

# The Effect of Public Sector Corporate Entrepreneurship on Organisational Performance in the Health Sector: A Case of Selected Public Hospitals in Lusaka, Zambia

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**Abstract:** This study was conducted in the City of Lusaka in Zambia at eight public hospitals using a quantitative research design with a post-positivism perspective that employed self-administered closed ended questionnaires for data collecting. The study aims at examining the effect of public sector corporate entrepreneurship dimensions on the performance of the public health sub-sector using the following dimensions that affect organisational performance (1) pro-activeness (2) risk-taking and (3) innovations. In addition, many internal organisational factors moderate the relationship between public sector corporate entrepreneurship dimensions and organisational performance. This study examines three factors: (1) resource availability, (2) supportive organisational structure, (3) rewards/resource reinforcement. Both descriptive and inferential statistics were used to test these relationships. The findings of this study reveal that the dimensions of corporate entrepreneurship-innovation, pro-activeness and risk taking have a positive impact on the performance of the public health sub-sector and that this relationship is moderated by internal organisational factors of resource availability, supportive organisational structure and rewards/resource reinforcement.

**Keywords** - Corporate Entrepreneurship, Health Sector, Organisational Performance, Public Sector, Zambia

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## I. Introduction

The Zambian government has been implementing health sector reforms over the years that are aimed at strengthening health service delivery in order to improve the health status of the Zambian people. The reforms have yielded significant results in form of strengthened health systems, improved access to health care and improved health outcomes (Zambia Demographic and Health Survey, 2013-14). Despite these achievements, the country has been recording an increase in the demand for health services due to the high disease burden compounded by the high prevalence of HIV, high poverty levels and the poor macro-economic situation (Ibid). This increase in demand has been posing a challenge on the quality of health services. The health sector has been consuming a larger portion of the gross domestic product (GDP). For example, in 2013, 11.3% was spent on the health sector with a total cost of 3,638.10 Million Kwacha and almost 1,095.00 Million Kwacha on hospitals alone. Nevertheless, the funds are still not adequate to address the health challenges the country continues to face especially that the country is constrained to meet the benchmark of 15% of the total national budget Abuja Declaration. Providing a solution to solve this problem of escalating demand and costs for quality health services has been identified as one of the major goals in the Zambian health system.

Amidst these uncertainties, a distinct paradigm is emerging that recognises corporate entrepreneurship as the driving element that could help Zambia solve the problem of increased costs and demand for health services. The corporate entrepreneurship elements can be very important to the productivity of the health sector in Zambia. Its effectiveness could help facilitate the provision of quality health services in a cost-effective way. Further, corporate entrepreneurship can be seen as the vehicle towards strategic renewal and change as well as a strategy that will make the organisation shift from being bureaucratic to being innovative (Zampetakis & Moustakis, 2007:414). The concept of public entrepreneurship as corporate entrepreneurship in the public sector, is seen as the way of introducing change to public bureaucracies so as to enhance the operations of the government and non-profit organisations (Mack, Green and Vedlitz, 2008:233). Entrepreneurial behaviour should not be limited to the private sector only, public organisations must also get involved in entrepreneurial behaviour especially that they operate with limited resources and need to find creative solutions to continue the provision of services in order to respond to the increased demands of its citizens. Entrepreneurial behaviour in the health sector can lead to the health population which in turn may lead to economic growth. The creative

provision of health services reduces the disease burden for the country. A health population is productive and it is this productivity that can improve the economy of the country.

The issues of corporate entrepreneurship have of late evoked increased interest not only from academicians but also from policy makers and business managers. The issue is being increasingly researched, however, its relationship to corporate performance as a dependent variable has not been sufficiently investigated (Zahra (1991)). In the public sector in Zambia, there has been no documentation to this effect and it has been difficult to relate public sector corporate entrepreneurship to the performance of the public sector. This highlights the need to research and document more on the role of the public sector corporate entrepreneurship practices in the health sector as well as what can be done to increase performance in the health sector.

The purpose of this research is to examine the effects of public sector corporate entrepreneurship dimensions on the performance of the health sector in Zambia and whether this relationship is moderated by internal organisational factors. This research will help close the gap that exists between public sector corporate entrepreneurship and organisational performance in the health sector in Zambia. Furthermore, the study will enable policy makers to make informed decisions, contribute to the understanding of the public sector on whether the willingness to be innovative and proactive can lead to hospitals being more competitive for purposes of increasing performance and finally adding to the body of knowledge on corporate entrepreneurship in Zambia.

## **II. Literature Review**

### **Corporate entrepreneurship**

Entrepreneurship has no universally accepted definition. Different scholars have defined it differently depending on how the phenomenon has manifested in their environments. For instance, Morris *et al* (2008:10), define entrepreneurship as the process of creating value by bringing together a unique combination of resources to exploit an opportunity. On the other hand, Schumpeter with an economic background defined entrepreneurship as the re-allocation of factors of production to more productive areas. Further, Zampekakis and Moustakis (2007:415) also define entrepreneurship as a process of creating value to the citizens by bringing together a unique combination of public/private resources in order to exploit social opportunities. In the same line, Roberts (1992) defines entrepreneurship as a generation of novel or innovative idea and the design and implementation of the innovative idea into public sector practice. From the above definitions it is clear that entrepreneurship involves opportunity identification and exploitation. An opportunity may imply a chance to improve one's work be it in business, teaching, nursing, auditing, human resource, engineering, research or any other field. The ability to identify and exploit opportunities with the view of creating value is what counts as far as entrepreneurship is concerned.

Corporate entrepreneurship as defined by Macfadzean *et al* (2005:352) is an effort of promoting innovation from an internal organizational perspective through the assessment of potential new opportunities, alignment of resources, exploitation and commercialization of said opportunities. According to Kearney, Hisrich and Roche (2008:295) corporate entrepreneurship is "a process by which individuals inside organizations pursue opportunities independent of the resources they currently control". Furthermore, Morris *et al* (2008:11) as well as Audretsch, Grillo and Thurik (2009:52) agree that corporate entrepreneurship is a "process whereby an individual or group of individuals, in association with an established company, creates a new organization or instigates renewal or innovation within the current organization". Scheeper, Hough and Bloom (2008:51) refer to corporate entrepreneurship as "the total process whereby established enterprises act in innovative, risk-taking and proactive ways". The internal environment of an organization is very important for the flourishing of corporate entrepreneurship. It is required that certain factors should be in place if an organisation is to be entrepreneurial as suggested by Zampetakis and Moustakis (2007), who state that any employee can be entrepreneurial if the organisation is structured in a way that encourages entrepreneurship.

With regards to entrepreneurship and the public sector, Kearney *et al* (2008:296) states that corporate entrepreneurship is entrepreneurship within an existing public sector organisation that results in innovative activities such as the development of new and existing services, technology, administrative techniques and new improved strategies. However, Zampetakis and Moustakis (2007:415) defined corporate entrepreneurship as a process of creating value to citizens by bringing together a unique combination of public and private resources to exploit opportunities. Their emphasis was mainly on value creation generated as the result of exploiting opportunities through a unique combination of resources. For the purpose of this research, the definition of corporate entrepreneurship as provided by Kearney *et al* (2008:296) was employed.

### **Public Sector Corporate Entrepreneurship**

Public sector corporate entrepreneurship is defined differently by various authors. Kearney *et al* (2009:277) defined public sector entrepreneurship as an individual or group of individuals who undertake desired activity to initiate change within the organization, adapt, innovate and facilitate risk. According to Currie *et al* (2008:989) public sector entrepreneurship is a process of identifying and pursuing opportunities by individuals and/or organizations. Nevertheless, Robert and King (1991:149-150) define public entrepreneurship as a process of introducing innovation to public sector practice. Roberts (1992) defines public entrepreneurship as a process involving three stages. The first stage as creation which involves the generation of an idea, the second stage being design which is basically defining the idea and planning the commitment of resources toward that idea and the third stage being the implementation of the idea. From this definition, it is clear that public sector entrepreneurship is about generation, design and implementation of innovative ideas in the public sector.

### **Public Sector Corporate Entrepreneurship and the Health Sector**

Corporate entrepreneurship has been studied by different authors before (Sebora, and Theerapatvong 2009; Ireland *et al* 2009; Zahra and Covin, 1995; Lumpkin and Dess 1996; Venter *et al*, 2008). Most of these studies were attempting empirically to test the influence of corporate entrepreneurship on company performance and sustainability. Public sector corporate entrepreneurship is a new field and very few scholars have studied it. Age-old intuitions portray public sector entities as bureaucratic monoliths (Hughes, 1998: 370-371). This intuition leads to the conclusion that public sector cannot be entrepreneurial. The structures, values, bureaucracy and practices make the public sector to be inimical to entrepreneurship. However, Governments around the world have lamented the absence of entrepreneurial behaviour in their public sector and yet a little has been written on public entrepreneurship. Most Governments around the world have undergone reforms to improve service delivery, but there has been little publication substantiating reforms that addresses structures, systems and culture stimulating innovation Mackrle (1996). The calls for entrepreneurship are based on dramatic turbulences occurring in the external environment both in the private and public sector (Eggers & O'leary, 1995). Sebora and Theerapatvong (2009) have suggested that large organizations tend to experience difficulties in employing corporate entrepreneurship in their management and employees; and this is often caused by a bureaucratic environment. According to Sebora and Theerapatvong (2009) organisations need continuous innovation, risk taking, and pro-activeness in order to stay competitive. The presence of Corporate Entrepreneurship among organisation managers leads to positive outcomes (Ireland *et al*, 2009). Top managers need to have an entrepreneurial strategy and be able to cascade this through different levels within the company. Furthermore, successful organisations have used the entrepreneurial strategy to meet the environmental demands making especially private sector to be efficient because of this approach Mintzberg (1981).

### **Entrepreneurial Orientation and public organisation**

Organizations that are innovative tend to be more entrepreneurially- oriented than those that do not (Zahra and Garvis 2000). These entrepreneurially oriented organizations have a culture that allows individuals within the organization to act autonomously and to be able to suggest new ideas that can lead to efficiency of operations. Ireland *et al* (2009) state that entrepreneurial orientation is an organisational state or quality that is defined in terms of several behavioral dimensions. Miller (1983), Covin and Slevin (1991) define entrepreneurial orientation as the presence of organisational behavior reflecting risk taking, pro-activeness and innovativeness. A company that embraces corporate entrepreneurship is said to be entrepreneurially- orientated (ibid). An entrepreneurial oriented organizations keeps alert by exposing employees to new technologies, making them aware of marketplace trends and helping them to evaluate new possibilities (Lumpkin *et al*, 2009). It is, therefore, important that the public sector becomes entrepreneurially oriented. In the public sector, ownership is divorced from control (Whitley, 1992) and this poses as a challenge in the delivery of health services. The public sector operating environment ought to be changed in order to recognise that mistakes can be made but should not be repeatedly made. This should be recognised in the risk management framework. The public sector should be entrepreneurial rather than spending-oriented (Morgan and Murtgatroyd, 1994).

### **Dimensions of public sector corporate entrepreneurship**

The definitions of entrepreneurship in the public sector have a number of elements in common. The dimensions of innovativeness, pro-activeness, and risk-taking emerged repeatedly. For example (Kearney *et al*, 2007) definition, had terms “innovate”, “initiate change”, and “facilitate risk” These dimensions also emerged repeatedly from the definition of corporate entrepreneurship as defined by the following authors; Miller 1983; Lumpkin and Dess 1996; Wiklund 1999; Covin and Miles 1999; Zahra and Garvis 2000; Ireland *et al* 2009;

Agca *et al* (2009) Innovation, pro-activeness and risk-taking dimensions are also present in the public sector just like in the private sector but with a different foci.

Empirically, Morris and Jones (1999:86) find entrepreneurship in the public sector to be strongly associated with innovativeness and pro-activeness, rather than with risk-taking. They suggest that stakeholder or public scrutiny might cause lower levels of risk-taking. Furthermore, Currie *et al* (2005: 996–1002) provide a similar justification, the public’s intolerance of failure and identify risk-aversion culture and lack of rewards for risky ventures as major obstacles in many public sector organizations. Corporate entrepreneurship has a lot of elements such as innovation, risk taking, pro-activeness, new product development, new business venturing , autonomy, competitive aggressiveness, self-renewal and strategic renewal. In the context of this study, the three dimensions; innovation, pro-activeness and risk-taking will be considered.

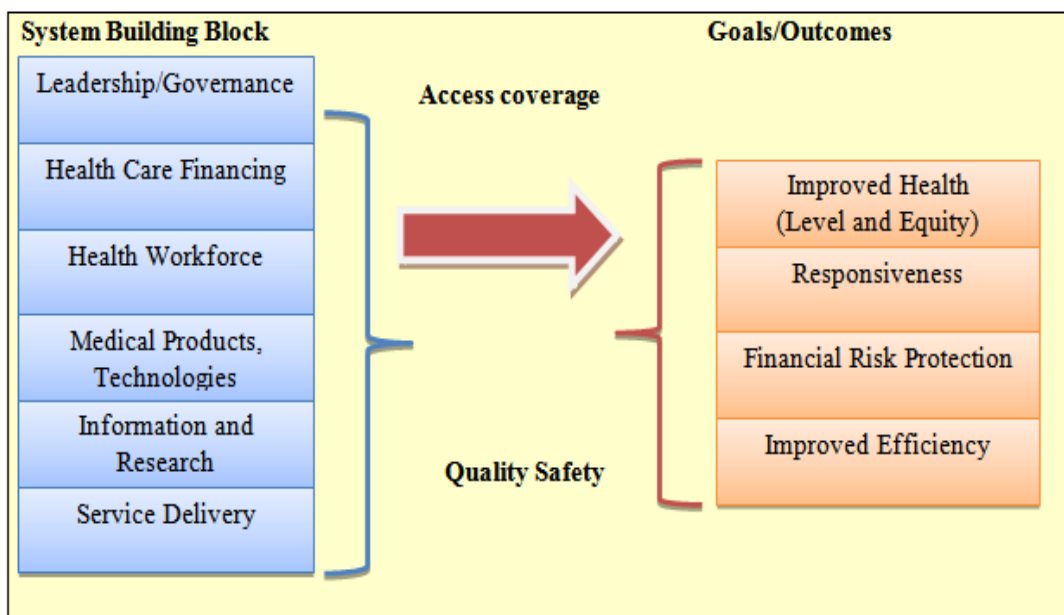
**Entrepreneurial economics and the health sector**

Entrepreneurial economics is a new field in the study of entrepreneurship. According to Keith Glancey & Ronald Macquaid (2000), entrepreneurial economics is concerned with the role of entrepreneurs, the nature and scope of entrepreneurship in the economy. It is the study of the entrepreneur and entrepreneurship within the economy. It looks at the behavior and characteristics of an entrepreneur in an economy. Entrepreneurial economics in the health sector brings efficiency, creativity and effectiveness in the provision of health services. Entrepreneurial economics helps in the creative allocation of resources in the health sector. This creative allocation of resources is what could reduce the disease burden for the country and help address the issue of escalating cost of health services. Every country strives for a health population because a health population is productive and leads to economic growth.

Economic growth is generally defined as an increase in the per capita income of a country (John, 1991). Such growth can be as the result of discovery of new resources or increased efficiency in the use of already available resources. These two events require entrepreneurial activity. It’s an entrepreneur who discovers the new resources or increases the efficiency use of the known resources. When that is done economic growth is achieved. Another determinant of economic growth is investment in human capital. This investment can be in form of educating and training the work force on the new methods of health care delivery. An improved health care delivery system improves the health status of citizens in the country.

**Measurement of performance in the health Sector**

For many years now performance of the health sector has been a major concern for policy makers. Reforms have been introduced in the health sector in Zambia with the explicit aim of improving performance. Measurement of performance requires an explicit framework defining the goals of a health system against which outcomes can be judged and performance quantified. The analysis of the performance of the health sector in Zambia is based on the “Six health System Building Blocks” adopted by the WHO as the appropriate framework for analyzing the performance of the sector. The figure 2.1 below shows the six building blocks and the expected outcomes;



**Figure No. 1: Six Health System Building Blocks**

Source: WHO (2007): Framework for Action

**III. Findings and Discussion**

Data for this study was analysed in SPSS Version 16.0 using descriptive and inferential statistics. A total number of 203 questionnaires were distributed to officers at managerial level in all the public hospitals in Lusaka district. 150 questionnaires were returned and properly filled in. This represents a response rate of 74%.

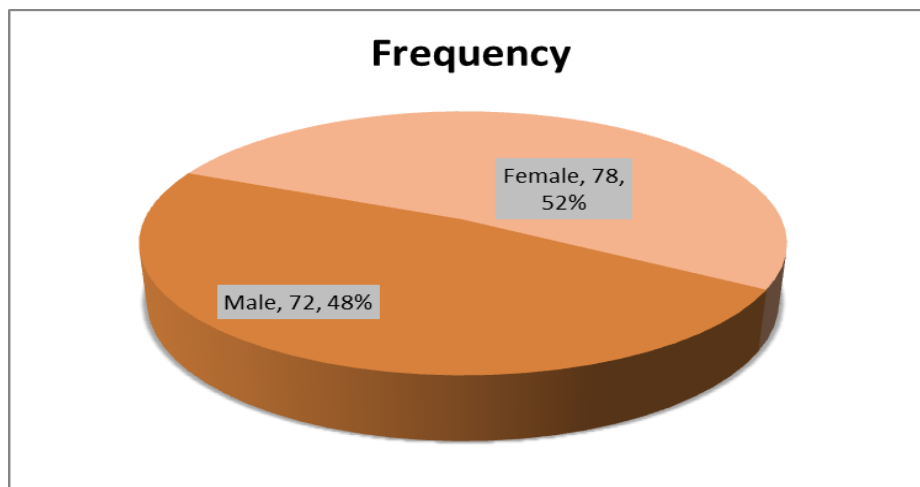
**Descriptive Statistics**

The descriptive statistics of this study are presented through Tables. These statistics were provided on the institution the respondent is coming from, gender, age group, rank in the organisation and central tendency.

**Table No. 1: Profile of respondents: institutions**

Name of institution	Frequency	Percent
University Teaching Hospital	68	45.3
Chainama Hills hospital	10	6.7
Cancer Disease Hospital	19	12.7
Levy Mwanawasa General Hospital	35	23.3
Chawama Hospital	4	2.7
Matero Hospital	5	3.3
Chipata Hospital	4	2.7
Chilenje Hospital	5	3.3
<b>Total</b>	<b>150</b>	<b>100</b>

The table shows that most respondents were from the University Teaching hospital (UTH). UTH is the biggest hospital in Zambia.

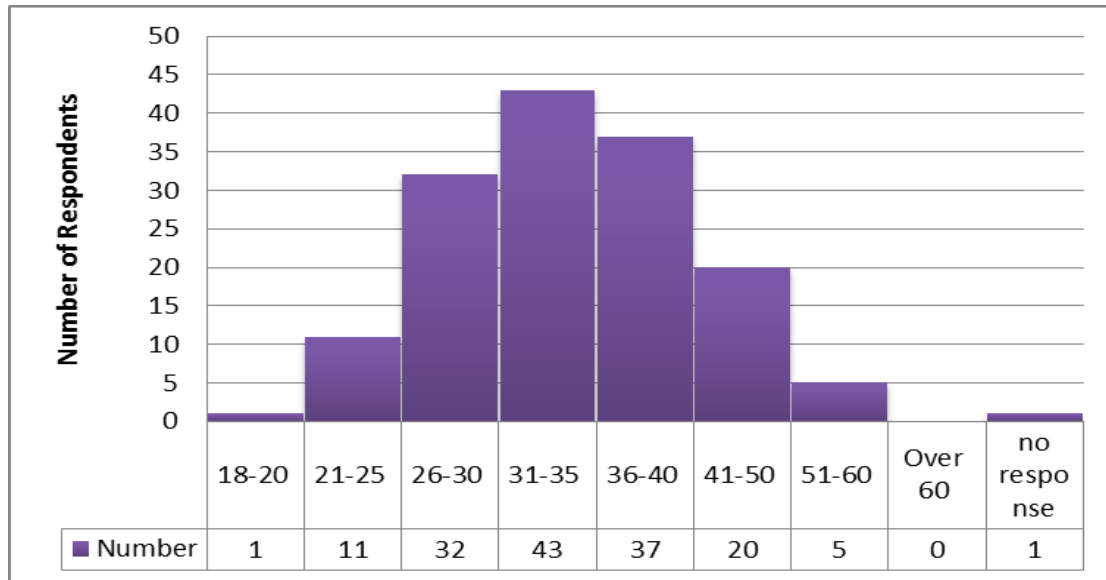


**Figure No. 2 Gender of respondents**

*Profile of respondents by Gender*

Figure No. 2 shows that most of the respondents were female representing 52%. They are more female than male in the health sector.

*Age of respondents*



**Figure 3:** Profile of respondents: Age group.

**Table No. 2:** Respondents' Age Groups

Age group (years)	Frequency	Percent
18-20	1	0.7
21-25	11	7.3
26-30	32	21.3
31-35	43	28.7
36-40	37	24.7
41-50	20	13.3
51-60	5	3.3
Over 60	0	0
No response	1	0.7
<b>Total</b>	<b>150</b>	<b>100</b>

The table shows that most of the respondents were aged between 31 and 35 years old. This represented 28.7%.

Current rank of respondent in the organisation

**Table No. 3:** Profile of respondents: Rank in organisation

Rank in organisation	Frequency	Percent
Top management	20	13.3
Middle management	78	52
Lower management	52	34.7
<b>Total</b>	<b>150</b>	<b>100</b>

The table shows that most of the respondents were at middle management level with a percentage of 52%.

Summary statistics for central tendency and variability of the metric scales of all the constructs

**Table No. 4:** summary statistics for the central tendency and variability of the metric scales of all the constructs

Column1	valid N	Minimum	Maximum	Mean	Median	Std. Deviation
Assessment of performance	150	2.2	99	4.8807	3.4	8.90354
C.1.Innovation	150	1	58	4.1267	3.4286	6.41251
C.2.Proactiveness	150	1.14	58.14	5.0229	3.2857	8.88016
C.3.Risk taking	150	1.2	41.4	3.2813	2.4	5.42518
D.1.Time availability	150	1.83	51.67	3.7856	3	5.82828
D.2.Rewards/Reinforcements	150	1.57	44.57	3.5581	3.44679	3.44679
D.3.Organisational structure	150	1.17	51.5	4.1778	3.178	7.0376

Table 4 shows the different dimensions that were measured using a 5-point likert-type scale, where high scores reflect high values on the construct.

#### **Reliability of the Measuring Instrument**

The summary statistics for the central tendency and variability of the metric scales of all the constructs was provided for in Table 4. The mean values were all greater than three (3). The value three (3) on the likert scale, means that the respondent neither agrees nor disagrees. And values above three (3) were agree or strong agree. It can be deduced that the mean score of the different constructs tend to range from higher than neutral towards positive or high. This shows that there is a positive relationship among the constructs under measure and there is presence of entrepreneurship in the health sector, Pro-activeness as a dimension of corporate entrepreneurship had the biggest value of 5.0229 and Risk taking had a value of 3.2813. This tells us that most managers were neutral on the risk taking construct.

The Cronbach Alpha test was used to evaluate the accuracy of the measuring instrument. Table 5 illustrates the accuracy of the measuring tool as expressed by means of Cronbach's alpha. Cronbach's Alpha Reliability Statistics **0.907**.

**Table No. 5: Reliability Statistics**

Description	No. of elements in construct	Cronbach's Alpha
Assessment of performance	7	0.902
C1. Innovation	6	0.893
C2. Pro-activeness	6	0.905
C3. Risk taking	4	0.894
D1. Time availability	5	0.900
D2. Rewards Reinforcements	7	0.882
D3. Organisational structure	5	0.880

According to Table No. 5, Overall coefficient of reliability or internal consistency (alpha) is .907, which is very high. According to the Cronbach Alpha test, it means that there is significant internal consistency among the survey items. This is in line with Nunnally (1978) recommendation that the minimal acceptable reliability for research should be in a range of 0.5 to 0.6, while higher values, such as 0.8, indicate that the measure is highly reliable

#### **Inferential Statistics**

Entrepreneurship is a powerful instrument in conveying messages of change in health care institutions. Implementing entrepreneurialism in the health care organization can cause modernization and an increased operating efficiency (Saltman & Busse, 2002). Roberts (1992) states that due to the scope and complexity of issues and problems facing public organizations, there is a need for public entrepreneurs to mound creative, flexible organizations to respond to the quickly changing world. He further argues that "public service organizations like government agencies need to be entrepreneurial just like any other business". Therefore, if Public sector corporate entrepreneurship is to be used as a strategy to improve health service delivery in a cost effective and efficient way, it is critical that the link between public sector corporate entrepreneurship and performance of the health sector is empirically examined.

The statistical analysis employed in this study differed based on the research questions. The t-test was used to determine the level of corporate entrepreneurship in the health sector. The chi-square test of independence was used to determine the relationship between the dimensions of public sector corporate entrepreneurship and the organisational performance and also the relationship between the dimensions of corporate entrepreneurship, organisational performance and the internal organisation factors.

#### **Hypothesis testing using T-tests**

The t-test was conducted to assess the significance difference in scores of all respondents in terms of gender. The following hypotheses were tested;

H<sub>0</sub>: The level of entrepreneurship is low.

H<sub>1</sub>: The level of entrepreneurship is high

**Table No. 6: Assessment of Performance and Gender**

Factors			Mean	Std. Deviation	t	df	Sig. (2-tailed)
	Gender	N					
Assessment of performance	Male	72	4.6792	11.27937	-0.265	148	0.791

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C.1. Innovation	Female	78	5.0667	0.88842	-1.543	148	0.125
	Male	72	3.2897				
C.2. Pro-activeness	Female	78	4.8993	6.68259	-1.253	148	0.212
	Male	72	4.0794				
C.3. Risk taking	Female	78	5.8938	4.57006	-0.362	148	0.718
	Male	72	3.1139				
D.1. Time availability	Female	78	3.4359	5.91294	-0.034	148	0.973
	Male	72	3.7685				
D.2. Rewards Reinforcements	Female	78	3.8013	0.70477	-0.685	148	0.495
	Male	72	3.3571				
D.3. Organisational structure	Female	78	3.7436	1.97404	-1.444	148	0.151
	Male	72	3.3171				
	Female	78	4.9722				

Table No. 6 shows that the p-values for Assessment performance, C.1. innovation, C.2. pro-activeness, C.3. Risk taking, D.1. time availability, D.2. rewards/reinforcements and D.3. organisational performance are above 0.05 ( $P > 0.05$ ). This is an indication that there is no significant statistical difference between the different gender's perceptions of these factors. There was not enough evidence to reject the null hypothesis and it can be concluded that the level of entrepreneurship is low in the health sector in Zambia.

#### Hypothesis testing using chi square tests

Two hypotheses were tested.

$H_0$ : There is a negative relationship between public sector corporate entrepreneurship dimensions and organisational performance.

$H_1$ : There is a positive relationship between public sector corporate entrepreneurship

**Table 7:** Chi-square and P-Values for Relationship between corporate entrepreneurship dimensions and organisational performance

	Innovation	Pro-activeness	Risk-taking
Assessment of Performance	1167 ( $P < 0.001$ )	1416 ( $P < 0.001$ )	1047 ( $P < 0.001$ )

The P-values in all the dimensions that represent public sector corporate entrepreneurship that is (C.1. innovation, C.2. proactiveness and C.3. Risk taking) vs. organisation performance are less than 0.05. The null hypothesis is therefore rejected at 5% significance level. This implies that there is a positive relationship between public sector corporate entrepreneurship dimensions and organisational performance.

$H_0$ : The relationship between public sector corporate entrepreneurship dimensions and organisational performance is not moderated by internal organisational factors.

$H_1$ : The relationship between public sector corporate entrepreneurship dimensions and organisational performance is moderated by internal organisational factors.

Chi-Square Tests: The relationship between public sector corporate entrepreneurship dimensions and organisational performance is not moderated by internal organisational factors.

**Table No. 8:** Summary of Chi-square Values and Corresponding P-Values

	D1	D2	D3
C1	574.3 ( $P = 0.004$ )	802.3 ( $P < 0.001$ )	972.1 ( $P < 0.001$ )
C2	881.8 ( $P < 0.001$ )	974.5 ( $P < 0.001$ )	1120 ( $P < 0.001$ )
C3	573.7 ( $P < 0.001$ )	499.9 ( $P = 0.032$ )	493.3 ( $P = 0.004$ )

Where:

C1 = Innovation;

C2 = Pro-activeness;

C3 = Risk taking;

D1 = Time availability;

D2 = Rewards reinforcements; and

D3 = Organisational structure

Since  $P < 0.05$  in all the factors measuring the relationship between public sector corporate entrepreneurship dimensions and organisational performance Vs. internal organisational factors.  $H_0$  is rejected, which implies that; the relationship between public sector corporate entrepreneurship dimensions and organisational performance is moderated by internal organisational factors.



The summary statistics for the central tendency and variability of the metric scales of all the constructs was provided for in table No. 5. The mean values were all greater than three (3). The value three (3) on the likert scale means that the respondent neither agrees nor disagrees. And values above three (3) were agree or strong agree. It can be deduced that the mean score of the different constructs tend to range from higher than neutral towards positive or high. This shows that there is a positive relationship among the constructs under measure and there is presence of entrepreneurship in the health sector, Pro-activeness as a dimension of corporate entrepreneurship had the biggest value of 5.0229 and Risk taking had a value of 3.2813. This tells us that most managers were neutral on the risk taking construct. The Cronbach Alpha test was undertaken on the measuring instrument. The Cronbach Alpha coefficients for all the constructs are shown on Table 5. The overall Cronbach Alpha coefficient is shown on table No. 5. The Overall alpha was .907, which is very high. According to the Cronbach Alpha test, it means there is significant internal consistency among the survey items. This is in line with Nunnally (1978) recommendation that the minimal acceptable reliability for research should be in a range of 0.5 to 0.6, while higher values, such as 0.8, indicate that the measure is highly reliable.

#### *1) Discussion pertaining to the results of the 1<sup>st</sup> hypothesis*

H<sub>0</sub>: The level of entrepreneurship is low.

H<sub>1</sub>: The level of entrepreneurship is high

The first hypothesis to be tested was to assess empirically the level of corporate entrepreneurship in the health sector. The t-test was performed and the results are shown in table .....

The results of the t-test on gender and C.1.innovation, C.2.pro-activeness and C.3.risk taking revealed that both males and female perceive Public sector corporate Entrepreneurship dimensions in the same way. They all agree with the fact that the level of public sector corporate entrepreneurship in the health sector is low. The P-value for all Public sector corporate Entrepreneurship dimensions that is C.1.innovation, C.2.pro-activeness and C.3.risk taking on gender is above 0.05 (P>0.05), that is 0.125, 0.212 and 0.718 respectively. According to the interpretation rule of the t-test which is stated as; when P-value is above 0.05 (P>0.05) the null hypotheses is not rejected. It can be concluded that: H<sub>0</sub> is true and therefore the hypothesis was not rejected. The level of corporate entrepreneurship in the health sector is low.

#### **Discussion pertaining to the results of the 2<sup>nd</sup> Hypothesis**

H<sub>0</sub>: There is a negative relationship between public sector corporate entrepreneurship dimensions and organisational performance.

H<sub>1</sub>: There is a positive relationship between public sector corporate entrepreneurship dimensions and organisational performance.

The second hypothesis to be tested was to assess empirically the association between public sector corporate entrepreneurship dimensions and organisational performance. The chi square test was performed and the results are shown in tables 7 and 8. The P-values in all the dimensions that represent public sector corporate entrepreneurship that is (C.1.innovation, C.2.proactiveness and C.3.Risk taking) vs. organisation performance are less than 0.05. The null hypothesis was therefore rejected implying that there is a positive relationship between public sector corporate entrepreneurship dimensions and organizational performance.

The empirical result of this study has proved the theories from the literature that corporate entrepreneurship is positively related to the organisation performance. Wiklund (1999) in his study on the impact of corporate entrepreneurship and organisational performance found that there is a positive relationship. The survey showed that there is a strong relationship overtime which meant that corporate entrepreneurship is effective within the organisation over a certain period of time. The study by Zahra and Garvis (2000) also shows that corporate entrepreneurship is positively associated with organisation performance. The health sector in Zambia should therefore, embrace corporate entrepreneurship activities in their organisations. The culture of entrepreneurship in the health sector would help solve some of the challenges it is facing. Vigoda (2002) states that a well performing public sector must rely on creativity and innovation to overcome problems.

#### **Discussion pertaining to the results of the 3<sup>rd</sup> Hypothesis**

H<sub>0</sub>: The relationship between public sector corporate entrepreneurship dimensions and organizational performance is not moderated by internal organisational factors.

H<sub>1</sub>: The relationship between public sector corporate entrepreneurship dimensions and organizational performance is moderated by internal organisational factors.

The 3<sup>rd</sup> hypothesis to be tested was to assess empirically whether the association between public sector corporate entrepreneurship dimensions and organizational performance is moderated by internal organisational factors. The chi square test was performed and the results are shown in tables Nos. 7 and 8. Furthermore, in the

literature review, Hancer *et al* (2009) states that rewards/reinforcements motivates employees to engage in innovative, proactive and risk behavior. Kurakto (2009) also postulates that for new and innovative ideas to thrive, employees should have time to incubate their ideas. Based on the results of this study, the public health facilities should therefore avoid putting time constraints on every aspect of employees' jobs and allow employees to work with their co-workers to solve long term problems and they should flatten organizational structures with the aim of reducing rigidity and increasing flexibility.

we concluded that there is a positive relationship between the dimensions of corporate entrepreneurship and organization performance and that the internal organizational factors moderates this relationship.

The findings of this research study are consistent with the findings reported by previous authors (Wiklund 1999; Zahra and Garvis 2000; Zampetakis and Moustakis 2007; Whipple & Peterson 2009:12; Hancer *et al* 2009; Kurakto 2009)

#### **IV. Conclusion**

This study found that all the dimensions of public sector corporate entrepreneurship have positive and significant impact on the performance of the health sector. The study further showed that all the internal organisational factors moderated the relationship between corporate entrepreneurship and organisational performance. All these findings were consistent with the theories that exist on the relationships between corporate entrepreneurship, organisational performance and internal organisational factors.

The study has built a snapshot of how an entrepreneurial organisation should act and operate. There has not been significant research and emphasis on corporate entrepreneurship in the health sector in Zambia. The following recommendations can be made to all institutions in the health sector in Zambia: To sensitize the employees on the importance of corporate entrepreneurship in the health sector; To search for non-tax revenue, develop creative user-free structures, rent out unused and underutilized resources, and generate revenue from public assets; To focus on participatory management, flat organisational structures, empower and reward champions and to have more broadly defined job autonomy (decentralisation); and To avoid putting time constraints on every aspect of employees' jobs and allow employees to work with their co-workers to solve long term problems

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