

**Impact Investing: Analysis of different measurement metrics for fund  
managers in South Africa**

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## **ABSTRACT**

### **Purpose**

Social investors are driven to sustainable investing for many different reasons: impact investors are concerned about the environment, social impact on the communities, as well as the sustainability and growth of their funds. Measuring that social impact can assist these organisations and fund managers to prove to their investors that their initiatives are benefiting the communities in which they operate. Measuring impact also helps social enterprises to evaluate their needs, aspirations, resources and incentives for their customers. It leads to improvement in performance, which often leads to job creation, survival and growth. This research evaluated and discussed impact investing industry in South Africa and focused on the effects or outcomes of the selected four major measurement metrics, namely: social impact, innovativeness, replicability and sustainability – for the fund managers. These measurement metrics were evaluated to ascertain if they would result in organisational performance/growth.

### **Design, methodology and approach**

This is a survey based empirical study with 159 respondents who are players in the impact investing industries. A descriptive quantitative method was used to address the proposed relationships between measuring metrics and growth of the organisations. The instrument was checked for validity and for reliability: the variables were operationalised and measured against multi-dimensional scales. Analyses for the proposed relationships were measured using multiple regression and correlation analysis.

### **Findings**

Results showed that impact organisations tend to grow more when they are transparent and accountable for their endeavours. Investors will increase funding to the fund managers who show in their reports how their objectives have been achieved. The study selected only four measurement metrics and tested how they affect growth of an organisation through increased funding. The results show that

two metrics (social impact and sustainability) had a positive relationship with the growth of the organisation, meaning that the more the organisations report on the impact they are making in communities and the more they show how self-sustainable they are, the more the organisations showed signs of growth. The results also showed that when social organisations are innovative, they are able to replicate their projects into more communities.

### **Research limitations and implications**

Main implications of this research are that fund managers will source more funds to grow their initiatives if they show transparency and accountability. If they report on how much social impact they are causing, how their initiatives have been innovative, how replicable they are and how self-sustaining the initiatives are, then impact investors will consider increasing their funding, resulting in growth.

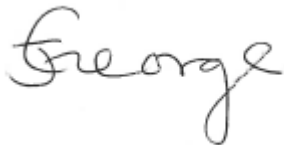
### **Contribution of study**

Impact investing industry is still new and requires more research to be conducted, especially in the South African context. Previous research has concentrated on definitions and on how to measure impact but not many have zoomed into the measurement metrics and analysed what they mean to the fund managers as well as to the investors. This research was conducted in order to cover that research gap.

## DECLARATION

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

James George

A handwritten signature in cursive script that reads "George".

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Signed at Wits Business School

On the 29<sup>th</sup> day of March 2016

## **DEDICATION**

First and foremost I would like to dedicate this report to God almighty and thank him for allowing me to enrol and study towards this master's degree. He has answered most of my prayers during my study period and has seen me through all trials and tribulations.

I dedicate this work to my beautiful and understanding wife, Collinda. She stood by me and encouraged me through my studies. I salute her for waiting patiently when I came home in the early hours of the morning. To my kids, Hadassah and Dantene', thank you very much for your support guys, for sitting quietly in your rooms whilst I studied. Thank you for understanding that daddy didn't have time to play with you over the weekends like we used to. I pray that God will reward me for all my efforts so that we can enjoy the fruits one day.

Special dedication also goes to my mother, siblings and to my in-laws: without your prayers, this mountain would have been insurmountable.

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# **1 REASON FOR RESEARCHING IMPACT INVESTMENT**

## **1.1 Introduction**

The last 15 years have observed a rise of literature on impact investing. However, this line of research has not adequately considered the phenomenon from the perspective of evaluating the measurement metrics that are used in the impact investing field to evaluate performance.

David Cameron (2012), in the report by the Alternative Commission on social investment, said that social Investors, are going to challenge the NGOs and fund managers to substantiate their business models, and seek investments for expansion into bigger markets. He also said that this will be a self-sustaining, independent market that will help build the bigger society (The Alternative Commission on Social Investment, 2015). David Cameron was referring to the emerging concept of social investing, called Impact investing. This type of investing might be similar to Social Responsible Investing (SRI) but they differ in that SRI relates to a set of positive or negative screening, usually to a group of publicly listed securities. SRI does not invest in companies that are believed to be doing 'harm' to the society for example they would not invest in alcohol, tobacco nor porn industries. Impact investing is all about investing in where there is social impact and also where managers and investors must track and measure their social and environmental performance (Trilling Global, 2015).

The objective of this study is to evaluate the impact of different measurement metrics used by fund managers in the South African context, to investigate if these cause growth of the organisation. Whereas the financial sector has played a bigger role in the evaluation of impact investing, in measuring cost effectiveness and cost benefit analysis, this research looks at other measurement metrics for impact investing that are non-financial. It looks at the effectiveness of the measurement outcomes to the organisation through the four metrics, namely social impact, innovativeness,

replicability and sustainability. Measuring impact is important considering that impact investors are looking to invest in people who can create social change (Urban, 2015).

Impact measurement is very important in this field as it demonstrates the impact being caused by impact investments. It also brings about value creation to all stakeholders, helps mobilise more capital, increases transparency and accountability for the impact delivered (Social Impact Investment Taskforce, 2014).

## **1.2 The paradigm of Impact Investing**

Since its formation in 2007, Impact Investing industry has been growing in recognition, prominence and size (J.P Morgan, 2015). There have been much research and discussions on the definitions, terminology used and also on the measurement of the social impact, but very little on the effects of the results or outcomes of the measurements. This research analysed four common types of measurement outcomes for impact measurement designed to assist investors and fund managers in decision making on investments as well as the impact that their activities are causing. The metrics are:

- Social impact,
- Innovativeness of solution,
- Replicability and
- Sustainability.

In this research we deliberated on these different measurement metrics and evaluated which tool causes growth of the organisation. The research concentrated on Fund Managers, how they measure their operations and how their initiatives are causing social impact. It investigated the measurement outcomes to find out which one makes the organisation 'look good' in the face of investors. After reporting on the outcomes of their operations, what does the organisation benefit? And what do investors look for when they are choosing which organisation to invest more in?

In order to define Impact investing well and to build up the context of this research, we will start explaining from the traditional Philanthropy, how they evolved to nonprofit organisations, to social enterprises and then eventually Impact investing players.

### **1.3 Traditional Philanthropy**

Philanthropic giving may be described as to some degree, paradoxical. This is because the standard hypothesis of economic behavior and self-interest, is not uninhibited, it may be thought that any level of philanthropic giving is jarring (Bernheim, 1985). The simplest models of philanthropy usually begin with the assumption that households do not only care about their own egotism but also about the well-being of other, less fortunate, households (Becker, 1974). Studies that try to understand why people give or donate are supported by the assumption that they do so out of 'philanthropy' or selflessness. Other scholars say that it is because they get satisfaction from seeing social problems being solved (Harbaugh, 1998). Many of the charitable giving was not just pure altruism, but anthropologists have used their giving to boost their social status, with terms like 'recognition of donors' being prevalent, (Harbaugh, 1998). He also concluded that a donor is not worried whether his donation is utilized for the good or not, provided he finds his social status enriched by giving it away. Other reasons why people give is because there are benefits that are associated with being a donor. Being referred to as a donor brings more income and business opportunities (Harbaugh, 1998). Some scholars have tried to separate the types of giving by labeling the one 'donor' and the other 'charity'. It is all the same type of giving that, for the purpose of this research we have labelled philanthropy. Most people feel compelled to donate to charity but only a few have figured out how to do it well (Kramer, 2002). Philanthropy has been on the decline and companies have started using it as form of public relations and advertisement (Kramer, 2002). This gave birth to the emergence of social organisations (nonprofit and for profit).



## 1.4 Social Organisations

Individuals who are socially conscious have come up with advanced and innovative business prototypes that seek to address social problems that the government and other institutions have neglected. Social organisations and social entrepreneurs make major impact on their societies by adopting their social enterprise solutions to many social problems (Zahra, S. A., Gedajlovic, E., Neubaum, D. O., & Shulman, J. M., 2009). Social entrepreneurship (SE) is a phenomenon that has puzzled many researchers and policy makers. This term (Social entrepreneurship) can be drawn back to 1997 in the publication called *The Rise of the Social Entrepreneur* (Leadbeater, 1997). Before this publication, some of the undertakings under the preface of social entrepreneurship were either dubbed 'community development' or those in 'social purpose organisations'. A social entrepreneur is thus described as a legal person who is involved in the practice of entrepreneurship that involves a section of the society with an altruistic aim, whose benefits accrue to that society (Tan, 2005). SE is an innovative idea whose objective is to have a social impact in either for-profit sector or incorporate social entrepreneurship. It cannot be defined by legal form, because there are many vehicles that it can be driven by e.g. non-profit, business, or government sectors. Differences between these types of organisations exist in mission, resource mobilisation, and performance measurement. To survive traditionally, social enterprises required grant-aid or charity donations, now they are expected to be sustainable through the introduction of commercial activities (Chell, 2007). This new philosophy then suggests that we can position social enterprises along a spectrum from the purely philanthropic to the purely commercial (Dess, 1984). An alternative model then splits up the outcomes to non-profit, social benefits, and wealth that is reused or reinvested into the business for sustainability (Chell, 2007).

According to Urban (2008), South Africa, like the rest of the world has many opportunities for social entrepreneurship because government initiatives do not satisfy all social ills. There are many social challenges in South Africa in the areas of

housing, education, HIV and Aids, unemployment and poverty, and social entrepreneurs then become agencies of change through their initiatives (Rigwena, 2010).

From philanthropy, charitable giving, and nonprofit organisations to social enterprises – we can now move onto impact investing which is a new phenomenon into which the organisations described above are now moving.

## **1.5 Impact Investing**

Social Investors, those who were traditionally known as the philanthropic and public funding social entrepreneurs, those who provided grants for non-profit organisations and social enterprises – were getting dispirited with the sustainability and long term impact of their investments. In 2007, at a meeting organised by the Rockefeller foundation at the Bellagio Centre in Italy, traditional philanthropists and leaders in social entrepreneurship came up with a term 'Impact Investing' (Partridge, 2013). This term was to describe the type of investing that can be summarised by the term 'investing with a purpose'. It is a way of investing using traditional debt and equity instruments, but with a specific objective of achieving social, environmental, economic and financial return: This marked the birth of the Impact investing industry. (Trilling Global, 2015).

Impact investing concept did not originate at the Rockefeller conference in 2007; it dates back to the 1960s, when government funded organisations like the International Finance Corporation (IFC) and the Overseas Private Investment Corporation (OPIC) had been using private equity and debt investments in developing countries and getting a return on investment that was sometimes as high as 18% (Trilling Global, 2015). Before the Bellagio meeting in 2007, the term 'Impact Investing' was not used for these investments, they were classified as normal investments.

According to the Global Impact Investing Network (GIIN), Impact investments are funds that are given to social entrepreneurs with the intention of generating social, environmental and financial return. It occurs across different asset classes, financial products including private equity, venture capital and debt (Greene, 2014). Jackson (2013) described it as mobilisation of capital for investments, with the intention to generate positive social impact beyond financial return.

Impact investing provides an opportunity to invest capital in order to create an impact on society, coupled with a financial return. There are four major players in the Impact Investing field, namely *Fund owners* or investors, *Fund managers*, *communities* or beneficiaries and the *service providers* who usually assist fund managers and communities by providing services to them (Jackson, 2013). Investors measure and consider investment options across asset classes, whilst fund managers monitor and evaluate their operations.

Impact measurement is vital to the field of Impact investing and it is also vital for growth. In order to legitimise the industry, we need to measure and quantify the social impact that these investments are having. Effective impact measurement brings about value for all players in Impact investing, mobilizes capital and brings about transparency and accountability (Social Impact Investment Taskforce, 2014).

The objective of this research is to analyse and discuss different measurement metrics for Impact investing. There are a number of measurement tools that are used to measure different sectors of impact investing for example:

- SROI – which calculates the social return on investment
- IFC – which measures the financial impact and return
- BACO – which quantifies investments' social value and compares it to other opportunities
- IRIS – provides specific metrics for a number of different sectors (Stubert, 2013)

- GEMI - identifies social and environmental performance indicators to measure and prioritise issues for management response
- MDC - quantifies number of people being affected in ways relating to Millennium Development goals.

This research looked at the four measurement metrics, namely, social impact, innovativeness, replicability and sustainability - regardless of which tool that the company uses to measure impact. Objective was to establish which metric is most valued by the investors and that would make them invest more capital and make the organisation grow. Measuring impact is important considering that impact investors are looking to invest in people who can create social change (Urban, 2015).

Although there has been research on social entrepreneurship, not many of them have concentrated on impact measurement (Urban, 2015). In the impact measurement terminology, the use of the term double or triple bottom line is prevalent. This means that the investments have financial, social and environmental impact. We also know that what gets measured gets managed (Wbcsd social capital, 2013), so fund managers need to manage funds well, for them to secure more funds. Companies are interested in measuring impact because it improves the business enabling environment, strengthens value chains and fuels products and service innovation (Wbcsd social capital, 2013), and on the other hand, It is very difficult to measure impact (Cook, 2013)

The research concentrated on key impact investing concepts, definitions and impact measurement. An analysis was done on the four measurement metrics used by fund managers. We measured the effectiveness/ impact of each metric on the growth of the organisation. We also measured if any of these metrics correlate or if there are any covariance between the different metrics. This research only concentrated on fund managers because the concept of impact investing was established by international players and is still dominated by them; most African players are simply

managing the funds as opposed to owning the funds, so there are more fund managers in South Africa than fund owners.

## **1.6 The problem and research question**

A sociologist, William Bruce Cameron (2013, p. 15), once said that ‘not everything that can be counted, counts: and not everything that counts can be counted. Social impact has been known to be very difficult to quantify: It cannot be counted and yet it counts in people’s lives. The main problem with impact organisations is that they cannot quantify their impact and yet their work counts in a lot of communities. According to Blaxter, L., Hughes, C. and Tight, M. (2003, p196) and Creswell (2009), defining a research problem is a fundamental step in the research process, and this section defines the research problem. The impact investing industry has grown over past years since inception, with definitions, policies and standards being developed and adopted. However, a common global standard for measuring social impact remains elusive. The industry still lacks consistency and transparency on how fund owners define, compare, measure and report on social impact. Example is that one organisation might include part time jobs when measuring job creation whilst another will only include full time jobs (Stubert, 2013).

Gray (2001) explained that social organisations are answerable to societies and, as such, they must seek to drive accountability in the sense of responsibility. Barman (2007) explained that SEs need to report on three areas, namely, financial, social effectiveness and institutional legitimacy. He also added that financial reporting and profitability should not be the number one priority for an SE but social effectiveness should take priority although all three of these reporting areas are interdependent. Although social effectiveness and social impact are difficult to quantify and measure, they still remain the fundamental part on which to report (Summers, 1987). This research sought to analyse the measurement metrics that are used by fund managers to measure their impact.

Does the organisation show signs of growth or does it derive any benefits that bring growth, when they disclose how much impact their initiatives are having on the

communities? Transparency has always been an issue with social organisations, and most investors have been frustrated by this culture of non-transparency, hence the emergences of impact investing practice. This research tried to prove that transparency and reporting on the measurement metrics such as social impact, innovativeness, sustainability and replication, does in fact cause growth of the organisation. According to Kanter (1998), measuring growth is often difficult due to lack of historical information and accessibility because there is a lack of information on performance measurement in the social entrepreneurship field. Measuring social impact is also very difficult and time consuming which is why many social organisations do not indulge in doing so.

The research question can be summary as follows: After fund managers measure and report on the outcomes of their endeavours, does any measurement outcome bring growth to their organisations by securing them more capital from the investors? The measurement outcomes being analysed would be social impact, innovativeness, sustainability and replicability.

#### **1.6.1 Main objective**

Evaluation of measurement metrics to determine which one causes growth of the organisation and will lead to its growth.

#### **1.6.2 Sub-objective**

In the earlier section, the main objective was formulated: To evaluate measurement metrics in pursuit of determining which one causes growth of the organisation and will lead to its growth. The following sub objective is therefore envisaged from this:

After evaluation of its initiative and reporting on social impact, on innovativeness, on sustainability and on replicability: what benefit does the organisation derive in terms of growth? Do any of these metrics cause growth of the organisation? The research analysed if any of these metrics brought or caused growth of the reporting organisation.

## **1.7 Significance of the study**

This study contributes to the body of research being conducted on impact investing and social entrepreneurship. The industry is still new and requires more research to be conducted, especially in the South African context. Previous research has concentrated on definitions and on how to measure impact but not many have zoomed into the measurement metrics and analysed what they mean to the fund managers as well as to the investors, and so this research intends to cover that gap. This research tests the proposed relationships between the measurement metrics and growth of the enterprise: However, not much research has been done to prove these relationships empirically.

Social entrepreneurship, let alone Impact investing, in South Africa has not been researched adequately. This type of research has particular significance for South Africa because the country is faced with many challenges especially that of equality, unemployment and poverty (Hall, 2008), despite of the fact that it has been almost two decades since democracy. Housing, food security, health care and education, are supposed to be basic constitutional rights and yet they are still not accessed by all. Against this background, the country would benefit from initiatives that address these social needs and social entrepreneurs could be regarded as agents of this transformation because their projects try to address these inequalities (Hall, 2008). Social entrepreneurship in South Africa has unequivocal application, since government policies and projects have failed to eradicate poverty and there are many challenges to nonprofit accountability (Urban, 2008). Furthermore, conducting this kind of research not only benefits the social organisations and communities that these organisations serve, but also government institutions.

In the Western world, Impact Investing and Social entrepreneurship are gaining a strong footing (Nicholls, 2009). A lot of research has been done in western countries and Impact investment is at an advanced stage in terms of definitions, policies, even measuring and reporting standards. However, in South Africa, still more work needs to be done and more players, both academic and corporate, need to be involved.

## **1.8 Delimitations of the study**

Impact investing is still a nascent field of both study and practice. Therefore, literature on this field is very limited, especially literature on measurement outcomes and what value they bring to the reporting organisation. Very few articles speak of fund managers in the impact investing spheres. This was a significant delimitation as we did not have enough literature to formulate hypotheses but we proposed the aforesaid relationships.

There are also very few players in this industry. Some of them are part of the industry but they do not recognise themselves as such. Our population and sample was affected as it is very difficult to identify the individual fund managers, that is why we approached the South African Impact Investment Network of South Africa for a list of their members. Impact investment players who are not part of the SAIIN did not take part in this research.

## **1.9 Defining the terms used in this study**

The following terms are used in this research and the meanings are explained as below:

*Metric:* - A defined unit of measurement outcome: a system or standard of measurement (Social Impact Investment Taskforce, 2014). For this research purposes, the metrics that are discussed are social impact, innovativeness, replicability and sustainability.

*Impact:* - Goal-level changes in the lives of the people which the organisation targets e.g. changes in educational attainment or health status (Wbcsd social capital, 2013). It can also be described as the reflection of the outcomes measurement (Social Impact Investment Taskforce, 2014)

*Fund Managers* - Individuals or organisations that deploy and manage funds that were invested by investors.



*Impact Investor* - Individuals or organisations that actually own and provide the funds.

*Sustainable Investing* – these are investments that seek to generate a social, environmental and financial return. Examples are stocks, publicly traded funds, bonds with a social, environmental and governance issues. These investments are found in private enterprises working on social problems like poverty, renewable energy, education, housing and water (Gateways to Impact, 2012).

### **1.10 Assumptions**

Our respondents were employees of organisations that are involved in the impact investing industry. The assumption here was that these employees are conversant with the day to day running of the organisations, especially the reporting metrics and standards that their organisation used.

Another assumption or generalisation is that our sample was representative of the whole country. My aim was to gather data from impact organisations from all regions and provinces of South Africa, although not all regions were well represented.

## **2 LITERATURE REVIEW**

### **2.1 Background**

Social enterprises are organisations whose activities are for the benefit of the community, rather than for the owners of the company (Nicholls, 2010). The number of social entrepreneurs has risen globally over the past years (Nicholls, 2009). In the United Kingdom, these organisations are playing a key role in the welfare and environmental policy innovation (Nicholls, 2009). They make significant and different contributions to their societies by implementing business models that seek to solve social ills (Zahra et. al, 2009).

At a world economic forum, Bill Gates said that there are two great forces of human nature, namely self-interest and a heart for others. These two forces have previously been considered incompatible (Partridge, 2013), however, Impact investing is a combination of the two. It is one of the creative and growing industries in the area of innovative development finance, combined with the social and environmental aspect. Over the past years, the industry has developed networks, standards, policies and measurement standards that have always been abstract (Jackson, 2013). But how is impact investing measured and evaluated? From the outcomes of the measurement, what do the fund managers or the investors derive? These are some of the questions that this research clarifies.

### **2.2 Introduction**

This chapter lays the foundation for the research by discussing the theory of impact investing, the measurement metrics and organisational growth. Since Impact investing is a nascent study, empirical evidence and literature is still limited. Because of lack literature, in this chapter, we are not able to formulate a hypothesis, but rather propositions. The Gateways to impact report (2012) mentioned that players in this industry lack understanding of this market, and are not equipped to provide advice on sustainable investments.

From the previous chapter, we can derive that Investors are driven to sustainable investing for many different reasons (Freedman, 2015); impact investors are concerned about the environment, social aspects of the communities as well as sustainability and growth of their funds. There are many challenges in the world e.g. poverty, social unrest, climate change and environmental degradation: companies are the ones with resources and capabilities of providing solutions to these problems (Wbcsd social capital, 2013). It is government's duty to eradicate poverty and inequalities in communities, but we all know that most governments are rigid and ineffective.

Measuring impact can assist social organisations to prove to communities, donors, civil society and government that their activities are benefiting the communities in which they operate (Wbcsd social capital, 2013). Measuring impact also helps social enterprises to evaluate their needs, aspirations, resources and incentives for their customers, so that they develop new products and services and improve on their operations (Wbcsd social capital, 2013). Literature reviews that research which measures performance must show a conceptual framework to define performance and it should identify accurate and available measurement tools (Dess, 1984). Koljatic and Silva (2010) also noted that the concept of social entrepreneurship is evolving and hence there is a need to develop effective tools to measure and assess impact. A common global standard for measuring social impact remains elusive and there is still lack of consistency and transparency in how impact is defined, evaluated and reported (Stubert, 2013).

### **2.3 Definition of research topic**

In order for the world to solve social problems, we need global capital pools to respond (Social Impact Investment Taskforce, 2014). These capital pools need to be managed well so that we can expect a return on financial, natural and social capital in a balanced way (Wbcsd social capital, 2013).

Impact Investors are those who propose and implement private debt deals, those who avail loans, guarantees and other debt instruments as well as equity and quasi-

equity, to fund managers and organisations whose aim is to support the disadvantaged with affordable products, jobs, income, and services, such as food, health care, housing, education, energy and environmental protection (Jackson, 2013). They are also called the socially motivated (Born, 2013). Fund Managers are organisations that deploy and manage the funds: example are micro finance organisations in developing countries and affordable housing schemes in developed countries (Jackson, 2013).

The central question of this research is on the benefits or lack thereof, derived from measuring the operations of a social organisation through different metrics/outcomes. The main implications are that measuring and reporting on certain metrics brings growth or more funding to the fund managers. Measurement of social activities is of utmost importance because it provides a framework for understanding the full potential of the impact investment industry, it also brings a well-developed set of data collection and analysis methods and it reminds all actors in the impact investing industry that what matters most is the extent to which the lives of societies are being affected by these investments (Jackson, 2013).

### ***2.3.1 Emergence of Impact Investing***

Impact investors are individuals with opposable minds: part profit-oriented and part purpose-oriented. These investors have started organisations that look a little like a business, or like a social-service provider and a little like charity or more of mixture of all three. Social investment is not a new concept, it dates back to the 1960s when government funded organisations like the International Finance Corporation (IFC) and the Overseas Private Investment Corporation (OPIC) started using private equity and debt investments in developing countries and getting a return on investment (Trilling Global, 2015). In 2007, at a Rockefeller foundation meeting (Bellagio Centre in Italy), social investors gave birth to the term 'Impact Investing' (Partidge, 2013). This term was to describe the type of investing that can be summarised by the term 'investing with a purpose'. According to Harji et al, (2014), this is the practice of investing for financial returns whilst creating measurable social and environmental

impact. New impact funds are being born, some in a low-interest-rate era but can still offer comparative returns. Social stock exchanges are being born worldwide. This kind of investing is becoming more and more common and is practiced in almost all continents like Africa, Asia, Eastern Europe, Latin America and Middle East. It has also been applauded as an emerging asset class in the same category as venture capital and private equity (Partridge, 2013).

Although Impact investing has been rising in recognition in the past years, it has yet to become standard practice for banks and other investment practitioners (Lufuno R., Horne, R. & Urban, B. (2015). These investments are not substitutes to vital grants and donations, but they tap into larger pools of pensions, endowments and commercial capital that can complement and augment those grants (Born, 2013). It will not replace governments or be a panacea, but it is one of a number of new tools to address social problems. In as much as impact investing addresses problems whilst proving their financial return, the industry still faces a lot of its own problems. Ongoing procedures and solutions are being worked on to address some of these problems. Examples of the problems are as follows:-

- Rating and measuring procedures for social and environmental impact are very expensive
- There is insufficient infrastructure necessary for efficient investing
- Most investment projects are exposed to high risk
- Some problems do not have an element of financial return, so Impact investing will not apply
- There are no clear definitions for impact investing, and no clear distinguishing this from other types of investment

Achieving a social impact alongside a market rate financial return is possible but not as easy as it sounds. Social and environmental problems can be addressed by private companies, government aid and by philanthropy. Most investors are now seeking to do good socially, whilst doing well financially (Born, 2013). This talk of

achieving both social impact and financial returns, has been questioned about how realistic it is. The question is, when and how does impact investing have a real impact on social, environmental and financial situations. Well, according to Paul Brest and Kelly Born (2013), an investment is considered to have an impact only if it increases in numbers and in quality of the enterprise's social outcomes, above what would have occurred. Economists have argued that a social investor cannot increase the output of an enterprise by simply buying stock on the public market. Nevertheless, impact investing is not largely done in public stock markets but where there are market frictions or market imperfections. The social impact of the investment or rather of the investor solely depends on the success of the enterprise in which they invested. There are many different types of impact that an enterprise can have but there are two main ones that are fundamental. Product impact: these are goods and services produced by the enterprise. Examples of these goods and services include, clean water, sanitation, malaria safety nets, medication, etc. The other type of impact is the Operational impact which is the management practices of the enterprise on its employees' health and economic security, as well as its effect on jobs and the well being of the communities in which it operates. In impact investing literature, there are terms like 'outputs and outcomes'. The two are very different in that 'outputs' are products and services produced by an enterprise and 'outcomes' will then be the effect of the outputs in improving communities (Born, 2013).

Brest and Born (2013) reiterated that there are other types of impact investors namely, concessionary investors and non-concessionary investors. Concessionary investors are those who make a financial sacrifice, those who take greater risks and lower returns to achieve their social goals. This appears like a thin line between concessionary investors and philanthropy, although they explain that there are lower returns on both. Some of the investments that concessionary investors made include financially supporting early stage – startups through microfinances and capital injections. They also subsidise some ongoing enterprises that need financial support. Because an investment is concessionary in nature does not guarantee that it will create a positive social impact, because some inefficient enterprises hide under subsidies and will continue to survive. Ideally, enterprises that are subsidised by

concessionary investors, should eventually grow and become self sustainable and be able to achieve market returns.

Non-concessionary investors are those who will not sacrifice their financial returns. These also form part of the double bottom line impact investors – who seek to make financial, social and environmental impact. The impact for concessionary investors discussed above is easy to measure because they forfeit some returns on their investments. However with non-concessionary investors, it is not that easy to see when and how they make their impact, hence the measurement metrics that are used to measure impact. Non-concessionary impact investors will cause an impact in imperfect conditions, like in social and environmental niche markets and also in areas where fund managers have experience and expertise (Born, 2013).

Impact investors do not only invest financially, they can also make non-financial investments, that will assist to achieve the social, environmental and financial returns. This can be achieved through many ways like: improving the enabling environment for social enterprises e.g. regulatory and political environments. They can also assist with identifying of investment opportunities, they can assist with technical and governance issues, they can assist with building strategic relationships. Another contribution they can do is to protect the enterprise's social mission. A report by the Rockefeller Foundation and J.P Morgan projected that impact investing could see new capital inflows of up to 1 trillion dollars by 2020 (Stubert, 2013).

Impact investing has been growing over the years and some of the causes of this growth are the changes and developments that have happening all over the world. Examples are the infirmity of capitalism after the 2008/2009 financial crunch and the growing gap of inequalities within our societies (Jackson, 2013). Impact investing has grown throughout the years and has spread into many countries. Examples of significant impact investing projects in Africa include Mobile Banking in Uganda, owned by MAP International. Their objective is to bring banking to all citizens in a country where only 5% of the population has bank accounts (Map International, 2009). Another example is the 35 Megawatt power plant being built by John McCall

MacBain from Canada. The plant will be using a renewable, carbon-neutral fuel source, wood chips from nonproducing and low carbon-sequestering rubber trees (John McCall MacBain, 2008). Deutsche Bank, Ashoka and International Agency for the Prevention of Blindness (IAPB) has availed US20 million dollars towards eye care hospitals in developing countries ([www.eyefund.info](http://www.eyefund.info)). In South Africa, the Open Society Institute (OSI), noted there is a lack of affordable housing and provided a four year US5 million dollars investment as a loan facility for small and medium private construction companies. OIPC also availed US15 million dollars towards the same cause. In India, Waterhealth International (WHI) has an innovative, cost effective franchise model that provides clean, safe and affordable water. There are many big players in this industry and to name but a few, The Acumen fund, Rockefeller foundation, Endeavour, FUNDES, Global environment fund, Google.org, JP Morgan, etc.

There is the Global Impact Investment Network (GIIN); the largest impact investment association, with about 40 members, who all come from different industries and asset classes ([www.thegiin.org](http://www.thegiin.org)). Some are from charitable organisations, example being Bill and Melinda Gates Foundation, some are from financial institutions, for example JP Morgan, some are microfinance organisations e.g. ACCION and some are commercial impact investors like Sarona. There are also banks involved in impact investing like Royal Bank of Canada. In summary, 20 members of GIIN conduct impact investing for profit, creating both social and financial impact, 14 are involved in poverty reduction, and 4 provide access to finance to underprivileged bottom of the pyramid people (Weber, 2012). The aim and objectives of this network is to increase the effectiveness of impact investing: resulting in social and environmental challenges being solved whilst profits are being made (Weber, 2012).

Not much study has been done on impact investing in emerging economies, particularly looking at the bigger institutions like banks and other financial institutions. Avery (2012) noted that banks are the most dominant in the financial sector of many developing countries and therefore play a larger role in creating social impact. Harji et al (2014) then added that the supply and demand side of the capital market is



serviced by these banks, so banks will surely revolutionise the impact investing industry.

### **2.3.2 Definition of Impact Investing**

Part of this research unpacks what Impact investing is all about, defines, contextualises it, identifies players and explains how impact investment is different to other social investments.

The main aim for Impact investments is to solve social and environmental problems and generate financial returns for investors. Monitor Institute (2009) described Impact investing as making investments that produce social and environmental value as well as financial return. It is the use of for-profit investment to address social and environmental problems. It can be described as a strategy to align the power of private funds to the social, environmental and financial developmental needs of a particular society (Barby, C., Barley, D., Dewan, N. & Osibo, P., 2014). All definitions of Impact investments have in common the achievement of societal and environmental changes through capital investments. These investments maximise both social and financial return, which is the concept of blended return or the shared value proposition (Kramer, 2002). This is an innovative mechanism within development finance with an intention to create positive social impacts that are beyond financial returns, improving the quality of lives within societies (Lufuno et al, 2015). Höchstädter and Scheck (2014) noted that this is similar to social investment, hence some call it social impact investment.

When it comes to equating risk and returns to form a proficient portfolio, it will be rather strange for people to look at investments that are not driven by those two. But this is what impact investing is all about, where investors put risk and return together and include a detailed measurement of their social impact (Howard, 2013). Investors of all sizes and industries are moving towards impact investing. Nicholls (2014) noted that pursuance of financial worth without reference to social impact is

becoming increasingly difficult. This is a new type of investing that is emerging that creates and protects value of both society and for investors (Howard, 2013). Impact investors do not have much impact in the market-rate opportunities because players in that field have more than enough capital. Brest and Born (2013) defined this type of investing as when an investor seeks to produce beneficial social outcomes that would not occur had it not been for his investment into a social enterprise: this is referred to as 'additionally'. They went on to say that it is an act of putting capital into companies that generate social goods and services e.g. jobs and housing – with an expected financial return which can be as high as market rates.

Impact investment has been termed 'investing with purpose' because of its pursuit for positive social change that is not through philanthropy. It is all about making profit-seeking investments, through traditional debt and equity instruments, supporting companies that seek to change communities for the better. Within this industry, there are different types of investors seeking different opportunities and desired impact and financial returns (Trilling Global, 2015). It is also referred to as 'Impact first' investments, implying that the primary goal of the investment is to solve a particular social problem, whilst sacrificing some level of financial return in the process of achieving the primary objective. Impact first investors are different from the rest because they support sustainable and not so profitable businesses that cannot provide market related returns, because of the nature of impact that is being created (Howard, 2013). On the other hand, some players in this industry engage in 'Financial first' or 'Thematic' impact investing. This means that they employ the traditional investment strategies but with a strong social and environmental impact. These 'Financial first' investors believe that generating returns over a long term will ensure sustainability and scalability and then a larger society will be positively impacted (Trilling Global, 2015). The Impact Investment industry is on a growing path, the investors, investees and fund managers all welcome the growth trend of this industry. This type of investing is about productive entrepreneurship that brings about positive social change to the communities, whilst on the other extreme side lays the unproductive and destructive entrepreneurship that seeks economic wealth only (Urban, 2015). Although it targets the poor members of the societies, though

who were previously disadvantaged, it also contributes to the economic growth of the whole nation (International Institute for Sustainable Development, 2013).

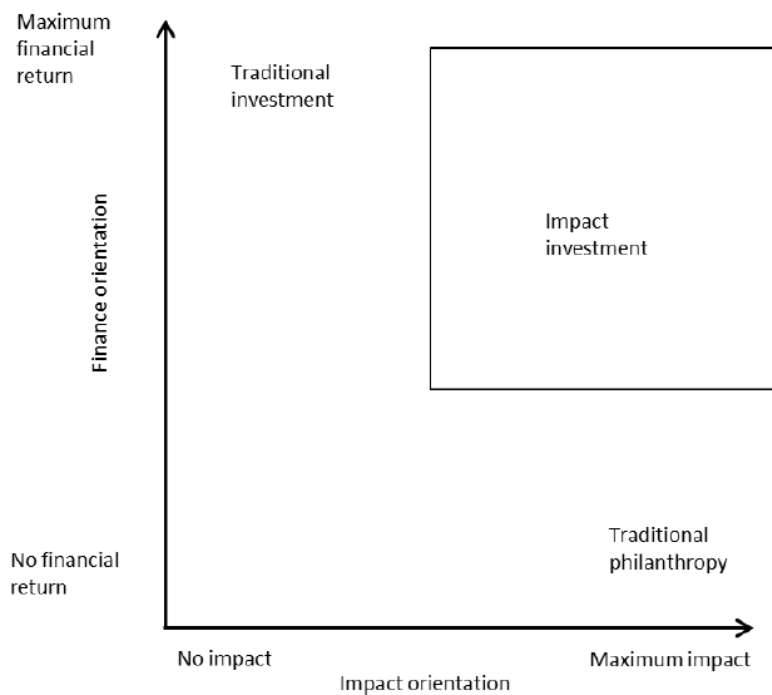
Impact Investing differs from Social Responsibility investing (SRI), although SRI also involves businesses and societies like impact investing (Urban, 2015). Ojala (1994) earlier mentioned that SRI involves complying with the law, setting moral standards and charity giving. Urban (2015) proposed that investments should serve people and the environment, meaning that investments should only be made based on a proper evaluation and should be done in ethically and economically acceptable enterprises that work to serve societies and the environment. Social problems need more capital than what SRI alone can provide (Höchstädter, 2014). In response to these challenges, Impact investment, tries to address social problems whilst generating financial returns. They explained the difference between SRI and impact investing by summarising that SRI seeks more of corporate governance whilst impact investing tries to solve social and environmental ills. Combs (2014) then added that SRI strategies can also be incorporated into impact investing strategies. Impact Investing is different from socially responsible investing (SRI). One of the major differences is that SRI does not invest in all companies; they screen out companies that are publicly listed as doing harm to the society. Examples of these companies are alcohol producers, tobacco manufacturers, firearms makers, war machinery manufacturers. SRI screens out and avoids dealing with companies like these listed above, however, this does not imply that Impact investment supports companies that cause harm to the society. It goes beyond screening and they seek to invest where an opportunity for social, environmental and financial impact is to be found.

**Table 2: Overview of the Impact Investing definition**

Its an Investment	<ul style="list-style-type: none"><li>• there is an expected rate of return on investment (or an impact alpha)</li></ul>
Its across a broad range	<ul style="list-style-type: none"><li>• All asset classes</li><li>• many different sectors</li><li>• All geographies</li></ul>
With a focus on positive impact	<ul style="list-style-type: none"><li>• main focus is to create a social, environmental, economical and financial - positive impact</li><li>• Unlike Socially Responsible Investing, Impact investing does not filter out sectors to invest - as long as there is a positive impact</li></ul>
Across Organisational forms	<ul style="list-style-type: none"><li>• Impact investing organisations and funds are for profit enterprises with a return on investment such as a loan repayments or shares of revenue.</li></ul>

*Source: Greene (2014, p. 5).*

What is the difference between Impact Investing, donations, charity or philanthropy?  
In summary: Impact investing provides an opportunity to invest capital in order to create an impact on society coupled with a financial return. The graph below adds to the definition by plotting the position of impact investing with regards to traditional philanthropy, normal investments and financial returns.



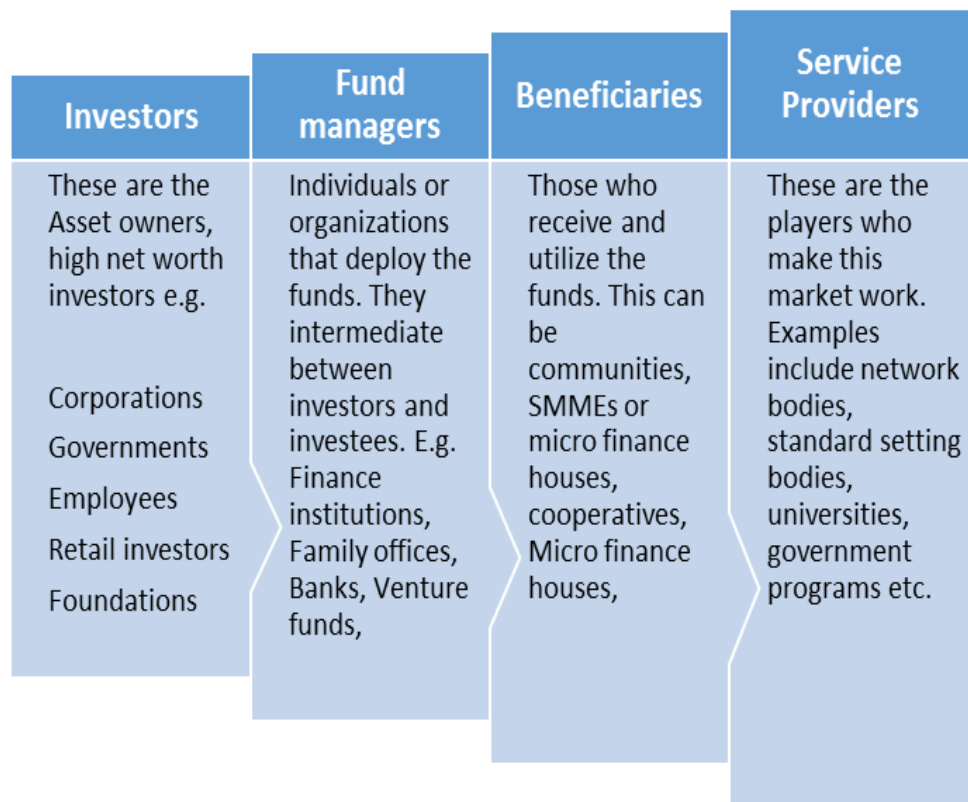
**Figure 1: Impact investment, philanthropy and conventional investment**

*Source: Emerson (2003, p. 11).*

For the purpose of this thesis, we define Impact investing according to the Global Impact Investing Network (GIIN), who summarised the definition as: funds that are given to social entrepreneurs with the intention of generating social, environmental and financial return. It occurs across different asset classes, financial products including private equity, venture capital and debt (Greene, 2014).

## 2.4 Impact investing activities

There are four major players in the Impact Investing field, namely, Fund owners or investors: who fund and interpret the impact created; Fund managers, also known as the impact creators; communities or beneficiaries, who gain from the endeavors; and the service providers who usually assist fund managers and communities by providing services to them (Jackson, 2013). Harji et al (2014) explained that all these players seek financial as well as social impact. Major players in the Impact investment industry can be divided into four categories, as indicated in Figure 2:



**Figure 2: Major players in the Impact investment industry**

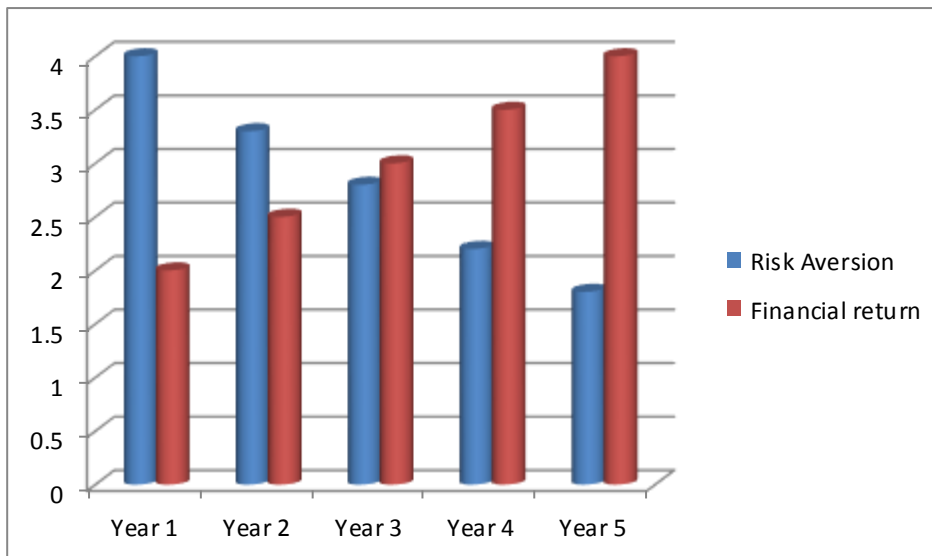
*Source: Jackson (2013, p. 98).*

Impact investing is a strategy with an objective of generating social and financial returns that are actively measured. Investors measure and consider investment options across asset classes, whilst fund managers monitor and evaluate their operations. Below are some of the key attributes of Impact investing (Trilling Global, 2015):

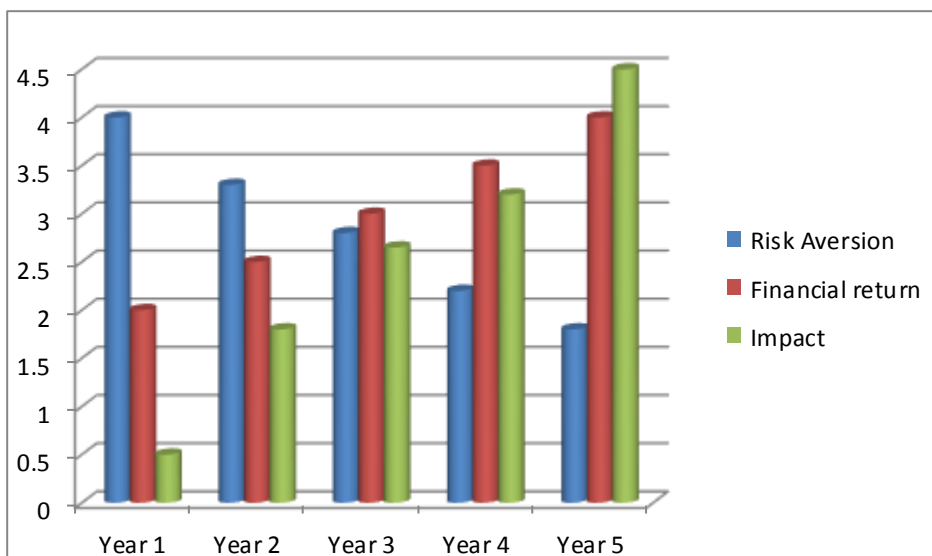
- Investment with both financial and social impact
- Active measurement of financial return and Positive Impact Value
- Investors seek broad range of Impact outcomes and financial returns
- Very different to Socially Responsible Investing or philanthropy
- It is a fast growing and timely investment approach.

Impact measurement is vital to the field of Impact investing and it is also vital for growth. In order to legitimise the industry, we need to measure and quantify the social impact that these investments are having. Effective impact measurement brings about value for all players in Impact investing, mobilises capital and brings about transparency and accountability (Social Impact Investment Taskforce, 2014).

According to Geoff Burnard, CEO of Investing for Good - Impact Investments are made with the intention to create social, environmental and financial impacts. It is dominated by debt financing and equity based investments, represents a small percentage of investments. The 'intention' to solve and address social issues is what differentiates Impact investments from other investments. They are found in emerging markets as well as developed markets – they also seek market financial returns as well as sub-market returns. Impact investing is a different form of investing which does not easily relate within the existing definition of traditional asset class. This is a different way of investing as the motivations for this strategy are different. Gavin Francis, founder and director of Worthstone, described it as a form of wealth deployment where an investor has a unique sort of association with their investment. The connection is not primarily financial as is with all other forms of investments, but this is also not philanthropy because the financial return aspect has not disappeared. Options available within impact investment include debt, equity, guarantees, deposits, venture capital and social impact bonds and all of these investments require their returns to be measured. Traditional investing looks at only two aspects, namely Risk Aversion and Financial Return. On the contrary, Impact investment adds another twist to it and brings in Social impact, making it three dimensional (Urban, 2015). Traditional investing concentrates on reducing risks whilst maximising financial returns and profits. On the three dimensional side of impact investment, financial returns and positive social impact are of importance but obviously do not ignore the risk aversion. This is explained better by the graphs below:



**Figure 3: Traditional investing measurement dimension.** *Source: Urban (2015, p. 10).*



**Figure 4: The three dimensional side brought about from Impact investing** *Source: Urban (2015, p. 10).*

#### **2.4.1 Locating Impact investments in South Africa**

The recent recessions have caused people to start thinking around investment and socio-economic development. The situation is rather worse in Africa, where foreign



capital investments have been shrinking. However, these challenges start a new chapter, where we have to evaluate our own resources to address the needs of our societies (South African Impact Investing Network (SAIIN), 2009). Like consumers make choices of what and where to buy – investors in the same light are also making choices of what and where to invest. This has moved social enterprises to be innovative and find ways to source more capital.

According to statistics from the Global Impact Investing Network (GIIN), about 70% of Impact Investing assets are invested in emerging markets like South Africa where the education system has serious inequalities, there is a shortage of housing, HIV and AIDS affects millions, 25% of the working population is unemployed and lastly, millions live in poverty (Rigwena, 2010).

There has been lots of individual and corporate philanthropy and yet many people still remain poor (South African Impact Investing Network (SAIIN), 2009)). South Africa has two extreme classes of citizens, one is the rich and well developed, and the other is the impoverished and struggling people. The gap between these classes is said to be growing and is believed to be the worst in the world. A Human Science Research Council national survey revealed that individual philanthropy in South Africa tops about R12 billion whilst corporate philanthropy is around 5 billion (SAIIN, 2015). Worthy of mentioning is the Warren Buffet foundation which donated more than 30 billion rands and the Bill and Melinda that donated more than 100 billion rands into the South African social spheres (Stubert, 2013). Although investors are pouring in funds to address social ills, the poor society seem to be getting poorer, with challenges in the areas of unemployment, education, housing, HIV and AIDS, food security, to mention but a few (SAIIN, 2015). This is a clear indication that charitable and corporate giving alone will not be enough to address these challenges, hence the introduction of Impact investing, which is a hybrid of both philanthropy and corporate giving, i.e with a social and financial return. The government has their hands full with responsibilities so it is only the public sector that can bail them out through social and sustainable investing. The use of Socially Responsible Investments (SRI) in South Africa is still shy of international standards.

Mobilising for even a small increase in the SRI funds' allocation will have a huge impact on the societies. The financial sector is very advanced in this country, indicating the potential and capability of growth in the SRI spend (SAIIN, 2015). However, the global crisis and the reduction of development assistance will have an impact on sustainability of social enterprises.

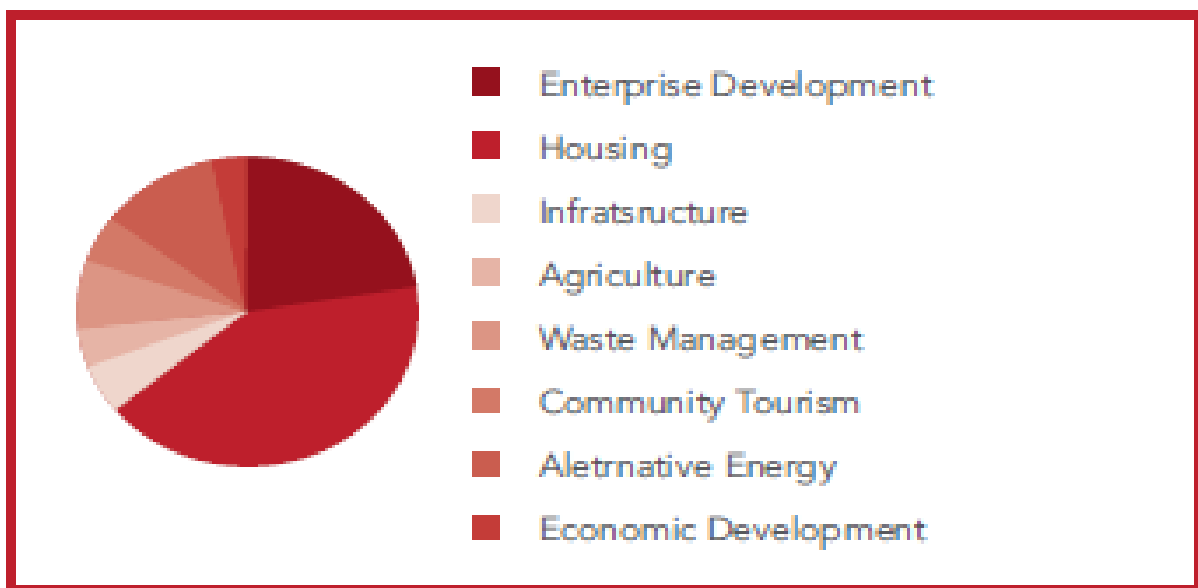
The South African Impact Investing Network (SAIIN) is responsible for seeing the impact investing industry in South Africa grow. Its main mandate is to raise awareness about the social investments, to make the industry visible, credible and grow. They achieve this through research, scouting for SRI opportunities and engaging in debates. Although the activities and objectives of SAIIN are too many, some of their activities include playing an advocacy role by raising cognisance of the impact investing industry and its importance to the societies. They engage in debates, research, reviews of the challenges, opportunities and solutions to the challenges. They also look into legalities and regulatory issues in the industry. Finally, they network players in the industry, provide them with programs and resources, with the objective of advancing and growing the Impact Investing industry in South Africa (SAIIN, 2015).

In South Africa, there is a concept called Community Investing which can be summarised as investing in underserved, previously disadvantaged and marginalised communities. This concept is the same as Impact investing and works the same way (SAIIN, 2015). Community investing involves providing basic banking to the lower income and impoverished communities, giving loans like microfinance loans, investing into smaller businesses and allowing them to grow. This can be summarised as to say they provide financial services to previously disadvantaged individuals, they provide capital to smaller and growing organisations and they also provide housing for low income earners. Figure 5 shows these functions of Community investing in SA.



**Figure 5: The Community Investing functions in South Africa** *Source: SAIIN (2015, p. 7).*

The Impact Investment industry in South Africa is still growing in recognition and in its effectiveness. It has only 67 members since inception, and these members are organisations that operate within South African borders and they also invest in communities. They operate across all provinces and across all sectors of the economy, the biggest sector being Housing and Enterprise Development. These companies can be Co-operatives, private companies or Section 21 companies.



Source: SA Impact Investing Network

**Figure 6: The sectors that Impact Investing members operate in.** *Source: SAIIN, 2015, p. 8).*

Impact Investment in South Africa has its own challenges that include lack of leadership and management experience, who are able to design good systems and procedures to expand their initiatives. Another problem is that there is generally a lack of organisations that train staff to execute their duties, especially loan officers. Most organisations resort to in-house training because of this shortage (SAIIN, 2015). Interest rates in the South African financial markets are also high, which result in a number of people not being able to afford these loans or defaulting on payments. Other challenges that players in the impact investment industry in SA face include forever changing regulations, fluctuating high inflation, forever changing and increasing staff remuneration. These challenges impact on the fund managers as well as on the Investors. Nonprofit organisations in SA have serious accountability problems and many NGOs in this country struggle to survive (Gugerty, 2010).

South Africa has a mature and well-regulated financial sector which often seems sophisticated and has its origin in the British and Dutch financial sectors. This sector is made up of securities, insurance and banking (Nyoka, 2013). A large proportion of the CSI spending comes from this sector which plays a more important role in impact

investing. National Treasury (2011) reported that this sector of the economy is at the heart of the country's economy and impacts on everyone's life through job creation, sustainable development and infrastructure provision (Maredza, 2013b). Avery (2012) also pointed out that the banking sector in South Africa is instrumental in creating an impact investing industry. According to Urban (2015), this financial sector is best positioned to correct disequilibrium in the market and create solutions that result in positive social and environmental impact.

#### ***2.4.2 Measuring Impact Investing***

There is no definitive formulation to a wicked social problem. For any given problem, a formula can be given for the problem solver to understand and solve the problem – but the same cannot be said for the wicked social problems, because there are different problems and different solutions to the problems in the world. A sociologist, William Bruce Cameron (1963, p13), once said that 'not everything that can be counted, counts: and not everything that counts can be counted. Social impact has been known to be very difficult to quantify, it cannot be counted and yet it counts in people's lives. However, assessing impact is never a cheap exercise, it is very costly. Although it is a familiar exercise, estimating a forecasted return on investment is a difficult exercise, but measuring social return is more difficult and complex (Born, 2013).

According to Hopwood (1983), the main tools for performance reporting are recognised in accounting standards, with a combination of common practice and regulation that has evolved over the last hundred years. The universal unit of measurement is financial (Miller, 1994), in the public sector, welfare economics have been developed to inform public expenditure decision making with quantitative analysis and performance. Impact measurement has supported a new trend for public management (Hood, 1991). Tools for measuring impact have improved over the years, with terms such as impact reporting and investment standards providing sound performance measures to allow organisations to assess and report on social performance (GIIN, 2012).

There are many measurement tools that can be used to measure impact. Arguments exist over which approach to use (more than 150 tools), which is best suited for the social venture (Roy, 2012). Many scholars however indicate that SROI is the most popular one, especially in the UK.

**Table 3: Examples of tools that are used to measure impact:**

	<b>Name of Tool</b>	<b>Value to Business</b>
1	Base of Pyramid Impact Assessment Framework	Measurement and understanding of the effects and different extents of poverty in your target area, societies and communities.
2	GEMI Metrics Navigator	Identify environmental and social performance indicators to measure and prioritise issues for management response
3	Impact Measurement Framework	Identifies relevant socio-economic pointers to quantify impact in four specific sectors: agribusiness, power, financial services, and information and communication technology
4	Impact reporting and investment standards	Select standard pointers to use within your all-encompassing impact measurement framework
5	MDG Scan	Quantify the number of people your company is touching in ways related to the Millennium Development Goals
6	MDC	Quantifies number of people being affected in ways relating to Millennium Development Goals.

7	GEMI	identifies social and environmental performance indicators to measure and prioritise issues for management response
8	IRIS	provides specific metrics for a number of different sectors (Stubert, 2013)
9	BACO	which quantifies investments' social value and compares it to other opportunities
10	IFC	which measures the financial impact and return
11	SROI	which calculates the social return on investment

Source: Wbcsd social capital (2013)

In order to fulfil their goal, organisations design management control systems. These are achieved by means of measurement instruments that are mostly quantitative. When these controls are implemented on a social organisation, they usually assume multiple profits (Megali, 2011). Social enterprises are usually answerable to the community as opposed to shareholders, so for this reason, management controls seek to drive accountability in the sense of responsibility (Gray, 2001). Barman (2007) explained that SEs need to report on three areas namely financial, social effectiveness and institutional legitimacy. Financial reporting and profitability should not be the number one priority for an SE but social effectiveness should take priority although all three of these reporting areas are interdependent. Giannessi (1960) concluded that social organisations prepare management accounts in order to check their financial accountability and also to measure their endeavors for economic equilibrium. Financial controls should assess financial efficiency, through reporting on all aspects of income statements and the financial standing through the balance

sheet (Megali, 2011). For social organisations to effectively implement control processes, they should be able to measure data, ex-post and ex-ante e.g. drawing up projections, budgets and analysis of costs and revenue. Transparency in financial reporting instills confidence and trust from investors leading to further funds injection.

Apart from the financial reporting discussed above, social enterprises also need to include non-financial results: the ability to achieve goals by utilising resources in a responsible manner. Although social effectiveness / impact are difficult to quantify and measure, they still remain the fundamental part on which to report (Summers, 1987). Social enterprises are created to address social ills within societies and by measuring and reporting on social effectiveness, they are pursuing their mission and are meeting community-wide goals (Megali, 2011). SEs should be able to measure what has been achieved and to what degree the initiative has been able to meet the demands of the society.

#### **2.4.2.1 Social Return On Investment (SROI)**

When talking about measurement of social and environmental impact, it will not be sufficient to talk about measurement tools and not talk about the Social Return on Investment rate (SROI). This method is principle based and it measures extra financial value that financial statements do not reflect. The main objective of this measurement tool is to evaluate impact on stakeholders, identify and suggest ways of improving performance and augment performance of investments (thesroinetwork, 2015). The New Economics Foundation in the UK, described SROI as the way of incorporating social, environmental and economic values into the decision making process. It shows whether an enterprise is profitable or not by revealing the economic values of social and environmental endeavours of that enterprise. The outcome of SROI will, in turn, cause the enterprises to be innovative and contribute to the positive social change and poverty reduction for all. Most enterprises use it for planning purposes and for assessing the level of impact caused by their initiatives. Some may want to think of SROI as the same as Cost benefit analysis but the difference is that SROI is non-financial. SROI also is presented as a ratio just like the cost benefit analysis, but is different because the ratio does not compare different



projects but one initiative and its developments. Stakeholders' perspective is also paramount to SROI calculations and considerations (thesroinetwork, 2015).

When calculating SROI, there are certain steps that are followed but these do not have to be in any chronological order. The boundaries of the initiative or project must be clearly defined, including the scope, aims and objectives. Boundaries could also include geographical boundaries and life span in terms of duration of the initiative. Key actors and stakeholders need to be selected, these are either investors or investees or fund managers, who will influence the project negatively or positively. A clear business plan will then be drawn up showing key actors, the objective of the project (which in many cases will be to reduce poverty (thesroinetwork, 2015)). The business plan also outlines the role, keenness and belief of all the stakeholders. The next step is to identify costs (inputs) and intended results (outputs) although sometimes there are unintended results that come out. All the benefits gathered are converted into monetary values using the different tools available for this. After all the steps have been done, then the SROI ratio is calculated. This is done by putting together the inputs, the financials, social and environmental returns to the investment. Good and solid data must be used for this purpose as well as possible estimates and attributions. The data used for this purpose is verified as well. SROI can be included in the normal monitoring and evaluation activities. It promotes transparency, consistency, collective ownership and commitment (thesroinetwork, 2015).

Like any other measurement tool, there are limitations to SROI, there are areas that it cannot cover nor satisfy. First limitation is that SROI cannot be monetised, meaning that there could be some benefits that cannot be expressed in monetary terms and yet they could be beneficial to stakeholders. It is for this reason that SROI should not be expressed as a single digit but as a whole social impact framework. Since Impact investing is about social as well as economic impact, some people tend to focus more on the monetary aspect and not the social and environmental impact. Organisations are then encouraged to clearly define its aims and objectives so that

they cannot be construed. SROI is very expensive to conduct and it requires a lot of time and resources.

The SROI network was established in 2006 and has over 570 members currently. Its mandate is to standardise the SROI method and to provide a consistent quantitative approach to understanding the impact that is caused by projects (thesroinetwork, 2015).

### **2.4.3 Measurement Metrics**

A number of qualitative and quantitative social metrics have evolved within academia over the past years to measure social impact (Nicholls, 2010). Not all social organisations are able to report on these metrics; some have taken them to a limited extent (Brooks, 2009). The value of qualitative social metrics has been known to achieve social objectives, and yet some argue that such metrics attract limited donor funding (Nicholls, 2009). Quantitative metrics have also been criticised for imposing an appropriate consistency onto a complex picture of data of uneven reliability (Seymour, 2011). Literature has also pointed out that there is a disconnection between mission, objectives and impact measurement (Seymour, 2011).

Outcomes of associated social ventures are evaluated in terms of social impact, innovativeness of solution, replicability and sustainability (Urban, 2015). This research evaluates these four metrics and discusses which one brings more value and more growth to the fund manager.

The four metrics or measurement outcomes are discussed below:-

#### **a) Social Impact**

Impact in this context, is defined depending on the organisation's goals and the social problems it seeks to address. As the investment or project progresses, the definition of impact will become clearer, as new actions and changes happen and as new data are generated and measured (Social Impact Investment Taskforce, 2014). The term 'Social' is defined and interpreted differently depending on people's cultural

backgrounds. Bear in mind that the core objective of social organisations is to create social value, whilst economic value will be a by-product that enables organisations to be self-sufficient and sustainable.

Measuring social impact can assist social organisations to prove to communities, donors, civil society and government that their operations and projects are benefiting the communities (Wbcsd social capital, 2013). He added that it helps them to evaluate their needs, aspirations, resources and incentives for their customers so that they develop new products and services and improve their operations (that is growth). This research investigates the relationship between social impact and growth and tests this theory. Yvon Chouinard, founder of Patagonia (2014, p.11), noted that there is no business that is conducted on a dead planet. This means that all companies must recognise that they have an obligation to impact the society and the environment in a positive way. Organisations that have recorded levels of social impact for the good are usually those that have been able to clearly define and articulate their social and environmental goals. It means that they will have set their priorities right and communicated their objectives to their staff members. It is believed that such organisations have the potential to grow in size and capacity to impact more societies (Tan, 2005).

One of the ways in which organisations maximise their social impact is by minimising any direct environmental and social harm. Many companies, especially huge social organisations, have committed to this cause e.g. in greenhouse gas emissions reduction, economical water use, healthy watersheds, green buildings, sustainable living and recycling, to mention just a few. There is an old accounting axiom that says, what is not measured is not managed, meaning that all social impact issues and examples mentioned here need to be measured so that organisations can develop standards, policies and procedures. Many discouraged organisations do not measure and report on the social impact their businesses are causing. This is because there are a number of challenges that this industry faces, namely, lack of data, how expensive it is to calculate social impact, etc. (Wbcsd social capital, 2013).

The impact of goods and services produced by a social enterprise is called Product impact. Operational impact then refers to impact of the organisation's effects on the social aspects of a community (Greene, 2014). Impact of an organisation's behaviour on the society is also referred to as social performance. Environmental performance refers to its impact on the environment including natural systems like air, water and land, (Chenhall, 2007).

### **b) Innovativeness**

According to Schumpeter (1934), innovation is the carrying out of new combinations of existing forces and things. He also added that, what keeps the capitalist engine in motion – comes from the new consumer goods, the new forms of industrial organisation that the capitalist enterprise creates. Social innovation concerns human beings; it is the carrying out of new combinations and of capabilities (Ziegler, 2010); he also suggested that social innovations, especially those that change people's lives, can in principle, gather support and resources from outside, resources in this regard being more investments from donor that will cause growth of the organisation. This research proves to what extent the innovativeness of an organisation impacts on growth of that organisation. Nicholls (2009, p. 13) said that social entrepreneurship has two major characteristics which are social impact and innovation. Social innovation is when social organisations develop new ideas and products to serve new markets and to ensure growth and sustainability of organisations (Kanter, 1998). Business innovation is market driven whereas social innovation has human needs as its focus. Social innovation is an interactive process that brings forth new knowledge and capabilities which in turn, will be used to generate new business ideas and grow the organisation (Ziegler, 2010). In general, entrepreneurs are known to be innovative in the way they start and grow their organizations, but as Schumpeter puts it, this innovation comes in many different forms; it does not have to be an invention always, but to be creative in every aspect of their business. They do this because they want their organisations to be sustainable and to grow (Dees, 1998).

### **c) Replicability**

Former US president, Bill Clinton was quoted in 1994 saying: Nearly every problem has been solved by someone, somewhere. The frustration is that we cannot seem to replicate those solutions anywhere else. Investors and managers of social organisations are eager to take a solution that has worked to solve a social problem somewhere, and then scale it up so that it becomes wider (Smith, 2010). Another way of replicability and scalability is franchising, where an entrepreneur with a small business or idea could build a big and profitable organisation around that idea by partnering with other business partners using the same name and brand.

Social organisations replicate their ideas to widen their impact as well as to expand their business (Smith, 2010). Social entrepreneurs and social investors are eager to try and replicate a program that has worked in a part of a society and make it work for the entire society (Smith, 2010). Replicability and innovation usually work hand in hand meaning that organisations have to come up with innovative solutions for them to be able replicate solutions that worked somewhere else. This proposition empirically tests the predictive ability of innovation to lead the organisation to replicate their solutions. Tracey and Jarvis (2007) noted that replicability forms some series of alliances where the mother company gets a risk free ticket to growth and success. There are many methods of replicability or scalability, franchising being the most common one. Franchising is when another organisation is allowed to operate using the same brand as the first organisation including the name, logo, mission, strategies and objectives (Dees, 2004). Branching is another form of replicability whereby an organisation opens other branches across the country. Affiliation and dissemination are also other forms of replication where social entrepreneurs are in association with other organisations (Dees, 2004). All the replicability forms discussed above are not simple business models but unique and innovative ones. Lisbert Schorr, a policy expert and author, observed that we need to develop more effective and innovative solutions to address social problems. Dees (2004) advised that social entrepreneurs and policy makers need to make more strategic and systematic ways of how to spread their innovations. This means that not all social

entrepreneurs can replicate or expand their operations easily. For them to be able to replicate, they need to be able to define their social innovation first. They must define and explain why their approach is distinctive, what is needed for their success, what are the internal and external factors that affect their organisation, and finally, they should be able to identify areas of improvement or change without affecting the intended impact (Dees, 2004). Not every innovation is replicable, because some elements might not work in different locations, contexts, skills and conditions. There are 5 Rs that social entrepreneurs need to consider before making a decision to transfer the idea to another place. They must be **ready** to spread the innovation, and the project itself must also be ready. Society or the new location must be able to **receive** the new innovation and not reject it. The project itself must also be receptive. There must be enough **resources** to transfer the project and also for the new community to be able to accept it. Resources can be in monetary terms, human resources and the land or space. There are certain **risks** to be considered in this regard. Risks will be on the society side and the organisation side, in that the innovation might not achieve the intended social impact. Lastly, once all is said and done, they should be able to assess the potential social, financial and environmental **returns** (Dees, 2004).

#### **d) Sustainability**

Social organisations are moving away from the traditional charitable organisations that depended on grants and loans that were used to address social problems. Instead, they are now looking to address underlying problems rather than meeting the needs: They are looking to empower societies rather than provide charitable relief; and they are also creating sustainable improvements rather than short term responses. In short, social enterprises are adopting business-like strategies to empower societies and increase their chances of lasting or sustainable social impact (Dees & Anderson, 2003). There is growing evidence that organisations now regard corporate social responsibility as a trigger for growth and long term survival, (Simms, 2002). According to the United Nations' Brundtland Commission, sustainability is the ability to meet today's needs and not disturb the future generation's ability to meet their needs. It is how to make societal and environmental development without

disturbing and endangering the living conditions of humans (Sheehan, 2014). Dees & Anderson, (2003) said that social enterprises are now looking for sustainable solutions for them to remain relevant. The human race is facing new challenges of demonstrating mastery, not over nature but ourselves: meaning that organisations need to show higher levels of sustainability and innovation for them to show higher levels of performance or output. This empirical study helps to prove this relationship and adds onto theory on social sustainability. For businesses, sustainability is the ability to stay as a going concern, through good relations with key stakeholders, whereas social sustainability has something to do with the public or society's interests (Brown, 2006). Organisations are considered sustainable when they manage well its capitals like human, financial, manufactured and natural capital within the society from which they operate, when they are adopting business-like strategies to empower societies and increase their chances of lasting or sustainable social impact (Dees & Anderson, 2003). Some scholars have also argued that the issue of social sustainability was an after-thought because initially SRI would report more on financial and environmental sustainability (Elkington, 2004), although there is evidence that organisations now regard corporate social responsibility as a trigger for growth and long term survival (Simms, 2002). Investors are driven to sustainable investing when the characteristics of the return on investment can be improved by factoring in sustainability into the investment decision. Sustainable investing and the study thereof is a growing phenomenon and it is growing even faster than the investment industry as a whole. This growth is attributed to the shift in societal expectations (Freedman, 2015). Gelb and Strawser (2001) in their research found out that stakeholders engage more when organisations disclose their sustainability levels, but this is also dependent on the industry and sector as some sectors, like financial services and real estate, need active stakeholder involvement. There is however, a non-significant or rather weak relationship between levels of sustainability and economic and financial performance of most organisations (Moneva, 2007). This current research not only tests the effects of sustainability on environmental and financial performance, but it seeks to find the relationship between sustainability and the replicability of the organisation.

#### **2.4.4 Growth of Fund Managers in SA**

Measuring the performance of organisations is very important, because it results in improvement of performance results, job creation, survival and growth (Brush, 1992). Measuring growth is often difficult, due to lack of historical information and accessibility. Kanter (1998) conceded to the notion that there is lack of information on performance measurement in the entrepreneurship field, however extensive empirical and conceptual research on organisational performance has been done in other fields. There is also a need to assess the role of growth motivation when researching about growth, because many managers or entrepreneurs deliberately choose not to pursue growth, for fear of negative consequences of growth (Wiklund, J., Davidsson, P., & Delmar, F. (2008). Researchers use the term 'performance' in conjunction with other constructs like 'success', 'survival' and growth, and for the purposes of this research, performance also means growth of the organisation. Some of the most popular indicators of performance measures are: changes in sales, changes in employees, profitability, return on investment and net profit (Brush, 1992).

Wiklund et al. (2008) did a research which looked at consequences of growth or rather factors that are affected by growth. They hypothesised and tested that growth of an organisation will result in it having financial muscle and being more sustainable. Their research also measured how growth makes it easier for the company to maintain its quality of products (innovativeness) and also how growth enables the company to replicate its services elsewhere. This empirical research looks at the inverse relationships i.e. factors that influence or cause growth and also investigates if measuring and reporting on sustainability, innovativeness, replicability and social impact, causes or brings about growth of the organisation.

We discussed in the earlier sections the four measurement metrics (sustainability, social impact, replicability and innovativeness), and how these metrics impact organisational growth. We also discussed growth as a result of the four metrics. The next heading discusses growth of a social enterprise in general, what it means and what is involved.



#### **2.4.5 SE Growth**

This section starts by discussing what growth of an enterprise entails. Social enterprise growth, like any other growth of an enterprise, can impact profitability through increased revenue, reduction of costs and economies of scale. Social enterprises also pursue growth to increase profits by growing market share and by facing competition, just like conventional companies. However, for many social entrepreneurs, their value creation is not gauged by how much profit they make, nor by how much they grow, but by the social impact made (Jackson, 2013). Nicholls (2009) agreed with the notion that social entrepreneurs use social impact reporting, to build legitimacy, performance and access resources. Previous research has also shown that enterprise growth means that more jobs are going to be created, and this will result in people's lives being improved (Reynolds & White, 1997).

Notwithstanding that starting a social enterprise is not an easy task, due to the challenging nature of its objectives of financial, social and environmental outcomes. SE's are expected to generate profits and create measurable impact, and prove to their investors that they are really making an impact (Vitvitskaya, 2015). It is an accepted fact that social enterprises usually require funding from investors e.g. Impact investors, grants, equity and loans: for them to get equity to expand and grow their organisations (www.unltd.org.uk, 2013). Ed Hess (2010), a Professor at Virginia University, said that there is a myth that all growth of an SE is good, well that is not all true. Growth can create value but if not properly administered, it can destroy all the value that was created. If an enterprise grows too quickly, or too much at one time, the managers can fail to keep up, internal controls will start to lag and even financial controls can fail: all these usually take time to put in place and manage. Also the bigger the business grows, the more complex it becomes to manage, and it will even require more capital and employees. Competition will up their game and intensify their competition as the company grows, so SEs must continually improve their customer value proposition against that of the competition.

Orloff (2002) attributed good leadership, the right and capable person to lead the organisation, as key success and growth of the social enterprise. Locks (2001) also

attributed strategic alliances as key to success and growth of the SEs. He added that the alliances should have a tangible mission and vision, its partners must be committed and reliable, they must trust each other and they must have clear actions plans if they want to see their organisations grow. Sharir and Lerner (2006) added to the list of growth ingredients, by saying that the social entrepreneur must have a social network, must be dedicated to the venture, must have a capital base, the public must accept his idea, must be able to service and to stand the market test and must have entrepreneurial and managerial experience. Hess (2010) discussed the 4 Ps of growth of an enterprise as planning, prioritisation, pace and process. This list is not exhaustive and social entrepreneurs are bound to grow if they adhere to most of the above listed requirements for growth.

This research proves whether reporting on the measurement metrics causes growth of an SE. Variables that make up growth consist of increase in sales figures, increase in number of employees, in net income margins and market share. It also looks at increase in labour expenses, balance sheet value, and net profits. All the above listed are attributes of growth of a social enterprise.

## **2.5 Propositions**

From the theoretical background of impact investing, impact measuring tools and the metrics, SE growth etc. discussed in the sections above, it's clear that empirical evidence is lacking that suggest any relationships between the variables discussed in this research. Because of this lack of literature and empirical evidence, this research did not formulate hypotheses but put forward propositions for empirical testing.

Dillon, Madden and Firtle (1994, p. 417) stated an argument that a hypothesis is a guess that the researcher makes about some characteristic of the sample population. It is a guess or assumption that needs to be tested with the aim of making statistical decisions that are backed by a scientific procedure. Cooper and Schindler (1998, p.101) further explained that the purpose of exploratory analysis is to develop hypotheses or questions for further research. The basis for scientific

research is formed by Propositions, and so is the validity of a research study evaluated on the criteria of its propositions. A proposition is a declarative statement of a concept; it is a narration of a concept, which requires the same level of caution and precision that is expected of scientific research. There is however conflicting literature about the meaning of the terms hypothesis and proposition. Cooper and Schindler (1998, p. 131) further defined a proposition as a statement about concepts that may be judged true or false if it refers to observable phenomena. When a proposition is formulated for empirical testing, they refer to it as a hypothesis.

This research could not formulate any statements or arguments for further testing. However, to be cautious the researcher decided to formulate a list of propositions which are statements about the Impact Investing concept that perhaps could be judged true or false. Four research propositions were formulated, that may allow limited statistical analysis and will be judged according to the definition of Cooper and Schindler (1998, p.131) that a proposition is a statement about concepts that may be judged true or false if it refers to observable phenomena. The propositions will be accepted if they can be tested to be true or rejected if they can be tested to be false.

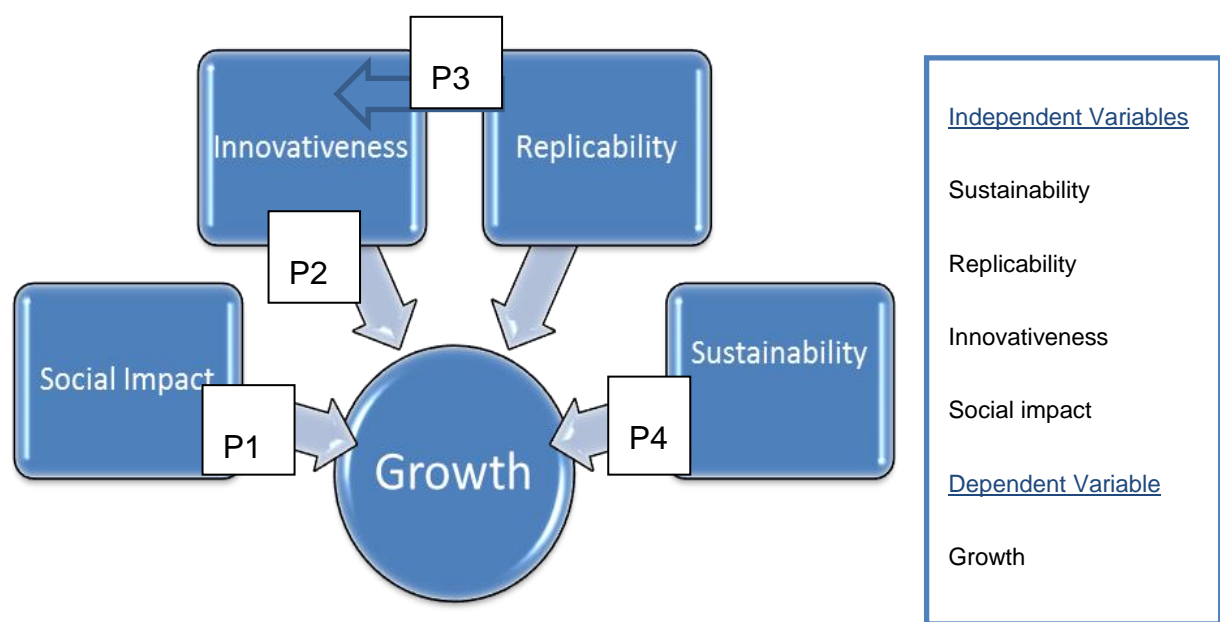
Therefore, the following propositions are formulated as follows:

*Proposition 1:* The enterprise will have higher levels of growth when there are higher levels of social impact

*Proposition 2:* The enterprise will have higher levels of growth when there are higher levels of innovativeness

*Proposition 3:* The enterprise will have higher levels of replicability when there are higher levels of innovativeness

*Proposition 4:* The enterprise will have higher levels of growth when there are higher levels of sustainability



**Figure 7: Propositions suggesting relationship between growth and the four metrics (developed by the researcher).**

## 2.6 Conclusion of Literature Review

Impact measurement studies have recently become popular with impact investors and have become even more important for fund managers. Objectives of impact investing studies commonly incorporate proving impacts and improving interventions (Hulme, 1997). The study of impact investment measurement is relatively new and has not been explored by many scholars. This empirical research evaluates and discusses the impact investing industry in South Africa and focuses on the benefits or outcomes of the four measurement metrics: social impact, innovativeness, replicability and sustainability – for the fund managers. However there is a lack of literature that shows relationships between the constructs and factors of this research topic. Because of this lack of literature, no hypothesis could be formed; rather propositions were suggested, hoping that the results will prove if the proposed relationships do exist.

### **3 RESEARCH METHODOLOGY**

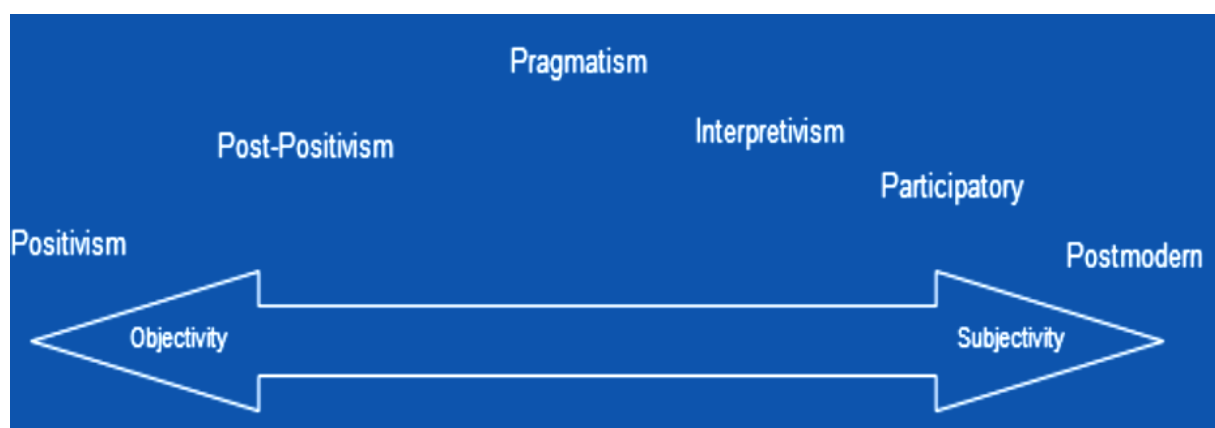
In this chapter, the definition of the research methodology is employed to achieve the objectives of this research and to address the research questions and problems discussed in chapter one. In order to address the problem statement, the research methodology should begin with the philosophy that explains and justifies the paradigm to test its propositions, this thesis relies on a positivistic paradigm and a quantitative approach with underlying hierarchical multiple regression analysis. It goes further and presents the population, sampling, instrumentation and data collection details. This includes a discussion on the validity and reliability of the instrument. At the end of the chapter, a discussion of the analysis is made, which includes a description of interaction analysis, model specification and estimation, regression assumptions, as well as violations and remedies.

This thesis had a quantitative approach where questionnaires were sent out. Questionnaires consisted of 30 questions on a Likert scale of five options and were distributed to about 67 companies, with the researcher hoping to get at least seven responses per organisation. The design of this questionnaire allowed for a covariance, coefficient, factor analysis and multiple regression analysis. The research was not a longitudinal one but rather a cross-sectional one (Blaxter et. al, 2003) where data was gathered through a survey from a selected sample at a particular point in time.

#### **3.1 Research Design**

This research looks at the effectiveness of the measurement outcomes, namely social impact, innovativeness, replicability and sustainability. The objective is to evaluate which metric is most valued by the investors and that will make them invest more capital and grow the organisation. The research is based on the paradigm that the nature of all things in this world can be scientifically examined and proven, making a reality the epistemological perspective that defines our beliefs about how a person can discover knowledge about the world. There are two extreme viewpoints, being from positivism to postmodern, positivism being on the objectivity side and

postmodern being on the subjectivity side. Positivism approach suggests that there is an absolute truth and one is able to work towards getting an answer to the research question through theories. On the other extreme side is the postmodern approach that suggests that there is no outright truth but one can interpret and make sense of all research findings (Creswell, 2009).



**Figure 8: Epistemological continuum** Source: Burrell and Morgan (1979. p. 13).

Positivism approach is biased towards quantitative research whilst a post-modern approach is inclined towards a qualitative research methodology (Blaxter et al., 2003). Quantitative research is a form of logical positivism approach where the researcher is independent from the subject being observed, and there is need for formulation of a proposition for verification of results. On the other hand, qualitative research is a type of interpretive science – that is meant to understand the human experience in context of specific settings (Amaratunga, D., Baldry, D., Sarshar, M., & Newton, R. (2002).

A pragmatic approach would be suitable for this research as it provides a balanced understanding from a theoretical perspective. Due to lack of empirical evidence of this study, it is justifiable to use the inductive approach as opposed to the deductive approach. According to Carlile and Christensen (2005), a deductive approach is based on existing theory whereas an inductive approach is not based much on existing research and theory.

This is descriptive research in that it is designed to provide systematic information about a social phenomenon. There is no hypothesis to be measured but instead a hypothesis is derived from the results (Creswell, 2009). In conclusion, literature on research highlights that the mindset of using a straitjacket philosophy, positivist versus postmodern, is unrealistic (Creswell, 2009). This implies a preference for a balanced approach. To fulfil a comprehensive business research proposal, a pragmatic philosophy was selected. This in turn allows for a predominantly quantitative methodology.

## **3.2 Population and sample**

### **3.2.1 Population**

As defined by Cooper and Schindler (2006, p. 402), the research population is “the total collection of elements about which we wish to make some inferences”. According to Harding (2006), when measuring social enterprises, the respondents must be involved in social initiatives, where their organisations have social as opposed to just profit objectives. This research’s population and samples are strictly those active in the impact investing industry, and the sample is also drawn on this basis. I gathered the population from the South African Impact Investment Network membership which consists of only 67 members (SAIIN, 2015). To add on to the population that was received from SAIIN, another eight Impact investing organisations were gathered from invitees to the WBS workshop for Impact investors held in October 2015, by an organisation called CLEAR monitoring and evaluation. A group email was sent to all companies that had applied to attend the workshop and the researcher was part of that mailing list. The researcher was unable to meet prospective respondents in person at the workshop, but still emailed and introduction and invitation to participate in the study. It was hoped at least 7 respondents from each organisation would complete the questionnaire, making the population about 518 possible respondents. This population was meant to cover the whole country and represent all provinces. The population consists of 26 social organisations from Gauteng province, 7 from Kwazulu Natal, 33 from Cape Town and 9 from Tshwane:

all representing the cosmopolitan provinces of South Africa. Impact investing is a nascent and still developing industry hence it still has very few players, although in reality, many companies out there are impacting societies through their various projects (Trilling Global, 2015). After identifying the population of the study, it is prudent to proceed with outlining the sample, if one intends achieving greater accuracy of the results, data collection in a short space of time whilst at the same time monitoring and minimising costs (Cooper & Schindler, 2011).

### **3.2.2 Sample and sampling method**

A sample method means taking a selection that represents the population so that the data collected can be used as research information. It is meant to give a good representation of accuracy and precision of elements of the population it is intended to represent. Frey, L. R., Botan, C.H. & Kreps, G.L. (2000, p, 125) described it as a subgroup of the population. There are two clusters of sampling methods and these are called probability sampling and non-probability sampling. Probability sampling is usually used when the researcher has a wide and large population and they want a certain level of confidence that the sample will truly represent the population without any bias (Frey et al, 2000). For the purpose of this research, because of the limited population size, a non-probability method seemed fit. One big disadvantage of this chosen method is that it is not advisable to generalise the results based on this sampling to the general population.

A method called 'convenience' or 'volunteer' was used for purposes of this research. This method is dependent on the available participants who agree to partake in the research. Some authors call this method 'reliance on available subjects'. Impact investing is not a common practice and does not have many registered players as yet. Respondents were drawn from the population from the South African Impact Investing Network and an invitation was sent all organisations in the population to participate in the research. 74 emails were sent to all organisations within the population, only 27 responded and agreed to take part in the research. That means that there was a refusal or rejection rate of 64%. This was due to the time frame



given for data collection. Most organisations did not refuse entirely to partake in the study but echoed concerns over lack of staffing to assist in such a short space of time. Of the 34% that agreed to partake, only three were Impact investors and the rest were fund managers. The sample was supposed to represent the whole of South Africa, but unfortunately we only managed to get responses from Cape Town, Durban, Johannesburg and Pretoria which was not really a true reflection of all the provinces in the country.

It should be acknowledged that, as with most if not all research methods, my chosen sampling method has some room for errors. Latham (2007) agreed with the fact that all research methods have room for error. He also added that being aware of these errors will help in the selection of the sampling method to be used. Some examples of these errors are non-responses, under coverage and sloppiness in data collection.

### **3.3 The research instrument**

A self-administered survey was used to gather data from the selected sample (Blaxter et. al, 2003). The survey was conducted and distributed via emails. Advantages of using emails are that it will be easier to reach the respondents, there will be constant interaction with respondents and this will speed up the process. The questionnaire was on a Likert scale of 1-5 to ensure reliability and validity (Blaxter et. al., 2003). The questionnaire design allowed for correlation and covariance and regression analysis to be performed on the data.

The questionnaire questions were deduced from various instruments as follows:

First 14 questions, which are divided into 4 variables (the metrics): were deduced from an article: Urban, B. (2015). *Evaluation of social enterprise outcomes and self-efficacy*. International Journal of Social Economics, 42(2), 163–178.

Five questions on the performance and growth section were deduced from this article: Murphy, G. B., Trailer, J. W., & Hill, R. C. (1996). *Measuring performance in entrepreneurship research*. Journal of Business Research, 36(1), 15–23. This article describes a number of dimensions but we were only interested in the growth section.

Four more questions in the performance and growth section were deduced from this article:

Wiklund, J., Davidsson, P., & Delmar, F. (2008). *What do they think and feel about growth? An expectancy-value approach to small business Managers' attitudes toward growth*. *Entrepreneurship Theory and Practice*, 27(3), 247–270.

**Table 4: The instrument and how it addresses the Propositions**

PROPOSITION	VARIABLES	QUESTIONS	AUTHORS QUESTIONS DEDUCTED FROM
<i>Proposition 1</i> : The enterprise will have higher levels of growth when there are higher levels of social impact	SOCIAL IMPACT	Q 1-4	Urban, B. (2015). Evaluation of social enterprise outcomes and self-efficacy. <i>International Journal of Social Economics</i> , 42 (2), 163–178.
	PERFOMANCE	Q 15-23	Murphy, G. B., Trailer, J. W., & Hill, R. C. (1996). Measuring performance in entrepreneurship research. <i>Journal of Business Research</i> , 36 (1), 15–23. Wiklund, J., Davidsson, P., & Delmar, F. (2008). What do they think and feel about growth? An expectancy-value approach to small business Managers' attitudes toward growth. <i>Entrepreneurship Theory and Practice</i> , 27 (3),
<i>Proposition 2</i> : The enterprise will have higher levels of growth when there are higher levels of innovativeness	INNOVATIVENESS	Q 5-7	Urban, B. (2015). Evaluation of social enterprise outcomes and self-efficacy. <i>International Journal of Social Economics</i> , 42 (2), 163–178.
	PERFOMANCE	Q 15-23	Murphy, G. B., Trailer, J. W., & Hill, R. C. (1996). Measuring performance in entrepreneurship research. <i>Journal of Business Research</i> , 36 (1), 15–23. Wiklund, J., Davidsson, P., & Delmar, F. (2008). What do they think and feel about growth? An expectancy-value approach to small business Managers' attitudes toward growth. <i>Entrepreneurship Theory and Practice</i> , 27 (3),
<i>Proposition 3</i> : The enterprise will have higher levels of replicability when there are higher levels of innovativeness	REPLICABILITY	Q 8-10	Urban, B. (2015). Evaluation of social enterprise outcomes and self-efficacy. <i>International Journal of Social Economics</i> , 42 (2), 163–178.
	INNOVATIVENESS	Q 5-7	Urban, B. (2015). Evaluation of social enterprise outcomes and self-efficacy. <i>International Journal of Social Economics</i> , 42 (2), 163–178.
<i>Proposition 4</i> : The enterprise will have higher levels of growth when there are higher levels of sustainability	SUSTAINABILTY	Q 11-14	Urban, B. (2015). Evaluation of social enterprise outcomes and self-efficacy. <i>International Journal of Social Economics</i> , 42 (2), 163–178.
	PERFOMANCE	Q 15-23	Murphy, G. B., Trailer, J. W., & Hill, R. C. (1996). Measuring performance in entrepreneurship research. <i>Journal of Business Research</i> , 36 (1), 15–23. Wiklund, J., Davidsson, P., & Delmar, F. (2008). What do they think and feel about growth? An expectancy-value approach to small business Managers' attitudes toward growth. <i>Entrepreneurship Theory and Practice</i> , 27 (3),
	DEMOGRAPHIC QUESTIONS	Q 24-30	

### **3.4 Procedure for data collection**

Emails were sent out to respondents as per the population and sample list. One email was sent to each company and one manager was asked to distribute and manage the process on behalf of the researcher. After gathering the sample, the researcher checked contact details and contact persons within each of the organisations. Phone calls were then made to all organisations; introducing the researcher and the research to be conducted, before inviting them to participate. Some phone calls did not go through and introductory emails were then sent to invite the participants. Only after the respondents had agreed to partake, was the research questionnaire sent via email. The email consisted of the introductory letter, the research instrument as an attachment and a link to Qualtrics online questionnaire.

### **3.5 Validity and reliability of research**

#### **3.5.1 External validity**

External validity is about generalisability. It addresses the question: Can the results or conclusions of a test be generalised? Some scholars argue that the absence of external validity leads to a lack of construct. In contrast, Cook and Campbell (1979) argued that when the interest of the researcher is mainly theoretical, then the inference of external validity is of little concern (Calder, 1982).

This research was tested for external validity by the demographics of the respondents. As indicted in the sampling section, the sample was from different provinces to try and reflect a national analysis. This also depended on the population of fund managers in South Africa long as a sample is relevant to the universe of the theory, then it should constitute a test of that theory.

### **3.5.2 Internal validity**

This relates to the extent to which the instrument actually measures what it is designed to measure (Dennick, 2011). Researchers try to create reliable and valid tests in order to enhance the accuracy of their research evaluations. The fundamental elements of an instrument are evaluation and validity (Dennick, 2011). Internal validity is concerned with the degree to which observed differences on the dependent variable are directly related to the independent variable (Wallen, 2008). Simply put, it is the extent to which you are able to say that no other variables except the ones you used caused the result. It is a crucial measure in quantitative research because it ensures that the experiment design used follows the principle of cause and effect (Blaxter et. al, 2003). A Cronbach Alpha was used to measure internal validity.

### **3.5.3 Reliability**

According to Hammersley (1987, p. 73), there is no widely accepted definition of reliability. Many scholars have also argued on the definition of reliability but there is a generally accepted definition: that reliability refers to the probability that repeating the research procedure would produce the same results (Golafshani, 2003). It demonstrates that the operations of a study can be repeated with the same results (Yin, 1994, p.144). It looks at the consistency of the instrument and the extent to which the research will produce similar results under constant conditions on all occasions (Amaratunga et. al, 2002). Reliability can simply be described as repeatability. A research instrument is highly reliable if it comes up with the same result in the same circumstances after time or by a different person (Amaratunga et. al, 2002).

The confidence that this research instrument is reliable and consistent lies in the fact that the instrument was tried and tested previously and has been consistent. This instrument was deduced from the following journal articles: not the convention

To measure and ensure reliability of our research instrument, Cronbach's Alpha was used— this is an instrument designed by Lee Cronbach in 1951, to measure internal consistency of a test and is expressed as a digit between 0-1. Cronbach's alpha is a coefficient that describes how well a group of items focuses on the constructs identified (Dennick, 2011).

Validity of the factors of the instrument was measured by use of confirmatory factor analysis. All factors on each scale had a high factor loading of above 0.8. Cronbach's Alpha was used to measure reliability of the scale for each of the constructs and all coefficients had a high level of reliability (above 0.9). More results of these tests are discussed in chapter 4.

#### **3.5.4 Ethical Considerations**

As prescribed by the Wits Business School Ethics Board, there are certain procedures and ethics that were followed when conducting this research. Some of these standards include:

##### **Professionalism:**

The conduct of the researcher in all communications or discussions and analysis was professional and reflected the standard of the Business School.

##### **Anonymity and Confidentiality:**

Identity of the respondents remains anonymous until expressed in writing by the individuals. Where names needed to be used, a nickname was used and is not directly linked to the actual person. For the organisations, any 'sensitive' information that they provided was treated in the strictest confidential manner.

**Legality:**

The entire research process is aligned to a legally accepted process and is not in breach of any law of any institution.

**3.6 Data analysis and interpretation**

Statistical programs called SAS and SPSS software were used to analyse data. Correlation, covariance and multiple regression models were used to analyse the data in order to determine the predicted relationships between the specified variables.

In Correlation, each factor is correlated with every other factor. Correlations can vary from -1.00 to +1.00 (Morrisson, 2015). The correlation matrix was created through the variables that make up the four measurement outcomes: social impact, innovativeness, replicability and sustainability. The correlation matrix allows the assessment and validation of the level of relationship that exists between the factors, it does not group the factors and it aims for positive correlation of +1.00 which will be regarded as a perfect relationship.

Backward stepwise regression was used to eliminate variables with strong regression co-efficiencies – where the propositions are significantly high at the  $p$ -level of less than 0.05. Multiple regression analysis lets numerous independent variables of competitive strategy to be applied as a dependent variable (Cramer, 2003), as well as to quantify the relationship. The interpretation of the results of the multiple regression analysis is fundamental to the research process as it concludes the results of the data collection and answers the research question.

Data is presented as descriptive statistics - mean, standard deviation and total correlations. Each metric was measured for stability using the Cronbach's alpha (Bhargava, 1994). Correlation efficiencies were also examined and results are discussed in chapter 4.

### **3.7 Limitations of the study**

Social organisations are known for non-accountability and disclosure of their operations. Because of this reason, it was difficult to gather a good sample of fund managers that would give a true reflection of the whole South African impact investing industry.

Some of the respondents in the sample were not using any of the measurement tools and metrics to measure their performance and their impact. This affected the results since the objective is to evaluate the different measurement tools.

When the research proposal for this thesis was presented, it proposed use of a triangulation method, where the researcher was to conduct a qualitative research together with a quantitative one. The aim was to interview a number of Impact investors so that we could gather more on the ground information about impact investing industry in SA. However, I failed to secure even a single interview with any investor which is the reason why I settled for only quantitative research.



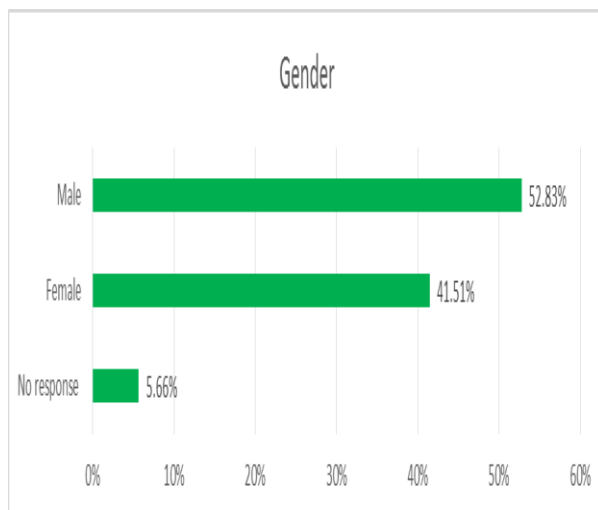
## 4 PRESENTATION OF RESULTS

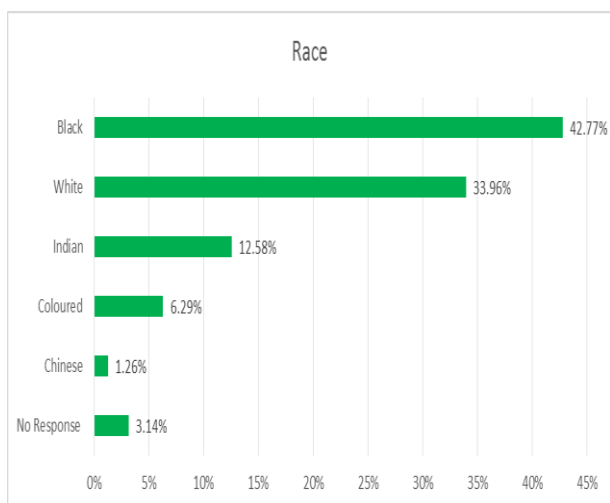
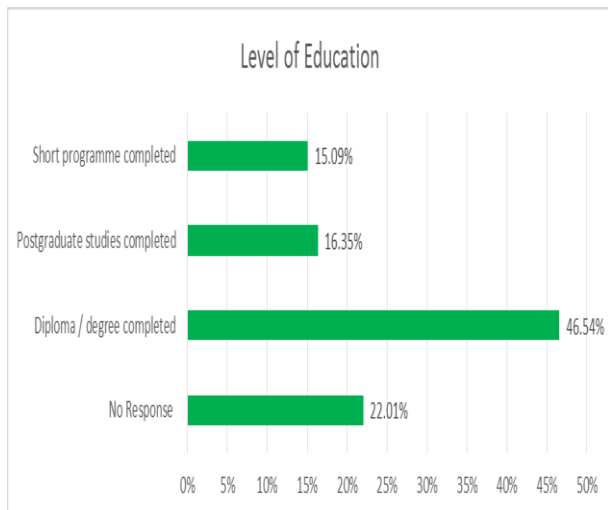
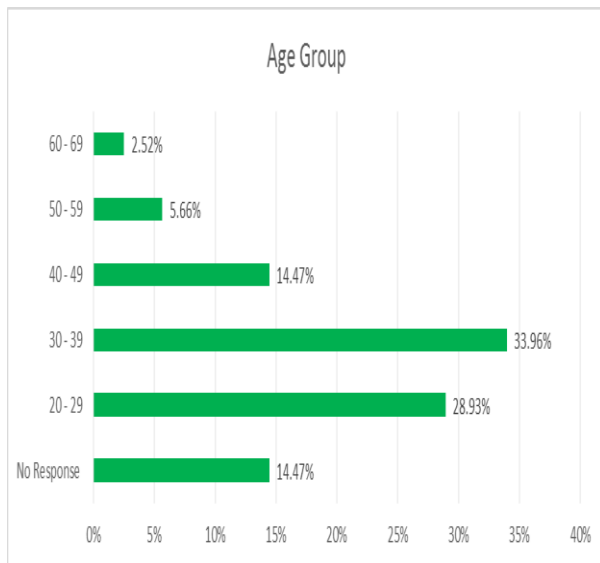
### 4.1 Introduction

In this chapter, results of the empirical investigation are presented. It includes a flow of interpretations and discussion of the demographic profiles of the respondents, and then an evaluation of the measurement aspects of the model. Results from reliability and validity test results are also presented in this chapter.

It is worthwhile to note that a number of respondents found it difficult to understand the terminology used in the initial questionnaire. I had to simplify some words in the initial instrument, but still maintain the context of the questions, for example, the term 'initiative' was replaced with 'enterprise'. Question 30 initially required respondents to calculate SROI for their organisation but because of the complexity of the SROI calculations, I had to change the question such that respondents would only indicate the SROI percentage of their organisations if they knew it.

### 4.2 Demographic profile of respondents





**Figure 9: Respondent Demographics**

Of the 159 responses that we received, 52.83% were males and 41.53% were females. This was a fair distribution of gender although some literature has indicated that social organisations are owned and managed by mostly women and that there are only a few males in this industry. This empirical study showed almost a half and half distribution, indicating that impact investment is a bit different from just social entrepreneurship because there are as many men as there are women.

33.96% of the respondents are between the ages of 30-39 and 38.93% are between the ages 20-29 years old and only 5.66% are above 60 years. This is a true reflection of the working class age group in South Africa where most of the employees are between 25 and 40 years and the retirement age is 65 years.

46.54% have completed a diploma or degree whilst a further 16.35% have a postgraduate qualification. This result indicates that the impact investing industry is made up of educated individuals. The Greater capital (2013) indicated a contrasting result when they reported that social organisations usually hire less qualified employees because of lack of funding. They also said that highly skilled employees prefer working for the private corporates who pay more. Most studies on the South African social entrepreneurship industry, indicate that most of South African social entrepreneurs do not complete a diploma or degree and about 89% of them enrolled for secondary education but did not complete. It is worthwhile to note that a significant 22.01% of the respondents in this research, did not disclose their level of education and most of these were females.

The 159 respondents were made up of 42.77% black people, 33.96% white people, 12.58% Indians, 6.29% coloured people and 1.26% Chinese. This result is also a fair reflection of the South African population by race where blacks are the majority and the Chinese are the most minority group. South Africa is considered a rainbow nation because it encompasses different races in significant numbers. It is considered to have the highest population of Indians outside India itself.

### **4.3 Descriptive Statistics**

The use of frequency analysis was employed to explain the distribution of the demographics. The regression procedure was used to test significant patterns of how respondents answered questions. This provided a clear narrative on how different demographics respond to particular issues in relation to the investigated discourse. For multicollinearity the researcher relied on the Condition index, where anything which had a value higher than 30 was worth investigating. R Square, Root MSE and coefficient of variation were all used to test the suitability of the regression as the procedure of preference/choice. It must be noted that because of time constraints, counter-non parametric tests were not performed to validate the results drawn from parametric tests and outlier diagnostic plots were beyond the scope of the study. The direction of the tested parameters was used as an indicator of the type of influence an independent variable has on the dependent variable.

The below table provides a high level review of descriptive statistics in the data set. As can be seen, the overall average for all the questions is 3.5 which mean that we have more respondents in agreement with most of the statements in the survey.

**Table 5: Summary of the Statistics**

Simple Statistics						
Variable	N	Mean	Std Dev	Sum	Min	Max
Q1.The results of the enterprise are tangible to date	150	3.73333	0.93167	560.00000	1.00000	5.00000
Q2.Results sufficient to surmise that people's lives were improved	158	4.00000	0.91693	632.00000	2.00000	5.00000
Q3. The projects is widespread and spans several communities	158	4.01266	1.06470	634.00000	1.00000	5.00000
Q4. There are many direct beneficiaries	156	3.77564	0.98094	589.00000	1.00000	5.00000
Q5. The enterprise has introduced new approaches or offered new solutions to societal problems	142	3.6338	1.19976	516.00000	1.00000	5.00000

Q6.The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	146	3.53425	1.00457	516.00000	1.00000	5.00000
Q7. Has entirely transformed established practices and/or systems	147	3.59864	1.03804	529.00000	1.00000	5.00000
Q8. The projects can be expanded from its original group of beneficiaries	152	3.78289	1.10937	575.00000	1.00000	5.00000
Q9. Applicability of the projects is clear in adjacent communities or country as a whole	148	3.52027	1.09090	521.00000	1.00000	5.00000
Q10. Many aspects of the projects can be transferred and adapted to other settings around the world	148	3.43919	0.97748	509.00000	1.00000	5.00000

Q11. The enterprise is insulated or independent of political events and legislation	147	3.46259	1.02217	509.00000	1.00000	5.00000
Q12. The enterprise self-generates most of its funds, or outside funding is fairly reliable	155	3.45806	0.85462	536.00000	1.00000	5.00000
Q13. The enterprise has entered several partnerships with businesses or has a few important ones	156	3.66026	0.86879	571.00000	1.00000	5.00000
Q14. Organization firmly in place and can stand without the support of the founder	148	3.68919	0.74552	546.00000	2.00000	5.00000
Q15. Enterprise has grown in terms of Sales in the past years	157	3.76433	0.84079	591.00000	1.00000	5.00000
Q16. Enterprise has grown in terms of employees in the past years	146	3.66438	0.85724	535.00000	2.00000	5.00000

Q17. Enterprise's net income margins have grown in the past years	141	3.71631	1.00943	524.00000	1.00000	5.00000
Q18. Our market share has improved in the last two years	136	3.64706	0.93118	496.00000	1.00000	5.00000
Q19. Our labour expense has grown in relation to sales revenue	156	3.71154	0.93677	579.00000	2.00000	5.00000
Q20. Our balance sheet has increased, in relation to net of assets and liabilities.	151	3.72848	0.88644	563.00000	1.00000	5.00000
Q21. In the event of a severe crisis, our enterprise will survive	151	3.84106	0.76675	580.00000	1.00000	5.00000
Q22. We are able to maintain the quality of our products and services	150	3.74667	0.97062	562.00000	1.00000	5.00000
Q23. Since we started, the enterprise's has always recorded net Profits	156	3.30769	0.79202	516.00000	2.00000	5.00000



#### **4.4 Factor analysis, Reliability, Validity and Internal consistency**

##### **4.4.1 Reliability tests (Cronbach Alpha)**

Reliability is the ability with which a quantifying instrument gives a particular result when the unit being measured remains the same (Wagner, C, Kawulich, B., and Garner, M. (eds). (2012). Reliability is measured by repeatedly measuring the variables or constructs in question. When the association between the scores derived after testing the model through this procedure is high, it means the more reliable the scale is. Cronbach's Alpha was used to measure reliability of the scale for each of the constructs and all coefficients had a fair level of reliability (0.40) (Lee, 2015). Cronbach, L.J. (1951) defined Cronbach Alpha as a statistical procedure used to examine the extent to which all items in the instrument measure the same construct. Internal consistency is measured in relation to a composite score, where item instruments are split into half performing and a correlational procedure is performed on both halves (Nunnally J, Bernstein L.(1994). Furthermore, the higher the correlation coefficient generated between the values 0 to 1 of which 0.8 correlation is adequately reliable, means that the test is consistent at 80% and errors may occur only at 20%. In this case, most of the variables are above 80% which means the correlation is adequately reliable. This means the test is 80%+ consistent and error may only occur at 20%.

**Table 6: Reliability for Social Impact as a construct**

Reliability Statistics				
Cronbach's Alpha		No. of Items		
0.898		3		
Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q2.Results sufficient to surmise that people’s lives were improved	7.819	3.500	0.851	0.819
Q.3The projects is widespread and spans several communities	7.819	3.110	0.775	0.880
Q4.There are many direct beneficiaries	8.077	3.319	0.783	0.867

Cronbach alpha is 0.898 which very high and shows that Social Impact as a construct is reliable with 3 variables after removing 1 construct whose factor loading was low.

**Table 7: Reliability for Innovativeness as a construct**

Cronbach's Alpha	No. of Items			
0.843	3			
Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q5.The enterprise has introduced new approaches or offered new solutions to societal problems	7.144	3.498	0.754	0.74

Q6.The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	7.22	4.28	0.698	0.794
Q7. Has entirely transformed established practices and/or systems	7.242	4.261	0.686	0.804

Cronbach alpha is 0.843 which is high enough and shows that Innovativeness as a construct is reliable with 3 variables.

**Table 8 : Reliability for Expandability as a construct**

Cronbach's Alpha	No. of Items
0.872	2

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q8. The projects can be expanded from its original group of beneficiaries	3.521	1.202	0.774	.
Q9. Applicability of the projects is clear in adjacent communities or country as a whole	3.813	1.258	0.774	.

Cronbach alpha is 0.872 which very high and shows that Expandability / Replicability as a construct is reliable with 2 variables after removing 1 construct whose factor loading was low.

**Table 9 : Reliability for Sustainability as a construct**

Cronbach's Alpha		No. of Items		
0.722		4		
Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q11.The enterprise is insulated or independent of political events and legislation	10.75	3.789	0.452	0.712
Q12.The enterprise self-generates most of its funds, or outside funding is fairly reliable	10.765	3.648	0.728	0.529
Q13The enterprise has entered several partnerships with businesses or has a few important ones	10.544	4.146	0.503	0.665
Q14. Organization firmly in place and can stand without the support of the founder	10.537	4.873	0.407	0.716

Cronbach alpha is 0.722 which very high and shows that Sustainability as a construct is reliable with all its 4 variables.

**Table 10 : Reliability for Growth as a construct**

Cronbach's Alpha		No. of Items		
0.919		8		
Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q15. Enterprise has grown in terms of Sales in the past years	25.832	29.226	0.693	0.911
Q16. Enterprise has grown in terms of employees in the past years	25.975	29.703	0.617	0.917

Q17. Enterprise's net income margins have grown in the past years	25.941	26.649	0.806	0.902
Q18. Our market share has improved in the last two years	26.042	27.007	0.86	0.897
Q19. Our labour expense has grown in relation to sales revenue	25.891	28.759	0.646	0.915
Q20. Our balance sheet has increased, in relation to net of assets and liabilities.	26.067	28.521	0.747	0.907
Q21. In the event of a severe crisis, our enterprise will survive	25.908	29.034	0.823	0.903
Q22. We are able to maintain the quality of our products and services	25.992	27.652	0.693	0.912

Cronbach alpha is 0.919 which very high and shows that Growth as a construct is reliable with 8 of its 9 variables after removing 1 construct whose factor loading was low.

#### **4.4.2 Factor Analysis**

For purposes of this study, explorative factor analysis was employed. According to Statistical Solutions Advancement through Clarity (2015), factor analysis can be used as an explorative analysis to group variables into dimensions. This process is also known as identifying latent factors. Factor analysis reduces information in a model by reducing the dimensions of the observations. It can be used to simplify data and if factor analysis is used for this purpose, most often than not, factors are rotated after extraction. The rotation is used to reduce multicollinearity such that the correlation between two factors becomes zero. The most common way to construct an index is to simply sum up the items in an index. However, it must be noted that in some situations some variables might have more explanatory power than others. In other cases, similar questions correlate and that can justify the researcher dropping one of the questions completely to make the questionnaire shorter. In this instance,

we then use factor analysis to recognise the weight each variable should have in the index.

Validity of the factors of the instrument was measured by use of confirmatory factor analysis. Most of the factors on each scale had a high factor loading of above 0.7. However, 3 constructs had a very low factor loading and had to be removed. The factors that were removed are as follows:-

**Table 11: Factors that were removed because of low factor loading**

<b>Communalities</b>		
	Initial	Extraction
Q1.The results of the enterprise are tangible to date	1	0.077
Q10. Many aspects of the projects can be transferred and adapted to other settings around the world	1	0.133
Q23. Since we started, the enterprise's has always recorded net Profits	1	0.396

**Table 12: Correlation Matrix**

Correlations						
FACTORS		Social impact	Innovativeness of solution	Expandability replicability	Sustainability	Growth
Social impact	Pearson Correlation	1				
Innovativeness of solution	Pearson Correlation	0.287**	1			
Expandability replicability	Pearson Correlation	0.365**	0.784**	1		
Sustainability	Pearson Correlation	0.365**	0.360**	0.158*	1	
Growth	Pearson Correlation	0.393**	0.324**	0.311**	0.411**	1
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

The correlation matrix above indicates that the highest correlation is between Innovativeness and expandability (Proposition3).

**Table 13 : Factor analysis for Social Impact construct**

KMO and Bartlett's Test						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.					0.735	
Bartlett's Test of Sphericity			Approx. Chi-Square		296.256	
			Df		3	
			Sig.		0.000	
Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.508	83.605	83.605	2.508	83.605	83.605
2	0.306	10.192	93.797			
3	0.186	6.203	100			
Extraction Method: Principal Component Analysis.						
Component Matrix <sup>a</sup>						
					Component	
					1	
Q2.Results sufficient to surmise that people's lives were improved					0.937	
Q4.There are many direct beneficiaries					0.905	
Q.3The projects is widespread and spans several communities					0.900	
Extraction Method: Principal Component Analysis.						
a. 1 component extracted.						

The above table shows that Social impact has a factor loading of 83.6% which is a good loading to explain that variables that make up this construct measure the same thing.

**Table 14 : Factor analysis for Innovativeness as a construct**

<b>KMO and Bartlett's Test</b>
--------------------------------



Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.718				
Bartlett's Test of Sphericity	Approx. Chi-Square			163.524		
	Df			3		
	Sig.			0		
Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.289	76.292	76.292	2.289	76.292	76.292
2	0.413	13.759	90.052			
3	0.298	9.948	100.000			
Extraction Method: Principal Component Analysis.						
Component Matrix <sup>a</sup>						
				Component		
				1		
Q5.The enterprise has introduced new approaches or offered new solutions to societal problems				0.898		
Q6.The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods				0.865		
Q7. Has entirely transformed established practices and/or systems				0.857		
Extraction Method: Principal Component Analysis.						
a. 1 component extracted.						

The above table shows that Innovativeness has a factor loading of 76.29% which is a good loading to explain that variables that make up this construct measure the same thing.

**Table 15 :Factor analysis for Expandability as a construct**

KMO and Bartlett's Test						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				0.500		
Bartlett's Test of Sphericity		Approx. Chi-Square		129.087		
		Df		1		
		Sig.		0.000		
Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.774	88.678	88.678	1.774	88.678	88.678
2	0.226	11.322	100			
Extraction Method: Principal Component Analysis.						
Component Matrix <sup>a</sup>						
					Component	
					1	
Q9. Applicability of the projects is clear in adjacent communities or country as a whole					0.942	
Q8. The projects can be expanded from its original group of beneficiaries					0.942	
Extraction Method: Principal Component Analysis.						
a. 1 component extracted.						

The above table shows that Expandability has a factor loading of 88.68% which is a good loading to explain that variables that make up this construct measure the same thing.

**Table 16 : Factor analysis for Sustainability as a construct**

<b>KMO and Bartlett's Test</b>			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.669	
Bartlett's Test of Sphericity	Approx. Chi-Square		131.083
	Df		6
	Sig.		0.000

<b>Total Variance Explained</b>						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.235	55.873	55.873	2.235	55.873	55.873
2	0.774	19.356	75.229			
3	0.669	16.717	91.946			
4	0.322	8.054	100			
Extraction Method: Principal Component Analysis.						
<b>Component Matrix<sup>a</sup></b>						
						Component
						1
Q12.The enterprise self-generates most of its funds, or outside funding is fairly reliable						0.887
Q13The enterprise has entered several partnerships with businesses or has a few important ones						0.747
Q11.The enterprise is insulated or independent of political events and legislation						0.688
Q14. Organization firmly in place and can stand without the support of the founder						0.646
Extraction Method: Principal Component Analysis.						
a. 1 component extracted.						

The above table shows that Sustainability has a factor loading of 55.87% which is not so high but a good loading to explain that variables that make up this construct measure the same thing.

**Table 17 : Factor Analysis for Growth as a construct**

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.832
Bartlett's Test of Sphericity	Approx. Chi-Square	733.897
	Df	28
	Sig.	0.000
<b>Total Variance Explained</b>		
Component	Initial Eigenvalues	Extraction Sums of Squared Loadings

	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.185	64.812	64.812	5.185	64.812	64.812
2	0.962	12.019	76.831			
3	0.63	7.872	84.703			
4	0.417	5.216	89.919			
5	0.272	3.396	93.315			
6	0.244	3.053	96.368			
7	0.192	2.399	98.767			
8	0.099	1.233	100.000			
Extraction Method: Principal Component Analysis.						
<b>Component Matrix<sup>a</sup></b>						
					Component	
					1	
Q18. Our market share has improved in the last two years						0.898
Q21. In the event of a severe crisis, our enterprise will survive						0.873
Q17. Enterprise's net income margins have grown in the past years						0.864
Q20. Our balance sheet has increased, in relation to net of assets and liabilities.						0.812
Q22. We are able to maintain the quality of our products and services						0.768
Q15. Enterprise has grown in terms of Sales in the past years						0.766
Q19. Our labour expense has grown in relation to sales revenue						0.732
Q16. Enterprise has grown in terms of employees in the past years						0.706
Extraction Method: Principal Component Analysis.						
a. 1 component extracted.						

The above table shows that Growth has a factor loading of 64.81% which is not so high but a good loading to explain that variables that make up this construct measure the same thing.

#### 4.5 Preamble of the Results: Relationships between constructs

To test the proposed relationships between the variables, this research made use of multiple regression analysis. Most scholarly researchers make use of multiple regression analysis for their research (Mason & Perreaul, 1991). This analysis is popular because it is easy to apply to different types of data, to different types of problems and it is easy to interpret. Multiple regression is used for two main purposes in research, i.e. to predict the outcome of hypothesised relationships and to draw conclusions on individual predictor variables (Mason & Perreaul, 1991). Results from multiple regression may be problematic when there appears to be more than one correlated variable, however, overall prediction will not be affected but the results may be misleading because of the perplexing effects of collinearity. This confusion is well known by researchers; hence they apply other ways to deal with multicollinearity issues (Farrar & Glauber 1967). For this report, four metrics namely Social Impact, Innovativeness, Expandability and Sustainability were analysed as independent variables against Growth, being the dependent variable. The results were as follows:-

**Table 18 : Multiple Regression: Growth as a dependent variable**

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	0.490 <sup>a</sup>	0.240	0.219	0.59679		
a. Predictors: (Constant), Sustainability, Expandability replicability, Social impact, Innovativeness of solution						
ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	16.173	4	4.043	11.352	0.000 <sup>b</sup>
	Residual	51.287	144	0.356		
	Total	67.460	148			

a. Dependent Variable: Growth						
b. Predictors: (Constant), Sustainability, Expandability replicability, Social impact, Innovativeness of solution						
<b>Coefficients<sup>a</sup></b>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.664	0.315		5.289	0
	Social impact	0.145	0.062	0.196	2.354	0.02
	Innovativeness of solution	0.041	0.092	0.056	0.441	0.66
	Expandability/ replicability	0.099	0.082	0.151	1.212	0.227
	Sustainability	0.281	0.088	0.27	3.179	0.002
a. Dependent Variable: Growth						

Two variables namely Social impact and Sustainability have a higher correlation value to Growth (dependent variable), whilst Innovativeness and Expandability have a low correlation to Growth as a dependent variable. This implies that from our proposed relationships, only Social Impact and Sustainability has shown to cause growth of the organisation.

**Table 19 : Multiple Regression: Expandability and Innovativeness**

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.784 <sup>a</sup>	0.614	0.612	0.57669		
a. Predictors: (Constant), Expandability_replicability						
ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	79.412	1	79.412	238.79	0.000 <sup>b</sup>
	Residual	49.885	150	0.333		
	Total	129.298	151			

a. Dependent Variable: Innovativeness_of_solution						
b. Predictors: (Constant), Expandability_replicability						
<b>Coefficients<sup>a</sup></b>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.027	0.171		6.007	0
	Expandability_replicability	0.701	0.045	0.784	15.453	0
a. Dependent Variable: Innovativeness_of_solution						

Expandability and Innovativeness have a higher perfect fit correlation.

Factor analysis discussed in the section above, is described as a family of methods that seek to group variables into dimensions. Its seeks to prove that the grouped factors can function together as one variable. Results of Linear Regression shown above showed that two of the propositions do not have a positive relationship with growth of the organisation. This result prompted me to break the variables once again and to run linear regression on individual variables. Objective was to investigate if we are not able to get more positive relationships that support the propositions. The analysis that follows seeks to establish individual relationships between the constructs of the independent variables against each construct of the dependent variables i.e. growth.

#### 4.6 Results: Proposition1

**The enterprise will have higher levels of growth when there are higher levels of social impact**

Questions 1-4 = Q15

Dependent Variable 15: Enterprise has grown in terms of Sales in the past years

**Table 20: Social impact/Reach of the Enterprise = Sales growth of the organisation**

### Linear Regression Results

Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	4.02985	0.5618	7.17	<0001
2. Results sufficient to surmise that people's lives were improved	1	-0.40724	0.18404	-2.21	0.0295
3. The projects is widespread and spans several communities	1	0.37203	0.14023	2.65	0.0095
4. There are many direct beneficiaries	1	0.53985	0.18006	3.00	0.0035
25. Please specify your age in years	1	-0.01925	0.00954	-2.02	0.0466
28. Please indicate the organisation's employee numbers	1	-0.00179	0.0784	-0.02	0.9818
29. Please indicate organisation's age	1	-0.01757	0.06235	-0.28	0.7787



Collinearity Diagnostics (Intercept adjusted)							
Variable	Eigenvalue	Condition Index	2. Results sufficient to surmise that people's lives were improved	3. The projects is widespread and spans several communities	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
2	1.46036	1.47050	0.00308	0.00056639	0.05555	0.21656	0.24393
3	1.04320	1.73984	0.00038704	0.00429	0.54755	0.10998	0.00365
4	0.57680	2.33983	0.00068334	0.00127	0.06914	0.52108	0.70959
25	0.39919	2.81258	0.05091	0.12436	0.00000305	0.13368	0.0001190
28	0.21533	3.82947	0.19903	0.82426	0.11777	0.01455	0.01338
29	0.14728	4.63045	0.72608	0.02011	0.20983	0.00246	0.02716

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

The results rejected  $H_0$  at 5% level of significance ( $0.0009 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following *Betas* were found to be significant by the model:

- $Q2 = 0.02 < 0.05$ : *contrasting relationship between Q2 (improved people's lives) and Q15 (Sales growth): an increase in Q2 causes a decrease in Q15*
- $Q3 = 0.009 < 0.05$ : *Positive relationship between Q3 (Initiative is widespread) and Q15 (Sales growth): an Increase in Q3 causes an increase in Q15*
- $Q4 = 0.003 < 0.05$ : *Positive relationship between Q4 (Direct beneficiaries) and Q15 (sales growth): an increase in Q4 causes an increase in Q15*
- $Q25 = 0.04 < 0.05$ : *contrasting relationship: an increase in Q25 (Age) causes a decrease in Q15 (Sales growth)*

R square was 24% which is poor as it means the model explains 24% of the variability in the data; this is a poor fit of the model. Furthermore the root MSE of 0.80 is fairly small and means there is not too much variability in the data. CV is 21% which is not bad; anything less than 30% is acceptable. The condition index is within the accepted range.

Questions 1-4 = Q16

**Table 21: Social impact/Reach of the Enterprise = Growth by number of employees of the organisation**

**Dependent Variable 16: Enterprise has grown in terms of employees in the past years**

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	5.23759	0.6221	8.42	<0001
2. Results sufficient to surmise that people's lives were improved	1	-0.63343	0.17896	-3.54	0.0007
3. The projects is widespread and spans several communities	1	0.36352	0.14892	2.44	0.0168
4. There are many direct beneficiaries	1	0.37404	0.1755	2.13	0.0361
25. Please specify your age in years	1	-0.03275	0.00937	-3.50	0.0008
28. Please indicate the organisation's employee numbers	1	-0.08922	0.07677	-1.16	0.2485
29. Please indicate organisation's age	1	0.08685	0.06038	1.44	0.1541
F value		4.16			
Pr > F		0.0006			
R Squared		0.2621			
Adj R Squared		0.1991			

Collinearity Diagnostics (Intercept adjusted)							
Variable	Eigenvalue	Condition Index	2. Results sufficient to surmise that people's lives were improved	3. The projects is widespread and spans several communities	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
2	1.47358	1.43151	0.00278	0.00056108	0.06545	0.18218	0.24964
3	1.04375	1.70092	0.00079881	0.00717	0.51221	0.10885	0.00849
4	0.59074	2.26092	0.00077378	0.00645	0.06271	0.47951	0.69452
25	0.41703	2.69090	0.05990	0.16206	0.00009767	0.21644	0.0002146
28	0.28094	3.27852	0.29145	0.79075	0.08492	0.00431	0.02111
29	0.17426	4.16278	0.61797	0.00021969	0.27416	0.00252	0.02580

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

This result rejected  $H_0$  at 5% level of significance ( $0.0006 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following *Betas* were found to be significant by the model:

- $Q2 = 0.0007 < 0.05$ : *contrasting relationship between Q2 ( Improved people's lives) and Q16 (Employee growth): an increase in Q2 causes a decrease in Q16*
- $Q3 = 0.01 < 0.05$ : *Positive relationship between Q3 (Initiative is widespread) and Q16 (Employee growth): an Increase in Q3 causes an increase in Q16*
- $Q4 = 0.03 < 0.05$ : *Positive relationship between Q4 (Direct beneficiaries) and Q16 (Employee growth). Q4 causes an increase in Q16*
- $Q25 = 0.0008 < 0.05$ : *contrasting relationship: an increase in Q25 (Age) causes a decrease in Q16 (Employee growth).*

R square is 26% which is poor as it means the model explains 26% of the variability in the data; this is a poor fit of the model. Furthermore the root MSE of 0.77 is fairly small and means there is not too much variability in the data. A CV of 21% is not bad; anything less than 30 is acceptable. The condition index is within the accepted range.

**Questions 1-4 = Q17**

**Table 22: Social impact/Reach of the Enterprise = Growth by number of employees of the organisation**

Dependent Variable 17: Enterprise's net income margins have grown in the past years

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	2.95899	0.60896	4.86	<.0001
2. Results sufficient to surmise that people's lives were improved	1	-17456	0.19679	-0.89	0.3777
3. The projects is widespread and spans several communities	1	0.06387	0.14955	4.27	<.0001
4. There are many direct beneficiaries	1	-0.06106	0.19353	-0.32	0.7532
25. Please specify your age in years	1	-0.01334	0.01025	-1.30	0.1966
28. Please indicate the organisation's employee numbers	1	0.04346	0.08617	0.50	0.6153
29. Please indicate organisation's age	1	0.35352	0.06934	5.10	<.0001
F value		8.51			
Pr > F		< 0001			
R Squared		0.4239			
Adj R Squared		0.3741			

Collinearity Diagnostics (Intercept adjusted)							
Variable	Eigenvalue	Condition Index	2. Results sufficient to surmise that people's lives were improved	3. The projects is widespread and spans several communities	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
2	1.41722	1.49921	0.00302	0.00042662	0.04769	0.23291	0.26398
3	1.05291	1.73934	0.00068729	0.00510	0.56003	0.09796	0.00304
4	0.59287	2.31793	0.00298	0.00010444	0.05781	0.60430	0.67017
25	0.39144	2.85265	0.04799	0.13354	0.00011020	0.04835	0.02163
28	0.21454	3.85322	0.20825	0.81898	0.11310	0.01275	0.01890
29	0.14563	4.67690	0.71773	0.01722	0.22109	0.00136	0.01994

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Reject  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following *Betas* were found to be significant by the model:

- $Q3 = 0.0001 < 0.05$ : *Positive relationship between Q3 (Widespread initiative) and Q17 (Growth in net income margins): an Increase in Q3 causes an increase in Q17*
- $Q29 = 0.0001 < 0.05$ : *Positive relationship between Q29 (Organisation's age) and Q17 (Growth in net income margins): an increase in Q29 causes an increase in Q17*

It must also be noted that an R square of 42% is poor as it means the model explains 42% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.85 is fairly small and means there is not too much variability in the data. A CV of 23% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.



**Questions 1-4 = Q18**

**Table 23: Social impact/Reach of the Enterprise = Growth of the organisation by Market Share**

Dependent Variable 18: Our market share has improved in the last two years

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	1.31730	0.60396	2.18	0.0323
2. Results sufficient to surmise that people's lives were improved	1	0.16143	0.17392	0.93	0.3562
3. The projects is widespread and spans several communities	1	0.22998	0.14313	1.61	0.1122
4. There are many direct beneficiaries	1	0.32080	0.17503	1.83	0.0707
25. Please specify your age in years	1	-0.00877	0.00889	-0.99	0.3271
28. Please indicate the organisation's employee numbers	1	-0.06712	0.07430	-0.90	0.3692
29. Please indicate organisation's age	1	0.25218	0.05862	4.30	<.0001
F value		8.00			
Pr > F		<.0001			
R Squared		0.4241			
Adj R Squared		0.3711			

<b>Collinearity Diagnostics (Intercept adjusted)</b>							
Variable	Eigenvalue	Condition Index	2. Results sufficient to surmise that people's lives were improved	3. The projects is widespread and spans several communities	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
2	1.36055	1.50094	0.00292	0.00109	0.09202	0.16802	0.30175
3	1.06095	1.69970	0.00025444	0.00907	0.45646	0.17000	0.01326
4	0.65664	2.16051	0.00261	0.00271	0.08055	0.51637	0.61269
25	0.42035	2.70032	0.06829	0.14946	0.00000425	0.13575	0.01078
28	0.27724	3.32499	0.23572	0.80264	0.12533	0.00093551	0.02235
29	0.01592	4.38763	0.66616	0.00386	0.24541	0.00003287	0.03891

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

This result rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. Only one *Beta* was found to be significant:

- $Q29 = 0.0001 < 0.05$ : *Positive relationship between Q29 (Organisation's age) and Q18 (Improved market share): an increase in Q29 causes an increase in Q18*

R square of 42% is not good as it means the model explains 42% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.72 is fairly small and means there is not too much variability in the data. A CV of 19% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range. Anything below 30 is acceptable here.

**Questions 1-4 = Q19**

**Table 24: Social impact/Reach of the Enterprise – Growth of the organisation by labour expenses growth**

Dependent Variable 19: Our labour expense has grown in relation to sales revenue

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	1.17729	0.53458	2.20	0.0303
2. Results sufficient to surmise that people's lives were improved	1	0.86429	0.17527	4.93	<.0001
3. The projects is widespread and spans several communities	1	-0.08221	0.13354	-0.62	0.5397
4. There are many direct beneficiaries	1	-0.34684	0.17147	-2.02	0.0461
25. Please specify your age in years	1	0.00107	0.00908	0.12	0.9063
28. Please indicate the organisation's employee numbers	1	-0.06817	0.07363	-0.93	0.3571
29. Please indicate organisation's age	1	0.38481	0.05832	6.60	<.0001
F value		10.90			
Pr > F		<.0001			
R Squared		0.4643			
Adj R Squared		0.4217			

Collinearity Diagnostics (Intercept adjusted)							
Variable	Eigenvalue	Condition Index	2. Results sufficient to surmise that people's lives were improved	3. The projects is widespread and spans several communities	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
1	3.15304	1.00000	0.01990	0.02524	0.00015907	0.00169	0.00215000
2	1.43990	1.47978	0.00319	0.00060587	0.06136	0.21615	0.25246
3	1.05017	1.73275	0.00033125	0.00394	0.52237	0.13054	0.00225
4	0.59648	2.29914	0.00036471	0.00218	0.08781	0.47532	0.69937
25	0.39798	2.18472	0.05115	0.12407	0.00003179	0.15807	0.00157
28	0.21524	3.82737	0.19980	0.82401	0.11793	0.01556000	0.01354
29	0.14720	4.62822	0.72527	0.01995	0.21033	0.00268000	0.02867

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

This result also rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following *Betas* were found to be significant by the model:

- $Q2 = 0.0001 < 0.05$ : *Positive relationship between Q2 (Improved people's lives) and Q19 (labour expense growth): an increase in Q2 causes an increase in Q19*
- $Q4 = 0.04 < 0.05$ : *Contrasting relationship between Q4 (direct beneficiaries) and Q19 (labour expense growth): an increase in Q4 causes a decrease in Q19*
- $Q29 = 0.0001 < 0.05$ : *Positive relationship between Q29 (Organisation's age) and Q19 (labour expense growth): an increase in Q29 causes a decrease in Q19*

An R square of 46% is poor as it means the model explains 46% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.76 is fairly small and means there is not too much variability in the data. A CV of 20% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

**Questions 1-4 = Q20**

**Table 25: Social impact/Reach of the Enterprise = Growth of the organisation by Balance Increase**

Dependent Variable 20: Our balance sheet has increased, in relation to net of assets and liabilities.

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	4.11364	0.5563	7.39	<.0001
2. Results sufficient to surmise that people's lives were improved	1	-0.43389	0.16079	-2.70	0.0084
3. The projects is widespread and spans several communities	1	0.10203	0.13420	0.76	0.4492
4. There are many direct beneficiaries	1	0.41191	0.15749	2.62	0.0106
25. Please specify your age in years	1	-0.01991	0.00838	-2.38	0.0198
28. Please indicate the organisation's employee numbers	1	-0.09221	0.06823	-1.35	0.1802
29. Please indicate organisation's age	1	0.3209	0.05338	6.01	<.0001
F value		7.79			
Pr > F		<.0001			
R Squared		0.3936			
Adj R Squared		0.3431			

<b>Collinearity Diagnostics (Intercept adjusted)</b>							
Variable	Eigenvalue	Condition Index	2. Results sufficient to surmise that people's lives were improved	3. The projects is widespread and spans several communities	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
2	1.45756	1.43777	0.00283	0.00060403	0.07502	0.17869	0.25636
3	1.04767	1.69586	0.00060672	0.00632	0.48479	0.13524	0.00619
4	0.60884	2.22460	0.00038076	0.00823	0.08587	0.43352	0.68988
25	0.41580	2.69189	0.06171	0.16409	0.00006907	0.23756	0.00134
28	0.28081	3.27561	0.29272	0.78772	0.08731	0.00558	0.02090
29	0.17628	4.13423	0.61511	0.00003108	0.26651	0.00337	0.02514



**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following *Betas* were found to be significant by the model:

- $Q2 = 0.008 < 0.05$ : *Contrasting relationship between Q2 (Improved people's lives) and Q20 (Increased Balance Sheet): an increase in Q2 causes a decrease in Q20*
- $Q4 = 0.01 < 0.05$ : *Positive relationship between Q4 (Direct beneficiaries) and Q20 (Increased Balance Sheet): an increase in Q4 causes an increase in Q20*
- $Q25 = 0.01 < 0.05$ : *Contrasting relationship between Q25 (Respondents' age) and Q20 (Increased Balance Sheet): an increase in Q25 causes a decrease in Q20*
- $Q29 = 0.0001 < 0.05$ : *Positive relationship between Q29 (Organisation's age) and Q20 (Increased Balance Sheet): an increase in Q29 causes an increase in Q20*

R square was 39% which is poor as it means the model explains 39% of the variability in the data; this is a poor fit of the model. Furthermore the root MSE of 0.70 is fairly small and means there is not too much variability in the data. A CV of 19% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### Questions 1-4 = Q21

**Table 26: Social impact/Reach of the Enterprise – Survival of organisation in the event of crisis**

Dependent Variable 21: In the event of a severe crisis, our enterprise will survive

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	3.37242	0.51231	6.58	<.0001
2. Results sufficient to surmise that people's lives were improved	1	-0.12528	0.16797	-0.75	0.4577
3. The projects is widespread and spans several communities	1	0.10649	0.12798	0.83	0.4076
4. There are many direct beneficiaries	1	0.13738	0.16432	0.84	0.4054
25. Please specify your age in years	1	-0.01658	0.00870	-1.91	0.0600
28. Please indicate the organisation's employee numbers	1	0.08724	0.07056	1.24	0.2196
29. Please indicate organisation's age	1	0.018524	0.05589	3.31	0.0013
F value		3.34			
Pr > F		0.0033			
R Squared		0.2101			
Adj R Squared		0.1473			

Collinearity Diagnostics (Intercept adjusted)							
Variable	Eigenvalue	Condition Index	2. Results sufficient to surmise that people's lives were improved	3. The projects is widespread and spans several communities	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
2	1.43990	1.47978	0.00319	0.00060587	0.06136	0.21615	0.25246
3	1.05017	1.73275	0.00033125	0.00394	0.52237	0.13054	0.00225
4	0.59648	2.29914	0.00036471	0.00218	0.08781	0.47532	0.69937
25	0.39798	2.81472	0.05115	0.12407	0.00003179	0.15807	0.00157
28	0.21524	3.82737	0.19980	0.82401	0.11793	0.01556	0.01354
29	0.14720	4.62822	0.72527	0.01995	0.21033	0.00268	0.02867

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0033 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. Only one *Beta* was found to be significant:

- $Q29 = 0.0013 < 0.05$ : *Positive relationship between Q29 (Organisation's age) and Q21 (Will survive in crisis): an increase in Q29 causes an increase in Q21*

It must also be noted that an R square of 21% is poor as it means the model explains 21% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.73 is fairly small and means there is not too much variability in the data. A CV of 19% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### **Questions 1-4 = Q22**

#### **Table 27: Social impact/Reach of the Enterprise = Ability to maintain quality of products**

Dependent Variable 22: We are able to maintain the quality of our products and services

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	3.99246	0.67757	5.89	<.0001
2. Results sufficient to surmise that people's lives were improved	1	-0.52296	0.22712	-2.30	0.0238
3. The projects is widespread and spans several communities	1	0.52093	0.17381	3.00	0.0036
4. There are many direct beneficiaries	1	0.12769	0.21661	0.59	0.5571
25. Please specify your age in years	1	-0.01213	0.01165	-1.04	0.3011
28. Please indicate the organisation's employee numbers	1	-0.25906	0.09365	-2.77	0.0070
29. Please indicate organisation's age	1	0.24389	0.07335	3.33	0.0013
F value		4.30			
Pr > F		0.0004			
R Squared		0.2637			
Adj R Squared		0.2024			

Collinearity Diagnostics (Intercept adjusted)							
Variable	Eigenvalue	Condition Index	2. Results sufficient to surmise that people's lives were improved	3. The projects is widespread and spans several communities	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
2	1.45078	1.47806	0.00300	0.00061235	0.06408	0.21207	0.24505
3	1.03780	1.74757	0.00076513	0.00278	0.52298	0.12873	0.00430
4	0.59607	2.30592	0.00034728	0.00270	0.07813	0.46748	0.69788
25	0.39676	2.82636	0.05216	0.11159	1.90145300	0.17587	0.00285
28	0.21037	3.88149	0.13078	0.78851	0.12297	0.00973	0.01186
29	0.13877	4.77911	0.79444	0.06964	0.21153	0.00423	0.03595

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

This result also reject  $H_0$  at 5% level of significance ( $0.0004 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following *Betas* were found to be significant by the model:

- $Q2 = 0.02 < 0.05$ : *Contrasting relationship between Q2 (People's lives were improved) and Q22 (Ability to maintain quality of products): an increase in Q2 causes a decrease in Q22*
- $Q3 = 0.003 < 0.05$ : *Positive relationship between Q3 (Widespread initiative) and Q22 (Ability to maintain quality of products): an increase in Q4 causes an increase in Q22*
- $Q28 = 0.007 < 0.05$ : *Contrasting relationship between Q28 (Number of employees) and Q22 (Ability to maintain quality of products): an increase in Q28 causes an increase in Q22*
- $Q29 = 0.0013 < 0.05$ : *Positive relationship between Q29 (Organisation's age) and Q22 (Ability to maintain quality of products): an increase in Q29 causes a decrease in Q22*

R square was 26% which is poor as it means the model explains 26% of the variability in the data; this is a poor fit of the model. Furthermore the root MSE of 0.96 is fairly small and means there is not too much variability in the data. A CV of 26% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

#### **4.6.1 Conclusion of Proposition 1 results**

Social factors that affect performance are summarised below:

- $Q2 = 0.02 < 0.05$ : contrasting relationship between Q2 and Q15: an increase in Q2 causes a decrease in Q15
- $Q3 = 0.009 < 0.05$ : Positive relationship between Q3 and Q15: an Increase in Q3 causes an increase in Q15
- $Q4 = 0.003 < 0.05$ : Positive relationship between Q4 and Q15: an increase in Q4 causes an increase in Q15
- $Q25 = 0.04 < 0.05$ : contrasting relationship: an increase in Q25 causes a decrease in Q15
- $Q2 = 0.0007 < 0.05$ : contrasting relationship between Q2 and Q16: an increase in Q2 causes a decrease in Q16
- $Q3 = 0.01 < 0.05$ : Positive relationship between Q3 and Q16: an Increase in Q3 causes an increase in Q16
- $Q4 = 0.03 < 0.05$ : Positive relationship between Q4 and Q15: an increase in Q4 causes an increase in Q15
- $Q25 = 0.0008 < 0.05$ : contrasting relationship: an increase in Q25 causes a decrease in Q15
- $Q1 = 0.002 < 0.05$ : Contrasting relationship between Q1 and Q 17: an increase in Q1 causes a decrease in Q 17.
- $Q3 = 0.0001 < 0.05$ : Positive relationship between Q3 and Q17: an Increase in Q3 causes an increase in Q17
- $Q29 = 0.0001 < 0.05$ : Positive relationship between Q29 and Q17: an increase in Q29 causes an increase in Q17
- $Q29 = 0.0001 < 0.05$ : Positive relationship between Q29 and Q18: an increase in Q29 causes an increase in Q18
- $Q2 = 0.0001 < 0.05$ : Positive relationship between Q2 and Q19: an increase in Q2 causes an increase in Q19
- $Q4 = 0.04 < 0.05$ : Contrasting relationship between Q4 and Q19: an increase in Q4 causes a decrease in Q15



- $Q29 = 0.0001 < 0.05$ : Positive relationship between Q29 and Q19: an increase in Q29 causes a decrease in Q15
- $Q2 = 0.008 < 0.05$ : Contrasting relationship between Q2 and Q20: an increase in Q2 causes a decrease in Q20
- $Q4 = 0.01 < 0.05$ : Positive relationship between Q4 and Q20: an increase in Q4 causes an increase in Q20
- $Q25 = 0.01 < 0.05$ : Contrasting relationship between Q25 and Q20: an increase in Q25 causes a decrease in Q20
- $Q29 = 0.0001 < 0.05$ : Positive relationship between Q29 and Q20: an increase in Q29 causes a decrease in Q20
- $Q29 = 0.0013 < 0.05$ : Positive relationship between Q29 and Q21: an increase in Q29 causes an increase in Q20
- $Q2 = 0.02 < 0.05$ : Contrasting relationship between Q2 and Q22: an increase in Q2 causes a decrease in Q22
- $Q3 = 0.003 < 0.05$ : Positive relationship between Q3 and Q22: an increase in Q4 causes an increase in Q22
- $Q28 = 0.007 < 0.05$ : Contrasting relationship between Q28 and Q22: an increase in Q28 causes an increase in Q22
- $Q29 = 0.0013 < 0.05$ : Positive relationship between Q29 and Q22: an increase in Q29 causes a decrease in Q22

#### **4.7 Results: Proposition 2**

**The enterprise will have higher levels of growth when there are higher levels of innovativeness**

Questions 5-7 = Q15

Dependent variable Q15: Enterprise has grown in terms of Sales in the past years

**Table 28: Innovativeness of solution = Sales growth of the organisation**

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	3.25678	0.54908	5.93	<.0001
5. The enterprise has introduced new approaches or offered new solutions to societal problems	1	0.10044	0.11750	0.85	0.3952
6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	1	0.08354	0.12726	0.66	0.5134
7. Has entirely transformed established practices and/or systems	1	0.09579	0.13192	0.73	0.4699
25. Please specify your age in years	1	-0.00794	0.01014	-0.78	0.4356
28. Please indicate the organisation's employee numbers	1	-14999	0.09502	-1.58	0.1184
29. Please indicate organisation's age	1	0.05052	0.07081	0.71	0.4776
F value		1.93			
Pr > F		0.0885			
R Squared		0.1248			
Adj R Squared		0.06			

Collinearity Diagnostics (Intercept adjusted)								
Variable	Eigenvalue	Condition Index	5. The enterprise has introduced new approaches or offered new solutions to societal problems	6. Has discovered a unique way of combining resources, new resources or services/ service delivery methods	7. Has entirely transformed established practices and/or systems	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
5	2.27534	1.00000	0.06488	0.07046	0.06911	0.00014404	0.00078964	0.00067914
6	1.41534	1.26792	0.00212	0.00020254	0.00000228	0.01941	0.26581	0.27625
7	1.03336	1.48387	0.01604	0.00654	0.00012635	0.79721	0.03027	0.00043089
25	0.64491	1.87834	0.00164	0.08047	0.05000	0.00613	0.50270	0.51152
28	0.33892	2.59106	0.02472	0.73472	0.40338	0.07442	0.17517	0.20764
29	0.29213	2.79086	0.89060	0.10560	0.47739	0.10268	0.02526	0.00348

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Failed to reject  $H_0$  at 5% level of significance ( $0.08 > 0.05$ ), therefore there is not enough evidence to prove that  $B_i \neq 0$ . All the independent variables in this category (Q5 - 7) cannot predict performance in terms Q15 (Sales growth).

It must also be noted that an R square of 12% is not good as it means the model only explains 12% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.91 is fairly small and means there is not too much variability in the data. A CV of 26% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range. Anything below 30 is acceptable here.

### **Questions 5-7 = Q16**

#### **Table 29: Innovativeness of solution = Growth of the organisation by employee numbers**

Dependent variable 16: Enterprise has grown in terms of employees in the past years

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	3.76265	0.54437	6.91	<.0001
5. The enterprise has introduced new approaches or offered new solutions to societal problems	1	0.14199	0.13071	1.09	0.26608
6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	1	-0.07258	0.13079	-0.55	0.5806
7. Has entirely transformed established practices and/or systems	1	0.08226	0.13821	0.60	0.5535
25. Please specify your age in years	1	-0.01905	0.00974	-1.95	0.0544
28. Please indicate the organisation's employee numbers	1	-0.13534	0.09052	-1.50	0.1391
29. Please indicate organisation's age	1	0.10239	0.06786	1.51	0.1356
F value		2.22			
Pr > F		0.0499			
R Squared		0.1510			
Adj R Squared		0.0831			

Collinearity Diagnostics (Intercept adjusted)								
Variable	Eigenvalue	Condition Index	5. The enterprise has introduced new approaches or offered new solutions to societal problems	6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	7. Has entirely transformed established practices and/or systems	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
5	2.31401	1.00000	0.05355	0.06606	0.06134	0.00027572	0.00039506	0.00006968
6	1.41118	1.28053	0.00023438	0.00049976	0.00000116	0.02846	0.26279	0.28062
7	1.01969	1.50643	0.00493	0.01059	0.00009620	0.80757	0.05002	0.00133
25	0.66083	1.87128	0.00042465	0.09680	0.06576	0.00964	0.44573	0.48516
28	0.37268	2.49181	0.01102	0.60681	0.34642	0.07874	0.21545	0.23112
29	0.22162	3.23133	0.93027	0.21924	0.52637	0.07531	0.02561	0.00170

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.04 < 0.05$ ), it must however be noted that there is no significant variable and the intercept is exaggerating the results at  $P = 0.0001$ . Therefore we can confirm that there is no sufficient evidence to prove that there is at least one *Beta* that is not equal to zero.

It must also be noted that an R square of 15% is poor as it means the model explains 15% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.87 is fairly small and means there is not too much variability in the data. A CV of 24% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### **Questions 5-7 = Q17**

#### **Table 30: Innovativeness of solution = Growth of the organisation by Net income margins**

Dependent variable 17: Enterprise's net income margins have grown in the past years

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	1.82422	0.61328	2.97	0.004
5. The enterprise has introduced new approaches or offered new solutions to societal problems	1	0.47662	0.12160	3.92	0.0002
6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	1	-0.13739	0.13340	-1.03	0.3064
7. Has entirely transformed established practices and/or systems	1	-0.01001	0.13701	-0.07	0.9420
25. Please specify your age in years	1	-0.00551	0.01053	-0.52	0.6021
28. Please indicate the organisation's employee numbers	1	-0.07073	0.10289	-0.69	0.4940
29. Please indicate organisation's age	1	0.31045	0.07638	4.06	0.0001
F value		7.76			
Pr > F		<.0001			
R Squared		0.3895			
Adj R Squared		0.3393			



Collinearity Diagnostics (Intercept adjusted)								
Variable	Eigenvalue	Condition Index	5. The enterprise has introduced new approaches or offered new solutions to societal problems	6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	7. Has entirely transformed established practices and/or systems	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
5	2.20970	1.00000	0.07213	0.07716	0.07689	0.00055723	0.00508	0.00187
6	1.37724	1.26667	0.00787	0.00114	0.00033847	0.00503	0.27426	0.29316
7	1.05161	1.44957	0.01441	0.01675	0.00089774	0.78644	0.01688	0.00182
25	0.67437	1.81016	0.00081882	0.11727	0.05500	0.00558	0.46608	0.46748
28	0.36730	2.45276	0.04644	0.71653	0.34491	0.10321	0.19667	0.23454
29	0.31978	2.62870	0.85834	0.07115	0.52195	0.09920	0.04104	0.00113

**H<sub>0</sub>:  $B_i = 0$**

**H<sub>A</sub>:  $B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected H<sub>0</sub> at 5% level of significance ( $0.004 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following *Betas* were found to be significant by the model:

- *Q5 = 0.001 < 0.05: Positive relationship between Q5 (Introduction of new solutions) and Q17 (growth in net income margins): an increase in Q5 causes an increase in Q17.*
- *Q29 = 0.0001 < 0.05: Positive relationship between Q29 (Organisation's work) and Q17 (growth in net income margins): : an increase in Q29 causes an increase in Q17*

R square of 38% is poor as it means the model explains 38% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.94 is fairly small and means there is not too much variability in the data. A CV of 26% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

**Questions 5-7 = Q18**

**Table 31: Innovativeness of solution = Growth of the organisation by Market Share improvement**

Dependent Variable Q18: Our market share has improved in the last two years

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	1.88451	0.50130	3.76	0.0003
5. The enterprise has introduced new approaches or offered new solutions to societal problems	1	0.11686	0.11649	1.00	0.3192
6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	1	0.38754	0.11449	3.38	0.0012
7. Has entirely transformed established practices and/or systems	1	-0.06658	0.12557	-0.53	0.5976
25. Please specify your age in years	1	-0.00019359	0.00881	-0.02	0.9825
28. Please indicate the organisation's employee numbers	1	-0.36295	0.08513	-4.26	<.0001
29. Please indicate organisation's age	1	0.31637	0.06242	5.07	<.0001
F value		10.06			
Pr > F		<.0001			
R Squared		0.4629			
Adj R Squared		0.4169			

Collinearity Diagnostics (Intercept adjusted)								
Variable	Eigenvalue	Condition Index	5. The enterprise has introduced new approaches or offered new solutions to societal problems	6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	7. Has entirely transformed established practices and/or systems	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
5	2.30137	1.00000	0.05505	0.06736	0.06274	0.00073283	0.00061038	0.00035001
6	1.29230	1.33448	0.00085291	0.00002	0.00029462	0.00951	0.31717	0.34366
7	1.04472	1.48421	0.00450	0.00851	0.00120	0.77968	0.05634	0.00875
25	0.74771	1.75439	0.00001246	0.06523	0.04572	0.05589	0.45449	0.45387
28	0.38704	2.43846	0.00994	0.63374	0.37741	0.07475	0.13693	0.18976
29	0.22686	3.18501	0.92964	0.22515	0.51263	0.07944	0.03446	0.00360

$H_0: B_i = 0$

$H_A: B_i \neq 0$

$\alpha = 0.05$

### Interpretation

Rejected  $H_0$  at 5% level of significance ( $0.0003 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following *Betas* were found to be significant by the model:

- $Q6 = 0.001 < 0.05$ : Positive relationship between Q6 (discovery of unique methods) and Q18 (Improved market share): an increase in Q6 causes an increase in Q18
- $Q28 = 0.001 < 0.05$ : Contrasting relationship between Q28 (number of employees) and Q18 (Improved market share): an increase in Q28 causes an increase in Q18
- $Q29 = 0.001 < 0.05$ : Positive relationship between Q29 (Organisation's age) and Q18 (Improved market share): an increases in Q29 causes a decrease in Q18

R square was 46% which is poor as it means the model explains 46% of the variability in the data; this is a poor fit of the model. Furthermore the root MSE of 0.77 is fairly small and means there is not too much variability in the data. A CV of 22% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

**Questions 5-7 = Q19**

**Table 32: Innovativeness of solution = Growth of the organisation by Labour expenses growth against revenue**

Dependent Variable Q19: Our labour expense has grown in relation to sales revenue

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	2.05560	0.45066	4.56	<.0001
5. The enterprise has introduced new approaches or offered new solutions to societal problems	1	0.15395	0.09588	1.61	0.1122
6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	1	0.17271	0.10396	1.66	0.1005
7. Has entirely transformed established practices and/or systems	1	-0.04384	0.10823	-0.41	0.6865
25. Please specify your age in years	1	-0.00088723	0.00832	-0.11	0.9154
28. Please indicate the organisation's employee numbers	1	-0.31575	0.07670	-4.12	<.0001
29. Please indicate organisation's age	1	0.40268	0.05694	7.07	<.0001
F value		11.04			
Pr > F		<.0001			
R Squared		0.4469			
Adj R Squared		0.4064			

Collinearity Diagnostics (Intercept adjusted)								
Variable	Eigenvalue	Condition Index	5. The enterprise has introduced new approaches or offered new solutions to societal problems	6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	7. Has entirely transformed established practices and/or systems	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
5	2.27112	1.00000	0.06546	0.07126	0.06929	0.00017119	0.00082714	0.00058813
6	1.39293	1.27690	0.00201	0.00020330	0.00000470	0.02181	0.27222	0.28861
7	1.03906	1.47843	0.01741	0.00805	0.00025970	0.77578	0.04168	0.00000637
25	0.66012	1.85485	0.00074361	0.06996	0.04695	0.01704	0.49675	0.52494
28	0.34301	2.57317	0.05014	0.78299	0.34812	0.09314	0.14034	0.18586
29	0.29377	2.78047	0.86424	0.06753	0.53538	0.09206	0.04818	0.00000102

$H_0: B_i = 0$

$H_A: B_i \neq 0$

$\alpha = 0.05$

### Interpretation

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following *Betas* were found to be significant by the model:

- $Q28 = 0.001 < 0.05$ : *Contrasting relationship between Q28 (number of employees) and Q19 (labour expense growth): an increase in Q28 causes an increase in Q19*
- $Q29 = 0.001 < 0.05$ : *Positive relationship between Q29 (Organisation's age) and Q19 (labour expense growth): an increase in Q29 causes a decrease in Q19*

It must also be noted that an R square of 44% is poor as it means the model explains 44% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.77 is fairly small and means there is not too much variability in the data. A CV of 21% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### Questions 5-7 = Q20

#### Table 33: Innovativeness of solution = Growth of the organisation by Balance sheet growth

Dependent Variable Q20: Our balance sheet has increased, in relation to net of assets and liabilities.



Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	2.61415	0.47289	5.53	<.0001
5. The enterprise has introduced new approaches or offered new solutions to societal problems	1	-0.06920	0.11498	-0.60	0.5491
6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	1	0.26370	0.11419	2.31	0.0236
7. Has entirely transformed established practices and/or systems	1	-0.00563	0.12350	-0.05	0.9638
25. Please specify your age in years	1	-0.01086	0.00864	-1.26	0.2126
28. Please indicate the organisation's employee numbers	1	-0.09526	0.07986	-1.19	0.2366
29. Please indicate organisation's age	1	0.32080	0.05973	5.37	<.0001
F value		5.81			
Pr > F		<.0001			
R Squared		0.3089			
Adj R Squared		0.2557			

Collinearity Diagnostics (Intercept adjusted)								
Variable	Eigenvalue	Condition Index	5. The enterprise has introduced new approaches or offered new solutions to societal problems	6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	7. Has entirely transformed established practices and/or systems	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
5	2.32753	1.00000	0.05204	0.06524	0.05964	0.00074722	0.00015287	0.00037720
6	1.39582	1.29132	0.00005825	0.00018359	0.00005528	0.03859	0.26133	0.28773
7	1.01864	1.51160	0.00591	0.00687	0.00010267	0.78620	0.07495	0.00076800
25	0.67225	1.86072	0.00008552	0.07819	0.05946	0.02763	0.44224	0.50135
28	0.36882	2.51210	0.01439	0.64008	0.34312	0.08090	0.17866	0.20387
29	0.21693	3.27559	0.92752	0.20944	0.53762	0.06668	0.04267	0.00628

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following *Betas* were found to be significant by the model:

- $Q6 = 0.02 < 0.05$ : *Positive relationship between Q6 (Discovery of a unique method) and Q20 (Increase in balance sheet): an increase in Q6 causes an increase in Q20*
- $Q29 = 0.0001 < 0.05$ : *Positive relationship between Q5 (Introduction of a new solution) and Q20 (Increase in balance sheet): an increase in Q29 causes an increase in Q20*

It must also be noted that an R square of 30% is poor as it means the model explains 30% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.78 is fairly small and means there is not too much variability in the data. A CV of 21% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### **Questions 5-7 = Q21**

**Table 34: Innovativeness of solution = Ability of organisation to survive in crisis**

Dependent Variable Q21: In the event of a severe crisis, our enterprise will survive

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	2.26814	0.45533	4.98	<.0001
5. The enterprise has introduced new approaches or offered new solutions to societal problems	1	0.16537	0.09687	1.71	0.0916
6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	1	0.13604	0.10503	1.30	0.1989
7. Has entirely transformed established practices and/or systems	1	0.01615	0.10935	0.15	0.8829
25. Please specify your age in years	1	-0.00984	0.00841	-1.17	0.2452
28. Please indicate the organisation's employee numbers	1	0.02883	0.07749	0.37	0.7108
29. Please indicate organisation's age	1	0.20457	0.05753	3.56	0.0006
F value		5.61			
Pr > F		<.0001			
R Squared		0.2912			
Adj R Squared		0.2393			

Collinearity Diagnostics (Intercept adjusted)								
Variable	Eigenvalue	Condition Index	5. The enterprise has introduced new approaches or offered new solutions to societal problems	6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	7. Has entirely transformed established practices and/or systems	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
5	2.27112	1.00000	0.06546	0.07126	0.06929	0.00017119	0.00082714	0.00058813
6	1.39293	1.27690	0.00201	0.00020330	0.00000470	0.02181	0.27222	0.28861
7	0.03906	1.47843	0.01741	0.00805	0.00025970	0.77578	0.04168	0.00000637
25	0.66012	1.85485	0.00074361	0.06996	0.04695	0.01704	0.49675	0.52494
28	0.34301	2.57317	0.05014	0.78299	0.34812	0.09314	0.14034	0.18586
29	0.29377	2.78047	0.86424	0.06753	0.53538	0.09206	0.04818	0.00000102

**H0:  $B_i = 0$**

**HA:  $B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Reject  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following Betas were found to be significant:

- $Q29 = 0.0006 < 0.05$ : *Positive relationship between Q5 (Introduction of new solutions) and Q21 (Ability to survive in crisis): an increase in Q29 causes an increase in Q21*

It must also be noted that an R square of 76% is poor as it means the model explains 29% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.78 is fairly small and means there is not too much variability in the data. A CV of 20% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### **Questions 5-7 = Q22**

**Table 35: Innovativeness of solution = Ability of organisation to maintain quality of products**

Dependent Variable Q22: We are able to maintain the quality of our products and services

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	2.56262	0.49751	5.15	<.0001
5. The enterprise has introduced new approaches or offered new solutions to societal problems	1	0.05786	0.11188	0.52	0.6065
6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	1	0.63106	0.12669	4.98	<.0001
7. Has entirely transformed established practices and/or systems	1	-0.20275	0.13987	-1.45	0.1513
25. Please specify your age in years	1	-0.02496	0.00947	-2.63	0.0102
28. Please indicate the organisation's employee numbers	1	-0.26748	0.08610	-3.11	0.0027
29. Please indicate organisation's age	1	0.31729	0.06278	5.05	<.0001
F value		9.77			
Pr > F		<.0001			
R Squared		0.4354			
Adj R Squared		0.3908			

Collinearity Diagnostics (Intercept adjusted)								
Variable	Eigenvalue	Condition Index	5. The enterprise has introduced new approaches or offered new solutions to societal problems	6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	7. Has entirely transformed established practices and/or systems	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
5	2.35513	1.00000	0.05748	0.06130	0.05190	0.00141	0.00193000	0.00057449
6	1.41121	1.29185	0.00151	0.00017284	0.00008154	0.03655	0.26271	0.27827
7	1.03302	1.50992	0.02232	0.01550	0.00220	0.73608	0.03413	0.00773
25	0.62975	1.93385	0.00176	0.03893	0.00900	0.00021340	0.62672	0.57489
28	0.34536	2.61137	0.47673	0.63752	0.00061454	0.22048	0.01229	0.10382
29	0.22552	3.23156	0.44021	0.24657	0.93621	0.00526	0.06222	0.03472



**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following variables become significant:

- $Q6 = 0.0001 < 0.05$ : *Positive relationship between Q6 (Discovery of new methods) and Q22 (Ability to maintain quality): an increase in Q6 causes an increase in Q22*
- $Q25 = 0.01 < 0.05$ : *Contrasting relationship between Q25 (Respondents' age) and Q22 (Ability to maintain quality): an increase in Q25 causes a decrease in Q22*
- $Q28 = 0.0027 < 0.05$ : *Contrasting relationship between Q28 (number of employees) and Q22 (Ability to maintain quality): an increase in Q28 causes a decrease in Q22*
- $Q29 = 0.0001 < 0.05$ : *Positive relationship between Q29 (Organisation's age) and Q22 (Ability to maintain quality): an increase in Q29 causes an increase in Q22*

R square was 43% which is poor as it means the model explains 43% of the variability in the data; this is a poor fit of the model. Furthermore the root MSE of 0.82 is fairly small and means there is not too much variability in the data. A CV of 22% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

**Questions 5-7 = Q23**

**Table 36: Innovativeness of solution = Organisation will record profits**

Dependent Variable Q23: Since we started, the enterprise's has always recorded net Profits

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	3.68936	0.49329	7.48	<.0001
5. The enterprise has introduced new approaches or offered new solutions to societal problems	1	0.07400	0.12101	0.61	0.5439
6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	1	0.46068	0.12411	3.71	0.0006
7. Has entirely transformed established practices and/or systems	1	-0.28204	0.13369	-2.11	0.0404
25. Please specify your age in years	1	-0.02937	0.00919	-3.20	0.0025
28. Please indicate the organisation's employee numbers	1	-0.36205	0.09055	-4.00	0.0002
29. Please indicate organisation's age	1	0.28814	0.06273	4.59	<.0001
F value		7.38			
Pr > F		<.0001			
R Squared		0.4905			
Adj R Squared		0.4240			

Collinearity Diagnostics (Intercept adjusted)								
Variable	Eigenvalue	Condition Index	5. The enterprise has introduced new approaches or offered new solutions to societal problems	6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	7. Has entirely transformed established practices and/or systems	25. Please specify your age in years	28. Please indicate the organisation's employee numbers	29. Please indicate organisation's age
5	2.55636	1.00000	0.03675	0.04437	0.03987	0.00007258	0.01472	0.01977
6	1.30004	1.40227	0.01080	0.01227	0.00716	0.00843	0.28237	0.24604
7	1.09116	1.53062	0.00788	0.02860	0.00510	0.65034	0.00359	0.00532
25	0.57360	2.11109	0.00240	0.01267	0.00710	0.00899	0.65413	0.65862
28	0.28318	3.00456	0.05152	0.85715	0.26580	0.30234	0.04295	0.06643
29	0.19566	3.61456	0.89065	0.04494	0.67498	0.02984	0.00224	0.00382

**H<sub>0</sub>:  $B_i = 0$**

**H<sub>A</sub>:  $B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected H<sub>0</sub> at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following Betas were found to be significant

- *Q6 = 0.0006 < 0.05: Positive relationship between Q6 (Discovery of new methods) and Q23 (Firm's independence): an increase in Q6 causes an increase in Q23*
- *Q7 = 0.04 < 0.05: Contrasting relationship between Q7 (Transformation of established systems) and Q23 (Firm's independence): an increase in Q5 causes a decrease in Q23*
- *Q25 = 0.04 < 0.0025: Contrasting relationship between Q25 (Respondents' age) and Q23 (Firm's independence): an increase in Q25 causes a decrease in Q23*
- *Q28 = 0.0002 < 0.05: Contrasting relationship between Q28 (Number of employees) and Q23 (Firm's independence): an increase in Q28 causes a decrease in Q23*
- *Q29 = 0.0001 < 0.05: Positive relationship between Q29 (Organisation's age) and Q23 (Firm's independence): an increases in Q29 causes a decrease in Q23*

R square of 49% is poor as it means the model explains 49% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.67 is fairly small and means there is not too much variability in the data. A CV of 19% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

#### **4.7.1 Conclusion of Proposition 2 results**

Innovativeness factors that affect Performance are summarised below:

- $Q5 = 0.001 < 0.05$ : Positive relationship between Q5 and Q17: an increase in Q5 causes an increase in Q17.
- $Q29 = 0.0001 < 0.05$ : Positive relationship between Q5 and Q17: an increase in Q29 causes an increase in Q17
- $Q6 = 0.001 < 0.05$ : Positive relationship between Q6 and Q18: an increase in Q6 causes an increase in Q18
- $Q28 = 0.001 < 0.05$ : Contrasting relationship between Q28 and Q18: an increase in Q28 causes an increase in Q18
- $Q29 = 0.001 < 0.05$ : Positive relationship between Q29 and Q18: an increase in Q29 causes a decrease in Q18
- $Q28 = 0.001 < 0.05$ : Contrasting relationship between Q28 and Q19: an increase in Q28 causes an increase in Q19
- $Q29 = 0.001 < 0.05$ : Positive relationship between Q29 and Q19: an increase in Q29 causes a decrease in Q19
- $Q6 = 0.02 < 0.05$ : Positive relationship between Q6 and Q20: an increase in Q6 causes an increase in Q20
- $Q29 = 0.0001 < 0.05$ : Positive relationship between Q5 and Q20: an increase in Q29 causes an increase in Q20
- $Q29 = 0.0006 < 0.05$ : Positive relationship between Q5 and Q21: an increase in Q29 causes an increase in Q21
- $Q6 = 0.0001 < 0.05$ : Positive relationship between Q6 and Q22: an increase in Q6 causes an increase in Q22

- $Q25 = 0.01 < 0.05$ : Contrasting relationship between Q25 and Q22: an increase in Q25 causes a decrease in Q22
- $Q28 = 0.0027 < 0.05$ : Contrasting relationship between Q28 and Q22: an increase in Q28 causes a decrease in Q22
- $Q29 = 0.0001 < 0.05$ : Positive relationship between Q5 and Q21: an increase in Q29 causes an increase in Q21
- $Q6 = 0.0006 < 0.05$ : Positive relationship between Q6 and Q23: an increase in Q6 causes an increase in Q23
- $Q7 = 0.04 < 0.05$ : Contrasting relationship between Q7 and Q23: an increase in Q5 causes a decrease in Q23
- $Q25 = 0.04 < 0.0025$ : Contrasting relationship between Q25 and Q23: an increase in Q25 causes a decrease in Q23
- $Q28 = 0.0002 < 0.05$ : Contrasting relationship between Q28 and Q23: an increase in Q28 causes a decrease in Q23
- $Q29 = 0.0001 < 0.05$ : Positive relationship between Q29 and Q23: an increase in Q29 causes a decrease in Q23

#### 4.8 Results: Proposition 3

**The enterprise will have higher levels of replicability when there are higher levels of innovativeness**

Questions 8-10 = Q15

Dependent Variable Q5: The enterprise has introduced new approaches or offered new solutions to societal problems

**Table 37: Expandability/replicability = Growth of organisation by Sales growth**

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	0.54701	0.30702	1.78	0.0771
8. The projects can be expanded from its original group of beneficiaries	1	0.30648	0.10012	3.06	0.0027
9. Applicability of the projects is clear in adjacent communities or country as a whole	1	0.55116	0.09797	5.63	<.0001
10. Many aspects of the projects can be transferred and adapted to other settings around the world	1	0.00929	0.07402	0.13	0.9003
F value		68.46			
Pr > F		<.0001			
R Squared		0.6088			
Adj R Squared		0.5999			

Collinearity Diagnostics					
Variable	Eigenvalue	Condition Index	Intercept	8. The projects can be expanded from its original group of beneficiaries	9. Applicability of the projects is clear in adjacent communities or country as a whole
Int	3.85632	1.00000	0.00284	0.00170	0.00205
8	0.09394	6.40706	0.02514	0.02816	0.12234
9	0.03571	10.39128	0.76269	0.14357	0.00367



**H0:  $B_i = 0$**

**HA:  $B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following Betas were found to be significant

- $Q8 = 0.002 < 0.05$ : Positive relationship between Q8 (Expandability of initiative) and Q5 (Introduction of new solutions): an increase in Q8 causes an increase in Q5
- $Q9 = 0.0001 < 0.05$ : Positive relationship between Q9 (Applicability in other communities) and Q5 (Introduction of new solutions): an increase in Q9 causes an increase in Q5

R square of 60% is good as it means the model explains 60% of the variability in the data, this is a good fit of the model. Furthermore the root MSE of 0.74 is fairly small and means there is not too much variability in the data. A CV of 20% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### **Questions 8-10 = Q16**

#### **Table 38: Expandability/replicability = Growth of organisation by increase in number of employees**

Dependent Variable 6: The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	0.67839	0.29333	2.31	0.0223
8. The projects can be expanded from its original group of beneficiaries	1	0.30525	0.09763	3.13	0.0022
9. Applicability of the projects is clear in adjacent communities or country as a whole	1	0.36129	0.09438	3.83	0.0002
10. Many aspects of the projects can be transferred and adapted to other settings around the world	1	0.13780	0.07255	1.90	0.0597
F value		48.64			
Pr > F		<.0001			
R Squared		0.5269			
Adj R Squared		0.5161			

Collinearity Diagnostics					
Variable	Eigenvalue	Condition Index	Intercept	8. The projects can be expanded from its original group of beneficiaries	9. Applicability of the projects is clear in adjacent communities or country as a whole
Int	3.86194	1.00000	0.00285	0.00164	0.00204
8	0.08866	6.59993	0.02952	0.02781	0.13269
9	0.03567	10.40482	0.76977	0.13286	0.00370

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Reject  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following Betas were found to be significant

- $Q8 = 0.002 < 0.05$ : Positive relationship between Q8 (Expandability of initiative) and Q5 (Introduction of new solutions) : an increase in Q8 causes an increase in Q6
- $Q9 = 0.0002 < 0.05$ : Positive relationship between Q9 (Applicability in other communities) and Q5 (Introduction of new solutions): an increase in Q9 cases an increase in Q6

It must also be noted that an R square of 52% is good as it means the model explains 52% of the variability in the data, this is a good fit of the model. Furthermore the root MSE of 0.71 is fairly small and means there is not too much variability in the data. A CV of 19% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

**Questions 8-10 = Q17**

**Table 39: Expandability/replicability = Growth of organisation by increase net income margins**

Dependent Variable Q7: Has entirely transformed established practices and/or systems

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	0.94692	0.33598	2.82	0.0055
8. The projects can be expanded from its original group of beneficiaries	1	0.41041	0.10905	3.76	0.0002
9. Applicability of the projects is clear in adjacent communities or country as a whole	1	0.06374	0.10611	0.60	0.5490
10. Many aspects of the projects can be transferred and adapted to other settings around the world	1	0.25323	0.08078	3.13	0.0021
F value		28.12			
Pr > F		<.0001			
R Squared		0.3777			
Adj R Squared		0.3642			

Collinearity Diagnostics					
Variable	Eigenvalue	Condition Index	Intercept	8. The projects can be expanded from its original group of beneficiaries	9. Applicability of the projects is clear in adjacent communities or country as a whole
Int	3.86448	1.00000	0.00271	0.00164	0.00198
8	0.08810	6.62300	0.02709	0.02954	0.12813
9	0.03382	10.68985	0.76748	0.14311	0.00415
10	0.01360	16.85800	0.20272	0.82571	0.86775

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following Betas were found to be significant

- $Q8 = 0.0002 < 0.05$ : Positive relationship between Q8 (Expandability of initiative) and Q7 (Transformation of established systems): an increase in Q8 causes an increase in Q7
- $Q10 = 0.002 < 0.05$ : Positive relationship between Q10 (initiative can be transferred) and Q7 (Transformation of established systems):: an increase in Q10 causes an increase in Q7

It must also be noted that an R square of 37% is not good as it means the model explains 37% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.81 is fairly small and means there is not too much variability in the data. A CV of 22% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

#### **4.8.1 Conclusion of Proposition 3 results**

Replicability factors that affect innovativeness are summarised below:

- $Q8 = 0.002 < 0.05$ : Positive relationship between Q8 and Q5: an increase in Q8 causes an increase in Q5
- $Q9 = 0.0001 < 0.05$ : Positive relationship between Q9 and Q5: an increase in Q9 cases an increase in Q5

- $Q8 = 0.002 < 0.05$ : Positive relationship between Q8 and Q5: an increase in Q8 causes an increase in Q6
- $Q9 = 0.0002 < 0.05$ : Positive relationship between Q9 and Q5: an increase in Q9 causes an increase in Q6
- $Q8 = 0.0002 < 0.05$ : Positive relationship between Q8 and Q7: an increase in Q8 causes an increase in Q7
- $Q10 = 0.002 < 0.05$ : Positive relationship between Q10 and Q7: an increase in Q10 causes an increase in Q7

#### **4.9 Results: Proposition 4**

**The enterprise will have higher levels of growth when there are higher levels of sustainability**

Questions 11-14 = Q15

Dependent variable Q15: Enterprise has grown in terms of Sales in the past years

**Table 40: Sustainability = Growth of organisation by Sales Growth**



Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	1.94950	0.39469	4.94	<.0001
11. he enterprise is insulated or independent of political events and legislation	1	-0.14911	0.07460	-0.20	0.0477
12. The enterprise self-generates most of its funds, or outside funding is fairly reliable		0.16848	0.11375	1.48	0.1410
13. The enterprise has entered several partnerships with businesses or has a few important ones	1	0.32398	0.09207	3.52	0.0006
14. Organization firmly in place and can stand without the support of the founder	1	0.14679	0.10150	1.45	0.1505
F value		9.23			
Pr > F		<.0001			
R Squared		0.2198			
Adj R Squared		0.1960			

Collinearity Diagnostics							
Variable	Eigenvalue	Condition Index	Intercept	11. he enterprise is insulated or independent of political events and legislation	12. The enterprise self-generates most of its funds, or outside funding is fairly reliable	13. The enterprise has entered several partnerships with businesses or has a few important ones	14. Organization firmly in place and can stand without the support of the founder
Int	4.86968	1.00000	0.00112	0.00236	0.00108	0.00145	0.00121
11	0.05640	9.29247	0.03442	0.74609	0.00208	0.05391	0.06232
12	0.03523	11.75754	0.13072	0.02571	0.09203	0.45303	0.19958
13	0.02308	14.52728	0.29506	0.07590	0.46392	0.21824	0.21285
14	0.01542	17.76870	0.53868	0.14983	0.44090	0.27338	0.52403

**H0:  $B_i = 0$**

**HA:  $B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following Betas were found to be significant

- *Q11 = 0.04 < 0.05: Contrasting relationship between Q11 (Independent of political events) and Q15 (Sales growth): an increase in Q11 causes a decrease in Q15*
- *Q13 = 0.0006 < 0.05: Positive relationship between Q13 (Partnerships) and Q15 (Sales growth) : an increase in Q11 causes an increase in Q15*

It must also be noted that an R square of 21% is not good as it means the model explains 21% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.75 is fairly small and means there is not too much variability in the data. A CV of 20% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### **Questions 11-14 = Q16**

#### **Table 41: Sustainability = Growth of organisation by increase in employee numbers**

Dependent Variable Q16: Enterprise has grown in terms of employees in the past years

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	2.14443	0.42609	5.03	<.0001
11. he enterprise is insulated or independent of political events and legislation	1	-0.25391	0.08999	-2.82	0.0056
12. The enterprise self-generates most of its funds, or outside funding is fairly reliable		0.20998	0.13288	1.58	0.1167
13. The enterprise has entered several partnerships with businesses or has a few important ones	1	0.25476	0.09868	2.58	0.0110
14. Organization firmly in place and can stand without the support of the founder	1	0.20606	0.10727	1.92	0.0571
F value		7.43			
Pr > F		<.0001			
R Squared		0.1972			
Adj R Squared		0.1707			

Collinearity Diagnostics							
Variable	Eigenvalue	Condition Index	Intercept	11. he enterprise is insulated or independent of political events and legislation	12. The enterprise self-generates most of its funds, or outside funding is fairly reliable	13. The enterprise has entered several partnerships with businesses or has a few important ones	14. Organization firmly in place and can stand without the support of the founder
Int	4.87342	1.00000	0.00109	0.00191	0.00088725	0.00145	0.00123
11	0.05724	9.22742	0.04659	0.52133	0.01312	0.03492	0.09212
12	0.03390	11.99068	0.06394	0.04624	0.01981	0.63653	0.21327
13	0.02215	14.83177	0.49983	0.09560	0.31822	0.03427	0.24913
14	0.01329	19.14806	0.38855	0.33492	0.64796	0.29283	0.44424

**H0:  $B_i = 0$**

**HA:  $B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following Betas were found to be significant

- *Q11 = 0.005 < 0.05: Contrasting relationship between Q11 (Independent of political events) and Q16 (Employees growth): an increase in Q11 causes a decrease in Q16*
- *Q13 = 0.01 < 0.05: Positive relationship between Q13 (Partnerships) and Q16 (Employees growth): an increase in Q13 causes an increase in Q16*

It must also be noted that an R square of 19% is not good as it means the model explains 19% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.77 is fairly small and means there is not too much variability in the data. A CV of 20% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### **Questions 11-14 = Q17**

#### **Table 42: Sustainability = Growth of organisation by increase in net income margins**

Dependent Variable Q17: Enterprise's net income margins have grown in the past years

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	1.27978	0.53832	2.38	0.0191
11. he enterprise is insulated or independent of political events and legislation	1	0.14126	0.09646	1.46	0.1458
12. The enterprise self-generates most of its funds, or outside funding is fairly reliable		-0.17386	0.14477	-1.20	0.2322
13. The enterprise has entered several partnerships with businesses or has a few important ones	1	0.12577	0.11771	1.07	0.2875
14. Organization firmly in place and can stand without the support of the founder	1	0.56951	0.13795	4.13	<.0001
F value		6.10			
Pr > F		0.0002			
R Squared		0.1725			
Adj R Squared		0.1442			

Collinearity Diagnostics							
Variable	Eigenvalue	Condition Index	Intercept	11. he enterprise is insulated or independent of political events and legislation	12. The enterprise self-generates most of its funds, or outside funding is fairly reliable	13. The enterprise has entered several partnerships with businesses or has a few important ones	14. Organization firmly in place and can stand without the support of the founder
Int	4.86678	1.00000	0.00104	0.00244	0.00115	0.00153	0.00114
11	0.06031	8.98275	0.04241	0.68606	0.00658	0.03986	0.06137
12	0.03518	11.76169	0.09385	0.05310	0.07231	0.54274	0.18300
13	0.02254	14.69435	0.14574	0.18056	0.71265	0.26092	0.07934
14	0.01519	17.90113	0.71697	0.07784	0.20731	0.15495	0.67514



**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0002 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. Only one Beta was significant:

- $Q14 = 0.0001 < 0.05$ : *Positive relationship between Q14 (can stand without support) and Q17 (Growth in net income margins): an increase in Q14 causes an increase in Q17*

It must also be noted that an R square of 17% is not good as it means the model explains 17% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.94 is fairly small and means there is not too much variability in the data. A CV of 25% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### **Questions 11-14 = Q18**

**Table 43: Sustainability = Growth of organisation by market share improvement**

Dependent Variable Q18: Our market share has improved in the last two years

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	0.81036	0.44296	1.83	0.0700
11. he enterprise is insulated or independent of political events and legislation	1	0.13369	0.09187	1.46	0.1484
12. The enterprise self-generates most of its funds, or outside funding is fairly reliable		0.05838	0.13607	0.43	0.6687
13. The enterprise has entered several partnerships with businesses or has a few important ones	1	0.29422	0.10091	2.92	0.0043
14. Organization firmly in place and can stand without the support of the founder	1	0.30947	0.11710	2.64	0.0094
F value		11.40			
Pr > F		<.0001			
R Squared		0.2856			
Adj R Squared		0.2606			

Collinearity Diagnostics							
Variable	Eigenvalue	Condition Index	Intercept	11. he enterprise is insulated or independent of political events and legislation	12. The enterprise self-generates most of its funds, or outside funding is fairly reliable	13. The enterprise has entered several partnerships with businesses or has a few important ones	14. Organization firmly in place and can stand without the support of the founder
Int	4.86270	1.00000	0.00113	0.00211	0.00096023	0.00156	0.00120
11	0.06174	8.87504	0.04027	0.54979	0.01102	0.05521	0.06498
12	0.03945	11.10275	0.11586	0.03201	0.05090	0.50034	0.14959
13	0.02254	14.68922	0.36975	0.10686	0.33774	0.14533	0.30090
14	0.01358	18.92263	0.47299	0.30923	0.59938	0.29756	0.48333

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following Betas were found to be significant

- *Q13 = 0.004 < 0.05: Positive relationship between Q13 (Partnerships) and Q18 (Improved market share): an increase in Q13 causes an increase in Q18*
- *Q14 = 0.0094 < 0.05: Positive relationship between Q14 (Can stand without support) and Q18 (Improved market share):: an increase in Q14 causes an increase in Q18*

R square of 28% is not good as it means the model explains 28% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.79 is fairly small and means there is not too much variability in the data. A CV of 21% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

**Questions 11-14 = Q19**

**Table 44: Sustainability = Growth of organisation by labour expense growth against sales revenue**

Dependent Variable Q19; our labour expense has grown in relation to sales revenue

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	2.26592	0.46053	4.92	<.0001
11. he enterprise is insulated or independent of political events and legislation	1	0.34683	0.08794	3.94	0.0001
12. The enterprise self-generates most of its funds, or outside funding is fairly reliable		0.03114	0.13656	0.23	0.8200
13. The enterprise has entered several partnerships with businesses or has a few important ones	1	-0.02570	0.10968	-0.23	0.8151
14. Organization firmly in place and can stand without the support of the founder	1	0.06229	0.11899	0.52	0.6015
F value		6.30			
Pr > F		0.0001			
R Squared		0.1634			
Adj R Squared		0.1375			

Collinearity Diagnostics							
Variable	Eigenvalue	Condition Index	Intercept	11. he enterprise is insulated or independent of political events and legislation	12. The enterprise self-generates most of its funds, or outside funding is fairly reliable	13. The enterprise has entered several partnerships with businesses or has a few important ones	14. Organization firmly in place and can stand without the support of the founder
Int	4.87015	1.00000	0.00113	0.00234	0.00104	0.00140	0.00122
11	0.05703	9.24063	0.03519	0.72397	0.00270	0.05537	0.06003
12	0.03570	11.67949	0.13879	0.02735	0.10271	0.40778	0.19169
13	0.02157	15.02647	0.34911	0.07312	0.39685	0.21499	0.30586
14	0.01555	17.69976	0.47579	0.17321	0.49669	0.32046	0.44121

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. Only one beat was significant:

- *$Q11 = 0.0001 < 0.05$ : Positive relationship between Q11 (Independent of political events) and Q19 (Labour expense growth): an increase in Q11 causes an increase in Q19*

R square of 16% is not good as it means the model explains 16% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.88 is fairly small and means there is not too much variability in the data. A CV of 23% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### **Questions 11-14 = Q20**

#### **Table 45: Sustainability = Growth of organisation by balance sheet growth**

Dependent Variable Q20: Our balance sheet has increased, in relation to net of assets and liabilities.

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	1.69720	0.40215	4.22	<.0001
11. he enterprise is insulated or independent of political events and legislation	1	-0.09794	0.08509	-1.15	0.2519
12. The enterprise self-generates most of its funds, or outside funding is fairly reliable		-0.17971	0.12733	-1.41	0.1606
13. The enterprise has entered several partnerships with businesses or has a few important ones	1	0.03626	0.09441	3.84	0.0002
14. Organization firmly in place and can stand without the support of the founder	1	0.45685	0.10355	4.41	<.0001
F value		11.01			
Pr > F		<.0001			
R Squared		0.2605			
Adj R Squared		0.2368			



Collinearity Diagnostics							
Variable	Eigenvalue	Condition Index	Intercept	11. he enterprise is insulated or independent of political events and legislation	12. The enterprise self-generates most of its funds, or outside funding is fairly reliable	13. The enterprise has entered several partnerships with businesses or has a few important ones	14. Organization firmly in place and can stand without the support of the founder
Int	4.86995	1.00000	0.00113	0.00200	0.00089791	0.00146	0.00123
11	0.05722	9.22572	0.03707	0.57542	0.00836	0.05681	0.07489
12	0.03661	11.53298	0.11536	0.02581	0.04763	0.50501	0.18490
13	0.02306	14.53140	0.45036	0.06105	0.26699	0.09569	0.32031
14	0.01315	19.24242	0.39608	0.33572	0.67612	0.34103	0.41867

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following Betas were found to be significant

- $Q13 = 0.0002 < 0.05$ : *Positive relationship between Q13 (Partnerships) and Q20 (Increase in balance sheet): an increase in Q13 causes an increase in Q20*
- $Q14 = 0.0001 < 0.05$ : *Positive relationship between Q14 (Can stand without support) and Q20 (Increase in balance sheet):: an increase in Q14 causes an increase in Q20*

It must also be noted that an R square of 26% is not good as it means the model explains 26% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.75 is fairly small and means there is not too much variability in the data. A CV of 20% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

**Questions 11-14 = Q21**

**Table 46: Sustainability = Organisation will survive in event of crisis**

Dependent variable Q21: In the event of a severe crisis, our enterprise will survive

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	2.15954	0.38185	5.66	<.0001
11. he enterprise is insulated or independent of political events and legislation	1	0.05574	0.06992	0.08	0.4269
12. The enterprise self-generates most of its funds, or outside funding is fairly reliable		-0.19874	0.10631	-1.87	0.0639
13. The enterprise has entered several partnerships with businesses or has a few important ones	1	0.02023	0.08600	0.24	0.8144
14. Organization firmly in place and can stand without the support of the founder	1	0.57759	0.10094	5.72	<.0001
F value		8.58			
Pr > F		<.0001			
R Squared		0.2141			
Adj R Squared		0.1892			

Collinearity Diagnostics							
Variable	Eigenvalue	Condition Index	Intercept	11. he enterprise is insulated or independent of political events and legislation	12. The enterprise self-generates most of its funds, or outside funding is fairly reliable	13. The enterprise has entered several partnerships with businesses or has a few important ones	14. Organization firmly in place and can stand without the support of the founder
Int	4.86680	1.00000	0.00108	0.00245	0.00113	0.00151	0.00115
11	0.05845	9.12508	0.03403	0.74258	0.00253	0.05561	0.05445
12	0.03670	11.51530	0.13525	0.02697	0.10066	0.44166	0.16599
13	0.02292	14.57225	0.18529	0.11143	0.57310	0.31052	0.14898
14	0.01513	17.93644	0.64434	0.11657	0.32258	0.19070	0.62943

**H0:  $B_i = 0$**

**HA:  $B_i \neq 0$**

**$\alpha = 0.050$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. Only one beta was significant:

- *Q14 = 0.0001 < 0.05: Positive relationship between Q14 (Can stand without support) and Q21 (Survival in crisis): an increase in Q14 causes an increase in Q21*

It must also be noted that an R square of 21% is not good as it means the model explains 21% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.70 is fairly small and means there is not too much variability in the data. A CV of 18% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### **Questions 11-14 = Q22**

#### **Table 47: Sustainability = Organisation is able to maintain quality of products**

Dependent Variable Q22: We are able to maintain the quality of our products and services

Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	2.08780	0.46918	4.45	<.0001
11. he enterprise is insulated or independent of political events and legislation	1	-0.04115	0.08910	-0.46	0.6450
12. The enterprise self-generates most of its funds, or outside funding is fairly reliable		-0.05405	0.14366	-0.38	0.7074
13. The enterprise has entered several partnerships with businesses or has a few important ones	1	0.62721	0.10850	5.78	<.0001
14. Organization firmly in place and can stand without the support of the founder	1	-0.09572	0.12628	-0.76	0.4499
F value		10.35			
Pr > F		<.0001			
R Squared		0.2519			
Adj R Squared		0.2275			

Collinearity Diagnostics							
Variable	Eigenvalue	Condition Index	Intercept	11. he enterprise is insulated or independent of political events and legislation	12. The enterprise self-generates most of its funds, or outside funding is fairly reliable	13. The enterprise has entered several partnerships with businesses or has a few important ones	14. Organization firmly in place and can stand without the support of the founder
Int	4.87700	1.00000	0.00116	0.00235	0.00096520	0.00149	0.00115
11	0.05211	9.67410	0.01197	0.83727	0.00253	0.12357	0.02458
12	0.03243	12.26244	0.14444	0.03038	0.02430	0.50854	0.28533
13	0.02317	14.50926	0.53436	0.01670	0.35980	0.08354	0.17120
14	0.01529	17.85980	0.30807	0.11330	0.61241	0.28285	0.51774

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.050$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.0001 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. Only one beta is significant:

- $Q13 = 0.0001 < 0.05$ : *Positive relationship between Q13 (Partnerships) and Q22 (Ability to maintain quality): an increase in Q13 causes an increase in Q22*

R square of 25% is not good as it means the model explains 25% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.88 is fairly small and means there is not too much variability in the data. A CV of 23% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

### **Questions 11-14 = Q23**

#### **Table 48: Sustainability = Organisation will record profits**

Dependent Variable Q23: Since we started, the enterprise's has always recorded net Profits



Linear Regression Results					
Variable	DF	Parameter Estimate	Standard Error	t-Value	Pr>(t)
Intercept	1	2.38324	0.56254	4.24	<.0001
11. he enterprise is insulated or independent of political events and legislation	1	0.04475	0.11134	0.40	0.6888
12. The enterprise self-generates most of its funds, or outside funding is fairly reliable		0.37641	0.18480	2.04	0.0450
13. The enterprise has entered several partnerships with businesses or has a few important ones	1	-0.27146	0.13335	-2.04	0.0451
14. Organization firmly in place and can stand without the support of the founder	1	0.15311	0.15485	0.99	0.3258
F value		3.11			
Pr > F		0.0199			
R Squared		0.1359			
Adj R Squared		0.0921			

Collinearity Diagnostics							
Variable	Eigenvalue	Condition Index	Intercept	11. he enterprise is insulated or independent of political events and legislation	12. The enterprise self-generates most of its funds, or outside funding is fairly reliable	13. The enterprise has entered several partnerships with businesses or has a few important ones	14. Organization firmly in place and can stand without the support of the founder
Int	4.87828	1.00000	0.00099510	0.00185	0.00072377	0.00134	0.00100
11	0.05648	9.29340	0.02687	0.54933	0.00368	0.03189	0.08374
12	0.03464	11.86708	0.14037	0.03704	0.03440	0.52045	0.10685
13	0.02012	15.57273	0.43638	0.01986	0.25488	0.17276	0.27734
14	0.01048	21.57751	0.39539	0.39192	0.70632	0.27357	0.53107

**$H_0: B_i = 0$**

**$H_A: B_i \neq 0$**

**$\alpha = 0.05$**

### **Interpretation**

Rejected  $H_0$  at 5% level of significance ( $0.019 < 0.05$ ), therefore there is sufficient evidence to prove that there is at least one *Beta* that is not equal to zero. The following Betas were found to be significant

- $Q12 = 0.04 < 0.05$ : *Positive relationship between Q12 (Self generation of funds) and Q23 (Firm's independence): an increase in Q12 causes an increase in Q23*
- $Q13 = 0.04 < 0.05$ : *Contrasting relationship between Q13 (Partnerships) and Q23 (Firm's independence): an increase in Q13 causes an increase in Q23*

It must also be noted that an R square of 13% is not good as it means the model explains 13% of the variability in the data, this is a poor fit of the model. Furthermore the root MSE of 0.80 is fairly small and means there is not too much variability in the data. A CV of 23% is not bad; anything less than 30 is not a problem. The condition index is within the accepted range.

#### **4.9.1 Conclusion**

Sustainability factors that affect Performance are summarised below:

- $Q11 = 0.04 < 0.05$ : *Contrasting relationship between Q11 and Q15: an increase in Q11 causes a decrease in Q15*
- $Q13 = 0.0006 < 0.05$ : *Positive relationship between Q13 and Q15: an increase in Q11 causes an increase in Q15*

- $Q11 = 0.005 < 0.05$ : Contrasting relationship between Q11 and Q16: an increase in Q11 causes a decrease in Q16
- $Q13 = 0.01 < 0.05$ : Positive relationship between Q13 and Q16: an increase in Q11 causes an increase in Q16
- $Q14 = 0.0001 < 0.05$ : Positive relationship between Q14 and Q17: an increase in Q14 causes an increase in Q17
- $Q13 = 0.004 < 0.05$ : Positive relationship between Q13 and Q18: an increase in Q13 causes an increase in Q18
- $Q14 = 0.0094 < 0.05$ : Positive relationship between Q14 and Q18: an increase in Q14 causes an increase in Q18
- $Q11 = 0.0001 < 0.05$ : Positive relationship between Q11 and Q19: an increase in Q11 causes an increase in Q19
- $Q13 = 0.0002 < 0.05$ : Positive relationship between Q13 and Q20: an increase in Q13 causes an increase in Q20
- $Q14 = 0.0001 < 0.05$ : Positive relationship between Q14 and Q20: an increase in Q14 causes an increase in Q20
- $Q14 = 0.0001 < 0.05$ : Positive relationship between Q14 and Q21: an increase in Q14 causes an increase in Q21
- $Q13 = 0.0001 < 0.05$ : Positive relationship between Q13 and Q22: an increase in Q13 causes an increase in Q22
- $Q12 = 0.04 < 0.05$ : Positive relationship between Q12 and Q23: an increase in Q12 causes an increase in Q23
- $Q13 = 0.04 < 0.05$ : Contrasting relationship between Q13 and Q23: an increase in Q13 causes an increase in Q23

## **5 DISCUSSION OF THE RESULTS**

### **5.1 Introduction**

From the results presented in the previous chapter, we are going to build up the discussion in terms of linkages, similarities, differences, and dominant issues with references from literature section. The discussion includes the theoretical background, confirming or contrasting with the results.

### **5.2 Discussion: Proposition1**

**The enterprise will have higher levels of growth when there are higher levels of social impact**

***Social factors that affect Sales figures performance are discussed below:***

The results showed a positive relationship between the replicability of the initiative and sales growth. This is possible because the more the initiative is expanded to many communities, the more sales they will be able to make. Widespread of the initiative means opening more branches and the ability to sell more products to more communities. When the company has more direct beneficiaries, the results have shown that it could lead to growth in sales figures also. Having more direct beneficiaries' means having a wider or bigger initiative which leads to more projects being conducted and more income being generated.

A contrasting result showed that the more the tangible results of the organisation, the less the sales will grow, and also that the more people's lives were improved then the less the sales figures will grow. This is in contrast with literature, because the more the organisation makes sales, the more it is able to impact lives. Age was another contrasting relationship to sales growth. This means that younger employees should be more productive and as employees age, they become less productive and sales figures will drop.

***Social factors that affect Employee growth are discussed below:***

As also shown in the previous result, initiative's replicability has a positive effect on employee growth. Meaning that as the initiative is spread to other communities; the organisation has to employ more employees to be able to deliver. This is how they are able to deliver what is expected of them by the communities. Having more direct beneficiaries also showed positive effects on employee growth, as more people benefit directly, the more the organisation employs more workers.

As more lives are improved, the result showed that employee growth seemed to decrease. This result is also in contrast with literature, because for more lives to be improved, the organisation has to take the initiative to more communities, have to grow their sales and employ more employees. Contrasting relationship between employees' age and employee growth meant that organisations will not employ older workers. As workers are ageing, organisations will either not replace them after retirement or they will replace them with younger people.

***Social factors that affect net Income margins of the organisation:***

Net income margins seem to grow as the initiative expands to a wider market. This is in line with the previous result because the spread of the initiative brings about employee growth, which will cause growth in sales which will result in net income margins improvements. Another interesting result showed that as the organisation ages, its net income margins also grow.

Net income margins are also affected by the growth in tangible results. This result shows that the more the organisation's results become tangible, the less the net income margins will grow. This is in contrast with literature because tangible results are as a result of more income and growth of an organisation.

***Social factors that affect the growth of labour expense of the organisation:***

The results have shown that for organisations to impact and improve people's lives, they have to spend more on employee salaries and benefits. Labour expenses are made up all employee benefits, including salaries, bonuses, uniforms, food, allowances etc. The results also suggested that the more years that the organisation has survived, the more its labour expenses will grow. As the organisation ages, it will now be able to afford paying its employees more benefits and better salaries.

As with the previous contrasting results have shown, the more the organisation's direct beneficiaries, the less their labour expense growth. This means that the organisation will not have enough resources to pay its employees better salaries when it has more people that directly benefit from its proceeds.

***Social factors that affect the Balance Sheet increase of the organisation:***

The result indicates that the more the direct beneficiaries the organisation has the more their balance sheet grows. Company's financial growth is measured through balance sheet growth, so this means that the more the organisation is growing financially, the more they are able to impact communities directly. The same applies for organisation's growth, causing growth on the balance sheet as well. The longer the organisation has been in existence, the more their balance sheet grows. This is supported by the fact that the more the company survives; it would have acquired more assets and financial will power to grow the balance sheet.

Contrasting result showed that an increase in the employee's age causes a decrease in balance sheet growth. This indicates that as employees grow older, they become less productive, hence the reduction in balance sheet growth. Also, as the organisation impacts more on people's lives and improving their lives, the results show that its balance sheet growth will decrease. This could be as a result of more resources being channelled towards the initiative and not being pumped into growing the organisation.

### ***Social factors that affect the organisation's ability to maintain the quality of products:***

The more the initiative is wide spread into many communities, the more the organisation is able to maintain the quality of its products. This result is in contrast with Bloom & Smith (2010), who indicated that scaling can cause organisations to lose quality of their service provision or products. Organisation's age has shown to have a positive relationship with the ability to maintain quality of products. This is probably due to the fact that a lot of research and development will have been done over the years until they found a lasting formula.

An increase in the improvement of people's lives will cause a decrease in the quality of products. Another contrasting result relationship was between increase in number of employees and ability to maintain quality of products. This is a contrasting result to literature because more employees are supposed to ensure productivity of good quality products.

### ***Social factors that affect the organisation's independence relative to customers, suppliers and lenders***

An increase in the organisation's age has shown to cause an increase in its independence in relation to customers, suppliers and lenders.

Contrasting relationship between improvement of people's lives and the firm's independence: an increase in the improvement of people's lives causes a decrease in the firm's independence.

### ***Conclusion***

A number of Social variables had a positive relationship to the Growth variables, depicting a confirmation that social impact of the organisation can actually cause it to grow. An interesting result that was shown by the organisation's age in relation to the growth of the organisation. The result shows that the older the organisation, the more it ticks the checklist for growth. It is also interesting to note that 'improvement



of people's lives' and having direct beneficiaries had contrasting relationship to the growth of the organisation. This is because social organisations need to spend money and resources for them to have a real impact on people's lives. Wbcsd social capital (2013) agreed with this result and added that when social organisations record high social impact results, it helps them to evaluate their needs, aspirations, resources and incentives for their customers, so that they develop new products and services and improve on their operations (that is growth). Yvon Chouinard, founder of Patagonia, noted that there is no business that is conducted on a dead planet, meaning that all companies must recognise that they have an obligation to impact the society and the environment in a positive way. Organisations that have recorded levels of social impact for the good are those that set their priorities right and communicated their objectives with their staff members, and it is these organisations that are believed to have the potential to grow in size and capacity to impact more societies (Tan, 2005). One of the ways in which organisations maximise their social impact is by minimising any direct environmental and social harm.

### **5.3 Discussion: Proposition 2**

**The enterprise will have higher levels of growth when there are higher levels of innovativeness**

***Innovativeness factors that affect net income margins of the organisation:***

Introduction of new solutions have shown to bring about growth in net income margins. This is in agreement with Schumpeter (1934), who indicated that innovation involves introduction of new solutions plus that is what keeps the capitalist engine in motion. Ziegler (2010) also agreed to this positive relationship when he said that innovativeness helps gather support and resources from outside. Another interesting result was that an increase in the organisation's age will cause an increase in the net income margins. This is another confirmation that as the organisation establishes itself over the years, it also ticks all the boxes on growth.

***Innovativeness factors that affect market share of the organisation:***

Discovery of unique methods has also shown to bring about improved market share. Disruptive innovation, as Schumpeter puts it, is about discovery and designing of unique methods and this usually guarantees the organisation a good market share. The more unique products that are introduced, causes an increase or improvement in the market share. Organisation's age has also shown to improve market share, meaning an increase in the organisation's age causes an increased market share improvement.

Contrasting result: An increase in the number of employees has shown to cause a decrease in the market share improvement. Improved market share is a sign of growth and this shows that as the company uses more resources to employ more employees, they tend to lose a portion of their market share.

***Innovativeness factors that affect the balance sheet increase of the organisation:***

Discovery of unique methods positively impacts on the increase in balance sheet values: an increase in discovery of unique methods and products will cause an increase on the balance sheet. Introduction of new solutions have shown to cause an increase in balance sheet. This result also confirms Ziegler (2010), when he said that innovation helps gather support and resources from outside and these resources will contribute to balance sheet growth.

***Innovativeness factors that affect the organisation's ability to survive in a crisis:***

If an organisation introduces new solutions then its ability to survive in crisis also increases. New solutions will bring about new products, new business strategies and more resources such that in times of crisis, the organisation will be able to survive. This is positively related to expandability and sales growth of the organisation. New solutions also mean new business strategies and new internal solutions. New

survival strategies and solutions could also see the company surviving through difficult times.

***Innovativeness factors that affect the organisation's ability to maintain the quality of products:***

The results have also shown that discovery of new methods can mean that the organisation now has the ability to maintain quality of its products. As discussed in the later paragraph, discovery of new methods is not only limited to products or sales. It also relates to discovery of new internal methods, or ways in which the company operates. The result also showed a positive relationship between the organisation's age and its ability to maintain quality. This means that as the company survives for more years, it develops new solutions and methods to improve and maintain the quality of its products.

Contrasting relationship was shown between respondents' or employees' age and the ability of that organisation to maintain quality of products: an increase in the organisation's age causes a decrease in ability to maintain quality. This means that older employees tend to become less productive and they become more complacent and do not concentrate on the finer details. Maintaining quality of the products means the organisation is more innovative, and the previous result showed that younger employees are the ones that are more innovative. On the other hand, an increase in the number of employees will affect the ability to maintain quality. This result shows that the more employees that are hired, the more difficult it will become for the organisation to maintain the quality of their products because of labour costs.

***Innovativeness factors that affect the organisation's independence in relation to customers, suppliers and lenders***

Discovery of new methods has shown to provide the firm with independence. As the organisation discovers new methods, it becomes self-sustaining and independent of its shareholders, customers and suppliers. Independence means they do not depend on the decisions made by these stakeholders. It also means that the company is able to survive without support from these stakeholders. Another positive relationship

was between Organisation's age and Firm's independence. This is another result confirming the organisation's age having a positive relationship with the growth of the organisation.

On the contrasting side, transformation of established systems had a negative effect on the Firm's independence: an increase in transformation of systems causes a decrease in the firm's independence. Employee's age also had a negative relationship with the firm's independence: an increase in the respondents' age causes a decrease in the firms' independence. Number of employees also had contrasting relationship with the firm's independence, meaning that an increase in number of employees causes a decrease in the firms' independence.

### ***Conclusion***

Not many Innovation variables had a positive outcome with regards to growth as the dependable variable, confirming that Innovativeness of the organisation failed to prove that it causes growth of the organisation. Number of employees and Respondents' age are the two variables that had a contrasting relationship with the growth of the organisation although they were not part of the hypothesis testing. Ziegler (2010) suggested that social innovations, especially those that change people's lives, can in principle, gather support and resources from outside and this will lead to growth of these organisations. Entrepreneurs are known to be innovative in the way they start and organise their initiatives. But as Schumpeter puts it, this innovation comes in many different forms; it does not have to be a new invention always, but to be creative in every aspect of their business. They do this because they want their organisations to be sustainable and to grow (Dees, 1998). However, overall results have shown that Innovativeness does not have a positive relationship with Growth of the organisation, contrary to literature discussed above.

### **5.4 Discussion: Proposition 3**

**The enterprise will have higher levels of replicability when there are higher levels of innovativeness**

***Replicability factors that affect new solutions being introduced by the organisation:***

Results have shown that when organisations replicate their projects, they also tend to produce more new solutions that will make the new markets want to use their products. This is in agreement with previous results because expanding the initiative means spreading to more communities and making more sales. This is possible when the organisation introduces new and unique products and solutions to new communities. These solutions are not only products and services but can also be internal systems, new operation designs and new solutions to customer needs and queries. The results also showed that when a project is applicable to other communities, it results in the introduction of more new solutions. Expandability and applicability to other communities have the same positive effect as the introduction of new solutions. For the organisation to be able to expand and apply its initiative to other communities, they need to introduce new and unique products.

***Replicability factors that affect the discovery of unique methods of the organisation:***

This result showed that when the initiative is expandable as well as applicable to other communities, there is a high possibility that they will discover new methods. As the initiative is expanding into new markets and new communities, it has to come up with new service delivery methods and unique services in order for it to survive, and the organisation is bound to discover winning solutions and methods. Expandability and applicability in other communities is the same and has the same result.

***Replicability factors that affect the ability of the organisation to transform established systems:***

Results have shown a positive relationship between the expandability of the initiative and transformation of established systems, meaning that the more the initiative is expandable, the more the organisation can or needs to transform its established systems. Transformation of internal systems will enable the organisation to adapt into the new communities. Ability to transform internal systems requires one to be

innovative as well. The results have also shown that as the initiative is transferable, this can result in the initiative being able to transform its established systems. An increase in transferability of the initiative causes an increase in the transformation of established systems. This agrees with Bradach, (2003) when they said that controlling the replication of an initiative is difficult because there is low transparency displayed by social entrepreneurs. Because of this reason, they have to transform internal systems.

### ***Conclusion***

Most of individual replicability factors have shown a positive relationship with Innovation factors. An increase in Innovation has shown that it can also cause an increase in the replicability of the initiative. This result is in agreement with Dees (2004) who came to the conclusion that social entrepreneurs and policy makers need to make more strategic and systematic ways of how to spread their innovations, they need to be able to define their social innovation. They must define and explain why their approach is distinctive, what is needed for their success and what the internal and external factors are that affect their organizations. Finally they should be able to identify areas of improvement or change without affecting the intended impact (Dees, 2004). Not every innovation is replicable, because some elements might not work in different locations, contexts, skills and conditions, which is why the organisation will have to be innovative and be able to discover new methods and solutions.

### **5.5 Discussion: Proposition 4**

**The enterprise will have higher levels of growth when there are higher levels of sustainability**

***Sustainability factors that affect net Income margins of the organisation:***

When the enterprise enters into several partnerships with businesses and or has a few important ones, its sales figures are bound to grow. A rise in sales figures will

lead to a rise in gross and net profits and balance sheet, this will mean that the business will grow and will be able to sustain itself. Partnerships mean that the organisation will get capital injections and will use that capital to expand into new and bigger markets. More agreements can be entered into that will bring in more capital, expertise, ideas and even more manpower, all of which can contribute to the growth of the organisation.

On the contrary, when the organisation is insulated from political events, this will have a negative effect to the sales figures growth. This result implies that social organisations should not be independent of political events and legislation otherwise this will have a negative effect on the sales and operations. This means the government or political events have an influence over social organisations.

***Sustainability factors that affect growth in terms of number of employees are discussed below:***

When the enterprise enters into several partnerships with businesses and/or has a few important ones, the number of its employees is bound to grow. This means that as the organisation enters into many partnerships, it will require more employees for it to be able to meet the demands of the partners. As mentioned earlier, partnerships come in different forms and they also result in the initiative expanding, thereby requiring more employees to do the job.

Another contrasting result showed that when the organisation is insulated from political events, this will have a negative effect on the increase in number of employees. This result implies that social organisations should not be independent of political events and legislation otherwise this will have a negative effect on growth of its employee numbers. This means the government or political events have an influence over social organisations.

***Sustainability factors that affect net Income margins and market share of the organisation:***

When an organisation is firmly in place and can stand without the support of its founder, then its net income margins will also grow. An increase in the ability of the organisation to stand on its own without support causes an increase in its net income margins. For an organisation to be able to stand on its own without support, it means that it has been operational for a long time, it has acquired enough resources and that it has grown on its balance sheet. When an enterprise enters into several partnerships with businesses or has a few important ones, its market share tends to improve. The more partnerships the organisation enters into, the more their market share will be improved. More partnerships means the initiative will be widespread and hence the improved market share. And also, when the organisation is firmly in place and can stand without support of the founder, this will also improve its market share and this means that they have grown and covered a greater market share.

***Sustainability factors that affect the growth of labour expense and balance sheet of the organisation:***

The results indicate that the more the organisation is independent from political events, the more their labour expenses will grow. Labour expenses growth means hiring more staff members or paying the current employees more benefits. Independence from political interference means the organisation will be at liberty to hire any number of employees and pay them any benefits as they wish. On the same note, when an organisation enters into many partnerships, the results have shown that this will have a positive relationship with factors of growth. The results have also shown that the balance sheet of the organisation will grow as more partners come into play. And as shown in the previous result, the organisation's balance sheet will increase as the organisation is able to stand on its own without support from its founders. The results also show that as the organisation becomes sustainable, its balance sheet and labour expenses will grow.



***Sustainability factors that affect the organisation's ability to survive and maintain quality in times of crisis:***

There is a positive relationship between the ability of the organisation to stand on its own without support of its founders, and its ability to survive in a crisis. Social organisations are known to ask for donations and funds from donors and its founders, for them to run their non-income generating projects. This result has shown that when they reach sustainability levels that enable them not to ask for any funds, their survival becomes inevitable and they can also maintain good quality of products, even in times of recession. Another interesting result showed that organisations that generate most of their own funding or have reliable outside funding, also tend to record net profits, although the opposite is shown by the result of when the organisation has entered into many partnerships. Most partnerships will require the partners to share the profits. Some partnerships will also mean that operating expenses will increase, resulting in the reduction of net profits.

***Conclusion***

Most of the Sustainability variables had a positive outcome with regards to growth and dependable variable. Independence from political events variables had a contrasting relationship with the growth of the organisation, agreeing with Dees & Anderson, (2003) who said that social enterprises are now looking for sustainable solutions for them to remain relevant, meaning that the higher the sustainability, the higher the levels of performance for the enterprise. For businesses, sustainability is the ability to stay as a going concern, through good relations with key stakeholders. But social sustainability has something to do with the public or society's interests (Brown, 2006). This result confirms Dees & Anderson, (2003) who concluded that organisations are considered sustainable when they manage their capitals like human, financial, manufactured and natural capital within the society from which they operate. He was also was in line with this result when he said that organisations should adopt business like strategies to empower societies and increase their chances of lasting or sustainable social impact.

## **6 CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS**

### **6.1 Introduction**

The objective of this study was to establish relationships between growth of the organisation and the four evaluation metrics, namely, social impact, innovativeness, expandability and sustainability of the organisation. In summary, as supported by the literature on impact investing and its growth components, the results have shown that enterprises will have higher levels of growth when the levels of its social impact are greater (P1), They will NOT have higher levels of growth when their innovativeness is higher (P2), they will have higher levels of replicability when their innovativeness levels are also higher (P3) and finally, will have higher levels of growth when the levels of sustainability are greater (P4). In this chapter, we discuss the results pertaining to the theoretical background. We interpret and present the results, including implications and future research recommendations.

### **6.2 Conclusions of the Research Results**

#### **6.2.1 *Social Impact***

In previous years, organisations would sit behind closed doors and come up with products and services (Ries, 2011, p.6). Customers were not afforded the opportunity to see the product until it was on the shelf. This ended when organisations realized that sometimes their efforts were fruitless after customers rejected their innovations. Drucker (2007) earlier mentioned that products are defined by customers, hence social or impact entrepreneurs should focus on their beneficiaries and need to take into account their opinions or preferences. Most of the Social variables that we tested in this research had a positive relationship to the Growth variables, depicting a confirmation that reporting high social impact by the organisation can help source more funding from investors, which will result in growth. From the results of this research, we also discovered that older organisations had positive relationships with all the variables that cause growth. This is in congruency

with the literature from Wbcsd social capital (2013) that motivated that 'Measuring social impact can assist social organisations to prove to communities, donors, civil society and government that their operations and projects are benefiting the communities'. He added that this helps them to evaluate their needs, aspirations, resources and incentives for their customers, so that they develop new products and services and improve their operations (that is growth). In conclusion, reporting on higher social impact by social organisations can result in the accumulation of all the necessary ingredients for growth.

### **6.2.2 *Innovativeness***

Some of the Innovation variables had a positive relationship with regards to growth. This is in agreement with Ziegler (2010) who suggested that social innovations, especially those that change people's lives, can in principle, gather support and resources from outside: resources in this regard being more investments from donors that will cause growth. This research sought to establish if there was a positive relationship between innovativeness of the organisation and growth; however, the result showed a negative relationship. There was a result that came out when Innovativeness was measured, that indicated that young employees did not bring about the innovativeness and growth to the organisation. Social innovation is when social organisations develop new ideas and products to serve new markets and to ensure growth and sustainability of organisations (Kanter, 1998). Social innovation is an interactive process that brings forth new knowledge and capabilities which in turn, will be used to generate new business ideas and grow the organisation (Ziegler, 2010); unfortunately, the overall result did not support this proposition. Innovativeness does not necessarily cause or bring growth of the organisation.

### **6.2.3 *Replicability***

The study was to establish if there is any relationship between replicability of the organisation and how innovative it is. All the replicability factors have shown a positive relationship with Innovation factors. An increase in Innovation has shown

that it causes an increase in the replicability of the initiative. According to Smith (2010), replicability is about widening and growing projects and initiatives to other communities. Replicability and innovation usually work hand in hand meaning that organisations have to come up with innovative solutions for them to be able to replicate solutions that have worked somewhere else. Social organisations replicate their ideas to widen their impact as well as to expand their business (Smith, 2010). This thesis has shown this positive relationship and has proved that innovativeness can bring about replicability and also that replicability can be as a result of Innovativeness of an organisation. Social entrepreneurs and social investors are eager to try and replicate a program that has worked in a part of a society and make it work for the entire society (Smith, 2010). This research has empirically tested the predictive ability of innovation to lead the organisation to replicate its solutions. Tracey and Jarvis (2007) noted that replicability forms some series of alliances where the mother company gets a risk free ticket to growth and success.

#### **6.2.4 Sustainability**

The research sought to establish the relationship between sustainability and growth of the organisation. Most of the Sustainability variables had a positive outcome with regards to growth of the organisation. Independence from political events variable had a significant contrasting relationship with the growth of the organisation. Dees & Anderson, (2003) said that social enterprises are now looking for sustainable solutions for them to remain relevant, meaning that the higher the sustainability the higher the levels of performance for the enterprise. This empirical testing has proved the United Nations' Brundtland Commission report right when they reported that 'sustainability is the ability to meet today's needs and not disturb the future generation's ability to meet their own needs'. This can be achieved when the organisation has grown and gathered enough resources. Simms (2002) concurred that organisations now regard corporate social sustainability as a trigger for growth and long term survival. This result supports Dees & Anderson, (2003) when they said that social enterprises are now looking for sustainable solutions for them to remain

relevant, meaning that the higher the sustainability, the higher the levels of performance for the enterprise.

### **6.3 Implications and Recommendations**

This study aimed at contributing to the body of research being conducted on impact investing and social entrepreneurship. The Impact investment industry is still new and requires more research to be conducted, especially in the South African context. Previous research has concentrated on definitions of the terms used in the industry and on how to measure impact but not many have zoomed into the measurement metrics and analysed what they mean to the fund managers as well as to the investors. Not many have concentrated on the causes or contributors to growth of fund managers as this research sought to establish, which was to investigate if social impact, innovation, expandability and sustainability can indeed cause growth of social organisations, in particular fund managers. Impact investors and fund managers will benefit from this type of study as it shows the practical effect of the measurement metrics that bring about more funding and growth for the organisation. Depending on which metric that each project is strong in, management can now make a choice on which metric to show more transparency on. If they are looking for growth, this research will help identify areas that they should concentrate on when reporting. Practical implications of this study are that fund managers need to be transparent in their reporting if they want to grow their initiatives. They need to declare how much social impact they are having on the societies, how innovative they are, how their initiatives are replicable and lastly, how sustainable they are.

#### **6.3.1 *Suggestions for further research***

This research aimed at conducting a scholarly study into the nascent and not well researched area of the impact investing industry in South Africa. It has provided an insight into Impact investing measuring metrics, and has therefore opened other avenues for future research. According to the results shown by this research, it is imperative that fund managers work on recording the outputs of their initiatives.

Becker (1974), emphasised that social organisations need to report on their social impact so that their donors can keep on putting in money. Transparency is key for social entrepreneurs if they are to be accountable to their investors. Ziegler (2010) also concluded that social innovations, especially those that change people's lives, can in principle, gather support and resources from outside, and it is indeed these resources that will be used for growth. Tracey and Jarvis (2007) also concluded that replicability forms some series of alliances where the mother company gets a risk free ticket to growth and success. Lastly, Dees & Anderson, (2003) said that social enterprises are now looking for sustainable solutions for them to remain relevant. These theories have been tested and empirically proven such that fund managers can adopt them if they need to grow their organisations.

The empirical tests that we ran brought about interesting results that affect fund managers initiatives. For future research, it will be worthwhile to conduct a research on the effects of demographical factors like respondents' age, employees' age and the age of the organisation. It will be worthwhile to find out how age affects performance of the organisation, in terms of being profitable, or innovative, or dynamic. This research showed interesting positive and negative relationships with age of employees and age of the organisation. For future research, one can be interested in empirically testing how the organisation's age has contributed to its success in terms of growth, market share holding, sustainability and even political independence. Another research that is worth looking at in future is how the employee's age shapes and contributes to the success or failure of the organisation. This research showed that age had some negative relationships with some growth aspects.

This research will also yield better results with a larger sample size, because we observed that the more respondents that partake in the research, the more relationships that will emerge and the more useful conclusions that will emerge. A mixed method approach of qualitative and quantitative will be more appropriate for such a research as it will assist in filling the gaps that literature does not cover. I also recommend that future research on impact investment should include a qualitative

analysis. Interviews with the actual players will help highlight and explain some of the theories that are still to be tested. Impact investors are very few and they are also difficult to get hold of, and yet they hold crucial information from their first hand experiences. There is not enough literature in the field of impact investments so a qualitative research will help gather some information and some conclusions.

Incorporating policy making framework of Impact investments, in this research of measurement metrics will assist players to implement policies and make informed decisions on which measurement metrics to adopt.

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## **7 APPENDIX A (INVITATION LETTER FOR RESPONDENTS)**

Address

Date

**Ref: Invitation to Respond to Questionnaire in line with a Master's degree Research Program**

Dear Sir/Madam,

As part of my Master's degree research at the Wits Business School, I am conducting a survey that looks at the impact investing industry, how impact is measured and which measurement metric brings more value to the fund managers. Which measurement metric must the fund managers' report on for them to get more fund from the investors?

The results of this research will be available to your organization on completion. I would therefore kindly ask if you could assist me by completing this questionnaire. Any information obtained in this study that can be identified with you will remain confidential. In any written reports or publications, no one will be identified and only group reports will be represented.

You are free to withdraw your participation at any time. If you have any questions please contact me, my full contact details are at the end of this letter.

Thank you very much for your co-operation.

In line with this I am inviting you as one of the respondents for my research questionnaire. This letter serves as an official invite in line with this research.

Yours Sincerely

Mr. James George

+27 74 791 1947

[James.george@wits.ac.za](mailto:James.george@wits.ac.za)

## 7.1 APPENDIX B

### 7.2 Actual Research Instrument

Please indicate how much agree or disagree with the following statements:	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
<b>Social impact/Reach of the Enterprise</b>					
1. The results of the enterprise are tangible to date	1	2	3	4	5
2. Results sufficient to surmise that people's lives were improved	1	2	3	4	5
3. The projects is widespread and spans several communities	1	2	3	4	5
4. There are many direct beneficiaries	1	2	3	4	5
<b>Innovativeness of solution</b>					
5. The enterprise has introduced new approaches or offered new solutions to societal problems	1	2	3	4	5
6. The enterprise truly has discovered a unique way of using/combining resources, has discovered new resources or services/ service delivery methods	1	2	3	4	5
7. Has entirely transformed established practices and/or systems	1	2	3	4	5
<b>Expandability/replicability</b>					

8. The projects can be expanded from its original group of beneficiaries	1	2	3	4	5
9. Applicability of the projects is clear in adjacent communities or country as a whole	1	2	3	4	5
10.Many aspects of the projects can be transferred and adapted to other settings around the world	1	2	3	4	5
<b>Sustainability</b>					
11.The enterprise is insulated or independent of political events and legislation	1	2	3	4	5
12.The enterprise self-generates most of its funds, or outside funding is fairly reliable	1	2	3	4	5
13.The enterprise has entered several partnerships with businesses or has a few important ones	1	2	3	4	5
14.Organization firmly in place and can stand without the support of the founder	1	2	3	4	5
<b>Performance and Growth of the enterprise</b>					
15.Enterprise has grown in terms of Sales in the past years	1	2	3	4	5
16.Enterprise has grown in terms of employees in the past years	1	2	3	4	5
17.Enterprise's net income margins have grown in the past years	1	2	3	4	5



18. Our market share has improved in the last two years	1	2	3	4	5
19. Our labour expense has grown in relation to sales revenue	1	2	3	4	5
20. Our balance sheet has increased, in relation to net of assets and liabilities.	1	2	3	4	5
21. In the event of a severe crisis, our enterprise will survive	1	2	3	4	5
22. We are able to maintain the quality of our products and services	1	2	3	4	5
23. Since we started, the enterprise's has always recorded net Profits	1	2	3	4	5

**Biographic details: Anonymous and confidential**

24. Please specify your gender.

Male	1
Female	2

25. Please specify your age in years \_\_\_\_\_

26. Please indicate the highest level of education you have received.

No matric	1
Matric completed	2
Short programme completed	3
Diploma / degree completed	4
Postgraduate studies completed	5

27. What is your ethnic group?

Indian	1
Coloured	2
Black	3
White	4
Chinese	5
Other (please specify)	6

28. Please indicate the organisation's employee numbers

Not applicable	0
Less than 10	1
10-50	2
51-200	3
More than 200	4

29. Please indicate organisation's age

Not applicable	0
Less than 3 months	1
3-42 months	2
5-10 years	3
11-20 years	4
More than 20 years	5

30. What is your organisation's ratio for SROI (if you have calculated it in the previous or current financial year) .....

### 7.3 5 Consistency matrix

Table 8: Consistency matrix

Impact Investing: Analysis of different measurement metrics for fund managers in South Africa					
Aims of research	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
1. Understanding Impact investment in South Africa.	(J.P Morgan, 2015), (Greene, 2014), (UNDP, 2014), (Dees & Anderson, 2003), (Barby, C., Barley, D., Dewan, N. & Osibo, P., 2014). (Weber, 2012), (Michael Ngoasong, 2015)	What is impact investing? What and who is involved? Which industry sectors are involved? What are the problems faced by players in this	Literature & interviews with investors  Question 4-8 for interviews	Intervals, Continuous  Qualitative data	Thematic process  Network method

Impact Investing: Analysis of different measurement metrics for fund managers in South Africa					
Aims of research	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
2. Understanding measuring of performance of social organisations	(Dess, 1984), (Hulme, 1997), (M. Bhargava, 1994), (Social Impact Investment Taskforce, 2014)	How is performance measured? What are the inputs and outcomes?	Literature & interviews with investors  Question 9-13 for interviews	Intervals, Continuous  Qualitative data	Thematic process  Network method
3. Evaluating social impact of the organisation	(Hulme, 1997), (Jackson, 2013), (Nicholls, 2010),	<i>Proposition 1:</i> The enterprise will have higher levels of growth when there are higher levels of social impact	questionnaire questions on a Likert scale  Ind. Variable Questions 1-4  Dep. Variable Questions 15-23	Intervals, Continuous  Ordinal data	Correlation, covariance and multiple regression

Impact Investing: Analysis of different measurement metrics for fund managers in South Africa					
Aims of research	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
4. Measuring and understanding effects of innovativeness of social organisations	(Burgelman, Maidique, & Wheelright, 2001), (Nicholls, 2010), (Tseng, Lin, & Vy, 2012) (Yam, Lo, Tang, & Lau, 2011)	<i>Proposition 2:</i> The enterprise will have higher levels of growth when there are higher levels of innovativeness	questionnaire questions on a Likert scale Ind. Variable Questions 5-7 Dep. Variable Questions 15-23	Intervals, Continuous  Ordinal data	Correlation, covariance and multiple regression
5. Measuring and understanding effects of replicability of social organisations	(Urban, 2015), (Jackson, 2013), (Nicholls, 2010)	<i>Proposition 3:</i> The enterprise will have higher levels of replicability when there are higher levels of innovativeness	questionnaire questions on a Likert scale Ind. Variable Questions 8-10 Dep. Variable Questions 15-23	Interval, Continuous  Ordinal data	Correlation, covariance and multiple regression

Impact Investing: Analysis of different measurement metrics for fund managers in South Africa					
Aims of research	Literature Review	Hypotheses or Propositions or Research questions	Source of data	Type of data	Analysis
6. Measuring and understanding effects of sustainability of social organisations	(Urban, 2015), (Social Impact Investment Taskforce, 2014), (Lorren K. Haywood, 2013), (Rivera, 2008)	<i>Proposition 4:</i> The enterprise will have higher levels of growth when there are higher levels of sustainability	questionnaire questions on a Likert scale Ind. Variable Questions 5-7 Dep. Variable Questions 11-14	Interval, Continuous  Ordinal data	Correlation, covariance and multiple regression
7. Measuring growth of social organisations	(Social Impact Investment Taskforce, 2014), (Hulme, 1997), (Antoncic & Prodan, 2008), (Gregory B Murphy, 1996), (Johan Wiklund et. al, 2008)	How does social impact, replicability, sustainability and innovativeness – affect growth of an organisation?	questionnaire questions on a Likert scale Ind. Variables Questions 1-14 Dep. Variable Questions 15-23	Interval, Continuous  Ordinal data	Correlation, covariance and multiple regression

