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The effect of technological innovation capabilities on corporate entrepreneurship and firm performance in the South African media and entertainment industry.

A research report submitted to the faculty of Commerce, Law and Management, University of Witswatersrand, in partial fulfilment of the requirements for the degree of Master of Management in Entrepreneurship and New Venture Creation (MMENVC)

by

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Supervisor

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31 March 2016

DECLARATION

I, Ekenedilichukwu Onwu, 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 Entrepreneurship and New Venture Creation (MMENVC) at the University of Witwatersrand Business School, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

_____

Ekenedilichukwu Onwu

Signed at _____

On the _____ day of _____ 2016

DEDICATION

To my parents, siblings, lady and friends.

“Set your hearts on his kingdom first, and on God's saving justice, and all these other things will be given you as well. So do not worry about tomorrow: tomorrow will take care of itself. Each day has enough trouble of its own.” Matthew 6: 33-34

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“Innovation has nothing to do with how many R&D dollars you have. When Apple came up with the Mac, IBM was spending at least 100 times more on R&D. It's not about money. It's about the people you have, how you're led, and how much you get it.”

Steve Jobs

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ABSTRACT

In order for developing countries like South Africa to not only compete in business at an international level, but to also establish a sustained competitive advantage in this increasingly integrated global business economy, a radical change in thinking is required. Technological innovation, knowledge and its application, which holistically explains an enterprise's technological innovation capability, are absolutely essential for modern firms looking to develop strategic and operational prowess on a global scale. Research in this field has largely highlighted the lack of technological innovation capabilities in developing regions around the world, and more recently the need for nations and firms to increasingly invest heavily in fostering technological innovation as a means for national economic growth. The same notion goes for the practice of corporate entrepreneurship, which has been internationally recognised as an integral aspect of firm survival, growth and relevance in all sectors and industries around the world.

However, while several researchers agree that the relationship between technological innovation capabilities and corporate entrepreneurship is not clear, it is also vague as to the effect this relationship consequently has on organisational performance. Therefore, this research aims to delineate these relationships, specifically between technological innovation capabilities and corporate entrepreneurship, between technological innovation capabilities and organisational performance, between corporate entrepreneurship and organisational performance and through these constructs, shed some light on the investment capability of firms in these concepts in the context of the South African Media and Entertainment Industry. The research looks at the seven dimensions of technological innovation capabilities, the four dimensions of corporate entrepreneurship and a minor dimension on investment capability, all in relation to firm performance. This research employs both a regression and multi-correlation analysis to demonstrate the relationships between the two constructs and their individual relationships to firm performance.

CHAPTER 1: INTRODUCTION

1.1. Theoretical Background

Firms all over the world increasingly find themselves in complex and volatile environments where the incessant need for firms to continually technologically innovate and prepare their internal environment's favourability for entrepreneurship, is essential in order to maintain a sustained competitive advantage. This growing phenomenon has necessarily obligated organisations to rearrange their resources more effectively in order to remain in harmony with external environmental changes (Wang, Lu & Chen, 2008). Consequently, organisations must not only coordinate their internal resources effectively in order to adapt more innovatively for this evolving landscape, but also invest heavily in improving factors and elements that create encouraging perceptions of the firm's internal environment, for increased entrepreneurial activity and organisational performance as a means of corporate survival and relevance (Afuah, 1998).

The different elements associated with an organisation's innovation capability in general, are what researchers have described as the integral components of the organisation's innovation system (Yam, Lo, Tang & Lau, 2011). This system of innovation within a firm is widely known as a collaborative process that comprises of creation, acceptance, implementations and incorporation of novel ideas, processes and products within the organisation (Van de Ven, Angel & Poole, 1989; Carlsson, Jacobsson, Holmen & Rickne, 2002) The essential crux of the firm's innovation system centres on the idea that individuals within an organisation have the ability to develop, employ and disseminate certain innovations that have economic value. This collection of internal attributes and resources is defined as the firm's technological innovation system (Teece, 1996; Yam et al., 2011).

Corporate entrepreneurship has increasingly been encouraged in several organisations so that firms not only gain more competitive ground in this extremely competitive business scene (Zahra & Covin, 1995), but also to change their current business strategies (Ginsberg & Hay, 1994), nurture innovativeness as well as

create novel methods of wealth generation (Badden-Fuller, 1995) and more recently to become more successful internationally (Birkinshaw, 1997). The field of corporate entrepreneurship until recently has been criticized by scholars, with some insisting that the concept is just another managerial trend, due to a lack of convincing empirical evidence on the influence corporate entrepreneurship has on organisational performance (Hornsby, Kuratko & Zahra, 2002). Most of the studies conducted prior to recent literature were largely subjective and recommendatory in nature. Several scholars have valiantly attempted to bridge some of the gaps in the literature with regards to the processes and ingredients involved in corporate entrepreneurship but there is a lot more knowledge to be gained and diffused in the field (Hornsby et al., 2002; Kuratko, Hornsby & Covin, 2014).

Scholars in the field of business and innovation management argue that the technological innovation capabilities of an organisation form the decisive factor of sustained competitive advantage (Tseng et al., 2012; Yam et al., 2011; Martin-Rojas, Garcia-Morales & Bolivar-Ramos, 2013); They go on to argue that the survival and growth of today's enterprise is massively dependant on its technological know-how and ability to apply it innovatively. This imperative has given rise to the suggestion that firms invest more aggressively in technological innovation capabilities in order to survive and gain superior market share in their respective industries (Tseng et al., 2012).

In today's extremely competitive business landscape often characterised by hurried technological change, increased emphasis is placed on organisations with regards to when and how often these firms choose to innovate, gain external knowledge, technologies, technological expertise, as well as partake in internal developmental improvements for sustained competitive advantage and market relevance (Berchicci, 2013; Hussinger, 2010; Martin-Rojas et al., 2013). Several firms have thus placed an increased significance on technology and the influence a firm's technological innovation capabilities have on sustained organisational performance and competitive benefit.

1.2. Context of the study

The South African Media and Entertainment industry has in recent times, exhibited serious potential for growth and expansion of the economy's youth employment imperatives and is continuously growing in reputation. Its ability to produce better quality entertainment productions and its ability to deliver world-class reliable services is fast becoming a lucrative avenue for economic growth and unemployment reduction for South Africa. The industry boasts a very encouraging future if invested in robustly and if fuelled proficiently enough, has the potential to solve several socio-economic challenges the country faces (PricewaterhouseCoopers, 2013).

The industry now employs thousands and is set to grow to hundreds of thousands in the next two decades (National Film and Video Foundation, 2014). The South African Media and Entertainment industry has anticipated and estimated overall revenues in excess of R175.4 billion in the next two three years, after having already exhibited a significant 10.9% compounded annual growth rate amounting to R104.8 billion since 2012 (PricewaterhouseCoopers, 2013). Researchers, analysts and economic forecasters have attributed this projected growth in the industry to internet enabled products, services and will remain the major force behind the growth in revenue from the industry in the next couple of years (Omnicom Media Group, 2013). Even though a large amount of the projected growth is not credited to traditional media and entertainment businesses, the technological advancement and digital growth in the industry would not be possible without infrastructural improvements and the network technologies to roll out these services (PricewaterhouseCoopers, 2013). Different forms of media entertainment delivered to the homes via the internet to consumers are projected to become an integral part of the South African entertainment industry in the coming years (Omnicom Media Group, 2013).

Technological innovation and corporate entrepreneurship in the South African Media and Entertainment Industry.

The South African Media and Entertainment industry has in recent years seen an influx of international organisations looking to increase their market share and exploit the ample business opportunities available not only in Southern Africa but on the continent as a whole (PricewaterhouseCoopers, 2013). Online video streaming services, media production companies, digital media and entertainment agencies amongst others, with cutting edge business intelligence technologies and superior technical knowledge and experience, have completely disrupted the traditionally lucrative broadcast and analogue television driven businesses in South Africa. However, the infrastructural challenges and internet penetration issues in South Africa have afforded local businesses the luxury of time to assimilate their resources more innovatively (PricewaterhouseCoopers, 2013).

In recent years, some of South Africa's largest Media organisations have quite daringly placed heavy investments in technological innovation and corporate entrepreneurship with the desire to fend off imminent threats and enhance competitiveness both locally and internationally. This growing imperative amongst local South African Media organisations has led to an increased number of Media start-ups entering the market (Techcentral, 2016). This disruptive change in the business landscape has also lead to an increased number of large Media organisations discarding archaic strategies and embracing new technologies as a means for improving long term organisational performance. This radical change in thinking and the innovative new products and services pioneered by South African Media businesses, has been rather encouraging in recent years (Techcentral, 2015). The use of out-dated technologies is still present in quite a few small to medium sized Media businesses in South Africa but the rate of technology adoption amongst these businesses is reassuring (Techcentral, 2015). However, there is still a dire need for additional investment in technologically advanced innovative solutions in order for Media businesses to create products and services tailored for the needs of the majority of South Africans. Only a few with access to advanced digital and broadband infrastructure are able to embrace some of the media products and services currently available in the market (PricewaterhouseCoopers, 2013).

This interaction with technological innovation capabilities by media and entertainment firms in South Africa as a means for enhancing an organisation's ability to be more entrepreneurial and consequently improve its organisational performance, has had no discussions to date. This study aims to bridge that gap in research.

This study aims to delineate the influence that the media and entertainment organisations in South Africa investing in technology innovation capabilities have in promoting corporate entrepreneurship, by shedding light on the intrinsic technology innovation capability variables that can foster the construct; And thus analyse the influence corporate entrepreneurship has on firm performance within these said organisations looking to gain an edge competitively and enhance their organisational performance.

1.3. Problem Statement

While many assume that there exists a nexus between an organisation's investment in its technological innovation capabilities and firm performance, this nexus is still very blurred with regards to how and to what extent a firm's investment in technological innovation capabilities affects the practice of corporate entrepreneurship in organisations. It is also unclear how this relationship between investment in technological innovation capabilities and corporate entrepreneurship, affects the performance of enterprises in the South African Media and Entertainment industry.

1.4. Research purpose, questions and aims of the study

This study aims to comprehensively examine the impact technological innovation capabilities has on corporate entrepreneurship and consequently on organisational performance.

The study also aims to look at technological innovation capabilities, with an interest in how the firm's investment capabilities with respect to this construct, affects the practice of corporate entrepreneurship in entertainment enterprises looking to achieve increased organisational performance.

1.5. Conceptual/theoretical definitions of terms

The technological innovation capabilities of organisations are defined as a set of processes that encompass the amalgamation of several distinct properties, and is a theoretical concept that is multi-faceted, intricate and extremely difficult to quantify candidly (Chiesa, Coughlan & Voss, 1998; Hansen, 2001). They are described as a robust set of attributes of a firm that foster and encourage its technological innovation aims and objectives (Tseng et al., 2012). Technological innovation capabilities are a subset of an organisation's invaluable resources and are made up of key distinct areas, these include technology, knowledge, development, product, experience and organisation (Guan & Ma, 2003; Tseng et al., 2012). A more concise definition of the construct was suggested by Lall (1992) and he described the technological innovation capabilities of an enterprise as the expertise and comprehension required to effectively enthral, comprehend, master, better and diffuse current technologies and to formulate novel ones.

Thus making aggressive investments in order to augment successful technological innovations is not solely dependent on an organisation's technological know-how or capabilities, but also on other integral capabilities in the fields of research and development, producing, marketing, organisation, strategy planning, learning and resources allocation that could foster corporate entrepreneurship and organisational competitiveness and growth (Tseng et al., 2012). Thus, several scholars argue that the technological innovation capabilities of firms and the investment in these capabilities are reflected by a variety of indicators that are not easily measurable and that are multi-dimensional in nature (Burgelman, Maidique & Wheelright, 2001; Guan & Ma, 2003; Chiesa et al., 1998; Tseng et al., 2012). Jennings and Lumpkins (1989, p.487), who were able to give a comprehensive definition of corporate

entrepreneurship, described the intrinsic phenomenon as the degree by which novel products and markets are essentially created.

Many researchers very early on in the field of corporate entrepreneurship encouraged this definition and also placed an increased emphasis on this notion of the process involving new product innovation as an integral action in creating a corporate entrepreneurial environment (Shane & Venkataraman, 2000; Miller, 1983; Scholhammer, 1982, Zahra & Covin, 1995). In more recent times however, organisational renewal has formed the crux of the corporate entrepreneurial way of doing business and this process involves conception, improvement, and enactment of new concepts or behaviours (Morris & Kuratko, 2002). Other words historically used to describe corporate entrepreneurship include intrapreneurship or venturing by a corporate entity; This mode of conducting business is continuously being drilled into enterprises for them to gain profitability in this ever-changing business scene (Zahra & O'Neil, 1998), to refurbish their current business stratagem (Ginsberg & Hay, 1994), to nurture innovativeness and novel cradles of income (Badden-Fuller, 1995), and in succeeding years as emphasized by (Birkinshaw, 1997) to develop more fruitful ventures internationally.

Ancona and Caldwell (1987) argued that technological innovation specifically plays an intrinsic role in the rejuvenation and survival of firms. Corporate entrepreneurship has often been portrayed as a precursor of organisational performance or as a process within the firm that served as a catalyst for firm performance (Covin & Slevin, 1991; Zahra & Covin, 1995; Phan, Wright, Ucbasaran & Tan, 2009). There has been a plethora of strategic research done since then that proposes various measurements for organisational performance when exploring sources of innovation (Tseng et al., 2012; Martin-Rojas et al., 2013). In this study a Likert-type seven-point scale designed by Murray and Kotabe (1999) and used by several researchers in recent years (Tseng et al., 2012; Martin-Rojas et al., 2013), consisting of five items to measure organisational performance as compared to its competitors, will be employed.

The instrument measured survey responses on a seven point Likert-type scale where scale 1 measured “Much worse than my competitors” and scale 7 measures “Much better than my competitor”. The use of an organisational performance

measure that involves pitting the company against its competitors is one of the more recent and more widely adopted measures of firm performance (Antoncic & Prodan, 2008; Choi, Poon & Davis, 2008; Ucbasaran & Tan, 2009; Martin-Rojas et al., 2013).

1.6. Contributions of the study

Several scholars in recent years have alluded to and implied that there exists a relationship between a firm's technological capabilities and corporate entrepreneurship as a means for strategic renewal and business model rejuvenation, and increased financial and economic firm performance (Antoncic & Prodan, 2008; Luo, Olechowski & Magee, 2012;).

This study aims to shed some light on the relationship between a firm's increased investment capability in its technological innovation capabilities and the effect this has on fostering corporate entrepreneurship as a means for increased organisational performance and consequently firm growth, survival and relevance in today's increasingly volatile and competitive business landscape. This study aims to add to the body of knowledge on technological innovation capabilities, corporate entrepreneurship and organisational performance as theoretical constructs, and how these play out in the South African context, specifically in the media and entertainment industry.

This study aims to provide researchers with a premise to further delineate the nexus between technological innovation capabilities and corporate entrepreneurship and how policy makers can use the relationships if they do exist, to drive policy development methodologies to enable environments that allow firms to foster corporate entrepreneurial activities as a means of economic growth and unemployment reduction.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

Since the early 1980s several researchers have endeavoured to investigate and examine the kinds of innovations by which organisations in newly industrialised countries in the Asian region, managed to reduce their technological innovation capabilities gaps in comparison to global industrial leaders while remaining highly competitive and in some cases, exhibiting encouraging organisational performance (Tseng et al., 2012). This examination and exploration has given rise to the notion that there exists a connection between organisational innovation, organisational competitiveness and performance, and economic development (Porter, 1990; Nelson, 1993; Tseng et al., 2012). The innovation factor which encapsulates the firm's ability to technologically innovate has been described as extremely integral for organisations looking to foster corporate entrepreneurship as a means to increase organisational performance and competitiveness (Kuratko, Hornsby, Naffziger & Montagno, 1993; Ireland, Covin & Kuratko, 2003; Antoncic & Prodan, 2008). In the context of financial liberalisation, international business and globalization, the literature in the field of management leadership has identified developing nations on the African continent, as nations more susceptible to market disruption from global players with increased technological readiness due to its low levels of technology adoption (Fenny & Rogers, 2001; Tseng et al., 2012).

In order for developing countries and firms within these environments to not only survive but to also acquire sustained competitive advantage, organisations within these countries need to aggressively innovate. Several scholars have placed significant emphasis on technological innovation capabilities and the increased significance of this factor within organisations looking to improve organisational performance and competitiveness (Teece, 1996; Tseng et al., 2012). However, researchers have also highlighted that not all types of novel technologies and firm innovations lead to sustained competitiveness and improved firm performance.

Understanding that there exists a plethora of technological innovations for organisations to select from, it is therefore paramount for researchers in the field to

be cognisant of the types of technological innovations specifically that can not only foster competitiveness and organisational performance, but also corporate entrepreneurship as a means to bridge the socio-economic gaps in developing regions (Koellinger, 2008; Tseng et al., 2012). Nevertheless, some research conducted in developing nations with conditions similar to those on the African continent, argue that most of our enterprises use out of date technology. They argue that our infrastructure always seems a step or more behind those in the developed economies with technological innovation capabilities being very limited (Vu & Van Cuong, 2010; Wang et al., 2008). Therefore, the approach of enterprises investing in technological innovation capabilities as a means to remain competitive and globally relevant is a logical approach but there has been very little research on the impact that organisations investing in technological innovation capabilities, have on organisational growth and performance (Lewieka, 2011; Tseng et al., 2012).

Corporate entrepreneurship is an extensive phenomenon, at the cusp of which is the concept of organisational renewal. This concept can be attained through the production, growth, and employment of novel ideas or activities (Morris & Kuratko, 2002). Corporate entrepreneurship, also known as corporate venturing or intrapreneurship has been absorbed into the fabric of several enterprises in order for businesses to gain more financial success in this ever competitive business setting (Zahra & Covin, 1995), to revive their current business approach (Ginsberg & Hay, 1994), to boost innovativeness and fresh avenues of wealth creation (Badden-Fuller, 1995) and in years to come as underlined by (Birkinshaw, 1997), to become more successful in international markets.

Literature in the field of corporate entrepreneurship activities in organisations over the years has underlined several shortcomings and challenges. Several reviews in the peer reviews literature amplify the need for more research into the heterogeneity of corporate entrepreneurship when dealing with novel contexts (Phan et al., 2009; Soriano & Huarng, 2013; Spinelli & Adams, 2013). Due to the ever-changing global business landscape, firms have been forced to be seriously innovative, proactive and more open to taking high but calculated risk. Some papers have gone further and endeavoured to suggest appropriate strategies when these contexts arise. The concept of corporate entrepreneurship has for a long time being viewed as a

potentially feasible way to promote and sustain competition between different corporations (Covin & Miles, 1999; Sebora et al., 2010; Zimmerman, 2010).

Several authors have over the years agreed that the corporate entrepreneurship culture as a means of promoting and encouraging growth within an organisation, is of vital importance for businesses to not only remain relevant but also to attain competitive advantage (Kuratko, 1993; Merrifield, 1993; Pinchott, 1985; Dess, Lumpkin & McGee, 1999; Zimmerman, 2010, Sebora et. Al, 2010). However most of the findings, until very recently, have been through testimonials and have been anecdotal in nature. Zahra (1991) made reference to the fact that there has been a lack of empirical evidence to support the existence of positive correlations between large organisations practicing corporate entrepreneurship and the performance and growth of the enterprise as a whole, which gave rise to the suspicion amongst many interested in the field of study that the concept was just another trendy managerial topic. Even though Covin and Miles (1999) tried to bridge the gap by conducting some pioneering empirical research into the field, there was still a lot more to be uncovered about the process of corporate entrepreneurship and how businesses can successfully implement the culture and techniques (Vu & Van Cuong, 2010; Antoncic & Prodan, 2008).

It was only in the late nineties that several researchers began to conduct more empirical research in order to delineate the antecedents of a firm's corporate entrepreneurial activities (Zahra & Covin, 1995). It is through this research, especially amongst several others that some light was shed on the fact that there existed several heterogeneous factors unique and internal to a firm that played a significant role in fostering corporate entrepreneurial activities within the firm (Covin & Slevin, 1991). Zahra and O'Neil (1998) suggested that when external environmental factors and factors within an organisation coincide, this unification intrinsically forced managers at varying levels to act proactively, creatively and innovatively in order to stay relevant and remain market leaders. Though there are still some heavy debates surrounding what these internal factors are that contribute to firms practicing corporate entrepreneurship, there is consensus, however, on the critical role middle managers play in driving an entrepreneurial and innovative culture and mind-set within an organisation (Floyd & Woolridge, 1991; Floyd & Woolridge, 1992; Ginsberg & Hay, 1994; Osterman, 2008; Mantere, 2008). They do not only

serve as catalysts of change and proactiveness within an organisation, but research has also shown that middle managers are able to influence and initiate corporate entrepreneurial activities amongst their subordinates (Kuratko, 1993).

2.2. Background Discussion

This study proposes the hypotheses that an organisation's technological innovation capabilities has a positive influence on its organisational performance as highlighted by Antoncic and Prodan (2008) and Tseng et al. (2012). They furthermore suggest that through a firm's investment in technological innovation capabilities, they may not only improve organisational performance but also foster corporate entrepreneurship as an imperative of several organisational elements for sustained competitive advantage and firm survival (Martin-Rojas et al., 2013).

2.3. Technological innovation capabilities and corporate entrepreneurship

2.3.1 Technological innovation capabilities and corporate entrepreneurship Theory

Burgelman, Maidique and Wheelright (2004) defined technological innovation capabilities as "a set of characteristics of an organisation that facilitates and supports its technological innovation strategies." The literature on technological innovation capabilities thus far has described them as an invaluable asset to the firm made up of aspects to do with technology, production, process, knowledge, experiences and the organisation itself (Guan & Ma, 2003). Previous research into the phenomenon mainly focused on the influence that organisations' technological innovation capabilities had on the diffusion of technology from the first world developed economies to developing ones (Tseng et al., 2012). The concept has evolved since then and is relevant to this research as it provides a conceptual framework for the comprehension of the significance of possessing such capabilities as a resource, for fostering corporate entrepreneurship as a means to increase organisational

performance and firm competitiveness. Thus, in order for organisations to partake in successful technological innovation, they need to not solely depend on technological capability but several scholars argue that it is heavily dependent on a firm's ability to measure its manufacturing, marketing, organisation, strategy planning, learning and resource allocation (Yam et al., 2011; Martin-Rojas et al., 2013). Aggressive investments in technological innovation capabilities have thus become a dominant feature in the capital expenditure budgets of enterprises in developed economies across the globe as a means for improved business growth and long term enterprise relevance (Tseng et al., 2012).

Several studies have been able to link this sort of innovation capability that is needed for businesses looking to partake in the transformation of a nation's economic activities, to the effect this capability has had on the role entrepreneurs play, specifically in large corporates, in fostering proactiveness, risk taking, new business venturing, technological readiness, adoption and organisational innovation as a means for wealth generation and job creation (Garcés-Ayerbe, Rivera-Torres & Murillo-Luna, 2012; Lee, Hwang & Choi, 2012; Soriano & Peris-Ortiz, 2011). The role that technological innovation plays in the entrepreneurship sphere within large corporates is one described by some as creative destruction, where organisations that choose not to develop new innovation capabilities built on the back of technological advancement, become completely irrelevant and simply vanish (Martin-Rojas et al., 2013; Soriano & Huarng, 2013). Quite often, the use of a firm's technological readiness to improve its entrepreneurial and innovation culture, and its performance consequently, has received a lot of support from researchers in the field in recent times (Acur, Kandemir, De Weerd-Nederhof & Song, 2010; Tseng et al., 2012; Soriano & Huarng, 2013); A firm's technological readiness and ability to innovate technologically is necessary as it creates an enabling environment for corporate entrepreneurship to blossom (Acur et al., 2010).

Another dimension of the theoretical background of both technological innovation and corporate entrepreneurship is the influence that top management has on the entire process. Top management's commitment and involvement in encouraging a firm's adoption of technology and use of it to create pioneering innovations, is absolutely crucial in fostering entrepreneurship within the organisation (Fernandes, Raja, White & Tsinopoulos, 2006). They form the first step in creating an

environment where the organisation is able to secure critical human capital, tangible and intangible technology, financing for extensive research and development, training and processes that augment the firm's marketing, and Strategic Planning Capability (Fernandes, Raja, White & Tsinopoulos, 2006). Firms are unable to truly grow and create realities where proactiveness, new business venturing, risk taking and organisational innovation are encouraged without top management incessantly driving this as an imperative throughout the organisation (Martin-Rojas et al., 2013). In recent research in the pharmaceutical industry, a study was conducted on pharmaceutical firms that are heavily reliant on technology and Tierney, Hermina and Walsh (2013) discovered that not only is top management support extremely important, but it also influences and encourages technological innovation as a means of growing a firm's corporate entrepreneurial essence. In the field of nanotechnology, the same sort of discovery became apparent, with Allarakhia and Walsh's (2012) research highlighting the fact that top managers who invest heavily in their technological innovation capabilities were able to more effortlessly endorse corporate entrepreneurship as a method to grow their businesses for long term survival. The technological know-how and technological education of managers at the highest level is essential for firms looking to improve their technological innovation capabilities in order to be able to create novel innovations and necessary commitment from their employees to build more corporate entrepreneurial products and projects (Shane & Venkataraman, 2000).

Researchers have established that in order for firms to attain business success, their technological innovation capabilities are absolutely essential and indispensable so that a corporate entrepreneurial culture can truly flourish. Understanding this phenomenon necessarily obligates organisations to execute a complete revamp of their strategy. This is particularly essential in an industry that is heavily reliant on the use of technology to build robust products and services. Thus an increased investment and development of the various components of technological innovation is required, in order for these enterprises to be effectively and efficiently managed. Some of these components include research and development, marketing training, technical skills training, ability to create novel innovations, products and services amongst others.

Investing in human capital and technological skills and education is supported by recent research conducted by Fini, Grimaldi, Marzocchi, and Sobrero (2012) on a few information communications technology companies; The study places emphasis on the firms that invest in their technological innovation capabilities and how these firms are more likely to partake in corporate entrepreneurship; It more importantly also highlights the fact that these corporate entrepreneurial activities, formulated on the back of technologically advanced enterprises, are largely driven and influenced by the skills of quite a number of individuals (Fini et al., 2012). These entrepreneurial professionals that reside within large organisations that are heavily dependent on technology, have earned their respect and standing through the pivotal role they play in being able to identify new opportunities that allow them to encourage corporate entrepreneurial development (D'Este, Mahdi, Neely & Rentocchini, 2012). Thus, the technological innovation capabilities of an organisation, though very complex, has been studied as an integral facet of entrepreneurs in large enterprises participating in new business venturing, by accomplishing the unfathomable and innovating their way out of complex business environments and conditions (D'Este et al., 2012). In order for technological innovation to encourage corporate entrepreneurial activity within an enterprise, it is very critical for the entrepreneurs within the organisation to be extremely cognisant of technological innovation and possess the necessary technical skills for the enterprise to command the authority over its domain of doing business (Antoncic & Prodan, 2008; Cooper, 1973).

Research concluded on some companies in the United States of America have highlighted that technological innovations as a means to promote a corporate entrepreneurial culture, do not happen in isolation (Zahra & Garvis, 2000). This usually comes in the form of complimentary resources that allow firms that are technologically intensive to gain access to these complementary resources in order to attain sustained competitive prowess (Newbert, Gopalakrishnan & Kirchoff, 2008).

Successfully managing this investment into technological innovation capabilities is extremely complex and multi-dimensional and there is very little comprehension surrounding the effects, consequences and implications of investment decisions taken in this regard (Tseng et al., 2012). Scholars in recent years have suggested a real options method be employed in order to tackle investment decision-making when it comes to technological innovation capabilities as a means of growing

corporate entrepreneurship; As a result, the instrument on technological innovation capabilities used in this research will be slightly modified, specifically with regards to questions around resource allocation capability, to include questions associated with financial investment. This modification was done specifically to ascertain whether financial investment in technological innovation had some effect in creating a more entrepreneurial spirit within the organisation. Based on the comprehensive work of previous scholars as stipulated in the literature review above, we have attempted to declare the following hypothesis:

2.3.2 Hypothesis 1

Hypothesis 1: Technological innovation Capability is positively associated with corporate entrepreneurship in Media and Entertainment firms in South Africa.

Hypothesis 1a: Learning capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1b: Research and Development Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1c: Resource Allocation Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1d: Production Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1e: Marketing Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1f: Organising Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1g: Strategic Planning Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Proposed Model:

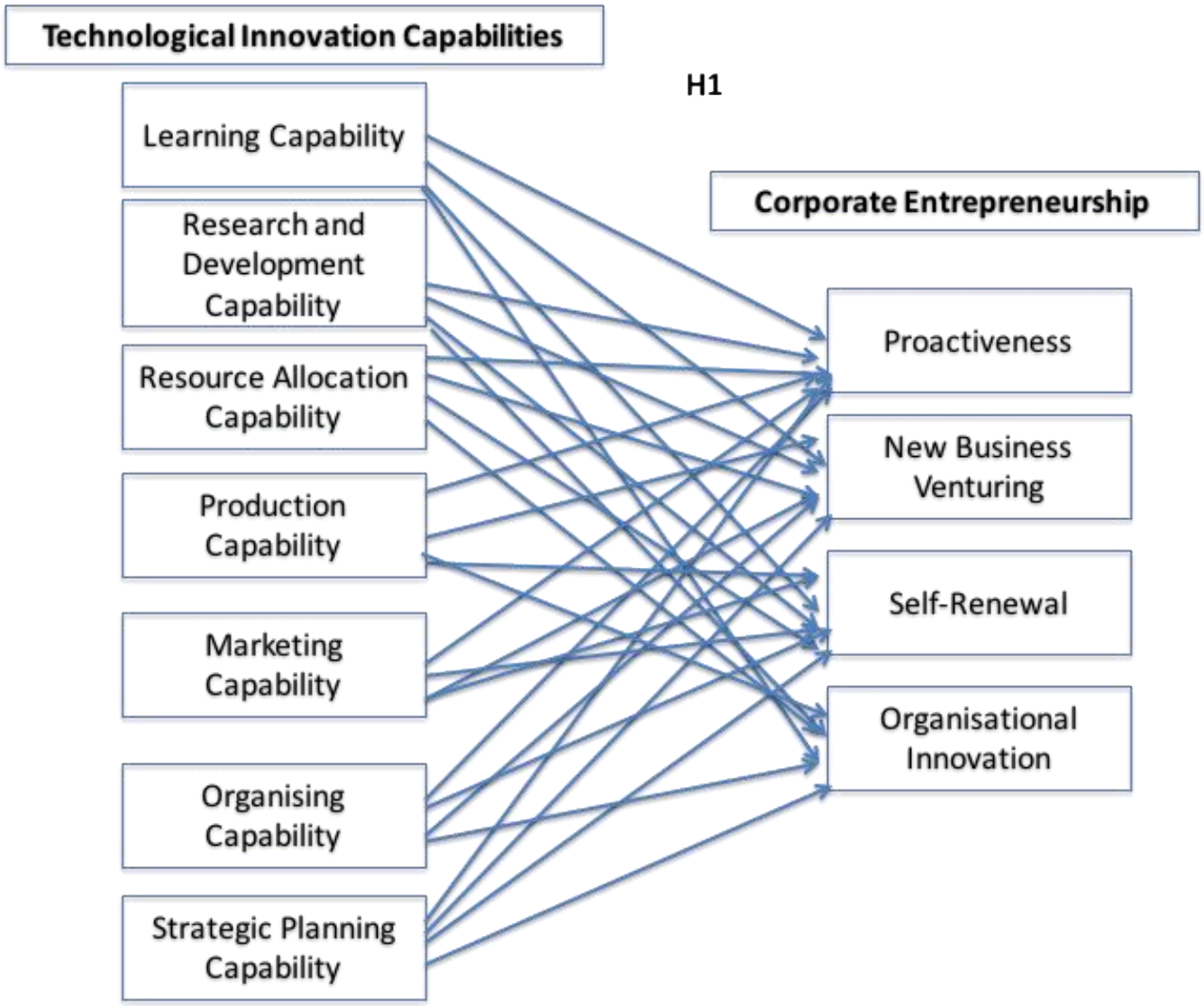


Figure 1 - (Tseng, Lin & Vy, 2012; Gündoğdu, 2012, Martin-Rojas et al., 2013 ;)

2.4. Corporate entrepreneurship and organisational performance.

2.4.1 Corporate entrepreneurship and organisational performance theory.

The precise definition of corporate entrepreneurship has over the last few years eluded several scholars in the field of business and new ventures creation to a point where debates through literature have brought about an inconclusive construct for

the theoretical concept (Zimmerman, 2010). The concept encompasses and is used to delineate the key entrepreneurial behaviours present within the walls of well-established firms (Morris & Kuratko, 2002). Jennings and Lumpkins (1989), as early as 1989, defined corporate entrepreneurship as ‘‘the extent to which new products and/or new markets are developed.’’ Several scholars in literature have also supported and accentuated this idea of “new product innovation”, as an imperative action in the field of corporate entrepreneurship (Zahra & Covin, 1995; Shane & Venkataraman, 2000; Miller, 1983; Scholhammer, 1982).

Corporate entrepreneurship has been deemed by several scholars over the years as a vital predictor of firm performance (Antoncic & Prodan, 2008). The construct has proven to be extremely important for firms looking to survive complex business situations, grow their profits and reinvent their core business strategies. There has also been research conducted in the field of corporate entrepreneurship with firms that rely heavily on technology (Zahra, 1996). The findings resonate firmly with the businesses surveyed in this research. In high technology environments where there exists rapid change and rampant competition, adopting a corporate entrepreneurial mind-set and executing entrepreneurial strategies has increasingly become the most vital undertaking of these enterprises (Zahra & Covin, 1995). Bold risk taking strategies, coupled with increased investment into the development of novel innovative technologies, products, services and processes have become part of the DNA of large businesses looking to remain alive and stay relevant. Networks and alliances in this field has definitely been under-researched, especially with regards to how these firms can use their internal and external resources and how their inter-organisational associations can be more effectively used to promote corporate entrepreneurship in their enterprises (Antoncic & Prodan, 2008).

Several scholars agree that corporate entrepreneurship built on the back of technological innovation has proven to be extremely essential in first world countries (Wang et al., 2008; Yam et al., 2011; Tseng et al., 2012); The phenomenon has also proven to be critical for the rejuvenation of transitioning and developing economies (Antoncic & Hisrich, 2001; Bacova, 1987; Lin & Vy, 2012) considering they are the drivers of firms within this part of the world endeavouring to be on par with more advanced economies (Ozcelik & Taymaz, 2004; Bojnec & Noval, 2006; Gunther & Gebhardt, 2005). Corporate entrepreneurship was discovered to have a relationship

with performance of businesses in as early as 1986 when Covin and Slevin (1986) researched the existence of the construct within small, medium and large corporates from a variety of Slovenian sectors and industries, but at that point not on any enterprises in the United States of America. It was only until Zahra and Garvis (2000) took on the challenge in 2000 to research nearly 100 companies based in the United Stated of America, that a high correlation was discovered between the enterprises that were entrepreneurially active and their consequent firm profitability and performance. Though the intensity at which these various firms practiced corporate entrepreneurship was researched, it never portrayed a positive relationship with how well these US companies performed (Morris & Sexton, 1996); They further went on to explain this discrepancy and alluded to the fact that companies based in the United States of America or in really strong first world economies are more focused on growth and place more emphasis on this than those in developing markets. Firms like those researched by both Antoncic and Hisrich (2001), were seemingly more focused on a combination of profits and growth both locally and internationally. Nevertheless, enterprises that placed significant emphasis on innovation as a facet of corporate entrepreneurship according to Freel (2000), were more prone to portray growth indicators than those enterprises who placed zero emphasis on innovation and uniqueness. It is important to be cognisant of the fact that the adoption of corporate entrepreneurship, though extremely useful for firm renewal and the alleviation of economic challenges, has been highlighted by some scholars to not always necessarily translate into favourable outcomes and instant profits (Covin & Miles, 1999; Antoncic & Hisrich, 2001; Peltola, 2012); As the construct is extremely difficult to successfully and efficiently implement and manage in organisations (Ireland et al., 2009).

Another dimension of corporate entrepreneurship is this concept of entrepreneurial behaviour, which is at the centre of corporate entrepreneurship. The entrepreneurial behaviour of a firm or set of individuals within a large enterprise can be defined as the ability to recognise and exploit opportunities in an entrepreneurial manner across different facets and departments of the enterprise. It is important for firms looking to improve their business performance to comprehend the antecedents of corporate entrepreneurship. These organisations according Peltola (2012), need to be aware of the differences between salient opportunities and exploiting these for current

success and exploring and exploiting novel opportunities for future sustained competitive advantage. To further elaborate, recent research has shown that firms looking to imbibe corporate entrepreneurship as a means to foster organisational performance need to assume complete advantage of their recognized business opportunities, while at the same time ruthlessly searching for new ways of increasing overall organisational performance (Ireland et al., 2009; Peltola, 2012). Enterprises are not to focus on one and abandon the other, a firm balance between the two must be achieved otherwise these enterprises could easily begin a downward spiral and incurring insurmountable costs at the same time (Ireland et al., 2009; Peltola, 2012).

Corporate entrepreneurship as a means to boost enterprise performance has historically been researched as a process that largely focused on the external environment and developing novel services, processes and products (Cunningham & Lischeron, 1991). However, several researchers in recent times have placed increased distinction on the importance of the organisation's internal innovation processes and internal business environment preparedness for corporate entrepreneurship (Burgess, 2013; Sebora, Theerapatvong & Lee, 2010; Hornsby et al., 2002). In the corporate entrepreneurship literature, several authors have come to the consensus that the process involves employing an "organisational renewal" and business "rejuvenation" methodology in exploiting opportunities both native to and outside of the enterprise (Burgess, 2013; Hornsby et al., 2002; Hancer, Bulent Ozturk & Ayyiildiz, 2009); They go on to suggest that the entire process becomes a robust strategic agenda for forthcoming business objectives and undertakings instead of some sort of sustenance for existing activities.

In order for corporate entrepreneurship to work efficiently in large enterprises, the correct assemblies and procedures must exist. Usually large organisations become heavily reliant on efficiency and standardization, and less on unconventional and innovative styles of management (Ireland et al., 2009). There are several hierarchical structures that generally exist in large enterprises that require clear and concise instructions and directions from senior management. These then need to be enacted on operating departments at lower levels of the business's chain of management as well (Mantere, 2008; Burgess, 2013). Corporate entrepreneurship relies heavily on all managers, including those at lower leadership levels in the enterprise (Kuratko et al., 2005; Burgess, 2011), to create a collaborative environment where individuals

are constantly on the lookout for promising opportunities for commercialisation (Hisrich et al., 2005). These objectives are only realised with the assistance of top-level managers who ultimately own the firm's mission and can affect change (Heinonen & Toivonen, 2007; Burgess, 2013). Research has shown that the methods enterprises use to animate a corporate entrepreneurial environment are extremely vital. These methods are essential especially with regards to how knowledgeable employees have to be about the fact that the process involves a two-way collaborative dynamic from senior to lower level management and vice versa (Heinonen & Toivonen, 2007). This allows for a culture where learning and development is encouraged. Middle managers have however in recent research been seen as the glue that binds senior level management and lower level management corporate entrepreneurial potential together; They hence act as massive catalysts for the successful implementation of corporate entrepreneurial activities and strategies (Kuratko et al., 2005). They essentially translate senior management mission, visions and strategies into actionable activities for lower level employees (Kuratko et al., 2005).

Recent research has however shed some light on the complexities that middle level managers, involved in an organisation's corporate entrepreneurial design, face. Though we are aware that these complexities exist, there's very little consensus from scholars as to what exactly these antecedents are (Heinonen & Toivonen, 2007; Ireland et al., 2009). A few authors have however attempted to create a summary of these antecedents and they generally fall into either basic managerial problems and skills or human resource management policies. These said antecedents have generally been described as organisational structure and systems, leadership, teamwork, communication, long-term commitment and rewards (Ireland et al., 2006). Middle level management involvement in the corporate entrepreneurial process should not be confused with one of custodianship as they do not govern the process. It is therefore vital that those at the top are aware of these antecedents and the effects they have on a middle level manager's ability to effectively enact an entrepreneurial culture (Kuratko et al, 2005; Osterman, 2008; Ireland et al, 2006; Burgess, 2013).

In conclusion, the central purpose of an enterprise is to essentially satisfy the desires of its stakeholders, whether in the forms of economic returns, increasing their

consumer footprint, endeavouring to be more industrious or achieving sustained development in the long run (Burgess, 2013). Several researchers as highlighted in the literature have succeeded in establishing a connection between how well firms perform and their corporate entrepreneurial output, with more recent literature further suggesting that firms gain both financial and non-financial proceeds (Kuratko et al, 2005; Sebora et al., 2010; Burgess, 2013). Although in most cases enterprises' achievements are measured by financial performance, more recent research has indicated that the corporate entrepreneurial activities of an enterprise may hold some non-monetary benefits (Goosen, De Coning & Smith, 2002; Sebora et al., 2010). Some of these include the number of novel ideas being created, job contentment, individual development and improved interactions with those interested in the welfare of the enterprise, namely, its consumers and suppliers (Burgess, 2013; Sebora et al., 2010; Dess & Lumpkin, 2005). Kuratko et al. (2005) still reminds us though, that an unsuccessful corporate entrepreneurial strategy may have adverse results on enterprise performance and consequently on financial returns.

Looking at the existing literature and how it has systematically evolved over the years, we have attempted to affirm the following hypothesis based on extensive literature and a more recent line of thinking which forms the basis of the second aspect of this study:

2.4.2 Hypothesis 2

Hypothesis 2: Corporate entrepreneurship is positively associated with organisational performance in media and entertainment firms in South Africa.

Hypothesis 2a: Proactiveness is positively associated with Organisational Performance.

Hypothesis 2b: New Business Venturing is positively associated with Organisational Performance.

Hypothesis 2c: Self-renewal is positively associated with Organisational Performance.

Hypothesis 2d: Organisational Innovation is positively associated with Organisational Performance.

Proposed model:

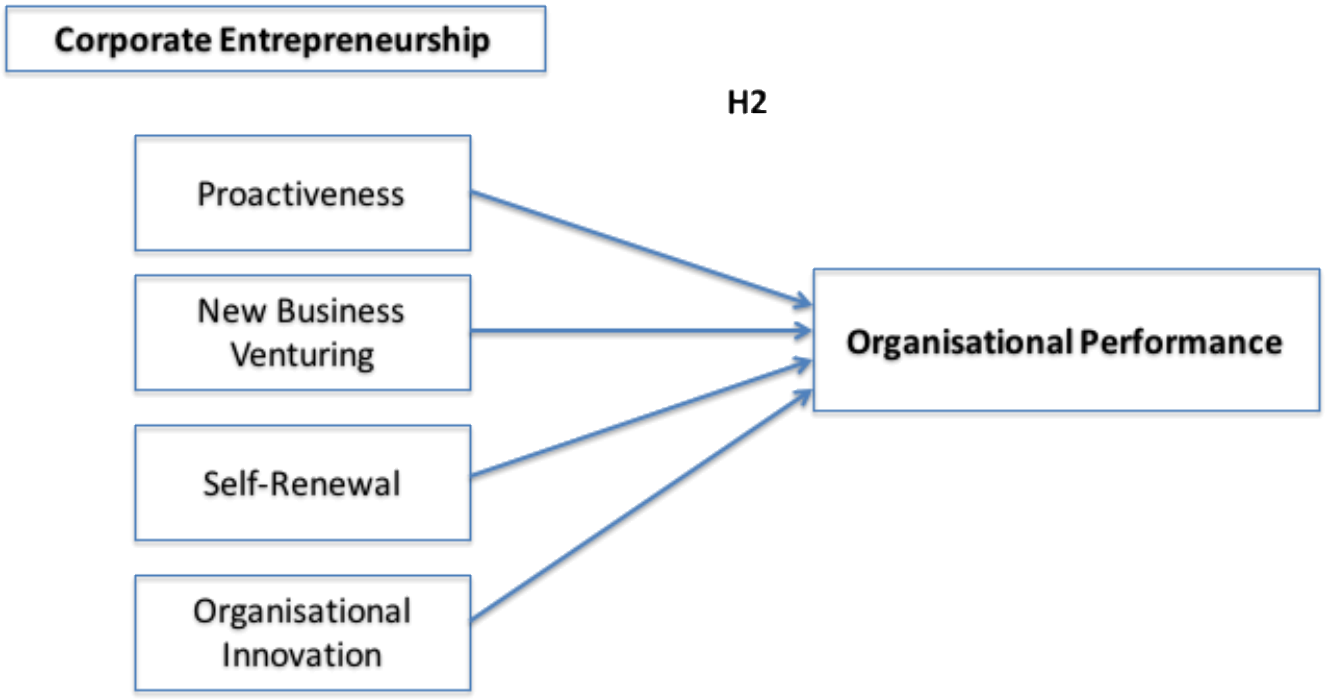


Figure 2 - (Zahra, 1993; Knight, 1997; Zimmerman, 2010; Martin-Rojas et al., 2013)

2.5. Technological innovation capabilities and organisational performance

2.5.1 Technological innovation capabilities and organisational performance Theory

A firm's technological innovation capabilities are a multifaceted and an extremely intricate and challenging construct to determine. Several facets of the firm's functions and numerous resource integration techniques of countless departments comprise the study of an organisation's technological innovation capabilities. As a result of its complexity and multi-dimensional nature, several uncertainties about the construct exist (Garcia-Muina & Navas-Lopez, 2007). This thus leads to processes of innovation that are very complex to determine, carry high levels of uncertainty and are also problematic to predict.

This complexity has however not deterred several authors in the field and several have indeed endeavoured to formulate a link between technological innovation and high growth entrepreneurship especially with regards to corporate entities; They

have over the years agreed that a corporate entrepreneurial culture and technological innovation readiness as a means of promoting and encouraging growth within an organisation, is of vital importance for businesses to not only remain relevant and attain competitive advantage but for sheer survival (Gündoğdu, 2012; Kuratko & Audretsch, 2009; Merrifield, 1993; Pinchott, 1985; Dess et al., 1999).

Other researchers propose a definition of technological innovation capabilities as a function that is essentially comprised of four distinct factors (Adler & Shenbar, 1990). These include firstly the aptitude for creating novel products, processes or services to gratify consumer desires; Secondly the aptitude for applying the correct methods of using cutting edge technology to create novel products, processes or services; Thirdly the aptitude for creating and implementing novel products, processes and services built on the back of technology to gratify forthcoming consumer needs; And finally the aptitude for quickly and efficiently adapting to accidental technological advances and unpredicted prospects made possible by rivals in one's industry. These capabilities have been around enterprises particularly at a commercial level. Tseng et al. (2012) insists that there exists a causal relationship amongst an enterprises resources and its profitability.

The connection between an enterprise's technological innovation capabilities and the enterprise's performance has been widely debated across various facets of literature. Some of these include Snow and Hrebiniak's (1980) distinctive competencies, Teece et al. (1997) and Nelson's (1991) self-motivated proficiencies approach and the knowledge fountain of the firm that Grant (1996) proposed. The studies have directly and indirectly highlighted the nexus that exists between an enterprise's technological innovation capabilities and firm performance. The have further placed significant emphasis on the complexities that exist between establishing a relationship between these constructs is more apparent than meets the eye. Several empirical studies have been conducted, however, in an attempt to bridge the gap in literature (Zahra, 1996; Deeds, DeCarolis & Coombs, 1998; Garcia-Muina & Navas-Lopez, 2007; Tseng et al., 2012) researchers are yet to come to an accord about the effect an enterprise's technological innovation capabilities has on its performance due to their multi-dimensionality.

The literature has evolved from simply measuring how much enterprises spend on research and development, patents or both, to include an enterprise's readiness to acquire new technologies; Hence the adoption of a seven-dimensional model to measure a firm's technological innovation capability used by many researchers in recent times (Tseng et al., 2012; Yam et al., 2011; Lin & Vy, 2012).

Organisational performance has a variety of measurement methods, different ones employed by different scholars. Several researchers have emphasized the role innovation plays in fostering organisational, success competitiveness and performance; They go on to radically argue that either firms innovate for corporate survival, growth and relevance or simply "evaporate" and become extinct (Higgins, 1995; Porter, 1990).

This study proposes a third hypothesis that has received very little attention in the literature due the complex nature of the technological innovation capability concept and its measurement with regards to organisational performance. In order to bridge the gap in the literature, this study posits that:

2.5.2 Hypothesis 3

Hypothesis 3: Technological innovation Capability is positively associated with organisational performance in media and entertainment firms in South Africa.

Hypothesis 3a: Learning capability is positively associated with Organisational Performance.

Hypothesis 3b: Research and Development capability is positively associated with Organisational Performance.

Hypothesis 3c: Resource allocation is positively associated with Organisational Performance.

Hypothesis 3d: Production capability is positively associated with Organisational Performance.

Hypothesis 3e: Marketing capability is positively associated with Organisational Performance.

Hypothesis 3f: Organising Capability is positively associated with Organisational Performance.

Hypothesis 3g: Strategic Planning Capability is positively associated with Organisational Performance.

Proposed model:



Figure 3 – (Tseng, Lin & Vy, 2012; Yam et al., 2011)

This study will make use of an audit instrument proposed by (Yam et al., 2011) to measure organisations' technological innovation capabilities. The framework comprises of seven capability dimensions described as learning capability, research and development capability, marketing capability, resource allocation capability, Organising Capability and strategic capability. This framework measured organisations' technological innovation capabilities by these seven dimensions. Several other scholars who have used this technological innovation capabilities framework developed by Yam, Lo, Tang and Lau (2011) agree that it establishes the

basic elements of innovation in organisations, including production, market, management, technology etc. (Burgelman et al., 2001; Chiesa et al., 1998).

The conceptual framework used to measure the financial investment capabilities with respect to technological innovation capabilities of firms spoken about in the literature review, is a 5 point Likert-type scale measurement of economics developed by the Organisation for Economic Co-operation and Development (OECD) – Eurostat (1997), where 1 depicts “strongly unimportant” and 5 depicts “strongly important”.

This study will also make use of a conceptual framework designed by Murray and Kotabe (1999) to measure organisational performance. The instrument employs a 7 point Likert-type scale consisting of five items that measure the organisation’s performance in comparison to its most direct competitors. This method of determining a firm’s organisational performance in comparison to its competitors was used in this study because it has been widely used in recent research and has proven to be an even more accurate measurement scale in studies conducted in the fields of technological innovation and entrepreneurship (Douglas & Judge, 2001; Choi et al., 2008).

The conceptual framework employed in this study for corporate entrepreneurship is one formulated by two scholars Knight (1997) and Zahra (1993) and employed by Martin-Rojas et al. (2013) and many more in recent studies in the field of corporate entrepreneurship. This study aims to use a measure of four elements employed by Martin-Rojas et al., 2013) to measure an organisations’ proactiveness, another four items to measure business venturing, four to measure self-renewal and four to measure organisational innovation within an organisation, all developed by Zahra (1993) and employed by several researchers in the last 2 years.

2.6. Conclusion of Literature Review

The technological innovation capabilities and related investment capabilities in it and their effect on corporate entrepreneurship and organisational performance is reflected by a multitude of indicators that are not easily measurable by a single dimensional approach but are very complex and multifaceted in nature (Burgelman et al., 2001; Chiesa et al., 1998; Guan & Ma, 2003; Tseng et al., 2012; Ancona & Caldwell, 1987; Martin-Rojas, Garcia-Morales & Bolivar-Ramos, 2013). The aim of the study is to comprehensively examine the impact of technological innovation capabilities on corporate entrepreneurship and consequently organisational performance.

The study also aims to look at technological innovation capabilities, with an interest in how a firm's related investment capabilities in this concept, affects the practice of corporate entrepreneurship in entertainment enterprises looking to achieve increased organisational performance.

The literature concludes a comprehensive summary on the literature of three main areas of study namely, technological innovation capabilities, corporate entrepreneurship and organisational performance, with one minor focus being on a firm's investment capability in relation to its technological innovation capabilities.

Table 1: Summary of all proposed hypotheses addressed in this study.

Hypothesis	Test Performed	Main Findings
H1: Technological Innovation Capability is positively associated with Corporate Entrepreneurship in Entertainment and Media Firms in South Africa.	**ANOVA and Correlation Analysis**	Hypothesis 1a: Learning Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Learning Capability can also significantly positively predict Proactiveness, New Business Venturing, Self-renewal & Organisational Innovation.
		Hypothesis 1b: Research and Development Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Research and Development Capability can also signficantly positively predict Proactiveness & Self-renewal.
		Hypothesis 1c: Resource Allocation Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Resource Allocation Capability can also signficantly positively predict Proactiveness, New Business Venturing, Self-renewal & Organisational Innovation.
		Hypothesis 1d: Production Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Production Capability can also signficantly positively predict Proactiveness, Self-renewal & Organisational Innovation.
		Hypothesis 1e: Marketing Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Marketing Capability can also signficantly positively predict Organisational Innovation & significantly negatively predict Self-renewal.
		Hypothesis 1f: Organisational Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Organisational Capability can also signficantly positively predict Organisational Innovation.
		Hypothesis 1g: Strategic Planning Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Strategic Planning Capability can also signficantly positively predict Organisational Innovation.

Hypothesis	Test Performed	Main Findings
H2: Corporate Entrepreneurship is positively associated with Organisational Performance in Entertainment and Media Firms in South Africa.	**ANOVA and Correlation Analysis**	Hypothesis 2a: Proactiveness is positively associated with Organisational Performance. Proactiveness can also significantly positively predict Organisational Performance.
		Hypothesis 2b: New Business Venturing is positively associated with Organisational Performance. New Business Venturing can however not significantly positively predict Organisational Performance.
		Hypothesis 2c: Self-renewal is positively associated with Organisational Performance. Self-renewal can however not significantly positively predict Organisational Performance.
		Hypothesis 2d: Organisational Innovation is positively associated with Organisational Performance. Organisational Innovation can also significantly positively predict Organisational Performance.

Hypothesis	Test Performed	Main Findings
H3: Technological Innovation Capability is positively associated with Organisational Performance in Entertainment and Media Firms in South Africa.	**ANOVA and Correlation Analysis**	Hypothesis 1a: Learning Capability is positively associated with Organisational Performance. Learning Capability however cannot significantly positively predict Organisational Performance.
		Hypothesis 1b: Research and Development Capability is positively associated with Organisational Performance. Research and Development Capability however cannot significantly positively predict Organisational Performance.
		Hypothesis 1c: Resource Allocation Capability is positively associated with Organisational Performance. Resource Allocation Capability however cannot significantly positively predict Organisational Performance.
		Hypothesis 1d: Production Capability is positively associated with Organisational Performance. Production Capability however cannot significantly positively predict Organisational Performance.
		Hypothesis 1e: Marketing Capability is positively associated with Organisational Performance. Marketing Capability however cannot significantly positively predict Organisational Performance.
		Hypothesis 1f: Organisational Capability is positively associated with Organisational Performance. Organisational Capability however cannot significantly positively predict Organisational Performance.
		Hypothesis 1g: Strategic Planning Capability is positively associated with Organisational Performance. Strategic Planning can significantly positively predict Organisational Performance.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. Research approach/ Paradigm

The research approach on technological innovation capabilities will follow a quantitative approach based on a slight modification of the existing conceptual framework as suggested by (Yam et al., 2011), which involves quantitatively analysing the seven elements that comprise an organisation's technological innovation capabilities, with the inclusion of a technological investment conceptual framework to augment the resource allocation variable in the survey instrument. A similar quantitative approach also based on the replication of an existing conceptual framework used to asses, and analyse corporate entrepreneurship within organisations developed by (Knight, 1997) and (Zahra, 1993), will be used as is. The research approach will also follow a quantitative approach with regards to analysing the constructs within organisational performance as suggested by Martin-Rojas et al. (2013) and developed by Murray and Kotabe (1999).

3.2. Research design

Questionnaires consisting of 54 survey elements will be emailed and hand delivered to 330 individuals in the South African entertainment industry in different sectors. These questionnaires will consist of the constructs in appendix A to D, measured through the use of a 7 point Likert-type scale ranging from strongly disagree "1" to strongly agree "7" for measuring technological innovation capabilities, investment capabilities and corporate entrepreneurship. In order to measure organisational performance recent research has placed emphasis on measuring its performance metrics relative to its competitors. The final survey will be emailed to a sample of respondents from the Media and Entertainment industry, who will be incentivised by committing to provide a summary of the results to them upon completion.

3.3. Population and Sample

3.3.1 Population

The population of this study consists of enterprises involved in any sort of Media and Entertainment business dealings in South Africa. This population is estimated to be in the region of 50,000 (PricewaterhouseCoopers, 2013). The reason for selecting this industry, stems from the fact that the entertainment landscape in South Africa is on the rise and the rise of internet technology as a driving force behind several innovations in this space, has led to Media and Entertainment companies increasingly and rapidly needing to innovate in order to survive. Therefore, many Media and Entertainment companies are embracing technology as a means for knowledge transfer within the economy and competitive superiority and business survival; Thus organisations that embrace technology and invest in technological innovation capabilities become more and more strategic for the economy.

3.3.2 Sample and Sampling Method

This research will employ a comprehensive empirical study through the collection of data from all firms in the entertainment industry in order to determine the correct organisational performance solution for firms in a developing nation competing in a highly technologically advanced business landscape. The idea is to have the samples randomly selected from enterprises in different sectors of the industry willing to participate. A method known as purposive sampling was used in this study as it has been considered to be one of the relevant of the methods that do not involve probability theory (Choi et al., 2008). This method of sampling indicates quite confidently that the researcher has the ability to choose a number of businesses that are relevant to his/her topic of research and indicates that the proposed sample is an adequate representation of the population. In this study a sample of 10 CEO’s, 80 senior managers, 150 marketing managers, 60 technology managers and 30 research and development managers of Media and Entertainment companies in South Africa were selected due to the noted minute number of technologically

advanced media and entertainment companies and personnel to select from in the country. This method of sampling used in this study is thus supported by this reality and solidifies the notion that the sample is a more than fair representation of the entire population of CEOs, senior managers, marketing managers, technology managers and research and development managers in this particular industry. This research however does acknowledge the reality that the sample can never be an exact representation of the entire population due to the fact that correspondents are requested to complete questionnaires voluntarily and not mandatorily.

The sample of CEOs, senior managers, marketing managers, technology managers and research and development managers included employees that worked for digital media and entertainment agencies in South Africa, a large portion of the sample from well-established television broadcasting companies across the country. CEOs and Managers from corporations like DStv, M-Net, ShowMax, Vidi, E-tv, SABC, Coal Stove Pictures, Reel Media amongst others formed part of the sample employed in this study. The alpha level used in determining the sample size within this research was 0.05, which is generally considered an acceptable level of significance for social research (Ary et al., 1996). Furthermore, participation was encouraged through a formal research motivation letter that was emailed to respondents; Special care was taken to ensure that the questionnaire was visually stimulating and questions were concise and succinct.

Table 1: Profile of respondents

Description of respondents	**Number to be sampled**
CEOs	10
Senior Managers	80
Managers of Marketing	150
Managers of Technology	60
Managers of Research and Development	30

3.4. The research instrument

The questionnaire was taken from several bodies of literature on both technological innovation capabilities and corporate entrepreneurship as stated earlier. The concept of corporate entrepreneurship is very tough to define as a process and technological innovation capabilities are a multi-faceted and multi-dimensional construct. This thus begs for an amalgamation of different reliable and well-tested measurements for all constructs used in this study. The survey questionnaire proposed is an amalgamation of 4 different instruments. The first being a corporate entrepreneurship measurement tool developed by Knight (1997) and Zahra (1993) that uses a 7-point Likert-type scale measurement ranging from a strongly disagree scale to a strongly agree one; The second being an instrument that measures investment capability as developed by OECD-Eurostat (1997) and used by Tseng et al. (2012) recently; The third instrument measures technological innovation capabilities developed by Yam et al. (2011) using a 7-point Likert-type scale instrument ranging from “strongly disagree” to “strongly agree”; The fourth and final instrument measures organisational performance and will be measured using a 7-point Likert-type scale with response options ranging from “Much worse than my competitor” to “Much better than my competitor”. The questionnaire will also ask some questions to determine certain control variables with regards to the size of the firm and the sector, where the number of employees in the organisation will be used to indicate the size of the business.

3.5. Procedure for data collection

A questionnaire designed through a combination of various measurements designed by several scholars (Yam et al., 2011; Zahra, 1993; Knight, 1997; Murray & Kotabe, 1999; Tseng et al., 2012) will be emailed and physically handed out to respondents. In order to augment the validity of the survey, considerable effort will be made to have interactive sessions with firms participating in the survey in order to clarify any confusing aspects, especially elements to do with technological innovation, so as to ensure a comprehensive understanding of each question as well as the objective of the study and what it is endeavouring to achieve. The respondents will then be

requested to return the survey questionnaire within a week either through email or physical handover to undergo data analysis. The respondents will receive follow up reminders if the one-week deadline is missed. The survey will be slightly modified to reflect and portray understanding of concepts.

3.6. Data analysis

The data collected will be validated with previous research literature using statistical software like SAS or SSP and advanced Microsoft Excel will be used to calculate the data and conduct basic descriptive analysis identifying the mean and standard deviations.

A correlation analysis will also be conducted to determine relationships between the different variables in each construct. I will also conduct a correlation analysis among the constructs themselves to determine the validity of the relationships between the constructs, as proposed by the hypotheses in this study.

A confirmatory factor analysis will also be conducted on the different constructs within the instrument in order to analyse the validity of the constructs and variables within each construct and the accumulated percentage of explained variance.

An ordinary least squares regression analysis will be conducted in this study where corporate entrepreneurship will be used as a dependent variable to be regressed on by the independent variable, technological innovation capabilities and any control variables. Organisational performance will also be used as a dependent variable and we will use both corporate entrepreneurship and technological innovation capabilities as independent variables and regress these constructs on Organisational Performance. We will do this in order to analyse correlations between constructs so as to accept or reject the different hypotheses proposed at the beginning of the study.

3.7. Validity and reliability of research design

The analysis of the survey questionnaires will undergo Cronbach's alpha coefficient tests to ensure reliability of the different constructs within the instruments and to ensure that the study was acceptable (Cronbach, 1970; Tseng et al., 2012).

3.7.1 External Validity

To evaluate the external consistency, interactive sessions will be held in order to ensure a comprehensive understanding of the constructs within the survey so as to ensure the rigour and validity of the study conducted, especially one of a highly technical nature such as this.

3.7.2 Internal Validity

To evaluate the internal consistency, the Cronbach alphas (Cronbach, 1970) will be calculated.

3.7.3 Reliability

To evaluate the internal consistency, the Cronbach alphas (Cronbach, 1970) will be calculated and confirmatory factor analysis will also be conducted to ensure content reliability.

3.8. Limitations of the study

The respondents could be slightly biased when answering the survey. The applicability of certain concepts in the technological innovation capabilities measurement tool with regards to manufacturing capabilities for example could prove to be a challenging concept to measure in Media and Entertainment enterprises in South Africa. Some of the questions in the survey, may require responses where some of the information required could be considered highly confidential which could instigate hesitation on the part of responses from individuals, especially those in managerial positions. However, I have tried to minimise the need for such confidentiality through the manner in which the questions were crafted.

CHAPTER 4: PRESENTATION OF RESULTS

The survey responses collated from businesses across the South African Media and Entertainment Industry were processed and analysed through a reliable quantitative statistical software known as SSP. This chapter commences with a brief discussion and analysis of the demographic profile of the surveyed individuals used in this study; the chapter then takes a look at a very detailed presentation of the findings and results associated with the tests. A brief paragraph will then conclude our findings within this chapter.

4.1. Demographic profile of respondents

Sample

The sample of respondents used in this study was made up of a total of 247 respondents of which 60% were male and the other 40% were female. The respondents were asked to identify their levels of experience within their firms in order to ensure that the responses recorded, conveyed a more reliable and unbiased spread across the business. The responses recorded indicated that interns constituted 3% of the sample, junior level management 26% of the sample, middle level management constituted 40% of respondents, senior level management constituted 28% of respondents and CEOs or individuals who occupied executive roles within their firms, constituted 2% of respondents.

Individuals who participated in the survey were also asked to specify which of the departments below best suited their respective roles in their organisations; and of those that responded, 37% of them occupied roles in the Marketing department, 30% of them occupied roles in the Product department which encapsulated product research, product development and product support, 16% in the Technology department, 16% occupied roles in their General and Executive Management departments and 1% of respondents gave no answer.

Table 1: Sample Demographics

Variable	Category	Frequency	Percentage
Gender	Male	147	60%
	Female	100	40%
Job level	Intern	8	3%
	Junior Level Management	65	26%
	Middle Level Management	98	40%
	Senior Level Management	70	28%
	CEO/Executive	6	2%
Departments that best suits the respondent's role in organisation	Marketing	91	37%
	Product: Research, Development and Support	75	30%
	Technology	39	16%
	General Management	40	16%
	No answer	2	1%

Measurement scale

The variables within corporate entrepreneurship namely Proactiveness, New Business Venturing, Self-Renewal and Organisational Innovation were measured using a 7 point Likert-type scale where 1 meant strongly disagree and 7 meant strongly agree. The variables within technological innovation capabilities namely, Learning Capability, Research and Development Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability, and Strategic Planning Capability were all also measured using a 7 point Likert-type scale where 1 meant strongly disagree and 7 meant strongly agree. The variables within organisational performance were also measured using a 7 point Likert-type scale where recent research have supported the use of a scale where 1 means much worse than my competitor and 7 means much better than my competitor.

4.2. Factor Analysis

A factor analysis is a method used in statistics to explain possible inconsistencies between certain experimental variables that exhibit correlation amongst one another. In this case for example, there exists a possibility that the variability in the variables that best describe technological innovation capabilities and corporate entrepreneurship could imitate the inconsistencies in the variables that best describe organisational performance. Hence the factor analysis is conducted to precisely discover these possible variations that exist between observed variables and underlying variables. Therefore, in each instance, we modelled the variables within technological innovation capabilities and corporate entrepreneurship as linear combinations of the likely characteristics, with error terms included.

4.2.1 Scale Reliability

We conducted a factor analysis in order to assess whether all the variables within one construct loaded highly onto the other corresponding variables in the other constructs. We assessed if each variable within technological innovation capabilities loaded highly onto the variables within corporate entrepreneurship and whether the variables within both these constructs loaded highly onto organisational performance. After conducting the factor analysis, Cronbach’s alpha values were computed for each of the resultant variables within each construct to assess their

reliability. All the constructs in the factor analysis conducted retained one factor. Results for the Factor analysis and the reliability of the factor analysis are shown in the tables below.

Table 2: Factor Analysis Results

Construct	Item	Factor Loading	Total variance explained
Proactiveness	In dealing with competitors, the organisation is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc.	.871	72%
	In general, the top managers at our firm have a strong propensity for high risk projects (with chances of very high returns).	.859	
	In general, the top managers at our firm believe that, owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives.	.840	
	When confronted with decision-making situations involving uncertainty, our organisation typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities.	.832	
New Business Venturing	The organisation has stimulated new demands on the existing products/services in the current markets through aggressive advertising and marketing.	.874	73%
	The organisation has broadened the business lines in the current industries.	.859	
	The organisation has pursued new businesses in new industries that are associated with the current business.	.844	
	The organisation has entered new business by offering new lines and product/services.	.840	
Self-Renewal	The organisation has reorganised units and divisions to increase organisational innovation.	.924	81%

	The organisation has coordinated activities among units to enhance organisational innovation.	.911	
	The organisation has adopted flexible organisational structures to increase innovation.	.889	
	The organisation has trained and encouraged the employees to be creative and innovative.	.872	
Organisational Innovation	The different innovations within the organisation have significantly increased in number over the years.	.902	78%
	The spending on new product/service development activities has significantly increased in value over the years.	.890	
	The number of products/services added by the organisation and already existing in the market has significantly increased in number over the years.	.883	
	The number of new products/services introduced for first time in the market by the organisation has significantly increased in number over the years.	.876	
	Research and development, technological leadership and innovation have significantly increased in emphasis over the years.	.860	
Learning Capability	There is capacity to assess technologies that are relevant to the firm's business strategy.	.895	78%
	Teams at work are encouraged to identify opportunities to improve the present ways of doing things.	.886	
	There is an ability to understand the firm's core competencies and matching its technological capabilities to the needs of the market.	.861	
Research and Development	There is an encouraging quality and speed of feedback from creating to designing and developing of new products and services.	.924	80%

Capability	There are mechanisms for transferring technology from a research phase to a product development phase.	.906	
	There is a significant amount of market and customer feedback into the technological innovation process.	.883	
	There is a significant level of investment in research and development in the rollout of new products and services.	.853	
Resource Allocation Capability	The organisation attaches a significant level of importance to hiring new qualified personnel.	.901	76%
	The organisation attaches a significant level of importance to getting the right resources into the right jobs at the right times.	.885	
	The organisation selects key personnel in each functional department.	.885	
	The organisation steadily increases its personnel working on innovation activity.	.877	
	The organisation purchases tangible/intangible technology for example machinery and equipment; patents and licenses; cutting edge software or hardware.	.866	
	The organisation conducts organised in-house research and development and contracted research and development activities; This could either be sub-contracted research and development, joint research and development activities or both.	.862	
	The organisation invests in knowledge acquisition, for example training, inviting experts from outside for problem solving, trials and experiments.	.857	
	The organisation works on improving its existing product, process and service technology.	.845	
	The organisation actively markets new or improved products within the organisation.	.844	

Production Capability	The organisation has the ability to transform the research and development output into new products and services.	.927	85%
	The organisation exhibits effectiveness in producing new goods and services.	.927	
	The organisation has personnel who can effectively produce new products/services.	.909	
Marketing Capability	The organisation manages relationships with customers.	.933	80%
	The organisation has knowledge of various market segments.	.916	
	The organisation has a sales and marketing team that is highly efficient in creating awareness and educating customers around new products/services.	.892	
	The organisation exhibits the ability to continuously and efficiently market a product/service after its initial launch.	.841	
Organising Capability	The organisation has the ability to handle multiple innovation projects in parallel.	.917	83%
	The organisation has the ability to coordinate and cooperate between the research and development, marketing and production department.	.913	
	The organisation has the ability to integrate and control the major functions of the company at a high level.	.897	
Strategic Planning Capability	The organisation has the ability to identify internal strengths and weaknesses.	.922	77%
	The organisation has the ability to identify external opportunities and threats.	.890	
	The organisation exhibits goal and objectives clarity.	.885	

	The organisation has made available clear plans – a roadmap with measurable milestones.	.874	
	The organisation displays adaptability and responsiveness to the external environment.	.808	
Organisational Performance	Organisation's market share in its main products and markets.	.853	71%
	Organisational performance measured by return on equity (financial profitability or return on equity).	.849	
	Organisational performance measured by return on sales (percentage of profits over billing volumes)	.845	
	Growth of sales/subscribers in its main products and markets.	.843	
	Organisational performance measured by return on assets (economic profitability or return on assets).	.831	

Table 3: Reliability scores

Constructs	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	Remark
Resource Allocation Capability	.958	.960	9	Acceptable
Organisational Innovation	.924	.929	5	Acceptable
Strategic Planning Capability	.921	.924	5	Acceptable
Self-Renewal	.920	.921	4	Acceptable
Marketing Capability	.916	.918	4	Acceptable
Research and Development Capability	.912	.914	4	Acceptable
Creation Capability	.911	.911	3	Acceptable
Organisational Performance	.897	.899	5	Acceptable
Organising Capability	.893	.895	3	Acceptable
New Business Venturing	.871	.877	4	Acceptable
Proactiveness	.869	.873	4	Acceptable
Learning Capability	.853	.855	3	Acceptable

4.2.2 Appropriateness of Factor Analysis

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is used to measure the appropriateness of a factor analysis.

Interpretive adjectives for the Kaiser-Meyer-Olkin Measure of Sampling Adequacy are: above 0.90 as marvellous, above 0.80 as meritorious, above 0.7 as middling, above 0.60 as mediocre, above 0.50 as miserable, and below 0.50 as unacceptable. The value of the KMO Measure of Sampling Adequacy for the corporate entrepreneurship variables are: Proactiveness - 0.833, New Business Venturing - 0.829, Self-renewal - 0.796 and Organisational innovation - 0.898. The value of the

KMO Measure of Sampling Adequacy for the technological innovation capabilities variables are: Learning Capability – 0.728, Research and Development Capability – 0.728, Resource Allocation Capability – 0.948, Production Capability – 0.755 Marketing Capability – 0.806, Organising Capability – 0.748 and Strategic Planning Capability – 0.880. The value of the KMO Measure of Sampling Adequacy for Organisational Performance is 0.830. Since all the KMO Measures of Sampling Adequacy meets the minimum criteria, we do not have a problem that requires us to examine the Anti-Image Correlation Matrix.

Bartlett's test of Sphericity tests the hypothesis that the correlation matrix is an identity matrix; i.e. all diagonal elements are 1 and all off-diagonal elements are 0, implying that all of the variables are uncorrelated. If the sigma values for this test are less than our alpha level, we reject the null hypothesis that the population matrix is an identity matrix. The sigma values for this analysis are all less than our alpha level of 0.05 and this it leads us to reject the null hypothesis and conclude that there are correlations in the data set that are appropriate for factor analysis. This analysis meets this requirement.

Table 4: KMO and Bartlett's Test

Proactiveness		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.833
Bartlett's Test of Sphericity	Approx. Chi-Square	476.168
	df	6
	Sig.	.000
New Business Venturing		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.829
Bartlett's Test of Sphericity	Approx. Chi-Square	493.966
	df	6
	Sig.	.000
Self-Renewal		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.796
Bartlett's Test of Sphericity	Approx. Chi-Square	776.872
	df	6
	Sig.	.000
Organisational Innovation		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.898
Bartlett's Test of Sphericity	Approx. Chi-Square	938.190

	df	10
	Sig.	.000
Learning Capability		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.728
Bartlett's Test of Sphericity	Approx. Chi-Square	330.096
	df	3
	Sig.	.000
Research and Development Capability		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.801
Bartlett's Test of Sphericity	Approx. Chi-Square	728.811
	df	6
	Sig.	.000
Resource Allocation Capability		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.948
Bartlett's Test of Sphericity	Approx. Chi-Square	2192.534
	df	36
	Sig.	0.000
Production Capability		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.755
Bartlett's Test of Sphericity	Approx. Chi-Square	500.195
	df	3
	Sig.	.000
Marketing Capability		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.806
Bartlett's Test of Sphericity	Approx. Chi-Square	766.260
	df	6
	Sig.	.000
Organising Capability		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.748
Bartlett's Test of Sphericity	Approx. Chi-Square	438.539
	df	3
	Sig.	.000
Strategic Planning Capability		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.880
Bartlett's Test of Sphericity	Approx. Chi-Square	956.422
	df	10
	Sig.	.000
Organisational Performance		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.830
Bartlett's Test of Sphericity	Approx. Chi-Square	761.882
	df	10
	Sig.	.000

The Cronbach's Alpha values for the variables within the corporate entrepreneurship framework read as follows: Proactiveness specified a Cronbach's Alpha value of 0.869, New Business Venturing specified a Cronbach's Alpha value of 0.871, Self-Renewal specified a Cronbach's Alpha value of 0.920 and Organisational Innovation specified a Cronbach's Alpha value of 0.924.

The Cronbach's Alpha values for the variables within the technological innovation capabilities framework read as follows: Learning Capability specified a Cronbach's Alpha value of 0.853, Research and Development Capability specified a Cronbach's Alpha value of 0.912, Resource Allocation Capability specified a Cronbach's Alpha value of 0.896, Production Capability specified a Cronbach's Alpha value of 0.911, Marketing Capability specified a Cronbach's Alpha value of 0.916, Organising Capability specified a Cronbach's Alpha value of 0.893 and Strategic Planning Capability specified a Cronbach's Alpha value of 0.921.

The Cronbach's Alpha values for the variables within the Organisational Performance framework read as follows: Organisational Performance specified a Cronbach's Alpha value of 0.897.

The factor analysis conducted on the constructs and sub-constructs indicated that all the variables within the constructs loaded highly on to their respective variables within their corresponding constructs. The results portrayed a very high internal consistency as shown by the fact that all Cronbach's Alpha values were greater than 0.7.

The following variable labels were used for the resultant 14 constructs.

Table 5: Variable labels

Label	Construct
PRO	Proactiveness
NBV	New Business Venturing
SR	Self-Renewal
OI	Organisational Innovation
LC	Learning Capability
RDC	Research and Development Capability
RAC	Resource Allocation Capability
PC	Production Capability
MC	Marketing Capability
OC	Organising Capability
SPC	Strategic Planning Capability
OP	Organisational Performance

A summated scale was computed for each construct by calculating the average of the items in that construct. The descriptive statistics for the different constructs are summarised in the table below.

Table 6: Descriptive Statistics

Descriptive Statistics					
Label	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
OP	247	3.40	7.00	5.997	.813
PC	247	2.00	7.00	5.895	.993
LC	247	2.67	7.00	5.866	.912
NBV	247	2.75	7.00	5.838	.903
OC	247	1.67	7.00	5.830	1.050
OI	247	2.80	7.00	5.824	.949
MC	247	1.75	7.00	5.815	1.077
SPC	247	2.00	7.00	5.789	1.074
PRO	247	3.00	7.00	5.734	.844
RAC	247	2.44	7.00	5.674	1.081
SR	247	1.50	7.00	5.622	1.134
RDC	247	1.75	7.00	5.602	1.138

The results show that the construct Organisational Performance with a mean of 5.997 had the highest presence within the organisation followed by Production Capability with a mean of 5.895, Learning Capability with a mean of 5.866, New Business Venturing with a mean of 5.838, Organising Capability with a mean of 5.830, Marketing Capability with a mean of 5.815, Strategic Planning Capability with a mean of 5.789, Proactiveness with a mean of 5.734, Research Allocation Capability with a mean of 5.674 and Self-Renewal Capability with a mean of 5.622. The construct with the least score and consequently the construct with the lowest presence within the organisation were recorded for Resource and Development Capability with a mean of 5.602. This showed that the average responses corresponded to “agree” with a standard deviation of about 1 level on the scale.

4.3. Correlation and Regression Analysis

Table 7: Correlation Analysis Table

Pearson's Correlations Analysis													
		PR	**NBV**	**SR**	**OI**	**LC**	**RDC**	**RAC**	**PC**	**MC**	**OC**	**SPC**	**OP**
PRO	Pearson Correlation	1											
	Sig. (2-tailed)												
NBV	Pearson Correlation	.672**	1										
	Sig. (2-tailed)	.000											
SR	Pearson Correlation	.751**	.584**	1									
	Sig. (2-tailed)	.000	.000										
OI	Pearson	.766**	.619**	.770**	1								

	Correlation												
	Sig. (2-tailed)	.000	.000	.000									
LC	Pearson Correlation	.690**	.630**	.715**	.714**	1							
	Sig. (2-tailed)	.000	.000	.000	.000								
RDC	Pearson Correlation	.754**	.542**	.758**	.719**	.721**	1						
	Sig. (2-tailed)	.000	.000	.000	.000	.000							
RAC	Pearson Correlation	.724**	.590**	.777**	.746**	.691**	.755**	1					
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000						
PC	Pearson Correlation	.752**	.606**	.759**	.734**	.718**	.745**	.734**	1				
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000					
MC	Pearson Correlation	.627**	.577**	.587**	.648**	.641**	.672**	.673**	.720**	1			

	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000				
OC	Pearson Correlation	.700**	.573**	.692**	.702**	.700**	.742**	.699**	.861**	.776**	1		
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000			
SPC	Pearson Correlation	.688**	.570**	.662**	.705**	.663**	.747**	.656**	.768**	.673**	.810**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		
OP	Pearson Correlation	.656**	.523**	.546**	.628**	.586**	.617**	.609**	.682**	.618**	.674**	.764**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis table above indicates that the correlations between the independent variables and dependent variables hypothesized in the study are highly significant. The table also highlights that even though all the correlations are significant, they all have correlation coefficients below 0.9. This essentially indicates that there is a low risk of multicollinearity when you use the same variables in a multiple regression analysis. This implies in other words that if any two variables had been too highly correlated (i.e. > 0.9), then we would have only been able to use one or the other of the two, not both in the multiple regression analysis.

4.4 Hypothesis 1

Correlation Analysis

Hypothesis 1: Technological innovation capabilities is positively associated with corporate entrepreneurship in media and entertainment firms in South Africa.

A correlation analysis was conducted between technological innovation capabilities and corporate entrepreneurship. The results are shown in Table 7 above.

Hypothesis 1a: Learning capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1a is supported by the results since Learning Capability has a highly significant correlation with Proactiveness (r = 0.690**) at a 1% level of significance, New Business Venturing (r=0.630**) at a 1% level of significance, Self-Renewal (r=0.715**) at a 1% level of significance and organisational innovation (r=0.714**) at a 1% level of significance. Thus, Learning Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1b: Research and Development Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1b is supported by the results since Research and Development capability has a highly significant correlation with Proactiveness (r = 0.754**) at a 1% level of significance, New Business Venturing (r=0.542**) at a 1% level of

significance, Self-Renewal (r=0.758**) at a 1% level of significance, and Organisational Innovation (r=0.719**) at a 1% level of significance. Thus, Research and Development Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1c: Resource Allocation Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1c is supported by the results since Resource Allocation Capability has a highly significant correlation with Proactiveness (r = 0.724**) at a 1% level of significance, New Business Venturing (r=0.590**) at a 1% level of significance, Self-Renewal (r=0.777**) at a 1% level of significance, and Organisational Innovation (r=0.746**) at a 1% level of significance. Thus, Research and Allocation Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1d: Production Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1d is supported by the results in the table above since Production Capability has a highly significant correlation with Proactiveness (r = 0.752**) at a 1% level of significance, New Business Venturing (r=0.606**) at a 1% level of significance, Self-Renewal (r=0.759**) at a 1% level of significance and Organisational Innovation (r=0. 734**) at a 1% level of significance. Thus, Production Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1e: Marketing Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1e is supported by the results in the table above since Marketing Capability has a highly significant correlation with Proactiveness (r = 0.627**) at a 1% level of significance, New Business Venturing (r=0.577**) at a 1% level of significance, Self-Renewal (r=0.587**) at a 1% level of significance and Organisational Innovation (r=0. 648**) at a 1% level of significance. Thus, Marketing Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1f: Organising Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1f is supported by the results in the table above since Organising Capability has a highly significant correlation with Proactiveness (r = 0.700**) at a 1% level of significance, New Business Venturing (r=0.573**) at a 1% level of significance, Self-Renewal (r=0.692**) at a 1% level of significance and Organisational Innovation (r=0. 705**) at a 1% level of significance. Thus, Organising Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1g: Strategic Planning Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Hypothesis 1g is supported by the results in the table above since Strategic Planning Capability has a highly significant correlation with Proactiveness (r = 0.688**) at a 1% level of significance, New Business Venturing (r=0.570**) at a 1% level of significance, Self-Renewal (r=0.662**) at a 1% level of significance and Organisational Innovation (r=0. 705**) at a 1% level of significance. Thus, Strategic Planning Capability is positively associated with Proactiveness, Business Venturing, Self-Renewal and Organisational Innovation.

Regression Analysis

Hypothesis 1: Technological innovation Capability is positively related to corporate entrepreneurship in media and entertainment firms in South Africa.

Proactiveness as a dependent variable

Proactiveness was regressed against Learning Capability, Research and Development Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic and Planning Capability.

Table 8: Coefficients - Proactiveness against Technological innovation Capability.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.417	.214		6.607	.000
	LC	.119	.055	.129*	2.160	.032
	RDC	.194	.051	.262*	3.809	.000
	RAC	.154	.049	.197*	3.112	.002
	PC	.242	.068	.285*	3.547	.000
	MC	.004	.048	.005	.075	.941
	OC	-.038	.071	-.048	-.544	.587
	SPC	.075	.054	.096	1.401	.162
a. Dependent Variable: PRO						

The above table shows that Learning Capability (standardised beta, β= 0.129, t-value = 2.160, p-value = 0.032), Research and Development Capability (standardised beta, β= 0.262, t-value = 3.809, p-value = 0.000), Resource Allocation Capability (standardised beta, β= 0.197, t-value = 3.112, p-value = 0.002) and Production Capability (standardised beta, β= 0.285, t-value = 3.547, p-value = 0.000) are positive and significantly associated with Proactiveness since the p-values were less than 0.05 and the coefficients of the variables were positive.

On the other hand, Marketing Capability (standardised beta, β= 0.005, t-value = 0.075, p-value = 0.941), Organising Capability (standardised beta, β= -0.048, t-value = -0.544, p-value = 0.587), and Strategic Planning Capability (standardised beta, β= 0.096, t-value = 1.401, p-value = 0.162) are not significantly associated with Proactiveness the p-values were greater than 0.05.

The regression model fitted to this hypothesis is:

PRO = 1.417 + 0.119LC + 0.194RDC + 0.154RAC + 0.242PC + 0.004MC - 0.038 OC + 0.075SPC.

Table 9: ANOVA - Proactiveness against Technological innovation Capability.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	118.915	7	16.988	71.835	.000[b]
	Residual	56.520	239	.236		
	Total	175.435	246			
a. Dependent Variable: PRO						
b. Predictors: (Constant), SPC, RAC, MC, LC, RDC, PC, OC						

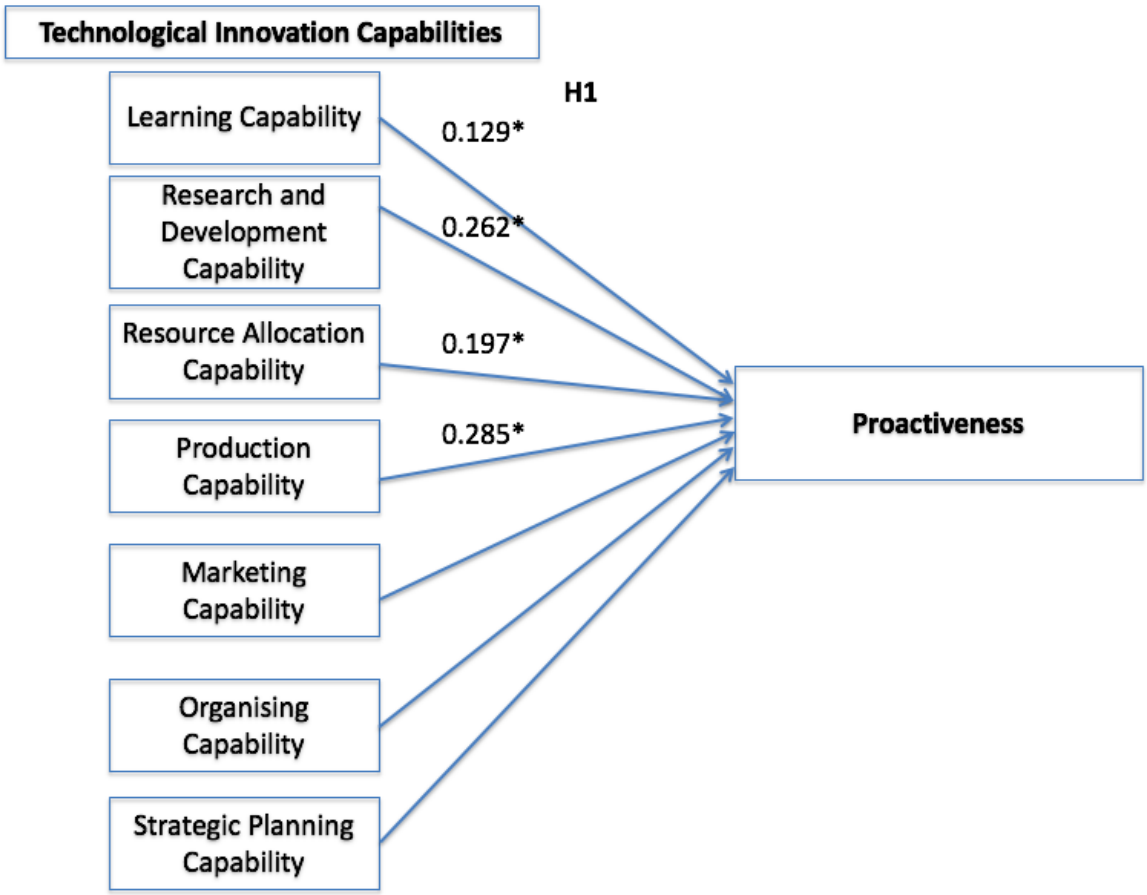
The ANOVA table has results showing whether Technological innovation Capability can significantly predict New Business Venturing. A p-value of the f-test of 0.000 is an indication that the variables for Technological innovation Capability can significantly predict New Business Venturing. The coefficients table below shows results on the impact on individual Technological innovation Capability variables on Proactiveness.

Table 10: Model Summary – Proactiveness against Technological innovation Capability.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.823[a]	.678	.668	.48630
a. Predictors: (Constant), SPC, RAC, MC, LC, RDC, PC, OC				

The model summary shows that Learning Capability, Research and Development, Capability, Resource Allocation, Capability Creation, Capability Marketing Capability, Organising Capability and Strategic Planning Capability explain 67.8% of variation in Proactiveness.

Diagram 1 with regression coefficients:



All individual technological innovation capability variables, namely, Learning Capability, Research and Development, Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability, and Strategic Planning Capability were positively associated with Proactiveness under our correlation analysis. However, when included with other variables in the same multiple regression analysis only Learning Capability, Research and Development, Capability, Resource Allocation Capability and Production Capability were significantly positively associated with Proactiveness.

New Business Venturing as a dependent variable

New Business Venturing was regressed against Learning Capability, Research and Development Capability, Resource Allocation Capability Factor, Production Capability, Marketing Capability, Organising Capability and Strategic and Planning Capability.

Table 11: Coefficients – New Business Venturing against Technological innovation Capability.

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.611	.290		5.547	.000
	LC	.315	.075	.318*	4.223	.000
	RDC	-.085	.069	-.108	-1.235	.218
	RAC	.148	.067	.177*	2.214	.028
	PC	.151	.092	.167	1.637	.103
	MC	.153	.065	.182*	2.341	.020
	OC	-.093	.096	-.108	-.970	.333
	SPC	.135	.073	.160	1.852	.065
a. Dependent Variable: NBV						

The above table shows that Learning Capability (standardised beta, β= 0.318, t-value = 4.223, p-value = 0.000), Resource Allocation Capability (standardised beta, β= 0.177, t-value = 2.214, p-value = 0.028), Marketing Capability (standardised beta, β= 0.182, t-value = 2.341, p-value = 0.020), are positive and significantly associated with New Business Venturing since the p-values were less than 0.05 and the coefficients of the variables were positive.

On the other hand, Production Capability (standardised beta, β= 0.167, t-value = 1.637, p-value = 0.103) Research and Development Capability (standardised beta, β= -0.108, t-value = -1.235, p-value = 0.218), Organising Capability (standardised beta, β= -0.108, t-value = -0.970, p-value = 0.333), and Strategic Planning Capability (standardised beta, β= 0.160, t-value = 1.852, p-value = 0.065) are not significantly associated with New Business Venturing the p-values were greater than 0.05.

The regression model fitted to this hypothesis is:

NBV = 1.611 + 0.315LC - 0.085RDC + 0.148RAC + 0.151PC + 0.153MC - 0.093OC + 0.135SPC.

Table 12: ANOVA – New Business Venturing against Technological innovation Capability.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	96.660	7	13.809	31.814	.000[b]
	Residual	103.737	239	.434		
	Total	200.397	246			
a. Dependent Variable: NBV						
b. Predictors: (Constant), SPC, RAC, MC, LC, RDC, PC, OC						

The ANOVA table has results showing whether Technological innovation Capability can significantly predict New Business Venturing. A p-value of the f-test of 0.000 is an indication that the variables for Technological innovation Capability can significantly predict proactiveness. The coefficients table below shows results on the impact on individual Technological innovation Capability variables on New Business Venturing.

Table 13: Model Summary – New Business Venturing against Technological innovation Capability.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695[a]	.482	.467	.65882
a. Predictors: (Constant), SPC, RAC, MC, LC, RDC, PC, OC				

The model summary shows that Learning Capability, Research and Development, Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic Planning Capability explain 48.2% of variation in New Business Venturing.

Diagram 2 with regression coefficients:



All individual technological innovation capability variables, namely, Learning Capability, Research and Development, Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability, and Strategic Planning Capability were positively associated with New Business Venturing under our correlation analysis. However, when included with other variables in the same multiple regression analysis only Learning Capability, Research Allocation Capability and Marketing Capability were significantly positively associated with New Business Venturing.

Self-Renewal as a dependent variable

Self-Renewal was regressed against Learning Capability, Research and Development Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic and Planning Capability.

Table 14: Coefficients – Self-Renewal against Technological innovation Capability.

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.245	.267		-.919	.359
	LC	.219	.069	.176*	3.199	.002
	RDC	.235	.064	.235*	3.691	.000
	RAC	.366	.061	.349*	5.953	.000
	PC	.342	.085	.300*	4.029	.000
	MC	-.136	.060	-.129*	-2.266	.024
	OC	-.016	.088	-.015	-.185	.854

	SPC	.010	.067	.009	.150	.881
a. Dependent Variable: SR						

The above table shows that Learning Capability (standardised beta, β= 0.176, t-value = 3.199, p-value = 0.002), Research and Development Capability (standardised beta, β= 0.235, t-value = 3.691, p-value = 0.000), Resource Allocation Capability (standardised beta, β= 0.349, t-value = 5.953, p-value = 0.000) & Production Capability (standardised beta, β= 0.300, t-value = 4.029, p-value = 0.000), are positive and significantly associated with Self-renewal since the p-values were greater than 0.05 and the coefficients of the variables were positive.

On the other hand, Organising Capability (standardised beta, β= -0.015, t-value = -0.185, p-value = 0.854), and Strategic Planning Capability (standardised beta, β= 0.009, t-value = 0.150, p-value = 0.881) are not significantly associated with Self-renewal the p-values were greater than 0.05.

Interestingly enough, Marketing Capability (standardised beta, β= -0.129, t-value = -2.266, p-value = 0.024) is a significantly negative predictor of Self-Renewal since the p-value was less than 0.05 and the coefficient of the variable was negative.

The regression model fitted to this hypothesis is:

SR = -0.245 + 0.219LC + 0.235RDC + 0.366RAC + 0.342PC - 0.136MC - 0.016 OC + 0.010SPC.

Table 15: ANOVA – Self-Renewal against Technological innovation Capability.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	228.854	7	32.693	89.169	.000[b]
	Residual	87.628	239	.367		

	Total	316.483	246			
a. Dependent Variable: SR						
b. Predictors: (Constant), SPC, RAC, MC, LC, RDC, PC, OC						

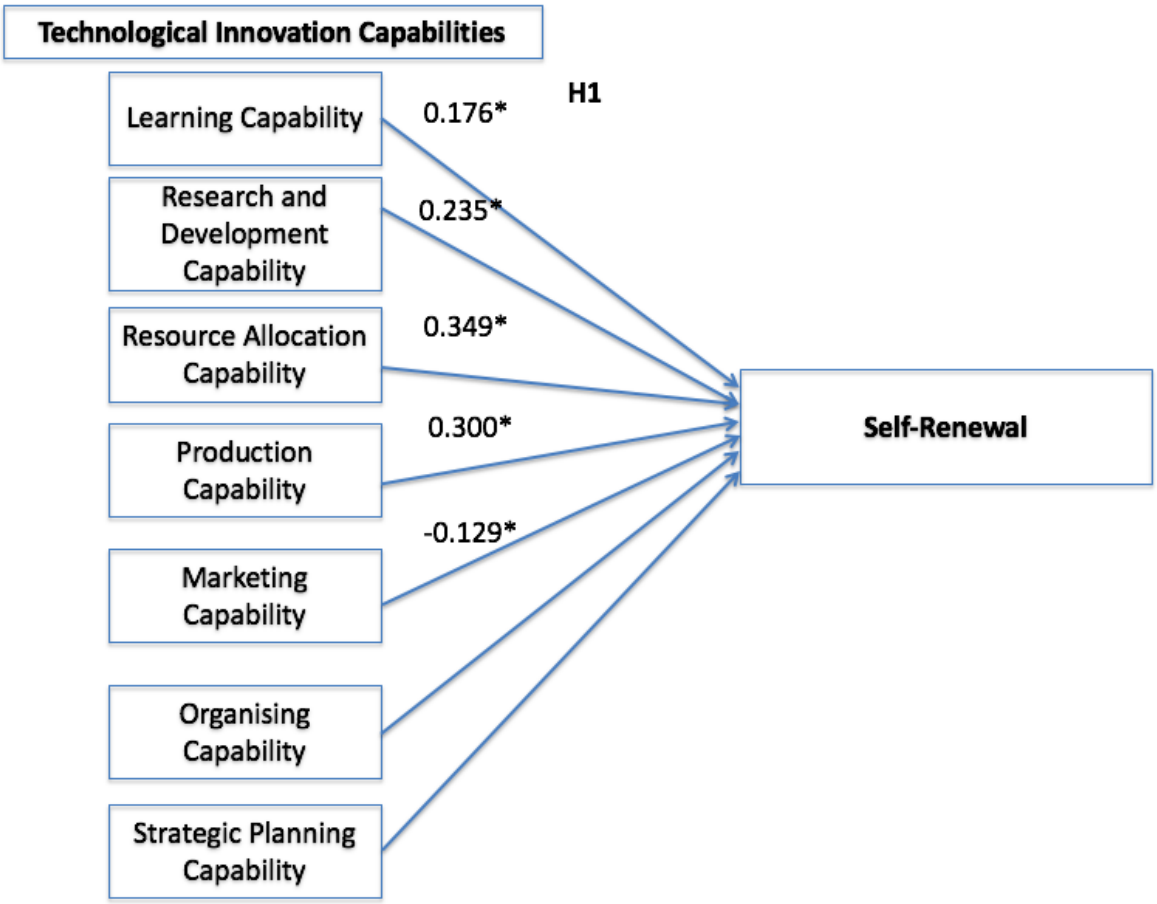
The ANOVA table has results showing whether Technological innovation Capability can significantly predict Self-Renewal. A p-value of the f-test of 0.000 is an indication that the variables for Technological innovation Capability can significantly predict proactiveness. The coefficients table below shows results on the impact on individual Technological innovation Capability variables on Self-Renewal.

Table 16: Model Summary – Self-Renewal against Technological innovation Capability.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.850[a]	.723	.715	.60551
a. Predictors: (Constant), SPC, RAC, MC, LC, RDC, PC, OC				

The model summary shows that Learning Capability, Research and Development, Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic Planning Capability explain 72.3% of variation in Self-Renewal.

Diagram 3 with regression coefficients:



All individual technological innovation capability variables, namely, Learning Capability, Research and Development, Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability, and Strategic Planning Capability were positively associated with Self-Renewal under our correlation analysis. However, when included with other variables in the same multiple regression analysis only Learning Capability, Research and Development Capability, Research Allocation Capability, Production Capability and Marketing Capability were significantly positively associated with Self-Renewal.

Organisational Innovation as a dependent variable

Organisational Innovation was regressed against Learning Capability, Research and Development Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic and Planning Capability.

Table 17: Coefficients – Organisational Innovation against Technological innovation Capability.

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.793	.239		3.317	.001
	LC	.215	.061	.206*	3.494	.001
	RDC	.072	.057	.086	1.256	.210
	RAC	.253	.055	.289*	4.601	.000
	PC	.160	.076	.168*	2.103	.037
	MC	.046	.054	.052	.854	.394
	OC	-.041	.079	-.046	-.523	.602
	SPC	.166	.060	.188*	2.779	.006
a. Dependent Variable: OI						

The above table shows that Learning Capability (standardised beta, β= 0.206, t-value = 3.494, p-value = 0.001), Resource Allocation Capability (standardised beta, β= 0.289, t-value = 4.601, p-value = 0.000), Production Capability (standardised beta, β= 0.168, t-value = 2.103, p-value = 0.037) and Strategic Planning Capability (standardised beta, β= 0.188, t-value = 2.779, p-value = 0.006) are positive and significantly associated with Organisational Innovation since the p-values were less than 0.05 and the coefficients of the variables were positive.

On the other hand, Marketing Capability (standardised beta, β= 0.052, t-value = 0.854, p-value = 0.394), Organising Capability (standardised beta, β= -0.046, t-value = -0.523, p-value = 0.602), Research and Development Capability (standardised

beta, β= 0.086, t-value = 1.256, p-value = 0.210) and are not significantly associated with Organisational Innovation the p-values were greater than 0.05.

The regression model fitted to this hypothesis is:

SPC = 0.793 + 0.215LC + 0.072RDC + 0.253RAC + 0.160PC + 0.046MC - 0.041OC + 0.166SPC.

Table 18: ANOVA – Organisational Innovation against Technological innovation Capability.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	151.012	7	21.573	73.277	.000[b]
	Residual	70.363	239	.294		
	Total	221.374	246			
a. Dependent Variable: OI						
b. Predictors: (Constant), SPC, RAC, MC, LC, RDC, PC, OC						

The ANOVA table has results showing whether Technological innovation Capability can significantly predict Self-Renewal. A p-value of the f-test of 0.000 is an indication that the variables for Technological innovation Capability can significantly predict proactiveness. The coefficients table below shows results on the impact on individual Technological innovation Capability variables on Organisational Innovation.

Table 19: Model Summary – Organisational Innovation against Technological innovation Capability.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.826[a]	.682	.673	.54259
a. Predictors: (Constant), SPC, RAC, MC, LC, RDC, PC, OC				

The model summary shows that Learning Capability, Research and Development, Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic Planning Capability explain 72.3% of variation in Self-Renewal.

Diagram 4 with regression coefficients:



All individual technological innovation capability variables, namely, Learning Capability, Research and Development, Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability, and Strategic Planning Capability were positively associated with Organisational Innovation under

our correlation analysis. However, when included with other variables in the same multiple regression analysis only Learning Capability, Research Allocation Capability, Production Capability and Strategic Planning Capability were significantly positively associated with Organisational Innovation.

4.5 Hypothesis 2

Correlation Analysis

Hypothesis 2: Corporate entrepreneurship is positively associated with organisational performance in media and entertainment firms in South Africa.

Correlation analysis was conducted between corporate entrepreneurship and organisational performance. The results are shown in table 7 above.

Hypothesis 2a: Proactiveness is positively is positively associated with Organisational Performance.

Hypothesis 2a is supported since Proactiveness has a highly significant correlation with Organisational Performance (r=0.656**) at a 1% level of significance. Thus, Proactiveness is positively related Organisational Performance.

Hypothesis 2b: New Business Venturing is positively associated with Organisational Performance.

Hypothesis 2b is supported since New Business Venturing has a highly significant correlation with Organisational Performance (r=0.523**) at a 1% level of significance. Thus, New Business Venturing is positively associated with Organisational Performance.

Hypothesis 2c: Self-renewal is positively associated with Organisational Performance

Hypothesis 2c is supported since Self-Renewal has a highly significant correlation with Organisational Performance (r=0.546**) at a 1% level of significance. Thus, Self-Renewal is positively associated with Organisational Performance.

Hypothesis 2d: Organisational innovation is positively associated with Organisational Performance.

Hypothesis 2d is supported since Organisational Innovation has a highly significant correlation with Organisational Performance (r=0.628**) at a 1% level of significance. Thus, Organisational innovation is positively associated with Organisational Performance.

Regression Analysis

Hypothesis 2: Corporate entrepreneurship is positively associated with organisational performance in media and entertainment firms in South Africa.

Organisational Performance was regressed against Proactiveness, New Business Venturing, Self-Renewal and Organisational Innovation.

Table 20: Coefficients – Organisational performance against corporate entrepreneurship.

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.000	.284		7.052	.000
	PRO	.371	.081	.386*	4.591	.000
	NBV	.089	.058	.099	1.530	.127
	SR	-.017	.057	-.024	-.301	.763
	OI	.248	.071	.289*	3.494	.001
a. Dependent Variable: OP						

The above table shows that Proactiveness (standardised beta, β= 0.386, t-value = 4.591, p-value = 0.000) and Organisational Innovation (standardised beta, β= -0.024, t-value = -0.301, p-value = 0.763), are positive and can significantly predict Organisational Performance since the p-values were less than 0.05 and the coefficients of the variables were positive.

On the other hand, New Business Venturing (standardised beta, β= 0.099, t-value = 1.530, p-value = 0.127) and Self-renewal (standardised beta, β= -0.024, t-value = -0.301, p-value = 0.763), cannot significantly predict Organisational Performance since the p-values were greater than 0.05.

The regression model fitted to this hypothesis is:

OP = 2.000 + 0.371 PRO + 0.089 NBV – 0.017 SR + 0.248 OI.

Table 21: ANOVA – Organisational Performance against corporate entrepreneurship.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.972	4	19.243	54.383	.000[b]
	Residual	85.629	242	.354		
	Total	162.601	246			
a. Dependent Variable: OP						
b. Predictors: (Constant), OI, NBV, SR, PRO						

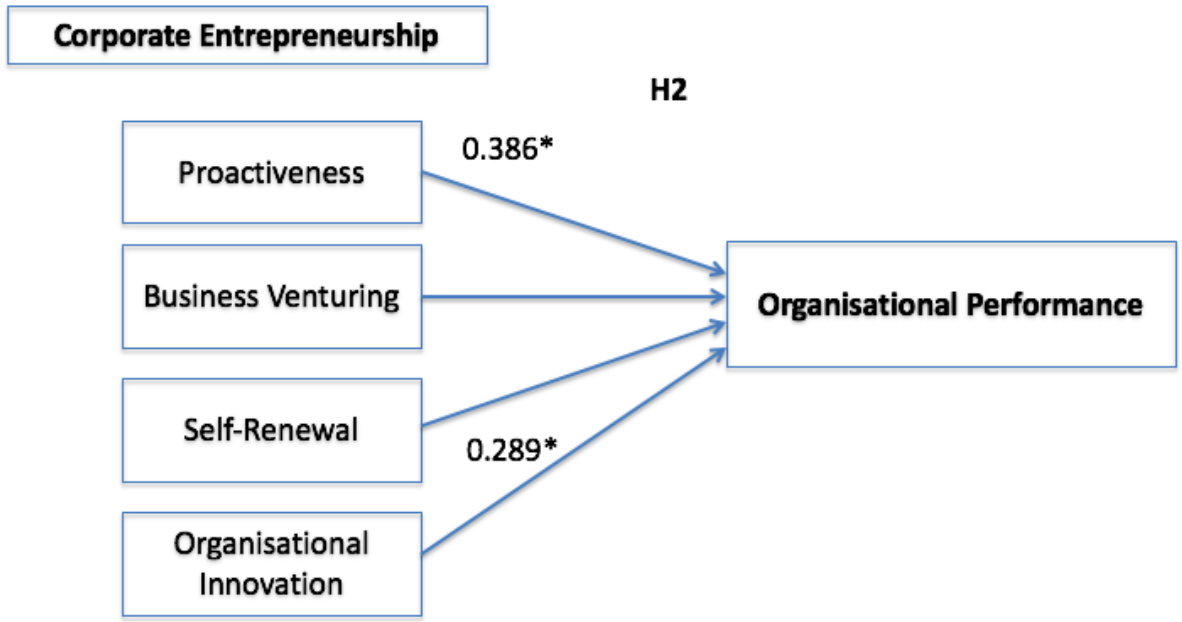
The ANOVA table has results showing whether corporate entrepreneurship can significantly predict Organisational Performance. A p-value of the f-test of 0.000 is an indication that the variables for corporate entrepreneurship can significantly predict Organisational Performance. The coefficients table below shows results on the impact on individual corporate entrepreneurship variables on Organisational Performance.

Table 22: Model Summary – Organisational Performance against corporate entrepreneurship.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.788[a]	.620	.610	.59484
a. Predictors: (Constant), OI, NBV, SR, PRO				

The model summary shows that Proactiveness, New Business Venturing, Self-Renewal and Organisational Innovation explain 62% of the variation in Organisational Performance.

Diagram 5 with regression coefficients:



All individual corporate entrepreneurship variables, namely, Proactiveness, New Business Venturing, Self-Renewal and Organisational Innovation were positively associated with Organisational Performance under our correlation analysis. However, when included with other variables in the same multiple regression analysis only Proactiveness and Organisational Innovation were significantly positively associated with Organisational Performance.

4.6 Hypothesis 3

Correlation Analysis

Hypothesis 3: Technological innovation Capability is positively associated with organisational performance in Media firms in South Africa.

Hypothesis 3a: Learning Capability is positively associated with Organisational Performance.

Hypothesis 3a is supported since Learning Capability has a highly significant correlation with Organisational Performance (r=0.586**) at a 1% level of significance. Thus, Learning Capability is positively associated with Organisational Performance.

Hypothesis 3b: Research and Development capability is positively associated with Organisational Performance.

Hypothesis 3b is supported since Research and Development Capability has a highly significant correlation with Organisational Performance (r=0.617**) at a 1% level of significance. Thus, Research and Development Capability is positively associated with Organisational Performance.

Hypothesis 3c: Resource Allocation Capability is positively associated with Organisational Performance.

Hypothesis 3c is supported since Resource Allocation Capability has a highly significant correlation with Organisational Performance (r=0.617**) at a 1% level of significance. Thus, Resource Allocation Capability is positively associated with Organisational Performance.

Hypothesis 3d: Production Capability is positively associated with Organisational Performance.

Hypothesis 3d is supported since Production Capability has a highly significant correlation with Organisational Performance (r=0.682**) at a 1% level of significance. Thus, Production Capability is positively associated with Organisational Performance.

Hypothesis 3e: Marketing capability is positively associated with Organisational Performance.

Hypothesis 3e is supported since Marketing Capability has a highly significant correlation with Organisational Performance (r=0.618**) at a 1% level of significance. Thus, Marketing Capability is positively associated with Organisational Performance.

Hypothesis 3f: Organising Capability is positively associated with to Organisational Performance.

Hypothesis 3f is supported since Organising Capability has a highly significant correlation with Organisational Performance (r=0.674**) at a 1% level of significance. Thus, Organising Capability is positively associated with Organisational Performance.

Hypothesis 3g: Strategic Planning Capability is positively associated with Organisational Performance.

Hypothesis 3g is supported since Strategic Planning Capability has a highly significant correlation with Organisational Performance (r=0.764**) at a 1% level of significance. Thus, Strategic Planning Capability is positively associated with Organisational Performance.

Regression Analysis

Hypothesis 3: Technological innovation Capability is positively associated with Organisational Performance in media and entertainment firms in South Africa.

Organisational Performance was regressed against Learning Capability, Research and Development Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic and Planning Capability.

Table 23: Coefficients – Organisational Performance against Technological innovation Capability.

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.113	.224		9.422	.000
	LC	.034	.058	.038	.593	.554
	RDC	-.049	.053	-.069	-.921	.358

	RAC	.084	.052	.112	1.633	.104
	PC	.138	.071	.168	1.928	.055
	MC	.093	.050	.124	1.854	.065
	OC	-.066	.074	-.085	-.894	.372
	SPC	.434	.056	.573*	7.740*	.000
a. Dependent Variable: OP						

The above table shows that only Strategic Planning Capability (standardised beta, β= 0.160, t-value = 1.852, p-value = 0.065) can significantly positively predict Organisational Performance since its p-value was less than 0.05 and the coefficients of the variable was positive.

On the other hand, Learning Capability (standardised beta, β= 0.038, t-value = 0.593, p-value = 0.554), Resource Allocation Capability (standardised beta, β= 0.112, t-value = 1.633, p-value = 0.104), Marketing Capability (standardised beta, β= 0.124, t-value = 1.854, p-value = 0.065), Production Capability (standardised beta, β= 0.167, t-value = 1.637, p-value = 0.103) Research and Development Capability (standardised beta, β= -0.069, t-value = -0.921, p-value = 0.358) and Organising Capability (standardised beta, β= -0.085, t-value = -0.894, p-value = 0.372), cannot significantly predict Organisational Performance since their p-values were greater than 0.05.

The regression model fitted to this hypothesis is:

OP = 2.113 + 0.034LC - 0.049RDC + 0.084RAC + 0.138PC + 0.093MC - 0.066OC + 0.434SPC.

Table 24: ANOVA – Organisational Performance against Technological innovation Capability.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	100.782	7	14.397	55.663	.000[b]
	Residual	61.819	23	.259		

			9			
	Total	162.601	246			
a. Dependent Variable: OP						
b. Predictors: (Constant), SPC, RAC, MC, LC, RDC, PC, OC						

The ANOVA table has results showing whether Technological innovation Capability can significantly predict Organisational Performance. A p-value of the f-test of 0.000 is an indication that the variables for Technological innovation Capability can significantly predict Organisational Performance. The coefficients table below shows results on the impact on individual Technological innovation Capability variables on Organisational Performance.

Table 25: Model Summary – Organisational Performance against Technological innovation Capability.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.787[a]	.620	.609	.50858
a. Predictors: (Constant), SPC, RAC, MC, LC, RDC, PC, OC				

The model summary shows that Learning Capability, Research and Development, Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability, and Strategic Planning Capability explain 62% of variation in Organisational Performance.

Diagram 6 with regression coefficients:



All individual technological innovation capability variables, namely, Learning Capability, Research and Development, Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability, and Strategic Planning Capability were positively associated with Organisational Performance under our correlation analysis. However, when included with other variables in the same multiple regression analysis only Strategic Planning Capability was significantly positively associated with Organisational Performance.

Table 26: Summary of hypotheses and corresponding findings.

Hypothesis	Test Performed	Main Findings
H1: Technological innovation Capability is positively associated with corporate entrepreneurship in media and entertainment Firms in South Africa.	**ANOVA and Correlation Analysis**	Hypothesis 1a: Learning Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Learning Capability can also significantly positively predict Proactiveness, New Business Venturing, Self-renewal & Organisational Innovation.
		Hypothesis 1b: Research and Development Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Research and Development Capability can also significantly positively predict Proactiveness & Self-renewal.
		Hypothesis 1c: Resource Allocation Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Resource Allocation Capability can also significantly positively predict Proactiveness, New Business Venturing, Self-renewal & Organisational Innovation.
		Hypothesis 1d: Production Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Production Capability can also significantly positively predict Proactiveness, Self-renewal & Organisational Innovation.
		Hypothesis 1e: Marketing Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Marketing Capability can also significantly positively predict Organisational Innovation & significantly negatively predict Self-renewal.
		Hypothesis 1f: Organisational Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Organisational Capability can also significantly positively predict Organisational Innovation.
		Hypothesis 1g: Strategic Planning Capability is positively associated with Proactiveness, New Business Venturing, Self-renewal and Organisational Innovation. Strategic Planning Capability can also significantly positively predict Organisational Innovation.

Hypothesis	Test Performed	Main Findings
H2: Corporate entrepreneurship is positively associated with organisational performance in media and entertainment Firms in South Africa.	**ANOVA and Correlation Analysis**	Hypothesis 2a: Proactiveness is positively associated with Organisational Performance. Proactiveness can also significantly positively predict Organisational Performance.
		Hypothesis 2b: New Business Venturing is positively associated with Organisational Performance. New Business Venturing can however not significantly positively predict Organisational Performance.
		Hypothesis 2c: Self-renewal is positively associated with Organisational Performance. Self-renewal can however not significantly positively predict Organisational Performance.
		Hypothesis 2d: Organisational Innovation is positively associated with Organisational Performance. Organisational Innovation can also significantly positively predict Organisational Performance.

Hypothesis	Test Performed	Main Findings
H1: Technological innovation Capability is positively associated with corporate entrepreneurship in media and entertainment Firms in South Africa.	**ANOVA and Correlation Analysis**	Hypothesis 1a: Learning Capability is positively associated with Organisational Performance. Learning Capability however cannot significantly positively predict Organisational Performance.
		Hypothesis 1b: Research and Development Capability is positively associated with Organisational Performance. Research and Development Capability however cannot significantly positively predict Organisational Performance.
		Hypothesis 1c: Resource Allocation Capability is positively associated with Organisational Performance. Resource Allocation Capability however cannot significantly positively predict Organisational Performance.
		Hypothesis 1d: Production Capability is positively associated with Organisational Performance. Production Capability however cannot significantly positively predict Organisational Performance.
		Hypothesis 1e: Marketing Capability is positively associated with Organisational Performance. Marketing Capability however cannot significantly positively predict Organisational Performance.
		Hypothesis 1f: Organisational Capability is positively associated with Organisational Performance. Organisational Capability however cannot significantly positively predict Organisational Performance.
		Hypothesis 1g: Strategic Planning Capability is positively associated with Organisational Performance. Strategic Planning can significantly positively predict Organisational Performance.

Summary

Table 26 above summarises the main findings of the three different hypotheses tested in this study and highlights where there exists positive and/or negative relationships between constructs. The results highlight a number of essential contributions and implications that will be comprehensively discussed in the chapter to follow. A model of technological innovation capabilities and corporate entrepreneurship driven organisational performance was established and empirically tested. The results highlight the importance of technological innovation capabilities as a means of fostering entrepreneurship in large media firms in South Africa. The results also highlight the significance of the two concepts as a means of driving organisational growth and performance in firms and will be discussed in detail in the chapter to follow.

CHAPTER 5: DISCUSSION OF RESULTS

The three different hypotheses proposed in this study will be discussed one after the other in this chapter, which will be concluded by an overall discussion with regards to the theoretical concepts comprehensively investigated in this study.

The study postulates a comprehensive number of important insights and findings into the complex and multi-faceted theoretical framework that is technological innovation capabilities, and its association with corporate entrepreneurship. It also highlights the importance of specific variables within these constructs that businesses can foster as a means to boost their entrepreneurial imperative and consequently their ability to evolve and remain competitive. Each hypothesis in relation to the findings from the previous chapter is discussed in detail below.

5.1 Hypothesis 1

H1 - Technological innovation capability is positively associated with corporate entrepreneurship in media and entertainment firms in South Africa.

The research findings from the study with regards to this hypothesis suggests that the variables within the technological innovation capabilities framework namely: Learning Capability, Research and Development Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic Planning Capability, when taken as independent variables in relation to the corporate entrepreneurship variables of Proactiveness, New Business Venturing, Self-Renewal, Organisational Innovation as dependent variables respectively, portray a complex but comprehensive picture when employing both multiple regression and correlation analyses on the variables as suggested by Tseng et al. (2012) and Garcia-Morales and Bolivar-Ramos (2013).

- Proactiveness: The findings of the research from both the regression and correlation analyses conducted in this study, indicated that all the variables

within the technological innovation capabilities framework had significant positive relationships with Proactiveness. These variables namely Learning Capability, Research and Development Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic Planning Capability were all significantly positively associated with the concept of Proactiveness within the corporate entrepreneurship framework.

However, contrary to the literature suggested by Tseng et al. (2012) and Garcia-Morales and Bolivar-Ramos (2013), not all variables within the technological innovation framework could individually significantly predict this concept of Proactiveness within the corporate entrepreneurship framework. In fact, three out of the seven constructs namely Marketing Capability, Organising Capability and Strategic Planning Capability, could not individually significantly predict this concept of Proactiveness within the corporate entrepreneurship framework.

- New Business Venturing: The findings of the research from the study also indicated that all the variables within the technological innovation capabilities framework, were significantly positively associated with New Business Venturing. These variables namely Learning Capability, Production Capability, Marketing Capability, Organising Capability and Strategic Planning Capability were positively associated with the concept of New Business Venturing within the corporate entrepreneurship framework.

  Also in contradiction to the literature suggested by Tseng et al. (2012) and Garcia-Morales and Bolivar-Ramos (2013) where all variables within the technological innovation framework could significantly predict this concept of New Business Venturing, in this study not all variables did. In actual fact, four out of the seven constructs namely Research and Development Capability, Organising Capability, Strategic Planning Capability and Production Capability, could not significantly predict this concept of New Business Venturing when New Business Venturing was employed as a dependent variable.

- Self-Renewal: The findings of the research from both the regression and correlation analyses conducted in this study, indicated that all the variables within the technological innovation capabilities framework had significant positive relationships with this concept of Self Renewal. These variables, namely, Learning Capability, Research and Development Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic Planning Capability were all significantly positively associated with the concept of Self Renewal within the corporate entrepreneurship construct.

  However, contrary to the literature suggested by Tseng et al. (2012) and Garcia-Morales and Bolivar-Ramos (2013), not all variables within the technological innovation framework could significantly predict this concept of Self-renewal within the corporate entrepreneurship framework. Two out of the seven constructs, namely, Organising Capability and Strategic Planning Capability, could not significantly predict this concept of Self-renewal within the corporate entrepreneurship framework.

  The study interestingly enough highlighted something also different from existing literature. The results indicated that Marketing Capability could significantly negatively predict Self-renewal in Media firms in South Africa. It essentially suggests that in Media organisations in South Africa, the better your Marketing Capabilities, the less likely you are to renew your existing way of doing business.

- Organisational Innovation: The findings of the research from the study indicated that all the variables within the technological innovation capabilities framework namely Learning Capability, Research and Development Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic Planning Capability were significantly positively associated with the Organisational Innovation variable within the corporate entrepreneurship construct.

  However, contrary to the literature suggested by Tseng et al. (2012) and Garcia-Morales and Bolivar-Ramos (2013), not all variables within the technological innovation framework could significantly predict this concept of

Organisational Innovation within the corporate entrepreneurship framework. Three out of the seven constructs namely Research and Development Capability, Marketing Capability and Organising Capability, could not significantly predict this concept of Organisational Innovation within the corporate entrepreneurship framework.

Thus, at a first glance from the study, it is suggested that the null hypothesis be rejected as the variables within the technological innovations capabilities framework show positive relationships with the four corporate entrepreneurship variables. This finding is extremely significant as it supports the studies of several researchers in recent times. Scholars in this field of research have suggested that firms with the ability to innovate technologically have used this capability to propel their entrepreneurial imperative (Acur, Kandemir, De Weerd-Nederhof & Song, 2010; Tseng et al., 2012; Soriano & Huarng, 2013). The findings in this study support and confirm this suggestion from the literature. The study highlights the positive relationship that exists between the seven technological innovation capabilities variables of a firm namely Learning Capability, Research and Development Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic Planning Capability and the four corporate entrepreneurship variables namely Proactiveness, New Business Venturing, Self Renewal and Organisational Innovation, when these are employed as dependent variables.

The study also indicated that not only is it clear that there exists a positive relationship between technological innovation capabilities and corporate entrepreneurship but most of these are significant. At least one of the variables within the Technological innovation framework, could significantly positively predict all four variables within the corporate entrepreneurship framework used in this study. The findings surrounding the significantly negative relationship between Marketing Capability and Self-renewal however, proved to be rather interesting considering all of the studies conducted by Burgelman, Maidique and Wheelright (2001), Guan and Ma (2003), Chiesa et al. (1998) and Tseng et al. (2012) all suggested positive significant relationships between all technological innovation capabilities variables and corporate entrepreneurship variables.

These studies were conducted, however, in more developed nations where one could not only argue that “real”, novel innovation of all kinds occur but could also argue that their technological readiness to innovate is far superior than those in developing nations (Tseng et al., 2012). Research has shown that in first world economies several organisations like Procter & Gamble, for example, have created unique departments within their organisation to promote and foster new innovations; Such a growth and survival strategy is still being imbibed in corporates in developing nations today (Brown & Anthony, 2011). Companies like Apple have also invested a lot of money in sustaining a pioneering innovation culture perpetuated by the late Steve Jobs (Bedigian, 2011); Whereas with this study being conducted in a developing nation like South Africa, one might argue the true existence of pioneering, unique, indigenous, and innovative marketing strategies and capabilities; The kinds that assist in rejuvenating, refurbishing and challenging businesses to avoid maintaining the status quo.

This study highlights the argument above which is contrary to recent literature by Garcia-Morales and Bolivar-Ramos (2013), which argues that Marketing Capabilities, as a technological innovation capability variable, can significantly positively predict all four corporate entrepreneurship variables.

The results also shed some light on the other aim of the study which was to investigate whether an increased investment in technological innovation capabilities, could affect a firm’s ability to foster corporate entrepreneurship as well as its ability to grow its performance. The results support findings by Garcia-Morales and Bolivar-Ramos (2013) and Tseng et al. (2012) in recent literature. The study highlighted a positive relationship between Resource Allocation Capability (investment in human and financial capital) and Proactiveness, New Business Venturing, Self-renewal, Organisational Innovation as well as Organisational Performance.

5.2 Hypothesis 2

Hypothesis 2: H1 - Corporate entrepreneurship is positively associated with Organisational Performance in media and entertainment firms in South Africa.

The research findings from the study with regards to this hypothesis suggest that the variables within the corporate entrepreneurship construct namely: Proactiveness, New Business Venturing, Self-Renewal, Organisational Innovation when taken as independent variables in relation to Organisational Performance reaffirm the findings of several scholars in recent years (Phan et al., 2009; Soriano & Huarng, 2013; Spinelli & Adams, 2013). Research conducted in the field of corporate entrepreneurship and organisational performance in recent years have all suggested a positive significant relationship between a firm's ability to be more proactive, venture into new business, renew its way of doing business, reorganise its firm more innovatively and its ability to perform (Kuratko, Hornsby, Naffziger & Montagno, 1993; Ireland, Covin & Kuratko, 2003; Antoncic & Prodan, 2008); Most of these scholars suggest that there exists a significant positive relationship between firms that practice corporate entrepreneurship or intrapreneurship and the Organisational Performance of these said firms. This study based on the correlation and regression analyses conducted, suggests that with regards to:

- Proactiveness: There exists a significant positive association between Proactiveness and Organisational Performance (economic, financial, equity, sales & market share performance in relation to one's competitors). Proactiveness can also significantly predict Organisational Performance.
- New Business Venturing: There exists a significant positive association between New Business Venturing and Organisational Performance. However, the regression results indicate that New Business Venturing cannot significantly predict Organisational Performance.
- Self Renewal: There exists a significant positive association between Self-renewal and Organisational Performance. The regression results however

also suggest that Self-renewal cannot significantly predict Organisational Performance.

- Organisational Innovation: There exists a significant positive association between organisational innovation and Organisational Performance. Organisational Innovation can also significantly predict Organisational Performance.

Thus the study conducted on individuals in this South African media and entertainment industry suggests that the null hypothesis in this case be rejected since the study indicates that there exists a significant positive relationship between all four corporate entrepreneurship variables and Organisational Performance. The study also specifically indicated the two out of the four variables that contributed most in predicting Organisational Performance. It highlighted a highly significant positive relationship between Proactiveness and Organisational Performance as well as a highly significant positive relationship between Organisational Innovation and Organisational Performance. These findings are in line with research suggested by several scholars in the field of corporate entrepreneurship over the years (Ireland et al, 2009; Burgress, 2013; Kuratko, Hornsby & Covin, 2014). Several scholars over the years have highlighted the importance of firms being able to imbibe a culture of proactiveness and create firms that foster organisational innovation, as a means to improve business performance and remain competitive (Kuratko, Hornsby & Covin, 2014; Peltola, 2012).

5.3 Hypothesis 3

Hypothesis 3: H1 - Technological innovation capability is positively associated with organisational performance in media and entertainment firms in South Africa.

This hypothesis suggests that the variables within the technological innovation capabilities framework namely: Learning Capability, Research and Development Capability, Resource Allocation Capability, Production Capability, Marketing Capability, Organising Capability and Strategic Planning Capability when taken as independent variables in relation to Organisational Performance, speak to the complex natures that several researchers have alluded to when measuring the technological innovation capabilities of a firm in relation to Organisational Performance (Vu & Van Cuong, 2010; Wang et al., 2008; Lewieka, 2011; Tseng et al., 2012). Several researchers, however, have attempted to delineate the subject further and have worked on pioneering research in making sense of the relationship that exists between firms that are increasingly technologically innovatively capable and the effect this has on the firm's ability to perform successfully (Tseng et al., 2012). This study supports existing literature and for both the correlation and regression analyses, suggest that with regards to:

- Learning Capability: There exists a significant positive association between Learning Capability and the Organisational Performance. However, the regression results indicate that Learning Capability cannot significantly predict Organisational Performance.
- Research and Development Capability: There exists a significant positive association between Research and Development Capability and Organisational Performance. However, the regression results indicate that Research and Development Capability cannot significantly predict Organisational Performance.
- Resource Allocation Capability: There exists a significant positive association between Resource Allocation Capability (financial investment and human capital allocation) and Organisational Performance. However,

the regression results indicate that Resource Allocation Capability cannot significantly predict Organisational Performance.

- Production Capability: There exists a significant positive association between Production Capability and Organisational Performance. However, the regression results indicate that Production Capability cannot significantly predict Organisational Performance.
- Marketing Capability: There exists a significant positive association between Marketing Capability and Organisational Performance. However, the regression results indicate that Marketing Capability cannot significantly predict Organisational Performance.
- Organising Capability: There also exists a significant positive association between Organising Capability and Organisational Performance. However, the regression results indicate that Organising Capability cannot significantly predict Organisational Performance.
- Strategic Planning Capability: There also exists a significant positive association between Strategic Planning Capability and Organisational Performance. The regression results indicate that Strategic Planning Capability can significantly positively predict Organisational Performance.

Thus, at first glance, all 7 technological innovation capabilities variables are positively associated with Organisational Performance. However, 6 of the 7 portray relationships that are not highly significant in predicting Organisational Performance. Only Strategic Planning Capability proved to be a highly significant predictor of Organisational Performance in the regression model. It is then suggested that the null hypothesis be rejected as the results indicate that overall there exists a positive relationship between technological innovation capabilities and Organisational Performance.

A modified hypothesis may be proposed that could assist in shedding some light on the inability of New Business Venturing and Self-renewal to significantly predict Organisational Performance; The three modified hypotheses could read as follows, H1 - All seven technological innovation capability variables can significantly predict

Organisational Performance in the South African Media industry. H2 - All four corporate entrepreneurship variables can significantly predict Organisational Performance in the South African Media industry. H3 – All seven technological innovation variables can significantly predict Organisational Performance. All three hypotheses are supported by the findings. However, with regards to the sub hypotheses, although a significant positive association exists between all seven technological innovation capabilities, all four corporate entrepreneurship variables and Organisational Performance, only some of these could significantly predict Organisational Performance.

It is important to be cognisant of the fact that the data collection process was limited to media and entertainment companies in South Africa. However, we believe that the findings of the study can be extended to other industries and economic contexts because some studies conducted on developing and transition economies in past cross-national research were discovered to be analogous with those in developed nations around the world (Antoncic & Hisrich, 2001; Bacova, 1987; Lin & Vy, 2012). The effect that technological innovation capability has on corporate entrepreneurship and consequently organisational performance is the main contribution of this study. What the model used in this study implies theoretically is that technological innovation capabilities can be considered as a predictor of corporate entrepreneurship. It also highlights the importance of Learning Capability, Research and Development Capability, Resource Allocation Capability, Production Capability as a means of predicting Proactiveness as a variable of corporate entrepreneurship, and how this becomes fertile ground for increased emphasis on these specific factors in future research.

It highlights Learning Capability, Resource Allocation Capability and Marketing Capabilities as predictors of New Business Venturing, Learning Capability, Resource Allocation Capability, Research and Development Capabilities and Production Capability as predictors of Self-renewal and Learning Capabilities, Resource Allocation Capabilities, Strategic Planning Capability and Production Capabilities as predictors of Organisational Innovation. It highlights the importance of fostering and placing greater emphasis on proactiveness and organisational innovation as a means of growing the business and remaining relevant; something future researchers in this field could potentially investigate. It also highlights Strategic

Planning Capability as the most integral technological innovation capability in predicting Organisational Performance.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusions of the Research

This research aimed to focus on the role that technological innovation capabilities of organisations in the South African Media industry have on its corporate entrepreneurial practices and consequently, the effect that this has on its organisational performance. The research also aimed to shed some light on the effect this continued investment in these technological innovation variables, has on its corporate entrepreneurial imperative and subsequently the organisation's performance.

Technological innovation capabilities and corporate entrepreneurship have been taunted by several researchers over the years as the solution for firms looking to not only grow their ventures to new heights but for sustained business relevance and survival. Most of the research to date has been conducted in developed first world environments, where a lot of pioneering technological innovations and corporate venturing has taken place. This has given rise to the need for further research in developing nations such as in the one highlighted in this study. This study has endeavoured to bridge the gap between how firms' in the media industry specifically in South Africa, use their technological innovation capabilities to foster corporate entrepreneurship and how this has assisted in propelling these firms into robust and sustainable organisational performance.

The main findings of this study with regards to the three hypothesis being tested is in agreement with Tseng et al. (2012), Martin-Rojas et al. (2013) and Gündoğdu (2012) and indicated that:

- Employees in the South African Media and Entertainment industry are of the perception that their firms do possess technologically innovation capabilities and this know-how has contributed tremendously towards their ability to be more entrepreneurial as firms.
- Employees working in the South African Media and Entertainment industry are of the perception that their businesses are entrepreneurial in their thinking

and style of doing business and that this culture has propelled their profitability and success as businesses both locally and internationally.

- Not only do these firms harness technological innovation capabilities but this ability has also contributed quite strongly to their ability to out-perform their competitors in their respective sectors and increase their ability to grow and remain relevant in this ever-changing global business landscape.
- The study postulates certain key variables within the corporate entrepreneurship framework that have indicated a highly positive significant relationship with organisational performance in this study, which is not necessarily supported by the literature in recent times from other regions of the world in the field of corporate entrepreneurship and the effect this construct has on organisational performance (Antoncic & Hisrich, 2001; Bacova, 1987; Hornsby et al., 2002; Kuratko, Hornsby & Covin, 2014). They argue that all four corporate entrepreneurship variables are significant positive predictors of organisational performance.
- The study suggests that although all technological innovation capabilities variables are positively associated with both corporate entrepreneurship and organisational performance, only strategic planning capability could significantly predict organisational performance in the South African Media and Entertainment industry.
- Firms in the South African Media and Entertainment industry believe strongly that there exists a relationship between their technological innovation capabilities and their ability to foster corporate entrepreneurial attributes, which is in agreement with recent pioneering research conducted by the likes of Martin-Rojas et al. (2013) and Gündoğdu (2012).

6.2 Recommendations

This research is pioneering in the sense that it is the first of its kind conducted in South Africa and also the first of its kind conducted on any media and entertainment industry in the world, which suggests an extremely useful study at this level specifically from a strategic and operational point of view for f other industries looking to imbibe technological innovation and entrepreneurial traits in their organisations.

1. I believe the study suggests a high level of utility at a national level, with South Africa's economy exhibiting stunted and uninspiring growth this study highlights the importance of both technological innovation and corporate entrepreneurship as a way to foster economic growth and unemployment reduction in general.
2. The study also highlights the importance of using technological innovation and entrepreneurship as a means for youth unemployment reduction, specifically with regards to the vibrant Media and Entertainment industry largely driven by creative young individuals.
3. At a national level, government should look to create more enabling environments and infrastructure for young entrepreneurs and corporate firms with an entrepreneurial culture to grow. The idea being to improve and in some cases completely overhaul existing policies and strategies for economic growth and unemployment reduction.
4. At a private sector level, the study indicates the importance of technological innovation and how pioneering innovation built on the back of technological advancement can propel firms to increase their entrepreneurial activities which will consequently lead to increased firm performance.

I believe the study proves extremely useful from a theoretical perspective as well as a practical perspective. The study from a theoretical perspective highlights the fact that technological innovation capabilities are a significant and essential predictor of corporate entrepreneurship. It highlights several technological innovation capabilities variables, as individually integral in fostering all four corporate entrepreneurship variables. The study theoretically also highlights certain corporate entrepreneurship

variables and technological innovation capabilities variables that are important in growing a business and ensuring its sustainability.

The practical implications of the study are supported by the fact that the results were able to pin point the technological innovation capabilities strategies and corporate entrepreneurship strategies that may be beneficial to the firm if invested in, in order to improve on the firm's success. The results of the study highlighted the following:

- Firstly, in order for firms to be more proactive, the study found that firms needed to focus a lot more on their Learning Capability, Research and Development Capability, Resource Allocation Capability and Production Capability from a technological innovation capabilities perspective.
- In order for firms to venture more into new business, the study found that firms needed to focus a lot more on their Learning Capability, Resource Allocation Capability and Marketing Capability from a technological innovation capabilities perspective.
- In order for firms to foster self-renewal, the study found that firms needed to focus a lot more on their Learning Capability, Research and Development Capability, Resource Allocation Capability and Production Capability from a technological innovation capabilities perspective.
- In order for firms to be more innovative as an organisation, the study found that firms needed to focus a lot more on their Learning Capability, Research and Development Capability, Resource Allocation Capability and Production Capability from a technological innovation capabilities perspective.
- In order for firms to improve their performance as an organisation the study found that firms needed to focus more on their ability to be proactive and take on risk and their ability to innovate as an organisation.
- In order for firms to improve their performance as an organisation, the study found that firms needed to focus a lot more on their Strategic Planning Capability from a technological innovation capabilities perspective.

The study also shed some light on the financial and human capital investment perceived to exist in the South African Media and Entertainment industry and how

this innovative resource allocation strategy, has assisted businesses to be more entrepreneurial in their strategies and consequently perform at higher levels.

6.3 Further Research

This study provides massive room for further research. This model of driving technological innovation in large corporates as a means to foster entrepreneurship and consequently firm performance could benefit many Media and Entertainment enterprises in South Africa. It serves as a foundation for researchers looking to identify specific technological innovation capabilities variables and corporate entrepreneurship variables that could more significantly enhance the lifespan of organisations in different industries. The study could serve as a catalyst for further research into technological innovation and the effect this has on corporate entrepreneurial activities in other industries not only in the South African context but in other developing nations with similar business landscapes.

Research into Technological innovation Investment Capabilities and organisational performance, which essentially theorises that an increased investment in technological innovation capabilities has positive effects on an organisation's performance, provides another opportunity for further research that this study could potentially contribute towards. In other words, the more firms invest in technological innovation, the greater their chances are of fostering corporate entrepreneurship and consequently their overall organisational performance. This will help in deepening the understanding of the already complex antecedents of technological innovation capabilities and corporate entrepreneurship within other business contexts similar to those in South Africa. This study has highlighted the importance of fostering these constructs as a means for business growth and survival; it places serious emphasis on their importance for Media and Entertainment firms in South Africa, and suggests an increased emphasis by firms in other industries, to develop their technological innovation capability and entrepreneurial imperative as a means of growing the enterprise. Further investigations may also incorporate a cross-national analysis and the relationships between technological innovation capabilities models and corporate entrepreneurship models and extrapolating these studies into non-media industries around the world.

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APPENDIX A: SURVEY INSTRUMENT ON CORPORATE ENTREPRENEURSHIP

Rank the following statement from 1 to 7 where 1= Totally disagree and 7= Totally agree	Totally disagree	Somewhat disagree	Disagree	Neutral	Agree	Somewhat agree	Agree Totally agree

In the last three years:

1. Proactiveness

1.1 In dealing with competitors, the organisation is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc.

1.2 In general, the top managers at our firm have a strong propensity for high risk projects (with chances of very high returns).

1.3 In general, the top managers at our firm believe that, owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives.

1.4 When confronted with decision-making situations involving uncertainty, our organisation typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities.

2. New Business Venturing

2.1 The organisation has stimulated new demands on the existing products/services in the current markets through aggressive advertising and marketing.

2.2 The organisation has broadened the business lines in the current industries.

2.3 The organisation has pursued new businesses in new industries that are associated with the current business.

2.4 The organisation has entered new business by offering new lines and product/services.

3. Self Renewal
    3.1 The organisation has reorganised units and divisions to increase organisational innovation.
    3.2 The organisation has coordinated activities among units to enhance organisational innovation.
    3.3 The organisation has adopted flexible organisational structures to increase innovation.
    3.4 The organisation has trained and encouraged the employees to be creative and innovative.
4. Organisational innovation
    4.1 The different innovations within the organisation have significantly increased in number over the years.
    4.2 The spending on new product/service development activities has significantly increased in value over the years.
    4.3 The number of products/services added by the organisation and already existing in the market has significantly increased in number over the years.
    4.4 The number of new products/services introduced for first time in the market by the organisation has significantly increased in number over the years.
    4.5 Research and development, technological leadership and innovation have significantly increased in emphasis over the years.

APPENDIX B: SURVEY INSTRUMENT ON TECHNOLOGICAL INNOVATION CAPABILITIES

Rank the following statement from 1 to 7 where 1= Totally disagree and 7= Totally agree	Totally disagree	Somewhat disagree	Disagree	Neutral	Agree	Somewhat agree	Agree Totally agree

1. Learning Capabilities
   1.1 There is capacity to assess technologies that are relevant to the firm's business strategy.
   1.2 Teams at work are encouraged to identify opportunities to improve the present ways of doing things.
   1.3 There is an ability to understand the firm's core competencies and matching its technological capabilities to the needs of the market.
2. Research and Development Capability
   2.1 There is an encouraging quality and speed of feedback from creating to designing and developing of new products and services.
   2.2 There are mechanisms for transferring technology from a research phase to a product development phase.
   2.3 There is a significant amount of market and customer feedback into the technological innovation process.
   2.4 There is a significant level of investment in research and development in the rollout of new products and services.
3. Resource Allocation Capability
   3.1 The organisation attaches a significant level of importance to hiring new qualified personnel.
   3.2 The organisation attaches a significant level of importance to getting the right resources into the right jobs at the right times.
   3.3 The organisation selects key personnel in each functional department.
   3.4 The organisation steadily increases its personnel working on innovation activity.

Resource Allocation Capability (Financial Investment)

3.5 The organisation purchases tangible/intangible technology for example machinery and equipment; patents and licenses; cutting edge software or hardware.

3.6 The organisation conducts organised in-house research and development and contracted research and development activities; this could either be sub-contracted research and development, joint research and development activities or both.

3.7 The organisation invests in knowledge acquisition, for example training, inviting experts from outside for problem solving, trials and experiments.

3.8 The organisation works on improving its existing product, process and service technology.

3.9 The organisation actively markets new or improved products within the organisation.

4. Production Capability
   - 4.1 The organisation has the ability to transform the research and development output into new products and services.
   - 4.2 The organisation exhibits effectiveness in producing new goods and services.
   - 4.3 The organisation has personnel who can effectively produce new products/services.
5. Marketing Capability
   - 5.1 The organisation manages relationships with customers.
   - 5.2 The organisation has knowledge of various market segments.
   - 5.3 The organisation has a sales and marketing team that is highly efficient in creating awareness and educating customers around new products/services.
   - 5.4 The organisation exhibits the ability to continuously and efficiently market a product/service after its initial launch.
6. Organising Capability
   - 6.1 The organisation has the ability to handle multiple innovation projects in parallel.

6.2 The organisation has the ability to coordinate and cooperate between the research and development, marketing and production department.

6.3 The organisation has the ability to integrate and control the major functions of the company at a high level.

7. Strategic Planning Capability

7.1 The organisation has the ability to identify internal strengths and weaknesses.

7.2 The organisation has the ability to identify external opportunities and threats.

7.3 The organisation exhibits goal and objectives clarity.

7.4 The organisation has made available clear plans – a roadmap with measurable milestones.

7.5 The organisation displays adaptability and responsiveness to the external environment.

APPENDIX C: SURVEY INSTRUMENT ON ORGANISATIONAL PERFORMANCE

Rank the following statement from 1 to 7 where 1= Totally disagree and 7= Totally agree	Much worse than my competitors	Worse than my competitors	Slightly worse than my competitors	Neutral	Slightly better than my competitors	Better than my competitors	Much better than my competitors

Relative to your main competitors, what is your firm's performance in the last three years in the following areas?

1. Organisational Performance measured by return on assets (economic profitability or return on assets.
2. Organisational Performance measured by return on equity (financial profitability or return on equity).
3. Organisational Performance measured by return on sales (percentage of profits over billing volumes)
4. Organisation's market share in its main products and markets.
5. Growth of sales in its main products and market.

APPENDIX D: ADDITIONAL RESULTS TABLE

Table A: Proactiveness Factor Analysis Output

a. Measures of Sampling Adequacy(MSA)

Communalities		
	Initial	Extraction
Proactiveness-In dealing with competitors, the organisation is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc.	1,000	,738
Proactiveness-In general, the top managers at our firm have a strong propensity for high risk projects (with chances of very high returns).	1,000	,759
Proactiveness-In general, the top managers at our firm believe that, owing to the nature of the	1,000	,706

environment, bold, wide-ranging acts are necessary to achieve the firm's objectives.		
Proactiveness-When confronted with decision-making situations involving uncertainty, our organisation typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities.	1,000	,693

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,895	72,384	72,384	2,895	72,384	72,384
2	,422	10,550	82,934			
3	,361	9,025	91,959			
4	,322	8,041	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component

	1
Proactiveness-In general, the top managers at our firm have a strong propensity for high risk projects (with chances of very high returns).	,871
Proactiveness-In dealing with competitors, the organisation is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc.	,859
Proactiveness-In general, the top managers at our firm believe that, owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives.	,840
Proactiveness-When confronted with decision-making situations involving uncertainty, our	,832

organisation typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities.	

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Case Processing Summary			
		N	%
Cases	Valid	247	100,0
	Excluded[a]	0	0,0
	Total	247	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,869	,873	4

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	,632	,584	,671	,086	1,148	,001	4

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Proactiveness-In dealing with competitors, the organisation is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc.	17,11	7,013	,737	,550	,828
Proactiveness-In general, the top managers at our firm have a strong	17,26	6,786	,757	,575	,819

propensity for high risk projects (with chances of very high returns).					
Proactiveness-In general, the top managers at our firm believe that, owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives.	17,21	6,799	,709	,510	,837
Proactiveness-When confronted with decision-making situations involving uncertainty, our organisation typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities.	17,23	6,197	,700	,495	,847

Table B: New Business Venturing Factor Analysis Output

a. Measures of Sampling Adequacy(MSA)

Communalities		
	Initial	Extraction
New Business Venturing-The organisation has stimulated new demands on the existing products/services in the current markets through aggressive advertising and marketing.	1,000	,712
New Business Venturing-The organisation has broadened the business lines in the current industries.	1,000	,706
New Business Venturing-The	1,000	,764

organisation has pursued new businesses in new industries that are associated with the current business.		
New Business Venturing-The organisation has entered new business by offering new lines and product/services.	1,000	,738

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,920	73,010	73,010	2,920	73,010	73,010
2	,432	10,805	83,815			
3	,341	8,519	92,335			
4	,307	7,665	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
New Business Venturing-The	,874

organisation has pursued new businesses in new industries that are associated with the current business.	
New Business Venturing-The organisation has entered new business by offering new lines and product/services.	,859
New Business Venturing-The organisation has stimulated new demands on the existing products/services in the current markets through aggressive advertising and marketing.	,844
New Business Venturing-The organisation has broadened the business lines in the current industries.	,840

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Case Processing Summary

		N	%
Cases	Valid	247	100,0
	Excluded[a]	0	0,0
	Total	247	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,871	,877	4

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	,640	,587	,683	,096	1,163	,001	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
New Business Venturing-The organisation has stimulated new demands on the existing products/services in the current markets through aggressive advertising and marketing.	17,50	7,186	,720	,529	,840
New Business Venturing-The organisation has broadened the business lines in the current industries.	17,51	8,755	,713	,516	,849
New Business Venturing-The organisation has pursued new businesses in new	17,47	7,461	,766	,588	,819

industries that are associated with the current business.					
New Business Venturing-The organisation has entered new business by offering new lines and product/services.	17,57	7,181	,737	,553	,832

Table C: Self-Renewal Factor Analysis Output

a. Measures of Sampling Adequacy(MSA)

Communalities		
	Initial	Extraction
Self Renewal -The organisation has reorganised units and divisions to increase organisational innovation.	1,000	,830
Self Renewal -The organisation has coordinated activities among units to enhance organisational innovation.	1,000	,790

Self-Renewal -The organisation has adopted flexible organisational structures to increase innovation.	1,000	,854
Self Renewal-The organisation has trained and encouraged the employees to be creative and innovative.	1,000	,761

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,235	80,869	80,869	3,235	80,869	80,869
2	,401	10,036	90,905			
3	,217	5,434	96,339			
4	,146	3,661	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1

Self Renewal-The organisation has adopted flexible organisational structures to increase innovation.	,924
Self Renewal-The organisation has reorganised units and divisions to increase organisational innovation.	,911
Self Renewal-The organisation has coordinated activities among units to enhance organisational innovation.	,889
Self Renewal-The organisation has trained and encouraged the employees to be creative and innovative.	,872

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Case Processing Summary

		N	%
Cases	Valid	247	100,0
	Excluded[a]	0	0,0
	Total	247	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,920	,921	4

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	,744	,665	,809	,144	1,217	,004	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted

Self Renewal-The organisation has reorganised units and divisions to increase organisational innovation.	16,85	12,087	,835	,743	,890
Self Renewal-The organisation has coordinated activities among units to enhance organisational innovation.	16,87	12,555	,798	,684	,903
Self Renewal-The organisation has adopted flexible organisational structures to increase innovation.	16,88	10,746	,860	,763	,882
Self Renewal-The organisation has trained and encouraged the employees to be creative and innovative.	16,87	12,162	,781	,663	,907

Table D: Organisational Innovation Factor Analysis Output

a. Measures of Sampling Adequacy(MSA)

Communalities

	Initial	Extraction
Organisational Innovation-The different innovations within the organisation has significantly increased in number over the years.	1,000	,768
Organisational Innovation-The spending on new product/service development activities has significantly increased in value over the years.	1,000	,740
Organisational Innovation-The number of products/services added by the organisation and already existing in the market has significantly increased in number over the years.	1,000	,793
Organisational	1,000	,779

Innovation-The number of new products/services introduced for first time in the market by the organisation has significantly increased in number over the years.		
Organisational Innovation-Research and development, technological leadership and number of innovations have significantly increased in emphasis over the years.	1,000	,813

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,893	77,860	77,860	3,893	77,860	77,860
2	,346	6,912	84,772			
3	,311	6,219	90,991			
4	,229	4,571	95,562			
5	,222	4,438	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Organisational Innovation-Research and development, technological leadership and number of innovations have significantly increased in emphasis over the years.	,902
Organisational Innovation-The number of products/services added by the organisation and already existing in the market has significantly increased in number over the years.	,890
Organisational Innovation-The number of new products/services introduced for first time in the market by the	,883

organisation has significantly increased in number over the years.	
Organisational Innovation-The different innovations within the organisation has significantly increased in number over the years.	,876
Organisational Innovation-The spending on new product/service development activities has significantly increased in value over the years.	,860

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Case Processing Summary

		N	%
Cases	Valid	247	100,0
	Excluded[a]	0	0,0
	Total	247	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,924	,929	5

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	,723	,677	,772	,095	1,140	,001	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted

Organisational Innovation-The different innovations within the organisation has significantly increased in number over the years.	23,24	14,859	,805	,655	,906
Organisational Innovation-The spending on new product/service development activities has significantly increased in value over the years.	23,31	15,157	,782	,619	,911
Organisational Innovation-The number of products/services added by the organisation and already existing in the market has significantly increased in number over the years.	23,20	15,674	,825	,691	,906
Organisational Innovation-The number of new products/services introduced for first time in the market by the	23,29	14,996	,812	,671	,905

organisation has significantly increased in number over the years.					
Organisational Innovation-Research and development, technological leadership and number of innovations have significantly increased in emphasis over the years.	23,44	12,670	,839	,710	,906

Table E: Learning Capability Factor Analysis Output

a. Measures of Sampling Adequacy(MSA)

Communalities		
	Initial	Extraction
Learning Capability-The organisation has the capacity to assess technologies that are relevant to the firm's business strategy.	1,000	,742
Learning Capability-Teams at work are encouraged to identify	1,000	,801

opportunities to improve the present ways of doing things.		
Learning Capability-The organisation's employees have the ability to understand the firm's core competencies and are able to match its technological capabilities to the needs of the market.	1,000	,785

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,327	77,573	77,573	2,327	77,573	77,573
2	,381	12,701	90,273			
3	,292	9,727	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Learning Capability-Teams at work are	,895

encouraged to identify opportunities to improve the present ways of doing things.	
Learning Capability- The organisation's employees have the ability to understand the firm's core competencies and are able to match its technological capabilities to the needs of the market.	,886
Learning Capability- The organisation has the capacity to assess technologies that are relevant to the firm's business strategy.	,861

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Case Processing Summary

		N	%
Cases	Valid	247	100,0
	Excluded[a]	0	0,0
	Total	247	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,853	,855	3

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	,663	,632	,707	,075	1,119	,001	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Learning Capability-The organisation has the capacity to assess technologies that are relevant to the firm's business strategy.	11,69	4,069	,695	,483	,827
Learning Capability-Teams at work are encouraged to identify opportunities to improve the present ways of doing things.	11,77	3,211	,754	,570	,769
Learning Capability-The organisation's employees have the ability to understand the firm's core competencies and are able to match its technological capabilities to the needs of the market.	11,74	3,445	,739	,550	,780

Table F: Research and Development Factor Analysis Output

a. Measures of Sampling Adequacy(MSA)

Communalities		
	Initial	Extraction
Research and Development Capability-There is an encouraging quality and speed of feedback from creating to designing and developing of new products and services.	1,000	,854
Research and Development Capability-There are mechanisms for transferring technology from a research phase to a product development phase.	1,000	,727
Research and Development Capability-There is a significant amount of market and customer feedback into the technological innovation process.	1,000	,779
Research and Development Capability-There is a significant level of investment in research	1,000	,821

and development in the rollout of new products and services.		

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,181	79,527	79,527	3,181	79,527	79,527
2	,437	10,918	90,446			
3	,208	5,196	95,642			
4	,174	4,358	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Research and Development Capability-There is an encouraging quality and speed of feedback from creating to designing and developing of new products and services.	,924
Research and Development	,906

Capability-There is a significant level of investment in research and development in the rollout of new products and services.	
Research and Development Capability-There is a significant amount of market and customer feedback into the technological innovation process.	,883
Research and Development Capability-There are mechanisms for transferring technology from a research phase to a product development phase.	,853

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was

extracted. The solution
cannot be rotated.

Case Processing Summary

		N	%
Cases	Valid	247	100,0
	Excluded[a]	0	0,0
	Total	247	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,912	,914	4

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	,726	,602	,796	,194	1,323	,005	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Research and Development Capability-There is an encouraging quality and speed of feedback from creating to designing and developing of new products and services.	16,83	10,749	,858	,745	,867
Research and Development Capability-There are mechanisms for transferring technology from a research phase to a product development phase.	16,83	12,480	,749	,625	,904
Research and Development Capability-There is a significant amount of market and customer feedback into the technological innovation process.	16,71	12,149	,785	,683	,892
Research and Development Capability-There is a	16,85	12,570	,826	,707	,881

significant level of investment in research and development in the rollout of new products and services.					

Table G: Research Allocation Capability Factor Analysis Output

a. Measures of Sampling Adequacy(MSA)

Communalities		
	Initial	Extraction
Resource Allocation Capability-The organisation attaches a significant level of importance to hiring new qualified personnel.	1,000	,812
Resource Allocation Capability-The organisation attaches a significant level of importance to getting the right resources into the right jobs at the right times.	1,000	,769
Resource Allocation Capability-The	1,000	,714

organisation selects key personnel in each functional department.		
Resource Allocation Capability-The organisation steadily increases its personnel working on innovation activity	1,000	,749
Resource Allocation Capability-The organisation purchases tangible/intangible technology for example machinery and equipment; patents and licenses; cutting edge software or hardware.	1,000	,743
Resource Allocation Capability-The organisation conducts organised in-house research and development and contracted research and development activities; This could either be sub-contracted research and development, joint	1,000	,783

research and development activities.		
Resource Allocation Capability-The organisation invests in knowledge acquisition for example training, inviting experts from outside for problem solving, trials and experiments.	1,000	,784
Resource Allocation Capability-The organisation works on improving its existing product, process and service technology.	1,000	,712
Resource Allocation Capability-The organisation actively markets new or improved products within the organisation.	1,000	,734

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	6,801	75,565	75,565	6,801	75,565	75,565
2	,530	5,892	81,456			
3	,359	3,985	85,441			
4	,297	3,296	88,737			
5	,274	3,039	91,776			
6	,224	2,492	94,268			
7	,188	2,094	96,362			
8	,184	2,050	98,412			
9	,143	1,588	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Resource Allocation Capability-The organisation attaches a significant level of importance to hiring new qualified personnel.	,901
Resource Allocation Capability-The organisation invests in knowledge acquisition for example training, inviting experts from outside for problem solving, trials and experiments.	,885

Resource Allocation Capability-The organisation conducts organised in-house research and development and contracted research and development activities; This could either be sub-contracted research and development, joint research and development activities.	,885
Resource Allocation Capability-The organisation attaches a significant level of importance to getting the right resources into the right jobs at the right times.	,877
Resource Allocation Capability-The organisation steadily increases its personnel working on innovation activity	,866
Resource Allocation Capability-The organisation purchases	,862

tangible/intangible technology for example machinery and equipment; patents and licenses; cutting edge software or hardware.	
Resource Allocation Capability-The organisation actively markets new or improved products within the organisation.	,857
Resource Allocation Capability-The organisation selects key personnel in each functional department.	,845
Resource Allocation Capability-The organisation works on improving its existing product, process and service technology.	,844

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Case Processing Summary

		N	%
Cases	Valid	247	100,0
	Excluded[a]	0	0,0
	Total	247	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,958	,960	9

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	,725	,625	,824	,199	1,319	,002	9

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Resource Allocation Capability-The organisation attaches a significant level of importance to hiring new qualified personnel.	45,51	72,243	,872	,792	,951
Resource Allocation Capability-The organisation attaches a significant level of importance to getting the right resources into the right jobs at the right times.	45,72	71,786	,846	,777	,953
Resource Allocation Capability-The organisation selects key personnel in each functional department.	45,35	75,693	,808	,695	,954
Resource Allocation Capability-The organisation steadily increases its personnel working on innovation	45,45	73,712	,827	,713	,953

activity Resource Allocation Capability-The organisation purchases tangible/intangible technology for example machinery and equipment; patents and licenses; cutting edge software or hardware.	45,13	77,934	,821	,710	,954
Resource Allocation Capability-The organisation conducts organised in-house research and development and contracted research and development activities; This could either be sub-contracted research and development, joint research and development activities	45,38	77,481	,850	,747	,953
Resource Allocation Capability-The organisation invests in knowledge acquisition for example training, inviting experts from	45,54	73,315	,853	,748	,952

outside for problem solving, trials and experiments.					
Resource Allocation Capability-The organisation works on improving its existing product, process and service technology.	45,21	76,828	,797	,688	,954
Resource Allocation Capability-The organisation actively markets new or improved products within the organisation.	45,22	77,407	,814	,704	,954

Table H: Production Capability Factor Analysis Output

a. Measures of Sampling Adequacy(MSA)

Communalities		
	Initial	Extraction
Production Capability-The organisation has the ability to transform the research and development output into actual products and services.	1,000	,859

Production Capability-The organisation exhibits effectiveness in the applying the method used in creating new product and services.	1,000	,827
Production Capability-The organisation exhibits capability of personnel who can create or manufacture new products/services.	1,000	,860

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,546	84,874	84,874	2,546	84,874	84,874
2	,256	8,533	93,407			
3	,198	6,593	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Production Capability-The organisation	,927

exhibits capability of personnel who can create or manufacture new products/services.	
Production Capability- The organisation has the ability to transform the research and development output into actual product and services.	,927
Production Capability- The organisation exhibits effectiveness in the applying the method used in creating new product and services.	,909

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Case Processing Summary

		N	%
Cases	Valid	247	100,0
	Excluded[a]	0	0,0
	Total	247	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,911	,911	3

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	,773	,757	,802	,045	1,059	,001	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted

Production Capability-The organisation has the ability to transform the research and development output into actual products and services.	11,73	4,068	,832	,695	,863
Production Capability-The organisation exhibits effectiveness in the applying the method used in creating new product and services.	11,86	4,274	,799	,638	,890
Production Capability-The organisation exhibits capability of personnel who can create or manufacture new products/services.	11,78	4,019	,833	,698	,862

Table I: Marketing Capability Factor Analysis Output

a. Measures of Sampling Adequacy(MSA)

Communalities		
	Initial	Extraction
Marketing Capability-	1,000	,707

The organisation manages relationships with customers effectively.		
Marketing Capability-The organisation has knowledge of various market segments.	1,000	,796
Marketing Capability-The organisation has a sales and marketing team that is highly efficient in creating awareness and educating customers around new products/services.	1,000	,839
Marketing Capability-The organisation exhibits the ability to continuously and efficiently market a product/service after its initial launch.	1,000	,871

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	3,213	80,322	80,322	3,213	80,322	80,322
2	,398	9,948	90,270			
3	,259	6,466	96,736			
4	,131	3,264	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Marketing Capability-The organisation exhibits the ability to continuously and efficiently market a product/service after its initial launch.	,933
Marketing Capability-The organisation has a sales and marketing team that is highly efficient in creating awareness and educating customers around new products/services.	,916
Marketing Capability-The organisation has knowledge of various market segments.	,892
Marketing Capability-	,841

The organisation manages relationships with customers effectively.	

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Case Processing Summary

		N	%
Cases	Valid	247	100,0
	Excluded[a]	0	0,0
	Total	247	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based	N of Items

	on Standardized Items	
,916	,918	4

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	,736	,642	,832	,190	1,295	,006	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Marketing Capability-The organisation manages relationships with customers effectively.	17,36	11,727	,733	,552	,916
Marketing Capability-The organisation has knowledge of various market segments.	17,41	11,617	,805	,698	,895
Marketing Capability-The organisation has a sales and marketing team that is highly efficient in creating awareness and	17,52	9,730	,847	,740	,880

educating customers around new products/services.					
Marketing Capability- The organisation exhibits the ability to continuously and efficiently market a product/service after its initial launch.	17,49	9,885	,872	,799	,869

Table J: Organising Capability Factor Analysis Output

a. Measures of Sampling Adequacy(MSA)

Communalities		
	Initial	Extraction
Organising Capability- The organisation has the ability to handle multiple innovation projects in parallel.	1,000	,833

Organising Capability- The organisation has the ability to coordinate and cooperate between the research and development, marketing and production department.	1,000	,805
Organising Capability- The organisation has the ability to integrate and control the major functions of the company at a high level.	1,000	,841

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,479	82,644	82,644	2,479	82,644	82,644
2	,289	9,644	92,288			
3	,231	7,712	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Organising Capability- The organisation has the ability to integrate and control the major functions of the company at a high level.	,917
Organising Capability- The organisation has the ability to handle multiple innovation projects in parallel.	,913
Organising Capability- The organisation has the ability to coordinate and cooperate between the research and development, marketing and production department.	,897

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Case Processing Summary

		N	%
Cases	Valid	247	100,0
	Excluded[a]	0	0,0
	Total	247	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,893	,895	3

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	,740	,719	,768	,048	1,067	,001	3

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Organising Capability-The organisation has the ability to handle multiple innovation projects in parallel.	11,60	4,745	,797	,643	,841
Organising Capability-The organisation has the ability to coordinate and cooperate between the research and development, marketing and production department.	11,76	4,353	,772	,596	,868
Organising Capability-The organisation has the ability to integrate and control the major functions of the company at a high level.	11,62	4,846	,807	,656	,834

Table K: Strategic Planning Capability Factor Analysis Output

a. Measures of Sampling Adequacy(MSA)

Communalities

	Initial	Extraction
Strategic Planning Capability-The organisation has the ability to identify internal strengths and weaknesses.	1,000	,764
Strategic Planning Capability-The organisation has the ability to identify external opportunities and threats.	1,000	,653
Strategic Planning Capability-The organisation exhibits goal and objectives clarity.	1,000	,851
Strategic Planning Capability-The organisation has made available clear plans - a roadmap with measurable milestones.	1,000	,784
Strategic Planning Capability-The organisation displays	1,000	,792

adaptability and responsiveness to the external environment.		

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,843	76,851	76,851	3,843	76,851	76,851
2	,481	9,614	86,465			
3	,286	5,722	92,187			
4	,225	4,505	96,692			
5	,165	3,308	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Strategic Planning Capability-The organisation exhibits goal and objectives clarity.	,922
Strategic Planning Capability-The organisation displays adaptability and responsiveness to the	,890

external environment.	
Strategic Planning Capability-The organisation has made available clear plans - a roadmap with measurable milestones.	,885
Strategic Planning Capability-The organisation has the ability to identify internal strengths and weaknesses.	,874
Strategic Planning Capability-The organisation has the ability to identify external opportunities and threats.	,808

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Case Processing Summary		
	N	%

Cases	Valid	247	100,0
	Excluded[a]	0	0,0
	Total	247	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,921	,924	5

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	,709	,601	,817	,215	1,358	,005	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Strategic Planning Capability-The organisation has the ability to identify internal strengths and weaknesses.	23,27	17,083	,798	,658	,907

Strategic Planning Capability-The organisation has the ability to identify external opportunities and threats.	23,09	20,499	,717	,539	,918
Strategic Planning Capability-The organisation exhibits goal and objectives clarity.	23,10	19,059	,869	,778	,891
Strategic Planning Capability-The organisation has made available clear plans - a roadmap with measurable milestones.	23,21	18,438	,809	,694	,900
Strategic Planning Capability-The organisation displays adaptability and responsiveness to the external environment.	23,10	18,958	,818	,711	,899

Table L: Organisational Performance Factor Analysis Output

a. Measures of Sampling Adequacy(MSA)

Communalities

	Initial	Extraction
Organisational Performance - Organisational Performance measured by return on assets (economic profitability or return on assets).	1,000	,691
Organisational Performance - Organisational Performance measured by return on equity (financial profitability or return on equity).	1,000	,721
Organisational Performance - Organisational Performance measured by return on sales (percentage of profits over billing volumes)	1,000	,714
Organisational Performance - Organisation's market share in its main products and markets.	1,000	,728

Organisational Performance - Growth of sales/subscribers in its main products and markets.	1,000	,711

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,565	71,304	71,304	3,565	71,304	71,304
2	,593	11,867	83,172			
3	,360	7,210	90,381			
4	,275	5,492	95,874			
5	,206	4,126	100,000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Organisational Performance - Organisation's market share in its main products and markets.	,853
Organisational Performance -	,849

Organisational Performance measured by return on equity (financial profitability or return on equity).	
Organisational Performance - Organisational Performance measured by return on sales (percentage of profits over billing volumes)	,845
Organisational Performance - Growth of sales/subscribers in its main products and markets.	,843
Organisational Performance - Organisational Performance measured by return on assets (economic profitability or return on assets).	,831

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Rotated Component

Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Case Processing Summary

		N	%
Cases	Valid	246	99,6
	Excluded[a]	1	,4
	Total	247	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,897	,899	5

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	,641	,562	,763	,201	1,358	,005	5

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Organisational Performance - Organisational Performance measured by return on assets (economic profitability or return on assets).	23,86	10,569	,736	,620	,878
Organisational Performance - Organisational Performance measured by return on equity (financial profitability or return on equity).	24,02	10,653	,762	,653	,872
Organisational Performance - Organisational Performance measured by return on sales (percentage of profits over billing volumes)	24,17	10,403	,748	,580	,876
Organisational Performance - Organisation's market	23,91	11,293	,757	,622	,874

share in its main products and markets.					
Organisational Performance - Growth of sales/subscribers in its main products and markets.	23,93	11,346	,745	,628	,876

APPENDIX E: CONSISTENCY MATRIX

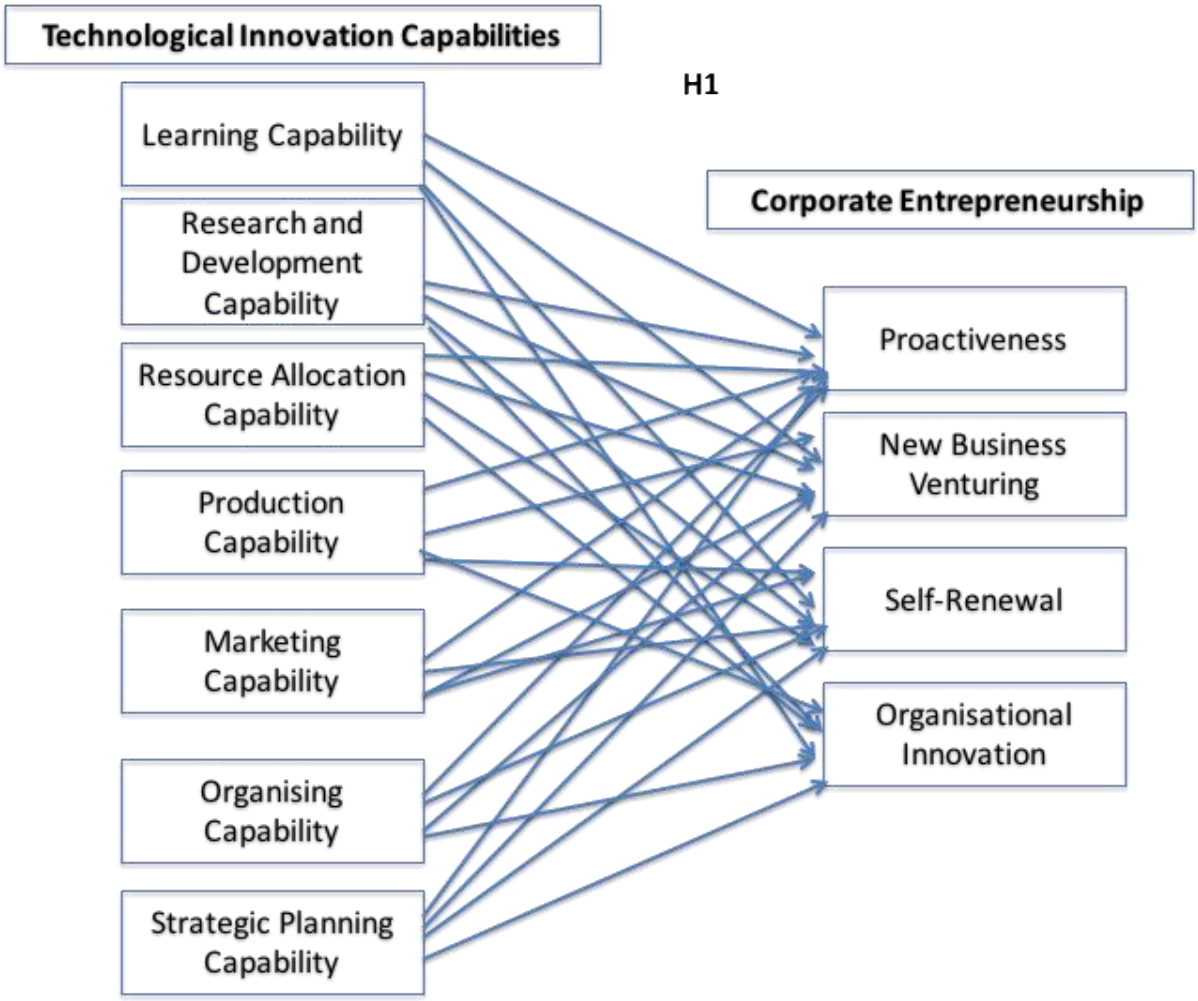
The influence of technological innovation capabilities investment capability on corporate entrepreneurship and firm performance.					
Aims of research	**Literature review**	**Hypothesis or proposition or Research question**	**Sources of data**	**Type of data**	**Analysis**
To determine the effects components of technological innovation capability have on fostering corporate entrepreneurship in the South African Media and Entertainment	(Martin-Rojas et al., 2013; Zahra, 1993; Gündoğdu 2012)	Technological innovation Capability is positively associated with corporate entrepreneurship.	Ordinal data. A 7 point Likert-type scale for measurement of both corporate entrepreneurship and measurement of technological	Intervals	Confirmatory Factor Analysis, Correlation Analysis, Regression Analysis,

industry.			innovation capabilities		
To determine the importance of corporate entrepreneurship relative to organisational performance	(Martin-Rojas et al., 2013; Morris & Kuratko, 2002; Murray & Kotabe, 1999)	Corporate entrepreneurship is positively associated with organisational performance.	Ordinal data. A 7 point Likert-type scale for the measurement of corporate entrepreneurship and measurement of Organisational Performance	Intervals	Confirmatory Factor Analysis, Correlation Analysis, Regression Analysis,
To determine the importance of factors of technological innovation capability variables on fostering organisational performance.	(Tseng et al., 2012; Porter, 1990; Antoncic & Prodan, 2008)	Technological innovation capabilities are positively associated with organisational performance.	Ordinal data. A 7 point Likert-type scales for measurement of technological innovation capabilities and measurement of organisational	Intervals	Confirmatory Factor Analysis, Correlation Analysis, Regression Analysis,

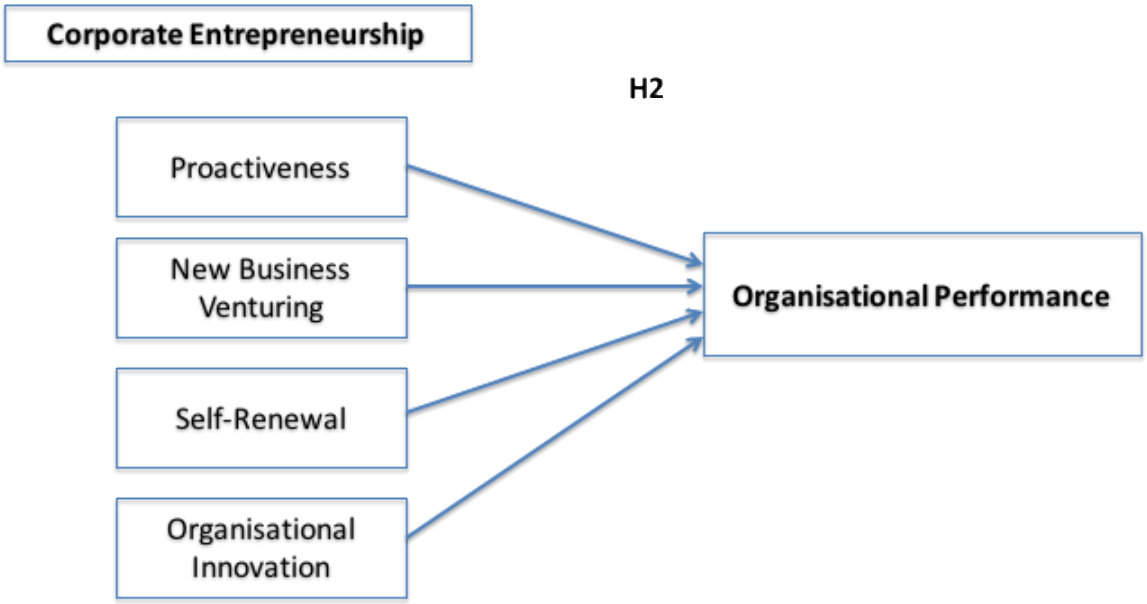
			performance		

APPENDIX F: PROPOSED MODEL

Hypothesis 1:



Hypothesis 2:



Hypothesis 3:

