the economic well-being of the companies operating therein, but also on an industry level. Lastly, there is an evident need to investigate and find ways and opportunities to lend support to existing initiatives, as well as promote new and sustainable ways to implement skills development initiatives.

CHAPTER 2: Literature Review

2.1 Introduction

Saunders and Lewis (2012) defined a literature review as a means of presenting an overview of the significant literature available and relevant to the chosen research topic. The authors went on to explain that it is also a means of developing a clear argument in order to contextualize and justify the research being conducted.

Considering this, the following chapter is dedicated to firstly defining the most important constructs considered for the study. Secondly, it aims to elaborate on the current and relevant literature that is available, specifically applicable to the sectors and industries involved. Thirdly, it will substantiate the need for this specific research in relation to the gap in the current literature and theories. Lastly, it aims to contextualise all of this information in relation to what is currently occurring within this field of study and within the boundaries of the relevant industries.

2.2 Important Constructs

To correctly comprehend and interpret the research objectives, as well as the defined limitations of this study, it was important to define the following key constructs, namely, skills scarcity, skills development and private sector. These terms are discussed in turn.

2.2.1 Scarce skills.

According to a report by the Human Sciences Research Council (2007), scarce skills can be categorised and defined in terms of an absolute or relative demand thereof. Scarce and critical skills are defined as having “an absolute or relative demand: current or in the future; for skilled; qualified and experienced people to fill particular roles/ professions, occupations or specialisations in the labour market” (p. 31).

This report indicates that an absolute skills scarcity applies where suitably skilled people are simply not available in the right quantities to satisfy the skills demand, for example:

- In a new or emerging occupation where there are few, if any, people in the country with the requisite skills.
- Institutional delays, when firms, sectors and even the country are unable to implement planned growth strategies and experience productivity, service delivery and quality problems directly attributable to a lack of skilled people.
- Where replacement demand is high, which means that there are no people enrolled or engaged in the process of acquiring the skills that need to be replaced (p. 31).

The report then stipulates that relative skills scarcity is applicable where suitably skilled people are available to work, but do not meet other employment criteria, for example:

- People are confined to geographical location, i.e. people are unwilling to work outside of urban areas
- There are equity considerations and limitations, which mean that there are few if any candidates from the specifically, required groups with the requisite skills available to meet the skills requirements of companies.
- The effect of lead time, where replacement demand would reflect a relative scarcity if there are people in education and training (formal and work-place) who are in the process of acquiring the necessary skills (qualification and experience) but where the lead time will mean that they are not available in the short-term to meet replacement demand (p. 31).

Lastly, the report also defines priority skills as those scarce and critical skills that are needed at a particular point in time. For the purpose of this study, the focus remains on the absolute scarcity of priority skills, more specifically, the impact of a reduced working capacity in the labour market. This scarcity is brought on by inadequate numbers of skilled individuals, as well as the inability of individuals to physically perform technical work at the required proficiency skill.

2.2.2 Skills development.

Two similar concepts surfaced here namely, Vocational Education and Training (VET) and Further Education and Training (FET). They were approached as a collective concept for the purpose of this study.

According to the Services Sector Education and Training Authority (Services SETA) (2013), skills development refers to all levels of VET. This entails the up-skilling or preparation of individuals that are of legal working age, able to work, and are seeking permanent employment, in order to successfully and sustainably perform the tasks required by such employment (SSETA, 2013). VET further applies to any formal institutional process that prepares trainees for jobs or careers at various levels; from trade and craft to professional services. More so, applicable to the context of this report, it relates to the ability of individuals to practically and sustainably apply skills learned from education and training programmes in specifically private institutions. VET was therefore seen a link between education and training, and the working world (Service SETA, 2013).

The definition by McGrath and Akoojee (2007) is also applicable to this study, and states, "Further Education and Training as all provisions for National Qualification Framework (NQF) levels 2-4, although these institutions might, under certain circumstances, include NQF level 5 training as well." (p. 210).

This study will consider all in-house initiatives and programmes associated with South African NQF level 2-5, as well as programmes and initiatives offering a similar level of vocational qualifications in other African countries.

2.2.3 Private sector.

According to Akoojee and McGrath (2007) "private provision [for FET] is very diverse and can be placed in three broad categories: not-for-profit, for-profit and in-house" (p. 210). This study aimed to look at in-house provision as a separate entity, although the importance and contribution of the remaining two categories were not seen as inferior to that of in-house training.

Akoojee and McGrath (2007) explained that it is mainly the larger companies that tend to be in-house training providers, and that they are mainly focused on their internal training needs. Although these initiatives are generally undertaken in response to a specific short-term company need, there can be a significant disconnect between these and the long-term needs of the relevant industry.

Further, for the purpose of this study, private sector includes any formally registered and legally recognised private organisation that offers any type of formal temporary or permanent employment to skilled and/or unskilled labour. In addition, it has either the means or potential to implement in-house skills development training for not only their employees, but to their immediate communities as well.

In concluding the stipulation of the main research constructs, it was assumed that the true understanding of the research objectives could only be ensured through the correct interpretation of the certain key constructs associated therewith. Elaboration on the concept of an absolute scarcity of skills, the specific meaning of technical skills, and the confines of the private sector were explained in order to avoid possible misunderstanding or misinterpretation of the specific research scope and objectives.

2.3 Observed Research

This section entails the research considered to be relevant in providing a more detailed picture of the research problem. It therefore substantiates the research topic and its relevance and impact on the construction and mining industries in Sub-Saharan African countries. It also addresses the need for a radical change in the approach to skills development within these industries, and assesses the shortcomings of the public sector in providing skills on a national level. It then elaborates on the increased responsibility of the private sector towards skills development, and justifies why the construction and mining industries were specifically targeted by this research.

Lastly, this section also briefly covers skills development from a global perspective. This has been included in order to provide a high-level and generalised comparison of developing and developed countries' approach to skills development.

2.3.1 The need for a radical change in approach to skills development.

As indicated in the research title, this study is not limited to the confines of South Africa, but includes countries from the greater Sub-Saharan African region. With South Africa widely recognised as a powerhouse in the African economy, it is deemed necessary to contextualise the need for the radical change in approach to skills development in both South African and the rest of Sub-Saharan Africa separately.

2.3.1.1. Skills development needs in the South African context.

Via ASGISA, the Presidency of the Republic of South Africa (2010) acknowledges the shortage of suitably skilled labour, which it stipulates as being amplified by the impact of apartheid spatial patterns on the cost of labour. It continues to say that:

the most difficult aspects of the legacy of apartheid to unwind, arise from its deliberately inferior system of education and irrational patterns of population settlement, and in a [current] period of [economic] growth it is evident that there is a lack of sufficiently skilled professionals, managers and artisans. The uneven quality of education remains a contributory factor and countering these constraints requires a series of decisive interventions, which do not amount to a shift in economic policy so much, as it is a set of initiatives to achieve our objectives more effectively. (p. 5)

Furthermore, the Presidency of the Republic of South Africa (2010) states that in:

...both the public infrastructure and the private investment programmes, the single greatest impediment identified by ASGISA is shortage of skills – including professional skills such as engineers and scientists; managers such as financial, personnel and project managers; and skilled technical employees such as artisans and IT technicians. The shortfall is due to the policies of the apartheid era and the slowness of our education and skills development institutions to catch up with the current acceleration of economic growth. (p. 9)

King, McGrath, and Rose (2007) further identifies a skills deficit as the “most important

constraint on both infrastructural development and private sector investment.” The authors further state that: “Since the state argues that poverty reduction requires greater national and foreign direct investment to create employment, it follows that a shortage of skills is a key constraint on development, employment and poverty reduction.” (King *et al.*, 2007, p. 352).

According to Human Science Research Council Report (2007), the issue of scarce skills has become a key government priority as it is now generally accepted that skills shortages in key occupational areas are inhibiting future economic growth. As a result of its role in constraining economic development, the issue of scarce skills has been prioritised through the development of various policies at national level. The Accelerated and Shared Growth Initiative – South Africa (ASGISA) and the Joint Initiative on Priority Skills Acquisition (JIPSA) are the most prominent examples of such initiatives.

Also, according to the Skillsportal (2013), the revised B-BBEE Codes of Good Practice, which is scheduled for inception in October 2014, has attached greater importance to skills development. It states that skills development has become one of the three priority elements that form part of the Code and aims to contribute towards the national economy. This aims to be achieved by focusing on the following three key principals:

- To allow measured entities to contribute to the achievement of South Africa’s economic growth and social development goals by developing skills that will enrich the creation of decent work and sustainable livelihoods.
- Promote the development of an industrial skills base in critical sectors of production and value-added manufacturing, which are largely labour intensive industries.
- Strengthen the skills and human resource base by encouraging the support of skills development initiatives with an emphasis on skills development and career-pathing for all working people in order to support employment creation (p. 1).

As briefly mentioned in Section 1.5, p. 4, Mpyatona (2013) stated that the South African

infrastructure development plan, as instigated by government, is being adversely affected by the general lack of skilled individuals within the construction industry. He raises the fact that the 2012 South African *Medium-Term Expenditure Framework (MTEF)* set an enormous R845bn aside for the development and expansion of public infrastructure projects and highlighted an additional R3.2trn for various planned infrastructure projects until 2020. He lastly stresses that the execution thereof has been severely inhibited by the shortage skills in the country.

Adcorp (2014) describes the skills shortage as a function with both demand and supply factors, suggesting that demand factors relate to the quantity of jobs available, whereas supply factors relate to the quantity of suitable applicants. It is thus evident that, with an already critical skill shortage scenario in SA, that with the predicted increase in demand, matters were deemed to get worse. Considering this, it is of critical importance that alternatives to public reliance for skill development be investigated and recognised in order to facilitate implementation elsewhere, and in so doing sustainably alleviate the persistent shortage of skills in Africa.

In conclusion, Skillsportal (2013) says that, within the need for skills in the South African context, the “skills gaps cannot be filled through formal academic training alone, and by recognising companies and individuals that put a lot of effort into measuring the impact of training interventions, is one way of shifting the focus away from just completing the training checklist.” (p. 1). It is further stated that “having the most skilled and experienced employees will positively impact on the bottom line of any business, making the alignment of skills development initiatives with business objectives imperative.” (p. 1).

Following the above substantiation regarding the need for effective skills development solutions within the South African context, the context within the rest of Sub-Saharan Africa follows. .

2.3.1.2 The need for skills development in the greater African context.

When considering the perception of the rest of Africa regarding the importance of skills development, it soon becomes clear that various countries recognise the lack of skills

as having a crippling effect on their local economies. Here, Kenya and Botswana's need for skills development is briefly examined.

The Kenyan government sees the development of technical skills as central to its industrialisation ambitions. As the Kenyan Government 2005 stated, "the country needs a critical mass of Kenyans with some technical skills for technological take-off and sustainability" (p. 27).

This sentiment is not limited to Kenya, as Ssegawa-Kaggwa, Ngowi and Ntswene (2013) believes a lack of adequate and experienced human resources in Botswana has the same adverse effects, as projects are seen to be fulfilled through the efforts and skills of people, with the help of systems. However, the authors further stated that "respondents consulted in a [Botswana] national survey, identified a lack of appropriate, experienced and adequate human resources as leading to the poor delivery of public projects" (p. 10).

As previously highlighted in Section 1.3, p1, the effect of skills shortages inhibits the South African Government's ability to roll out major infrastructure development initiatives. Alinaitwe (2011) concurs by identifying other developing African countries, like Uganda, with similar problems. He explains that:

[Uganda] is in dire need of infrastructure development and is now actively venturing into Private Public Partnerships (PPPs) as an alternative to develop not only infrastructure, but also to share the cost, impacts and long-term benefits of the associated skills development programmes. The multi objectives of PPPs, including promoting infrastructure development, developing local economy, reducing costs, increasing construction and operation efficiencies, and improving service quality by incorporating the private sector's knowledge, expertise and capital have drawn increasing interest from policy makers, researchers and the industry practitioners" (p. 289).

Sufficient availability of technical skills, and associated sustainable skills development practices, are further highlighted as a fundamental to the success of these types of partnerships (Alinaitwe, 2011).

2.3.2 Shortcomings of the public sector as skills provider.

Allais (2012) stated that “numerous policy interventions and the creation of new institutions and systems for skills development in South Africa are widely seen as having failed to lead to an increase in numbers of skilled workers” (p. 632). The author further explains that:

“dominant view in the South African media and policy circles is that a skills shortage, coupled with an inflexible labour market, are the leading causes of unemployment... [and that] “this has led to policy pre-occupation with skills as part of a ‘self-help’ agenda, alongside policies such as wage subsidies and a reduction of protective legislation for young workers, instead of collective responsibility for social welfare” (Allais, 2012, p. 632).

McGrath and Akoojee (2009) are of the opinion that the sustainability of national development projects in Africa is likely to continue to be problematic, and skills development will only ever be able to play a limited role in addressing this challenge. They suggest that governments can do more to support the sustainability of these skills development systems and need to pay attention to both public and private provision in so doing (McGrath & Akoojee, 2009).

In addition, McGrath and Akoojee (2009) also stated that a less than positive view regarding vocational education in South Africa. Here, it is “dominated by public providers, owned but frequently mismanaged by Ministries of Education; whilst occupational training has a much more complex public–private mix” (p. 155). The authors further explained that “the Education–Labour split in South Africa and elsewhere will not be easy to overcome but it remains a serious barrier to viable skills strategies.” (p. 155)

According to Palmer (2008) policy attention has however started to slightly shift in the direction of examining what the alternative enabling environments are which can sustainably contribute to poverty reduction and growth. The researcher however continues by saying that “to substantiate a more dedicated shift toward such alternatives, will mean that government will have to take ownership for and be

accountable to the failures of the existing public provisions, which in reality actually becomes a restraint of dedication towards such a shift.” (p. 12)

Dennis (2007) stated that, for economists, the most important aspect of any discussion regarding skills is its relationship to productivity in the company or organisation. However, government has defined skills shortages without taking this relationship into account and this then aids to the disarticulation between public and private skills development initiatives earlier.

Further to this, as mentioned in Section 2.3.1.1, p11, the revised Broad Based Black Economic Empowerment (B-BBEE) Codes of Good Practice in South Africa (2014), has now attached even greater importance to the skills development component of the Code (Skillsportal, 2013). This ultimately aims to make it more onerous for companies to engage in public sector projects to increase their contribution towards skills development. Yet, it fails to address companies solely engaged in private sector projects. Again, this resembles an obligatory tactic by government, rather than a partnering initiative with the private sector.

2.3.3 Skills development as private sector responsibility.

In contrast to the public sector shortcomings mentioned in Section 2.3.2, p15, McGrath and Badroodien (2006) noted that:

“even in the pre-democratic period of South Africa, the debate on skills development started within the constituencies of organised business and labour, rather than within the state... [and that] both groups relied primarily on their own networks with parallel organisations in other countries and focused largely on debates at the workplace and sectorial levels and how these reflected trends in work organisation and international trade.” (p. 486)

Thwala (2008) stated that “the [construction] industry has raised the concern that skills provided through the FET initiatives were often inappropriate to the industry requirements, thus resulting in a skills gap, while industry-based training usually aligned skills development more closely with company-specific needs” (p. 446). Akoojee (2010)

further stated that “the impact of the recession on education and training (in the public sector) is unsurprisingly significant, and that private sector initiatives can also aim to contribute to more stability in times such as global financial downturns” (p. 179). Kerr, (2008) supports this by stating that “several new voices in the ranks of SA’s most highly regarded employers are considering business involvement from a different angle in that companies shouldn’t try to deflate the current system, but must help to increase the skills, and that the private sector must act as a support system for Government in order to improve skills and help the economy to grow.” (p. 14). Daniels (2007) raised the point that “while the advantages of [in-house] training seems clear, it is an unfortunate but highly consistent finding that South African firms under-invest in it, and that more than half of the firms surveyed do not provide in-house or even outside training programmes” (p. 21).

According to Exxaro (2013), the “shortage of specific skills in South Africa is a particular challenge and a national plan is needed to address critical or scarce competencies. Therefore, the attraction, retention and development of these critical skills are priorities for all mining companies and creates a competitive point of difference within the industry.” (p. 01).

The research continues to state that:

the skills deficit in South Africa translates into issues of leadership, culture, literacy and numeracy, and providing a pipeline of core and critical skills, and the collective sustainability of business depends on rapidly developing the skills each company needs to run its operations which, in turn, enables it to empower employees’ to develop their full potential and ultimately contribute to national economic growth. The private sector, therefore, cannot afford to wait for the public education system to produce the calibre of people it needs at every level and focus is needed on ensuring that all staff have the knowledge and skills they need to develop personally and to help grow their company for the benefit of all.” (p. 01)

According to the Republic of South Africa (2006), the construction sector consists of a large low-skilled labour force and limited numbers of highly skilled professionals, which are in short-supply. However, despite this, enterprises are not adequately investing in

skills development.

When aiming to up-skill employees, a major challenge is posed by the fact that employees are expected to be productive at work, which leaves very little time for gaining additional information or keeping up with developments in their sector. This is bad for the employee and bad for business, but effective employee training can solve this dilemma and investing in employee training has many benefits for the business Skillsportal (2014).

Therefore, corporations need to understand that they have three options when it comes to internal skills development, according to Skillsportal (2014):

1. If you choose not to invest in employee training, you will miss out on industry developments and the business will suffer.
2. Likewise, if you force your employees to learn on their own, productivity at work may deteriorate or employees may become resentful and feel that you are infringing on their home time. This will lower staff morale. Trying to absorb new information on your own can prove to be incredibly challenging and time-consuming and there is no guarantee that self-taught individuals will increase their efficiency at work.
3. Alternatively you can allow employees to participate in planned sessions at a training facility that has a good curricular and people with experience who, “are able to impart tremendous amounts of information in a short period of time.” (p.1)

These findings are concluded with the article stating that “by initiating employee training you will have a better return on your money and are likely to see much higher levels of productivity in your business in the long run.” (p. 01).

Bhorat and Lundall (2002) found the following relationships between company output and employment, capital and training: (a) a 1% increase in employment will result in a 0.45% per cent increase in output (known as the output-employment elasticity); (b) a 1% increase in capital leads to a 0.33% increase in output; and (c) a 1% increase in training expenditure leads to a 0.16% increase in output. They continue that although training

expenditure clearly has a positive impact on output, its impact is less complex than that of improving productivity by upgrading the capital stock. They concluded that it is likely much cheaper to train than to upgrade the capital stock or increase employment numbers for that matter. It therefore makes this form of productivity enhancement highly cost effective.

2.3.4 Why the construction and mining industries?

Table 2.1, from Statistics SA (2014), illustrates that the construction and mining industries are two of the largest contributors to formal employment in South Africa, with both these sectors heavily reliant on the availability of artisanal and technical skills. What is also noteworthy is that employment in various other sectors, such as manufacturing and transport, is directly dependent on, and can be adversely influenced by the economic good standing of both the mining and construction sectors.

Table 2.1. Number of formally employed people per industry in South Africa (Source: South African Quarterly Labour Force Survey, Quarter 2, 2014)

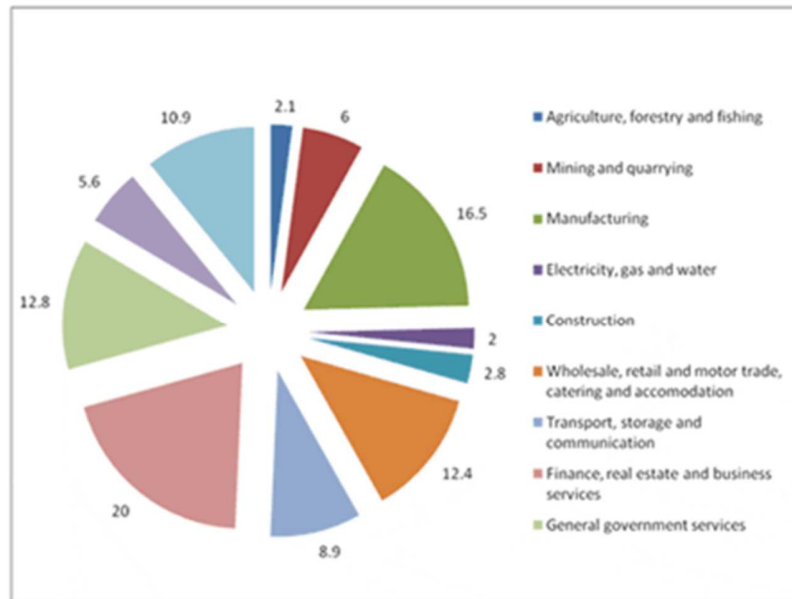
Industry	Apr-Jun 2013	Jan-Mar 2014	Apr-Jun 2014	Qtr-to-qtr change	Year-on-year change	Qtr-to-qtr change	Year-on-year change
	Thousand				Per cent		
Total*	14 692	15 055	15 094	39	403	0,3	2,7
Agriculture	742	709	670	-39	-73	-5,5	-9,8
Mining [†]	403	424	419	-5	16	-1,2	3,9
Manufacturing	1 838	1 804	1 745	-60	-93	-3,3	-5,1
Utilities	123	130	118	-11	-5	-8,8	-3,8
Construction	1 149	1 199	1 182	-18	32	-1,5	2,8
Trade	3 087	3 186	3 179	-8	92	-0,2	3,0
Transport	897	895	947	52	50	5,9	5,6
Finance and other business services	1 967	2 045	2 012	-34	45	-1,7	2,3
Community and social services	3 266	3 428	3 531	103	265	3,0	8,1
Private households	1 215	1 231	1 290	60	75	4,9	6,2

Note: Total includes other industry.
[†]Mining is a very clustered industry, hence the industry might not have been adequately captured by the QLFS sample. For more robust mining estimates, please use the Quarterly Employment Statistics (QES).
^{*}Due to rounding, numbers do not necessarily add up to totals.

Also, based on Figure 2.1 that follows, it is evident that the mining and construction

industries are two major contributors to South African GDP. Therefore, these industries well-being and growth, potentially holds significant benefits or impacts on the national economy.

Figure 2.1. Contribution of the main economic sectors as percentage of South African GDP (source: <http://www.moneyweb.co.za/moneyweb-the-burning-question/weird-signals>)



Many large construction and mining companies based in South Africa operate on a multi-national level, specifically in Africa. This creates the opportunity to expand the research beyond the confines of South Africa. It will however remain limited to those African countries that such companies' operations are confined to.

Also, the Joint Initiative on Priority Skills Acquisition (JIPSA) identified artisanal and technical skills as one of the scarce and priority skills, in particular those relevant for infrastructure development which in turn is heavily reliant on the construction industry. (Skillsportal, 2006).

2.3.5 Skill development in a global context.

Skill shortage is a global concern and an emphasis, even in developed nations, is placed on expedited and alternative (to public provision) skills development approaches to supply the ever-increasing demand for skills. Research conducted in the USA and Ireland, that is discussed below, clearly identified the need for and a shift in focus towards private sector provision as a solution to the problem on a global scale.

Here, when reviewing at the benefits of skills development in the USA, Crumpton (2011) agrees that “it is not human resources that form the basis for a competitive advantage, but rather the human capital pool that has the potential to create the advantage with both high levels of skill and willingness to perform and that the distinction is in the skill set [obtained through in-house initiatives] that creates a talented and committed workforce” (p. 170). This concurs that in-house skills development and training initiatives holds benefits when approached and implemented correctly.

Crumpton (2011) also mentioned that focusing on self-assessment when determining training needs is imperative. In other words, this means that companies, at the coal face of the industry, are best suited to “self-determine” what skills need to be developed. This strategy also lends its support to in-house initiatives.

McCartney and Teague (2001) reiterate that enterprises in Ireland can gain the competitive advantage by increasing employee skills, yet they are reluctant to engage in [in-house] training because of market failures. The authors stated that together with administrative failures in national training systems, can lead to economy-wide under-provision of skills and those tightly coordinated labour markets, which encourage companies to engage in training, are widely seen as a solution to this problem (McCartney & Teague, 2001). It is further evident from this study that private provision is not a sustainable solution, but public-private partnerships are also required. These kinds of initiatives are common in developing nations, as is evident in South Africa by such initiative as the Extended Public Works Programme and *ASGISA* (2010), which focuses on this type of partnership.

In conclusion, it is thus a global trend to engage in private sector, more specifically in-house, training initiatives by focusing on the benefits associated thereto. Also, as current skills development initiatives are widely considered as failing to adequately address the most pertinent skills shortages, it necessitates a different strategy in order to achieve more success. It is further also evident that the private sector has a great responsibility in providing skilled individuals, as the public sector is hampered by its shortcomings and is simply not delivering on the level and quantities required. The construction and mining industries, as significant contributors to GDP, are severely affected by these skills shortages and the current local trends, although commendable, does not seem to have the impact it could or should have in alleviating these shortages.

2.4 Gap in the Current Theory

This section is aimed at providing substantiation to the gap that exists in the private sector skills development space. Here, it specifically relates to the effects of in-house initiatives.

McGrath and Akoojee (2007) state that, “in the Sub-Saharan African context there has been a growth of two literatures on public and private provision in decade leading up to 2007.” (p. 210) This literature makes it clear that the public providers are in a state of transition, driven by both external intellectual and aid influences, largely emanating from development co-operation agencies and by real or imagined impacts and implications on globalisation (McGrath, 2012). McGrath and Akoojee (2007) further stated that “this has resulted in public providers becoming more focused on responsiveness to the needs of industry and on promoting employability rather than employment of graduates” (p. 210).

According to McGrath and Akoojee (2007), the private provisions for skills development tends to operate in a fairly narrow range of niches in terms of location and programmes and that the responsiveness of such [private] providers is assumed by those working within the sector. However, some of these studies have pointed to the need to test more rigorously at the empirical level (McGrath & Akoojee, 2007).

Also, according to McGrath (2012), the current decade has seen a significant return of interest in VET amongst the international policy community. This rise in policy and programmatic interest in VET's role in development, however, stands in contrast to the state of the academic debate. McGrath (2012) continues by stating that "whilst there has continued to be both policy and academic developments in VET within the Organisation for Economic Co-operation and Development (OECD) countries; in the south [Southern hemisphere] there has been a paucity of VET research and little in the way of theoretical exploration". Furthermore, the author states that the current approach to VET is grounded in an outmoded model of development, whilst the academic critique of VET in developing countries is also clearly long outdated (McGrath, 2012).

Lastly, Kraak (2004) explained that "one of the central tenets has been that the [research] emphasis on 'high skills' is not sufficient in a developing economy such as South Africa (cited in Daniels, 2007, p. 212)." The author further stipulates that emphasising low skilled strategies should be viewed in a positive light, particularly with respect to addressing unemployment and stimulating labour-intensive forms of production. (Kraak (2004), cited in Daniels, 2007, p. 212).

This study, through a focused research approach, thus aims to contribute towards the literature and theory surrounding how private sector can contribute towards skills development and skills shortage challenges that continues to plaque African countries.

2.5 What is Currently Happening within the Construction and Mining Industries?

When considering the significance of the private sector's contribution to alleviating skills shortages, it was also important to note that there were a multitude of innovative in-house programmes currently being successfully implemented and managed in both the construction and mining industries. Unfortunately, no matter how beneficial to the individual companies, these programmes seem to be a drop in the ocean when it comes to finding a sustainable solution to alleviating the ever present skills shortages faced within these industries on a local or even multi-national level. The following examples aim to highlight some of the more noteworthy initiatives and programmes that have been

adopted by companies operating within these industries in Sub-Saharan Africa.

Thwala (2008,) explains that “the ‘People at the Gate’ is an innovative training programme launched by Group Five, one of the big five construction companies in South Africa” (p. 446). The main aim of the programme is to empower unemployed individuals selected from local communities in the areas where the company operates. Here, the main driver is the sustainable development of a diverse set of skills within these communities.

Also, Goldfields, one of the largest gold mining companies in Sub-Saharan Africa, reported in their *2013 Integrated Annual Review*, that they opened their South Deep Mechanised Training Centre in 2013 to help employees improve their skills. This centre features world-class equipment to ensure employees are trained to operate at the highest possible level. (Goldfields, 2013)

Further, companies like Exxaro conducts skills audits at several of their operations. The skills audit identifies current job and competency requirements, comparing these with what is needed currently and, more importantly, in the future to achieve organisational goals and objectives (Exxaro, 2013). They then offer sponsored training in engineering and mining learnerships at, for example, the Colliery Training College (CTC, where Exxaro is a shareholder) in Mpumalanga. Also, as part of the talent pipeline, they provide sponsored on-the-job training in core skills programmes like plant operators, maintenance operators and mobile equipment operators.

In conclusion, considering the range of initiatives and programmes currently implemented by the private sector, of which the above are only a few examples, it soon became evident that the commitment and contributions were mainly attributed, in isolation, to individual large corporates. Although there might be some similarity in the objectives in developing skills, the basic approaches differ tremendously. This again raises a few pertinent questions, namely: (a) Should there not be a more inclusive benefits realisation approach towards smaller companies as well?; or (b) Should a more standardised or concerted approach be adopted across all types and sizes of companies operating within the same industry, to ensure the end-results are realised on an industry, or even national, level?

CHAPTER 3: Research Objectives

3.1 Introduction

This chapter stipulates the main research objectives and research questions which form the foundation of this research. The research objectives provide an overview of the aim and purpose of the research, whereas the research questions address specific issues in order to generate conclusive evidence to satisfy the objectives.

3.2 Research Objectives

The primary research aim is to explore both the driving and inhibiting factors behind in-house private sector skills development initiatives in the construction and mining industries within Africa. This information will then be utilised to develop and recommend a basic framework that can potentially enable companies in the respective industries to implement skills development initiatives in a more sustainable way.

With that in mind, it was also considered significant to first understand the economic importance of technical skills development in developing economies which are commonplace in Africa. In order to facilitate this, the aim was separated into two research objectives as follows:

Objective #1: To substantiate the importance of effective skills development in African economies and to understand why there needs to be a focus on the contribution the private sector can make thereto.

Objective #2: To explore the drivers and inhibitors behind current in-house private sector skills development initiatives within the construction and mining industries in Africa, and subsequently recommend a basic framework that can be adopted and implemented across the full spectrum of companies operating within the respective industries, which can ultimately lead to the alleviation of skills scarcities in a sustainable way.

3.3 Research Questions

The following research questions were proposed to enable the research process to address the objectives as stipulated above:

Research Question 1:

Is effective and sustainable skills development an important factor in developing economies?

Research Question 2:

Should there be a focus on finding more sustainable approaches from the private sector towards skills development in developing economies?

Research Question 3:

What are the main factors inhibiting the private sector embarking on in-house skills development initiatives and programmes within the construction and mining industries in Africa?

Research Question 4:

What are the main benefits and factors promoting the private sector to engage in in-house skills development programmes within the construction and mining industries in Africa?

The findings derived from these research questions can facilitate the necessary recommendations towards developing a basic framework for sustainable in-house skills development programmes. This framework could be considered across the private sector within the respective industries.

CHAPTER 4: Research Methodology

4.1 Introduction

Research methodology is defined as the process of collecting information and data in order to make informed [business] decisions (Businessdictionary.com, 2014). To avoid disconnect from the data and information gathered as part of this research project it was crucial that the methodology be aligned to the research objectives and research questions as described in Chapter 3.

On the basis of these objectives and questions, this chapter is concerned with the actual approaches and methods undertaken to provide reliable and quantifiable data and information. The quantitative and descriptive nature of the research design is discussed in detail, and clear distinction is made between the sample, population, unit of analysis and the sampling techniques. It further explains how the data was measured and analysed, and what the limitations of the scope of the research was.

4.2 Research Design

This section aims to provide a detailed outline of how the research took place. As Businessdictionary.com (2014) explains, a research design will typically include how data was collected, what instruments were employed, how the instruments were used, and the intended means for analysing data collected.

Bearing this in mind, a descriptive quantitative research design was implemented for the purpose of this study and both these constructs are explained in turn.

4.2.1 Quantitative research.

Saunders and Lewis (2012) defined quantitative research as the approach to collecting quantifiable data that is numerical or whose values could be measured in some way. According to Babbie (2010), quantitative methods aim “to emphasise objective measurements and the numerical analysis of data collected through polls, questionnaires or surveys.” A quantitative method thus focuses on gathering numerical

data and generalising it across groups of people.

Therefore, this research aimed to objectively measure and analyse data collected from a sample of the population (as defined in Section 4.3, p29). Next, the researcher extrapolated these findings across the entire population as an indicative, but accurate reflection of existing circumstances within the targeted industries.

A quantitative approach further supported this research, as it is conclusive in its purpose through quantifying the feedback results in easily interpretable and illustratable data that is inexpensive to obtain from a large population. As the mining and construction industries are diverse and complex industries, it created the opportunity to gather information from a greater spectrum of respondents in a much shorter time and in a more efficient manner.

Quantitative research was lastly relevant to the study as it created a measurable platform for the perceptions, opinions and responses of a large number of the respondents. This, in turn, enabled the researcher to substantiate any claims, assumptions or statements made in relation to the objectives of the research, and to then extrapolate these results to the greater population.

4.2.2 Descriptive research.

According to Saunders and Lewis (2012), descriptive research seeks to accurately describe or represent, people, events or situations by collecting measurable and quantifiable data. The descriptive properties of this research design was perfectly suitable for this study, as it aimed to explore and describe the demographics, perceptions and opinions of the target population (described in Section 4.3, p.29).

Various key measures, like the perceived benefits of in-house training, had to be accurately described in order to clearly understand the exact background from which the proposed framework could be derived and developed. This also enabled the grasping of the context and function within the workplace, company and, on a greater scale, the relevant industries. Failure to accurately describe and contextualise such key measures, could inevitably lead to a disconnect between the intended purpose of the

framework, and the expected outcomes and benefits for the company.

4.2.3 Data collection.

Data collection was facilitated through survey questionnaires, which is supported by Saunders and Lewis (2012) as an appropriate technique for descriptive quantitative research. This method of data collection gathers standardised data from large numbers of respondents, usually in a cost effective way.

The survey was sent out as an online questionnaire, via email, to as many members of the population as possible. This was done with the assumption that the majority of the target population would have had access to email and the Internet.

Data was also collected from publicly accessible records, e.g. published annual reports. This approach was applied in order to assist in clarifying what skills development initiatives and programmes were successfully implemented across the construction and mining industries in Africa.

In conclusion, this section aimed to provide a clear understanding of the research design implemented for this study. It described the both the quantitative and descriptive nature of the design respectively, and elaborated on the main data collection methods undertaken.

4.3 Universe and Population

Labspace.com (n.d.) defined a study population as “the total members of a defined class of people, objects, places or events selected because they are relevant to your research question.” For the purposes of this study, the population was described as any person permanently employed within private companies operating within the mining and construction industries in Sub-Sahara Africa, or companies directly affected by these industries throughout Sub-Saharan Africa.

Further, for the purpose of this study, the population only included those employees who were computer literate and who had active email addresses, access to such email

addresses and related Internet services.

No demographic differentiation, other than the geographic confines of Sub-Saharan Africa and the computer literacy of individuals was applied for the purpose of defining the research population. These population parameters also aimed to facilitate the triangulation process by separating respondents as follows:

- Training management staff, who were primarily tasked with identifying skills development needs and requirements, as well as designing, developing and approving the programmes to satisfy these needs and requirements.
- Human Resources' staff members, who were responsible for the implementation, facilitation and monitoring of skills development initiatives within their respective companies.
- General employees, who would generally be directly or indirectly influenced by, involved in, or subjected to in-house skills development initiatives.

As Saunders and Lewis (2012) explained, triangulation uses two or more independent sources of data within one study in order to ensure that the data leads to the same result. This method therefore increases the credibility of a study's findings (Saunders & Lewis, 2012). This study therefore obtained feedback on the same criteria from different sources in order to objectively substantiate any findings and results relevant to the research.

4.4 Unit of Analysis

The unit of analysis for this study was the opinion and perception of employees who were directly or indirectly responsible for, affected by, subjected to, involved with, or aware of skills development programmes at NQF Level 2 to 5 within their respective companies and industries.

In contrast to the sample population, which focused on the employees and their relevant demographics, the unit of analysis needed to provide a quantifiable and measurable

entity, which comprised of their opinions and perceptions as gathered through the survey questionnaire described in the following section.

4.5 Sampling

The construct and description of the research sample is described in this section. It can be separated into three categories namely, sampling techniques, sampling frame and sampling size. These categories are discussed in turn.

4.5.1 Sampling techniques.

The main sampling method applied to this study is referred to as snowball sampling. According to Saunders and Lewis (2012), snowball sampling is used when it is difficult to identify all the members of your population, or they may be difficult to reach.

As it was extremely difficult to reach the entire population (see Section 4.3, p. 29), the technique that was implemented was the distribution of online survey questionnaires (as described under Section 4.6.3, p. 35) to at least two key employees within a company, with the request that they forward it to as many staff members fitting the sampling criteria as possible. In this way a larger population was reached, increasing the potential sample size, and ultimately creating more results' accuracy and credibility.

4.5.2 Sampling frame.

Saunders and Lewis (2012) defined a sample frame as the complete list of all the members of the total population. The difficulty of obtaining such a sample frame for this research study was amplified by the sheer size and diversity of the proposed population. The aim was however to at least obtain lists of registered construction and mining companies from the relevant industry registration authorities. This was done in order to identify an eligible spectrum of companies to target in order to obtain the necessary sample frame.

4.5.3 Sampling size.

As the actual population size and demographic make-up was unknown, the survey questionnaire was distributed to as many members as possible. This resulted in a sample size of 84 respondents who completed for questionnaire. This also provided sufficient spread between the relevant categories as stipulated in the aforementioned triangulation process.

This section provided a clear was aimed at providing a clear understanding of the relevant constructs that comprise the concept of sampling. This was ensured by describing and elaborating on the sampling techniques, sampling frame, and the sample size.

4.6 Measurement

The measurement tool for this study was in the form of the survey questionnaire (see Annexure A). According to Zikmund, Carr and Griffin (2012) surveys provide quick, efficient and accurate means of accessing information and are a flexible way of doing so.

In order to accurately measure the required constructs, a structured online questionnaire was developed. Saunders and Lewis (2012) stated that the design should be shaped around the need to meet the research objectives. This was applied to the questionnaire and the researcher also gave the respondents a clear and easily interpretable document to complete. The questionnaire incorporated fixed-alternative questions, with the respondents only allowed limited-alternative responses (Zikmund *et al.*, 2012).

The following section describes the measurement approach. Here, measurement design, pre-testing, and distribution are discussed.

4.6.1 Design.

The survey questionnaire was split into an introductory title page together with five sub-sections, as described in Sections 4.6.1.1 to 4.6.1.6, p33-34. However, with the

exception of survey Section B, all survey questions were presented to the respondents in a Likert scale format (see Section 4.7.2, p. 36). SurveyMonkey.com (2014) defines a Likert scale as a reliable way to measure attitudes and behaviors by using answer choices that range from one extreme to another, and allows you to uncover degrees of opinion.

4.6.1.1 Introductory title page.

The initial page of the questionnaire introduced the researcher to the respondents or participants, and gave a brief description to the background of the study, as well as a summarised indication of the intended purpose thereof. It further included the consent and confidentiality information, as well as the contact details of the researcher.

4.6.1.2 Section A: Clarifying definitions.

Section A briefly introduced and clarified three key concepts and the context thereof in relation to the workplace. This was done to ensure the correct interpretation was adopted by the participants at the start of the survey, as well as to focus their attention on the specific issues being raised.

4.6.1.3 Section B: Demographic information.

The following part of the questionnaire, Section B's primary function was to capture relevant demographic information such as, but not limited to, those mentioned below.

- a. Company Information:
 - Industry of operation
 - Level of participant's employment

- b. Personal Information:
 - Gender
 - Age

The anonymity and privacy of all respondents were respected and protected at all times. Therefore, no names or any other personal information was recorded or disclosed as part of the data collection process.

4.6.1.4 Section C: Public sector.

The next part of the questionnaire, namely Section C, was the first section to specifically address the research questions in order to ultimately satisfy the objectives as stipulated under Section 3.1, p. 26. This section was thus designed to obtain feedback data related to the participants' perception of the public sector's role in fulfilling skills development requirements within their industry.

Each survey question was directly or indirectly related to a specific research question with a maximum of 4 survey questions linked to any one research question.

4.6.1.5 Section D: Private sector shortcomings.

In line with the private sector focus of the study, Sections D and E formed the larger portion of the survey. These sections aimed to address the participants' perception of the current in-house skills development initiatives in the private sector.

Here, Section D specifically targeted the potential shortcomings of the in-house skills development initiatives and programmes in the private sector within the respective industries.

4.6.1.6 Section E: Private sector benefits.

As with Section D, this section kept its focus on private sector in-house skills development initiatives and programmes. However, more specifically targeting the potential benefits that these initiatives and programmes might have on the companies and industries, respectively.

This entire survey questionnaire consisted of five separate sections with a combined total of 26 questions (see Annexure A).

4.6.2 Pre-testing.

Pre-testing, or pilot testing, prior to official release of the survey questionnaire was of critical importance. According to Saunders and Lewis (2012), this ensures firstly that the statements and questions contained therein are easily understood, correctly interpreted, and that the responses are accurately captured.

In order to facilitate such a pilot testing, the researcher distributed 12 survey questionnaires to a pre-selected sample of friends and colleagues. This was facilitated by making use of the pre-testing services offered by “SurveyMonkey.com”.

The feedback received from the pilot survey was minimal, but constructive. This was incorporated into the main survey and minor adjustments were made to streamline the survey document.

4.6.3 Distribution.

By utilising the services of “SurveyMonkey.com”, the survey questionnaire was converted to a digital online format which could be accessed via a website link included in all emails distributed.

The surveys were then completed online by the respondents through a quick, formal and easy accessible platform which was extremely cost-effective for the researcher.

4.7 Data Analysis

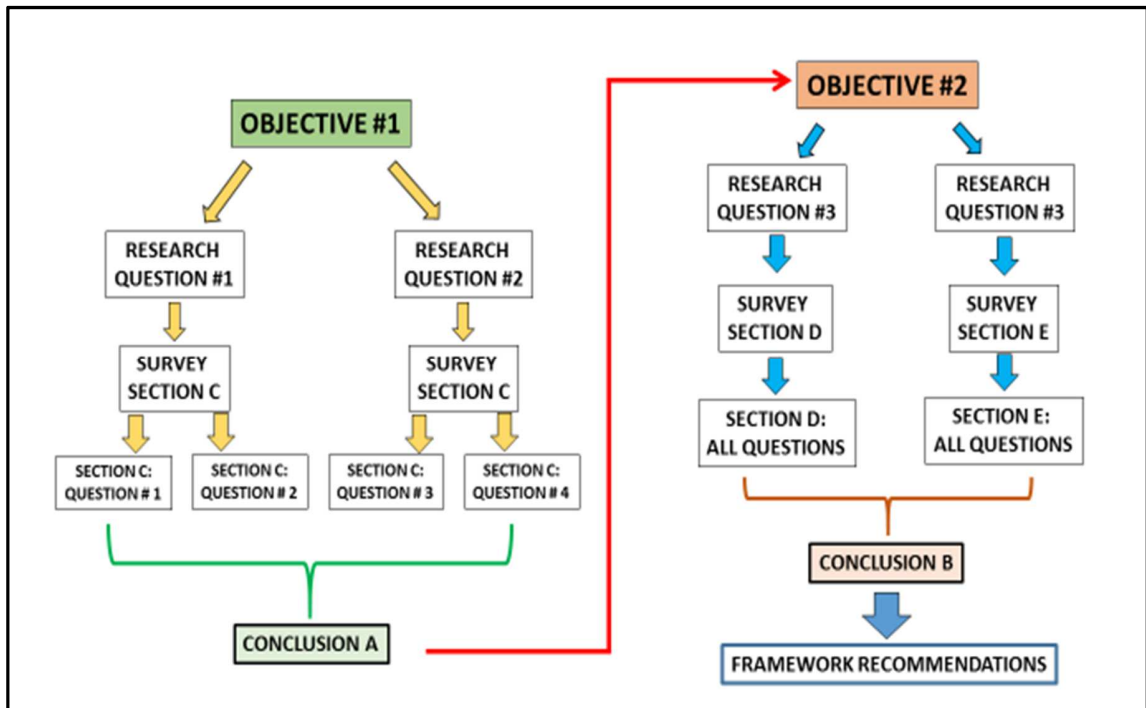
The following section is dedicated to explaining the data analysis process. This analysis is based of two distinct categories, namely analysis approach and analysis execution.

4.7.1 Analysis approach.

Figure 4.1 that follows illustrates how the survey questions were grouped under the

respective sections. It also shows how each section links to the relevant research questions and ultimately to the main research objectives as stated and explained in Section 3.1, p. 25.

Figure 4.1. Data Analysis in Relation to Research Objectives



It should be noted that Objective #1 was analysed separately, as a preceding objective, to Objective #2, and did not form part of the analysis aimed at the concluding framework recommendations. Objective #1 thus primarily functioned to substantiate the current status of skill shortages experienced in both industries as well as to emphasise the perception of the potential impact thereof in relation to the well-being of the national economy of a developing country.

4.7.2 Analysis execution.

All survey questions directly related to Research Question #'s 1 to 4, were formulated and presented in the form of a Likert scale. This approach was primarily undertaken to support the need for quantifiable data as depicted by the research design (see Section

4.2.1, p. 27). As no comparative analysis was envisaged at the research design stage, this approach was sufficient to enable an accurate description of the analysed data, in a clear and uncomplicated manner.

With the exception of Section B of the survey questionnaire, which comprised of the gathering of demographic and general information, all survey questions directly linked to the research questions, and thus related to the research objectives, were presented in Likert scale format (see Annexure A).

The scale was limited to 5 possible ratings and was allocated as indicated in Figure 4.2 below. Here, a strong disagreement, indicated a severe negative perception or opinion towards the respective statement and was allocated a rating of 1. In contrast, strong agreement was seen as an indication of extreme favouritism towards the stamen and was allocated a rating of 5. A rating of 3 was seen as absolutely neutral, with the respondent not having any inclination towards agreeing or disagreeing with the statement. This scaling format was accepted as able to generate the necessary spread in respondent opinion to enable satisfactory analysis.

It should also be noted that all the survey questions that were presented in Likert scale format comprised of the exact same scaling structure, being the 5 possible ratings. This simplification was implemented to ensure the responses for each individual question or statement could be quantified similarly and the result could be assessed and compared on exactly the same basis.

Figure 4.2: Likert Scale Rating Allocation

	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
"Statement / Question"	1	2	3	4	5

Raw response data gathered from the completed surveys was automatically categorised into the relevant sections and sub-sections by SurveyMonkey.com. The data was

extracted and displayed in a spreadsheet format and further processed into the descriptive statistics that could be easily and clearly illustrated. The main descriptive statistics used for data analysis was in the form of average ratings of each individual survey question.

For the purposes of this study, a deviation of 0.75 to either side of the neutral rating was seen as significant. Thus, ratings above 3.75 or below 2.25 were seen as significant and justified further consideration. However, average ratings deviating more than 1.25 from the neutral, i.e. ratings more than 4.25 or less than 1.75, were seen as overwhelmingly conclusive in relation to the respective research questions.

In presenting the analysed data (see Chapter 5), bar charts and histograms perfectly suited the profile for the graphical illustrations needed to clearly articulate the research analysis. It should however be noted that individual survey questions with negative average ratings (disagreements) were inverted for illustrative purposes. In this way the extent, and thus the significance, of the deviation from the neutral for the average ratings of all items could be illustrated and compared on the same side of the vertical axis. The bars of the inverted items have been shaded in red with an “[R]” accompanying the respective data labels. This ensured that the inverted ratings were clearly distinguished from those that have not been inverted.

Also, as an added advantage of this inversion technique, the scale of all horizontal (gaging) axis’ were set to start at 3.0, rather than 1.0, and end at 5.0. This facilitated additional horizontal expansion of the item bars and allowed for added emphasis on the differences in average ratings for the different items.

It should lastly be noted that the data related to any items illustrated in Chapter 5, have not been changed, altered or manipulated in any way, and remains a true reflection of the data obtained from the survey process.

4.8 Research Limitations

Although every effort was made to eliminate limitations and shortcomings of the research, the researcher acknowledges the limitations as follows.

- The research was limited to in-house skills development and training initiatives and programmes conducted in the private sector at NQF level 2 to 5, and corresponding levels of training in other Sub-Saharan African countries falling within the scope of this research.
- The study was limited to the confines of the African continent.
- The research was limited to the mining and construction industries, as significant individual contributors to employment and the economy of South Africa, as well as the rest of the developing Sub-Saharan continent.
- The respondents from the targeted population had to be computer literate and had to have access to Internet services and email.
- The researcher had no prior experience with the distribution methodology described in section 4.6.3, p35, although there was familiarity with the concept and care was be taken to be fully acquainted with the service before the distribution phase of this study.
- Lastly, the research was limited to focus on an absolute skills scarcity and not a relative scarcity, as explained in Section 2.2.1, p. 7.

4.9 Conclusion

Having a definite relation between the research methodology and the stated research objectives was imperative. It became evident from the onset that the research objectives supported a quantitative and descriptive approach, which was elaborated upon respectively. Further, it was important to define the sample population and the techniques accurately and provide an extensive explanation of how the data analysis was conducted, specifically in terms of the Likert scale approach. Lastly, the limitations of this study were stated.

CHAPTER 5: Results

5.1 Introduction

Preceding the detailed explanation and description of the data gathered by this research, this chapter intends to graphically illustrate the analysed data. This is done on two levels. Firstly, the main sample demographics are illustrated, and although these do not directly concern the research questions or objectives as discussed in Chapter 3, they aim to further contextualize the sample make-up in terms of the gathered data. Following this, both research objectives are respectively presented in the form of illustrations. .

5.2 Sample Demographics

The following section presents a high-level illustration of the most significant sample demographics considered as part of this research.

5.2.1 Sample gender.

Figure 5.1. Sample Gender Breakdown

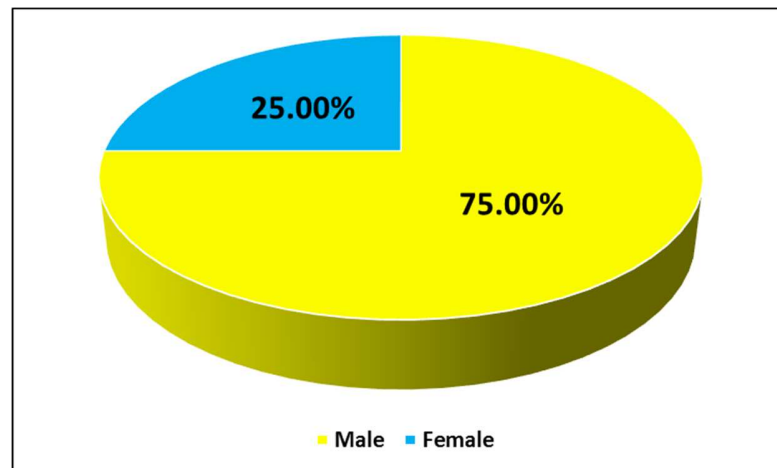
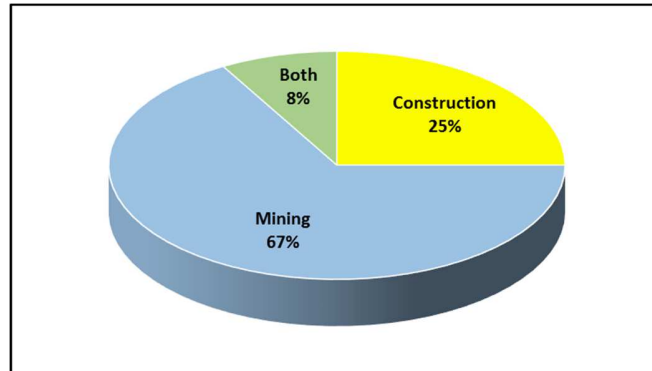


Figure 5.1 clearly illustrates an overwhelming majority of male respondents completing the survey, although there was no discrimination in the survey distribution process.

5.2.2 Sample breakdown per industry.

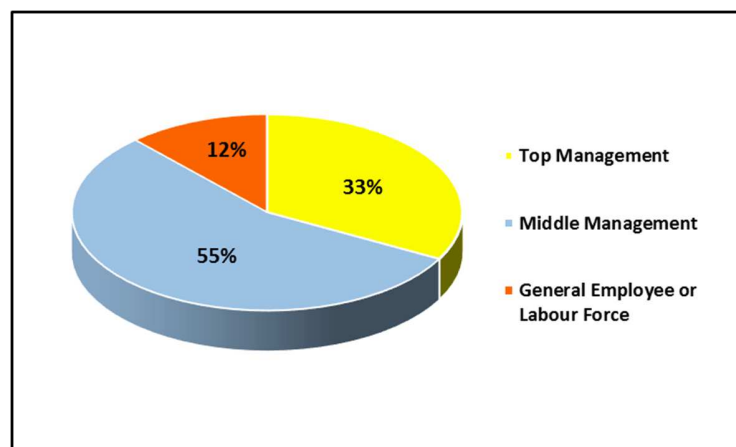
Figure 5.2. Sample Breakdown per Industry



As per Figure 5.2 above, the majority of the respondents service the mining industry. Although the mining industry in South Africa is a larger contributor to GDP (see Figure 2.1, p. 20), the construction industry employs almost three times as much labour (see Table 2.1, Section 2.3.4, p. 19) which should expect to yield a greater number of respondents from the construction sector. However, the contribution of each sector for the purposes of this research is seen as sufficient within the margin of error for the population in order to extrapolate the findings for both industries.

5.2.3 Sample breakdown per employment level.

Figure 5.3. Sample Breakdown per Employment Level



The sample demographic illustrated in Figure 5.3, bears significance to the triangulation approach (as discuss under Section 4.3, p. 29). When comparing the data to the population characteristics, the difference in percentage Top Management and Middle Management resembles current industry employment norms. However, the reduced number of respondents from the General Employee or Labour Force is skewed and can possibly be ascribed to the limited access of this level of employees to Internet and email services, as mentioned under the research limitations (Section 4.8, p. 38). Considering this limitation, the respective percentages are perceived to provide sufficient spread across the three targeted levels to validate the triangulation approach as successful.

The following section aims to illustrate the data analysis of each individual survey question. The individual items can subsequently be assessed on their own or in relation to the survey questions relating to the same survey sections. The illustrations below are grouped together under their respective Research Questions and Objectives, as indicated in Figure 4.1, p. 36.

5.3 Research Objective #1

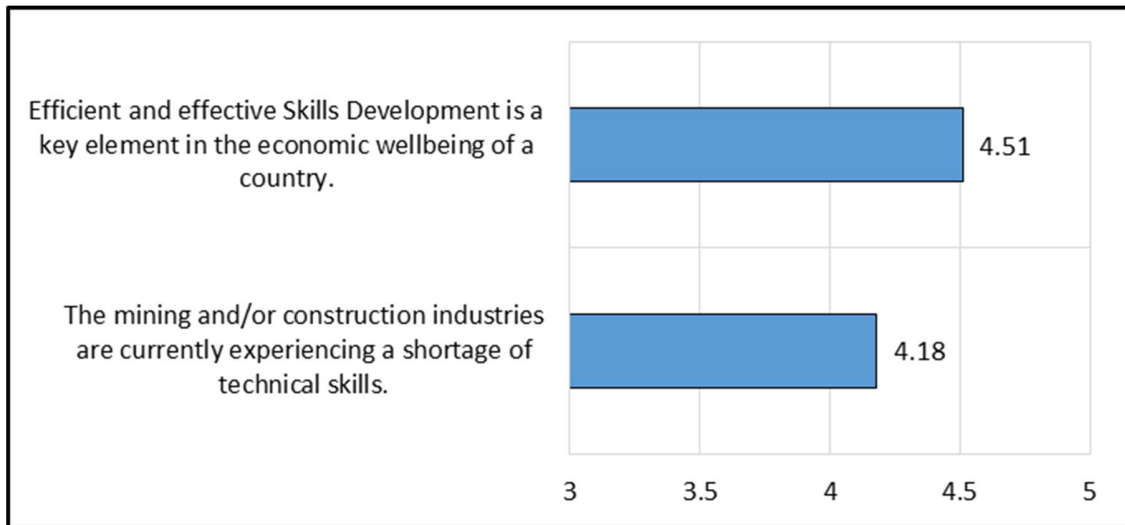
As explained in Section 3.1, p25, objective #1 was aimed at substantiating the importance of effective skills development in African economies and to understand why there needs to be a focus on the contribution the private sector can make thereto. The data analysis related thereto is illustrated below.

5.3.1 Research question #1.

Is effective and sustainable skills development an important factor in developing economies?

With an average rating of 4.51, Skills development is definitely viewed as a critical contributor to the economic wellbeing of a country. Also evident from above, is a significant average rating of 4.18 for perceived skills shortages currently experienced within both industries.

Figure 5.4. Average perception ratings of current skills shortages that exist in the mining and construction industries, as well as its relevance to national economic wellbeing



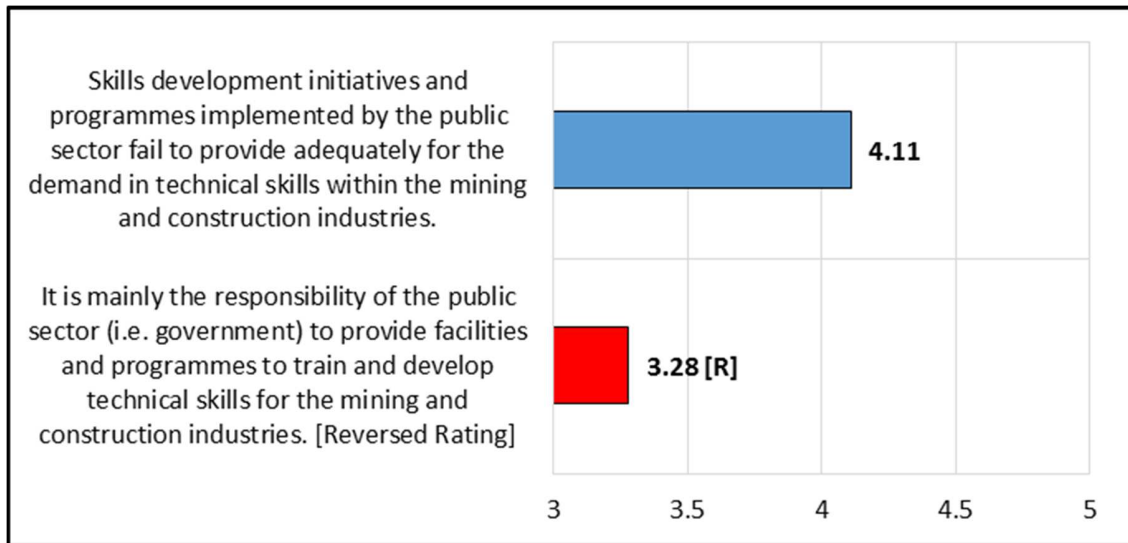
This emphasises the need for an increase in effective skills development programme, albeit through private or public participation, in order to prevent further deterioration of the well-being of the national economy.

5.3.2 Research question #2.

Should there be a focus on finding a more sustainable approach from the private sector towards skills development in developing economies?

Based on the illustration above, it is evident that there is a significant lack of confidence in the public sector to provide adequately for the demand in technical skills shortages within both industries. When this is coupled with the findings, albeit with a somewhat insignificant average rating, that it is not only the responsibility of the public sector to provide facilities and programmes to train and develop technical skills. It becomes clear that the private sector needs to get more involved.

Figure 5.5. Average ratings for the perception of the need for increased involvement from the private sector in skills development.



5.4 Research Objective #2

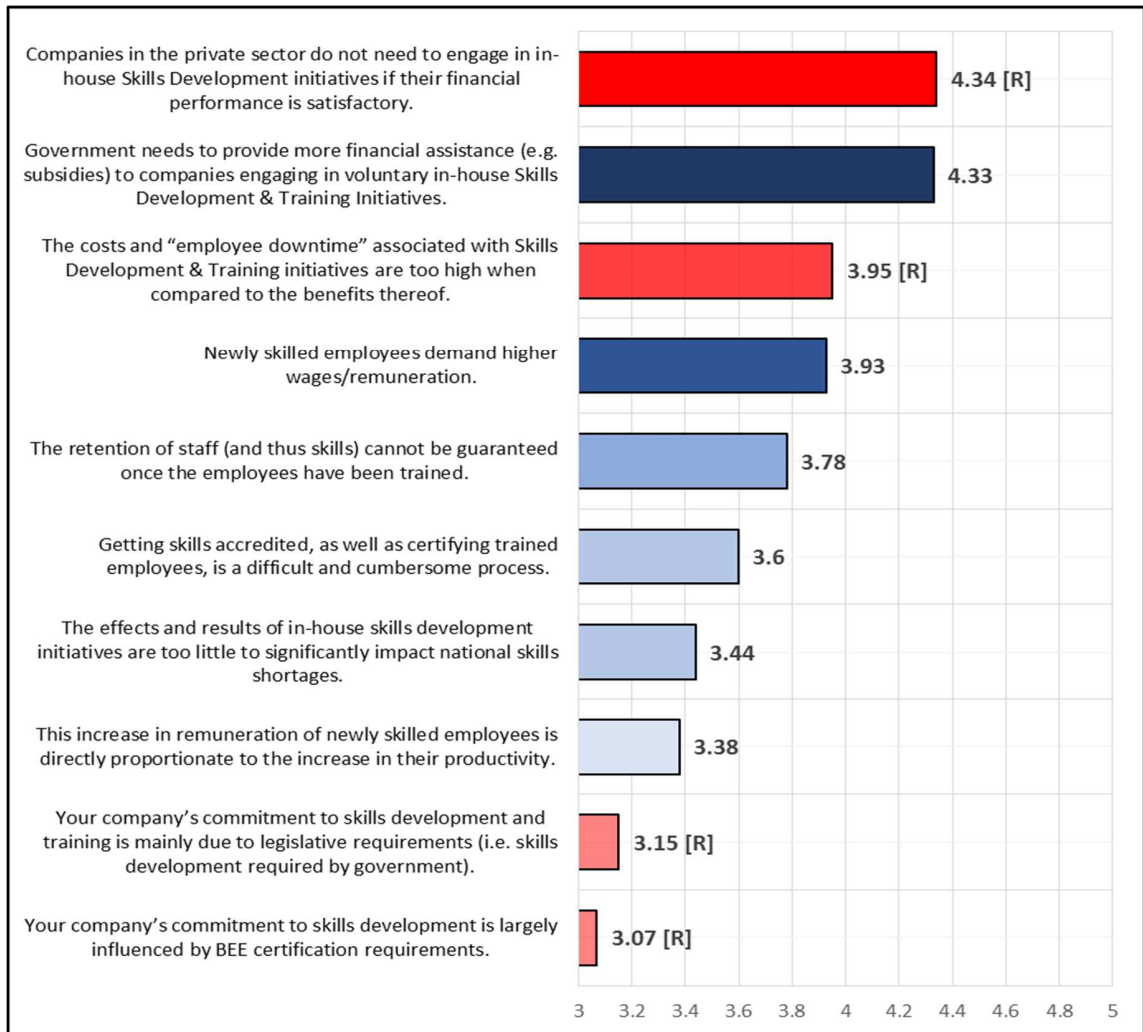
As mentioned in Section 3.1, p. 25, in conclusion of objective #1, objective #2 aimed to explore the actual drivers and inhibitors behind the engagement of in-house private sector in skills development initiatives. These drivers and inhibitors are analysed and illustrated below in order to identify the most pertinent factors, positive or negative. These factors affected the engagement of the private sector to in-house skills development initiatives, which can then be assessed, ranked and incorporated into the basic framework recommendations.

5.4.1 Research question #3.

What are the main factors inhibiting the private sector to engage on an in-house level in skills development initiatives and programmes within the construction and mining industries in Africa?

Evident from the average ratings in Figure 5.6, there is significant differentiation between the respondents feedback on the various inhibiting factors. Thus, this section lends itself to more scrutiny and explanation.

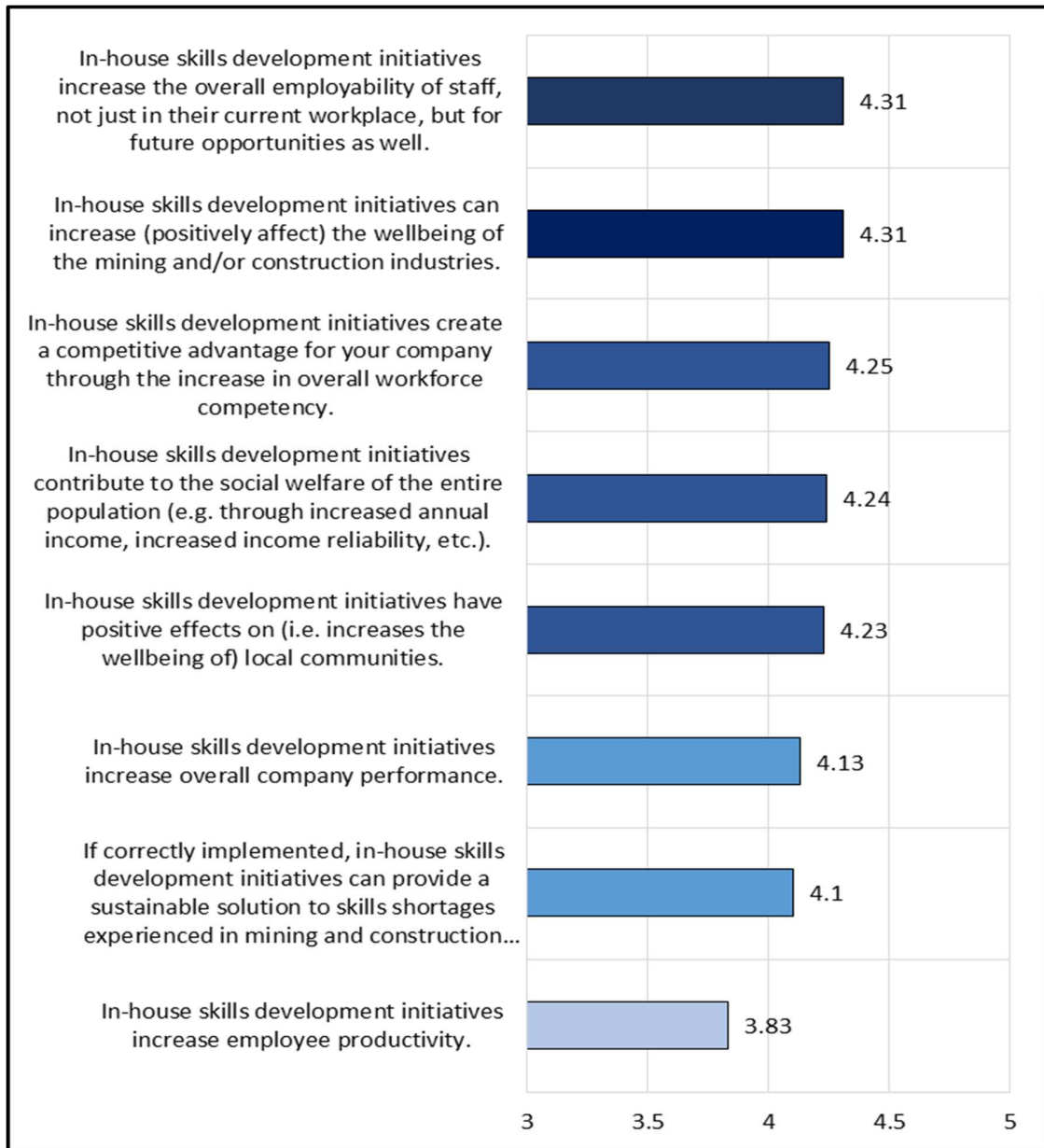
Figure 5.6. Average ratings of the factors inhibiting the engagement of in-house private sector in skills development initiatives.



5.4.2 Research question #4.

What are the main benefits and factors promoting the private sector to engage in in-house skills development programmes within the construction and mining industries in Africa?

Figure 5.7: Average rating of the beneficial factors and impacts promoting the engagement of the private sector in in-house skills development initiatives.



Considering the findings illustrated in Figure 5.7, all benefits opinions surveyed generated results that are well above the significant threshold (as described in Section 5.3, p. 42). This illustrates the coherent agreement and commonalities in the various perceptions of the main benefits associated with in-house skills development initiatives.

5.5 Critical Focus Areas

Figure 5.8. Five most significant factors inhibiting the engagement of in-house private sector in skills development initiatives.

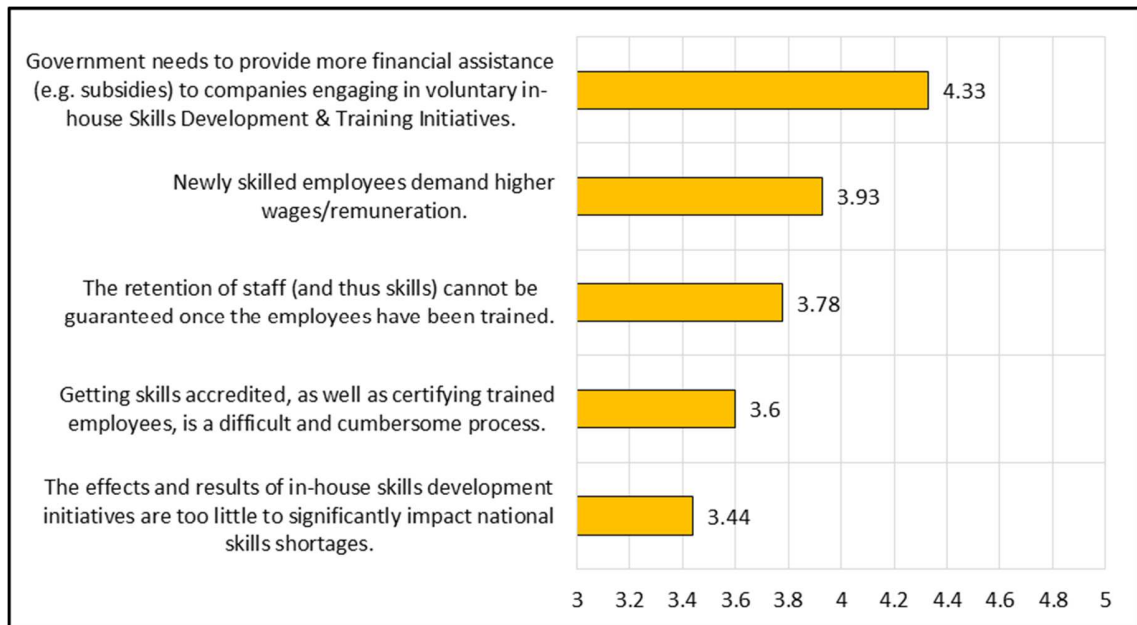


Figure 5.8 highlights the five of the most significant inhibitors of the private sector engagement in in-house skills development initiatives. This should be incorporated as critical factors or focal areas when recommending the framework that follows in Chapter 6.

5.6 Key Beneficial Impact Factors

In Figure 5.8, both the critical inhibiting factors that are internal and external to the company are grouped together. The beneficial impacts can however be separated more definitively into 1) benefits having a direct effect on the internal performance of the company; and 2) those benefits that effect the external social-economic environment in which the companies operate.

Figure 5.9: Key Company Benefits (Internal Benefits) to be considered for the Benefits Realization part of the Framework.

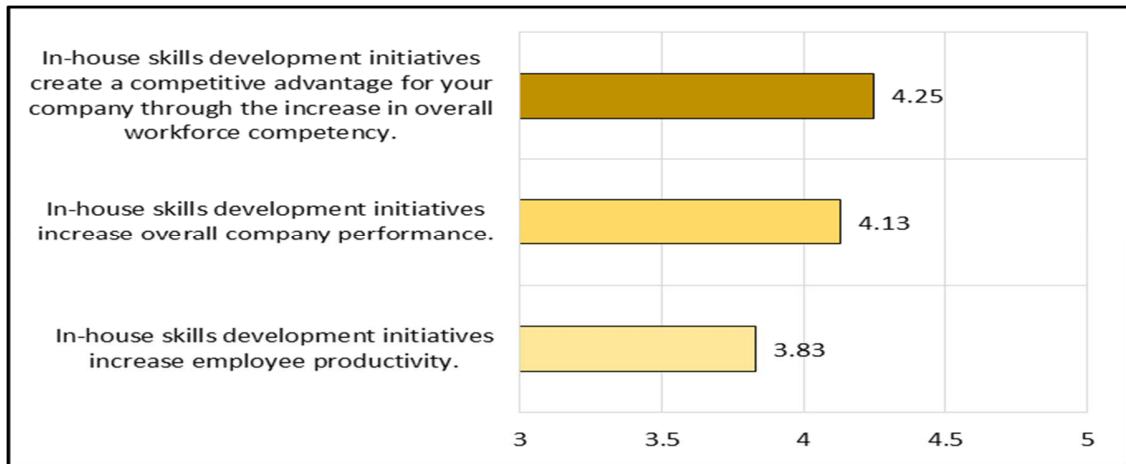


Figure 5.10: Key Socio-Economic Benefits (External Benefits) to be considered for the Benefits Realization part of the Framework.

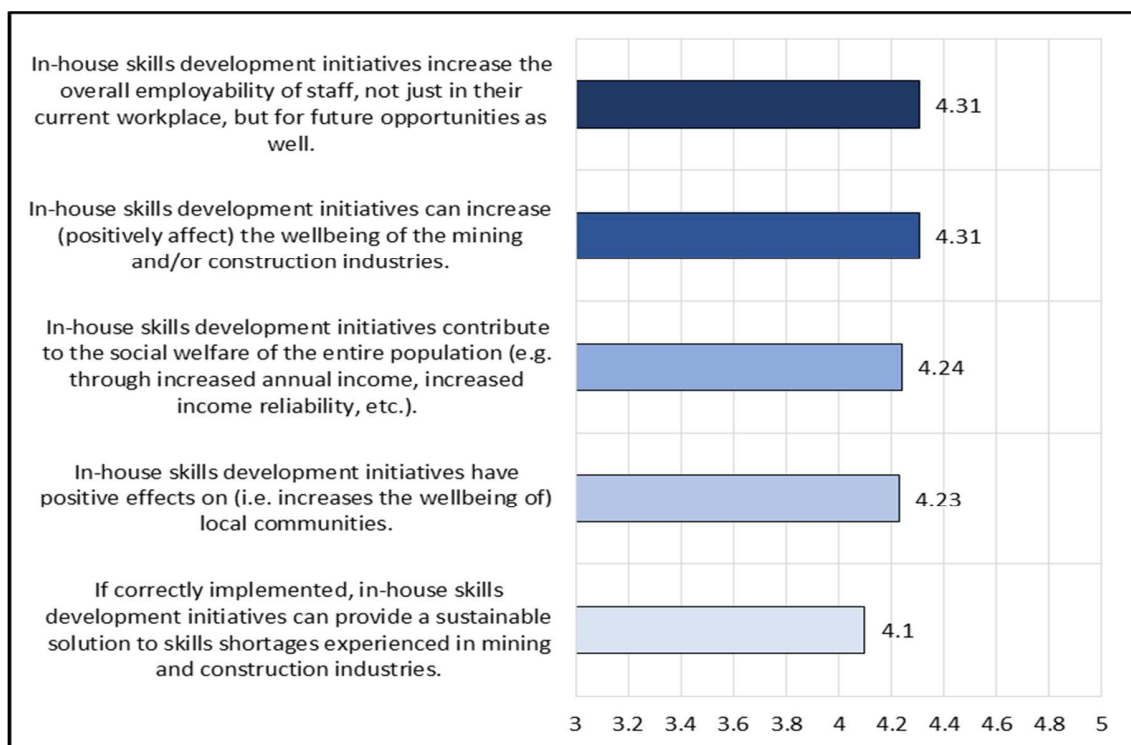


Figure 5.9 highlights the beneficial impact factors internal to the company that generally promote active engagement from the private sector in in-house skills development

initiatives. These benefits should be considered in the benefits realisation section of the recommended framework to follow.

Figure 5.10, in turn, highlights the beneficial impacts that are external to the company, but critical on a socio-economic level. These factors can be incorporated in the framework as secondary drivers to private sector engagement. However, it should always remain critical factors to be considered by the public sector.

5.7 Conclusion

It is evident that there is a full spectrum of findings ranging from insignificant to critical. In addition, within related sections, there are many similarities and dissimilarities to consider. The sample demographics were illustrated, as well as a clear graphical presentation of the data gathered in terms of the two research objectives respectively. The following chapter explains or discusses and substantiates these findings in more detail.

CHAPTER 6: Discussion of Results

6.1 Introduction

The previous chapter presented the research data analysis and graphical illustrations of the relevant research findings. This chapter provides the interpretation, explanation and conclusion of these findings. This section of the research also includes the recommendations for a basic, but substantial model framework, which will incorporate the most significant factors influencing private sector engagement in in-house skills development initiatives.

Therefore, in this section, five distinct sections are discussed, namely, the demographic considerations; the public sector shortcomings and the need for private contribution; inhibiting factors of private sector commitment and engagement in skills development initiatives; beneficial impacts of private sector engagement in skills development initiatives; and the recommendations and framework composition.

6.2 Demographic Considerations

Demographic considerations, is not seen as having any direct impact on the findings or conclusions of the main objectives of this study. However, the relevance of explaining these findings are seen to contribute to contextualising the target population through the sample characteristics in order to view the main research findings in specific relation to the industries that were assessed.

6.3 Sample Make-up and Demographics

The following section describes the sample demographics, as mentioned in Section 6.2 above, in three main areas namely, gender, industry, and level of employment.

6.3.1 Gender make-up of sample.

The only significant aspect concerning the gender make-up of the sample, as illustrated in Figure 5.1, p. 40, is the overwhelming dominance of male respondents. This is

assumed to be an accurate reflection of the sample population gender demographic, as both industries are historically male dominated, from management through to the labour force. Notwithstanding additional considerations, special attention is drawn to the male domination of the labour force in particular, which is mainly necessitated by the physical demands on workers due to the inherent nature of laboured portion of the work for both industries.

However, as explained in Section 4.8 (p. 38), the sample population was limited to employees with active email accounts and access to the Internet, thus eliminating the majority of the labour force, who were assumed not to have access to such facilities. The lack of survey penetration to the mostly male dominated level of employment within these industries could thus have led to an increased percentage of female respondent representation, although this is not reflected as such in the sample.

6.3.2 Industry make-up of sample.

The industry make-up of the sample correlates positively to the GDP contribution of each industry (see Figure 2.1, p. 20). It is however not representative of the relation in employment figure as indicated in Table 2.1, p. 19. The main attribute to the lower employment per GDP contribution of the mining industry can be ascribed to the fact that a large portion of its operations is executed and controlled by highly mechanised means and processes. Therefore, it was expected to see a larger portion of respondents represented by the construction industry.

This is not seen as a limitation to the findings, as the focus of the study remains on the shortages of technical skills within both industries. Although there is significant technical skills diversity within each respective industry, as well is between them, the fact is that both industries are experiencing a scarcity of technical skills in general and makes the percentage industry breakdown of the sample acceptable for this study. The respective industry skills shortages are supported by Mpyatona (2013) for the construction industry in Section 1.5, p. 4 and by Exxaro (2014) in Section 2.3.3, p. 16 for the mining industry.

6.3.3 Employment level make-up of sample.

Accurate sample composition, under normal research conditions or circumstances, could have reflect a vast majority of representation from the labour force, as this is level of employment far outweighs the combined management levels for both industries. However, as stipulated in Section 4.8, p. 38, this sample population was limited to computer literate employees with access to email and Internet access. This is assumed to have eliminated the majority of the labour force within both industries from the sample population. The ratio of middle to top management seems to be aligned to the industry norms.

It should however also be noted that the main purpose of gathering and analysing data based on the level of respondents employment, was to facilitate the substantiation of the triangulation approach as explained in Section 4.3, p. 29. On conclusion of this analysis, as well as considering the limitation on the sample population described in the preceding paragraph, the triangulation results are accepted as providing sufficient spread to indicate an inclusive representation across the employment levels of both industries.

This therefore concludes the description of the demographic considerations. The relevance thereof should be continuously considered as providing context and support to the remainder of the discussion of the research results that follows.

6.4 Public Sector Shortcomings and the Need for Private Sector Contribution

This section relates to Objective #1 and is aimed at substantiating the importance of effective skills development in African economies and to understand why there needs to be a focus on the contribution the private sector can make thereto. The description of the results to follow can thus be directly linked to the relevant research questions and are headed as such.

6.4.1 Research question #1.

With consideration to the limited number of survey questions related to Question #1, the findings indicate a strong inclination to both the relevance of skills development in a developing economy, and the fact there is a severe scarcity of technical skills within these industries. With an average rating of 4.51, see Figure 5.4, p. 43, the relevance of skills development in developing economies can be categorised as critical to the economic wellbeing of a country.

This is supported by King (2009) who stated that technical and vocational skills development is becoming an increasingly important policy issue in developing countries. McGrath and Akoojee (2009), also emphasises this by explaining that even beyond the local economic platform, skills and knowledge even help build international competitiveness, employment and prosperity.

Also evident from Figure 5.4, p. 43, is the average respondent rating of 4.18 for the opinion that there are actually skills shortages currently being experienced within both industries. The scale ratings and assumptions, as explained in Section 4.7.2, p. 36, categorises this as a significant finding and substantiates the fact that there is a definite need for an increase in effective skills development programmes, albeit through private or public participation, in order to prevent further deterioration of the well-being of the national economy.

Reuters (2012) acknowledges that there is a shortage of skills in the mining sector and that this shortage of skilled workers is actually worsening. Mpyatona (2013), on the other hand, further stresses the general shortage of skilled individuals within the construction industry of South Africa as hampering aspiring infrastructure developmental plans introduced by the state.

In conclusion to research question #1, it is established that there is a definite dependence of the economic well-being of a developing economy on effective skills development within that country, and that both the mining and construction industries are currently experiencing a severe shortage of technical skills. Bearing these findings in mind, the following section aims to substantiating the subsequent necessity of the

engagement of the private sector in contributing to the alleviation of these skills shortages and scarcities.

6.4.2 Research question #2.

In section 6.4.1 above, it was concluded that there is a definite need for effective skills development in developing countries, more specifically also within industries that suffers from a severe skills scarcity, such as the construction and mining industries. Although the need for technical skills development within these industries has thus been determined, it is also of significance to look at the main avenues of supplying or developing technical skills in these environments. For the purpose of this study, the functions of supplying and developing technical skills have been separated into two distinct sectors, namely: 1) the public sector, such as government programmes and institutions; and, 2) private, such as private companies and businesses (see Section 2.2.3, p9).

The public sector is historically seen as been the main provider of institutions and initiatives to train and develop various levels of skills on a national level. If able to adequately do so, the assumption is that there will be limited need for the private sector to roll up its sleeves and commit to similar initiatives. However, they would rather act as a guiding entity to shape the focus of the public sector's supply to the skills most critical to economic growth and prosperity. This is however not the case, as the findings illustrated in Figure 5.5, p. 44, indicate that the initiatives and programmes implemented by the public sector are failing to adequately provide for the current demand in technical skills, specifically within the mining and construction industries.

Allais (2012) supports this by saying that “numerous [public] policy interventions and the creation of new institutions and systems for skills development in South Africa are widely seen as having failed to lead to an increase in numbers of skilled workers” (p632), and that this has in fact led to a severe lack of confidence in the public sector's ability to adequately provide skilled individuals to satisfy an increasing skills scarcity brought on by continual economic growth.

Further to this, as inferred from Figure 5.5, p. 44, the belief that it is mainly the

responsibility of the public sector to provide facilities and programmes to train and develop technical skills within the mining and construction industries is countered. The [reversed] rating of 3.28, is not rated as significant enough to draw important conclusions, as it only mildly deviates from the neutral, but nonetheless leans more towards the opinion that the responsibility does not vest solely in the public sector.

As Skillsportal (2013) reports, the “skills gaps cannot be filled through formal [public] academic training alone and by recognising companies and individuals that put a lot of effort into measuring the impact of training interventions, is one way of shifting the focus away from just completing the training checklist.” (p. 1)

Based on the categorisation of national skills providers into two sectors, the finding conclude that it is incumbent on the private sector to take ownership of a larger portion of responsibility for developing technical skill, as the public sector is simply failing to produce either the quality or quantity of skills required by the respective industries. It must be said that it seems the private sector is already one step closer to accepting increased responsibility by acknowledging that it is not only the public sector that should be held accountable for failing to provide the necessary skills.

The findings in in this section, and Section 6.4.1, p. 53, is accepted as having satisfied all the aspects raised as part of objective #1, and can be summarized as follows:

- Technical skills development is a key factor in the economic wellbeing of developing nations within Africa.
- There is a definite scarcity of technical skills within the construction and mining industries of Africa.
- The public sector is failing to provide adequately for demand of technical skills within these industries, and
- It is not mainly the responsibility of the public sector to train and develop technical skills for these industries.

Subsequent to the findings related to objective #1, which ultimately substantiates the need for private sector involvement, it is the function of the following sections to describe and explain the factors impacting the engagement of such involvement.

6.5 Factors Impacting the Engagement of the Private Sector

This section aims to satisfy the parameters of objective #2 by addressing three main aspects contained therein. Firstly, it aims to assess the inhibiting factors forming part of research question #3, and secondly to identify the main benefits associated with private sector's engagement on both an internal (company) level as well as an external (socio-economic) level by addressing research question #4. Lastly then, it will conclude by identifying the most significant and critical factors and incorporating these into a basic recommendatory framework to be considered when engaging in in-house skills development initiative.

6.5.1 Inhibitors of private sector engagement in skills development initiatives.

The various aspects of research question #3 yielded tremendous diversity in its analysis and findings, and although the data was grouped and illustrated under one question, it is imperative that the survey questions be assessed and discussed individually before any collective conclusions are drawn. As illustrated in Figure 5.6, p45, the findings have been ranked from most to least significant, and although this does not resemble the order of the survey questionnaire, it shall be discussed in this order.

6.5.1.1 *Skills development commitments vs. company performance.*

The most significant result was obtained from the opinion of respondents if companies should still engage in in-house skills development programmes although financial performance of the company is within satisfactory levels. As the average reversed rating of 4.34 indicates, there is strong disagreement to the fact that if financial performance is satisfactory, there does not have to be a commitment towards in-house skills development. Worded differently, this result simply infers that there should be no difference in commitment to in-house skills development initiatives at different levels of financial performance of the company.

6.5.1.2 Government to provide more financial assistance.

The second most significant result, however, proves a predisposition to the fact that governments should provide more financial assistance, i.e. subsidies, to companies voluntarily engaging in in-house initiatives. This can be seen as supporting the focus on a partnership approach from government, rather than an obligatory tactic that forces compliance, rather than rewards it.

One of these types of obligatory tactics is explained by Skillsportal (2013), which states that in South Africa, the Broad Based Black Economic Empowerment (B-BBEE) Codes of Good Practice in South Africa has now attached even greater importance to the skills development component of the Code, which ultimately aims to make it more onerous on companies to increase their contribution towards skills development. Whereas Alinaitwe (2011) identifies other developing [African] countries, like Uganda, that are actively venturing into Private Public Partnerships (PPPs) as an alternative to develop not only infrastructure, but also to share the cost, impacts and long-term benefits of the associated skills development programmes.

6.5.1.3 Employee downtime not an issue.

Another significant disagreement came from the average respondent rating of the benefits vs. cost of employee downtime. It was found that with a reversed rating of 3.95, that the opinion is strongly in favour that the benefits associated with developing skills of an individual definitely outweighs the costs associated with time it takes to train such an employee (“employee downtime”).

6.5.1.4 Increased skills, increased remuneration.

It was found, within acceptable levels of significance, that newly skilled employees demand higher wages. This can be seen as an inhibiting factor for developing skills mainly because there is perceived risk for the company in paying a higher wage. However, there isn't the guarantee that the additional monthly salary will be realised in the same proportion when it comes to productivity of the employee.

This introduces the separate issue of remuneration increases versus increased productivity. The results depicted showed a slight inclination towards the agreement that the increase in employee productivity is directly proportionate to the increase in remuneration associated with the higher level of skills. Nevertheless, based on the rating categories, explained in Section 4.7.2, p. 36, this finding is labelled insignificant within the margin of error applicable to this study, and no substantial conclusion or assumption can be drawn therefrom.

6.5.1.5 *No guarantee on retaining trained staff.*

Staff retention is evidently another serious concern for companies committing to in-house initiatives. This aspect received an average rating of 3.78, which signifies the fact that there is perceived risk in upskilling and developing employees, as there seems to be no way to guarantee their commitment towards the company once they have been benefited. Another fact to consider is that the salaries earned by technically skilled employees, although typically well above the basic wage structures for both industries, form part of the lower end of a company's salary range. This makes these employees vulnerable to even small financial incentives elsewhere and increases the risk for companies investing in in-house skills programmes affecting basic and technical skills.

6.5.1.6 *Certification and accreditation an issue.*

The facilitation and implementation of skills programmes, as well as the actual training process remain challenging. However, aspects of the skills development predicament faced within these industries, the process of getting these skills evaluated and certified by accredited institutions once completed, can pose additional complexity to this scenario.

The proper evaluation and standardised certification is critical to the entire skills development process, as the lack thereof can negatively affect not only the company, but also the trained employees. As an example, if the assumption is made that the core beneficiation of skills development, for the company, is to increase employee performance, and for the employee, it is increased remuneration, what happens when an employee leaves a company without his/her skills being properly certified. Firstly, the

company, who has to replace the skill, will not have confidence in new applicants that are seemingly proficiently skilled for the job, if they are not properly certified. Secondly, the employee will seek employment without proper certification, and will most probably have to prove his/her worth in executing that skill productively before the new employer will consider adequate remuneration therefore.

The need for a proper, efficient and standardised certification system is thus of critical importance for both employer and employee, however, the findings in Figure 5.5, p. 44, indicate a substantial lack of confidence in getting skills certified and/or accredited.

Although this may be seen as insignificant within the context of the research objectives, it is considered noteworthy to reflect slightly on the findings of the remaining three inhibiting aspects that follow.

6.5.1.7 Insignificant findings.

There is an obvious predisposition to the fact that the effects of in-house private sector skills development initiatives cannot significantly impact national skills shortages, and this finding can be viewed in an optimistic or pessimistic light.

Firstly, the fact that there is an inclination towards the private sector not being able to make a significant difference in this space, can be seen as creating a potential downward spiral of decreasing private sector engagement in these types of initiatives. This is due perception that it is a lost cause, or, secondly, and more positively, the lack of significance of this finding can cause us to eliminate the perception that this is indeed a limiting aspect for the private sector. This is in direct opposition to the view that the private sector can actually make a significant impact on national skill shortages.

The commitment of companies towards in-house training in order to satisfy statutory compliance was of great concern at the start of this study. However, the findings indicate an insignificant result towards such assumptions. However, it can be noted that there is a slight leaning towards disagreeing with the fact that companies engage in skills development initiatives because of legislative requirements. This therefore promotes the assumption that it is, in fact, internally driven by company needs or beneficiation, rather

those external requirements.

Black Economic Empowerment, as a driver for private sector engagement was also seen as relevant for this study, however, its specific relation to the South African context, could limit the validity of the results. This is mainly due to the sample population having included companies in the rest of Sub-Saharan Africa as well. Although the finding indicated minor disagreement towards companies' engagement in skills development due to BEE requirements, for the purpose of this study, this result will not be considered.

Focus now shifts to the beneficial impact generated by the engagement of the private sector in in-house skills development initiatives, together with the implications.

6.5.2 Beneficial impacts of private sector engagement in skills development initiatives.

The constructs of research question #4 encapsulated the investigation and substantiation of the factors motivating companies in the private sector to engage in in-house skills development initiatives because of the benefits associated therewith.

The results illustrated in Figure 5.6, p. 45, demonstrates that there is no variety in terms of agreeing or disagreeing with the relevance of the mentioned benefits, but rather only a difference in the level of agreement towards the individual benefits. The individual survey questions will thus be discussed in context of its level of contribution to the beneficitation process, rather than focusing on if these findings are actually perceived as a benefit or not.

The findings are subdivided into internal and external benefits. Internal benefits are seen to directly influence the company's wellbeing, while external benefits indirectly impact to the socio-economic environment (industries and countries) in which these companies operate.

It is accepted that, in practice, there is a substantial interdependence between most of the benefits identified. However, the extent of such interdependencies do not form part of the scope of this study, and each beneficial factor will be considered as having an independent impact on either the internal or external platforms as described in the

preceding paragraph.

6.5.2.1 *Competitive advantage as an internal benefit.*

Competitive advantage has become a buzzword in modern economic terms, and is so often associated with aspects of innovative marketing, effective cost control, groundbreaking strategy and efficient processing, to name but a few. Seldom is it seen as a result of effective skills development, which makes the related average rating of 4.25 so much more significant. In-house skills development can create a competitive advantage for a company through the ability to increase workforce competency. McGrath and Akoojee (2009), agrees with this and states that skills and knowledge even help build competitiveness on an international level.

6.5.2.2 *Increased financial performance as an internal benefit.*

Arguably the main indicator of a company's wellbeing is its financial performance. It is thus no surprise that the second highest rated internal benefit is the effect of in-house skills development on company performance. The increase in financial performance can be achieved through various indirect factors related to skill development such as, but not limited to, physical processes related to increased workforce efficiencies; optimised cost redundancies; and the psychological effects of increased workforce morale. Skillsportal (2013) supports this by stating that "by initiating employee training you will have a better return on your money and are likely to see much higher levels of productivity in your business in the long run" (p. 1).

6.5.2.3 *Increased employee productivity as an internal benefit.*

The last internal benefit, although still rated as extremely significant, is the effect of skills development on employee productivity. This seems self-explanatory, but in many instances the perception of limited productivity increases in relation to skills training expenses, deters companies from committing to skills training. Daniels (2007) supports this by raising the point that "while the advantages of [in-house] training seem clear, it is an unfortunate but highly consistent finding that South African firms under-invest in it,

and that more than half of the firms surveyed do not provide in-house or even outside training programmes”

However, the significance of the results returned from this research serves as proof that the increase in employee productivity, through skills development and training, is perceived as a definite benefit to a company.

The section that follows will focus more on the external benefits, in context to its effects on the socio-economic environment in which the construction and mining industries operate.

6.5.2.4 Increase employability as an external benefit.

When considering the issue of addressing national unemployment levels, it is widely expressed that the aspect of employability has become more relevant than the issue of just employing individuals. Simply creating employment is seen as a short-term response to the problem, whereas creating an employable workforce is believed to be the sustainable long-term solution. The latter can and will only be achieved through effective and persevering skills development initiatives, albeit through the public or private sector.

The results show that an attempt by the private sector through in-house initiative can in fact increase the over-all employability of the workforce, which then has tremendous implications, as explained in the above paragraph, on a socio-economic level.

6.5.2.5 Increased wellbeing of the local community, industry and national population as external benefits.

When looking at the well-being of the construction and mining industries, separately to the greater national economy, the results of the survey indicated a strong inclination to the fact that the lack of in-house skills development initiatives can hold adverse consequences. Also, when considering this on a more national level, it is further the opinion of the sample that in-house skills development initiatives can even effect the entire well-being of the national population, by increasing factors such as income and

income reliability.

The extent of the impact of in-house initiatives are thus believed to be crucial far beyond the company or even the respective industries. McGrath and Akoojee (2009), also supports this through their findings that skills and knowledge help build employment and prosperity.

Taking a step back from the national context, it should also be noted that the results indicated an overwhelming agreement that in-house skills development benefit the local communities within the geographical areas in which the companies operate. Initiatives implemented by companies on an in-house basis within local communities are believed to be a crucial beneficial factor as these initiatives can be locally determined and customised to address the most pressing needs of the communities surrounding the specific projects.

The reason for this can also be that public provision in remote areas have become fairly limited, which increases the reliance in the private sector to step up to the challenge of community upliftment, albeit a by-product of skills development initiatives.

The example given by Thwala (2008) supports this by explaining that “the ‘People at the Gate’ is an innovative training programme launched by Group Five” (p. 446) and that “the main aim of the programme is to empower unemployed individuals selected from local communities in the areas where the company operates, with the main driver being the sustainable development of a diverse set of skills within these communities.”

6.5.2.6 *In-house initiatives can make a difference.*

Lastly, it provides some relief to know that there is confidence in the industry that, if correctly implemented, in-house skills development initiatives can provide a sustainable solution to the skills shortages experienced in the mining and construction industries. This is however based on the effective implementation of such initiatives, and endorses the need for a guiding policy or framework to be recommended as part of this study.

The key points are summarised in the section below, which will then ultimately be

incorporated into a basic recommendation framework.

6.6 Key factors and Framework Recommendations

The extents of the factors impacting the private sector skills development initiatives have now been discussed. This leaves the establishment of a basic conceptual framework, by focusing on the most critical inhibitors, as well as the most significant benefits identified as part of this chapter. This section will thus be dedicated to summarising these factors and designating and incorporating them under core areas that will ultimately derive the framework. The structure of the framework will then be discussed and put forward as a concept to be considered within the private sector.

6.6.1 Key inhibiting factors.

As illustrated from Figure 5.8, p. 47, the key focus areas for eliminating inhibitors or barriers to private sector engagement in skills development initiatives can be split into two main categories, namely, institutional or external inhibitors, and company or internal inhibitors. These can be grouped as follows:

a) Institutional (external) inhibitors:

- lack of financial assistance from government;
- difficulties in developing and ensuring standardised and accredited skills; and the
- lack of confidence that the private sector can make a meaningful contribution to the alleviation of national skills shortages.

b) Company (internal) inhibitors:

- increased remuneration associated with increased skills level; and
- companies cannot guarantee the retention of skills once developed.

It is therefore evident from the points list above, that the institutional inhibitors demand greater government or institutional intervention to eliminate these barriers and facilitate additional private sector involvement. Whereas the company inhibitors calls for stricter

management and control by the company itself in order to mitigate the risks associated with investing in skills development initiatives.

6.6.2 Key benefits.

From Figure 5.9 and 5.10, p. 48, we can summarise the main beneficial impacts as part of two distinct beneficial areas, namely, company or internal benefits, and socio-economic or external benefits. These are summarised as follows:

a) Company (internal) benefits:

- increased employee productivity;
- increase in overall company performance; and
- creates a competitive advantage for the company.

b) Socio-economic (external) benefits:

- increased employability of employees;
- increased social well-fare of the entire population; and
- increased wellbeing of the communities local to the geographical area of operations of the company.

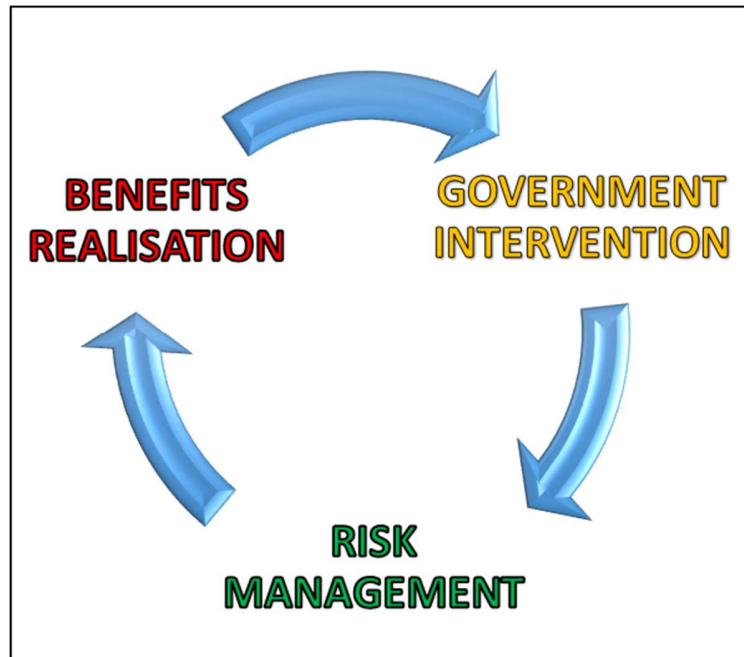
Although these benefits effects various levels within the national economy, for the purpose of this study, the focus remains on where they originate from and are thus encapsulated under one core approach labelled, benefits realisation.

6.6.3 The framework.

The three key factors, as identified in Sections 6.6.1 and 6.6.2, p. 64-65, can now be summarised into three core concepts as follows:

- benefits realisation process;
- government intervention; and
- risk management.

Figure 6.1. Conceptual framework recommended to facilitate more sustainable implementation of private sector skills development initiatives and programmes



These concepts are illustrated in Figure 6.1. It should however be noted that there are a diverse number of sub-sectors within the mining and construction industries respectively, as well as a vast difference in individual company structures, strategies and management practices. Therefore, the description of the individual concepts that follow will remain at a high level for the purpose of this study.

6.6.3.1 Benefits realisation.

This entails a focus on creating awareness of the key benefits associated with in-house initiatives on both internal and external platforms. It is often advocated as a critical step to facilitate the buy-in or commitment to skills development and training initiatives by private sector companies. Simply put, the level of commitment by companies often depends on the benefits that can be generated from participation therein. It should however be noted that the substantiation of the relationship between benefits and company commitment is however beyond the scope of this research and is only suggested at this stage.

Internal benefits proved to be significant as part of this research and included, increase employee productivity, increase in overall company performance, and the ability to create a competitive advantage for the company. These benefits should be promoted via a benefits realisation campaign and should be clearly articulated in the marketplace as they can ultimately increase company performance on various levels.

In the same vein, the external benefits impacting the socio-economic environment in which private companies operate, include, the increased employability of employees, the increased social welfare of the entire population, as well as the increased well-being of the communities local to the geographical area of operations of the company. Although these are generally limited to only being reaping benefits in the long-run, the fact that it should ultimately lead to the sustainable supply of skilled individuals, supported by uplifted communities, should not be overlooked. In both internal and external realisation scenarios, there should be remain an emphasis on the sustainable beneficitation associated with effective implementation.

6.6.3.2 Government intervention.

Encompassing the collection of the main inhibiting factors external to the company, as described in Section 6.6.1, p. 64, this aspect addresses the role of government and regulatory institutions. Here their roles are discussed with regard to enabling, facilitating and/or assisting the private sector to make more meaningful contributions towards skills development and training on an industry and national level.

The critical inhibitors include a lack of financial assistance from government, difficulties developing and ensuring standardised and accredited skills, and the lack of confidence that the private sector can make a meaningful contribution to the alleviation of national skills shortages.

These factors are all directly related to the interaction of government and associated regulatory institutions with the private sector. It is evident that more intervention is needed by these institutions and possible areas of focus might include the following:

- The establishment of revised subsidy structures and programme sponsorship

initiatives.

- Public-Private-Partnerships dedicated to addressing specific industry and sub-sector needs.
- The development and implementation of standardised accreditation platforms.
- The introduction of a dedicated skills database to measure, track and monitor the development of skills within the private sector.

6.6.3.3 Risk management.

Here, the company's internal inhibiting factors come into play. They are addressed in the discussion and suggests various methods of eliminating or minimising the direct and indirect risks associated with in-house training and development. Risk management is of vital importance, as it is the only method, fully controlled by the company, which enables them to protect their investment in these programmes.

The two most significant internal inhibitors identified by the research are the increased remuneration associated with increased skills level, and the fact that companies cannot guarantee the retention of skills once developed. That said, increased remuneration is only considered a risk if the employee productivity does not increase in the same relation or percentage as the increase in remuneration. However, the investment in developing a skill, or even a set of skills, is made before such performance can be measured, and is thus perceived as a risk until proven otherwise.

Bearing this in mind, possible risk mitigating tools and approaches might include:

- delay in remuneration increase until the skill is assessed and increased productivity approved;
- implementing more detailed performance appraisals and incentives on a technical skills level;
- continual development and promotion strategies to incentivise core skilled employees to stay;
- subscription to a national skills database in order to access skilled individuals' track records, etc.; and
- continuous monitoring and feedback systems on a technical skills level.

The exact practicality and challenges associated with the tools and recommendations that form part of Sections 6.6.1 to 6.3.3, p. 64-65, are beyond the scope of this research and are merely included as examples to support the suggested framework. It should further be noted that addressing any of the three core framework concepts in isolation, should only yield limited results. It is suggested that through focussing on collective force of these concepts, its true potential as a sustainable solution can be realised. A tabled summary of this framework is attached under Annexure B.

6.6.3.4 *The interrelatedness of the framework concepts*

The interrelatedness of these framework concepts are critical to its effectiveness, as it can be argued that addressing any one of these in isolation might produce positive results. It is however suggested that the complementary nature of the framework necessitates all three concepts to be addressed to ensure optimal results and, ultimately, sustainable skills development. Although the three concepts have been explained in detail in Sections 6.6.3.1 to 6.6.3.3, p. 66-69, a short summary of their interrelatedness and interdependence follows.

It starts with the benefits realisation process. Here, the buy-in of companies towards in-house skills development initiatives needs to be facilitated through an awareness process and, where possible, proof of the benefits related to such initiatives. Then, when companies have committed to active participation therein, the aid and assistance from government or regulatory institutions should be readily available, as well as easily attainable.

Once the respective initiatives are then aided and implemented, it is up to the company to apply the necessary risk management protocols in order to identify, prioritise and mitigate the various associated risks. This risk management process also includes the measuring, assessing, and monitoring of the skills being developed. Feedback from this risk management process can either be positive or negative. In both cases, the framework needs to recycle by again focusing on the potential benefits engaging in skills development.

For example, if the programme is deemed successful, the cycle restarts by focusing on

the benefits associated with diversifying the skills development portfolio. Government again needs to support this diversification, and the risks associated therewith are managed accordingly, once implemented.

If, however, the programme is deemed unsuccessful, the cycle needs to restart by comparing the end results with the original anticipated benefits. This analysis process should identify where the process failed, and direct the company to alternative ways of approaching the challenge. Examples of such alternative approaches may include, a focus on a different skills set, or perhaps a simple change in the core benefits that can be pursued.

The framework cycle thus lends itself to either, corrective action, or continuous improvement and optimisation of existing practices. However, the ultimate challenge supposedly lies in motivating the repetition of the cycle in both successful and failed scenarios.

6.7 Conclusion

In conclusion, the analysed data and subsequent findings showed that as anticipated there was generally a strong leniency towards the benefits associated with in-house skills development within the private sector of the construction and mining industries in Sub-Saharan Africa. There was however, diversity in the findings related to the factors inhibiting such engagement. It was proven that there is a definite need for more active private sector participation, as the public sector is not providing adequately to the current skills demand set by these industries. It also became evident that it the private sector should increase its engagement, as it is not perceived to be solely the responsibility of the government to tackle this problem.

Lastly, a basic conceptual framework was compiled and its' constructs explained. This however remains a concept at this stage and should be considered and treated as such. That being said, it become apparent that through an active benefits realisation approach, increased government intervention, and effective risk management, all pertaining to skills development initiatives; such initiatives can be implemented more sustainably within the private sector.

CHAPTER 7: Conclusion

7.1 The Importance of Effective Skills Development

The impact of skills shortages on a company, industry and national economic level, is a great concern in developing nations. Skills development is therefore becoming an increasingly important policy issue in terms of national development, social welfare and prosperity, and even international competitiveness.

It became evident throughout this research that developing economies in Sub-Saharan Africa are not exempted from these impacts and are generally perceived to be plagued, on various levels, by the adverse effects of a lack of competent skills. Not only is it inhibiting industry performance and socio-economic well-being of the national population, but it directly inhibits the desired level of economic growth. This growth is however desperately needed to lift these countries out of widespread poverty and inequality. The importance of assessing and addressing the major impacts of these skills shortages are thus of paramount importance and formed the foundation of study.

7.2 Sectors, Industries and Constructs

It is a common practice to address skills development from a national platform, however, two industries were specifically considered for this study, namely, construction and mining. These industries generally contribute significantly to their respective national GDP's throughout Sub-Saharan Africa, and were considered appropriate to target in isolation from the national economies in which they function.

In addition to this, two sectors were considered for the research, namely, public and private providers. They collectively encompass the entire source of skills development provision within the economy, and the inability of either one can severely inhibit growth of the local economy. It was therefore considered necessary, in order to facilitate a shift of focus onto the private sector, to assess if the public sector's role and performance in this aspect was satisfactory or not. If it provides adequately for the skills demanded by the respective industries, then the need for private sector participation remains limited.

However, the research indicates a severe lack of confidence in the public sectors ability to adequately provide for the technical skills currently demanded by these industries. This then substantiates the need for a more pro-active participation and sustained commitment from the private sector to contribute to alleviating these skills shortages. It is also ideally situated at the coalface of skills utilisation and can more easily assess true and relevant challenges, as well as respond to these more quickly.

This research thus aimed to substantiate the responsibility of private sector's participation in developing skills, as well as find ways and means to implement such participation on a more sustainable way within the confines of Sub-Saharan Africa as a developing region.

The most significant constructs were explained, in order to create a clear context and understanding of the extent of the research. This included the concept of, an absolute scarcity of priority skills, an extended definition of technical skills, as well as a description of the private sector as a main focus area of this research.

7.3 Research Purpose, Objectives and Methodology

The need for a shift in focus from public to private provision of technical skills required substantiation. This necessitated the introduction of research objective #1 which was primarily concerned with substantiating the importance of effective skills development in Sub-Saharan African economies. In addition, to understand why there needs to be a focus on the contribution the private sector regarding the importance of skills development in these economies.

The results were conclusive in establishing three aspects that promotes the focus on private sector engagement in technical skills provision. Firstly, that effective skills development is a key factor in the economic well-being of developing nations. Secondly, that there is a definite lack of confidence in the public sector's ability to adequately provide technical skills. And lastly, that it is not only the responsibility of the public sector to engage in initiatives that satisfies skills development and training.

Next, objective #2 was examined. This included the investigation of the drivers and inhibitors behind current in-house private sector skills development initiatives within the relevant industries. Detailed analysis of these results ultimately facilitated the recommendation of a basic framework, which could potentially be implemented within the private sector. Here, its purpose is to promote increased participation on a more sustainable platform.

Both objectives were pursued by deriving specific research questions related to each objective. These research questions then formed the basis of an online research questionnaire, which was distributed to a defined population, and implemented as the primary data gathering tool for this study. This then facilitated the descriptive quantitative approach adopted as the main research method.

The population was limited to the employees permanently employed within the construction and mining industries of Sub-Saharan Africa. A triangulation approach was also implemented by adding a population demographic that could categorise the sample into top management, middle management, and general employees. This was considered in order to add more credibility to the results, by considering respondents from various levels of employment. A total of 84 credible responses was collected and considered for analysis. Here, careful consideration was given to aligning the analysis approach to the set research objectives and questions and was supported by a graphical illustration to eliminate possible confusion or misinterpretation of the results.

The survey questionnaire comprised of mainly Likert scale questions. This ensured a reliable way to measure attitudes and behaviours by using answer choices that range from one extreme to another, and allowed degrees of opinion to be uncovered. Results were mainly presented and interpreted as average ratings in accordance to this scale methodology. Findings rated from critical to insignificant and were categorised, presented, and discussed in relation thereto.

Finally, the research limitations were stated, of which the most important were namely; the type of skills scarcities; level and types of skills development programmes; types of industries; geographical region; and population characteristics, considered for this study.

7.4 Results

Discussion of the results and findings commenced with the interpretation and explanation of the main sample demographics, which included three unrelated findings. Firstly, the sample gender was discussed. These results indicated a strong male dominance within the responses, which substantiates the male domination still present within the construction and mining industries in Sub-Saharan Africa. Secondly, the industry make-up was analysed and results yielded an acceptable spread between the respective industries as to not be concluding the findings of this research to only one industry. Lastly, the level of employment was analysed which proved satisfactory triangulation through the various levels in order to substantiate a degree of credibility, subsequent findings and results.

Here, the remainder of the results yielded bare close resemblance to the research objectives and questions stipulated. They were individually and separately considered in response to answering the research questions.

Analysis related to research question #1, indicated a strong inclination to both the relevance of skills development in a developing economy, and the fact there is a severe scarcity of technical skills within the construction and mining industries. These findings were respectively categorised as critical and significant.

In response to research question #2, results clearly indicated an onus on the private sector to take ownership of a larger portion of responsibilities associated with developing technical skill. This is mainly the result of the public sector failing to produce either the quality or quantity of skills required by the respective industries. These results also showed a significant level of acknowledgement by the respondents that it is not only the public sector that should be held accountable for failing to provide the necessary skills.

The various aspects of research question #3, yielded tremendous diversity in its analysis and findings. However, five critical inhibitors of private sector engagement in skills development initiatives could be derived. These factors could further be split into company (internal) inhibitors and institutional (external) inhibitors. Company inhibitors included the increased remuneration associated with increased skills level, and the fact

that companies cannot guarantee the retention of skills once developed. On the other hand, institutional inhibitors comprised of the following, namely, lack of financial assistance from government; difficulties in developing and ensuring standardised and accredited skills; and the lack of confidence that the private sector can make a meaningful contribution to the alleviation of national skills shortages.

Although the results pertaining to research question #4, beneficial factors, were less diverse than research question #3, the same principle applied in that the most significant factors were highlighted. These factors were, in turn, also split into two categories, namely, company (internal) benefits and socio-economic (external) benefits.

Company benefits encompassed increased employee productivity, increase in overall company performance, and the ability to create a competitive advantage for the company. The socio-economic benefits, however, related to the increased employability of employees, the increased social welfare of the entire population, and the increased well-being of the communities local to the geographical area of operations of the company.

7.5 The Framework

The basis, on which the critical inhibitors and significant benefits were categorised, into internal and external factors, enabled them to be captured under three core concepts which could, in turn, be considered for the recommended framework. These included an innovative benefits realisation process, more active government intervention, and effective risk management practices.

The concepts of government intervention included the main inhibiting factors external to the company's operations. It also highlighted the role required to be filled by government and regulatory institutions in enabling, facilitating and/or assisting the private sector to make a more meaningful contribution towards skills development and training on an industry and national level. As these inhibiting factors are all directly related to the interaction of government and associated regulatory institutions within the private sector, it is evident that more intervention by government or regulatory institutions can make a

significant difference in this space.

With risk management, the inhibiting factors internal to the company come into play. This should be addressed in ways that can mitigate or eliminate the direct and indirect risks associated with in-house training and development.

Lastly, the benefits realisation process involves a focus on creating awareness of the key benefits associated with in-house initiatives on both internal and external platforms. As the level of commitment by companies, specifically towards skills development, often depends on the benefits that can be generated from participation therein, this is seen as a critical step to promote the participation of companies within private sector.

It can however be challenging for companies to monitor and measure the external benefits, as they are generally limited to the socio-economic environment in which the companies operate, and usually only have long-term effects. The fact that it will ultimately lead to a sustainable and continuous supply of skilled individuals, supported by uplifted communities, should be considered by any company focussed on a triple bottom line strategy.

7.6 Future Research Considerations

Although the limitations of this research has confined it to a focussed topic, the following suggestions for future research can be recommended in order to supplement this research or address alternative areas of concern related to this study. These recommendations are as follows:

- The effects of gender inequality on the implementation and performance of skills development initiatives in male dominated industries.
- The factors impacting the voluntary commitment of employees to further education and training or skills development programmes.
- The level of interdependence between the beneficial impacts associated with in-house skills development initiatives.
- The measurability of skills development initiatives related to public-private-partnerships.

- The challenges associated with the benefits realisation process within the construction or mining industries.
- Should there be a focus on employment or employability? Also, what is the impact on skills development in developing economies?

7.7 Concluding Statement

Skills shortages pose a real and persistent threat to the economic well-being of any developing country, even more so, to specific industries functioning within those economies. It has become a general and acceptable phenomenon that public sectors in Sub-Saharan Africa continuously fail, on a national level, to implement practical and sustainable solutions to the challenges associated skills development, and nowhere does evidence indicate otherwise.

An adequately skilled population is such an integral part of sustainable national development. Therefore, the true developing potential of Sub-Saharan Africa will never be realised if there is not a drastic change in approach to the evident lack of proper skills development on a national level. However, by rolling up its sleeves and getting its hands dirty, private sectors within these economies can surely facilitate the change so desperately needed to ignite the proverbial light at the end of the skills development tunnel.

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Annexure A: Research Questionnaire

Research Questionnaire

Welcoming Page:

Welcome to the Questionnaire and thank you for your participation.

Dear Participant,

I'm currently conducting research on the types, benefits and impact of private sector in-house skills development programmes within the construction and mining industries in Africa.

This research aims to assist the development of a conceptual framework which may lead to more sustainable methods of implementing and maintaining in-house skills development programmes in the private sector within these industries. Your assistance will help us better understand what the industry perceptions of current in-house skills development initiatives are, and how they can ultimately benefit the various stakeholders involved.

This survey should not take up more than 15 minutes of your time. Your participation is entirely voluntary and you can withdraw at any time without penalty. Every aspect of information disclosed will strictly be treated as confidential.

The response submission cut-off date for this questionnaire will be 12:00pm on 05 September 2014.

Should you require any additional information or clarification regarding this research, please feel free to contact myself or my supervisor.

Thank you for you participation.

Yours faithfully,
Francois van Vuuren
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Survey Section:

A) Section A: CLARIFYING DEFINITIONS

- **Skills development:** Any form of educational and training programmes that further enhance and develop the technical skills of employees
- **Technical Skills:** Skills possessed by artisans, technicians, tradesmen, etc. usually functioning as part of the labour force.
- **In-house programmes:** Voluntary, non-legislative and non-subsidised skills development initiatives and programmes sponsored and implemented by the company itself.

B) Section B: General Information

Kindly tick only one alternative from the options given below:

	Male	Female	
What is your gender?			
	Below 18	Between 18 and 35	35 and Above
What is your age?			
	Mining	Construction	Both
In what Industry does your company operate?			
	Top Management	Middle or Junior Management	General Employee or Labour Force
What is your current level of employment within the company?			

C) Section C - PUBLIC SECTOR

Kindly tick only one alternative from the options given below:

To which level would you say you agree or disagree with the following statements regarding skills development in the **public sector** (i.e. implemented or initiated by government):

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
Efficient and effective Skills Development is a key element in the economic wellbeing of a country.					
The mining and/or construction industries are currently experiencing a shortage of technical skills.					
It is mainly the responsibility of the public sector (i.e. government) to provide facilities and programs to train and develop technical skills for the mining and construction industries.					
Skills development initiatives and programs implemented by the public sector fail to provide adequately for the demand in technical skills within the mining and construction industries.					

D) Section D – Private Sector Shortcomings

Kindly tick only one alternative from the options given below:

To which level would you agree or disagree with the following statement(s) regarding the potential shortcomings of skills development in the private sector:

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
Companies in the private sector do not need to engage in in-house Skills Development initiatives if their financial performance is satisfactory.					
The costs and “employee downtime” associated with Skills Development & Training initiatives are too high when compared to the benefits thereof.					
Getting skills accredited, as well as certifying trained employees, is a difficult and cumbersome process.					
Newly skilled employees demand higher wages/remuneration.					
This increase in remuneration of newly skilled employees is directly proportionate to the increase in their productivity.					
The retention of staff (and thus skills) cannot be guaranteed once the employees have been trained.					
Government needs to provide more financial assistance (e.g. subsidies) to companies engaging in voluntary in-house Skills Development & Training Initiatives.					
Your company’s commitment to skills development and training is mainly due to legislative requirements (i.e. skills development required by government).					

E) Section E – Private Sector Benefits

Kindly tick only one alternative from the options given below:

To which level would you agree or disagree with the following statement(s) regarding the potential benefits of skills development in the private sector:

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
In-house skills development initiatives increase employee productivity.					
If correctly implemented, in-house skills development initiatives can provide a sustainable solution to skills shortages experienced in mining and construction industries.					
In-house skills development initiatives increase overall company performance.					
In-house skills development initiatives have positive effects on (i.e. increases the wellbeing of) local communities.					
In-house skills development initiatives contribute to the social welfare of the entire population (e.g. through increased annual income, increased income reliability, etc.).					
In-house skills development initiatives create a competitive advantage for your company through the increase in overall workforce competency.					
In-house skills development initiatives can increase (positively affect) the wellbeing of the mining and/or construction industries.					
In-house skills development initiatives increase the overall employability of staff, not just in their current workplace, but for future opportunities as well.					

This is the end of the survey. We thank you for your participation and trust that your input will make a valuable contribution to the research being conducted.

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Annexure B: Framework Summary (Tabled)

Focus / Key Area	Impacting Factors	Core Concept	Possible Tools / Suggestions
Core Benefits	<p>Internal:</p> <ul style="list-style-type: none"> a) Increase employee productivity, b) Increase in overall company performance c) Creates a competitive advantage <p>External:</p> <ul style="list-style-type: none"> a) Increased employability of employees, b) Increased social welfare of the entire population, c) The increased wellbeing of the communities local to the geographical area of operations of the company 	Benefits Realisation Process	<ul style="list-style-type: none"> • Benefits realisation campaigns • Corporate social investment advocacy • Create awareness through media platforms
Institutional Inhibitors (External to the company)	<ul style="list-style-type: none"> a) Lack of financial assistance from government, b) Difficulties in getting skills standardised and accredited, c) Lack of confidence that the private sector can make a meaningful contribution to the alleviation of national skills shortages. 	Government/ Institutional Intervention	<ul style="list-style-type: none"> • Focused Public-Private Partnerships • Subsidies / Sponsorships • Standardised Accreditation Platforms • Skills Database
Company Inhibitors (Internal to the company)	<ul style="list-style-type: none"> a) Increased remuneration associated with increased skills level, and b) Companies cannot guarantee the retention of skills once developed 	Risk Management	<ul style="list-style-type: none"> • Delayed remuneration increase agreements • Focus on critical skills • Better performance appraisals and incentive schemes on technical skills level • Continual development and promotion strategies • Skills database subscription • Continuous monitoring and feedback systems on technical skills level