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Contribution of components of Green Supply Chain Execution-Marketing in Green Supply Chain Performance measurement-A Pilot Empirical Study of the Indian Automobile Manufacturing Sector

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ABSTRACT

This paper is one of the several extensions of the research works done by [5]. Green Supply Chain Practices have been known to have an impact on Green Supply Chain Performance [5].This paper tests empirically through a pilot study of the Indian Automobile Manufacturing Sector, the contribution of the four variables constituting the construct Green Supply Chain Execution-Marketing in Green Supply Chain Performance measurement. Also the paper establishes the reliability of the questionnaire instrument developed previously for measuring the construct Green Supply Chain Execution-Marketing and also for measuring the reliability of the four variables that constitute the construct Green Supply Chain Execution-Marketing. Further the paper establishes the correlation among these four variables. Finally this paper conducts Confirmatory Factor Analysis (CFA) to arrive at a single factor (linear combination of four variables constituting the construct Green Supply Chain Execution-Marketing) to aid in measuring the construct Green Supply Chain Execution-Marketing. Finally the paper establishes the order of contribution of the four variables constituting the construct Green Supply Chain Execution-Marketing.

Keywords: Automobile; CFA; Green Supply Chain Execution-Marketing; Green Supply Chain Performance; Green Supply Chain Practices, Indian, Manufacturing Sector; Pilot Study

INTRODUCTION

Green Supply Chain Execution-Marketing has been identified as one of the ten Green Supply Chain Performance measures which are impacted by five Green Supply Chain Practices [5]. Accordingly, this paper identifies the variables constituting the construct Green Supply Chain Execution-Marketing [5]. Green Supply Chain Execution-Marketing in turn is a sub-construct of the main construct Green Supply Chain Performance. Since Green Supply Chain Execution-Marketing has been identified as being constituted of four variables, it is of interest to know how these four variables fare in the pilot empirical study of the Indian automobile manufacturing sector by means of a questionnaire instrument [5]. It is also of interest to know the order of contribution of these four variables constituting the construct Green Supply Chain Execution-Marketing. The 50 automobile manufacturing plants that were surveyed during the pilot empirical study are among the ones listed in [2]. The survey methodology was used in line with the findings of [3].

THE RESEARCH QUESTIONS

The six research questions that have been addressed by this research paper are as follows:

Research Question 1. To have a feel of the responses of the Indian Automobile Manufacturing Sector pertaining to the four variables constituting the construct Green Supply Chain Execution-Marketing.

Research Question 2. To know the reliability of the questionnaire instrument for measuring the construct Green Supply Chain Execution-Marketing.

Research Question 3. To know the reliability of the questionnaire instrument for measuring the four variables constituting the construct Green Supply Chain Execution-Marketing.

Research Question 4. How are the four variables constituting the construct Green Supply Chain Execution-Marketing correlated?

Research Question 5. How many factors are retained by the four variables constituting the construct Green Supply Chain Execution-Marketing?

Research Question 6. What is the order of contribution of the four variables constituting the construct Green Supply Chain Execution-Marketing?

THE CONSTRUCT GREEN SUPPLY CHAIN EXECUTION-MARKETING AND ITS FOUR VARIABLES USED IN THE STUDY

There are four variables that constitute the construct Green Supply Chain Execution-Marketing. They are depicted in Table 1 in their abbreviated form.

Table 1. The four variables constituting the constituting the construct Green Supply Chain Execution-Marketing

The four variables constituting the construct Green Supply Chain Execution-Marketing	GSCEXMARK1	GSCEXMARK2	GSCEXMARK3	GSCEXMARK4

DESCRIPTIVE STATISTICS OF THE DATA ON GREEN SUPPLY CHAIN EXECUTION-MARKETING THAT WAS SCALED

A five point balanced Likert scale was used to scale the data from respondents on whom a questionnaire was administered. The respondents were employees of Indian automobile manufacturing firms and /or their plants as mentioned in [2]. The data collected revealed the following descriptive statistics of the four variables constituting the construct Green Supply Chain Execution-Marketing.

Table 2. Descriptive Statistics of the data scaled by the questionnaire on Green Supply Chain Execution-Marketing

Simple Statistics						
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
GSCEXMARK1	50	50	3.76000	1.11685	188.00000	1.00000
GSCEXMARK2	50	50	3.92000	0.98644	196.00000	1.00000
GSCEXMARK3	50	50	3.70000	1.18235	185.00000	1.00000
GSCEXMARK4	50	50	3.70000	1.18235	185.00000	1.00000

THE RELIABILITY OF THE INSTRUMENT FOR THE CONSTRUCT GREEN SUPPLY CHAIN EXECUTION-MARKETING

The reliability of the questionnaire instrument developed by [5] for the construct Green Supply Chain Execution-Marketing is shown in Table 3 as 0.968858 which is considered to be an indicator of excellent internal consistency reliability [4].

Table 3. Reliability by Cronbach's Coefficient Alpha for the construct Green Supply Chain Execution-Marketing

Cronbach Coefficient Alpha	
Variables	Alpha
Raw	0.969056
Standardized	0.968858

The reliability of the questionnaire for the four variables that constitute the construct Green Supply Chain Execution-Marketing is shown in Table 4. All the four variables in Table 4 namely GSCEXMARK1, GSCEXMARK2, GSCEXMARK3 and GSCEXMARK4 have a reliability greater than 0.9 but less than 1 which is considered to be an excellent indicator of internal consistency reliability [4].

Table 4. Reliability of the individual four variables constituting the construct Green Supply Chain Execution-Marketing

Cronbach Coefficient Alpha with Deleted Variable				
Deleted Variable	Raw Variables		Standardized Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
GSCEXMARK1	0.904914	0.964054	0.899235	0.965278
GSCEXMARK2	0.830030	0.984707	0.828849	0.984765
GSCEXMARK3	0.984326	0.941023	0.981921	0.941560
GSCEXMARK4	0.984326	0.941023	0.981921	0.941560

PEARSON'S CORRELATION COEFFICIENT AMONG THE VARIABLES STUDIED

The Pearson's Correlation coefficient between different pairs of variables that constitute the construct Green Supply Chain Execution-Marketing is shown in Table 5. Since the values of correlation coefficient are positive, it indicates that all the four variables that make up the construct Green Supply Chain Execution-Marketing are oriented towards the goal of Green Supply Chain Execution-Marketing in a unidirectional manner. Also all the values of correlation coefficient are above 0.7 but less than 1. This is also an indicator of internal consistency reliability [4].

Table 5. Pearson's Correlation coefficient among the four variables of Green Supply Chain

Execution-Marketing

Pearson Correlation Coefficients, N = 50 Prob > |r| under H0: Rho=0				
	GSCEXMARK1	GSCEXMARK2	GSCEXMARK3	GSCEXMARK4
GSCEXMARK1	1.00000	0.74171 <.0001	0.93347 <.0001	0.93347 <.0001
GSCEXMARK2	0.74171 <.0001	1.00000	0.85390 <.0001	0.85390 <.0001
GSCEXMARK3	0.93347 <.0001	0.85390 <.0001	1.00000	1.00000 <.0001
GSCEXMARK4	0.93347 <.0001	0.85390 <.0001	1.00000 <.0001	1.00000

CONFIRMATORY FACTOR ANALYSIS OF THE CONSTRUCT GREEN SUPPLY CHAIN EXECUTION-MARKETING

Using a statistical analysis software called SAS 9.2, Confirmatory Factor Analysis (CFA) was conducted on the construct Green Supply Chain Execution-Marketing which consists of four variables namely GSCEXMARK1, GSCEXMARK2, GSCEXMARK3 and GSCEXMARK4. Principal Component method was used as the initial factor method. Accordingly the Eigenvalues were obtained as shown in the Table 6.

Table 6. Eigen values obtained by using Principal Components Method as the initial factor method.

Eigenvalues of the Correlation Matrix: Total = 4 Average = 1				
	Eigenvalue	Difference	Proportion	Cumulative
1	3.66387946	3.39141979	0.9160	0.9160
2	0.27245968	0.20879882	0.0681	0.9841
3	0.06366086	0.06366086	0.0159	1.0000
4	0.00000000		0.0000	1.0000

An Eigen value indicates the relative importance of each factor in accounting for the particular set of variables being analyzed. From Table 6 it is clear that the first factor can explain 3.66387946 variables. No other factor in Table 6 can explain at least one variable. Hence only one factor will be retained by MINEIGEN criterion as the only factor as shown by the factor pattern of Table 7. The variance explained by this factor is 3.6638795.

Table 3. Factor pattern obtained for the single factor retained by MINEIGEN criterion

Factor Pattern	
Variable	Factor1
GSCEXMARK1	0.94470
GSCEXMARK2	0.89839
GSCEXMARK3	0.99104
GSCEXMARK4	0.99104

The final communality estimates for the four variables constituting the construct Green Supply Chain Execution-Marketing are shown in Table 8.

Table 4.The final communality estimates for Green Supply Chain Execution-Marketing

Final Communality Estimates: Total = 3.663879			
GSCEXMARK1	GSCEXMARK2	GSCEXMARK3	GSCEXMARK4
0.89245138	0.80709696	0.98216557	0.98216557

Communality estimates are indicative of how much of each variable is accounted for by the underlying factors taken together. A high value of communality means that not much of the variable is left over after whatever the factors represent is taken into consideration. In short the communality estimates are indicative of the relative contribution of each of the variables in the construct. Accordingly Figure 1 shows in the descending order, the relative contribution of each of the four variables of the construct Green Supply Chain Execution-Marketing as follows: GSCEXMARK3 and GSCEXMARK4 at the same level followed by GSCEXMARK1 and GSCEXMARK2.

Figure 1. Contribution of the four components of Green Supply Chain Execution-Marketing in descending order.

CONCLUSION

The aim of this paper was to study the contribution of the four variables constituting the construct Green Supply Chain Execution-Marketing as a component measure of Green Supply Chain Performance. It was found that all the four variables in the study were strongly correlated with each of the other variables meaning that all the four variables involved are strongly oriented towards Green Supply Chain Execution-Marketing. The reliability of the construct Green Supply Chain Execution-Marketing was 0.968858 which is considered excellent. Also the reliability of the four variables constituting the construct Green Supply Chain Execution-Marketing was above 0.9 but less than 1which means that the questionnaire is reliable to measure each of the four variables and also the construct Green Supply Chain Execution-Marketing as a whole. Also the results of Confirmatory Factor Analysis reveal that the single factor accounting for 3.6638795 variables is retained. In the descending order, the relative contribution of each of the four variables of the construct Green Supply Chain Execution-Marketing are as follows: GSCEXMARK3 and GSCEXMARK4 at the same level followed by GSCEXMARK1 and GSCEXMARK2.

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Principals Leadership Styles and Students' Academic Performance in Enugu Metropolis: A Comparative Survey of Public and Mission Secondary Schools

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ABSTRACT
Education is a fundamental human right enshrined in all major United Nations and International Charters. As a result, there is need to provide it in most efficient manner. Education plays a major role in social emancipation, political, economic and cultural development of countries. However, the low performance of teachers and its negative impact accentuated by the dwindling fortunes of students' academic performance have become a great concern to major stakeholders in the education sector. The study compares the leadership styles of principals in public and mission secondary schools on students' academic performance in Enugu South Local Government Area of Enugu State, Nigeria. Ex-post facto descriptive research design was adopted. Data collection instruments were the use of structured questionnaire and interviews. The Yamane's (1964) statistical formula was used for sample size determination. A total of 285 copies of the questionnaire were administered to principals, teachers and supportive staff of the selected Secondary Schools using simple random sampling techniques. A combination of chi-square and Pearson product moment correlation statistical tools at 0.05 level of significance was utilized. Results of the investigation reveal that autocratic leadership style was positively correlated with students' academic performance. The study recommends that the application of autocratic leadership style by principals has the capacity of increasing the level of students' academic performance.

Key words: Principal, Leadership Style, Academic performance, Public, Mission.

INTRODUCTION
The society has various organizations among them educational institutions. Educational institutions especially secondary schools have become significant as a result of the importance placed on education (Budohi, 2014). An educational institution refers to a group of individuals in a given environment whose efforts are deliberately co-ordinated by principals for the purpose of imparting knowledge, skills and attitudes to students or pupils in order to achieve predetermined educational objectives or goals (Okumbe, 1998). These educational organizations include secondary schools which have aims and objectives to achieve and principals/leaders to co-ordinate its activities.Leadership is a broad concept that has been described and defined variously by philosophers, scholars, researchers and even laymen. It is as old as man and his interactions in the universe which involves both simple and complex ramifications. Leadership is the process of influencing the activities of a group of people by a

leader in efforts towards goal achievement (Nworgu, 1991 and Nwadiani, 1998). It involves a force that initiates action in people and the leader. Leadership could be described as the ability to get things done with the assistance and co-operation of other people within the school system (Aghenta, 2001). Nowadays, the role of principal is to emphasize his or her activity as the transformational and instructional leader. This is because effectiveness is ultimately determined by the impact of the principal on students' learning outcome. Most of the research findings in the literature strongly correlate that the principal is the most important person in providing leadership for improved instruction and better curricular in order to enhance high-academic excellence in educational performance, (Adeyemi and Bolarinwa, 2013, Kythreotis, Pashiardis and Kyriakides, 2010 and Ibrahim, 2003). It is important to deal with effective leadership styles performed by the principals as these indeed play the most important role for effective schools and determining students' excellence in academic performance. Contributing and accentuating to the above discourse, outstanding leadership invariably emerged as a key characteristic of outstanding schools. There is no doubt that those seeking quality in education must ensure its presence in quantum proportion and that the development of potential leaders must be given high priority (Abrar, Baloch and Ghouri, 2010).

Thus it is arguable that management and leadership styles are very important for the running of the various organisations including secondary schools. In line with this argument, Ball (1987) had identified the following leadership and management styles which emerged in the course of his research in British secondary schools:the interpersonal managerial style, adversarial and the political style or authoritarian style. He described interpersonal head teachers/principals as being typically mobile and visible with a preference for consulting with individuals rather than holding meetings. They like to "sound out ideas" and gather opinions. Such head teachers will frequently reiterate to teachers the importance of bringing complaints and grievances to them first. Ball (1987) pointed out that this type of leadership style is particularly effective at satisfying teachers' individual needs and that grievances and staff turnover tend to remain low in such schools. On the other hand, he argued that principals/head teachers with managerial styles adopt a leadership style that parallels that of a manager in an industry. Nevertheless, Nsubuga (2008), argues that the use of management techniques involves the importation into the school system, types of relationships and processes of organizational control from the factory. The secondary school administrators in Nigeria are called principals (Duze, 2012 and Chidiobi, 2012) and are surrounded by school senior management team called the vice principals. The principals relate to the staff through this team and through a formal structure of staff meetings. Consequently, when the management team functions well through the principal's leadership, the school operations are well supervised and students perform well in their examinations. The principal is an important personality in the governance and management of the school for several reasons which include but are not limited to the following: liaising with Vice Principals and Head of Departments in upholding the culture of the school; maintaining school ethics and discipline;management of school funds; management of the general welfare of staff and students; soliciting support for the school from the host community and developing the quality and standards of education (Obama; Eunice and Orodho, 2015). It should be observed that some aspects of school management such as instructional, administrative, democratic and bureaucratic leadership styles are always good, coercive and authoritarian management styles are always frowned at and are therefore not conducive. It is against this background that this study was prompted and sought to compare the leadership styles of principals and students' academic performance in public and mission secondary schools in Enugu South Local Government Area of Enugu State especially given the ferocious agitations that preceded the formal hand over of schools to these missionary owners by the Enugu State Government in 2000.

STATEMENT OF THE PROBLEM

The current global upsurge towards the acquisition of quality education has created anxiety in the hearts of stakeholders in the education sector on the types of leadership styles which school administrators/principals should adopt for effective and efficient implementation of national curriculum which would pave way for high educational output. This quest for the Golden Fleece had seen many wealthy and literate Nigerians 'catapulting' their wards and/or children out of the country to acquire the best quality education money can 'buy'. This sudden realization for quality education has received top priority in most Sub-Saharan African countries including Nigeria (Adeyemi and Bolarinwa, 2013; Orodho, 2014 and STAN, 1992). Demand for education quality is also increasing in Enugu South Local Council Government of Enugu State where the current administration in the state views the satisfactory performance of her basic education system not only instrumental but also strategically in relation to economic development and national competitiveness of her indigenes in the Nigerian project.Despite the fact that both public and missionary schools in Enugu South have qualified principals using differing leadership styles the academic performance in these schools have become a nightmare for stakeholders (Ahmadu, Yunus, Norwaris and Musa, 2012) and Obemeata, (1992).

There is no gain saying the fact that academic performance of students in Senior Secondary Schools Certificate (SSCE) examinations is determined by many factors, leadership style plays a very significant role in the quality of education delivery. Studies by scholars and researchers have established the consensus that principals' leadership styles have significant impact on student's performance and achievement in external and national examinations such as West African Senior School Certificate Examination (WASSCE) and National Examination Council (NECO) respectively. However, some of these studies produce varying results and only very few are in agreement witheach other's findings. Research has shown that in secondary schools where management principles like delegation, teachers' participation in decision making process, clear communication channels, human relations and modern instructional techniques are practiced, students' academic performance tend to improve greatly. It has been documented that in some secondary schools in the Enugu State some principals abdicate their duty and divorce themselves from statutory responsibility and authority entrusted to them leading to poor students' academic performance. This practice is very much common in rural schools with low supervision by Ministry of education and Post Primary School Management Board (PPMB).

Again no research study has delved into comparing the leadership styles of public and missionary schools principals and its impact on students' academic achievements. The current study was conceived to investigate the difference if any of leadership styles of principals in public and missionary secondary schools on students' academic performance since primary and secondary schools were 'de-regulated' and many handed over to their former owners the missionary by the then government of Enugu State between 1999 - 2007.

PURPOSE AND OBJECTIVES OF THE STUDY

The purpose of the study is a comparative study of secondary school principals in public and missionary schools in Enugu South LGA. The objectives this study seeks to investigate are as follows:

1. To examine the level of academic performance of students in public and missionary secondary schools where the most commonly used leadership style is practiced.
2. To determine which leadership style is the best for Public and/or Missionary Secondary School in Enugu South Local Government Council.

KEY RESEARCH QUESTIONS

From the foregoing, the following key research questions were deciphered:

1. To what extent is the level of students, academic performance improved by the most commonly used leadership style in public and missionary schools?
2. What should be the best leadership style for a public and mission secondary schools in Enugu South L.G.A.?

RESEARCH HYPOTHESES

A hypothesis is a tentative statement of the relationship between two or more variables (Spiegel, 1992; Ozofor, 2012). In line with the main purpose and objectives defined in the foregoing the following hypotheses are formulated for the study:

H_0: There is no correlation between principals' leadership styles and the level of students' academic performance in public and missionary secondary schools in Enugu South L.G.A.
H_1: There is a correlation between principals' leadership styles and the level of students' academic performance in public and missionary secondary schools in Enugu South L.G.A.

H_0: There is no best leadership style of principals for public and mission secondary schools in Enugu South L.G.A.
H_1: There is the best leadership style of principals for public and mission secondary schools in Enugu South L.G.A.

REVIEW OF RELATED LITERATURES

Conceptual Framework

Much effective school research over the past two decades has concentrated on examining the relationship between the leadership behavior of school principals and the enhancement of organizational performance (Shum & Cheng, 1997). Of particular interest has been studies that highlighted the mediating role principals serve between teachers and learners (Silins& Murray-Harvey, 1999). Interestingly, results from these studies have suggested that principals have the ability to indirectly affect student achievement by improving the tone or learning environment of a school (Johnson, Livingston, Schwartz & Slate, 2000).However, while the concepts of school leadership and school learning environment seem to be intuitively linked, there has been few studies that have related these concepts together (Griffith, 1999). Furthermore, recent paradigm shifts in conceptualizing leadership have also encouraged educational researchers to consider these relationships from the perspective of new leadership models. Prominent among them is the transformational and transactional leadership model (Burns, 1978) which suggests that follower performance can be lifted to beyond what is normally considered to be acceptable (Bass, 1985). Again, transformational leaders are able to manipulate and alter their environmental constraints in order to achieve performance goals (Kirby, King and Paradise, 1992).

Adeyema and Bolarinwa (2013),brought into focus a dimension of leadership style that is associated with the autocratic/democratic continuum. This is the task orientation-versus relationship-oriented style of leadership with the task orientation being similar to the autocratic method and the relationship oriented style being similar to the democratic method. According to the authors, current research has established that the difference between the effectiveness and ineffectiveness of the four leadership styles is the appropriateness of the leader's behavior to the particular situation in which it is used. With respect to the foregoing, Duze (2012) states that one of the basic factors that would elevate or debilitate each of the four

leadership styles is the basic task maturity of the individual or group being led with maturity being defined in terms of the capacity to set high but realistic goals.

Kemp and Nathan (1989) identified three styles of leadership namely authoritarian, democratic or delegative, and or laissez-faire. According to Adeyemi (1998) the authoritarian or autocratic leadership style is used when leaders tell their employees what they want done and how they want it accomplished, without getting the advice of followers. This style results in the group members reacting aggressively and uninterestingly in the work environment. They further suggest that authoritarian style should normally only be used on rare occasions. This often results in unending industrial disputes in an organization hence affecting the achievement of the overall goals and objectives. The participative or democratic leadership style involves the leader including one or more employees in the decision making process in determining what to do and how to do it. However, the leader maintains the final decision making authority. Using this style is not a sign of weakness; rather, it is a sign of strength that your employees will respect (Obama, Eunice and Orodho, 2015).

Nsubuga (2008) maintains that an effective principal pays more attention to planning work, special tasks and permits teachers to participate in decision-making processes in an effort to achieve school goals. Using this style is of mutual benefit. It allows them to become part or the team and allows you to make better decisions. According to Ogunasanwo, (2000) the participatory leadership style provides a climate of sense of unity in pursuit of set goals.

Delegative or free reign is where the leader allows the employees to make the decisions. This is used when employees are able to analyze the situation and determine what needs' to be done and how to do it. The laissez-faire style of leadership, according to Flippo and Munsinger, (1982) is where a leader succumbs to Theory Y. The theory argues that people are innately motivated, naturally like to do work and therefore there should be no rules since everybody has an inborn sense of responsibility. However, this style of leadership may result in indiscipline due to non-enforcement of rules and regulations in a school leading to poor performance in both national and external examinations.

Pervasive and sustained student learning is more likely to occur in schools with strong instructional leadership. Morphet, Johns and Reller (1974) stress that administrative efficiency will be valid only to the extent to which it will contribute to the attainment of goals of the organization, the goals of actors in the organization and the extent that it will meet the requirements of the environment for that survival of the organization. Bell (1992) notes that effective leadership will provide schools with a vision, explicit philosophies laid on consultation and team work and lead to success in attainment of good results in national examinations. Abrar, Baloch and Ghour (2010) further assert that incompetent principals are a big problem to the overall administration and management of education in any country.

Empirical Studies Reviewed: Leadership and Students' Academic Performance
The term 'academic performance' has been described as the scholarstic standing of a student at a given moment. It refers to how an individual is able to demonstrate his or her intellectual abilities. This scholarstic standing could be explained as the grades obtained in a course or groups of courses taken (Daniels and Schouten, 1970), Owoyemi, 2000). Animola, (1990) commented on the scholarstic standing of students and argued that performance is a measure of output and that the main outputs in education are expressed in terms of learning, that is, changes in knowledge, skills and attitudes of individuals as a result of their experiences within the school's system. Thus, in determining academic performance, Daniels and Schouten (1970) emphasized the use of grades in examinations and reported that grades could serve as

predictive measures as well as criterion measures. Findings made by AI-Shorayye (1995) and Adeyemi (1998) gave credence to this point.

Academic performance therefore is largely identified by a range of statistical indicators. Science Teachers Association of Nigeria (STAN, 1992) supported this argument and reported that performance is the level of attainment of a person in an examination, that is, how an individual is able to demonstrate his or her abilities in an examination. Performance has been regarded as a measure of educational output (Adeyemi, 2006). This fact buttressesObemeata's (1992) argument that the performance of students in public examinations in many Nigerian schools has been poor as a result of shortage of teachers, inadequate funding of schools and the broad secondary school curriculum. Supporting these findings, Animola (1990) expressed that this poor performance of students has been a great concern to curriculum planners and stakeholders in the education sector.

Omotoso (1992) attributes the causes of dwindling performance of students in Nigerian schools to the poor financial position of government which has made the funding of schools inadequate. This situation has placed a greater burden on the Parents Teachers Associations which is saddled with the funding of most capital projects in schools.The introduction of the Structural Adjustment Programme by the Federal Government of Nigeria in 1986 led to the rising cost of textbooks and stationery in Nigeria. Hence, the running grants to schools were often delayed and grossly inadequate in view of the rising cost of living (Ige, 2001). Ibukun (1990) supported this view and reiterated that poor training of teachers, lack of textbooks and inadequate facilities often lead to poor educational results. As a result, he asserted that the educational system in Ondo State, Nigeria is being seriously challenged, as it appears to be true in opinion of many people that the standard of the educational enterprise is falling in the State.

Principals play a significant role in determining the academic performance in secondary schools due to their varied tasks and roles together with their constant supervision of their teachers determined to a great extent the level of teacher input and students' academic achievement (Budohi, 2014). Many of them have failed in school leadership because of many management problems relating to institutional planning, human relations, discipline, instructional supervision and community relations experienced which ultimately impact on students' academic performance. Studies carried out by many scholars indicate that students' academic achievement is mainly dependent on environmental factors and personal factors of the students (Okumbe, 1998). Students' personal factors include intelligence, discipline and personal goals. Environmental factors include the principals' leadership style, quality and quantity of teachers and learning materials (Olaniyan, 1999) finance (Okumbe, 1998) and home environment (Griffith, 1999).

Commenting on the inadequacy of physical facilitates in schools, Animola (1990) remarked that there were over-crowded classrooms especially in urban schools and the absence of laboratory facilities in many rural schools thereby inhibiting effective teaching and learning processes. This situation tends to have adverse effect on students' academic performance in schools.Towards this end, Adeyemi, (1998) conducted a study on schools and teacher variables associated with students' academic performance in Ondo State secondary schools and found that students' performance in the major subject of the school curriculum was at a low level. Similar finding were made by other researchers (Aghenta, 2000; Ige, 2001).It needs to be mentioned, however, that the pattern of scoring in the senior secondary certificate examinations was such that: A1 to C6 are credit grades. As such, students are required to

obtain credit grades in 5 subjects including English Language and Mathematics in order to qualify for admissions into higher institutions in Nigeria (WAEC, 2010).

In essence failure to master their leadership roles and lack of proper induction/training on school leadership are probably the most frequently cited reasons why most principals fail to improve on student's academic performance and objectives. Effective leadership style is essentially a tool which principals should use to raise teachers' job efficiency and consequently improve the dwindling academic performance of students in both national and external examinations.

METHODOLOGY

The researchers adopted ex-post facto descriptive research design. Ex-post facto research is a systematic empirical study in which a researcher does not have direct control over the independent variables because they have already occurred (Onyeizugbe, 2013).The design was appropriate in this study because the variables: Leadership styles of principals and students' academic performance had already occurred. Thus the researchers merely analyzed the nature of relationships. The objective of the study was to carefully compare the leadership styles exhibited by principals in public and missionary secondary schools in Enugu South Local Government Area of Enugu State Nigeria. The instruments for data collection were questionnaire and oral personal interviews. The population of the study was 992 staff of both public and missionary owned secondary schools. This data was generated from the Post-Primary School Management Board (PPSMB) Agbani Zone in charge of secondary schools' supervision as at 25th January, 2015.The Yamane's (1964) statistical formula was employed for sample size determination (Appendix I). The questionnaire and structured oral personal interview were developed by the researchers.The questionnaire instrument was validated by senior colleagues of the researchersexperienced and knowledgeable in the construction of research instruments. Consequently, some items were added while a few others were re-written in line with the research objectives.

The computed sample size was allocated proportionally to the selected public and missionary owned secondary schools using Kumar (1976) proportionate allocation formula (Appendix II).The questions were optioned using a five (5) point Likert type of responses namely: Strongly Agree, Agree, Neutral, Disagree and strongly disagree.

The study also included oral personal interviews with principals who agreed to be interviewed. The principals were asked to indicate their availability and willingness in the questionnaire. As expected, the principals would be most likely to provide information on leadership styles and students' academic performance.

A total of 285 copies of the questionnaire were administered to principals, teachers and supportive staff of the selected secondary schools. Out of this number, ten(10) were not returned, five (5) was unusable due to improper filling by respondents. As a result, two hundred and seventy (270) were utilized indicating a return rate of 98 percent. The quantitative data were analyzed using chi-square and Pearson product moment correlation statistical tools at 0.05 level of significance. These techniques were adopted because the samples of the variables were randomly selected from the population (Igwe, Nwokedi and Udeh, 2014).

Table 1.0 Questionnaire Distribution

S/N	QUESTIONNAIRE	NO OF RESPONDENTS	PERCENTAGE
1	Returned	275	96.5
2	Not returned	10	3.5
3	Not used	5	2.0
4	Used	270	98.0
	Total distributed	**285**	**100.0**

Source: From questionnaire administration, 2015.

RESULTS AND DISCUSSION

In this study a comparative analysis of leadership styles of principals was compared to the level of students' academic performance in public and missionary schools in Enugu South Local Government Area of Enugu State. In this section therefore the findings in relation to the objectives of the study are presented and discussed.

Computation of hypothesis 1 (one)
Principals' leadership styles and level of students' academic performance
Objective 1 (one)
To examine the level of academic performance of students in public and missionary secondary schools where the most commonly used leadership style is practiced.

Research question 1 (one)
To what extent is the level of students, academic performance improved by the most commonly used leadership style in public and missionary schools?

Relevant Questions:
Question numbers 23 and 24
23.   Autocratic leadership style increases academic performance of students.
24.   Paternalistic leadership styles increases students' academic performance

Table 2.0
Contingency table on the correlation between leadership styles and increase in level of academic performance of students.

N(paired values of X and Y)	Autocratic leadership styles increasing the level of academic performance = X	Participative leadership style increases the level of academic performance = Y	X^2	Y^2	XY
Strongly Agree	120	125	14400	15625	15000
Agree	80	85	6400	7225	6800
No opinion	60	40	3600	1600	2400
Disagree	10	20	100	400	200
Strongly Disagree	00	00	00	00	00
N = 5	$\sum x = 270$	$\sum Y = 270$	$\sum x^2 = 24500$	$\sum Y^2 = 24850$	$\sum XY = 24400$

Test statistic   =   Pearson's Product moment correlation coefficient
Degree of freedom (df)   =   3
Number of pairs   =   5
Level of significance   =   0.05
Critical value   =   2.35
γ   =   0.97
Calculated value   =   6.86

Source: Statistical Analysis (Appendix III)

The computation of γ using the raw value of 0.97 indicated a strong positive correlation between leadership styles of autocratic and participative styles of principals and increase in the level of academic performance of students in the secondary school certificate examinations. From the above, it becomes necessary to make inference about the population as to whether the correlated coefficient obtained is an indication of a real relationship between positive principal leadership styles and academic performance of students in senior secondary school certificate examination (SSCE).

The test statistic used to realize this objective is the t-test.
Solution:
N   =   Number of pairs   =   5
Y   =   0.97
Level of significance   =   0.05
Degree of freedom   =   n – 2
                                       =   5 – 2
                                       =   3

Decision rule: Reject Ho if t – computed is greater than t – critical, otherwise do not reject (accept).

t – critical from the table = 2.35
Computation of t from sample: For detailed computation and transformation of Pearson's Product moment Correlation to t – test (see Appendix III).

Decision: t – computed 6.86 > t – critical (2.35).

Therefore, we reject Ho and accept the alternate hypothesis which states that there is a significant relationship between principals' autocratic leadership styles and level of students' academic performance in senior. Secondary School Certificate Examination at the public and mission secondary schools in Enugu South L.G.A.

Finding
The finding of the objective one shows that the null hypothesis was rejected after the computational analysis.

The finding of this computational analysis reveals a strong positive correlation between the leadership styles of autocraticprincipals and students' academic performance at senior secondary school certificate examinations n the sampled schools (Table 4.3.4). The findings in respect of the hypothesis agreed with the findings of Adeyemi, (1998) and Adeyemi and Bolarinwa (2013). The strong positive correlations found in this study attests to the fact that the more autocratic a principal in the schools curriculum implementations the better the academic performance of the students. This suggests that principals who show no nonsense

inclinations in students' academic performance achieve better results in external examinations especially in WAEC and NECO. This finding extols the need to compel and police students in order for them to study and perform better. Thus the administrative strategy of theory X becomes paramount especially in public schools with low moral values.

Computation of hypothesis two (2)
The search for best leadership styles of Principals in Public and Mission Secondary Schools in Enugu South L.G.A.

Objective 2 (two)

To determine which leadership style is the best for a Public and/or Missionary Secondary School in Enugu South Local Government Council.

Research Question 2 (two)
What should be the best leadership style for a public and mission secondary schools in Enugu South L.G.A.

Relevant Questions
Questions 28 and 33 of the questionnaire
28.   Autocratic Leadership style is best for Public Secondary Schools
33.   Paternalistic leadership is best for a missionary secondary schools

Table 3.0
Contingency table on evaluation of the best leadership style for public and mission secondary schools

Options	RESPONSES					
	SA	A	N	DA	SD	Row Total
Autocratic leadership style is best for public secondary schools	20	10	40	80	120	270
Paternalistic leadership style is best for mission secondary schools	10	10	30	90	130	270
Column Total	30	20	70	170	170	540

Table 4.0
The Computed observed and expected frequencies of sample result

Options	RESPONSES					
	SA	A	N	DA	SD	Row Total
Autocratic leadership style is best for public secondary schools	20(15)	10(10)	40(35)	80(85)	120(125)	270
Paternalistic leadership style is best for mission secondary schools	10(15)	10(10)	30(35)	90(85)	130(125)	270
Column Total	30	20	70	170	170	540

Test statistic   = x^2
Degree of freedom (df) =   4
Level of significance   =   0.05
Critical value   =   9.49
Calculated value   =   5.73
Source: Statistical Analysis (Appendix VI)

Decision

Since the computed value 5.73 is less than the critical value (9.49), we accept the null hypothesis and reject the alternative hypothesis. We conclude therefore that there is no best leadership style suitable for public or missionary secondary schools applied by principals.

Finding

The finding of the study shows that the null hypothesis was accepted after the computational analysis. Table 4.0 reveals that the respondents did not agree that there is one best leadership style for schools administration. This finding agrees with the assertions of Chidiobi (2012) that there is no one best leadership style that gets the job done. She rather advocates a mix of the leadership styles applied based on situation. This is because leadership styles and motivation tend to depend for effectiveness on the cultural patterns of the environments. Collaborating the above assertions, Akpala (1993) opines that managerial action to motivate subordinates is principally a question of art or managerial judgment applied contingently.

CONCLUSION

This investigation asserts that leadership styles of principals are a critical variable in the administration and management of both public and mission secondary schools in Enugu South Local Government Area of Enugu State. This was evident in the findings which isolated that autocratic leaderships style of principals has the capacity of enhancing students' academic performance in national and external examinations. The study is also of the view that there is no single best leadership style for high performance principals rather a mix is advocated and should be applied based on contingency.

RECOMMENDATIONS

1. Autocratic leadership is suggested to principals desirous of improved academic standards especially in increasing the level of students' academic performance in external examination.
2. Since there is no single best leadership style for any situation it is recomended that training and development programme should be given to principals and vice principals to update them with current global leadership style that achieve results. This training can be designed during the long vacation just before the resumption of new academic session.
3. Regular school inspection by the Ministry of Education in collaboration with the Post Primary School Management Board (PPSMB) should ensure that the leadership style utilized by principal is the one that improve teacher job performance. This will definitely enhance administrative effectiveness thereby improving the academic tone of the schools.

AREAS FOR FUTURE RESEARCH

This study has provided insights into leadership styles as utilized by principals of public and mission secondary schools in Enugu South Local Government Area. Consequently, it opens new vistas of opportunities for scholars in the education field and Management Sciences across Nigeria and other countries to conduct further research in the following areas.

1. Interested scholars are encouraged to investigate the leadership style that could best improve the job performance of supportive non-teaching staff in the school system.
2. The impact of leadership styles of Head teachers of primary schools on job performance of teachers could be investigated.
3. A similar comparative study could be done for high profile non-mission private schools and government schools.

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APPENDIX I

In calculating the sample size, the researcher applied the statistical formula for selecting from a finite population as determined by Yamane (1964).

The formular is stated as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = Sample size

N = the entire population

I = theoretical constant

e = proportion of sampling error in a given situation, in this

case (0.05)

Assigning values to these symbols, the sample size was calculated thus:

$$n = \frac{992}{1 + 992\,(0.05)^2}$$

$$= \frac{992}{1 + 992\,(0.0025)}$$

$$= \frac{992}{1 + 2.48}$$

$$= \frac{992}{3.48}$$

$$= 285.06$$

$$285$$

APPENDIX II

After calculating, the sample size we allocated this value proportionately to the secondary schools namely public owned and missionary owned respectively. This was facilitated through the use of Kumar (1976) proportionate allocation formula. It is given by:

$$nh = \frac{n(Nh)}{N}$$

Where:

Nh = group population from each stratum

n = overall sample size

N = overall population

nh = sample size from each stratum, in this case each

secondary school.

Table 3.1: Distribution of questionnaire among the secondary schools in Enugu South L.G.A.

S/N	NUMBER OF SECONDARYSCHOOLS	NUMBER OF STAFF	NUMBER OF QUESTIONNAIRE
1	Public Secondary Schools (5)	602	173
2	Mission owned Secondary schools (5)	392	112
	Total (10)	**992**	**285**

Source: Field Survey, 2015.

Table 3.2: Distribution of respondents based on organizational level.

S/N	ORGANISATIONAL LEVEL	NUMBER OF RESPONDENT	PERCENTAGE
1	Principals	10	3.50
2	Teaching staff	225	78.95
3	Non-Teaching (Supportive) Staff	50	17.55
	Total (10)	**285**	**100.00**

Source: Field Survey, 2015.

APPENDIX III

COMPUTATION OF HYPOTHESES THREE FROM SAMPLE RESULT

Applying the Pearson Product Moment Correlation Coefficient's formula as symbolically defined as:

$$Y = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Substituting the values as obtained:-

$$Y = \frac{5 \times 24400 - (270)(270)}{\sqrt{[5(2450) - (270)^2][5(24850)^2 - (270)^2]}}$$

$$= \frac{122000 - 72900}{\sqrt{(122500 - 72900)(124250 - 72900)}}$$

$$= \frac{49100}{\sqrt{(49600)(51350)}}$$

$$= \frac{49100}{\sqrt{2546960000}}$$

$$= \frac{49100}{50467.42}$$

$$= 0.9729$$

$$\approx 0.97$$

Computation of t from sample

$$t = r\sqrt{\frac{n-2}{n-r^2}}$$

Where
t = t – statistic
r = Correlation coefficient
n = number of paired values
n-2 = degree of freedom

By substituting the values

$$t = 0.97\sqrt{\frac{5-2}{1-(0.97)^2}}$$

$$= 0.97\sqrt{\frac{3}{1-(0.9409)}}$$

$$= \sqrt[0.97]{\dfrac{3}{1-(0.06}}$$

$$= \sqrt[0.97]{50}$$

$$= 0.97 \times 7.07$$

$$= 6.8589$$

$$= 6.86$$

Computation of coefficient of determination

To support the g correlation coefficient, there is need to compute further the coefficient of determination, g^2 so that we can assess the residual error.

Thus
g = 0.97
g = 0.97^2

= 0.9409

APPENDIX IV

COMPUTATION OF HYPOTHESES FOUR FROM SAMPLE RESULT

Test statistic: The chosen test statistic is Chi-square(x^2) is applied at 5 percent level of significance.

Let x = 0.05
Degree of freedom df = (r - 1) (c -1)
$$= (5 - 1) (2 -1)$$
$$= (4) (1)$$
$$= 4$$
The Critical Value = 9.49

To compute the expected, we apply

$$\frac{(\text{row total})(\text{column total})}{\text{overall total}}$$

$$ej(i) = \frac{270 \times 30}{540} = 15$$

$$ej(ii) = \frac{270 \times 20}{540} = 10$$

$$ej(iii) = \frac{270 \times 70}{540} = 35$$

$$ej(iv) = \frac{270 \times 170}{540} = 85$$

$$ej(v) = \frac{270 \times 250}{540} = 125$$

$$x^2 = \frac{(Oj - Ej)^2}{ej}$$

$$x^2(i) = \frac{(20 - 15)^2}{15} + \frac{(10 - 15)^2}{15}$$

$$= 1.67 + 1.67$$
$$= 3.33$$

$$x^2(ii) = \frac{(10 - 10)^2}{95} + \frac{(10 - 10)^2}{95}$$

$$= 0 + 0$$
$$= 0$$

$x^2(iii) = \dfrac{(40-35)^2}{35} + \dfrac{(30-35)^2}{35}$

= 0.71 + 0.71
= 1.42

$x^2(iv) = \dfrac{(80-85)^2}{85} + \dfrac{(90-85)^2}{85}$

= 0.29 + 0.29
= 0.58

$x^2(v) = \dfrac{(120-125)^2}{125} + \dfrac{(130-125)^2}{125}$

= 0.2 + 0.2
= 0.40

Total = 3.33 + 0.00 + 1.42 + 0.584 + 0.40 = 5.73

$\therefore$ 5.73 > 9.49

APPENDIX V

CONSENT TO PARTICIPATE IN RESEARCH: A COMPARATIVE ANALYSIS OF LEADERSHIP STYLES OF PRINCIPALS IN PUBLIC AND MISSIONARY SCHOOLS IN ENUGU SOUTH LOCAL GOVERNMENT AREA OF ENUGU STATE

What is the purpose of this research?
We are asking you to participate in a research study because we are trying to learn more about your understanding of leadership styles. You are invited to participate in this study because you are a Nigeria. This study is being conducted by Dr. Nick Igwe at Godfrey Okoye University Enugu.

How much time will this take?
This study will take about fifteen minutes of your time.

What will I be asked to do if I agree to participate in this study?
If you agree to be in this study, you will be asked to complete a questionnaire with information about leadership styles.

What are the risks involved in participating in this study?
Being in this study involves minimal risks of spending some of your time completing the questionnaire.

What are the benefits of this study?
Your participation in this study may contribute to policy change in the administration of secondary schools, in Enugu State Nigeria.

Can I decide not to participate? If so, are there other options?
Yes, you can choose not to participate. Even if you agree to be in the study now, you can change your mind later and leave the study. There will be no negative consequences if you decide not to participate or change your mind later.

How will the confidentiality of the research records be protected?
The records of this study will be kept confidential. In any report we may publish, we will not include any information that will identify you. Research records will be stored securely and only the researchers will have access to the records that identify you by name. Some people may review our records in order to make sure we are doing what we are supposed to. For example, the Godfrey Okoye University Institutional Research Board may review your information. If they look at our records they will keep your information confidential.

Whom can I contact for more information?
If you have questions about this study, please contact Dr. Nick Igwe 08038726688. If you have questions about your rights as a research participant, you may contact, Godfrey Okoye University's Coordinator of Research.

Statement of Consent
I have read the above information. I have all my questions answered. (Tick as appropriate). [ ] I consent to be in this study. [ ] I do not consent to be in this study. [ ]

Signature: _____   Date: _____
Printed name: _____

APPENDIX VI

QUESTIONNAIRE FOR RESEARCH STUDY ON: A COMPARATIVE ANALYSIS OF LEADERSHIP STYLES OF PRINCIPALS IN PUBLIC AND MISSIONARY SCHOOLS IN ENUGU SOUTH LOCAL GOVERNMENT OF ENUGU STATE.

INTRODUCTION
SECTION A

Dear Respondent,
The enclosed questionnaire is purely a research tool designed for a Professional Diploma in Education (PDE) project to be submitted to the Institute of Ecumenical Education Thinkers Corner Enugu. You have been selected at random and that your response will be treated in utmost confidence. It is purely for academic purposes and as such your co-operation is highly solicited.

Thanks.

Instructions
To be completed by principals, teachers and supporting staff of secondary schools in Enugu South Local Government Area of Enugu State.
ii.   Please carefully read each question before responding.
iii.   Tick as appropriate in the spaces provided.

SECTION B
INFORMATION ABOUT RESPONDENT AND HIS/HER SCHOOL

1. Sex: Male [ ]   Female [ ]

2. Marital Status: (a) Single [ ] (b) Married [ ]   (c) Widowed [ ]   (d) Separated [ ]
(d) Divorced [ ]

3. Age of Respondents: (a) Less that 20 years [ ]   (b) 20 – 30 years [ ]
(c) 31 – 40 years [ ] (d) 41 – 50 years [ ] (e) 51 – 60 years

4. Religion: (a) Christianity [ ]   (b) Muslim [ ]
(c) Other religions – please specify _____

5. What is your highest academic qualifications:
(a) M.Sc./M.Sc.Ed/M.Ed/M.A or above   (b) B.Ed./B.Sc.Ed/ B.Sc/HND
(c) N.C.E. (d) O.N.D. (e) WASC/G.C.E.

6. Name of your school _____

7. Your school is   (a) Less than 5 years [ ]   (b) 6 – 10 years [ ]   (c) 11 – 15 years [ ] (d) 16 – 20 years [ ]   (e) 21 years and above

8.   Number of years in service with the school   (a) 1 – 5 years [ ]   (b) 6 – 10 years (c) 11 – 15 years [ ] (d) 16 – 20 years [ ] (e) 21 years and above

9. Department unit: (a) Teaching (b) Supportive staff (c) Principal

SECTION C
LEADERSHIP STYLES OF PRINCIPALS IN SECONDARY SCHOOLS

Key: (5) Strongly Agree (4) Agree (3) No – opinion (4) Disagree
(5) Strongly Disagree

To what extent do you agree that the following listed leadership styles are applied by principals of secondary schools: Autocratic, Paternalistic, Participative and Laisser-Faire.

LIKERT SCALE

10		5	4	3	2	1
a.	Autocratic					
b.	Paternalistic					
c.	Participative					
d.	Laisser-Faire					
11	Autocratic Leadership styles enhance schools Administration					
12	Parternalistic Leadership styles enhances school Administration					
13	Participative Leadership styles enhances school Administration					
14	Laisser-Faire Leadership styles enhances school Administration					
	Leadership Styles And Teachers Job Performance					
15	• Autocratic Leadership styles improves teachers' job performance					
16	• Paternalistic Leadership styles improves teachers' job performance					
17	• Participative Leadership styles improves teachers' job performance					
18	• Laisser-Faire Leadership styles improves teachers' job performance					
	A mix of the leadership styles get the job easily done.					
19	• A mix of autocratic and paternalistic leadership is good.					
20	• A mix of Participative and partnership leadership style.					
21	• A mix of participative and Laissez-Faire leadership style and autocratic.					
22	• A mix of Laissez-Faire leadership style.					
	Leadership style and level of students'					

	Academic performance in SSCE					
23	• Autocratic leadership style increases academic performance of students.					
24	• Paternalistic leadership styles increases students academic performance					
25	• Participative leadership style increases students academic performance					
26	• Laissez-Faire enhances level of academic performance students.					
27	• Only a mix of the leadership styles improves level of the students' academic performance					

Evaluation of best leadership style for a public and missionary secondary schools

LIKERT SCALE

		5	4	3	2	1
28	Autocratic Leadership style is best for Public Secondary Schools					
29	Paternalistic Leadership style is best for Public Secondary Schools					
30	Participative Leadership style is best for Public Secondary Schools					
31	Laissez-Faire is best for Public Secondary Schools					
	A mixture of leadership is best					
32	• Autocratic leadership is best for a missionary					
33	• Paternalistic leadership is best for missionary schools					
34	• Laisser-Faire is best for mission schools.					
35	• Participative Leadership is best for mission schools					
36	• A mix is best for mission schools.					
37	• Not one leadership style is best for both public and mission schools					
38	• Would you mind to be interviewed for further clarifications.					

Thanks for your attention and response.

Dr. Nicholas NgoziIgwe, MTRCN

APPENDIX VII

LIST OF PUBLIC SECONDARY SCHOOLS IN ENUGU SOUTH LOCAL GOVERNMENT OF ENUGU STATE

1. Girls High School Uwani Enugu
2. Model High School Amechi
3. CSS AmoduAwkunanaw
4. CSS Ugwuaji
5. CSS Akwuke
6. CMSS Amechi-Uno
7. Maryland Boys Secondary School
8. Army Day Secondary School
9. Idaw River Girls Secondary School
10. CSS NdiaguAmechi
11. CSS ObeaguAwkunanaw

MISSION OWNED SECONDARY SCHOOLS ADMINISTERED BY MISSIONARY PRINCIPALS

1. C.I.C. Enugu
2. H.R.C. Enugu
3. Union Secondary School Awkunanaw
4. Girls Grammar School Awkunanaw
5. His Grace High School Awkunanaw
6. Notre Dame Secondary School
7. Methodist College Agbani Road
8. Emmanuel Anglican Secondary School Achara Layout Enugu
9. St. Raphael Secondary School Amechi

Cluster or No Cluster? Characterization Of Software Development Companies In Emerging Economies

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ABSTRACT

Software has become a ubiquitous element in modern societies and represents a high-value economic sector in the market. The objective of this work is to analyze its characterization, particularly in the region of Chihuahua, Mexico, by making a description and comparison of the situation of the companies oriented towards this sector, with respect to the cluster that already exists. This characterization allows establishing a diagnosis of the sector, which will help to define strategies aimed at strengthening such companies, as well as establishing comparative elements for companies of the same sector in other latitudes. The main findings point out that the companies surveyed as well as the cluster share the same problem and can work on solutions together.

Keywords: Software development; Development economies; México; Clusters.

INTRODUCTION

Software has become an omnipresent phenomenon in modern economies and is an indispensable input for a growing number of economic activities. Software is understood as the set of instructions stored in a computer-readable format that instructs them in how they should perform specific tasks [1]. By its nature, the software can offer a wide variety of functions, ranging from the most elementary management of the components of a computer orchestrated by an operating system, to complex applications that provide various functionalities for the end users [2]. Because of its malleability and its growing importance, the software industry requires professionals from all walks of life to interact and exchange knowledge. Software can be observed from different perspectives: that of the end users and what they need the software to do for them; that of software engineers and developers who translate user needs into computer programs; that of the managers who must orchestrate the

resources and the human material to operate the software; that of the industrialists who organize the companies that produce and distribute the software; that of policy experts and lawyers who must resolve conflicts inside and outside the industry without discouraging growth and innovation; and that of economists who must offer insights and views on how the software market works [3].

Although software has been produced for computers since the early 1950s, computer users and producers dominated their development until the late 1960s. Both computer users and producers play important roles in the production of current software, but the period since 1978 has witnessed the rapid growth of firms specializing in the production of commercial software [4]. These firms are known as Independent Software Vendors (ISV), because they are not linked either with the hardware manufacturers or with the end users. For developed economies, software is important from two angles: as an economically important industrial sector (vertical) and as an innovation enabler in other industrial sectors (horizontal). It is for this reason that the expected economic impact of software innovation is possibly greater when its impact is observed throughout the economy and not when only the capital invested in the sector is examined [2]. This paper describes the characteristics of seven companies that are dedicated to software development for commercialization in the city of Chihuahua and compare them to the evaluation of the cluster of Information Technology (IT) that already exists in the entity, in order to be able to establish a diagnosis that allows the creation of strategies that will foster development and strengthen all of them.

SOFTWARE INDUSTRY

The software industry consists of the global application software, systems software, and home entertainment software markets. Application and system software segments are categorized into B2B (business to business) and end-user applications that include mobile applications and desktop applications. The IT services industry is comprised of global data processing and outsourcing markets, as well as the global IT consulting market and other services. The global data-processing and outsourcing market includes electronic data-processing service providers and business process outsourcing (BPO) services. The IT consulting services market includes information technology service providers and system integration services. Finally, the global internet services and software market consists of companies that develop and sell Internet software or provide Internet services including databases accessed through the Internet and interactive services, web address registration services, databases, and website design services. The global software and services industry has fluctuated in growth over the period form 2008 to 20012. However, its growth is expected to stabilize in the following years and until 2017. In 2012 sales of this industry amounted to 2.596 billion dollars, representing an annual growth of 4.8% in the span from 2008 to 2012 [5], [6].

Software industry in Mexico

The domestic market for the software and services industry in Mexico grew 11.9% in 2012 reaching a value of 8.83 billion US dollars, representing 1.4% of the American market. The Mexican software market is divided into the following segments: Software for network and database management that represents 24.3%; general productivity applications for business and home that represents 23.6%; vertical applications for industry 21.2%; software operating system 18.2%; other system software 8.6%; other application software 4.2%. In 2012 Mexico became the third exporter of IT services worldwide, after India and the Philippines [7].

Opportunities for Chihuahua in the software industry

The software industry can flourish in Chihuahua because this state has been characterized as a human capital exporting entity with computer training, which is the main input of this

industry. Many professionals and computer technicians have left the organization and work successfully in the national software industry and in many cases in other countries in global companies, occupying important positions. In addition to the availability of human capital, Chihuahua's geographical location puts it near the main market for the software industry, there is also greater compatibility with North American culture compared to other industry competitors such as India, by sharing the same time zones, and having acquired extensive experience with the North American corporate culture with the establishment of Mexican manufacturing companies in the country since the 1960s. All this has contributed into giving Chihuahua a good opportunity to become a competitive region in this industry.

CHIHUAHUA IT CLUSTER (CITC)

For the purpose of this exercise, clusters are considered as business networks and research institutions (including universities) that have a thematic focus, are regionally concentrated, and are organized in an institution managed by a cluster administrator or a team of Cluster management. The cluster may also include other actors such as public bodies. The management organization of the Cluster is a management office that coordinates the activities of the participants within it. The Cluster management organization is led by participants and is in charge of representing them, both internally and externally, as well designing and implementing activities that support their development [8].

"Chihuahua IT Cluster" (CITC) is the name of the only cluster of information technologies formed in the city of Chihuahua in March 2011, and whose objectives and characteristics are described below, according to the evaluations requested by the Ministry of Economy [9], [10], as well as a report from the European Observatory [8] and whose reports and data are used as reference here:

Vision, objectives and activities of the CITC

The vision of the cluster is framed as: "Being the main IT service providers, with different specialties and certified personnel in the different processes of the value chain in the industry, which allows for the generation of worldwide solutions." The main objective of this business center is: "To be an association of private companies, academic institutions, research centers and dependencies of the Municipal, State, and Federal Government, with the purpose of promoting the development of the IT industry, thus generating solutions of Value for the Industry ", considering innovation as the main premise. Among the most important strategies that this entity intends to execute so far, there are: increasing value added, developing value chains, and improving the business environment. In second instance: attract more companies and investments, encourage innovations, increase employment, reduce production costs, increase exports, and seek funds.

To achieve these objectives, the planning of actions is necessary and for the CITC, there are a series of clearly defined and delimited activities. The most important is the promotion of its services, due to the phase in which it is: growth. The next activity mentioned, in order to achieve objectives, is the improvement that can be obtained in educational programs, with the support of the education system; this in order to achieve congruence with the needs of the cluster. In addition, it is important to raise student enrollment in IT areas.

The formula, cluster = private initiative + government + education, is paramount for the proper functioning of a cluster. It is for this reason that the activities to be carried out are focused in achieving greater interest in these three sectors. It is noteworthy that the activity is intended to promote changes in both political and government regulations, because there are no well defined IT cluster regulations for the entity. However, it is not a relevant activity at the

moment, since the work in other areas is more significant, in order to achieve the impetus that is required and be among the best in the country.

Composition and financing

Up to date, the Chihuahua IT Cluster has nine affiliated companies and registers a turnover in 2012 of 16.27 million dollars. In addition to companies that are part of the private sector, there is participation of educational institutions, among which are Monterrey Institute of Technology and Higher Studies (ITESM, in Spanish), Technological Institute of Chihuahua (ITCh, in Spanish) and Chihuahua State University (UACh), as well as agencies of the three levels of government: municipal, state and federal. Most of these companies are made up of national capital (78%). The financial support received by the CITC comes mainly from PROSOFT by 52%, followed by support from CONACYT and bank loans with 30%, the rest are internal sources and others. The most important factor in the economy of the city and the state of Chihuahua, is the maquiladora industry. There are several industrial parks part of this sector, in contrast to just two technology parks that house companies dedicated to offer IT services, called "technoparks". One of them is the "Innovation and Technology Transfer Park" (PIT2), belonging to ITESM and the other is the UACh "Tecnoparque". The first one mentioned is more organized and articulated, while the UACh one is in a structuring process. Both technology parks integrate "Chihuahua IT Cluster".

Human talent

In the CITC the functions performed by employees are basically broken down into the following: services focused on information technologies, management, support to various activities, operational, administrative, various functions, sales and marketing. The order in which these functions are mentioned is derived by the percentage of employees involved in each of them. This means that the highest percentage of employees perform functions focused on Information and Communication Technology services (55%), followed by the roles of managers as well as support staff, while the percentage of employees dedicated to sales and marketing is lower (5%). This reflects the cluster's priorities, now looking for a solid positioning in the market, which is why they require strategies for management levels. The majority of the CITC employees are graduates of national universities (29%), state and local educational institutions (27%), technical schools (24%) and universities abroad (20%). There is a very clear balance between the main sources of human capital trained to carry out the work of the CITC. One of the main difficulties faced by professionals graduating from state and local institutions to be part of the companies that make up the cluster is the certification on read and spoken English language; 62% of the workforce has this certification, but the rest is not certified.

CLUSTERS EVALUATION METHODS

There are several investigations of global use for cluster analysis. In the first one, the Meta-Study of Michael Porter and Claas van der Linde, the factors that determine competitiveness in Porter's diamond [11] are analyzed. The findings from the Cluster Meta-Study are then studied for strategy and competitiveness through the Harvard Business School. On the other hand, a second great reference comes from the report Cluster Initiatives in Developing and Transition Economies of the Center for Strategy and Competitiveness [12], in which the performance of the Clusters was analyzed according to the type of initiative by which they were created, considering for this: Type of initiator, Objectives, Activities, Sources of financing and some quantitative variables as number of companies that make up the Competitiveness Index (CI), the size of the companies measured by the number of workers or by the number of companies that comprise it.

According to the model of the European Observatory of Clusters, the following groups of factors are recommended to measure the quantity and quality of knowledge that circulates and extends between the companies located in a cluster:

A. Size: number of companies, employment, turnover and added value, among other economic data.
B. Specialization: proportion of the economic data in a category (types of business, proportion of software and services in billing, proportion of employees of software and services, proportion of employees with certification, among others).
C. Focus: proportion of employees and other economic data with respect to the total of a region.

These three factors: size, specialization, and focus, help to know if the cluster has reached a "specialized critical mass" to develop positive side effects and long-term links. According to this observatory, it is preferable to use data on wage mass, productivity or value added, if available, instead of employment, although this tilts the balance in favor of knowledge clusters.

MATERIALS AND METHODS

The present investigation was mainly descriptive, with support of the relevant and available literacy review up to 2014. In addition, seven software development companies, located in Chihuahua, were surveyed, with information provided by their owners or employees, according to the willingness to respond the instrument applied. The instrument applied for gathering the information was elaborated and provided by Dr. A. Hualde and Dr. R. Gomis from the Northern Border College. It consists of more then 50 items, but not all of them are used in this comparison, only the ones considered associated with the indicators established according to the model from the European Observatory of Clusters. Since this was the one used by the previous analysis in order to be able to compare data obtained from survey and information from the Chihuahua IT cluster.

RESULTS

A series of comparative tables with the results obtained from this research, regarding Size, Specialization and Focus dimensions are showed:

Size

Table 1. Size dimension.

Indicator	Surveyed companies	CITC
Quantity	7	9
Employees	99	322
Sales	43% between 1-5 millions of MXP 57% No data available	Total 16.27 millions of USD
Capital funding	71% national 29% foreign	78% foreign

Adapted from [8], [9], [10]

Specialization

Table 2. Specialization dimension.

Indicator	Surveyed companies	CITC
Products and services	100% Application software (COTS) and custom software (videogames, electronic billing, quality systems, logístic, e-commerce). Most of them non registered as patents. 57% Trainning services 42% Consulting services	More than 50% software 43% IT services 5% hardware
Exportations	28% expors 29% no exports 43% Not know Countries: India, Brazil, Russia, Colombia, El Salvador and E.E.U.U.	More than 60% exports
Sectors they serve	85% private sector, SMEs (nationals and foreign) 14% state government	34% private sector, SMEs 21% municipal government 20% state government
Human Talent: Skills and specializations Activities developed Employees'studies	Available skills: 27% software development 23% technical specializatin 19% foreign language (English)	Large companies show task specialization and a balanced work structure. Smaller ones show no specialization or balance 62% English language certification ----------------- 55% ICT 5% sales and marketing ------------------ 29% National universities 27% State/local universities 24% technical studies 20% Foreign universities
Quality Certifications	43% Yes. From this: 86% national certifications (Moprosoft, simplified version from CMMi) 14% international certifications (Microsoft Partner) 28% No 29% Not know	50% Moprosoft 17% CMMi 33% Others

Adapted from [8], [9], [10]

Focus

Table 3. Focus dimension.

Indicator	Surveyed companies	CITC
Relevance of ICT sector in region	Focus towards SMEs and public sector, less oriented to manufacturing No relation/vinculation between companies with other sectors, like education or manufacturing.	Relative weight of cluster companies is small compared to other sectors such as advanced manufacturing, government and SMEs in industry and commerce, Oriented to public sector and SMEs, little orientation to manufacturing. Little synergy of Research + Developement + innovation centers with cluster companies. Challenges in capital availability and financing.
Competitiveness of the state / region		Mexican Institute of Competitiveness grants the state of Chihuahua the 16th place among the 32 states of the Mexican Republic. 1st. place in use of International relations

Adapted from [8], [9], [10], [13]

CONCLUSION

As can be seen in the results obtained from the companies surveyed and those belonging to the cluster, the characterization of both groups shows similarities that allow to recognize common ground regarding problems, and therefore allowing to look for solutions together. It must be recognized that the cluster is currently in the process of maturity, analyzing opportunities and developing strategies to place itself in the ranking of the best in the country and thus position itself at the forefront of global competitiveness. Therefore, although the primary objective of any economic entity is to increase its productivity to translate into greater economic income, competitiveness, among other equally relevant aspects, take the forefront in the case of the CITC (Chihuahua IT Cluster). The same is true for the companies surveyed, however due to the stage of expansion and solidification in the market that they all go through, these objectives pass to a second instance.

Regarding the Size of software development companies and those belonging to the cluster, they show similarities in their composition and orientation. Most are made up of national capital, which puts them at a disadvantage compared to the more competitive clusters in the national territory, whose foreign investment is greater. In cases where their capital is of foreign origin, this also allows them to export their products without major problem to their place of origin. It is clear that there is no sense of partnership between the different software development companies in the locality, which does not allow them to take advantage of the potential available benefits of creating synergy between them. Although some of the companies belong to the cluster, they do not recognize this association as an element that gives them a competitive advantage. They give more value to the geographical location, cost and quality of labor. The managerial capacity, reflected in the decision making at that level of the organization in the companies, depends to a large extent on the managerial practices that make

the difference between the most competitive organizations: innovation, human resources, IT capacities, collaboration, among Others. The adoption of the best practices in this area, are areas of high value added opportunity. This is reflected in the priority assigned to the objectives, where management-oriented ones predominate, while those related to innovation are left out, when these are the ones that should guide companies in the sector. Also, there is imbalance in the development of activities among smaller companies, where there is no management team supported by a group of specialists / technical developers, which translates into higher operating costs for these small organizations.

In relation to the Specialization, they show a clear orientation towards the development of software and services to sectors of private initiative, particularly SMEs, and followed by the public sector, but leaving aside the manufacturing sector, which is the predominant in the region. It is interesting to note that only half of these products are registered, which is a vulnerable point for all these companies. It is necessary to increase the link with educational institutions, in order to increase the capacity of both teachers and students, in order to incubate knowledge companies. It's important to look for young people capable of working in teams, and teachers who generate knowledge, whose experience can lead to the creation of companies with processes of innovation and development. There is a need for greater focus on technology specialization in schools in the region. Since it is a reality that most of the professional staff that make up the cluster, are graduates of institutions outside the entity (49%). Not surprisingly, the lack of local talent to employ, coupled with disengagement with the education and research sector, reflected in the lack of skills required, adds to a lack employee training, either due to lack of resources and/or time. It is not surprising that most of the funds obtained are used in this training. Although most companies lack international certifications in order to expand to international markets, for some of them, this has not been an obstacle for seeking markets in Central and South America. This situation could also be explained by the lack of command of the English language among the members of the local software development companies.

As for the Approach, the city is generally seen as a low-cost manufacturing center. Currently, the IT sector in Chihuahua does not function as an element of process linkage or development. It is for this reason, that there is interest in promoting the services of these companies, which would allow them to generate chains of value between them and their clients-market. Although the IMCO gives the state of Chihuahua the 16th place among the 32 states of the country, there is little synergy with the local economy, reflected in sales in the region. There are barriers in the environment that hinder its growth, such as specific problems associated with human talent and capital [14], [15], [16]. During the last state administration (2010-2016), there was a total lack of state government support for the PROSOFT fund

Sadly, it is established that the Chihuahua IT cluster has not achieved its objectives, since their associates present the same problematic as companies that do not belong to the association.

As recommendations, it is necessary for the survival of this sector to establish strong linkage between them and also with other sectors, like manufacturing and education. Since IT, and particularly software development is a transversal "commodity", there are plenty of opportunities, mainly related to the manufacturing sector, the strongest one in the region. This will help the strengthening of organizational capacity through the promotion of joint innovations that will allow these companies to be linked to their final market.

It is then that it makes sense to design a cluster structure, with the linking of all the entities mentioned: public, private and educational. The cluster seeks to generate knowledge, innovate,

develop, and efficiently value chains through its internal components. This would generate a more effective participation between software companies, ICT services, multimedia, and research centers, through comparative services and training. With this, the intention is to meet and support the needs of the local companies involved in advanced manufacturing, domestic and international market. Therefore, it is essential to prioritize the promotion of the services offered by all these companies, so that they seek to create synergies that favor them. In addition, they should seek the interest of other sectors of the economy in the State of Chihuahua, particularly in the case of the export manufacturing industry, an important sector for the regional economy, and one that requires mostly these services in relation to technology, particularly in terms of software development.

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An Investigation of Risks Factors affect to Housing Loan's Processes in Thailand Commercial Banks

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ABSTRACT

This paper presents an investigation of the risk factors that affect to the housing loan's approval processes in Thailand's 5 largest commercial banks, with the largest amount of housing loan' Non Performing Loan (NPL). The data, obtained from 15 selected interviewees from 5 largest Thailand commercial banks, has been summarised, reported, and analysed by the qualitative content analysis technique. The interviewees include Mortgage Sales (Housing loan), Retail Credit Analyst and Credit Risk Analyst. The instruments, derived from both qualitative and quantitative approaches, to assess the borrowers' credit risk were also formulated in this paper. The results from this study can be used as a benchmark for other Thai financial institutions in order to improve the housing loan's approval processes.

Keywords: Credit risks; housing loan; Thailand Commercial Bank; 5Cs indicators; Risk Assessment.

INTRODUCTION

The property buyers typically require a large sum of money to buy or possess their houses. They typically acquire the fund by borrowing from commercial banks. However, they may have some difficulty in repaying the loan, due to their own capability to repay loan, their personal monetary terms, etc. **[**1].On the other hand, the banks also hold the risk of losing the amount loaned to the borrowers, which is basically regarded as "Credit risk" [2]. IMF [3] defined the Credit risk as the potential that a bank's borrower or counterparty fails to meet its obligations in repaying the loan borrowed from the financial institutions ("banks"). Thus, the banks need to manage the credit risks in their portfolio both at the individual borrower and transactional level, as well as to consider the linkage between credit risks and other types of risk. This is because these are criteria to assess the success/failure any banking lending activities [3]

The paper starts with exploring the credit risk analysis methods currently used by Thai commercial banks in the housing loan lending process, following by the empirical results gathered from the selected Thai commercial banks' representatives. This process is to find out the risks that have the most influential impact on the housing loan processes.

NON PERFORMING LOAN (NPL) OF HOUSING LOAN IN THAILAND BANKING SECTOR

IMF's Compilation Guide on Financial Soundness Indicators 2004, defines Non Performing Loan (NPL) as a loan of which the payments of interest and/or principal are past due by 90 days or more, or interest payments equal to or greater than 90 days have been capitalised, refinanced, or delayed by agreement, or payments are less than 90 days overdue due to some reasons such as borrower's bankruptcy and cannot make his/her payment in full [4]. Bank of Thailand reports that the amount of NPL in Thailand Housing sector rose to 7.6% in 2016 which is high relatively to the history since Tom Yum Kung crisis in 1997. This paper applies the IMF's NPL definition to identify the housing loan associated within the housing and real estate sector of 5 largest Thai commercial banks, that past due by 90 days or more, and the borrowers did not have capability to repay loan, within the condition of loan acquisition. We focus extensively on this sector, because the real estate sector, particularly housing or residential, is the real productive sector which also drives the dynamic of other industries, and stabilise the whole national economic system [5]. In order to protect the business confidentiality and the ethics of the banks used as case studies, the authors, herein, named those bank as "Bank A, Bank B, Bank C, Bank D and Bank E", respectively.
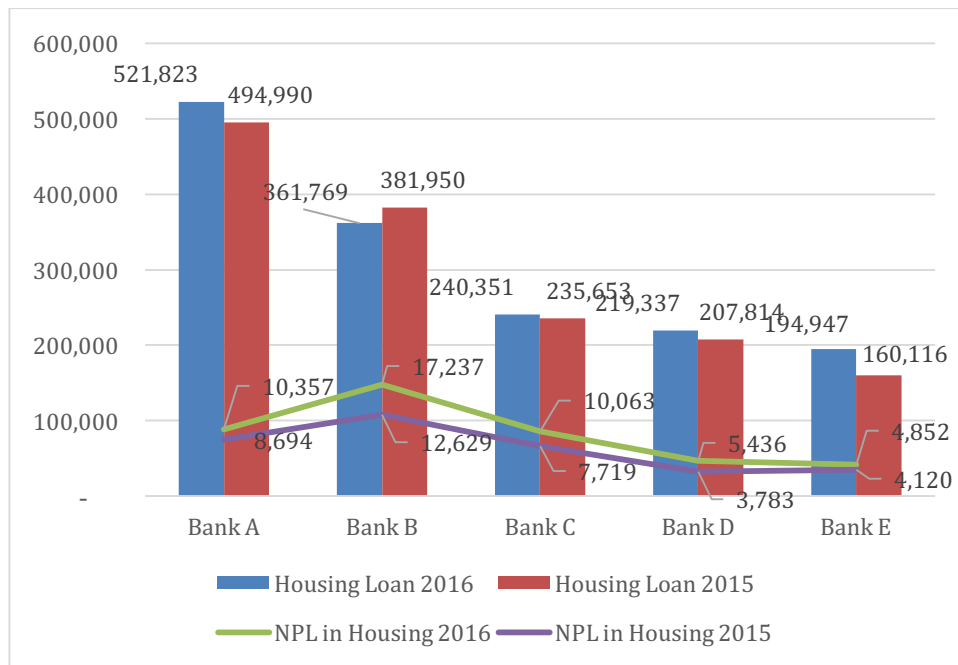
Figure 1 The amount of NPL of 5 largest Thai Commercial Banks (million baht) 2015-2016 (YOY)

The amounts of NPL in housing sector may have less significant while comparing with overall housing loans of those Thai commercial banks (See figure 1), it is summarised that average percentage of NPL on housing loan of 5 largest banks at fiscal year-end 2015 is 2.55% and 3.18% in fiscal year-end 2016 respectively [6]. However, BOT also predicts that the cumulative percentages of NPL in housing loan sector slightly increase in the following years. (see Table 1) [7]

Table 1 : Portions of NPL housing loan of Thailand Largest 5 Commercial Banks

	Bank A	Bank B	Bank C	Bank D	Bank E
NPL of Housing Loan 2015	8,694.00	12,629.07	7,719.00	3,783.00	4,120.00
2015 Housing Loan	494,990.00	381,950.33	235,653.00	207,814.00	160,116.00
% of NPL /Housing Loan	1.76%	3.31%	3.28%	1.82%	2.57%
NPL of Housing Loan 2016	10,357.00	17,236.52	10,063.00	5,436.00	4,852.00
2016 Housing Loan	521,823.00	361,769.40	240,351.00	219,337.00	194,947.00
% of NPL /Housing Loan	1.98%	4.76%	4.19%	2.48%	2.49%

THE CURRENT PRACTICE: CREDIT RATING SCORES

Thai Commercial banks currently employ the qualitative methods to evaluate the borrowers' credit risk, typically grounded on the 5Cs' principles, comprising Character of borrower, Capacity in repaying load, Collateral, Capital, and Conditions of lending contract. In this regard, 5Cs' were defined by [8], [9] as:

- o **Character or the borrower's personal profiles**, behaviour in repaying loan, the pass records of loan borrowings etc. It is divided into 2 attributes as (1) Borrower's personal profiles that include borrower's behaviour, family, ages, personal integrity, or the borrowers' reputations, and (2) Special capabilities of borrowers such as experience, personal specialty, wisdom or legal responsibilities [7].
- o **Capacity** is regarded as the borrower's abilities to find a source of fund to repay loans, in terms of personal loan. It also depends on the borrowers' character [3].
- o **Capital** generally measured by Debt / equity ratio, or the ratio of the borrower's equity on debts. This ratio helps the analysts to understand the borrowers' financial situation [7], [10].
- o **Collateral** including properties, land, commodities or other assets pledged as security for repayment of a loan, to be forfeited in the event of a default [11]. Collateral is property or an object of value, which a credit grantor can take and sell in case of default. A secured loan is the loan which collateral is required as security to the lender, whereas, unsecured loan is one where there is no collateral required; just an agreement to repay what is owed as agreed [8].
- o **Conditions** means the factors often are considered by the analyst when assessing the creditworthiness of the borrowers. These also include economic conditions affecting a borrower's ability to repay, such as unemployment, seasonal employment [9]

Thailand commercial banks may apply whether the traditional financial ratios, such as Return on Investment (ROI), Return on Asset (ROA), or debt and coverage ratios such as Short-term Solvency Ratios and Capitalisation Rate [3], [9], [13] to quantify the borrowers' risks. Although these methods are simple, but they normally depend on the credit analyst's experiences, and the past performance of the borrower, in this regard, these may cause more subjectivity and bias to the credit analysts or other users. This paper intends to investigate the related factors that influence a decision maker for analysing risks, as well as prioritises the seriousness of risks associated in the housing loan approving processes.

RESEARCH METHODOLOGIES

This paper started with an extensive literature review on the current credit risk assessment criteria (5 Cs), popularly used by Thai commercial banks. This review included the sub-criteria that need to consider on the capabilities of the borrowers when applying for the housing loans. The authors developed the research variables and data collection instruments, based on the criteria found during the literature review processes. The structured interviews were used to

collect in-depth information from the selected 15 interviewees from the 5 largest Thai Commercial banks, which consist of large amount of housing loans, and Non Performing Loan (NPL).There were anonymously labelled as Bank "A", Bank "B", Bank "C", Bank "D", and Bank "E", respectively. Three interviewees were selected from each aforementioned bank, by considering their roles and responsibilities in making decision on the housing loan. The banks representatives comprise: (1) 3 Mortgage sales (housing loan) (2) 3 Retail credit analysts, and (3) 3 Credit risk analysts (see Table 2).

Table 2 : Interviewees Schedule

Banks	Representatives from				
	Bank A	Bank B	Bank C	Bank D	Bank E
Percentage of NPL in the housing loan sector	1.50 – 2.00	1.50 – 2.00	2.00 – 3.00	2.00 – 3.00	1.50 – 2.00
Position and working experiences (years)					
Position	Bank A	Bank B	Bank C	Bank D	Bank E
Manager (Mortgage sales : MS)	24	11	22	20	15
Manager (Retail credit analysis : RCA)	20	22	24	20	25
Manager (Credit risk analysis: CRA)	21	33	20	24	21

To facilitate the interviewing process, the authors develop the interview records and the ranking table, to gather the informants' opinion s and the rank of 5 Cs' seriousness into the percentage (%), followed by the descriptive statistics to prioritise the level of 5 Cs' factors. The qualitative content analysis [XXX] was then used to interpret, analyse, and synthesise all data gathered from all informants. This is in order to explore the risk considerations and other related factors to credit risk. The final outcome of this paper is comprehensive assessment criteria to assess the Housing loans' credit risk.   Therefore, the overall research stage is summarised in figure 2 (See Figure 2)

The data collection and analysis processes were divided into 2 phases. In the first phase, fifteen informants of the relevant department, relating to approving housing loan were interviewed, to collect their opinions towards the degree of 6 Cs' impact, as well as the ranking of impacts of 5Cs (see Table 3). In the second phase, they described the detail of the considered factors relating to credit risk while lending the housing loan. The factors from this phase were summarised to found the comprehensive 5Cs criteria to investigate the impact of each risk associated in the housing loan approval.

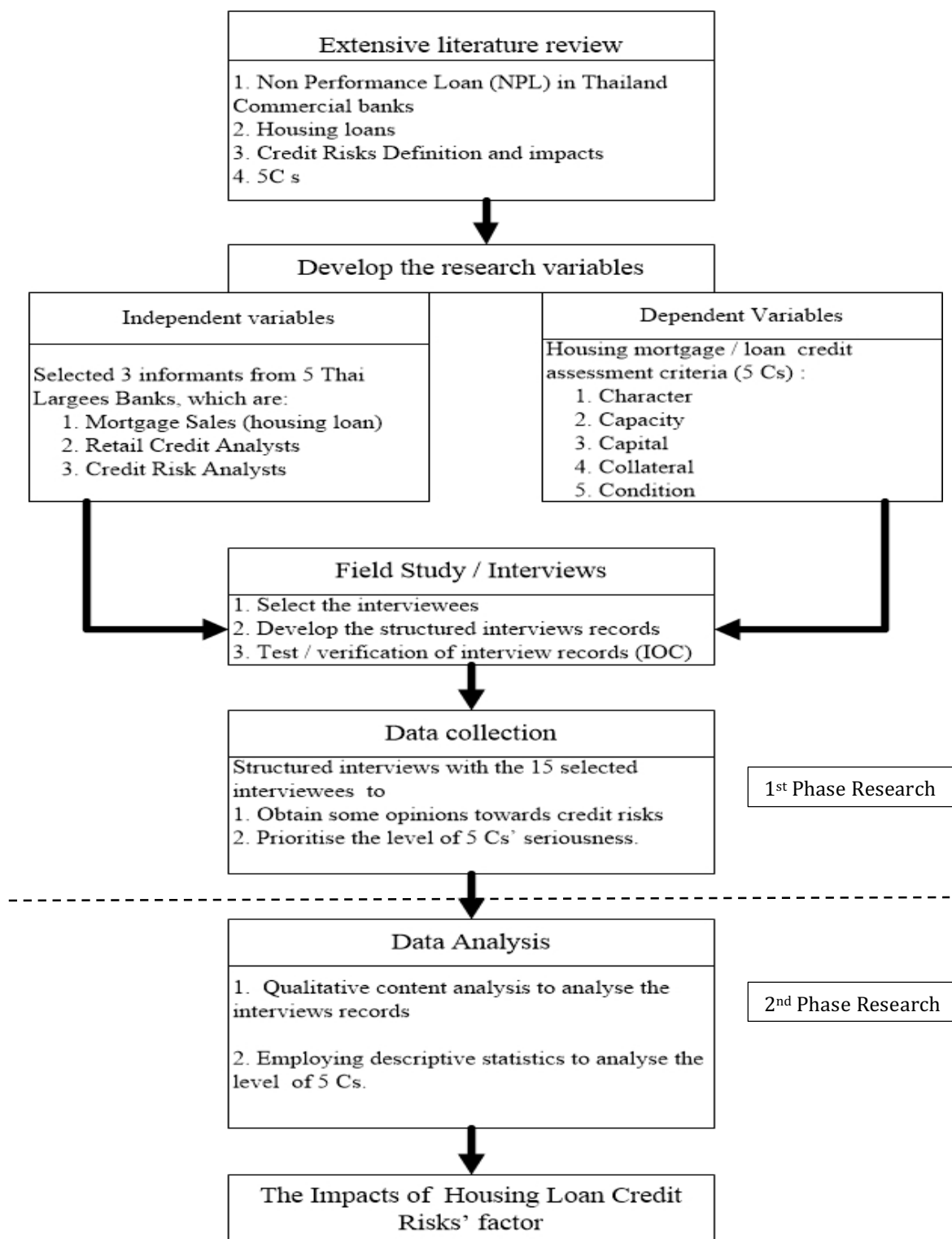**Figure 2   The research methodology**

RESULTS

First Phase results

The interviewees in the aforesaid 3 groups states their weights of 5 Cs' level of consequences. Then, the descriptive statistics, such as the percentages of total for each rank and the averages, were used to calculate the percentage of each group, before combining all results to prioritise the degree of 5 Cs' seriousness.

According to Table 3, the groups of MS and CRA stated that the Character factor contains the highest impact among other 5Cs, with an average of 35.67 %, whilst RCA weighed this factor as the second priority. Capacity becomes the second highest impact factor, as the average weight of 34%, followed by the Collateral factor, with the average of 10.67%, Capital at 10.33%, which is slightly higher than Condition of 9.33%. This phase findings confirms [5], [3], and [4] that Character factor contains the highest impact on risk assessment to overall housing loan approving process since this Character factor covers the necessary sub-criteria such as personal profiles of borrowers, loan repayment records and borrowers' financial status, etc. The authors also investigate the sub-criteria that shall be included in this Character factor, as well as in the other four factors in 5Cs in the second phase of this study.

Table 3 : The Results of 5CS Weighted (WT.) And Rank of 5CS Seriousness

5Cs Priority	Mortgage Sale (MS)		Retail Credit Analyst (RCA		Credit Risk Analysis (CRA)		Average Weighted	Rank
	Wt. (%)	Rank in group	Wt. (%)	Rank in group	Wt. (%)	Rank in group		
Character	38	1	29	2	40	1	35.67	1
Capacity	32	2	39	1	31	2	34.00	2
Collateral	9	5	12	3	11	4	10.67	3
Capital	10	4	9	5	12	3	10.33	4
Condition	11	3	11	4	6	5	9.33	5
Total	100		100		100		100	

Moreover, the informants stated that this criteria shall be equipped with Country factor, they were all agreed that the Country factor has the least significance, and this can be partly explained that the Country factor is only a sub-criterion of the Condition factor, and is applied by [5], as a supplementary to strengthen the housing loan lending processes.

The results in the first phase reveal that the Character factor has the highest impact, followed by Capacity, Collateral, Capital, Condition and Country, respectively (as shown in Table 3). The authors had to find the origins, details and the considerations of each 5Cs criteria.

Second Phase Results
In the second phase, the informants give the conclusive details for each 5Cs' factor, based on their opinions towards risk factors associated in the housing loan approval. The authors apply the qualitative content analysis to group the similar risk factors (or "Common risks considerations") as well as distinguish their differences (Different risks considerations) of the total risk factors involved in each 5Cs criteria. All details of 5Cs risk factors are tabulated in Table 4. The details are summarised as follows:

Character
The first phase results pointed that Character is ranked as the highest factor amongst all 5Cs, the informants additionally described 3 common considerations while approving loan, which are 1) Repayment records, 2) Age/Education, and 3) Work experience and position, respectively. However, RCA and CRA added that the Court prosecution records and Borrower's financial status (for example, borrower's account, cash in hand) are also the concern factors in this category. These considerations are mostly regarded as the borrower's internal factors as they are related to the borrower's personal profiles, expenditure, including personal behaviour in repaying loan [11].

Capacity

This factor, representing the abilities to repay housing loan [7] consists of 4 common considerations including1) Borrowers' debt, 2) Salary rate, 3) Stability of income and 4) Tax payment records. MS add the following factors of, namely, Type of business/ revenue /selling amount, the borrower's position in organisation, and the borrower's working skills, whilst RCA mention that the borrower's career/business, which associates with the risky or uncertainty activities (risky career/ business) should be included in the criteria. Therefore, there are 8 considerations in this Capacity factor. Most of them are related to an evaluation of the borrower's personal income, for example, salary rate and position of borrower in organisation, which means the higher position, the higher income that the borrower receives yearly. However, the informants explain that the expenditure and tax payment of the bowers must also be concerned, as the higher personal income, but higher expense, the capacity of repaying loan may be lower than expected [7], [8].

Capital

The common considerations to look into are borrowers' saving accounts, saving behaviour, burden free assets, and working capital of the borrowers which are necessary in processing the housing loan. Most of the considerations in this Capital factor are related to the borrower's monetary matters. MS and RCA also consider the factors of Capital shares and Sources of capital as they are important for evaluating the loan repayment capacity of juristic person, especially when the borrower lacks Character and Capacity factors.

Collateral

In the case the borrower does not repay the loan, Thai commercial banks have fully rights to foreclose and liquidate the mortgage properties (the Collateral) as the loan warranty. The Collateral helps mitigate the loss from non-repayment loans. Thus, banks concern on the quality of property's location, such as location and type of properties /assets. However, the mortgaged properties are usually houses or land parcels, the loan assessors therefore consider on the liquidity to sell those foreclosures [7]. The informants also given that the Collateral factor usually enhances the quality of Character and Capacity in the loan approval process [10].

Condition

As seen in the Table 4, the interviewees pointed that they normally consider on the economic situation at the time of loan application. The Bank of Thailand's rules and regulations towards housing loan and each bank's lending policy are the essential criteria to take into account in the Condition factor. The RCA add the factors concerning current political situation and government policies towards housing, while MS also look at the condition in the borrower's organisation he or she is working with. It is also found that most related factors in this Condition are counted as external factor, or systematic risks factors, which are unpredictable or uncontrollable [12]. [1].

Other factor

The interviewees also suggested that Thailand Commercial Banks shall concern on the impact of Country risk, (some informants had added this criterion as the sixth C in the housing loan acquisition criteria), particularly, the expat or foreign borrowers. This factor regards to the original nation of the borrower, the source of funds that the borrower uses to repay the loan, and the international trading environment. This factor is strongly influenced by the political economic and social situation of both borrower and lender's countries [5]. However, this factor has the least significant impact to the overall housing loan process, RCA did not even consider this Country factor into the housing loan approving process. All groups of interviewees state

that it is difficult to trace the income stream and status of the borrower in the country of origin. Therefore, there are several external risks related to Country factor such as currency exchange rate, economic situation in the country of origin. Nonetheless, it is important to thoroughly analyses when assessing the housing loan to foreigners [13].

Table 4 : The consideration factors

5Cs' Credit	Risk analysis (Risk considerations)			Common Factors	Different Factors
	Mortgage Sales (MS)	Retail Credit Analysis (RCA)	Credit Risk Analyst (CRA)		
Character	Repayment records	Court prosecution records	Court prosecution records	Repayment records	Borrowers' financial status
	Working experience /position	Borrowers' financial status	Working experience and position	Age / Educational	Court prosecution records
	Age / Educational	Age / Educational	Repayment records	Working experience /position	
		Repayment records	Age/ Educational		
Capacity	Salary rate	Borrowers' debt	Borrowers' debt	Borrowers' debt	Type of business / revenue /selling amount
	Borrowers' debt	Salary rate	Salary rate	Salary rate	Working skills
	Position	Stability of income	Stability of income	Stability of income	Position
	Type of business / revenue /selling amount	Tax payment records	Tax payment records	Tax payment records	Risky career / business
	Working skills	Risky career / business			
Capital	Bank saving accounts	Sources of capital	Bank saving accounts	Bank saving accounts	Capital shares
	Saving behaviours	Bank saving accounts	Working capital	Saving behaviours	Sources of capital
	Burden free assets	Working capital	Burden free assets	Burden free assets	
	Capital shares	Saving behaviours		Working capital	
Collateral	Selling liquidity	Selling liquidity	Selling liquidity	Selling Liquidity	Utilities/Facilities
	Location	Location	Location	Location	
	Properties /assets type	Properties /assets type	Properties /assets type	Properties /assets type	
		Utilities/ facilities	Utilities/ facilities		
Conditions	Current economic situation (while borrowing)	Bank of Thailand regulations towards housing loans	Bank of Thailand regulations towards housing loans	Current economic situation	Borrower 's personal profiles (organisation)
	Borrower's personal profiles (organisation)	Current economic situation	Current economic situation	Bank of Thailand regulations towards housing loans	Government policies towards housing
		Government policies towards housing			

5Cs' Credit	Risk analysis (Risk considerations)			Common Factors	Different Factors
	Mortgage Sales (MS)	Retail Credit Analysis (RCA)	Credit Risk Analyst (CRA)		
Other factors	Tax Payment records	Tax Payment records	Actually consider on capital, collateral, and condition of each borrower.	Tax Payment records	Currency exchange rate
	Type of career/ job	Type of career/ job		Type of career /job	Guarantor
	Currency exchange rate	Guarantor			The borrower's country economic situation
		The borrower's country economic situation			Actually consider on capital, collateral, and condition of each borrower

CONCLUSIONS AND RECOMMENDATIONS

According to our results, Thailand largest 5 commercial banks concern on the default of housing loans, and each bank has its own techniques to analyse and assess the credit risk of the borrowers. However, there are some non-synchronized between each technique, because of these assessors had developed the assessment technique/criteria based on their own individual perspectives and experiences, by the Banks' policies towards loan acquisitions, or by the borrowers' records.

In addition, these techniques may not suit with the current situation of housing loan approving process, whether in conditional or policy terms. As the defaults in housing loan may occur by several reasons, such as market factors, business management etc., which would devalue the banks' liquidity, reputation and essentially the bank's capital. This paper also states that Thai commercial banks must concentrate on the importance of credit risk management processes (identification, assessment, treatment and monitoring/controlling), before making decision toward housing loan approval.

A prioritization of risks associated in housing loan approval was developed in this paper, it indicates that 5Cs criteria shall be extended while considering the borrower's potential to repay loan. The priority of 5Cs is ranked as Character, Capacity, Collateral, Capital, and Condition, respectively, and the sub-criteria that shall be included in 5Cs are also described in second phase results. To assess the borrower's credit risks effectively, the authors recommend that Thai commercial banks shall apply other tools/techniques such as Credit Scoring, Know Your Customer: KYC, or Customer Due Diligence : CDD, together with 5Cs, these will help in classifying the borrower's potential and likelihood to default.

In addition, the banks shall provide a comprehensive and continuously trainings for the decision makers, risk assessors and relevant staff in order to update the current economic/political situation, as well as to acknowledge all new conditions issued by banks or other regulators

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SOCIETY FOR SCIENCE AND EDUCATION

The Impact of Intangible Assets on Firms Earnings Profitability: Evidence from the Athens Stock Exchange (ASE)

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ABSTRACT

The present paper examines the effects of intangible assets in the return on equity and return on assets during the period from the begging of adopting International Accounting Standards (IAS) on financial statements and before the start of the Greek economic crisis. At this paper, is trying an effort for the contribution of the Intangible Assets as a very important part of the assets of the company but still "unmeasurable", but definitely main account for future gains. In this research study, using a dataset of Greek listed firms in the Athens Stock Exchange (ASE) is made an attempt to investigate the hypothesis that the firms that have large intangible assets have better return on equity and better return on assets for the Greek listed companies, during the period 2004 -2009, the most significant business period for the entire greek economy and especially for the listed greek companies in the Athens Stock Exchange (ASE), just before the start of the catastrophic Greek crisis. In conclusion, this study indicates that there are accounting and auditing problems of defined, measured and disclosed intangible assets to users of financial statements. Despite these problems the importance of intangible assets will increase, as the market grows and there is a constant need to supply reliable accounting information.

Key Words: Accounting, Intangible Assets, International Accounting Standards, Earnings Profitability, Intellectual Capital, Greece

INTRODUCTION

Like in any other field of research, attempting to give a specific definition of the dimension of intangible assets is especially difficult. Result of the complexity of the angle from which any special approaches the issue but rather the goal is that each researcher through the research work and results which aims to give a multidimensional concept topic on the concept of intangible assets. In literature, several proposals were made, different approaches were followed and tons of ink spilled in conferences, workshops, scientific papers, scientific books and several authors, scientists have attempted to address this issue.

Sometimes trying to give a precise and clear definition, many articles ended descriptive to work around a definition, referring to the categories in which separated the intangible, but not proposed anything specific. The question "What is intellectual capital and what is intangible, often replaced with the question" What classes can be divided intangible and intellectual capital? ". This shows the distraction from the goal of a specific, clear and descriptive understood definition. It seems more difficult to strive for a definition of the characteristics that we know what is really those intangibles that we face and subsequently to approach the elements that compose. It is easily to find and specify an intangible resource than to describe the total subject of intangibles.

Such diversification helps to classify in a hierarchical order, starting from the general to the particular intellectual capital at the top, synonymous with the intangible and intangible assets (Intangible Assets), to be a part of the intangible capital.

Under the terms of consultants on the issues of Intellectual Capital, companies must measure and disclose and reflect on their financial statements and the relationship between the rights of intangible capital and financial performance of the company, translating changes to these rights as indicators of financial performance. Recognition therefore these additional elements that create value and increased business performance should be valued and recognized, but generally they provide complete and comprehensive information for users of these financial statements, whether internal or external users of these situations.

THE INTANGIBLE ASSETS OF THE COMPANY

The intangible capital, the intangible assets of the business are not something new that debuted recently on business needs. While it was still in operation and in the strategic business planning, though only in the last 20 years, since the mid-'90s began to draw the attention to the highly academic and professional Accountants Community-Business Consulting Financial Services. One of the problems it seeks to solve is the asymmetric information that comes to users of Financial Statements of Business by the Shareholders until the third dealing with the Company (Banks, Suppliers, and Customers). This information on the intangible assets of companies does not fully reflected in financial statements published by the Company. Thus there is no information on an essential and very important part of the assets of the company. The intangible capital.

What differentiates today business is the intangible property, rather than material assets. The mere possession of plant, machinery, transport equipment, raw materials and goods is not sufficient to ensure continued growth and profitability. Neither the low cost of raw materials is enough to the profitability of a company. No intangible assets, that remaining in business is the ability to mass produce a product or build things for others. This naturally keeps the company in a mediocrity on the state of the market and annual earnings. Only a well established brand, know-how, or other intangible assets can relieve the body from the mediocrity and / or extinction.

What differentiates that two similar, competing enterprises operating in the same sector, trade or productivity in the same area with similar providers and similar quality of the product is neither plant nor the administration buildings or machinery, or modes, or products. What differs the two companies, in the consumer's mind and choice, it is the intangible capital of firms, all these words which are the property of each company, there are also assessed more often in the company's accounts, but they offer to each firm's competitive advantage, being offered the chance to choose its own product by consumers, compared with competitors.

A typical example is the product of the mobile phone in the modern era and in the immediate past. Thus materials recombine in such a way as to give the mobile phone more technological capabilities Although a simple, everyday phone consists of the same quantity of raw materials with a phone built before five years (iron, plastic, silicone), these materials are used in such a way today to make the modern phone 30 times more potent, great utility and hence value. So this, added to the product to give more value and features are the intangible capital of the producing company.

Therefore, the bet required to win every business is how to acquire or develop or activate the hidden and intangible assets, to diversify and make it attractive to potential, future customer's

own product to the competitive one.

SOME DIFFERENT PROPOSALS - APPROACHES

For one so relevantly new point it makes sense that there are different approaches and different treatments by many scholars and practitioners- economists of the audit and accounting profession. Thus, different interpretations are found in the international literature to address the same issue.

Some of the terms used in the recognition and interpretation of the dormant assets of the company are Intangible Assets, Intellectual Property, Intellectual Assets , Intellectual Capital, Knowledge Based Assets, Knowledge Capital e.t.c.

LITERATURE REVIEW

As mentioned above, this intangible property of companies, does not appear suddenly. He was always there, just never been good looking and measurable and have never attempted to measure the property, let alone to manage the business these resources by offering a competitive advantage. The effort that intensified in the last 20 years, by trying to become even more pronounced after 2000.

So, we can distinguish two periods in which the original proposals were expressed, processed, corrected and reconciling as well as proposals for measurement models. These periods are before 2000 and after 2000.

An initial approach by Edvinsson and Malone (1997), is the use of the terms of intangible capital and intangible assets. The definition given is that "intangible assets are those which have no physical existence, but also contribute to the value of the firm. Already recognized by a first attempt to interpret that the main characteristic is the lack of physics - physical existence, and even non-physically contribute to the creation of value of the company. This approach is a first attempt at classification of intangible assets. So, according to them "the intangible capital is the human and structural capital". Since then, many different classification efforts were made by many academics and even more specific, business economist profession. Different efforts, different proposals, according to the optical prism through which every author considered the effect of intangible assets and depending on the objective which focuses each.

The terms spiritual or intellectual capital, Intangible and intangible assets, occur very frequently in the literature. Depending on the point of attending every author, this property of the company, use, analyze and work around the definition. But it is not synonymous definitions of the same. More likely it seems that dimension, it is a bit-part of another.

The term intellectual capital, derived from the literature of the science of Human Resources, while the term intangible, from the science of accounting. The consequence of all this is the term intangible asset, is more restrictive criteria and refers to the recognition of those assets from your existing accounting system, but usually covers the widest range and all aspects of the greater whole called the Cultural Capital (Intellectual Capital), concluding that intellectual capital includes all types of intangible. Below, the different tests and different types of intangible capital as proposed during the years analyzed, indicating the contribution of each proposal in the science of identification, measurement and contribution of intangible assets to the value of each company.

Especially in recent decades, intellectual property intellectual business was discussed between many chairman of the board, financial advisors and consultants, directors and the accountants.

In another attempt the same year, Sveiby (1997) defines the intangible asset, in his intangible asset monitor, through its division into three categories, which stem from the staff of an organization.

Stewart (1998), treats intellectual capital as an intellectual material (knowledge, information, intellectual property, expertise) that can together collectively be used to create value. This is recognized as a collective intellectual knowledge. Bontis et al (1999), use the term intangible sources, and recognize the category of intangible resources such intellectual capital. Therefore define the intellectual capital as the set of intangible resources and inputs generated, and their intangible sources, interpreted by each factor that contributes to the overall value of a business process.

As mentioned above, the attempt to define the assets of that company, has begun intensively in the mid 90s, but culminates in the new millennium. Thus, the greatest explosion of interest in the issue of intangible assets of companies, culminating in this first decade, during which, most articles were written so they can disclose, what really lies and that really because most of the value of current operations.

The moment developed is not random. The last decades after the second worl war, the economy going through the management revolution, in which companies use the knowledge to improve their competitiveness. Increasingly, that is, companies realize the role of knowledge in business, recognizes the strengths, its competitive advantages of each, and the points and win the others, they are not visible, or their competitors; or those directly involved (ownership, customer trading).

At the dawn of the new millennium, the selection of companies to seek ways to develop and evaluate the intangible property, shows the growing interest exists for this issue. A new attempt to approach and interpretation of the matter is by Sanchez et al (2000), who provided intangible, differentiate their intangible resources, which can be measured at a given moment and intangible activities arising during a period of time.

It is obvious that over the years and close to today, the interpretations given, reaching more financial dimension, ie an interpretation of some assets of the company, which circumstances can turn a profit for the company, either directly or supporting the broader function of the operation aiming at profit.

Sullivan (2000), provides the mental - intellectual capital as the knowledge that, under certain conditions, can be turned into profits for a company, while Lev (2001) provides that intangible assets of the company, is a cause for future profits, which have no physical (material) or financial status (ie excluding shares or bonds financial status. Gu and Lev (2001), define five different areas of intangible assets, research and development, advertising, cost of capital, information systems and technology assets.

Several times, various attempts to define by academics, rather than end up defining "what is the intangible assets of the business" definition "What are intangible assets. Or that there is a material asset, thereby classifying the intangible. So much effort, and ended up in what is named "material asset" for business. Upton (2001), refers to non-financial disclosures, indicators, ratios, and other information not presented in the basic financial statements and

intangible assets, which are elements of the company which is neither financial nor material which can not be regarded as assets, but it is important to the success of the company. As a non-physical - physical factors that either contributed or used to produce goods and services businesses, expected to provide future benefits for the company that uses these factors recognize the intangible (Blair and Wallman, 2001). Petty and Guthrie (2000), recognize intellectual capital as the economic value, two categories of intangible assets of an enterprise, human and organizational capital, while Ordonez (2003) give a broad concept of intellectual capital as the difference between the market value of the company and the book value. Are the sources, based on knowledge, contribute to a competitive business advantage from intellectual capital.

ATTEMPTS TO CATEGORIZE

After trying to decide on the appropriate definition of an intangible, the problem of categorization or separation and the division into similar groups. As expected, following a variety of definitions, numerous efforts and proposals made for a different classification and different approaches tried to explain more fully the same issue.

A first approach, which followed and which influenced so many writers is that of Edvinsson and Malone (1997), who set the intangible capital as a synthesis of human and physical - Structural, Organizational Capital. Sveiby's proposal (1997), was the separation of intellectual capital in the core competencies of workers, internal structure and external structure. According to Sveiby, the development of intellectual capital based on the core competencies of workers.

But the majority views of researchers were directed to the separation of intellectual capital into three categories. There were just different views concerning the naming of these categories. So others were named creativity, knowledge and identification of other units (Granstrad 1999), structural and Human Relations with third parties (Canibano et al , 1999), internal and external structure of human capital (Brennan and Connell, 2000), (or in other capacities of employees – Gunther, 2001) or the human, organizational, operational and customer capital (Mouritsen et al ,2002)

As seen, the majority of researchers, writers, propose the separation of intellectual capital in three categories human – structural and relations to third parties. Finally, these categorizations do not give a clear definition, despite living in a misty. They offer a clear perspective and guidance for proper and safe management of intangibles. Also not clearly defined what assets and resources belonging to each category.

Lev (2001), accept the non physical structure for the intangible adding also the non – monetary substance. Gu and Lev (2001), found that investment in research and development costs (a special intangible category), advertisement, trademarks and technological improvement leads to higher market value for the company.

Finally, the majority of the research agree that is very difficult to identify the intangible assets with a clear and specify definition and usually must be described in generally (Edvinsson & Malone, 1997, Stewart and Ruckdeschel, 1998, Bontis et al.,1999, Lev, 2001, Sullivan, 2000, Sanchez et al., 2000, Ordonez de Pablos, 2003). The majority of the proposals suggest that the intangible assets have non-physical existence (Edvinsson & Malone, 1997, Steward, 1998, Blair & Wallman, 2001, Lev, 2001), contribute in the market value of entity (Edvinsson & Malone, 1997, Petty & Guthrie, 2000, Sullivan, 2000, Lev, 2001, Gu & Lev, 2001) and also have a

significant effect in the future profits of company (Edvinsson & Malone, 1997, Stewart, 1998, Blair & Wallman, 2001, Lev, 2001). However, although the disagreement for recognition as an asset for the company, nevertheless agree that the owner is the company and the final goal is the growth, and the effect in the future profits (Upton, 2001).

THE HIDDEN FORTUNE OF THE COMPANY

As it is common belief, the major strategic factor for the excessive earnings for a company, is "something" that it is still unmeasurable yet. It is something hidden that create the fortune, the value for the company. Below follows a statement (Seetharaman et al, 2003) of what can be recognized as intangible assets or intellectual capital, which are identifiable, can be moved and changed their ownership, with some life, detached from the daily work of the owner.

So we can, depending on the type of activity of each company to recognize the following missing features, lacking physical existence, deprived of representation in the financial position statements, operators of the business, unaware that they are held, but often is what gives a competitive advantage and the special expertise of the company, making it stronger, stiffer competition between:

- Drafts
- Distribution Network
- Libraries
- Brand
- Emission Permits
- Purchase and sale agreement
- Chemical Formulas
- Computer Software
- Electronic Databases
- Contracts
- Cooperation Agreements
- Copyright
- Customer lists
- Contracts with customers
- Relations with customers
- Drawings
- Production rights
- Distribution Rights
- Drilling rights
- Contracts with employees
- Mechanical Drawings
- Environmental Rights-of emission rights
- Film
- Recipes cooking
- Franchise agreements (Franchise)
- Historical Documents
- Expert Knowledge (Know How) in terms of production, organization, technology, etc.
- Loan Portfolio
- Manual databases
- Manuscripts
- Medical records and maps
- Rights for mining
- Musical Compositions

- Natural Resources
- Patents
- Licenses
- Finance Portfolio Securities
- Shareholders Agreements
- Supplier Contracts
- Trademarks and Trade Names
- Trade Secrets
- Manuscripts Education
- Use of air rights, water, soil e.t.c

All these relate to specific kinds of intangibles that take part in certain types of businesses. A proposal on what could, under certain conditions, be recognized as a company's assets. It is not binding. It is true that many sub-sectors of the economy, they lack many of these resources, and is particularly important, other resources that are not listed in that list. For example, a sports club, or a particular SA, or Football or basketball or another sport, which makes a champion is for profit, people who have invested in it, it is clear that the primary and basic capital which founded and to which shareholders are investing early fans that support the team, players, the coaching group etc. which is not explicit and not specifically proposed in the above list.

CATEGORIES OF INTANGIBLE ASSETS STRATEGIC SIGNIFICANT FOR BUSINESS

In a broad sense, that the contribution of this hidden fortune, neither appears nor is counted but not shown adds value to the business and to support the view of the strategic importance of such intangible elements in the value of the business, we can discern additional categories. The existence of these groups in the economic environment of the company contributes to smooth operation, thus contributing to creating a good overall climate. On a good working environment, the company pays the most, and this yield translates to higher quality, better customer service in every respect, reducing loss or physical damage-or-better financial arrangements and other elements that make the company competitive. In the broad view, therefore, can be distinguished as a contribution to maximize its performance, good working relations with the government or other organizations. The professional conduct of the business to third parties creates confidence in and around the enterprise. A good working environment, could also be the basis for building competitive advantage in business. The term "good workplace" defines the attitudes of both management to the workers and employees together.

Could be distinguished with respect to relations of command - employee factors such as fair and equal treatment, a reward depending on the objective value and offer their respect for the personality of each participant in the life of the enterprise at any level of interest of management for all employees not as assets but as people, fine buildings and excellent technology with excellent hygiene, security, as far as possible, safety at work, both in performance and lasting security to work, etc.

All these contribute to creating a good working environment, which enhances the reputation of the company and contributes to productivity and quality of products and services. So while the individual (equal treatment, fairness, respect, solidarity, security, sanitation, etc.) may not be separate intangible assets of the company, it does not meet the above conditions for recognizing a fixed asset, however, help to consolidate other copyright - intangible assets such as goodwill, contracts with customers, customer lists, know-how etc.

Another factor is the concept of knowledge, which confers a competitive advantage. The modern business and economic environment in which enterprises operate, requires the use of knowledge not only on parts of the company (distribution channels - Customers-market - marketing, etc.) but the whole enterprise. This knowledge is embedded in the systems used and the skills and the key advantages of its executives. So the challenge facing firms is to develop mechanisms capable of detecting and following the administration of this particular knowledge in the plant, to increase the value of (Knowledge Management).

CONTRIBUTION OF INTANGIBLE ASSETS

Almost all investors and academia and business, all agree on the contribution of intangible assets, the value of the company. It is commonly accepted that high profits, the net return on investment by developing quickly, are some of the important features for successful investments. Few investors, however, recognize and analyze the intangible assets as factors leading to revenue growth and attain the company, according to others for profit (for-profit units) or otherwise maximize the value of the company.

Earnings above the average, from the proper management of intangibles because they contribute to cost savings through production or through the primary market price. These companies have earnings in excess of normal, compared with the average, are those owning or in possession or power of their valuable assets.

With the use of intangible assets, the company can benefit from a higher price, gaining market share, securing money without regard to whether the product is ordinary.

Examples of the patent, the use of which the company can save labor resources or raw materials during the manufacturing process. The brand is also relevant example. Many products are in the same format, similar almost the same features mostly the same packaging, same or similar quality, but the price is dramatically different, not because some companies have cost more to produce, because they use expensive materials but because the package is brand. The brand that the consumer is connected with memories of his own, personal system of values is ranked in the highest quality products, giving more satisfaction from the use, consumption, which means the willingness to pay higher prices to acquire the consumer , but higher profits for the company. Thus, without primary intrinsic value of the product is not spent to cover campaigns to enhance brand (especially for commercial products have established a specific brand name eg Lacoste, Ralph Laurent, etc.). Therefore, the major amount of the final retail price, an additional profit of the company (excessive earnings, the interpretation given by scholars to detect intangible assets). Other intangible may be having a large and qualified distribution network of business which can supply its products directly to major intermediaries in the chain (wholesalers).

Like all other fixed assets of a company, so the brands and all the intangible assets can grow and produce profits if the company funds available for promotion, advertising, research and renewal of technologies used . So we need to invest in the company to deliver the specific asset. If a business is reduced for one year the advertising costs that would improve the situation of the operating results, showing higher profits. But long term there will be problems in profitability and market share held by the company. Similarly in the field of technological development and expenditure on research and development. However, if a company that is wrong and reputation destroyed, material assets, and still have pretty good economic value, while at the same time, intangible assets, lose value very quickly.

The strategies followed by companies are often more efficient exploitation of intangible assets

as mergers, acquisitions and the sale of the entire enterprise.

METHODOLOGY

In this research study we collect data from   enterprises in ASE and using the base of data of Hellastat on period 2004 – 2009 we drew data for 254 companies and the financial ratios for five period years the action of which negotiates in the ASE. Companies that were excluded of our data are those of the financier sector.

More specifically, the financing elements which we drew for every company were following: a) Total of Asset, v) Return on Equity Before Taxes, c) Return on Assets Before Taxes,

The specific period, starts from the adoption of the International Accounting Stantards from the Greek listed companies in the Athens Stock Exchange at 2004. The last year of the study (2009), is the previous year from the start ofd catastrophic greek economic crisis. At 2010, the new Greek Prime Minister, announce that the greek debt is huge, greater than the previous annual reports. For this reason, the greek government ask the assistance of the International Monetary Fund (IMF). From this year (2010) and until now, the greek economy, is under supervision of International Monetary Fund and European Committee and until today, the greek crisis seems not to finish. That is the reason for the research period 2004-2009. Future research, will be focused in the period during the crisis, (2010-20XX) comparing the results from the previous period (2004-2009) to the crisis period.

Our Objective   is to investigate how much the companies with higher total of asset achieve higher efficiency of proper funds or globally invested capital.

For this reason, we created two teams with base the total of asset. Using the median we separated the companies in the (Team A) with total of asset bigger/equal from 84.773.514 Euros and them (Team B) with total of asset smaller than 84.773.514 Euros.

In this survey the sample that was used are firms listed on the Athens Stock Exchange and were divided into two groups, those that have large fixed assets and those that have less fixed assets and assumed that those with higher fixed assets null hypothesis H_0 will have greater intangible assets hypothesis H_1 and will be verified by financial ratios

CONCLUSIONS OF OUR RESULTS

From the next table I (statistical results) we can see for the first group A the mean price for ROE is 10,56% while the mean price for ROE for the second group B is -2,97%. Further more the mean price for ROA is 3,85% while for the second group B the mean price for ROA is -0,27%

Group Statistics

	E	N	Mean	Std. Deviation	Std. Error Mean
ROE	>= 84773514,00	719	,1056	1,17574	,04385
	< 84773514,00	714	-,0297	1,44995	,05426
ROA	>= 84773514,00	697	,0385	,12351	,00468
	< 84773514,00	681	-,0027	,20897	,00801

Table I : Descriptive statistics of the two groups

The critical point that we want to check is that if the mean of both groups are different. So that our hypothesis becomes as follows:

H_o: $\mu_1 = \mu_2$
H_1: $\mu_1 \neq \mu_2$

Where μ_1 is the mean for the ratio ROE or ROA for group A
And μ_2 is the mean for the ratio ROE or ROA for group B

Our analysis use the SPSS 19 statistic programmed and we also use the t-test analysis

The statistical results are showed in table II

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
ROE	Equal variances assumed	2,114	,146	1,940	1431	,053	,13526	,06971
	Equal variances not assumed			1,939	1368,642	,053	,13526	,06976
ROA	Equal variances assumed	2,504	,114	4,467	1376	,000	,04120	,00922
	Equal variances not assumed			4,442	1098,392	,000	,04120	,00927

Since Levene's test to test for the hypothesis of gender variation for the 2 groups we observe that for both indicators ROE and ROA, the p-value (Sig.) is greater than 0.05, therefore, assume gender variations and standard deviation and so on t-test will use the first line

For the ROA ratio p-value for testing the equality of the two means are equal to zero (Sig. (2-tailed)).

Thus the null hypothesis is rejected, ie the mean average of the two groups differ significantly in terms of statistical significance a = 5%. It shows that companies with high asset has a higher return on total invested capital compared to companies with less than total assets.

However, the index ROE p-value for testing the equality of the two means are equal to 0.053> 0.05 when the null hypothesis is not rejected at the level of significance a = 5%.

However, it is rejected for the level of significance a = 10%.

CONCLUSION

Ultimately, the issue of intangible assets is a daily preoccupation for companies. The measurement and management of intangible assets is not easy and is not in the same way with the materials. From empirical research shows that traditional industries such as aerospace, defense and oil have long and strong presence of intangible assets. It could be an element of future research to compare the relationship between intangible both traditional heavy industries and new industries such as multimedia industry. Although the research field, it seems to lack an internationally accepted language of communication, though the investigations are at a good level to determine the target (intangibles) and other data relating to them. Numerous articles, opinions, have written a general interest has been expressed for the understanding by all parties with business parties (managers, accountants, academics, consultants, etc.) of those intangible elements of the business.

The paradox facing economic practice, despite inconclusive scientific definition of the matter is that the more the financial system and businesses rely on intangibles and intellectual capital, both become more powerful, since these resources are the key building blocks for growth and value creation. Certainly the more intense investment in intangible resources do companies and the overall financial system, the more vulnerable it is.

Our analysis shows that there are few examples of empirical research and the literature, there is a lack of theoretical framework which could be demonstrated in practice. Absent that, a specific definition of intangible and intellectual - intellectual capital while the division into three categories, is not satisfactory.

It is obvious the lack of a practical approach to the issue of intangibles, which could provide information and assistance to businesses. In future research, could be investigated various topics such as concrete objectives of the research on intangible parallel proposals for the management of these intangible factors, proposals for exploitation and utilization in practice the information obtained from the study of intangible rather than we are left only to identify their examination of the application or not in practice, theories are developed, focusing on specific aspects of other intangible knowledge, development of theoretical underpinnings and workable in practice regarding the management of this property of enterprises, generalized measurement model which can express, to reflect and include all sorts of intangibles that may be held by the company, whether it means developing a new model or optimize an existing one.

Examining empirical results from the Athens Stock Exchange, for the greek listed companies for a 5-year period, after the adoption of the International Accounting Standards (2004-2009), and before the greek economic crisis effect the entire greek economy and many greek companies (SME's and listed), found that the companies with higher total of asset achieve higher efficiency of proper funds or globally invested capital and have also grater intangible assets at the level of significant 5% but not for level of significant10%.

However, future research, may examine, whether or not the crisis period for the greek economy, affects the intangible assets and the total assets of the listed companies and also achieve higher efficiency of proper funds or globally invested capital, comparing to the previous period, that before crisis starts. Also, future research, can also compare, the financial statements after the adoption of International Accounting Standards with the period after the adoption of Greek Accounting Standards (ELP), from 01/01/2015 in Greece (adopting the EU Guide), for the listed companies.

Also important it was to work on practical implementation of empirical research to investigate whether and to what extent operational management of intangibles

In conclusion, we can see, how visible is their contribution to creating competitive advantage and thus maintain the company's high level of competition.

The next challenge for all stakeholders (shareholders, investors, employees, management, financial advisors, accountants - academics, etc.) is to identify and establish management procedures, measurement and imaging in increasingly Intangible-Based Economics Environment.

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The Influence of Using Academic Information System on Private University Image and Its Impact to Competitive Advantage

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ABSTRACT
Competition among colleges in getting new students is getting fiercer. They are required to be able to have competitive advantages through improving facilities and image of the college to students and candidate students. The population in this research is students who are at least in the second year and come from private universities that have used academic information system. This study uses structural Equation Modeling (SEM) with AMOS version 22 are applied as tools in analyzing data. The results of research drawn based on hypothesis analysis and some tests show that academic information system has a significant influence on the image directly and indirectly to the competitive advantage of private universities in Kepulauan Riau province. This shows that by using Academic Information System, the students are very helpful in lecture activities because it provides a good assessment on the college which will finally give good appraisal of the competitive advantage of private universities in Kepulauan Riau province.

Keywords: academic information system, image, competitive advantage, private university

INTRODUCTION
Competition in the environment of higher education, is something must be observed and viewed from various point of views to maximize competitive advantage. Universities must be able to face the challenges of globalization and pass graduates who can compete in the community. Kepulauan Riau province as one of the newest provinces in Indonesia, in this year has owned 2 states and 56 private universities. Competition occurs not only among local private universities, and private universities against state universities in Kepulauan Riau but also among private universities in Indonesia even with universities from neighboring countries as well. This has an impact on the increasing difficulty of universities to maintain the exited number of students and obtain new students in each year. A fact the survival of private universities in Indonesia still depends on the number of student enrollment.

Currently the competition among universities in recruiting new students is increasing. According Assauri that the competitive advantage of a company from its competitors can be generated from technological sophistication or from the distribution network owned by the company [1]. In addition, people are more intelligent in choosing educational institutions. The college's big names became one of their other considerations in making choices other are the facilities which are provided by the college. A good image or reputation will get a greater appraisal for positive surprises and smaller market penalties for negative surprises than any other company [14].

LITERATURE REVIEW

Marketing Services

Lupiyoadi states that the marketing of services is any action offered by one of the parties which is principally intangible and does not cause any transfer of ownership [11]. Service marketing has become a major part of current economic activity. One of them is in the education sector conducted by universities. Based on the World Trade Organization (WTO) classification, in accordance with GATS / WTO-Central Product Classification / MTN.GNS / W / 120, education services are included in one of the service business classifications. Lupiyoadi states that there are some characteristics of services at universities [11]:

   o Colleges belong to pure service groups, where the provision of services is supported by work tools or supporting facilities only.
   o Services provided require the presence of service users (students), in this case students who come to the institution of Education get the desired services.
   o High contract system. The customer must be part of the service system.
   o Relationships with customers based on membership relationship.

Academic Information System

According to Hardcastle a system can be defined as a collection of components that work together toward a common goal [8]. The purpose of a system is to accept, input and convert them into outputs. The same thing was also stated by Ramachandra et al. which states that a system is a collection of elements which are combined to achieve a common goal [16]. A system is group of elements that are set with a specific purpose. Information is data that is processed, useful or relevant data, data with surprise value, useful data in the decision making process [24].

Systems using modern technology can provide information for users in easy format to understand that they are enable to use information systems effectively and improve their performance, high quality systems lead to high information quality. High quality information helps the Organization manage their business processes, make decisions, and improve organizational performance [2]. The utilization of systems in routine activities is the level and manner in which staff and customers utilize the capabilities of information systems [13]. The role of information systems will be regarded as one of the most important actions and achieving overall success will depend on user satisfaction [21]. This is also supported by Petter and Mclean in his research stating that user or user satisfaction is a harbinger of Consent or compatibility and user satisfaction with the production of information systems [12].

A Management Information System is defined as a computer-based system that makes information available for users with similar needs [17]. Academic information system is one of the implementation of management information system commonly used today in college. Raymond and Bergeron said that the quality of information output by the Performance Management Information System (PMIS) is closely related to the technical aspects and system services, namely system quality [18]. According to Hasan et al. there is a significant relationship between system quality and information quality [9].

Image

Image is a series of tangible and intangible characteristic such as the ideas, beliefs, values, interests and features that make them unique [9]. The image is the impression which is achieved from knowledge and understanding of facts or reality [4]. The image is formed based on knowledge and information received by someone. Image shows the impression of an object

toward another object formed in processing information every time from various reliable sources in accordance with one's knowledge and experience about something [3].

Competitive Advantages

Competitive Advantage is a real step in the selection and implementation of a common strategy to achieve and maintain its superiority [15]. Besanko et al state that the competitive advantage of a company is when a company gets a higher profit economically than the average profit of another company competing in the same market [6].

Robbins & Coulter defines competitive advantage as distinguishing factors or different edge of a company [19]. They both associate competitive advantage with core competencies. The competitive advantage of an organization is not only determined by external factors but also internal sources covering various areas. The concept of competitive advantage is manifested through appropriate management actions while managing the structures, processes, cultures and people of an organization [23]. Assauri agrees that the competitive advantage of an enterprise from its competitors can be generated from technological sophistication or from the company's distribution network [5].

RESEARCH METHOD

The population in this study are students who come from private universities in the province of Kepulauan Riau who have used academic information system. The samples were drown by using proportional random sampling technique from the active students who are at least have been at semester 5. Data collection technique used was the distribution of questionnaires filled out by 381 respondents. The samples calculated based non Slovin formula with a tolerance of 5% [20].

All variables are rated on a five-point Likert scale from strongly agree to strongly disagree. Confirmatory factor analysis is used to test the goodness of fit of the data set. To assess the effect of academic information system and image on competitive advantage, structural equation modeling by using amos software version 22. The structural model of the variables measured in this study are as follows:
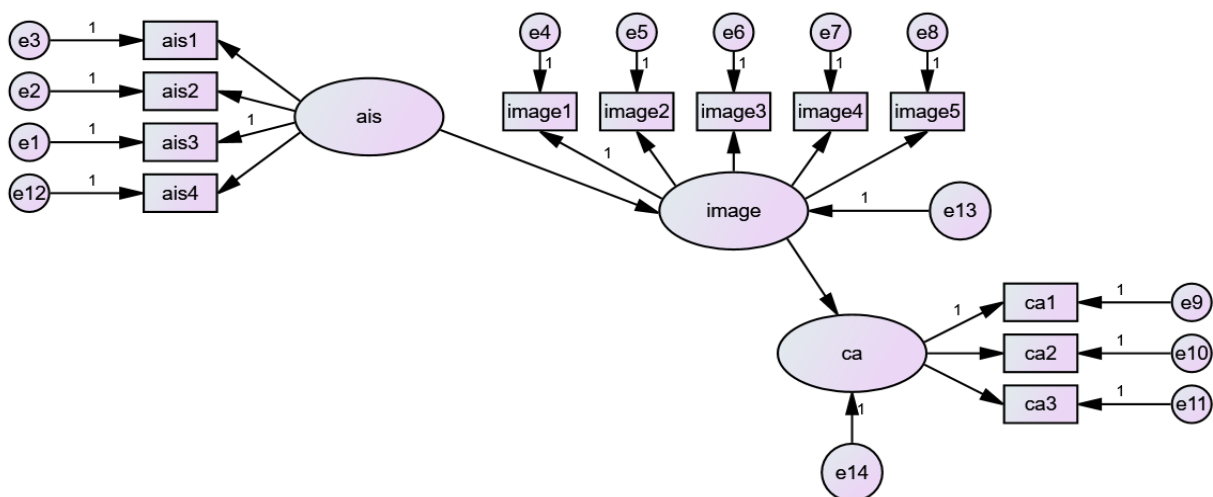

Figure 1
Structural Model of Research

RESULTS AND DISCUSSION

Before testing, the first evaluation was taken to the adequacy of the sample. The total sample at least must be 100 samples. This study has an estimated parameter value of 31points, this means the minimum required sample is 155 samples. Another index that can be used to test

data adequacy is the Hoelter Index in text output [7]. The sample used in the research is 381 samples, this means the number of sample has exceeded from the minimum data adequacy limit. The value of Hoelter Index in text output is 397, means that the sample used is enough to be used in drawing the conclusion because the total sample is smaller than the Hoelter Index value.

Characteristics of respondents by sex majority of men 50.9%. Age-based characteristics were dominated by respondents in the age range 21 - 25 years of 66.4%. This shows that the majority of private college students in Kepulauan Riau province are not fresh graduates, and based on field observations and interviews it is found that in general they are workers in industrial companies. The number of respondents based on respondent program study is dominated by respondents in Information Systems 20.2%. Characteristics of respondents based on the study period seen from the level of semester that is pursued by students, from obtained data of respondents are in semester 5 (five). They are the most respondents in this study 51.2%. These results indicate that the majority of private university students in Kepulauan Riau province are workers in companies who are still young and have a tendency to choose the field of computer science.

Validity

A valid indicator can be seen through loading factor value. A model can be said to be fit if loading factor value is greater than 0.50. Table 1 shows that all variable indicators have a Critical Ratio (CR) greater than twice their Standard Error (SE) and have a probability value less than 0.05. The results of this test indicate that these indicators have satisfied the requirements of construct validity.

Table 1.
Loading Factor value

			P	S.E.	*Critical Ratio*	*Loading Factor*	*Explanation*
ais1	<---	ais	0.000	0.580	16.524	0.821	Very strong
ais2	<---	ais	0.000	0.059	17.712	0.886	Very strong
ais3	<---	ais	Ref	Ref	Ref	0.829	Very strong
ais4	<---	ais	0.000	0.052	16.500	0.741	Very strong
image1	<---	image	Ref	Ref	Ref	0.767	Very strong
image2	<---	image	0.000	0.068	14.866	0.759	Very strong
image3	<---	image	0.000	0.064	16.402	0.831	Very strong
image4	<---	image	0.000	0.069	14.875	0.772	Very strong
image5	<---	image	0.000	0.069	14.786	0.753	Very strong
ca1	<---	ca	Ref	0.009	Ref	0.994	Very strong
ca2	<---	ca	0.000	0.009	111.709	0.991	Very strong
ca3	<---	ca	0.000	Ref	118.78	0.993	Very strong

Reliability

The approach used in assessing a measurement model is a construct reliability (CR) with values greater than or equal to 0.70 and Variance Extracted (AVE) with values greater than or equal to 0.50 [7].

Table 2 shows that the value of construct reliability (CR) is greater than 0.70 and the value of variance extracted (AVE) is greater than 0.50. The results of this test indicate that these indicators have met the reliability test requirements.

Table 2: Construct Reliability Value

			Loading Factor	Measurement Error	Construct Reliability	Variance Extracted
ais1	<---	ais	0.821	0.326	0.892	0.674
ais2	<---	ais	0.886	0.215		
ais3	<---	ais	0.829	0.313		
ais4	<---	ais	0.741	0.451		
image1	<---	image	0.767	0.412	0.884	0.604
image2	<---	image	0.759	0.424		
image3	<---	image	0.831	0.309		
image4	<---	image	0.772	0.404		
image5	<---	image	0.753	0.433		
ca1	<---	ca	0.994	0.012	0.995	0.985
ca2	<---	ca	0.991	0.018		
ca3	<---	ca	0.993	0.014		

Normality

Normality testing is done by looking at the value of kurtosis value of the data used. Variables that have a skewness or kurtosis coefficient with a critical ratio of no more than ± 2.58 indicate a normal distribution [7].

Table 3.
Value of Construction Reliability

Variable	Min	max	skew	c.r.	kurtosis	c.r.
ais4	2	5	0.011	0.084	-0.566	-2.257
ca3	2	5	-0.071	-0.565	-0.145	-0.578
ca2	2	5	-0.154	-1.224	-0.177	-0.707
ca1	2	5	-0.160	-1.273	-0.189	-0.753
image5	2	5	0.017	0.139	-0.333	-1.328
image4	2	5	-0.105	-0.834	-0.439	-1.747
image3	2	5	0.068	0.540	0.148	0.590
image2	2	5	-0.036	-0.286	-0.328	-1.307
image1	2	5	0.060	0.479	-0.223	-0.887
ais1	1	5	0.075	0.599	-0.167	-0.665
ais2	2	5	-0.242	-1.931	-0.326	-1.299
ais3	2	5	-0.058	-0.460	-0.412	-1.643
Multivariate					15.642	8.328

Table 3 shows that all data have a Kurtosis value and a Skewness value with a critical ratio of not more than ± 2.58. This means the data are allowed for analysis and continued [7]. This means that the data used in the study is normally distributed and very feasible for use in subsequent estimates.

Relating with the results of the evaluation of data normality, factors such as outliers. Multi co-linearity and singularity. Goodness of fit, modification indices and causality test have satisfied SEM condition.

Table 4.
Goodness of Fit Value to the Modified Model

Goodness of Fit Measure	Indeks	Cut Off	Explanation
Chi-square of estimate model	62.965		
Probability Level	0.060	> 0.05	Fit model
Goodness of Fit index (GFI)	0.975	≥ 0.9	Fit model
Adjusted Goodness of Fit Index (AGFI)	0.958	≥ 0.9	Fit model
Tucker-Lewis Index (TLI)	0.995	≥ 0.9	Fit model
Comparative Fit Index (CFI)	0.997	≥ 0.9	Fit model
RMSEA	0.030	≤ 0.08	Fit model

Table 4 shows that the results of the Goodness of Fit modulation model calculation gives a conformity index value that meets the recommended standard that is above the cut off value set. It can be concluded that the structural model is fit or has good and acceptable conformity.

The relation of causality between variables is shown in Table 5. The critical ratio (CR) value which is identical with the t test in the regression analysis shows that all the regression coefficients are not significantly equal to zero. Thus, the hypothesis 0 which states that the regression coefficient equal to zero can be rejected and the causality relationship in the research model is acceptable.

Table 5.
Coefisien Between Variabel Ways

			Standardized Estimate	C.R.	P	Explanation
Image	<---	ais	0.210	3.760	0. 000	Significant
Ca	<---	image	0.286	5.479	0. 000	Significant

Academic information system has a significant effect on image
Table 5 shows that the regression between academic information system variables on the image of 0.210 with the critical ratio value of 3.760 and the probability value 0.000. It states that academic information system variables significantly affect the image. The results of this study correspond to the results of a two-stage online survey conducted by Venkatesh et al. (2012) using data collected over four months: improving the performance of technology also enhances the reputation of a product so that consumers will continue to support the produced model [22].

Image has a significant effect on competitive advantage
Table 5 shows that the regression value between the image variables to the competitive advantage of 0.286 with the critical ratio value of 5.479 and the probability value 0.000. It states that the image variables significantly affect the competitive advantage. The results of this

study in accordance with research conducted Pfarrer et al. (2010) is a company that has garnered high reputation ("high reputation" companies) and celebrity companies (celebrity companies) are more likely to experience greater market rewards for positive surprises and smaller market penalties for negative shocks than firms other [14].

The study also found that academic information systems have an indirectly positive influence on competitive advantage of 0.060. This is in accordance with Huang's research results (2015), the company can take advantage of temporary competitive advantage as a result of market position to improve the position of resources and technological capabilities which can enhance their sustainable competitive advantage continuously [10].

CONCLUSION

This research resulted some findings that academic information system have significant effect to image and comply result of research of Venkatesh et al. (2012), the images have a significant effect on competitive advantage and comply with the results of research Pfarrer et al. (2010) as well as academic information systems have an indirect positive influence on competitive advantage and comply with Huang's research results (2015).

SUGGESTION

This study has some limitations because it does not cover all indicators of academic information system variables. Image and competitive advantage as proposed by previous researchers. Although the sample number meets the requirements for SEM. Larger samples are still needed to make generalizations. Beside that this research is located in Kepulauan Riau province in Indonesia in which the education field still in development. The next researcher is suggested to put more indicators of academic information system variables. Image and competitive advantage and enlarge the sample so that the result becomes more representative.

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Influence Of Labor Market Institutions On Female Youths' Access To Formal Employment In Kenya's Private Sector

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ABSTRACT
Kenya's demographic trends have resulted in an eminently young population structure. Unfortunately, there is high prevalence unemployment among youths in Kenya. Female youths are the most adversely affected by unemployment. As a result, a good number of them have resorted to seeking employment in the informal sector which in most cases does not provide adequate earnings. It was therefore important to examine the influence of labour market institutions on female youths' access to employment in the private sector. The study was based on qualitative and quantitative research methodologies. A survey questionnaire and a key informant's guide were used in collection of quantitative and qualitative data on labor market institutions in Kenya respectively. The study findings revealed that majority of women relied on social networks in gaining employment in the private sector. The findings further indicated that majority of women employees worked under oral contracts that did not guarantee good working conditions. Therefore, existing institutions in the labor market, such as terms and conditions of employment and poor implementation of labor laws hindered female youths' access to formal employment in the private sector.

Keywords: labor market institutions, female youths, access, formal employment

INTRODUCTION

Labor market institutions refer to policy interventions or collective organizations that determine wages and employment (Holmlund, 2013). Laws, practices, policies and conventions that fall under the umbrella of labor market institutions determine the type of contracts that are permissible. The creation of labor market institutions is usually justified based on imperfect information, uneven market power (between employers and workers), discrimination, and inadequacies of the market to provide insurance for employment-related risks (Bercherman, 2013). The influence of labor market institutions on employment has been approached from two differing perspectives. These perspectives are often referred to as the 'distortionist' and 'institutionalist'.

The 'distortionists' view labor regulations as a cost and interference in the market process that impede efficiency and discourage competition and investment (Fontana & Paciello, 2007). According to this perspective, regulations inevitably lead to rent extraction by politically influential 'insiders', who gain at the expense of those who have to pay more for goods and services, and of those who end up without jobs (Fontana & Paciello, 2007). Since they create a

wedge between the earnings of insiders and outsiders, they can be expected to increase inequality. By contrast, those who support labor market interventions (the institutionalists) argue that labor market interventions could potentially increase efficiency and lead to a better economic performance (Bercherman, 2013). They further contend that labor market institutions are associated with less inequality because they favor workers at the expense of employers. This study sought to investigate the influence of labor market institutions on female youths' access to formal employment in the private sector in Kenya. The specific issues examined were labor networks and employment terms and conditions in private sector organizations.

LITERATURE REVIEW ON THE INFLUENCE OF LABOUR MARKET INSTITUTIONS ON WOMEN'S ACCESS TO EMPLOYMENT

Labor legislations can directly or indirectly impose restrictions on women's access to work (Sanja & Breslin, 2010). For instance, in some societies, women are not allowed work in the formal sector unless permitted by their spouses (Sanja & Breslin, 2010). Working conditions, such as regulations on working hours, maternity leave and remuneration also influence participation of women in the formal sector (Rodgers & Berik, Asia's Race to Capture Post-MFA Markets: A Snapshot of Labour Standards Compliance and Impacts on Competi, 2006). Existing differences in parental leave between men and women could increase the perceived cost of employing women and reduce their employment opportunities. According to the International Labor Organization (1998), implementation of labor laws has remained a challenge in many countries. In Korea, for example, only a few firms in the manufacturing industry have instituted the system of maternity protection (Sirin, 2003; Hensvik & Skans, 2003). This outcome could reflect either poor compliance among firms or lack of workers' awareness of the policy.

Standard models of the labor market focus on individual characteristics, such as human capital levels, but usually disregard group characteristics, such as the pattern of social connections between individuals in the market. Yet, empirical accounts show that the matching of individuals to jobs is widely influenced by networks of interpersonal ties, particularly the young people. Social contacts help job seekers to find jobs, and employers to find employees (Calvo-Armengol, 2005). Social networks convey rich and trustworthy information across both sides of the labor market. As such, they constitute a cost-effective search channel for labor market information among job seekers and employers. Firms find it beneficial to use social contacts because they enable them to find their desired recruits. Thus, social networks serve as a direct means to reduce the uncertainty regarding how well suited the capabilities of a certain worker are for a particular firm by providing credible information.

According to Montgomery (1991), many companies like recruiting associates of industrious employees with the assumption that friends exhibit similar characteristics. Casella and Hanaki (2006) quoted in Hensvik and Skans (2013), further noted that many employers like hiring through personal referrals because they are cost effective. Moreover, social networks enable employers to extract surplus information about recruits. A part from being beneficial to employers, inexperienced workers can secure jobs through social networks. For example, relatives and friends often assist fresh graduates in getting jobs by linking them with employers (Hensvik & Skans, 2003).

Organizational research evidence indicates that men and women often use different social networks to access labor market information. Existence of various social networks may result into diverse labor market outcomes for men and women. Additionally, barriers to being part of the social networks often limit women's ability to gather and share information (World Bank,

2010). Although labor market information is usually communicated through social networks, women are less likely than men to participate in nonexclusively female networks. Thus, gender based differences in access to labor market information through social network can hinder women's access to economic opportunities (World Bank, 2010).

Problem Statement

Formal employment is one of the most plausible ways through which women can overcome socio-economic challenges (Corner, 2011). Globally, formal employment is widely recognized as an important vehicle for raising the status of women and promoting gender equality between women and men (Corner, 2011). In Kenya, the private sector serves as a major creator of both formal and informal employment. However, challenges in the labor market institutions have affected ability of young people to access jobs in the private sector. Previous labor force studies in Kenya have attributed the imbalance to personal characteristics (Wamuthenya, 2010; Suda, 2002). However, there is paucity of information about the specific institutional constraints that hinder young women in Kenya from accessing employment. This study aimed at investigating the institutional factors in the labor market that restrict female youths from accessing employment in the private formal sector. This study focused on the private sector because it is the major creator of formal employment in the country. In so doing, it aimed at generating new knowledge to the existing literature on female youth employment.

Overall Objective of the study

The overall objective was to examine how labor market institutions restrict female youths from accessing formal employment in Kenya's private sector.

Specific Objective of the study

I.   Examine the influence of terms and conditions of work on female youths' access to formal employment in Kenya's private sector.
II. Analyze the influence of social networks on female youths' access to formal employment in Kenya's private sector.

Conceptual Framework

The conceptual framework in figure one illustrates how the independent variables (labor market institutions and social networks) both influenced the dependent variable (female youth access to formal employment in private formal sector in Kenya). Based on the reviewed literature, the conceptual framework hypothesized that labor market institutions influenced female youth's access to formal employment.
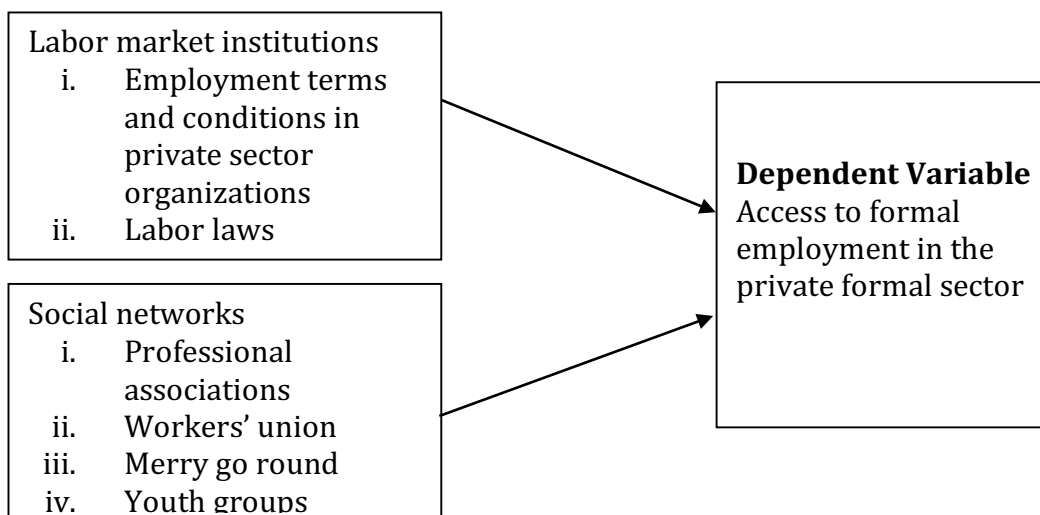
Independent Variables

Labor market institutions
- i. Employment terms and conditions in private sector organizations
- ii. Labor laws

Dependent Variable
Access to formal employment in the private formal sector

Social networks
- i. Professional associations
- ii. Workers' union
- iii. Merry go round
- iv. Youth groups

Figure 1: Author's conceptualization

METHODOLOGY

Study Sites
The study was carried out in East Kanyada location of Homa-Bay County and Kawangware Town of Nairobi County. Kawangware is a sprawling urban centre with a resident population of 113286 people and geographically covers 3.9 square kilometers (KNBS, 2009). Most of the inhabitants of Kawangware are low-income earners in the private sector and live in informal settlements. On the other hand, East Kanyada location is a remote village in Homa-Bay County with a geographical area of 104.1 square kilometers. It has a resident population of 37900 people (KNBS, 2009). Majority of its inhabitants are peasant farmers, but a few carry out small-scale retail businesses locally.

Study Population
The research population targeted women aged between 18 and 35 years in Kawangware town and East Kanyada location. Table 1 provides a summary of the population distribution in the areas of study.

Table 1: Population distribution in both Kawangware town and East Kanyada location

Kawangware Location			East Kanyada Location		
Sub-Location	Male Population	Female Population	Sub-Location	Male Population	Female Population
Gatina	24,747	21,125	Kothidha	4,200	4,702
Kawangware	34,683	32,731	Kanyach-Kachar	3,609	4,129
			Kalanya-Kanyango	6,965	7,562
			Kobwola-Kogwang	3,204	3,529
Total	59,430	53,856		17,978	19,922

Source: 2009 Kenya Population and Housing Census Report Vol 1A

Sample Size
Proportionate sampling method was applied to ensure equal participation of respondents from all the sampled locations. Two locations were purposively selected because of their diverse

demographic characteristics and socio-economic system. A sample size of 150 respondents was chosen through proportionate sampling method. Table 2 and 3 provide proportional samples for each location and sub-location respectively.

The sample for each Location was derived by:

Sample for Kawangware= $\underline{\text{Total Population of females in Kawangware Location}}$ × 150
Total population of females in Kawangware + East Kanyada Locations

Sample for East Kanyada = $\underline{\text{Total Population of females in Kawangware Location}}$ × 150
Total population of females in Kawangware + East Kanyada Locations

Table 2: Proportional Sample for each Location

Location	Total Female Population	Proportional Sample Per Location
Kawangware	53,856	109
East Kanyada	19,922	41
Total	73,778	150

Source: Kenya National Bureau of Statistics Census Report, 2009.

Table 3: Proportional Sample for each Sub-Location

Kawangware Location			East Kanyada Location		
Sub-Location	Female Population	Proportional Sample	Sub-Location	Female Population	Proportional Sample
Gatina	21,125	43	Kothidha	4,702	10
Kawangware	32,731	66	Kanyach-Kachar	4,129	8
			Kalanya-Kanyango	7,562	16
			Kobwola-Kogwang	3,529	7
Total	53,856	109		19,922	41

Source: Kenya National Bureau of Statistics Census Report, 2009.

Sampling of Respondents
One hundred and fifty respondents were sampled from all labor market categories. The investigator identified the first respondent using simple random sampling technique. Other participants were sampled through systematic sampling technique. Through purposive sampling technique, ten key informants were sampled based on their expert knowledge about employment issues.

Data Collection and Analysis
The study was based on qualitative and quantitative research techniques to surmount the flaws or inherent partiality of applying one method. Quantitative and qualitative data were collected using a survey questionnaire and a key informants' interview guide. Quantitative data was analyzed using the Statistical Package for Social Science (SPSS). Qualitative data were analyzed thematically.

STUDY FINDINGS
Terms and Conditions of Employment
The terms and conditions discussed in this section include type of contracts, number of working hours, type of leave or off days offered and facilities offered to female employees. In

addition equality in access to opportunities such as wages, training and promotion at work place was also examined.

Contractual Arrangements

Out of the 94 respondents who indicated that they were employed, 26 were self-employed/running their own businesses and 10 were engaged in unpaid family work. Thus, the remaining 58 were employees in the informal sector, formal private and public institutions. Among the 58, 67.2% (39) indicated that they were having contracts in their current jobs while 32.8% (19) did not have any contract. For those who had contracts, 64.1% were working under oral contracts of unlimited duration, 33.3% had permanent written contracts and only 2.6% had temporary written contracts. As shown in Table 4.14, majority of those who had written contracts were employed formally in government institutions whereas most of those who were in the formal private and informal sector worked under oral contracts. Buchmann et.al. (2010) argues that oral contracts are usually adopted by employers in order to create flexible jobs to enable them deal with highly fluctuating product markets. Additionally, some employers resort to oral contracting in order to avoid employment costs such as taxation and dismissal costs; hence, they are able to hire and fire employees easily. However, such job arrangements are in most instances unstable and characterized by lower pay, lower job security, and less favorable working conditions, which can deter women from accessing them.

Table 4: Type of employment contract by Market category

Type of employment contract	Market category			Total
	Formal Government	Formal Private	Informal Sector	
Oral contract of unlimited duration (permanent)	2	13	10	25
Written contract (permanent)	10	3	0	13
Written contract (temporary)	0	1	0	1
Total	12	17	10	39

Source: Field Data, 2015

Number of working hours

The study examined the number of hours that a respondent was required to work in a day in their current job. The mean number of working hours was 9.58 hours for all the respondents. However, for the formally employed respondents in the private sector, the mean number of working hours was 10 hours amounting to 60 hours in a week, which is higher than the normal working hours as stipulated in the Kenya labor laws. According to the Kenya labor laws, a normal working week should not consist of more than 52 hours spread over six days. Therefore, the pre-fixed long working hours in the private sector may possibly make it difficult for female youths who were already having additional domestic responsibilities to balance between domestic and market work. Consequently, some women may resort to other employment forms such as self-employment in the informal sector with flexible working schedules.

The study also sought to find out whether the respondents worked beyond the stipulated working hours and the form of compensation provided for the extra hours. 67.2% did not work overtime. Among the 32.8% who worked overtime, 63.2% indicated that they were compensated either in monetary form or in form of leave days for extra hours worked while 36.8% stated that they did not receive any form of compensation for working extra hours. Lack

of compensation for overtime is a clear indication that some of the employers were not complying with the labor laws, which requires that an employee be paid for any time worked in excess of the normal weekly hours.

Leave/off days Provision
Majority of the respondents stated that they were offered leave/off days (96.6%) and a few (3.4%) were not having such provisions. However, only some of the respondents stated that they had provisions for specific type of leaves such as maternity, sick leave and annual leave. The number of days offered for each leave differed among the respondents. As observed from Table 5, the mean number of days for maternity, sick leave and annual leave was 83.08, 8.74 and 32.15 days respectively. Among the respondents who had leave provisions, only 10.7% stated that their employers do not allow them to fully utilize their leave days.

Table 5: Min, max &mean no. of days per leave

Type of Leave	N	Minimum	Maximum	Mean	Std. Deviation
Number of days for maternity leave	13	30	90	83.08	17.974
Number of days for sick leave	23	1	14	8.74	4.760
Number of days for annual leave	20	14	60	32.15	12.119

Source: Field Data, 2015

Analysis of the form of employment and type of leave offered indicated that few of the respondents employed in the private sector had provisions for maternity leave, sick leave and annual leave as summarized in Table 6 These findings indicate poor compliance with labor regulations by the private sector firms/institutions where the respondents worked. This can be attributed to the fact that most of the private formal sector respondents were drawn from small private formal firms, which may not have acquired the capacity to fully implement all the labor laws. However, in general ILO (1998), submitted that despite a number of countries ratifying different labor laws, the difference between law and practice remained wide, consequently jeopardizing women employment.

Table 6: Employment Form and Number of respondents offered specific Leave

Employment Form	No. of respondents offered maternity leave	No. of respondents offered sick leave	No. of respondents offered annual leave
Formally employed (Government)	10 out of 12	8 out of 12	12 out of 12
Formally employed (private)	3 out of 18	8 out of 18	8 out of 18
Informally employed(private)	0 out of 28	7 out of 28	0 out of 28

Source: Field Data, 2015

Facilities Offered to Female Employees
The study also investigated whether there was provision of facilities to cater for the needs of women employees who were expectant, breast-feeding or had young children. All the

respondents indicated that they had no such provisions at their places of work. However, only 20.7% of the respondents felt that lack of such facilities was as a challenge to them. This was due to the fact that some of the respondents were not expectant, breastfeeding or having young children. The respondents who had young children reported that they used alternative coping mechanisms, such as employing house helps, leaving their children in daycare facilities and relying on the assistance of relatives and friends to enable them balance between employment and childcare work. Those who could not find house helps, suitable day care facilities and assistance of relatives faced a number of challenges in juggling employment and care giving work. For instance, 33.3% of the respondents indicated that they were not able to provide adequate care for their children, while 16.7% noted that they were usually disrupted from work. These challenges hindered the participation of women in the labor market.

Access to Opportunities at Work Place

The study investigated whether the female youths who were employed had equal opportunities to their male counterparts in the same level at work place. 72.4% indicated that they had equal opportunities in regard to wages, training and promotions whereas 15.5% had no idea about the same. Only 6.9% submitted that they did not have equal opportunities to their male counterparts. They attributed this scenario to difference in experience, skills, education and favoritism. This concurred with previous studies such as Dabalen (2000) who reported that in Kenya, women with least skills saw their position worsen relative to men with similar skills.

Social Networks

Social networks have been important channels through which information about job openings and other related information are shared among various firms and job seekers. Social networks act as a link between jobseekers and employers. Currently, a number of people are using personal connections such as friends and family members to find job opportunities. It is against this background that the study sought to investigate the types of social networks through which respondents accessed job related information.

Membership to Associations

The study inquired whether the respondents belonged to any association through which they could access information about employment issues. According to the findings, more than half (62.7%) of the respondents stated that they belonged to at least one association. 3.2% belonged to professional associations, 5.3% workers union, 10.6% associations of former classmates, 28.7% church group, 56.4% chama/merry-go round and 14.9% belonged to youth groups. The results further showed that majority of the respondents in all market categories as shown in Table 4.18belonged to chamas/merry-go round and church groups, which are groupings used by women not only to meet their financial needs but also to find emotional and social support. These findings correspond to those of Ibarra (1993) & Ibarra (1997) quoted in Stallings (2008), who stated that women have a greater number of expressive ties and relationships that provide emotional and social support. However, Ibarra (1997) argues that such ties, which are expressive in nature does not provide much job related information compared to male ties and relationships that are instrumental.

Table 7: Type of Associations and Market Category

Type of Associations	Formal Public	Formal Private	Informal sector	Unpaid family work	Unemployed
Professional associations	2 out of 9	0 out of 15	1 out of 30	0 out of 7	0 out of 32
Workers Union	4 out of 9	0 out of 15	1 out of 30	0 out of 7	0 out of 32
An association of former classmates	0 out of 9	1 out of 15	1 out of 30	0 out of 7	8 out of 32
Church Group	2 out of 9	6 out of 15	3 out of 30	1 out of 7	15 out of 32
Chama Merry go Round	6 out of 9	12 out of 15	26 out of 30	0 out of 7	9 out of 32
Youth Group	0 out of 9	0 out of 15	0 out of 30	5 out of 7	9 out of 32

Source: Field Data, 2015

Reliance on Social Networks for Accessing Job Related Information
The study also inquired whether the respondents relied on their networks to access job related information owing to the fact that a number of employers usually prefer hiring through referrals. For instance, the private sector employers interviewed in Dagoreti and Homa-bay sub-counties submitted that they usually rely on referrals for recruitment apart from using formal channels due to their efficiency and effectiveness. Referrals are also preferred due to the presumption that "good people refer good people". Therefore, this is an indication that the type of networks one is part of can play a significant role in determining their access to formal job opportunities. Table, provides a summary of the number of respondents who relied on their networks across the market categories.

Table 8: Reliance on Networks by Market Categories

Reliance on Networks	Market Category					Total
	Formal public	Formal private	Informal sector	Unpaid family work	Unemployed	
Yes	4	13	24	5	34	80 (53.3%)
No	8	8	27	5	22	70 (46.6%)
Total	12	21	51	10	56	150 (100%)

Source: Field Data, 2015

Analysis of respondents' reliance on networks showed that 53.3% of them relied on their social networks to access job related information whereas 46.7% stated that they did not rely on their networks. Job vacancies were the most accessed through social networks as reported by 78.6% of the respondents. 24.1% accessed information on training opportunities whereas internships, job referrals and volunteering opportunities were the least accessed through social networks. In addition to networks, others also relied on formal channels to access job related information. The findings showed that 57.3% of the respondents did not use formal channels to access information on employment opportunities whereas 42.7% used the formal channels. The formal channels used by the respondents include company websites, newspapers, job advertising boards/websites and recruitment agencies. The mostly used formal channels were newspapers and job advertising boards/websites. They attributed their preference for newspapers and job advertising websites/boards to ease in access, reliability and efficiency. Others also indicated that they occasionally used the channels due to difficulty in accessing them and because they are expensive.

Further analysis as to whether respondents relied on specific network categories such as close and distant family members, close friends and acquaintances revealed that 112 out of the 150 respondents relied on at least one of the specific categories. Acquaintances was the only category that majority (86.6%) of the respondents did not rely upon or relied less often. Majority (68.7%) relied on close family members and close friends (70.6%), which are regarded as strong/close introverted relationships. However, such ties/networks have been considered to transmit redundant information as opposed to extroverted friendship links that constitute richer information sources and transmit diversified information (Calvo-Armengol, 2005). Hence, minimal reliance on acquaintances is a clear indication that the respondents had limited information access as they only relied on those whom they had close relation. The results concerning the respondents' networks shows that their networks may not be very effective in accessing important job opportunities in the various sectors in the labor market because most of them belonged to close introverted and expressive networks which have been considered less powerful in regard to accessing market related information.

CONCLUSION

The study findings pointed out that labor market institutions had a great influence on female youths' access to formal employment in the private sector. The institutions examined included terms and condition of employment and the role of social networks in accessing labor market information. First, contractual arrangements were examined and the study showed that majority of those who had written contracts were employed formally in government institutions whereas majority of those who were in the formal private and informal sector worked under oral contracts. Oral contracts however subjected women workers to poor working conditions such as, poor remuneration, lack of job security, and unpaid leave. Second, the study examined the number of hours the respondents worked and established that the mean working hours for the formally employed respondents in the private sector was sixty hours in a week. This figure was higher than the normal working hours stipulated in the Kenya labor laws. Furthermore, very few respondents had provisions for specific leaves such as maternity leave, annual vocation leave, and sick leave. Therefore, poor terms and conditions of service in the private sector hindered female youths from accessing jobs. Third, analysis of the respondent's networks established that they had various types of social networks. The results indicated that more than half of the respondents belonged to at least one association with majority belonging to a chama/merry go rounds and church groups. This indicated that most of the respondents relied on expressive relationships/ties, which did not provide adequate labor market information. Therefore, social networks did not provide meaningful support to female job seekers. The following recommendations were drawn from the study findings.

RECOMMENDATIONS

I. The government should collaborate with the private sector in creating programs aimed at enhancing access to labor market information and career guidance and counseling. In so doing, female youths who have less powerful networks and who are not able to access formal job search channels will be able to easily access labor market information.
II. Second, private sector employers should adopt better terms of employment, for example, they should provisions for paid maternity leave, overtime allowances and written contracts. In addition, private firms should provide flexible working hours to female workers to enable them juggle motherhood and work.
III. The government should develop and ensure full implementation of gender sensitive labor laws in the private and public sectors.

IV.   Trade unions in Kenya should advocate better terms of service for women workers in the private sector. For example, they should regularly monitor the working conditions in the private sector and bargain for better terms of service for workers.

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The Influence of Marketing Mix on Student Trust and Its Impact on Competitive Advantage of Private Higher Education Institution

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ABSTRACT

The purpose of this research is to construct a new concept about the influence of marketing mix to trust and trust towards the competitive advantage of private higher education. The research method of gathering data in this research is by conducting quantitative research. The dissemination of the survey is using simple random sampling at private higher education in Kepulauan Riau (Kepri) province of Indonesia. Respondents from this research are 425 students representing all students of private higher education located in Kepri. The results are Marketing Mix has significant influence to the trust toward private higher education in Kepri province and Trust has a significant effect on the Competitive Advantage of private higher education in Kepri Province. The research concludes that private higher education in Kepri provinces should pay attention to the effect of marketing mix and trust in order to have a suitable competitive advantage.

INTRODUCTION

The university faces the era of the ASEAN free market by the end of 2015, which is the beginning of an era of free market economy, together with the AFTA (North American Free Trade Agreement) and APEC (Asia-Pacific) Economic Cooperation). The impact of all this is inevitably colleges must prepare themselves with various advantages and can benefit from the development situation and conditions in the era of the free market.

Universities must also be able to become a superior institution in order to maintain the continuity of teaching and learning process. Prof. Martinez, and colleagues (Martinez, Smith, & Humphreys, 2013), describe service to customers to staff, supervisors and administrators in college that they should focus on service to customers because it is closely related to the administrative functions of universities. This is reinforced by Zinaida Fadeeva and Mochizuki (Fadeeva & Mochizuki, 2010) in Figure 1 which states that in order to be able to maintain the continuity of their vision, a college must pay attention to the service to society, curriculum / teaching, student life, physical operations / infrastructure, research and scholarships, policy and administration planning.
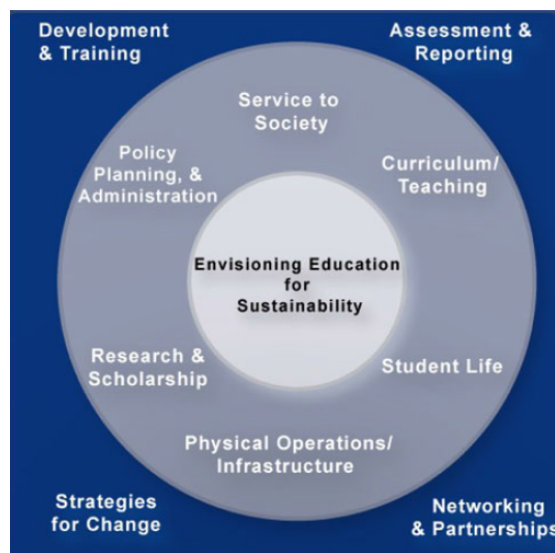
Source: Zinaida Fadeeva, et al. (2010)
Figure 1 Sustainability Project for Resource Cooperation for Universities

The discourse of sustainable development in the world that has always been written in various media has also gained political and social momentum as well as economy, as a reflection of the era of university modernization in the world. There is no doubt that this sustainable development can start from both developed and developing countries.

In developed countries like America and Europe, there is no question of the quality of Harvard University, then Oxford University, which has become the world standard in education. There has been a lot of educational content published by these excellent universities and they have always been a barometer of global education development because of the quality it has guaranteed. Their graduates have proved the result of their work that has spread to various multinational companies in the world.

Universities play an important role in encouraging developments in various fields; The first is the technical field, where the world-class universities have been able to produce engineering planning, manufacturing, processing, and even engineering hardware, software and facilities and infrastructure as well as office automation tools. The second is the field of economics, where reputable college alumni have been able to generate ideas, ideas and analysis in the field of economics, both micro and macro.

Universities can also play an important role in contributing to a more sustainable world by ensuring sustainability through their key educational, research and education functions and community service. Colleges must also know that their sustainability is challenged by external parties, one of them is a more competitive college.

For private higher education in Kepri region itself, based on observations by researchers, from DIKTI (DIKTI, 2016), there arises the phenomenon of decreasing and increasing in the number of students in private higher education in the province of Riau Islands, namely number of students in private higher education of Kepri province in the academic year 2009-1 up by 2015-3.

Based on these results there is a phenomenon that during the years 2009-2015 there was a decrease in the number of students at 4 colleges (19%), and the increase in the number of students at 17 universities (81%); It becomes an input to the researcher that whether it is true that it relates to Marketing Mix, and Trust and its impact on University Competitive Advantage.

From the data and facts the researcher can identify the problem that happened in this research is researching about how the relationship of marketing mix, with trust and competitiveness of college (Study at private university in Kepulauan Riau Province).

Based on the background of problems that have been expressed in the future, then this research problem can be formulated as follows: 1) Is the marketing mix having a significant effect on trust in private higher education in Kepri province? 2) Does trust significantly affect the competitive advantage of private higher education in Kepri province?

CONCEPT

Marketing Mix

The marketing mix became popular in the early 1960s, although it was first mentioned in 1949 at the American Marketing Association conference. Based on information from Chaffey and Smith's book (Chaffey & Smith, 2013), around the early 1960s, a Canadian Jerome McCarthy coined the term '4P': Product, Price, Place, Promotion. Four P is a controlled variable, which is planned and combined together in the right way, to satisfy the customer. Some controlled factors of the marketing mix include: product quality, product availability, product image, product pricing and services.

In accordance with the opinions of Armstrong and Kotler (Armstrong & Kotler, 2015), the marketing mix is "a set of marketing tools that work together to meet customer needs and build customer relationships"; and divided into four groups namely product, price, place and promotion, whereas when looking at the holistic marketing, based on the theories of Kotler and Keller (Kotler & Keller, 2013) that the marketing mix consists of people, processes, programs, and performances. This is according to them marketing mix is seen from the depth, complexity and wealth of a marketing process.

One aspect of the marketing mix is the people who point to the fact that workers and employees or people within the organization are a very critical element for the success of the company's product and service marketing process. This means that people also show that a marketer should view customers as people, to gain a sense of how the customer's lifestyle is broader, and not just as a mere product and service buyer.

Marketing mix reflecting all the creativity, discipline, and structures that are managed in marketing management. A marketer should be able to avoid sudden planning and sudden decisions and must also ensure that the ideas and concepts of the state of the art are executed appropriately. The "program" of the marketing mix reflects the overall activity aimed at consumers, while the "performance" is defined for all activities that generate financial and non-financial benefits for the company and also shows its impact on the company in the eyes of the community.

The marketing mix was subsequently developed by Boomer and Bitner in Chaffey and Smith (Chaffey & Smith, 2013), which added 3 P more into the previous 4 P, which can be shown in the following figure:

Figure 1. 4P + Processes, People, Physical Evidence
Source: Chaffey & Smith (2013)

Product can be seen from the traditional side, that is product consisting of quality, features and options, style, brand name, packaging, product line, warranty, and service level; while this can also be modified and exploited into quality, brand name, service line, warranty, capabilities, facilitating goods, tangible clues, price, personnel, physical environment, and process of service delivery.

Traditional products, including price, consist of discount and allowances and payment terms, and are modified and expanded into discounted and allowances, payment terms, customer's own perceived value, quality / price interaction, and differentiation; Place, traditionally consists of distribution channels, distribution coverage, outlet locations, sales territories, inventory levels and locations, and transport carriers can also be modified and expanded into locations, accessibility, distribution channels, and distribution coverage; Promotion consists of advertising, personal selling, sales promotion, publicity, and modified and expanded into advertising, personal selling, sales promotion, publicity, personnel, physical environment, facilitating goods, tangible clues, and process of service delivery; Participants can be modified and expanded into Personnel: training discretion, commitment, incentives, appearance, interpersonal behavior, attitudes; Other customers: behavior, degree of involvement, and customer contact; then physical evidence can be modified and expanded into environments: furnishings, colors, layouts, noise levels, facilitating goods, and concrete clues (tangible clues); process can be modified and expanded into policies, procedures, mechanization, employee discretion, customer involvement, customer direction, and flow of activities.

The size of the marketing mix in this study refers to the theories or concept developed by Chaffey and Smith (Chaffey & Smith, 2013), explaining further on 7P; they assume that the 3P addition - People, the process, and physical evidence - are important in providing services to

customers. People make and deliver services; but what happens is unhappy customers, and the existing service is in a mess. The process is even more important because the production process, at present, is not on closed doors (as in the case of products) anymore, but is open to all to see how the production process is. In addition, a transparent process has proven itself critical in the successful use of social media.

Trust

Kotler and Keller (Kotler & Keller, 2013) states that the trust or credibility of a company is a sphere where customers have the belief that a company can design and produce products and services that can satisfy their needs and wants.

In a study conducted by Charlebois et al. (Charlebois, Palmour, & Knoppers, 2016), it is defined that Trust is the extent to which one party delivers control to the other in the belief that it will fulfill the duties and responsibilities it respects; This is supported by Elia Ardyan and Vincent Didiek Wiet Aryanto (Ardyan & Aryanto, 2017) which defines trust in a brand as one's willingness to believe that news, information systems, or something from a third party are reliable, credible, responsible and competent.

Elia Ardyan and Vincent Didiek Wiet Aryanto (Ardyan & Aryanto, 2017) argued that trust in online brands is the willingness of visitors as readers to trust online news, information systems, or third parties with reliability, credibility, responsibility and competence.

The measure of trust in this study refers to theories or concepts developed by Stephen MR. Covey and Merril (Covey & Merril, 2013) which includes a) creating transparency; B) better; C) clarification of expectations; D) keep commitments; E) extend trust; F) direct talk; G) show respect; H) true false; I) show loyalty; J) delivers results; K) confront reality; L) practice accountability; M) listen first.

Competitive Advantage

Porter (Porter, 2008) defines Competitive Advantage as how a company can make the selection and implementation of a common strategy for achieving and maintaining its superiority; In this case there is a link between the types of competitive advantages that are cost and differentiation; with the scope of the company's activities.

Fred R. David (David, 2011) defines competitive advantage as anything a company can do best compared to its competitors. At a time when a company can do something that can not be done by competitors, or have something that is desirable by its competitors, can be said as the competitive advantage of the company.

In research conducted by Helena Stimac and Simic (Stimac & Simic, 2012), they mentioned that the most dangerous threat to the college market position is competition, especially from colleges that appear to be more flexible and market-oriented. Understanding the value and importance of applying marketing concepts education in the field of higher education is a prerequisite for their successful market performance, due to the dynamic changes in the needs, requirements and values of all stakeholders. David Besanko, et al. (Besanko, Dranove, & Shanley, 2013) argues that a company's competitive advantage is when a company gets a higher profit economically than the average profit of another company competing in the same market.

Excellence according to Ramin Jahanbegloo (Jahanbegloo, 2014) , is said as follows: The term "excellence" clearly shows a harmonious vision of the world that sees all cultures and traditions recognizing as a common horizon of global responsibility. Therefore, the idea of excellence is one that all civilizations possess; but the notion of what is best, varies across cultures. Theories about the superiority of universities have been put forward by M. R. Ab Hamid, et al. (Hamid, Mustafa, Suradi, Idris, & Abdullah, 2012) who said that the performance of universities is measured by 6 indicators: leadership, culture, productivity, employees, shareholders, and overall performance.

In other studies, Ferrell's competitive advantage [22] is something that companies do better than competitors who provide excellence in serving customer needs and / or maintaining mutually satisfying relationships with key shareholders.

Hill and Jones (Hill & Jones, 2015) argue that competitive advantage is based on a particular advantage, in which a firm has a special power that drives the company to differentiate its product compared to its competitor's product, or offer a cheaper price than its competitors.

Armstrong and Kotler (Armstrong & Kotler, 2015) define competitive advantage as a greater advantage over competitors earned by offering stronger customer value, either at a cheaper price, or providing more benefits than the price. The measure of competitive advantage in this study refers to theories or concepts developed by Porter (Porter, 2008), which include: 1) Cost Leadership, 2) Differentiation, and 3) Focus.

RELATIONSHIP ANALYSIS
Relationship between Marketing Mix and Trust
In accordance with the opinions of Armstrong and Kotler (Armstrong & Kotler, 2015), the marketing mix is "a set of marketing tools that work together to meet customer needs and build customer relationships"; Divided into four groups: product, price, place (or distribution) and promotion.

Kim, et al. (Kim, Kim, Lee, & Youn, 2014) says that the marketing mix strategy (with co-brand) has a significant effect on trust. This result is concluded from the results of his research on government employees and customers who make transactions with medium and manufacturing companies in Korea, where the result is trust will increase along with the improvement of product quality and promotion.

Jie Zhang et al. (Zhang, Cohen, & Larson, 2012), in his research on how to promote honesty in e-market places, concludes that a marketplace operates with buyers' model mechanism, in which buyers follow the advice of other buyers in social media; will earn the trust of the buyer so that in the end get bigger profit.

Ki-Pyeong Kim, et al. (Kim, Kim, Lee, & Youn, 2014), in his research entitled "The Effects of Co-Brand Marketing Mix Strategies On Customer Satisfaction, Trust And Loyalty For Medium And Small Traders And Manufacturers" published in the E & M Economics and Management Journal Vol.XVII / 1 which discusses relationships between the marketing mix and trust. The aim of the research is to examine whether there is a method for merchants and small producers to reach their competitive level and whether it is possible to co-branding between them, whether there is any effect on the customer and whether customer loyalty can be reinforced by this co-branding strategy. In common with this study is the discussion of the relationship between the marketing mix and trust, while the difference is the research of Kim, using customer satisfaction variables that are not used in this study and the survey conducted on government

workers and consumers who handle small and medium traders and producers.

Yongrok Choi and Gao (Choi & Gao, 2014), in his research argued that a direct positive relationship between the components of the web marketing mix and purchasing intentions was partially mediated by initial trust and sustained confidence, while initial beliefs only partially influence purchasing intentions through sustained trust. The similarity with this research is the discussion of the marketing mix, while the difference is in this paper analyzing the core factors of Chinese (relation or Guanxi) trust in improving the marketing mix strategy to determine whether Guanxi can be applied to other web community marketing strategies.

Nina Kurnia Hikmawati et al. (Hikmawati, Sucherly, & Sumawihardja, 2015) in a study aimed at testing marketing relationships and marketing mixes and influencing customer trust from telecom operators in Indonesia, concluded that the marketing mix has a significant effect on customer trust.

Relationship between Trust and Competitive Advantage
Singh, S.P., Neha Yadav (Singh & Yadav, 2014), in his research published in the Journal Research Journal of Management, discusses how the relationship between trust and excellence in universities. The purpose of this study is to investigate the impact of enablers on knowledge management about the competitive advantages of the Indian IT Industry.

Cam Caldwell (Caldwell & Hansen, 2010), in his research argues that trust can be understood as a source of competitive advantage only when beliefs are understood as behaviors or actions. The equation with this research is that trust is closely related to the company's competitive advantage; The difference is that trust can act as the source of a company's competitive advantage when trust is defined as a customer's behavior or action.

Jollivet (Jollivet, 2011), in his research using the literature, concludes that the mass security associated with trust and cooperation is a tangible social asset that can be judged for the attractiveness of a smart city, its competitive advantage, and its harmonious development. The similarity with this study is that trust is strongly related to the competitive advantage of a mega-city digital; The difference is that trust should be based on evidence and security views of the entire security source en masse.

Julia Connell and Voola (Connel & Voola, 2013), in a study aimed at examining how and whether industrial cluster members share knowledge through networks as a means of enhancing competitive advantage and, in particular, whether trust is present in the knowledge-sharing process; concluded that the survey results reported a positive relationship with respect to trust in the RMO model (relationship marketing orientation), knowledge sharing and competitive advantage. The equation with this research is that research states on the competitive advantages of industry clusters, it has to do with trust when sharing knowledge; The difference is research using relationship marketing orientation (RMO), in 3 time period that is year 2004, 2008 and 2010.

Singh, S.P., Neha Yadav (Singh & Yadav, 2014), in his research published in the Journal Research Journal of Management, discusses how the relationship between trust and excellence in universities. The purpose of this study is to investigate the impact of enablers on knowledge management about the competitive advantages of the Indian IT Industry. The similarity with this research is discussion of how the relationship between trust and competitive advantage, while the difference is the existence of enabler variable from knowledge management that is

collaboration, learning, formalization, centralization, t-shaped skill, behavior, creativity and information technology. In common with this research, there is a positive significant relationship between competitiveness with confidence in the IT industry in India, while the difference is defined trust is the mutual trust between employees who use IT with the IT industry in India.

RESULT ANALYSIS

Relationship Analysis Result

The methodology of this research is using casual explanatory research, and from 425 respondents we will analyze how Marketing Mix relate to Trust and Trust relate to Competitive Advantage.

Table 1 Construct Validity Test

DESCRIPTION			ESTIMATION	RELATIONSHIP
Trust	<---	Marketing Mix	0.182	Weak
Competitive Advantage	<---	Trust	0.554	Strong

Source: Primary Data (2017)

Table 1 shows results from our Structured Equation Model (SEM) analysis. The number 0.182 shows a weak relationship between the Trust construct and the Marketing Mix construct, so it can be said that Trust is not the whole part of the Marketing Mix; while 0,554 indicates a strong relationship between the construct of Competitive Advantage with the construct of Trust, so it can be said that Competitive Advantage is part of the formation of Trust.

Impact Analysis Result

Table 2 Regression Results

Relationship			P
Trust	<---	Marketing Mix	0.000
Competitive Advantage	<---	Trust	0.000

Source: Primary Data (2017)

Based on the formulation of the problem, the hypothesis analysis presented is as follows: The marketing mix has a significant effect on the trust toward private higher education in Kepri province, based on the result of analysis: P value on the relationship between Marketing Mix to Trust worth 0.000 <0,05, so it can be concluded that Marketing mix have significant influence to trust toward private higher education in Kepri province. Also based on the formulation of the problem, Trust has a significant effect on the competitive advantage of private higher education in Kepri province, since the result of analysis: P value on the relationship between Trust to the Competitive Advantage is 0.000 <0,05, so it can be concluded that Trust has significant effect to the Competitive Advantage of private higher education in Kepri Province.

CONCLUSION

The effect of marketing mix variables on trust is significant. The success of private higher education in Kepri province in the utilization of marketing mix in the implementation of academic activities contributed to the increase of confidence of private higher education in Kepri province. The influence of trust variables on the competitive advantage of private higher education in Kepri province is significant. The success of private higher education in Kepri province in fostering and maintaining Institutional Trust can contribute to the increase of competitive advantages of private higher education in Kepri province. In conducting its activities, college should give sufficient attention to the marketing mix both in the product side of the course, marketing products for new students, and services when planning, organizing,

implementing and evaluating teaching and learning activities in universities. Last point would be communication with all academicians should be maintained by conducting activities or meetings in order to encourage the improvement of trust and especially loyalty of students to the campus.

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Do Customers All Respond The Same? Generational Differences on Customer Orientation and Satisfaction.

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ABSTRACT
Organisations have improved customer satisfaction by being customer oriented in all levels. At the firm level, organisations seek to develop customer oriented organization by generating market intelligence regarding the needs of the customer and disseminating the intelligence across departments that will lead to organization wide responsiveness to it. At an individual level, organisations seek to recruit and train employees to exhibit customer orientation behaviour. This study focuses on customer level of responsiveness to persuasion from customer oriented employees and also existence of different levels of satisfaction among three generational cohort groups (Baby Boomers, Generation X and Generation Y). This study found generational differences on responsiveness hence pointing towards managers to develop products addressing different generations.

Physical goods are preproduced in a factory, whereas services are produced in a process in which consumers interact with the production resources of the service firm. Some part of the service may be prepared before the customers enter the process and the evaluation of the service happens at the point of contact. This highlights the importance of service organisations to focus their resources towards the point where there is an interaction between the customer, the employee and the service being offered.

Prior research clearly suggests that focusing on customer needs like customer orientation is important at firm level, individual level and customer level. Thus, it is not surprising that many service organizations pursue a market orientation. At the firm level, organisations seek to develop a customer orientation, which is the central element of a market orientation, through organization wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization wide responsiveness to it (Kohli and Jaworski 1990). Brady and Cronin (2001) ascertained that being customer oriented allows firms to acquire and assimilate the information necessary to design and execute marketing strategies that result in more favorable customer outcomes.

At an individual level, organisations seek to recruit and train employees to exhibit a customer orientation. Employees who use the most effective, or authentic, emotions while focusing on customer needs during service encounters are thought to present a high customer orientation (Brach *et al.*, 2013). Essentially, frontline employees who are customer oriented, intrinsically enjoy meeting customer needs. Customer contact employees are likely to prioritize their actions in favor of providing customer benefits because customer orientation is positively related to outcomes such as performance and customer satisfaction (Boles *et al.*, 2001).

A large body of research shows that customers with a higher level of satisfaction have higher levels of support behaviors such as repurchase, recommendation, cross buying, positive word of mouth, lower price elasticity, and longer relationship duration (Pallas 2014; Mittal and Frennea 2010), indicate relationships between expectations and emotions (Machleit and Eroglu 2000). Customers often notice employee effort exerted during service encounters and it leads to satisfaction across a variety of service industries (Mohr and Bitner 1995).

Since customer satisfaction reflects the degree of a customer's positive feeling for a service, it is important for service providers to understand the customer's vision of their services (Deng *et al.* 2010). Organisations strive to know categories of customers well and therefore segment them according to their generational cohort.

A definition of cohort by Parry and Urwin (2011) is solely based on birth years, whereas generations are determined by differences in values and attitudes that demarcate different birth groups. Generational cohorts are premised on the notion that shared experiences of individuals coming of age in a particular historical and social milieu shapes the unique identity of each generational cohort (Gardiner, Grace and King 2013; Schuman and Scott 1989; Mannhiem 1952). Furthermore, influence of social, political and cultural environments on individuals' values and attitudes (Leuty and Hansen 2014) also demarcate the groups. As a generation matures, it develops characteristics that differentiate it from previous generations (Bolton *et al.*, 2013; Smola and Sutton, 2002). A functional link between the shared experiences and hence responses to attention induced by emotion has also been supported at the behavioral level by several psychophysical studies, (Pourtois *et al.*, 2013; Bocanegra and Zeelenberg 2009,2011; Brosch *et al.*, 2010; Phelps *et al.*, 2006). The dynamic nature of generational cohorts therefore challenges marketers who seek to remain at the forefront of changing demographics and consumer trends that influence each generation's consumer behavior and its outcomes. Understanding the alignment between a consumer's self-identity and their respective generational stereotypical identity is important for effective marketing strategies that employ generational cohorts as a strategy for market segmentation (Gardiner, Grace and King 2013).

Although there is evidence in the literature regarding the influence of customer orientation on several outcomes in firm level, individual level and customer level, and evaluation of a service from customer's perception is different for all levels. Kruger and Dunning (1999) demonstrated that in a daily life context, competent individuals tend to overestimate their performance while incompetent individuals tend to underestimate it. Past studies indicate disparities on what constitutes a satisfactory service between the perceptions of the employee and the customer due to employee over confidence when rating their performance.

Customer's expectation of a satisfactory service and the level of response to persuasion through customer orientation efforts among generation cohort is a matter that should not be taken lightly by organisations that are at the forefront to satisfy their customers. Literature that may guide a prediction regarding generational cohort differences in their response to

persuasion is limited to general characterization of the generational cohort groups. This research therefore attempted to fill the gap by finding out if generational cohort responds to persuasion from customer oriented employees and also if level of satisfaction differ among the three groups.

The concept and determinants of customer satisfaction being a function of a consumer's experiences, calls for analysis of large number of factors such reactions to a service provider's behavior during the service encounter, as well as a function of the service setting among others (Veloutsou *et al.,* 2005; Nicholls *et al.,* 1998). It is beyond the scope of this study to analyse these variables.

CONCEPTUAL DEVELOPMENT

This study, taking a marketing perspective concentrated on the levels of responsiveness towards persuasion from customer oriented employees and the difference of levels of satisfaction, in the perspective of the customer whose attitudes, values and beliefs vary across generations.

Customer Orientation

Customer orientation enhances an understanding of customers, and helps organisations design new or improved service solutions to meet customer needs (Tang 2014; Grissemann *et al.,* 2013; Sin *et al.,* 2005). A lot of research and literature have pointed out the importance of customer orientation in an organisation. Extant literature on customer orientation has pointed out the existence of dimensions of customer orientation. This study uses three dimensions: company commitment, customer commitment and customer experience.

Customer orientation from a customer's perspective is the extent to which customers believe that the service provider is committed to understanding and meeting their needs (Brach *et al.,* 2013; Dean 2007). Company commitment and customer focus have become key words for businesses to succeed in the competitive market place, thus a customer oriented business culture is preferable for firms that seek success in the market (for example, Kim 2009; Parasuraman 1987; Houston 1986). These firms pay close attention to customers to meet their needs and wants (Valenzuela *et al.,* 2010). Service employees' customer orientation, reflects their attitudes and predispositions to meet customer needs on the job (Brown *et al.,* 2002; Harber and Fried 1975), has been identified as a key driver of customer outcomes, such as satisfaction (Jean et al 2016; Dean 2007; Hennig-Thurau 2004; Goff *et al.,* 1997).

Another dimension of customer orientation is customer commitment. The customers themselves are important resources in the service process in which they should know their role in the system. The four parts of the interactive system, including the customer as one part, have an impact on each other. For example, the systems and the physical resources used have a direct influence on the quality perception of customers, as have the attitudes and behaviors of the contact personnel (Grönroos 1998; Lehtinen 1983). Sometimes customer oriented employees perform according to the expectations of customers and the way they are trained, but customers may create problems by not fulfilling their roles in the process, for instance not coming to appointments on time, not reading instructions, and not providing the required information to the service provider (Parasuraman *et al.,* 1992). The effectiveness of customer orientation behaviors majorly depend on the situation of the purchase.

Customer orientation as an important element, employees do not necessarily behave the same way across customers and situations, and customers may respond in different ways to similar

patterns of employee behaviors because of their different interests, needs, or capabilities (Delcourt *et al.*, 2013). Therefore the differences in interest make their level of responsiveness to persuasion to differ across the generational cohort.

Customer Satisfaction

Customer satisfaction has attracted the most attention from both practitioners and researchers (Chen *et al.,* 2014). For more than two decades, customer satisfaction has been an intensively discussed subject in the areas of consumer and marketing research. Customer satisfaction is a central construct in marketing research (Luo and Homburg 2007). Achieving customer satisfaction is the primary goal for most service firms today (Jones and Sasser 1995) as it benefits the firms when they provide satisfactory services to their customers (Kim 2009) since satisfaction is the main source of attracting customers (Patterson *et al.,* 1997) and the most important source of gaining competitive advantage for service organisations (Zafar *et a.l*, 2012; Zeithaml *et al.,* 1996; Bolton and Drew *1991;* Parasuraman *et al.,* 1991, 1988).

Generational Cohort

Generational cohort is a common tool for consumer market segmentation in marketing, which is used to target different groups of customers better (Arsenault 2004). This study adopted the birth years commonly found in most generational literature which the population can be divided into four cohorts based on generation: the Silent Generation (born between 1925 and 1942); the Baby Boomers (born between 1943 and 1960); Generation X (born between 1961 and 1981); and Generation Y (born between 1982 and 2000), (Strauss and Howe 1997). Though, generational cohort have an affective experience which reflects an underlying attribution of causal agency to eliciting stimulus to the individual self, involve an assignment of causal agency neither to the stimulus nor the individual but instead to the situation (Westbrook and Oliver 1981; Smith and Ellsworth 1985; Scherer 1982; Izard 1977). Recognizing that affect feelings and emotions has long been regarded as important to marketing success (Cohen 1990), models of the satisfaction process have been expanded to consider the role of affect in the satisfaction response (Oliver 1993; Westbrook 1987), since values and priorities of a particular generational cohort are unique relative to other cohorts, satisfaction varies with various attributes of services across generational cohorts (Jackson *et al.*, 2011).

However, little is known about service expectations for diverse market segments such as different generations or how expectations and perceptions of service may vary in different settings thus impacting on the evaluation of the service. Several studies suggest that customers' expectations for services may vary across different contexts in which service is differentiated by customer characteristics (for example, Kwon 2001; Ma and Koh 2001; Churchill *et al.*, 1985; Michaels 1981). Different generational cohorts have different life style which may significantly affect their needs and expectations for services (Ma and Niehm 2006). Thus, according to some researchers, cohort segmentation provides both the stability that age segmentation offers (Steenkamp and Hofstede 2002) and the insights into consumer motivations that value segmentation offers (Jackson *et* al., 2011; Mitchell 2003; Morgan and Levy 2002).

Additionally, Eastman and Liu (2012) pointed out that generational cohort is a better means to segment the status consumer than other demographic variables. Segmenting people by their generational cohort is an aspect of segmenting consumers based on similar ideas, values and beliefs and has been shown to be valuable for understanding consumer behavior (Brosdahl and Carpenter 2012; Meredith *et al.*, 2007; Dou *et al.*, 2006; Bakewell and Mitchell 2003), and key drivers of marketplace behavior and responding appropriately (Meredith and Schewe 1994).

The core values and beliefs of the three primary generation groups (Baby Boomers, Generation X, and Generation Y) are used in this study to explain each group's responsiveness to persuasion from customer oriented employees and the various levels of satisfaction.

Baby Boomers

Boomers, as they are often called, were the result of the persistently high birth rates in between 1945 and the 1960s and, as a result, this generation is densely populated (Becton *et al.*, 2014; Lyons *et al.*,2007). Baby Boomers key formative years coincided with a rapid increase in trade and economic activities (Schewe and Meredith, 1994) that led to increase in demand for services. Baby Boomer generation prefers face to face communication, (Sherman 2006; Duchscher *et al.*, 2004; Weston 2001; Zust 2001) as they can detect the emotions of the information giver, thereby when a customer oriented employee approaches them, this trait being an emotional interest makes them respond to the efforts made by these employees.

Baby Boomers are also prone to both conspicuous and compensatory consumption (Belk 1986), which suggest that they are susceptible to persuasion and the information obtained from customer oriented employees makes them confident in their choice, and that the evaluation of a service is based on the service received and value of the service. Furthermore, it suggests a high level of materialism, and more specifically the centrality of possessions used to judge the success of oneself and the success of others in a person's life. Therefore, choices made based on the suggestions of customer oriented employees are used to evaluate the service.

Baby Boomers have respect for knowledge (Hughes 2008). This attitude makes them unique to the other groups in that it they value the information provided by customer oriented employees, as being knowledgeable in the sought information. Baby Boomers seek and respond to customer oriented employees when searching for information concerning a service. This generation demonstrate a high job involvement (Jackson *et al.*, 2011), participation with work make them have empathic feelings towards the efforts made by customer oriented employees. They respond positively to employee efforts and their choice decisions are based on what the employees have provided thus affecting the evaluation of the service provided.

Analysts have also viewed this group as highly selective and discerning (Harris *et al.*2005), members of this cohort group make their choices carefully, and that they recognize the efforts made by customer oriented employees. The information acquired from the employees shape their expectation and evaluation of the service. Baby Boomers demand facts, control and trust, and less easily influenced by their peers (Kasabova and Hain 2014; Appelbaum, Serena and Shapiro 2004). They engage employees whenever they require something or information regarding a service since trust in the service provider and commitment to the service provider is important to them.

Word of mouth from their peers does not affect their decisions but rather from the employees of the service provider. Baby Boomers are open minded experimenters in trying new brands and products (Yang and Jolly 2008; Bernstein 2001), efforts made by customer oriented employees is met openly as they expect variety of information from these employees. Their experimental nature makes the provided information be part of their choice, and thus the choice made affects their evaluation which is based on the service process as well as the interaction with the employees.

They are often referred to as having values including being idealistic (Strauss and Howe 1991), their aim for perfection makes them want to get more information from customer oriented employees, since they have a strong belief in perfect standards, the information provided is used to arrive at a perfect decision on a selected service provider. This decision impacts on the evaluation of the service process hence satisfaction or dissatisfaction is both from the service process and the information provided by the customer oriented employees. Baby Boomers want instant gratification and are self-indulgent (Moschis 2009) in that, the members of this group want to gain pleasure in the choices that they have made for which the choice of the service was made with the help of customer oriented employees.

Therefore, based on the discussion above the following hypothesis is presented:
H1a: Baby Boomers' responsiveness to persuasion from customer oriented employees will be more than each of the other generational cohorts.
H2a: Baby Boomers' level of satisfaction will be more than each of the other generational cohorts.

Generation X
Generation X are defined by life experiences such as the age of economic uncertainty, recessions, high unemployment, inflation, downsizing, and high divorce rates among their parents (Lyons et al., 2007; Kupperschmidt 2000) the people in this generational group have a skeptical attitude such that any efforts made by customer orientated employees are treated with suspicion, thus decisions made regarding a service is based on their knowledge and other information search for which evaluation of the service is not affected by customer orientation employees, although, they are described as cautious shoppers that seek an honest, straightforward approach (Gardiner et al., 2013; Wuest et al., 2008), they consider all information provided by customer oriented employees and peers as well as other sources since they would like to avoid potential problems that might occur during the interaction with service process.

This group evaluates service process based on the information acquired through various sources and the interaction of customer oriented employees. Generation X is a reactive generation in that the group responds to the efforts made by customer oriented employees which is contrary to Baby Boomer generation who control the situation by asking directly for the help of customer oriented employees. Furthermore, Generation X is a group with little self-esteem such that they lack confidence in their decision making regarding a service thereby making an inclination towards customer oriented employees for their input to aide in their choice.

Previous research adjudged that Generation X volunteers and joins local organizations in greater numbers, since they freely offer to take part in the organisation, consider information given to them by customer oriented employees as a free offer thus of minor influence when making their decisions, and in extension customer orientation have a minor influence when evaluating the service performance and consequently the satisfaction of the service. This Generation is attributed as having attitudes, values and behaviors of pragmatism, skepticism than any previous generation (Loretto 2011) Thielfoldt and Scheef 2005), they consider the success of a service performance as a practical application of their own making, and therefore they are not obligated to seek for customer oriented employees for assistance or information. Their evaluation of the service process is in part based on the information acquired through different sources and the service provision in totality.

Moreover, this generation go online to find others who share similar interests and perspectives

(Na¨rva¨nen et al., 2013b), the information acquired from the peers greatly impact the evaluation of the service process and not in totality from the information acquired through customer oriented employees. Generation X value work life balance (Twenge 2010; Smola and Sutton 2002).They endeavor to strike a balance between the customer-organisation interactions, but they also take positively the input or advice of the customer oriented employees. Furthermore, Davis et al's (2006) research found that Generation X valued job involvement therefore they are empathetic to other customer oriented employees who are focused on the customers. Therefore it is hypothesized as:

H1b: Generation X responsiveness to persuasion from customer oriented employees will be in such a way that it will not be higher than that of Baby Boomers and not lower than that of Generation Y.

H2b: Generation X level of satisfaction will be in such a way that it will not be higher than that of Baby Boomers and not lower than that of Generation Y.

Generation Y
Generation Y are reported to be more individualistic than the other generations (Twenge et al., 2010) which enables them to be unique from the other generational groups by having less emotional interest towards customer orientated employees. They are independent in making their choices regarding a service and their evaluation of the service process is not influenced by the interaction between the employees and the service process. Furthermore, they are said to learn quickly, are very well educated, and are technologically savvy, since they grew up in the era of the internet (Twenge et al., 2010; D'Amato and Herzfeldt 2008; Jenkins 2008; Burke 2004). The members in this generation are self-reliant which they rely on their own resources rather than that of customer oriented employees.

Proposal by Schrum et al., (1991) that television programs convey a wealth of information with respect to consumption, and that Generation Y households are around television seven hours a day (Nielsen 1995), which further points out that this generation gathers information required to make a service transaction through other sources rather than from customer oriented employees. This makes them not as responsive as the other generational cohort group, to the efforts made by customer orientated employees since their choices are based on the attributes acquired through their search process, rather than the interaction with customer oriented employees.

Individuals in this segment were typically raised in a secure and goal-driven environment (Howe and Strauss 2003), which gives them the confidence of the choices of services that they have made and thus evaluation is in the totality of the service experience and the service process. Generation Y is highly attuned and receptive to the environment (Pentecost and Andrews 2010) in that in the current rate of influence made through the social media is enormous and this generation is leading in the use of the social media combined with other mobile device search engines that can be used to acquire information. Customer orientation does not have any influence in their choice decision thus evaluation of the service is not greatly affected by customer oriented employees, but rather on the entire process of the service. They are much more media savvy and less apt to listen to what marketers are saying to them because they loathe being sold to (Hughes 2008), they consider themselves more technologically advanced than the rest of the generational cohort groups and can easily acquire more information without listening to a sales talk which they consider old fashioned and cumbersome, thus making them less responsive to customer oriented employees' persuasion. Evaluation of the service is based on the service process rather than the interaction of customer oriented employees.

Generation Y is described as anticorporate (Kapner and Cybulski 1997) this shows that they do not believe in the entire system of the service process which may include customer oriented employees. This group would like a system that runs without much interference of human intervention but rather the systems and technology, as their value for customer orientation is minimal. Efforts made by customer oriented employees on this group are lost on them and the presence of employees may lead to being less receptive to customer orientation.

Globalization of society and the marketplace is thought to have had a tremendous impact on their values (Howe et al., 2000) this group engages search engines to find out about the services that they are interested and since services are available globally they tend to use attributes for comparison of similar services across the board. Their evaluation of the service process is based on the attributes and the service process in totality and not through the interaction with the customer oriented employees.

Generation Y seek the input and affirmation of others (Chiang et al., 2014; Schmallegger and Carson 2008; Prensky 2001; Strauss and Howe 2000) this group values the input and information provided by their peers, rating of a specific service from the peers who have experienced the sought service process impacts greatly on their choice decision, and hence evaluation of the service process is based on how other members of the same group have experienced and the service process in totality. This generation respond to learning (Dunne and Lusch 2008; Straus et al., 2006) they would not seek customer oriented employees to find out the expectations of a service process, but rather would like to experience it first-hand so that they can evaluate the service process through this experience. Thus their rating is solely based on the service process.

Generation Y have higher expectations, technology itself may facilitate the impression that they are more self-absorbed (Trzesniewski and Donnellan 2010), their self-centeredness would not allow them to seek assistance from customer oriented employees and that Generation Y are lower in empathic concern, which is the tendency to experience feelings of warmth, compassion and concern for others (Loroz and Helgeson 2013; Davis, 1980). Their overall satisfaction is based on the smoothness of the service systems, since they are at ease with diversity, technology and online communication than previous generations (Choi et al., 2013; Lub et al., 2012; Eisner 2005).

On average they are better educated, more self-assured, techno-literate, materialistic than any other generation (Colucci and Scarpi 2013; Farris et al., 2002; Morton 2001;Merrill 1999; Neuborne and Kerwin 1999) they would not trust the information provided by customer oriented employees and thus their evaluation of the service process is not affected by these employees. This group searches for information regarding the services required, as they are technologically competent, they can engage various search engines in order to arrive at an optimal decision regarding the sought service. Cennamo and Gardner's (2008) study found that Generation Y valued freedom, which shows that they want to make their decisions freely without the persuasion of customer oriented employees. Their choice is based on the attributes of the service such that in case an employee does not perform according to the expectation it does not affect the overall evaluation during a service process, because their choice was not because of how the employees would handle them but because of what they perceived to be of importance when they were making that decision.

Generation Y's extreme confidence, awareness, and individuality, they like convenience and are value oriented individuals, one thing that they will not accept is a hard sell from customer oriented employees. The internet has helped to take the power away from marketers and has

given it to the consumers. The internet is also a powerful tool for this generation in spreading opinions about products to their peers (Hughes, 2008). When Generation Y is in contact with customer oriented employees, it will not make an influence towards the expected quality of the service because they already know what to expect from a service, which is information provided based on their peers' opinion. Taylor and Cosenza's (2002) research found that Generation Y customers seem to pursue diversity within the group rather than conformity. The attributes of the service is a selling point to this generation and they look for diverse attributes for a specific service rather than conform to what the customer oriented employees to advise them. Thus it is hypothesized that:

H1c: Generation Y responsiveness to persuasion from customer oriented employees will be in such a way that it will be lower than each of the other generational cohorts.

H2c: Generation Y level of satisfaction will be in such a way that it will be lower than each of the other generational cohorts.

METHODS

Sampling and Data Collection Procedures

This study used an explanatory research design the study sought to establish the level of responsiveness to persuasion from customer oriented employees and also to establish the different levels of satisfaction of customers across three generational cohort groups. This study was cross-sectional in nature and was carried out in three major international airports in Kenya. Target population was airline customers of different generations (Baby Boomers, Generation X and Generation Y) who have previous experience of an airline service. 600 questionnaires distributed for data collection at the waiting area of the airport. The passengers were asked to recall the most recent air travel experience with a service provider and rate the overall service provided following the service contact. Error associated with this retrospective design was reduced by allowing respondents to select a service of their own choosing, asking for more recent service events and allowing respondents the time needed to complete the questionnaire. It was a wait-and-collect exercise.

Measures

Customer Orientation

Customer orientation scale in this study reflected on the degree of consumer's interest towards customer oriented employee efforts. The items measuring customer orientation were adapted from Brown et al., (2002). Customer orientation was measured using ten items on a five-point Likert scale ranging from the lowest being strongly disagree (1) to the highest being strongly agree (5). This scale was originally designed to measure the customer orientation of sales personnel so its wording is slightly reworded to reflect the consumers' perception as well as capture the dimensions.

Customer Satisfaction

Customer satisfaction was measured using a five item unipolar adjective scale adapted from Westbrook and Oliver (1991). Since satisfaction is considered to be primarily an affective construct, the adjectives used were emotive in nature (Oliver 1997). Respondents were asked to report the degree to which they were happy, pleased, and delighted.

Generational Cohort

Generational cohort was measured using items developed and utilized specifically for this study. The item is designed to place respondents to their generational groups.

RESULTS

The sample population consisted of airline customers of different generations (Baby Boomers, Generation X and Generation Y) with a previous experience of an airline service. A total of 600 questionnaires were distributed; 200 to Baby Boomers, 200 to Generation X and another 200 to Generation Y. The overall response rate was 28% (56 respondents) for Baby Boomers, 92.0% (184 respondents) for Generation X and 93.0% (186 respondents) for Generation Y. Therefore, 426 (71%) usable questionnaires were returned.

Descriptive Analysis
Customer Orientation among Airline Passengers
Customer orientation was measured using ten items distributed across the three dimensions, reflecting on company commitment, customer commitment and customer experience. Respondents were asked to indicate the extent of their agreement with the items. Response scores on each item measuring a variable were summated for each case. The mean scores and standard deviations were then used to examine the respondents' perceptions of customer orientation. In addition skewness and kurtosis statistics were computed in order to examine distribution of responses across each item (see Table 1). The mean scores imply that respondents consistently tended to agree with the existing standards of customer orientation in the airline service. In addition, the skewness and kurtosis suggest that some of the customers in the study sample respond to customer orientation from service employees.

Customer Satisfaction among Airline Passengers
Customer satisfaction was measured using five items, reflecting on happiness with choice, satisfaction with services, pleased with own decision, suitability of the service to their needs and overall evaluation. Once again, respondents were asked to indicate the extent of agreement or disagreement with the items. Results reveal that on average, passengers are satisfied with the airlines. The satisfaction is consistent among the passengers basing on the small values of the standard deviations (see Table 2).

Tests of Hypothesis
Customer Orientation among the Generational Cohorts
Hypothesis 1a,b,& c were tested using ANOVA. The results in Table 3 show that there is a difference in mean levels of responsiveness to persuasion from customer oriented employees among generational cohorts. Bonferroni post hoc test was further used to explore the three generational cohorts' differences in customer orientation was largest. Results in Table 4 differences in mean response scores across the three generational cohorts exists. The implication is that, the level of responsiveness to persuasion varies across the three generational groups.

Levels of Satisfaction among the Generational Cohorts
Hypothesis 2a, b and c was tested using ANOVA. The results in Table 5 show that customer satisfaction among the groups is almost similar with a small mean difference in satisfaction levels in each generational cohort. The Bonferroni post hoc test was further used to explore between which three generational cohorts the difference in customer satisfaction was largest. The post hoc test results presented in Table 6 show the difference in customer satisfaction levels vary across the three generational cohort.

DISCUSSION AND MANAGERIAL IMPLICATIONS

According to generational cohort theory, significant intergenerational differences have been documented among different cohorts (Lu and Alon 2004; Yardley 2003). Despite the prevalent beliefs about the existence of generational differences, empirical research has reported

somewhat inconsistent results (Kowske, Rasch and Wiley, 2010). Indeed, researchers are still striving to provide more concrete evidence about generational differences around varying constructs by employing more sound methodological approaches to rule out alternative explanations about the generational differences (Park and Gursoy 2014).

Previous research has found disparate generational effects on behavioral measures. Twenge (2010) found that Generation Y is more satisfied than other generations. Contrary to the results of this study, where the findings show that Baby Boomers are more satisfied with the services than any other generational cohort. Generation Y is satisfied less than baby boomers but more than generation X. Generation X's level of satisfaction is the lowest. This could be attributed to the reason that this Generation is attributed as having attitudes, values and behaviors of pragmatism, skepticism than any previous generation (Loretto 2011; Thielfoldt and Scheef 2005). The results show that Generation X is more responsive to persuasion from customer oriented employees than any other group. This may be due to the fact that this group are open minded (Yang and Jolly 2008; Bernstein 2001) and trustworthy (Kasabova and Hain 2014; Appelbaum, Serena, and Shapiro 2004).

This study found differences in responsiveness to persuasion from customer oriented employees as well as different levels of satisfaction among the three generational groups, showing that judgments are made based on their emotions. Further, each group evaluates differently the services that are being offered and thus satisfaction levels are different.

Managers of organisations should be aware that customer orientation is important for the organisation. Therefore it should be embraced at all levels within the organisation. An organisation shall gain a competitive advantage when customer orientation is applied in all sectors, not only providing necessary resources for the company to be oriented but also realize that the customer is also part of this process. Generational cohorts have different attitudes and values that should be addressed differently and separately.

RESEARCH DIRECTIONS

Future studies should explore whether there are other factors that influence generations among the customers perceptions. A main goal of this study was to examine whether there are mean differences in responsiveness to persuasion from customer oriented employees and expectations are different among the generational cohort groups that are attributable to customer satisfaction.

Findings of this study suggest that some differences do exist in responsiveness and expectations. These findings remind us that, although generational cohort is a meaningful and useful social categorization, one must be careful not to treat the entire generation as the same. Researchers must help service providers become aware of and respond to the nature and benefits of diversity in its various forms, which is increasingly salient in the current patronage.

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Table 1
Perceptions of Customer Orientation among Airline Passengers

Response Items	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Help customers	1.00	5.00	3.73	1.08	-.54	-.48
Perform as promised	1.00	5.00	3.79	.92	-.63	.34
Physical facilities	1.00	5.00	3.81	.99	-.62	-.03
Convey confidence	1.00	5.00	3.85	.98	-.60	-.24
Individualised attention	1.00	5.00	3.93	1.01	-.63	-.39
Employees talk about their service	1.00	5.00	3.10	.93	-.81	.24
In making employees happy	1.00	5.00	4.06	.79	-.58	.25
Enjoy responding quickly	2.00	5.00	4.10	.74	-.60	.29
Empathy on employees	2.00	5.00	4.13	.74	-.57	.13
Enjoy being served	1.00	5.00	4.17	.72	-.73	.95
Valid N (listwise) Composite mean	415		3.87	.89		

Table 2
Satisfaction among Airline Passengers

Response Items	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Satisfied with services	1.00	5.00	4.10	.74	-.91	1.68
Happy with choice	1.00	5.00	4.11	.80	-.88	.95
Pleased with decision	1.00	5.00	4.08	.82	-.84	.76
For travel needs	1.00	5.00	4.08	.82	-.88	.84
Overall evaluation	1.00	5.00	4.05	.85	-1.16	2.07
Composite Mean			4.08	.81		

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Table 3
Responsiveness to Persuasion from Customer Oriented Employees

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Baby Boomers	56	40.25	4.42	.591	39.07	41.44	30.00	50.00
Generation X	176	38.95	5.22	.393	38.17	39.73	20.00	49.00
Generation Y	183	39.92	4.74	.350	39.22	40.61	28.00	50.00
Total	415	39.55	4.93	.242	39.07	40.02	20.00	50.00

Note: Min=Minimum; Max=Maximum

Table 4
Bonferroni Post Hoc Multiple Comparisons among Generational Cohorts

(I) Birth year	(J) Birth year	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Baby Boomers	Generation X	1.301	.753	.255	-.510	3.112
	Generation Y	.337	.750	1.000	-1.465	2.140
Generation X	Baby Boomers	-1.301	.753	.255	-3.112	.510
	Generation Y	-.964	.518	.191	-2.210	.282
Generation Y	Baby Boomers	-.337	.750	1.000	-2.140	1.465
	Generation X	.964	.518	.191	-.282	2.210

Table 5
Comparison of Customer Satisfaction among Generational Cohort

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Baby Boomers	56	21.11	2.95	.395	20.32	21.90	11.00	25.00
Generation X	176	20.35	3.02	.228	19.90	20.80	11.00	25.00
Generation Y	183	20.27	3.62	.268	19.74	20.80	7.00	25.00
Total	415	20.42	3.29	.167	20.10	20.73	7.00	25.00

Note: Min=Minimum; Max=Maximum

Table 6
Bonferroni Post Hoc Multiple Comparisons among Generational Cohorts

(I) Cohort	(J) Cohort	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Baby Boomers	Generation X	.761	.505	.398	-.453	1.974
	Generation Y	.840	.502	.287	-.368	2.047
Generation X	Baby Boomers	-.761	.505	.398	-1.974	.453
	Generation Y	.079	.347	1.000	-.756	.914
Generation Y	Baby Boomers	-.840	.502	.287	-2.047	.368
	Generation X	-.079	.347	1.000	-.914	.756

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Venture Capital Financing: Perspective of Entrepreneurs in an Emerging Economy

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ABSTRACT

In the developing countries the need for capital of small businesses remains small and fragmented despite a vast number of small businesses operating in these countries. A cross-sectional survey of entrepreneurs was conducted within the Kumasi Metropolis of Ghana on their perspective of venture capital financing. Questionnaires were used to assess their perception and impact of venture capital financing on small businesses whiles descriptive statistics and multiple linear regression were used to analyse the data. Result revealed that the requirement for accessing venture capital was difficult and cumbersome but the entrepreneurs confirmed that venture capital financing and its related packages can make the enterprise a success. The study found sales, innovation and efficiency variables to be positively significant whiles profit has a negative significant impact on venture growth and performance. This study suggests that the venture capital trust fund must embark on nationwide educational drive by engaging the business communities on its operations. The government must show real commitments and programmes towards the realisation of private enterprises development. Furthermore, the study prescribed five generic requirements for entrepreneurs and the venture capital industry that will guide start-up businesses.

Keywords: Entrepreneurs, Venture Capital Financing, Venture Capital Trust Fund, Ghana

INTRODUCTION

One of the dreams of any entrepreneur is to build a winning business whether it is for existing one or what the entrepreneur has in his/her plans and hope he/she will get it right one day. McKaskill [1] indicated that entrepreneurs are optimists and the society is fortunate that they are prepare to risk their savings and time to have a business because without their drive, creativity and perseverance, many of today's large corporations would not be in existence.

Butler [2] stressed that enterprise is the term that is generally applied to small or medium-sized business. He went on to say that an enterprise can be a start-up; an early stage business or equally developed business. Hatten [3] affirms that entrepreneurs are people who start enterprises or business; he describes a serial entrepreneur as one who is into the creation of new businesses for the purposes of selling it for profit. Longnecker *et al.,* [4] affirmed that an entrepreneur who creates and operates an enterprise is displaying the characteristics of entrepreneurship. Small enterprises encompass a variety of businesses and sectors, ranging from relatively stable businesses looking to expand, to companies that leverage innovation to transform an existing market as asserted by Divakaran *et al.,* [5] Contribution by the small businesses to the economy of any country cannot be underestimated in terms of job creation, payment of taxes, serving as the breeding ground for entrepreneurs to build larger businesses and investment generating center for many investors. It is strange that much has not being

done by many governments, financial institutions and private equity firms to develop such an important sector of the economy.

Lack of finance has been regarded as one of the major problems contributing to slow development and high mortality rates of small businesses in developing economies as indicated by Muteti [6]. Small businesses have made use of micro credit from the microfinance institutions to run their businesses, which offer most of the time small and short-terms loans. This avenue has outlived its purpose from the small businesses point of view as the size and credit demands of their businesses have also outgrown the capacity of microfinance institutions. The traditional option of external financing to many small businesses and entrepreneurs is bank lending. OECD [7] asserted that small businesses often heavily rely on straight debt to fulfill their start-up, cash flow and investment needs. While it is commonly used by small businesses, however, traditional bank finance poses challenges to small businesses and may be ill-suited at a specific stage in the firm's life cycle.

Several governments have come and gone employing certain schemes such as Business Assistance Fund, Ghana Investment Fund and Export Development and Investment Fund in the 1990's and 2002 to support small and medium-size enterprises in the areas of financing and seminars/workshops to manage their businesses better. These schemes had its own challenges hence the Venture Capital Trust Fund (VCTF). The VCTF was established in 2004 through an Act of Parliament (VCTF Act 680). The fund's intention is to provide low cost financing to small and medium enterprises so as to enable them expand, create wealth and jobs. It does this by providing credit and equity financing to eligible Venture Capital Finance Companies to support Small and Medium Enterprises (SME's).

Abor and Quartey [8] established that many entrepreneurs cannot provide the preferred collateral acceptable by the banks. This means that venture capital finance would be more suitable than debt finance for those who cannot meet the banks requirements. Landstrom [9] indicated that financing problems goes beyond the supply-side issues as his study revealed that many SME's especially small firms, are not aware of the available financing possibilities, and even if they are, they do not know how to approach it. The results from such study point to a need for initiatives that raise the awareness of financing possibilities among firms. Considering the roles of the SME's and its impact on the economy it is difficult to accept that financing gap is still a major issue for entrepreneurs and SME's in general. Is it because the authorities think that it is not significant enough or they do not have the clout to make things happen or really they are not in need of financial support from the governments or the government commitment is just a rhetoric? In finding solutions to the questions raised the study delved into the perceptions of entrepreneurs on venture capital financing as an alternative form of equity financing and its impact on their business activities. Section 2 surveys related studies on venture capital financing. Section 3 contains a description of the data and methodology. In Section 4, the results and discussions of the study are provided, while Section 5 concludes the paper.

WHAT DOES THE LITERATURE SUGGEST?
The society needs growth-oriented entrepreneurial ventures as they create innovations and dynamics, new jobs, income and not the least, wealth as stressed by Landstrom [9]. He further indicated that venture capital is a significant vehicle for promoting their growth. The importance of venture capital makes it essential to understand the way the venture capital market operates, and how business angels and venture capitalists manage their investments. Bürgel *et al.,* [10] found that only around 1 in 10 of United Kingdom (UK) firms had received venture capital. In Germany, this ratio went down to 1 in 14. Even in the United States (US),

Auerswald and Branscomb [11] noted that the supply of institutional venture capital finance for technology development trails significantly behind business angels, corporations and the Federal Government. It is salutary to note that in 2005, the US and UK venture capital industries invested collectively in only 412 seed and start-up deals according to BVCA, [12]. This is from two major world economies where, collectively, over one million new businesses are started every year. Thus, institutional venture capital still remains a specialist financing instrument of relevance only to a tiny percentage of the population of new and growing enterprises in any economy.

Despite the assumption that venture capital is a suitable subject for policy action, surveys of SME finance repeatedly show that entrepreneurs' receipt of risk capital from professional investors is an extremely rare event. Reynolds *et al.,* [13] 'guesstimate' that less than half a per cent of all nascent entrepreneurs receive either venture capital or business angel finance at start-up. A 2004 survey of UK SMEs showed that less than 2 per cent of respondents had ever raised institutional venture capital as stated by Small Business Service [14] A similar percentage has been recorded in Europe (European Commission, [15]). Given that the UK has the largest and most advanced venture capital/private equity industry in Europe, it is probable that other countries are unlikely to register significantly greater risk capital activity among their young firms. European studies confirm this reality of the scarcity of venture capital receipt (European Venture Capital Association, [16]). Divakaran *et al.,* [5] indicated that the lack of venture capital for small businesses in developing economics goes beyond simply limiting the access to capital of these businesses but not getting investor's knowledge and know-how to the businesses if they had invested in them. They went on to stress that though private equity investment could help to create, deepen, and expand small businesses growth in developing economies but the vast majority of private equity firms in such markets targets larger or more established enterprises.

A study conducted by Alemany and Marti [17] on unbiased estimation of economic impact of venture capital backed firms in Spain between 1993-1998 using 323 Spanish firms and a control sample similar without venture capital backed firms. The study revealed that venture capital backed companies had a greater economic impact and that venture capital funding had a significant and positive effect on growth in employment, sales, gross margin, total assets, net intangible assets and corporate tax paid. It was revealed that venture capital backed firms reported high growth sales than non-backed venture capital firms as declared by Bloomfield [18].

Gans and Stern [19] found that venture capital financing strongly impinge on firm's innovation, patenting processes and the influx of technological opportunities. This is the unique way to extract the social significance of an innovation. Hence, triggering innovations, along with the firm's professionalization, is another valuable feature of the venture capital funding. Engel and Keilbach [20] suggested that venture capital financing firms showed high profitability than non-backed venture capital financing in a study conducted in Germany. Hellmann and Puri [21] affirmed that venture capitalist brings about professionalism and value adding activities due to his/her involvement in the business as equity holder of the business.

Several authors have reported on the positive effects of venture capital financing on businesses from different perspectives. Peneder [22] affirmed productivity, innovation and strategy formation and its implementation by venture capital financing firms. Hellmann and Puri [21] (2002) asserted that increase in professionalism in business operations enhances internal control and credibility from relevant stakeholders. Caselli *et al.,* [23] indicated that innovation

in terms of productivity and creation of patent are added benefits of venture capital financing. Venckuviene, [24] declared that there exist a relationship between venture capital investments and innovation strategy. Kelly and Hankook [25] established that there is empirical evidence suggesting that venture capital is associated with faster growth and an acceleration of the innovation and commercialization process.

Authors such as Chemmanur *et al.,* [26] and Kelly and Hankook [25] in their studies investigated on how venture capital financing has positive effect on companies' sales and employment growth. Chemmanur *et al.,* [26] indicated that overall efficiency gains generated by venture capital backing arise primarily from improvements in sales, the efficiency gains of high-reputation venture capital backed firms arise also from lower increases in production costs. Kelly and Hankook [25] confirmed that venture capital backed firms outperform their non-venture capital backed counterparts in terms of growth indicators such as higher growth in sales, wages, and employment. Delmar *et al.,* [27] affirmed that sales are one of the preferred indicators as a performance measure of firm's growth. Sales figures are relatively easy to obtain and reflect both short term and long-term changes in the firm.

Markman and Gartner [28] stressed that it is not strange that growth has been used as a measure of firm performance to the attainment of sustainable competitive advantage and profitability. Delmar *et al.,* [27] pointed out that firm growth is not static in nature and there may be considerable variation in firm growth over time. They went on to argue that firm's growth pattern is related to age, size and industry. Cowling [29] investigated the relationship between growth and profitability and found little evidence of the growth versus profit trade-off. He suggested that there is potential for a cumulative type effect whereby profits engender growth and growth engenders future profit that allows some firms to continually face increasing returns to scale. It can be infer that in order to finance growth, the firm must forego profits.

STUDY AREA AND METHODOLOGY

Study Area

The population of Kumasi Metropolis is 1,730,249 represents 36.2 percent of the total population of Ashanti Region, from the 2010 Population and Housing Census. The Metropolis has a total number of 440,283 households with an average household size of about 4 persons. The percentage of population aged 11 years and older who are literate is 89.5 percent while 10.5 percent are not literate. About 66.5 percent of the population aged 15 years and older is economically active while 33.5 per cent is economically not active. Of the economically active population, 91.4 percent is employed while 8.6 percent is unemployed. Of the employed population, 38.9 percent are in the service and sales work, 22.8 percent are in craft and related trades 10.3 percent are into elementary occupation and only 2.6 percent are skilled agricultural forestry and fishery workers. Females (55.1%) are more likely than males (22%) to be engaged in service and sales work whereas males (32.9%) are more likely than females (13.1%) to be engaged as craft and related trade. About 49.2 percent of the workforce is self-employed without employees with females and males proportions as 60.1 percent and 37.9 percent respectively as indicated by Ghana Statistical Service [30].

Methodology

The study adopted descriptive cross-sectional study in a survey form which investigated entrepreneurs' perception of venture capital financing as an alternative source of finance within the Kumasi Metropolis of Ghana, especially those with knowledge of venture capital financing or with prior experience of venture capital financing. As indicated by De Vaus, [31], a survey research uses structured and in-depth interview, observation and content analyses

apart from questionnaires that are widely used.

Bethlehem [32] indicated that a target population of a study is the population that should be investigated. It is also the population to which the outcomes of the survey refer. He went on to say that the elements of a target population are often people, households or companies. The population of the study covers all entrepreneurs with prior experience with venture capital trust fund or have knowledge on venture capital financing. The Association of Ghana Industries (AGI) indicated that not many of its members in the Kumasi Metropolis have made use of the venture capital trust fund. The population includes all entrepreneurs within the Metropolis.

Two-Stage sampling approach was employed for the study. The first of which was the purposive selection of Kumasi Metropolis as a district among two hundred and sixteen districts from ten administrative regions. This was chosen based on the proximity and knowledge of the town by the author. The entrepreneurs' preparedness and voluntary participation was a factor for the study area. The second stage was using quota target for the selection of the entrepreneurs which was purposively done. The sample size of fifty (50) entrepreneurs who had membership registration with Association of Ghana Industries (AGI) was used for the study. The determination of sample size was non-statistical; it was based on the availability of the right respondents who have a fair knowledge of the issues under discussion. Most importantly the respondent should be voluntarily ready to be part of the study.

Questionnaires were used to solicit information from the entrepreneurs. The questionnaire was in the form of five likert scales. The questionnaire was divided into three (3) main sections, with each section examining different issues in the study. Section I looked at Socio-demographic characteristics of entrepreneurs. Section II explores the perception on venture capital financing. Section III examined the impact of venture capital financing on small businesses. A self-administered questionnaire was used to gather information from the entrepreneurs through drop-and-collect technique. This involved leaving a questionnaire with a respondent and going back to pick it up. This was used due to educational level of the entrepreneurs as they have the knowledge and ability to fill the questionnaire. The self-administered questionnaire helped to avoid the interviewer's bias and moreover gave the study the opportunity to ask a bit more complex questions. Another advantage is that it gave the respondents plenty time to consider their answers as compared with the interviewing technique where the interviewee required an immediate response.

Field [33] indicated that a questionnaire should consistently reflect the construct that it is measuring to determine its reliability. Leech *et al.,* [34] stressed that the value of Cronbach Alpha should be equal to or greater than 0.70. Whenever a scale is used for a study, it is important to find out that the scale is reliable. This has to do with the scale's internal consistency. The Cronbach's alpha coefficient were 0.968 (n=7) and 0.939 (n=5) respectively for entrepreneurs' perception of venture capital financing and impact of venture capital financing which were above 0.70 which is normally acceptable by researchers as a good reliability of a scale to indicate its internal consistency.

ANALYTICAL FRAMEWORK

Descriptive statistics such as frequency and percentages were employed to analyse data used to present the socio-economic characteristics of the entrepreneurs and entrepreneurs' perception on venture capital financing.

In addition the study made use of multiple regression analysis to establish the relationship and the significance of the independent variables on venture growth and performance of small businesses as part of venture capital financing. The regression equation is stated as:

$$VG = \beta_0 + \beta_1 PFT + \beta_2 INN + \beta_3 SAL + \beta_4 EFT + \varepsilon_t \qquad (1)$$

Where β_0 represents the constant of the intercept and ε_t is the error term. VG is the dependent variable which represents venture growth and performance. Improved profitability, enterprise innovation, high growth sales and increase efficiency are represented by *PFT, INN, SAL* and *EFT* respectively. The independent variables are expected to have a positive relation with venture growth and performance.

Hypothesis of the study were constructed as follows:
Ho$_1$ = Profitability has an insignificant impact on venture growth and performance
Ho$_2$ = Innovation has an insignificant impact on venture growth and performance
Ho$_3$ = Sales have an insignificant impact on venture growth and performance
Ho$_4$ = Efficiency has an insignificant impact on venture growth and performance

Variable description
Dependent variable
Venture growth and performance (*VG*): This is basically how venture capital financing maintain and speed up the small enterprises growth and its performance. Growth is a one-dimensional construct operationalized by a variety of growth measures like sales, profit, number of workers, value of net assets and market share among others.

Independent variables
Profit (*PFT*): Profitability is a yardstick by which entrepreneurs can measure their achievements and justify their claims to compensation. This assessed how the injection of venture capital financing has made the enterprise more profitable. Profitability is assumed to have a relationship with growth of an enterprise hence entrepreneurs who make higher profits are more likely to grow their enterprises. It is therefore hypothesised that venture capital financing that leads to improve profitability is positively related to the growth and performance of venture.

Innovate (*INN*): Innovation is the ability to process an idea or invention into a good or service for which others will be prepared to purchase because it creates value for the buyer. Small enterprises will typically invest much less, if at all in research and development vis-a-vis its limited human and financial resources. This assessed how venture capital financing impinges on enterprise's innovation. Innovative entrepreneurship is basically where an entrepreneur builds a new business from the beginning on a completely new idea within an existing environment to solve a problem. It is hypothesised that venture capital financing impinges on innovation hence venture capital financing which leads to innovation is positively related to the growth and performance of the venture.

Sales (*SAL*): Sales volume equals the quantity of goods/services a business sells during a given period of time such as monthly, quarterly or yearly. Sales or sales revenue equals the Ghanaian Cedis amount a business makes during a period. This assessed how venture capital financing injection improves sales or revenue in order to attain growth. It is hypothesised that venture capital financing will improve sales due to the professionalism investors brings to bear on the business hence venture capital financing which leads to improve sales is positively related to the growth and performance of the venture.

Efficient (*EFT*): Efficiency is one of the top priorities if businesses are to thrive and grow. Without efficient systems in place, each phase of growth will only cause more issues. Here the concern is operational efficiency. This assessed how venture capital injection increases efficiency and reduces waste in enterprises. It is hypothesised that venture capital financing will improve operational efficiency due to regulations, compliance and professionalism venture capitalist brings to bear on the business hence venture capital financing which leads to operational efficiency is positively related to the growth and performance of the venture.

Ethical consideration

The study followed all ethical practices during the research. The entrepreneurs were made aware of the purpose of the study before the data collection process. They were assured of their privacy and anonymity of their responses hence their names were not published in this study and their participation was voluntary.

RESULTS AND DISCUSSION

This section discusses the demographics of the entrepreneurs, entrepreneur's perception of venture capital financing and the impact of venture capital financing on businesses.

Demographic information of respondents

The questionnaire data were collected from fifty entrepreneurs of whom thirty-eight were males whiles twelve were female. This confirms that there are more males entrepreneurs as compare to females in Kumasi Metropolis. Their ages ranged from twenty-nine to fifty-five, with an arithmetic mean of forty-two years. Out of the fifty entrepreneurs ten, twenty-three and seventeen were into manufacturing, service and commerce respectively. This indicated that majority of small businesses in Kumasi can be categorized as service oriented businesses. In terms of employment, thirty-three out of the fifty entrepreneurs have employed maximum five workers while eleven have maximum ten workers. Four entrepreneurs had maximum fifteen workers whiles two entrepreneurs had maximum of twenty workers to support their business operations. Twenty-seven of the entrepreneurs years of business activities spanned between two years and ten years whiles eighteen entrepreneurs had eleven and twenty years. The other five entrepreneurs had twenty-one and thirty years of business activities.

Figure 1. Entrepreneur's perception of venture capital financing
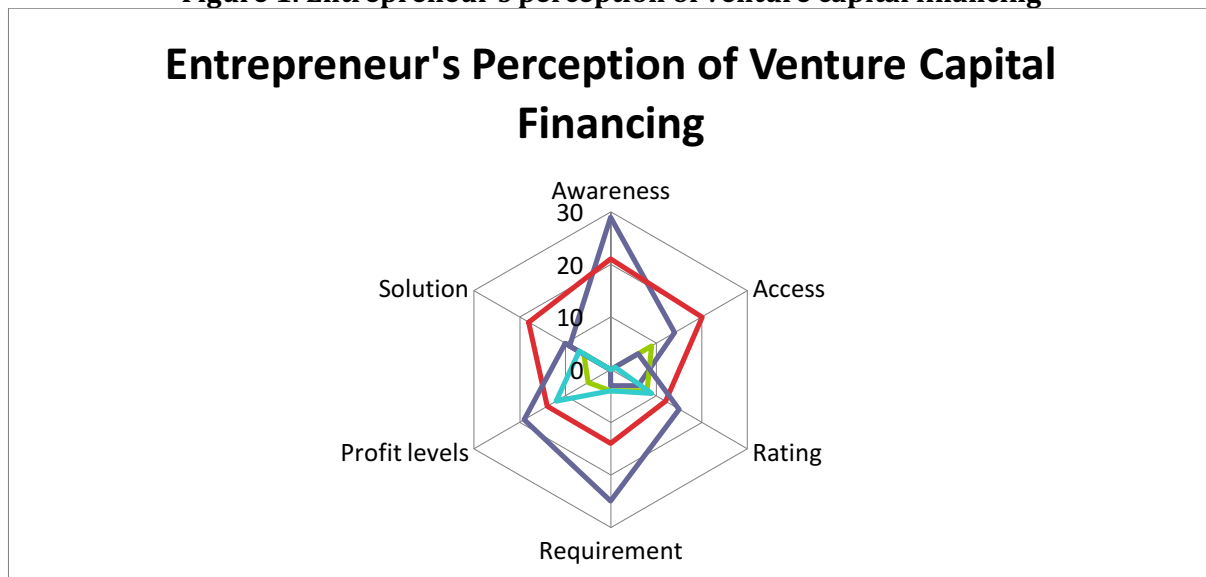
Source: Field data, 2017

Entrepreneur's Perception of Venture Capital Financing
The entrepreneurs' perception of venture capital financing was evaluated using five likert-scales. Figure 1 indicates the absolute numbers of the entrepreneurs' responses on the six thematic areas to find out their perception of Venture Capital Financing in Ghana. The reporting was done using the corresponding percentage of the absolute number.

Awareness as indicated under Figure 1 mean that the entrepreneurs might be aware of venture capital financing through the Venture Capital Trust Fund (VCTF) and its allied companies or not. Twenty-nine entrepreneurs representing 58% declared that they have a fair knowledge of the activities VCTF which goes beyond just the awareness level of venture capital financing whiles twenty-one entrepreneurs constituting 42% indicated that they were aware of the existence of venture capital finance as a source of finance that an entrepreneur can access. With the majority (58%) of the entrepreneurs having a fair appreciation of the VCTF and its operations meant that they were not ignorant about venture capital as an alternative source of equity financing. Entrepreneurs were asked given the opportunity would they be prepared to always access the venture capital financing for their businesses. It was a mixed reaction from them as 68% reported that they will be glad to access the fund with 18% indifferent on the theme and 14% indicated that they would not access the funds. Availability of other alternative funds was the defense of those who declared they would not access the fund. This was in line with the findings of Burgel's [10], who indicated that there are several ways by which businesses can raise capital to finance working capital and expansions. Contrary Landstrom [9] stressed that many small businesses were not aware of available financing possibilities, and even if they were, they did not know how to approach it.

Rating has to do with credit rating assessment of financial intermediaries on entrepreneurs who accessed venture capital financing as perceived by the entrepreneurs. 36% of the entrepreneurs indicated confidently and in affirmative that it can boost the business credit rating whiles 48% of the entrepreneurs though disagreed to that assertion but insisted that it might be true with certain factors coming to play to benefit from the credit rating. The rest of the entrepreneurs constituting 16% were neutral to that assertion. This result was in accordance with Divakaran *et al.,* [5]; the authors indicated that venture capital funding enhanced the credit rating of businesses due to investor's knowledge and technical know-how. The entrepreneurs' view on the requirements of venture capital financing was sought, 58% of them declared that the requirements were not difficult to meet whiles 34% indicated that it is cumbersome and did not make venture capital financing appealing to entrepreneurs with 8% being indifferent to the assertion that venture capital financing requirements were difficult. The entrepreneurs who indicated that the process was cumbersome and requirements were difficult to meet were justified as their reaction corroborate the empirical evidence obtained by Reynolds *et al.,* [13] their study which indicated that less than half a per cent of all nascent entrepreneurs received either venture capital or business angel finance at start-up. In addition it was recorded that less than 2 per cent of respondents had ever raised institutional venture capital in a survey of UK SME's in 2004 as stated by Small Business Service, [14]. It must be noted that even in the developed countries accessing a venture capital is a challenge so within the Ghanaian context where the industry is young and the size of the fund is not huge can be problematic for entrepreneurs to benefit from it as they are expecting.

Figure 1 shows that 54% of the entrepreneurs indicated that venture capital was a solution to their financial predicaments. Their defense was that venture capital firms did not only provide for the needed funds but also provided assistance to support the growth and expansion of the activities of small businesses. The result aligned with the findings of Muteti [6] who affirmed that lack of finance was a major problem contributing to slow development of small businesses

in the developing economies. Moreover, Abor and Quartey [8] pointed out that venture capital finance is more suitable for entrepreneurs as many entrepreneurs lacked the preferred collateral demanded by the banks as debt requirement. This is one of the reasons why entrepreneurs saw venture capital as a solution to their financial predicaments. As much as 34% of the entrepreneurs disagree to the assertion that venture capital was the solution to their financial predicaments. Some of the entrepreneurs pointed out that the size of the business opportunity and the needed funds plus type of industry might affect the access and utilization of the venture capital financing, hence venture capital financing cannot be a total solution to small businesses financial predicaments whether for expansion or start-ups. This finding is consistent with the view of OECD [7] as their study revealed that most of small businesses often heavily relied on straight debt to fulfill their start-up. No wonder the 34% of the entrepreneurs thought contrary to the assertion. The other 12% of the entrepreneurs were indifferent to that assertion that venture capital was the solution to the financial predicaments of entrepreneurs.

Entrepreneurs were asked if venture capital funding reduced profit levels. Out of the fifty entrepreneurs 28% confirmed that it did affect their profit levels, this can be inferred from the literature as most early stage venture-backed start-ups were not able to grow rapidly and be profitable. Hellmann and Puri [21] affirmed that venture capitalist brought professionalism and value adding activities due to his/her involvement in the business. Professionalism comes with its own cost as it can also affect the profitability of the enterprise. Majority of the entrepreneurs constituting 62% declared that venture capital funding might not be the cause of reduced profit levels if any as operational issues have much weight to affect profits level. This result was in alignment with the study of Engel and Keilbach [20] where they noted that firms that were backed by venture capital financing firms in Germany were more profitability than non-backed venture capital financing. Interestingly 10% of the entrepreneurs were neutral to that assertion that venture capital funding reduced profit levels.

Impact of Venture Capital Financing on businesses
Venture growth and performance was tested empirically with data from entrepreneurs' survey conducted in the Kumasi Metropolis. The dependent variable refers to venture growth and performance. The regression analysis (Table 1) shows that four variables employed in the model. The value of the regression coefficient for the intercept described a particular venture growth and performance for the entrepreneurs within the study area, while the remaining co-efficient described the impact of each explanatory variable on venture growth and performance.

Table 1. Impact of Venture Capital Financing on businesses

Dependent Variable : Venture capital results in growth and performance							
Independent variables	B	Standard Error	Beta	t-value	p-value	Collinearity statistics	
						Tolerance	VIF
Constant	3.658	.095		38.612	.000		
Profit *(PFT)*	-.205***	.059	-.51	-3.494	.001	.141	7.080
Innovate *(INN)*	.140**	.051	.36	2.870	.006	.190	5.272
Sale *(SAL)*	.362***	.051	.94	7.082	.000	.173	5.793
Efficient *(EFT)*	.027*	.054	.07	.500	.619	.156	6.411

Source: Author's computation, 2017. Note: R Square = .903, Durbin-Watson statistics =1.046, F value = 67.060, F significance = 0.000, *p < 0.1, **p < 0.05, *** p < 0.01

An R^2 overall of .903 indicated that 90 percent of the variation in venture growth and performance can be explained by variability in profit, innovation, improved sales and

operational efficiency. This meant profit, innovation, improved sales and operational efficiency occupy 90 percent in the factors that accounted for the venture growth and performance of the entrepreneurs' for the study in the Kumasi Metropolis of Ghana whiles the other factors accounted for the remaining 10 percent. It can be deduced that the four variables to a greater extend influenced the venture growth and performance of entrepreneurs in Ghana. The F-statistics had a value of 67 which is highly significant at one percent indicated that the model was fit hence the outcome of the study can be greatly relied upon.

The Durbin-Watson statistics test whether the assumption is tenable, that is testing for serial correlations between errors. The size of the Durbin-Watson statistics depends upon the number of predictors in the model, and the number of observations. Field [33] stressed that values for Durbin-Watson test less than 1 or greater than 3 are definitely a cause for concern. Table 1 indicated that the Durbin-Watson test value is 1.046 which is within the acceptable range. It can therefore be assumed that there was no first order linear autocorrelation in the study multiple linear regression model which meant the assumption had been met. To check for multicollinerality in the multiple linear regression model, the Tolerance should be > 0.1 (or VIF < 10) for all variables, from Table 1 the collinearity statistics by the figures of the Tolerance and VIF indicated that there was no multicollinearity, which made the model more reliable.

The regression result showed that profit as indicated in Table 1 have a t-value of - 3.494 and a coefficient value of -0.205 with a significant value of 1%. This signified that profit (*PFT*) had a negative, strong and significant impact on venture growth and performance among entrepreneurs within the Kumasi Metropolis. This implies that for every One Cedi (¢1) increase in profit of the entrepreneurs, the growth opportunity will decrease by 20.5 pesewas. This provided an evidence for rejecting the null hypothesis that profit has no significant impact on growth and performance of venture growth. This result aligns with Cowling [29] who noted in his study that profits engender growth and growth engenders future profit that allows some firms to continually face increasing returns to scale. It can be inferred that in order to finance growth, the firm must forego profits. The study of Delmar *et al.* [27] pointed out that firm growth is not static in nature and there may be considerable variation in firm growth over time. They went on to argue that firm's growth pattern is related to age, size and industry. This showed that firm's growth issues goes beyond profitability. It is imperative for entrepreneurs to appreciate the fact that it is good for entrepreneurs to be ambitious but should be careful in pursuing growth strategies at the expense of profits which will be a risky strategy. They should rather focus on profits and reinvesting those profits into the firm for the purposes of sustainability which will serve as a better strategy in the longer term.

Innovation (*INN*) has a t-value of 2.870 and a coefficient value of 0.140 with a significant value of 5%. This signifies that innovation (*INN*) has a positive, weak and significant impact on venture growth and performance among entrepreneurs within the Kumasi Metropolis. This implies that for every One Cedi (¢1) increase of innovation activities of the entrepreneurs, the growth and performance opportunity will increase by ¢1.40 pesewas. This provides an evidence for rejecting the null hypothesis that innovation by entrepreneurs has no significant impact on growth and performance of venture growth. This result agrees with Gans and Stern [19] where they indicated that venture capital financing strongly impinge on firm's innovation, patenting processes and the influx of technological opportunities. Hence, triggering innovations, along with the firm's professionalization, is another valuable feature of the venture capital funding. In addition several authors' works discussed the relationships between venture capital financing and innovation in terms of several dimensions. Peneder [22] affirmed that innovation and strategy formation and its implementation were by-products of venture capital financing firms. Moreover, Caselli *et al.* [23] indicated that innovation in terms

of productivity and creation of patent were added benefits of venture capital financing. Venckuviene, [24] declared that there exist a relationship between venture capital investments and innovation strategy. Kelly and Hankook [25] established that there is empirical evidence suggesting that venture capital is associated with faster growth and an acceleration of the innovation and commercialization process.

Sales (*SAL*) have a t-value of 7.082 and a coefficient value of 0.362 with a significant value of 1%. This signifies that sales (*SAL*) have a positive, weak and significant impact on venture growth and performance among entrepreneurs within the Kumasi Metropolis. This implies that for every One Cedi (¢1) increase of sales activities of the entrepreneurs, the growth and performance opportunity will increase by ¢3.62 pesewas. This provides an evidence of rejecting the null hypothesis that sale by entrepreneurs has no significant impact on growth and performance of venture growth. This result confirmed the results obtained by Bloomfield [18], where the study revealed that venture capital backed firms reported high growth sales than non-backed venture capital firms. Kelly and Hankook [25] confirmed that venture capital backed firms outperform their non-venture capital backed counterparts in terms of growth indicators such as higher growth in sales, wages, and employment. Delmar *et al.,* [27] affirmed that sales are one of the preferred indicators as a performance measure of firm's growth. Sales figures were relatively easy to obtain and reflect both short term and long-term changes in the firm. Alemany and Marti [17] in their study also revealed that venture capital funding had a significant and positive effect on growth in sales.

Efficient (*EFT*) have a t-value of 0.500 and a coefficient value of 0.27 with insignificant at 10% level of significance. This signifies that efficient (*EFT*) has a positive, weak and insignificant influence on venture growth and performance among entrepreneurs within the Kumasi Metropolis. This implies that for every One Cedi (¢1) increase in efficiency of the entrepreneurs, the growth and performance opportunity may not have any significant changes. In view of the result with respect to efficiency, this therefore provided an evidence of failing to reject the null hypothesis that efficiency by entrepreneurs has no significant impact on growth and performance of venture growth. This result concurred with the study of Chemmanur *et al*. [26] indicated that overall efficiency gains generated by venture capital backing arise primarily from improvements in sales, the efficiency gains of high-reputation venture capital backed firms arise also from lower increases in production costs.

The summary results shown in Table 1 are indicating that sales, innovation and efficiency give positive significant impact on venture growth and performance which means the higher the sales, innovation and efficiency, the higher would be the venture growth and performance of entrepreneurs businesses within the Kumasi Metropolis, however, profit has a negative significant impact on venture growth and performance.

CONCLUSION AND RECOMMENDATION

Venture capital is a private equity market which has formal and informal segments. The formal market consists of financial intermediary firms whiles the informal market is made up of wealthy individuals normally called business angels. This study focuses on the formal venture capital industry where funds are supplied for start-up and expansion of enterprises. The objective of this study was to delve into entrepreneurs' perspective on venture capital financing and its impact on their businesses. Apart from start-up firms, businesses that are in a rapid growth stage need a financial assistance that might be beyond their current resources and network which forces them to search for outside investment which can be extremely challenging.

The survey revealed that all the entrepreneurs were aware of the existence of venture capital as an alternative source of equity financing. It suggested that there is an opportunity to access venture capital financing by the entrepreneurs as the last resort since they understand the requirements and processes of the venture capital industry. There was evidence that venture capital enhanced the credit rating of entrepreneurs who have accessed venture capital financing. A third of the sampled entrepreneurs affirmed the unattractiveness of venture capital financing due to its cumbersome processes and stricter requirements to access the fund. It is not surprising that few entrepreneurs succeed in raising venture capital; the worrying situation is that some entrepreneurs might not even bother themselves for applying for venture capital knowing that they might not be successful. There was a mixed reaction from the entrepreneurs on venture capital being a solution to their financial predicaments within the Ghanaian context. This suggest that venture capital is not that popular with small businesses and yet to be accepted as a reliable financing option.

The study provided evidence to support that profit has negative significance and strong impact on venture growth and performance. The sustenance of any enterprise primarily is dependent of its making profit, profit per se cannot enhance growth of the business, and a lot of contributing factors come to play such as the vision, the capability, the leadership, the financial prudence and management of resource to make growth possible. Such results should encourage entrepreneurs to work on their profit levels and make sure profits are deployed to areas that will enhance growth of their businesses. Another important point is the positive and significant impact of sales on the venture growth and performance of entrepreneur's businesses. Sales is an important variable in any profit making venture, more sales has the potential and positively to enhance revenue mobilisation and with care utilisation of resources will improves the liquidity stance of the enterprise if cash and accounts receivables are managed well. This can serve as a fulcrum to propel expansion drive of the enterprise which will ultimately lead to growth of the enterprise.

The study affirmed that innovation had a positive, weak and significance impact on venture growth and performance among entrepreneurs. The result must be an eye opener to entrepreneurs irrespective of the size of the business to give a serious attention to innovation in their businesses. Innovation brings about competitive advantage whether in processes or products/services which can enhance venture growth as there is a compelling need for the product or services to consumers/customers to purchase it. The challenge here is innovation usually comes with degree of uncertainty which can deter financiers unless they have a fair knowledge of the technical practicability and market prospects before they will inject funds into the enterprise. Efficiency had a positive, weak and insignificant impact on venture growth and performance among entrepreneurs. The result points to the fact efficiency can be one of the determinants of enterprises sustenance in the longer term. Efficiency is one of the top priorities if businesses are to thrive and grow. A positive outcome of venture capitalist can influence good management of resources thereby affecting the productivity, profitability, competitiveness and innovation.

The paper recommends that the venture capital trust fund must embark on nationwide educational drive by engaging the business communities on its operations. This will help to sensitize the entrepreneurs to appreciate the works and demands of the venture capital trust fund for better opportunity for them to access the venture capital finance. The government must show real commitments and programmes towards the realisation of private enterprises development.

A limitation to this study is that the sample was in Ghanaian context, whose entrepreneurs may

be distinct from ones with other geographical/cultural background. Secondly, this paper has solely study the perspectives of entrepreneurs in connection to venture capital financing without getting the opportunity to interview senior staff members from the venture capital trust fund and some key venture capitalist to find out challenges and difficulties they faced with entrepreneurs in accessing the venture capital fund. This study offers future research suggestion to delve into the operational activities of the venture capital trust fund and its impact on businesses with financial support and its performance. The extension to the study will be on government commitments and programmes towards the realisation of private enterprises development.

Obtaining equity capital from a venture capitalist is not easy because venture capitalists are selective in their investments and only choose to invest in those companies that they believe have the potential to generate very high returns. The study prescribes generic practices that will aid better chance of accessing venture capital and how to develop venture capital industry in an emerging industry:

- Entrepreneurs must probe venture capital investors on their motives, goals, track records, personnel and overall credibility if they can serve the purpose as equity partner.
- Entrepreneurs must communicate the goals of their new ventures clearly to potential venture capital investors.
- For entrepreneurs to be successfully in raising venture capital finance, they must create a business proposal with a well-articulated product/market opportunity that will have a sufficient competitive advantage and probable exit strategy within three to five years and a detailed plan to achieve the exit conditions.
- It is important for entrepreneurs to have a fair understanding of venture capitalists decision models that help them decide on which companies to invest in and which not to. This can assist them in knowing whether they are attractive to venture capital investments, what potential changes they need to make in order to become attractive, and what information venture capitalist evaluate in their investment decisions.
- The performance of the venture capital industry is influenced by its size, diversity, and competence. This is where governments must establish and develop the venture capital industry through the establishment of institutional infrastructure, supplying capital for venture capital funds, financing early-stage investments and fostering the demand for venture capital.

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Economic Hardship Among Elderly and Its Consequences Toward Cognitive Status.

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ABSTRACT

Objectives: The purpose of this study is to identify factors contributing to economic hardship and its consequences toward cognitive status among elderly in Malaysia. *Design:* the study is a cross-sectional study through personal interview. *Setting*: Data for this study were obtained from the project 'Identifying Psychosocial Risks and Quantifying the Economic Costs of Age-Related Cognitive Decline among Older Malaysians', funded by Malaysia Government through long term grant scheme (LRGS) in 2015. *Participants*: A total of 2321 elderly from Perak, Johor, Kelantan and Selangor state were involved in the study. *Measurement*: Economic hardship scale and Mini-Mental State Examination (MMSE) were used in this analysis. Logistic regression was conducted to identify factors that contribute toward economic hardship of elderly and a Chi-square analysis was used to examine the association between economic hardship and cognitive status. *Results*: Logistic regression revealed that four predictors significantly contributed toward explaining the likelihood of experiencing economic hardship. The factors were ethnicity, education level, sources of income and household poverty status. Malay, elderly with no formal schooling, those with no earned income and living in a poor household (household income less than RM930), were more likely to experience economic hardship than their counterpart. The chi-square analysis revealed that higher proportion of those experienced economic hardship were reported having cognitive impairments (severe, moderate and mild). *Conclusion*: The study provides new insight into the impact of economic hardship on cognitive status of older persons particularly in developing countries such as Malaysia.

Key Words: Economic Hardship, Financial Hardship, Cognitive Status, Cognitive Impairment, Elderly Malaysia

INTRODUCTION

The whole world is ageing at a faster rate than ever especially in developing countries (Shetty, 2012). According to the United Nation, percentages of elderly age 60 and above in Asia are expected to increase from 11.6% of the population in 2015 toward 24.6% by 2050 (United Nations, 2015). Consequently, Malaysia is projected to become an aged nation in 2030 (Ministry of Women, Family and Community Development, 2013). The increasing number of elderly over time is might be due to an improvement of Health care in Malaysia (Chan Yin–Fah, Masud et al., 2010). Older person defined as those aged 60 years old and above (Ministry of Women, Family and Community Development, 2013) who are living better living conditions and enjoyed improve health facilities have resulted in increased life expectancy. Life expectancy at birth for man and woman in Malaysia were 72.5 and 77.4 years old in 2015, an increase from 71.9 and 76.6 respectively in year 2010 (Department of Statistic Malaysia, 2015).

Malaysians are expected to live much longer in old age. More resources are needed to support old age living. Changing family living patterns whereby family have small number of children contributed to the shrinking of the traditional financial and social support available to older persons. Based on fertility rate in Malaysia, total children born declined from three children in 1999 to 1.9 children in 2014 (The World Bank, 2016). Older person of today need to have own resources to support their old age. Unavailability of comprehensive social protection system put more pressure to people to have own resources to be used in old age.

With higher percentage of workers are in the informal sector as well as the increasing cost of living, many older persons are projected to become old without sufficient resources to support old age. According to Employees Provident Fund (EPF) Malaysia statistics in 2013 for elderly age 54 years old, 69% of them have less than RM50,000 to support old age living (EPF, 2015). This is worrying as the amount is not enough to support old age life for at least 20 years after retirement. Majority of the consumers nowadays, consume more than save (Gokhale, Kotliko, and Sablehaus 1996; Offer 2006). In addition, income received by elderly after they retired normally less than what they received while working (Masud, Haron et al., 2006).

Among old own account workers who did not have employee providence fund they normally have to work until they are unable to work to support their living. In general, elderly is one of the group that vulnerable to poverty (Ahmad, Mansor and Paim, 2016), which may lead them to experienced economic hardship. No old age planning (Noone, Stephens and Alpass, 2009), increase cost of living (Hossain, Byrne et al., 2011), migration of children (Guo, Aranda and Silverstein, 2009) lack of financial resources (Bell, Nelson et al., 2014), difficulties to meet daily needs such as food, medical expenses, transportation (Tay and Diener, 2011), no money (Ahmad, Mansor and Paim, 2016), unable to buy needed items, have to rely on others, unable to get goods and services needed may can lead to economic hardship which may affect their wellbeing. According to Rojas (2008), poor people are commonly have lower well-being than non-poor. Inabilities to meet daily needs may leads to starvation conditions and worry which eventually may cause depression or economic hardship. According to previous studies, economic hardship leads toward various psychological distresses among elderly such as depression, anxiety, and suicidal ideation (Almeida, Draper et al., 2012; Pudrovska, Schieman et al. 2005; Bierman 2014). Economic hardship was proven to be the factors that causing depression among elderly in Asia (Li, 1995). Unfortunately, there is not study among Malaysian regarding this matter. Thus, this study will attempt to examine factors explaining the likelihood of experiencing economic hardship and explore its association between economic hardships with cognitive status of the elderly. Much study has been done on poverty (Samat, Elhadary et al., 2012; Barrientos, Gorman and Heslop, 2003) but there has been no study exploring the relationship between economic hardship and cognitive status of the elderly in Malaysia. Results from this study will provide some insight on impact of economic hardship on elderly cognitive status. Knowledge about the relationship between economic hardship and cognitive status can be useful in designing programs to enhance the wellbeing of older person. Therefore, the research questions and objective of this paper as below:

Research questions
1. What are the factors explaining the likelihood of older person experiencing economic hardship?
2. Is there an association between economic hardship experience and cognitive status?

Research objectives
1. To determine factors explaining the likelihood of older person experiencing economic hardship
2. To examine the association between economic hardship experience and cognitive status

LITERATURE REVIEW

Economic hardship

Economic hardship can be defined as lack of money to support basic necessities for household such as food, clothing, shelter and medical care (Mirowsky and Ross, 2001). In this study, the term economic hardship are used interchangeably with financial hardship because of both term caught the same concept. Elderly with less economic hardship can be reflect as having less dependents and needs, fewer interest in possess the material things or increases the support of government (Mirowsky and Ross, 1999). Some of prior studies explained that economic hardship might be decline with age due to the maturity in conducting their life (Levecque, Rossem et al., 2011). In contrary, it does not only mean that but elderly also have less of opportunities to recover if fall into bad economic situations (Levecque, Rossem et al., 2011). Therefore, it is important for them to manage their economic situations carefully in order to avoid experiencing economic hardship.

Based on previous studies, social (ethnicity, living arrangement and education level) (Anderson and Becker, 1999; Srivastava and Mohanty, 2012; Maes, 2013; Mohd, 2014) and economic factors (sources of income and household income) of the elderly are some of the factors contribute toward experiencing economic hardship among elderly. Within the context of Malaysia history, there were three main ethnic consist of Malay, Chinese and Indian reside in Malaysia. Malay is the largest ethnic group in Malaysia followed by Chinese and Indian. Each ethnic has its own sociocultural values that they protect such as religion, language, dress and food (Tey, Siraj et al., 2015). Bumiputeras (consists of Malay and indigenous people) elderly were the most common group entered the poverty, hence vulnerable to economic hardship compared with Chinese and Indian (Mohd, 2014). This might due to majority of Malay elderly live in rural areas compared to other ethnic which avoid them to expose toward economic opportunities. According to WHO study, Malaysian elderly living in rural areas experiencing greater financial hardship than elderly living in urban area (Shahar, Earland and Abd Rahman, 2001). Hence, possibilities for Malay elderly experiencing economic hardship compared to other ethnicities are higher. In term of living arrangement, elderly in Malaysia are commonly co-residing with their children and living in an extended family (Mohd, 2014). However, industrialization, urbanization and modernization nowadays had broken-down the extended families (Chan, 2006). The elderly that living alone or with spouse were prone to high cost of living and have the potential of living in poverty (Sherlock, 2000). Education also influences the economic hardship experience of the elderly. Prior study reveals that, elderly with lower education level have probability living in poverty (Mohd, 2014).

Economic factors such as sources and amount of household income also played an important role in effecting economic hardship of elderly. Prior study reveals that most of elderly received income from social income (e.g. children and relatives) followed by working income (Masud and Haron, 2014). Unfortunately, the numbers of children are getting fewer day by day. Thus, elderly have tendency to experience economic hardship if they solely depend on social income to support their life. Study by Hamid and Samah (2000) reveals that 10% of elderly living in Johor, Malaysia are found living with inadequate income to support their life. Despite living with inadequate income, elderly generally felt that they have enough income to support their life (Stoller and Stoller, 2003) even though their income are relatively low (Masud, Haron et al., 2006). Financial resources especially money are important as it will directly influence one's

purchasing power and wellbeing. In brief, social and economic factors are both played an important role toward experiencing economic hardship among elderly. Thus, this study attempt to examine social and economic factors namely; ethnicity, living arrangement, education, sources and amount of household income in explaining economic hardship.
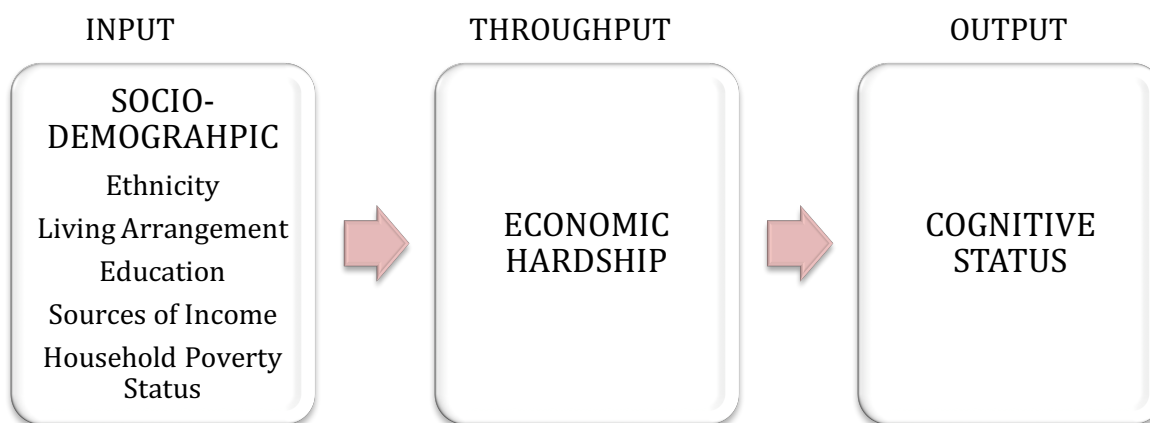
Cognitive State

Interest to study on elderly health is on the increase with increasing life expectancy. One of the important health issues on aspect of wellbeing is cognitive health (Oxley, 2009). It is critical to study elderly cognitive state because it could affect elderly quality of life (Fillit, Butker et al., 2002). According to Fors, Lennartsson and Lundberg (2009), cognitive health of elderly can weaken due to the normal process of aging or pathological changes. Example for pathological changes that can contribute toward elderly cognitive impairment is dementia (Sherina, Rampal and Mustaqim, 2004). Dementia could cause the memory disturbance and behavioral changes for elderly such as depression (Sherina, Rampal and Mustaqim, 2004) and will eventually effecting their wellbeing in late life.

However, Kiely, Leach et al. (2015) stated that the risk on having cognitive impairments also greater if they experience hardship. The hardship experiences by an individual are consistent with age (Butterworth, Rodgers and Windsor, 2009). It means that the older a person become the more hardship they will experience. Moreover, economic hardship are found to be one of critical stressor that effecting the quality of lives of an individual and families (Edin and Kissane, 2010; Seccombe, 2000). It is proven to be one of the factors related toward cognitive state of elderly (Stephens, Alpass and Towers, 2010). Study in UK revealed that economic inequalities experienced by elderly in UK due to working life could also affect their cognitive state (Chandola, Ferrie et al., 2007). Majority of them experienced it in early retirement age. On the other hand, study by Butterworth, Rodgers and Windsor (2009) on financial hardship, revealed that respondents with deprivation feeling and reported having cash flow problems have more potential to experience mental health problems than their counterpart. Human body function such as hearing, vison, movement and mental sharpness will slowly decreasing over time. Although the elderly health are known to be decreasing day by day, the hardship they experience in late life are afraid to be a factor that could trigger their cognitive impairment.

RESEARCH FRAMEWORK

The study adopted the **Family resource management model** proposed by Deacon and Firebaugh in 1981. This model was used to explained family and managerial concept. According to Deacon and Firebaugh (1981), family is viewed as a system. It consists of three major components; input, throughput and output. Inputs consist of demand and resources. The resources (social and economic) will be used to meet the needs of older person. The socio-demographic background such as ethnicity, living arrangement and education will have an effect on the ability to meet daily needs. Availability of income (sources and amount) will determine older persons' ability to obtaine goods and services. Lack or excess to economic resources may hinder older persons' ability to meet their needs hence experiencing economic hardship. The economic hardship experience will eventually leads toward worry, stress or depression which in the long run eventually may affect their cognitive status. Lastly at the output level, economic hardship experienced by elderly could influence the cognitive states of elderly. Cognitive impairment is selected to be representing the output of the model. Figure 1 explained research framework of the study.

INPUT	THROUGHPUT	OUTPUT
SOCIO-DEMOGRAHPIC Ethnicity Living Arrangement Education Sources of Income Household Poverty Status	ECONOMIC HARDSHIP	COGNITIVE STATUS

THE DATA

The data for this study were obtained from the project entitle 'Identifying Psychosocial Risks and Quantifying the Economic Costs of Age-Related Cognitive Decline among Older Malaysians' funded by Malaysia Government long term grant scheme (LRGS) in 2015. The study was conducted in Perak, Johor, Kelantan and Selangor states with the highest percentage of older persons in Malaysia. The respondents comprised of older persons age 60 years old and above. Multi-stage stratified random sampling was used to select the samples. A total of 2321 respondents involved in this study. Data were collected by trained enumerators through face to face interview. Economic hardship scale was developed through focus group discussion among older Malaysian. The scale comprised of a total of 11 statements with three choices of answer which are ever, never and not relevant. The economic hardship scale captured the economic hardship situations experienced by elderly in the past six months which includes situations with no money to obtain their wants and needs and depending on other people. Those ever experienced any one of the 11 statements listed were considered to be experiencing economic hardship. Cognitive impairment was measured using Mini-Mental State Examination (MMSE). This scale measured the cognitive function among elderly. The MMSE, comprised of six sections namely; time orientation (score 0 to 5), place orientation (score 0 to 5), memory registration (score 0 to 3), attention or concentration (score 0 to 5), memory (score 0 to 3) and language (score 0 to 9). The total score ranging from zero to thirty were regroup into four levels; severe (total score of less than 10), moderate (10 to 18), mild (19 to 23) and normal (more than 24). Binary logistic regression and chi-square analysis were used in the data analysis. The dependent variables for binary logistic regression was economic hardship while independent variables were ethnicity (Malay and Non-Malay); education level (no schooling; primary; and secondary and higher), living arrangement (living alone and living with other people), sources of income (income received from work related and social) and household poverty status (poor and non-poor). Income from work related were wages, businesses and agricultural. Meanwhile social related income were income received from transfer such as children's remittance and welfare assistance. Household poverty status were divided into two categories based on Malaysia poverty line in general for Peninsular Malaysia (EPU, 2014). Respondents with household monthly income less than RM930 were considered poor household while respondents with household income more than RM930 were considered non-poor household. For ease of interpretation for independent variables, all odds ratio with negative beta (B) will be inversed by using formula of 1 divide by odds ratio.

RESULTS
Socio-economic Background of Respondents
The background of respondents is shown in Table 1. Majority of respondents in this study were Malay (62.3%) while the rest are all non-Malay. This reflect the general trend in population structure of the country. Most of the respondents co-reside (65.8%) and 34.2% were living

alone or with spouse. More than half of the respondents had only up to primary schooling (55.3%) followed by secondary and higher (23.6%). There were 21.1% respondents' with no schooling.

Respondents in this study were mostly receiving income from social sources (52.9%) such as children's remittance and welfare assistance. Less than half (44.3%) received income from work related sources such as wages, business and agriculture. Majority of respondents (55.9%) were living in household with income below poverty line (general poverty line in peninsular Malaysia is RM930) (EPU, 2014). Consequently, less than half of the respondents were living in a non-poor household (44.1%).

Table 1: Socio-Economic Background of Respondents

Variables	N	%
Ethnicity		
o Malay	1447	62.3
o Non-Malay	875	37.7
Living Arrangement		
o Alone or With spouse	795	34.2
o With Others	1527	65.8
Education		
o No Schooling	490	21.1
o Primary	1283	55.3
o Secondary and Higher	549	23.6
Sources of Income		
o Social	1205	53.0
o Working	1008	44.3
HH Poverty Status		
o Poor	1269	55.9
o Non-Poor	1001	44.1

Economic Hardship experienced by elderly
The economic hardship in this study was measured to capture the elderly experienced resulted from lacks of economic resources. Table 2 shows the economic hardship experienced by elderly by their socio-economic background. Economic hardship experienced by elderly were different based on their ethnicity, education level and household poverty status. More Malay elderly reported experienced economic hardship compared to non-Malay elderly. Malay or Bumiputras are known to be vulnerable toward poverty compared to other ethnic (Mohd, 2014). Thus, they have probability of experiencing economic hardship due to insufficient money. Elderly living with others were reported to experience economic hardship more than elderly living alone or with spouse. Elderly living with other people in the household need to

consider other people before obtaining what they want. Limited resources also need to be shared with younger family members. Thus, they may experience the pressure which consequently increasing possibilities of experiencing economic hardship. Higher percentages of elderly with lower education level (no schooling and primary) experienced economic hardship than elderly with secondary or higher education level. In line with previous study, an improved of education were found to increase an individual quality of life (Winters, 2011). Elderly living in poor household are reported experiencing economic hardship than elderly living in non-poor household. Poor household could be the obstacle for elderly to obtained their wants and need which leads toward economic hardship.

Table 2 : Result on chi-square analysis on Socio-economic Background and Economic Hardship

Variables	Economic Hardship		Chi-square
	Yes	No	
	N (%)	N (%)	
Ethnicity			
Malay	349 (24.1)	1098 (75.9)	χ^2 =36.622
Non-Malay	120 (13.7)	755 (86.3)	df= 1
			Sig-p=.000
Living Arrangement			
Alone or with spouse	156 (19.6)	639 (80.4)	χ^2 =.248
With others	313 (20.5)	1214 (79.5)	df= 1
			Sig-p=.618
Education			
No Schooling	130 (26.5)	360 (73.5)	χ^2=35.889
Primary	273 (21.3)	1010 (78.7)	df= 2
Secondary and Higher	66 (12.0)	483 (88.0)	Sig-p=.000
Household Poverty Status			
Poor	337 (26.6)	932 (73.4)	χ^2=61.019
Non-poor	132 (13.2)	869 (86.8)	df= 1
			Sig-p=.000

Cognitive status of elderly

Table 3 shows that elderly cognitive impairment were differ by ethnicity, education level and household poverty status. The study revealed that more than half (54.7%) of Malay elderly had cognitive impairment (severe, moderate and mild). Contrary, majority of non-Malay elderly in a normal cognitive state (57.8%). There were no differences in cognitive status between elderly living alone or with spouse and living with others. Among those experiencing cognitive impairment, majority of the elderly were not having formal schooling (73.6%) compared to respondents with primary (50.1%) or secondary and higher education level (29%). Living conditions also played an important role in elderly cognitive status. Majority of elderly living in poor household (58.6%) reported having cognitive impairment compared to elderly living in non-poor household (38.9%). It can be concluded that elderly who are Malay, having no formal schooling and living in poor household condition have high tendency to experience cognitive impairment.

Table 3: Result on chi-square analysis on Socio-economic Background and Cognitive Status

Variables	Cognitive Status				Chi-square
	Severe	Moderate	Mild	Normal	
	N (%)	N (%)	N (%)	N (%)	
Ethnicity					
Malay	24 (1.7)	260(18.2)	497(34.8)	646(45.3)	χ^2 =41.64
Non-Malay	24 (2.8)	106(12.3)	234(27.1)	498(57.8)	*df* = 3
					Sig-*p*=.000
Living Arrangement					
Alone or with spouse	18 (2.3)	123(15.7)	259(33.0)	384(49.0)	χ^2 =.98
					df = 3
With others	30 (2.0)	243(16.1)	472(31.4)	760(50.5)	Sig-*p*=.805
Education					
No Schooling	26 (5.4)	163(33.8)	166(34.4)	127(26.3)	χ^2=290.64
Primary	16 (1.3)	173(13.7)	444(35.1)	633(50.0)	*df* = 6
Secondary and Higher	6 (1.1)	30 (5.5)	121(22.4)	384(71.0)	Sig-*p*=.000
Household Poverty Status Poor					
Non-poor	26 (2.1)	268(21.3)	442(35.2)	520(41.4)	χ^2 =100.32
	18 (1.8)	95 (9.6)	272(27.5)	604(61.1)	*df* = 3
					Sig-*p*=.000

Factors Explaining the Likelihood of Respondents Experiencing Economic Hardship
Binary logistic regression was conducted to determine the likelihood of experiencing economic hardship by ethnicity, living arrangement, education level, sources of income, household poverty status. The result of the analysis is shown in Table 4. The model was statistically significant χ2 (7, N=2270) =163.067, p <.001. The model can significantly distinguish between elderly experiencing economic hardship and those who did not experience economic hardship. The Nagelkerke R^2 score was 0.108 while Cox and Snell R^2 score was .069. Four predictors (ethnicity, income from working, household poverty status and education level) significantly contribute toward explaining the model.

The first significant predictors for economic hardship was ethnicity with odds ratio of 2.21. The data showed that the Malays elderly had 2.21 times more likelihood of having economic hardship compared to Non-Malay elderly. This result is in line with Mohd (2014) which stated that Bumiputras elderly in Malaysia (consist of Malay and indigenous people) are the most vulnerable group to enter poverty.

The second significant predictor was education level. Elderly with no education had 1.56 times more likelihood of experiencing economic hardship than elderly with secondary or higher education level. The result revealed that elderly with higher education level has less likelihood of having economic hardship. Better educational achievement are already proven to be the ticket for an individual to obtained better income which help them avoiding the poverty (Mohd, 2014). Household poverty status was found significantly contribute toward explaining economic hardship.

Elderly sources of income significantly explain economic hardship. Elderly with no work related income were 0.96 time more likelihood of experiencing economic hardship than elderly who received income from work. The data reveal that elderly who work have lower risk of experiencing economic hardship. Study by Sherlock (2000) also reveal that the elderly who have reduced capacity of income generation or did not work will leads toward poverty. Elderly are known to receive lower income compared to younger people (Behanova, Katreniakova et al., 2015). This is due to the retirement (Masud, Haron et al., 2006) which lessen their amount of income received. Consequently, the elderly were more prone toward poverty compared to younger people. Elderly living in a poor household were 1.79 times more likelihood of experiencing economic hardship compared to elderly living in a non-poor household. Non-poor household was expected to be able to fulfilled basic daily needs of the members including older person. In contrast, those living in poor household may experience difficulty in meeting basic needs.

Though living arrangement has been recognized to have influence on the wellbeing of elderly (Zhang, 2015), living arrangement did not significantly contribute toward economic hardship. The data show that the economic situations of the household is more critical in explaining economic hardship compared to living arrangement.

Table 4: Factors Explaining the Likelihood of Respondents Experience Economic Hardship

Variables	Economic Hardship			
	B	SE B	Sig	Odds Ratio
Ethnicity (Ref: Non-Malay)	0.793	0.121	0	2.211
Living Arrangement (Ref: With others)				
🎬Alone or with spouse	-0.081	0.115	0.48	0.922
Education (Ref: No schooling)				
🎬Primary	-0.166	0.129	0.199	0.847
🎬Secondary and Higher	-0.447	0.181	0.014	0.64
Sources of Income				
🎬Social (Ref: No)	-0.419	0.244	0.085	0.658
🎬Working (Ref: No)	-1.184	0.255	0	0.306
HH Poverty Status (Ref: Poor)				
🎬 Non-Poor	-0.579	0.123	0	0.56
χ^2	163.067			
Df	7			
Cox and Snell	0.069			
Nagelkerke R^2	0.108			

Association between Economic Hardship and Cognitive Impairment
An older person experienced economic hardship when he or she unable to meet basic daily needs. Such experience can cause worry, stress or depression which consequently may affect their cognitive status. Table 5 showed descriptive results of MSSE scale items and economic hardship; and chi-square analysis between cognitive status and economic hardship. The table

clearly shows that the mean score for MSSE scale that differ significantly were attention or concentration and memory. Higher proportion of elderly who did not experienced economic hardship had high attention or concentration and good memory. It is explained that both attention or concentration and memory are an important traits that will help elderly in managing themselves economically to avoid economic hardship. The chi-square analysis indicated that there was a significant difference in cognitive status among those experiencing economic hardship and those who did not experience economic hardship (χ^2 = 53.818, p=.000). Majority of elderly with economic hardship were having cognitive impairment (severe, moderate and mild) rather than normal state of cognitive. Almost two third (63.1%) of elderly who experienced economic hardship reported having cognitive impairment (severe, moderate and mild). In line with the study, Stephens, Alpass and Towers (2010) also found that social factors such as economic hardship had an effect on mental health of the elderly. An individual with financial hardship tend to suffer cognitive impairment due to exposure on financial stressors such as difficulty in paying bills and fulfilling their wants and need (Bradshaw and Ellison, 2010). The cumulative stress experiencing by elderly can eventually effecting cognitive function in short and long term (Scott, Graham-Engeland et al., 2015). Thus, older person should have sufficient economic resources to avoid them from experienced economic hardship which eventually may effect their cognitive impairment.

Table 5: Result on chi-square analysis on Economic Hardship and Cognitive Status

	Economic Hardship	
	Yes (n=469) Mean	No (n=1853) Mean
Cognitive State (MSSE Scale)		
Time Orientation	4.056	4.367
Place Orientation	4.598	4.699
Memory Registration	2.927	2.906
Attention or Concentration	0.780	0.870
Memory	0.631	0.716
Language	0.994	0.999
Cognitive State (MSSE Score)		
Severe	0.030 (3.0 %)	0.019 (1.9 %)
Moderate	0.25 (25.0 %)	0.137 (13.7 %)
Mild	0.352 (35.1 %)	0.311 (31.1 %)
Normal	0.369 (36.9 %)	0.533 (53.3 %)
Chi-Square	χ^2 =53.818 *df* = 3 Sig-*p*=.000	

CONCLUSIONS

This study examines the factors that contribute toward economic hardship and its effect toward cognitive impairment of elderly. The study found that several social and economic factors such as ethnicity, education level, work related income and household poverty status contributed toward explaining economic hardship among elderly. Elderly who are Non-Malay, had secondary or higher education level, non-poor and received income from working were reported to experience less economic hardship than the counterpart. The results showed that these factors significantly determine an elderly economic hardship. Looking at relationship between economic hardship and cognitive impairment, it reveals that elderly with economic hardship were suffering severe to mild cognitive impairment. Even though results showed that some elderly with economic hardship have normal cognitive, the percentage was smaller than elderly with severe, moderate and mild cognitive impairment. Hence, it can be concluded that

economic hardship could be one of the factor that accelerates cognitive impairment of elderly. With increase longevity and decline in human body functioning, it may leads to more year's unhealthy life for elderly. Thus, it is important for an individual to prepare themselves economically before they entered retirement age in order to lessen the potential of experiencing economic hardship which may lead to cognitive impairment in late life. Finding from this study, provide some evidence on the relationship between economic hardship and cognitive impairment which becoming an increasing concern among elderly. Therefore, it is belief that this finding provided intial findings on the consequence of economic hardship on cognitive status of elderly particularly in Malaysia. Further study which focus on psychological aspects should be conducted in near future.

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The Odd Couple Revisited: A Quantitative Analysis of Perceived CFO – CEO Relationships in SDA North American Division Conferences

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ABSTRACT

Historically, CFOs and CEOs functioned in their own office silos, however, changes in how CFOs and CEOs relate to and work together in their organizations occurred due to the impact of Sarbanes-Oxley Act. The purpose of this paper is to examine CFO-CEO relationship data collected from SDA Conferences in North America utilizing Descriptive Statistics, ANOVAs and Chi-Square Analysis.

KEYWORDS: Board Governance, CEO (Chief Executive Officer/President), CFO (Chief Financial Officer/Treasurer), Executive Board, General Conference (GC), leadership, North American Division (NAD), perceptions, CEO-CFO relationships, Sarbanes-Oxley Act, SOX, SARBOX, Seventh-day Adventists (SDA)

INTRODUCTION

According to Ode (2016), the CEO is the leader of the organization; whereas the CFO, in most organizational sectors, is considered as the second in command to the CEO (Whiteman, 2015). The operational efficiency (Lin and Orvis, 2016) and effectiveness (Glamuzina, 2015; Kerns, 2015; Taylor, Cornelius and Colvin, 2014) of the organization; in addition to the financial well-being (Moulton, 2016) and overall health of the organization is contingent upon how good the relationship is between the CEO and CFO (Grove, 2016).

Historically, Chief Financial Officers (CFOs) and Chief Executive Offices (CEOs) have functioned in their own office silos tending to co-exist in the organization out of functional necessity rather than partnering cooperatively. However, in an effort to minimize corporate fraud, protect company assets, and improve financial reporting and board governance the Sarbanes-Oxley Act of 2002 was legislated (Franklin, 2016; Aquilio, 2016; Joseph, 2015). The impact of this act has broken the CEO and CFO office silos; regulated CEO/CFO and Board organizational accountability (Krishnan, Gopal, Raman, Yang and Yu, 2011), and has fostered a more strategic partnership between the CEO and CFO (Butcher, 2011; M2 Presswire, 2012/Sept.).

CFO and CEO Relationship: Adventist Context

The global growth of the Seventh-day Adventist Church as a financial organization (Adventist World – NAD 2013, p. 5) has impacted how CEOs (Presidents) and CFOs (Treasurers) within the organization relate to each other as conference leaders. While the NAD Working Policy (2015-2016) and SDA Accounting Manual (2011) highlights the CEO (President) and CFO (Treasurer) functional positions and expected relationships with each other; uncertainty may

exist pertaining to the extent of their relationships in terms of operating efficiency, effectiveness and positivity in their respective conferences.

As with various business and organizational sectors, SDA local conferences are also significantly influenced by changes occurring in our global environments and societies. Positive CEO and CFO relationships must be encouraged and nurtured. However, it is not clear whether the expectations (Buckingham and Coffman, 1999) and perceptions pertaining to the relationships of CEOs and CFOs in SDA local conferences are clearly articulated and understood by conference leadership which may negatively impact the relationship between the CEO and CFO.

LITERATURE
Organizational Effectiveness and Efficiency
Organizational policies, procedures, values and interpersonal treatment enhance managerial effectiveness of managers leading to positivity and productivity in organizations (Malbasic, Marimon and Mas-Machuca, 2016; Srivalli and Kota, 2016; Rangriz and Soltanieh, 2015; Yildiz, 2014). Organizational effectiveness and efficiency primarily depends upon an executive's leadership style inclusive of transformational and visionary leadership (Taylor, Cornelius and Colvin, 2014; Walter, 2014). Organizational effectiveness and efficiency examines and measures the relationship between management evaluations, employees performance and working towards the objectives, goals and mission of the organization (Horne, 2016; Lin and Orvis, 2016; Salhieh and Abu-Doleh, 2015)

Organizations influence employee behavior in an effort to assist them in understanding their responsibility in contributing to and improving the overall effectiveness and efficiency of their organization. In other words, their task significance and how it impacts the organization (Glamuzina, 2015).

CEO/CFO and Organizational Effectiveness and Efficiency
A crucial responsibility of the CEO, as the leader of the organization (Ode, 2016) and CFO is to foster and facilitate a good and healthy working relationship with each other (Baker, 2016; Grove, 2016; Caruso, 2015). They must serve and work together as partners providing support, leadership and encouragement not only to one another and the leadership team, but also to all employees to ensure that the organization is fulfilling its mission and achieving its performance and productivity goals (Schiff, 2016). There should be authentic and open communication (Vercic and Zerfass, 2016) between the CEO's and CFO's office. Within an organization they cannot operate independently of each other, or in silos if they want to achieve success for their organization. The primary concern for these officers should be every aspect of what is happening internally in the organization as well as the external environment; especially in the aspect of organizational effectiveness and efficiency.

METHODOLOGY
A mixed methods research design (Creswell, 2014) was used in this study. Creswell (2003) "defines mixed methods research by incorporating the definition that focuses on collecting and analyzing both quantitative and qualitative data in a single study" (p. 210). A sequential exploratory design involving qualitative (Eriksson and Kovalainen, 2008; Nardi, 2003) and quantitative (Elsbach and Bechky, 2009) methods was utilized in the collection and analysis of the data collected from a purposeful sample of N=399 at fifty-seven SDA Local conference throughout North America (Bermuda, Canada and USA). The primary focus of this paper is quantitative pertaining to the study topic. ANOVAs, Likert Scale and Student-Newman-Keuls

Post-Hoc Test were the primary statistical analysis used for each of the survey questions pertaining to the treasurer's relationship to the president.

RESULTS

Research Question 1b

Is there congruence between the perceptions of the presidents, treasurers and executive board members as they relate to the way the roles, responsibilities and relationships of the treasurers have changed?

The results summary of question 1b pertaining to the treasurer's relationship with the president is presented with the means for the individual groups (presidents, treasurers, and board members). It should be noted that the Likert Scale used ranged from 1 (strongly disagree) through 5 (strongly agree). The higher the mean score, the more respondents agree with the survey questions.

Individual Group Means for the Treasurer's Relationship to the President

Questions of Treasurer's Relationship to Presidents		Presidents	Treasurers	Board Members
21	Relationship of treasurer changed from past, present, future.	3.63	3.62	3.68
22	Relationship is more a partnership and team.	4.34	4.08	4.18
23	Treasurer to support president regardless of outcomes.	1.97	2.38	2.02
24	Time spent together enhances working relationship.	4.31	4.03	3.74
25	Communication is essential in building trust.	4.74	4.69	4.62
26	Conflicts and disagreements are expected.	3.34	3.34	3.36
27	Unified front in public is expected.	4.06	4.18	3.87
28	Treasurer should relocate if unable to work with president.	2.97	2.97	2.75
29	A treasurer acting independently in decisions is divisive.	4.34	4.13	4.23

IMPLICATIONS

In summary, the three groups (presidents, treasurers and board members) tended to be congruent regarding the treasurer's relationship to the present. The one question (#24) where a significant difference between the groups of presidents and board members at the .05 level existed involved whether treasurers and presidents spending time together enhance their working relationship.

The total group's response indicates that it is essential for treasurers and presidents to spend time together, trust each other, and support each other to establish and maintain an effective working relationship.

CONCLUSIONS

Effective and viable CEOs and CFOs relationships significantly impact the organization's human resources and its operational climate and culture. Therefore, it's essentially critical that these relationships be maximized in the most positive and productive manner for the well-being of the conference and its subsidiaries and stakeholders. This leadership objective between the CEO and CFO would also promote an environment of effectiveness and efficiency in the overall organizational performance in a sustainable manner that would be very meaningful to all the

conference stakeholders, and of greater importance in reflecting the church mission and modeling as the Body of Christ.

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The Effect of Motivational Entrepreneurship on Business Performance of SMEs Moderated by Process Innovation.

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ABSTRACT

This study aims to determine the effect of motivational entrepreneurship to the innovation process and the performance of entrepreneurs. The population in this study are two centers of business in Bandung: Sentra Rajut Binongjati (the knitting business center) and Sentra Kaos Suci (the t-shirts business center). The samples in this study are 154 SMEs owners. Data analysis techniques use Partial Least Square - Structural Equation Modeling. The results show that motivational entrepreneurship which consists of achievement motivation, risk propensity, and self-efficacy have significant effects either on the innovation process and the business performance. It indicates that the achievement motivation, willingness to take risks and self-efficacy can generate innovation processes and improve business performance.

Keywords: Achievement motivation; Risk propensity; Self-Efficacy; Innovation; Performance; SME.

INTRODUCTION

The role of entrepreneur has two approaches, such as micro and macro. In micro approach, the roles of an entrepreneur are as inventor and planner. As an inventor, entrepreneur discovers and create something new. Meanwhile, as a planner, entrepreneur act as a designer of new action and effort, plan new business strategies, plan ideas and opportunities for success, create new organizations, and many others. [1] In macro terms, the role of an entrepreneur is to create prosperity, equity of wealth, and job opportunity that serves as the engine of economic growth of the country. [2]

In general, SMEs in Bandung deals with some problems such as business competition, access to the capital, infrastructure, cost access to the raw materials, weather, marketing and technology [3,4] needs knowledge, ability, and willingness to gain the success of a business. Definitely, it also needs the creativity to produce innovation that leads to competitiveness. Study by [5] proves that the ability of innovation has a positive effect on business performance. The same study [6] proves that innovative products have a significant effect on business performance in 5 (five) cities in Indonesia such as Solo, Sukoharjo, Jepara, Klaten, and Magetan. Therefore, some efforts to maintain business continuity and success in industrial activities can be accomplished by several strategic approaches: be objective, make it simple, focus on profitable markets, develop marketing plans, manage the labor effectively, create clear financial records, appreciate the cash money, avoid the repeated traps, and understand the entire business phases. [7] Development in entrepreneurship is related to creativity and innovation, which includes product research and development, price, place, and promotion. SMEs can grow and succeed because they have sufficient capability to create products and high-quality services and excellent in the market.

Innovation is a public pressure's desired result to change the performance of private organizations and public organizations. This is related to the expected better service. It is

based on the effectiveness and efficiency. It becomes a necessity for businessmen to produce a better service - this is related to the main element of the entrepreneur. [8] The concept of innovative behavior model based on the opportunities, its resources and producing a possible action. [9] According to [10] the success of an entrepreneur is determined by innovation which ultimately can improve business performance.

Entrepreneurship Empowerment, closely related to the life and welfare improvement for local development by exploring the strategic potentials owned by SMEs. [11] In addition, the potential and role of entrepreneurship have proven to be resistant to various economic crises. SMEs' motivation of is an internal factor that is contained in the entrepreneur of MSMEs. Internal factor is the most dominant factor in influencing the business performance of SMEs. The internal factors from the internal company tend to be changed by businessmen which include resource availability, personal skills, entrepreneurship ability and ability to use internal resources effectively. [12] It is apart from the businessmen' demographic characteristic factors, human resources, and business experience. The external environment is the environment outside the organization. There are two perspectives to conceptualize the external environment. First, it is a perspective that views the external environment as a vehicle that provides resources. Second, the perspectives look at the external environment as a source of information. The first perspective is based on the premise that the external environment is a vehicle that provides a vital resource for the survival of a company. This perspective also contains the potential external that threaten the company's internal resources. Strikes, deregulation and some changes in legislation, potentially undermine the company's internal resources. The second perspective connects information with environmental uncertainty. Environmental uncertainty refers to external environmental conditions that are difficult to forecast changes. This is related to the ability of organizational members in decision making.

The increasing competitiveness of SMEs to produce good performance can be done by improving the quality of its internal human resources. This is due to the problems and challenges faced by SMEs need serious attention towards the impact of the high level of competition that can be overcome. The entry of imported goods from China due to the ASEAN-PRC (ASEAN) trade agreement with low prices also poses a threat to SMEs as well as the MEA agreement. [12] External problems which affect the businessmen need to be balanced by increasing their capacity and capability in enhancing competitiveness, performance, innovation, and business creativity in order to maintain and seek new markets that need to be improved and to create competitive advantage without degrading product quality. Business competitiveness can be enhanced by innovation processes so that they are able to meet customers' needs. [13]

[14] stated that motivation is a psychological process that evokes and directs behavior toward goal achievement or goal-directed behaviors. [15] argue that motivation is a process that plays a role in the intensity, direction, and duration of individual efforts toward achieving goals. Similarly [16] provide a definition of motivation as a force within the individual that influences the voluntary direction, intensity, and persistence of behavior. Intensity is related to how hard someone tries. This is the element that gets the most attention from us when it comes to motivation. Thus, it can be said that motivation is a boost to a series of processes of human behavior on achieving the goals. In motivation, there are some elements such as generating, directing, maintaining, showing intensity, continuing and having a purpose. McClelland [12] states, one of the individual encouragement to produce individual performance is the need for achievement. The drive for achievement is the desire or determination to work well or exceed the standard of achievement. The standards may become from self-achievement in the past (improvement); objective measures (results orientation); exceeding the others

(competitiveness); challenging goals; or something that others have not done (innovation). This shows the drive to act better and more efficiently. There is an individual desire for making a significant achievement, mastering skills, controlling, or having high standards. Study by [17] prove that the ability possessed by SMEs can improve business performance. Results of research conducted by [18] prove that the desire for achievement is a strong predictor of business performance.

The courage to take risks is closely related to the courage to take risks due to the uncertainty in the business. This is related to the opportunities taken by the businessmen that will be implemented into a new thing. Research by [19] prove that the courage to take risks in business can be one factor of business success. Similar with [20] the research proves that the courage to take risks relates to business decisions and behaviors. The process of innovation can be obtained by having the courage to deal with risk failure in realizing the new ways for business performance. The new way is a process innovation that can enhance a company's ability to succeed in business competition. [21]

Self-efficacy relates to someone's ability to perform tasks. According to [22] self-efficacy relates to individual perceptions in relation to the possessed ability in completing the task. When the existence of self-efficacy associated with businessmen, it will result in self-confidence in completing business goals which have connections with the uncertainty in the future. Uncertainty about the gained outcomes requires certain self-beliefs and competencies related to improving business performance. [23] The feelings of individual abilities will affect their perceptions, motivations, and performance. Learning makes someone able to increase knowledge, skills and positive behavior. [24] Learning outcomes can generate creative power by creating new processes in the business. Thus, effectiveness and efficiency can be achieved. The newness in the business process is expected to improve business performance and self-efficacy affects performance. [25] Also [26] prove that self-efficacy has a positive effect on performance.

Based on the background of the problems and the important role of SMEs, it is necessary to know the influence of entrepreneurship motivation to the process innovation and business performance. The purpose of this study is to determine the magnitude of entrepreneurial motivational influences that include achievement motivation, the courage to take risks and self-efficacy toward the process innovation and business performance. The results of the study are expected to contribute to the performance of businessmen as well as the development of science, especially in entrepreneurship.

METHODS

This research uses the exploratory method. It makes a picture about situation or phenomenon which is meant for causal-predictive analysis. The population of this research is businessmen in two industrial clusters in Bandung, Sentra Industri Rajut, and Sentra Industri Kaos. The sampling technique using purposive sampling on the entrepreneur of SMEs in which based on several criteria that are; 1) Business Owners, 2) Willing to fill out questionnaires distributed by researchers, 3) Minimum sample 10% of total population. Based on the primary data, the obtained population data is 1.300 businessmen. The number of respondents taken as a sample is 154 businessmen. The method of data collection was done by distributing questionnaires directly to the respondent in accordance with sample criteria that have been set. The research instruments for achievement motivation variable adopt the instrument from [27] which has been validated by [28]. The instruments consist of 5 items. Moreover, the variables of risk propensity adopt a General Risk Propensity (GRP) instrument that has been validated by [20].

They consist of 4 instruments. The self-efficacy variables are adopted from [29] consist of 6 instrument indicators. Variable instruments of process innovation are adopted from [21] with 6 instruments. Meanwhile, the business variables are adopted from [30] consist of 6 instruments.

DATA ANALYSIS

Data analysis is done to describe the research result about motivation factors of SMEs in Sentra Kaos Suci and Sentra Rajut Binongjati Bandung. The data processing the WarpPLS 5.0 software. Operational variables in this study are motivational variables of entrepreneurship innovation and business performance that include; Achievement motivation (ARC), risks propensity (RP), self-efficacy (SE), innovation (INNO) and business performance (Perform). The research instrument uses Likert scale technique. Data analysis techniques use Structural Equation Modeling (SEM), component based Partial Least Squares (PLS). Partial Least Squares (PLS) modeling is based on predictions that have non-parametric properties. The test is performed on the outer model by testing the validity through convergent validity, discriminant validity and average variance extracted (AVE). The structural model is evaluated by model uses path coefficients criterion for construct and t-test and significance of structural path parameter. [31]

DISCUSSION

The respondent's characteristics consist of 65% men, with mostly 46% aged 30-40 years. Moreover, the age of business is 67% between 0-5 years. Data analysis is done by entering all data of respondent and testing convergent validity, discriminant validity, and significance test. The calculation results show all indicators show the loading value of> 0.5. Outer model test results show that the convergent validity, discriminant validity and significance test and outer test model meet all requirements as shown in Table 1 and Table 2, as follows;

Table 1. Indicator variable research

Indicators	Achievement	Risk Propensity	Self Efficacy	Innovation	Performance
Ach_1	0.687				
Ach_2	0.742				
Ach_3	0.701				
Ach_4	0.680				
Ach_5	0.735				
Risk_1		0.800			
Risk_2		0.733			
Risk_3		0.770			
Risk_4		0.763			
Self_1			0.533		
Self_2			0.635		
Self_3			0.726		
Self_4			0.684		
Self_5			0.579		
Self_6			0.560		
Ino_1				0.652	
Ino_2				0.678	
Ino_3				0.605	
Ino_4				0.868	
Ino_5				0.663	
Ino_6				0.773	
Kin_1					0.510
Kin_2					0.599
Kin_3					0.738
Kin_4					0.588
Kin_5					0.746
Kin_6					0.700

Table 2. Value of discriminant validity

Variables	Achievement	Risk Propensity	Self Efficacy	Innovation	Performance
Achievement	0.709				
Risk Propensity	0.047	0.767			
Self Efficacy	0.106	0.023	0.596		
Innovation	0.144	0.099	0.247	0.705	
Performance	0.370	0.309	0.265	0.326	0.653

Table 3. Composite Reliability, Average Variance Extracted (AVE) and Cronbach Alpha

Variables	Composite Reliability	AVE	Cronbachs Alpha
Achievement	0.835	0.503	0.753
Risk Propensity	0.851	0.588	0.766
Self Efficacy	0.762	0.555	0.728
Innovation	0.854	0.597	0.793
Performance	0.814	0.526	0.726

Table 4. Results of Path Analysis and Significance Test

Path Analysis	*Path Coeffients*	P Values
Achievement -> Innovation	0.254	0.000
Risk Propensity-> Innovation	0.127	0.043
Self Efficacy -> Achievement	0.190	0.001
Achievement -> Performance	0.396	0.001
Risk Propensity -> Performance	0.328	0.001
Risk Propensity -> Performance	0.207	0.011
Innovation -> Performance	0.218	0.008

Table 5. R values of squares and R-squares adjusted.

Variables	*R squares*	*R squares adjusted*	P Values
Innovation	0.160	0.137	0.000
Performance	0.409	0.387	0.000

The results of the entire model of research variables are as follows;
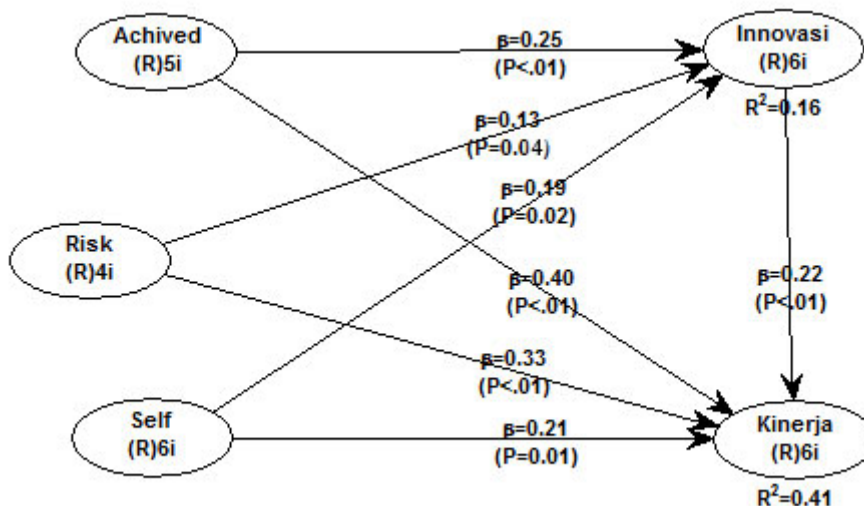

Figure 1. Results of Path Analysis

The picture above shows the results of research. It can be concluded that motivational entrepreneurship has a significant effect on innovation and performance. This is proven by the significant value below 0.05 for the achievement motivation, risk propensity and self-efficacy with the respective value, 0.01, 0.02, and 0.01. The results of this study are in accordance with research [6] which prove that the orientation of entrepreneurship has a significant effect on product innovation. The research of [12] also proves that motivational entrepreneurship has a significant effect on the business performance.

Motivational variables of entrepreneurship can improve the ability of process innovation and business performance. This is in accordance with [32] that state motivation is a series of forces that result in certain behaviors. To achieve high performance one must be willing to do something (motivation), must be willing to do the job effectively (ability) and have the material, resources, equipment and information to do the job. Mc. Clelland [12] states that there is a positive influence between motivation and individual performance. The higher the individual motivation for achievement, it will be easier in achieving maximum performance.

Motivational entrepreneurship is directly related the goal. In this case, it is the business objectives in order to improve the business performance of the entrepreneurs either directly or indirectly through process innovation. Motives of achievement, risk propensity, and self-efficacy directly affect the improvement of business performance. Achievement motivation will encourage the businessmen of SMEs in improving their enthusiasm in trying, never giving up on circumstances, taking risks and always improving their performance from time to time tirelessly. These achievement motifs will ultimately result in maximum business performance. The courage to face the risk in improving their business performance through process innovation contributes significantly to take some risks in generating innovation process. Self-efficacy enables businessmen to increase their knowledge, skills and positive behaviors to produce process innovations that ultimately can improve business performance. This is in accordance with a statement from [33] that self-efficacy relates to self-belief, competence, and ability to perform tasks in order to achieve certain goals.

The effect of innovation on performance proved to be significant with the p-value 0.01. The results of this study support the innovation theory by Schrumpeter [34] which states that innovation as an product introduction or new product quality; Introduction of new production methods; This method is not always the result of major scientific discoveries, but can be the new ways to create products more efficiently; opening up a new market for a product; seeking new resources as raw materials for production, replacing existing resources; and creating new organizational structures at the industry level. The results of this study are in line with a research conducted by [6]. It proves that product innovation has a significant effect on the performance of SMEs in Central Java. Thus, it can be said that both product innovation and process innovation have a significant effect on the performance of SMEs. [2] suggest that innovation is the key to economic development of any organization and the structure of future development. Furthermore [35] states that when the company wants to produce extraordinary performance, then it is necessary to raise seven capitals including access to new ideas, role models, informal forums, special area opportunities, security networks, access to free markets and exclusive leadership. The company's capitals proposed by [35] implies that the role of creativity that can produce innovation is an important factor for the company's progress. This is relevant to SMEs' efforts to increase innovation in generating new processes resulting in optimum business performance. The new innovation process can drive business performance. It proves the new innovation process make the organizational process more effective and efficient.

CONCLUSION

Based on the results of the study, it can be concluded that motivational entrepreneurship has an influence on innovation and business performance. Similarly, the motivational variables of entrepreneurship and innovation have significant effects on the business performance. This indicates that the motivation factor of business including achievement motivation, courage to take decisions and self-efficacy contribute to the improvement of innovation and business performance. In addition, innovation variables contribute to improving business performance.

This shows that the improvement of business performance can be done by increasing innovation supported by achievement motivation, risk propensity, and self-efficacy.

The managerial for business implied by developing achievement motivation, willingness to take risks in connection with the opportunity and having the ability of self-efficacy that improve the ability to produce a new process. Ultimately, it can improve the business performance. This study has some flaws since it does not use control variables. It only uses small samples. It is expected that the future research will include control variables, the other variables which are considered influential and a wider sample.

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Ethical, Environmental, Social and Governance-oriented Investments June 2017

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ABSTRACT
In the aftermath of the 2008/9 World Great Recession, ethical investing blossomed as opportunity to imbue trust in the economy. The crisis aftermath offered invaluable opportunities to redefine social investment to strengthen a more sustained, inclusive and equitable society. The 2015 incepted Sustainable Development Goals spearheaded the idea of financing societal advancement. Ethical, Environmental, Social and Governance-oriented Investments are key to sustainable prosperity. In the wake of stakeholder activism and based on intrinsic socio-psychological motives, ethics, environment, social and governance roots in finance hold untapped opportunities of sustainable prosperity in the finance world and in the implementation of sustainable prosperity.

INTRODUCTION

In the aftermath of the 2008/9 World Great Recession, ethical investing blossomed as **opportunity to imbue** trust in the economy (Puaschunder, 2016c)**. The crisis aftermath offered invaluable opportunities to redefine social investment to strengthen a more sustained, inclusive and equitable society.** The 2015 incepted Sustainable Development Goals spearheaded the idea of financing societal advancement (Puaschunder, 2017c).

Ethical, Environmental, Social and Governance-oriented Investments are key to sustainable prosperity. In the wake of stakeholder activism and based on intrinsic socio-psychological motives, ethics, environment, social and governance roots in finance hold untapped opportunities of sustainable prosperity in the finance world and in the implementation of sustainable prosperity (Puaschunder, 2013, 2017b).

As an investment philosophy that combines profit maximization with social endeavors; SRI integrates social, environmental and financial aspects in investments (Livesey, 2002; Matten & Crane, 2005; Puaschunder, 2013; 2017b; Wolff, 2002). Socially conscientious investors pursue economic and social value maximization alike in social screenings, shareholder advocacy and community investing (Renneboog, Horst & Zhang, 2007; Schueth, 2003; Puaschunder, 2015c). Thereby SRI embraces a variety of stakeholders comprising economic, organizational and societal constituents.

In the age of climate change raising economic growth versus environmental protection predicaments, the time is ripe to pay attention to the history of allocating finance towards environmental, social and governance causes in order to retrieve success factors to align economic with greater societal goals. Studying the history of SRI and international practice of Financial Social Responsibility helps draw conclusions about the future potential of SRI in the era of global warming. Reflecting financial social conscientiousness through a historic lens allows deriving natural Financial Social Responsibility triggers and SRI success factors in order to aid the ongoing adoption of SRI around the globe.

History does not repeat itself but we can learn from it in current times of economic and environmental governance turmoil. Originating from religious and moral considerations, Socially Responsible Investment (SRI) evolved in the wake of sociopolitical deficiencies, legislative compulsion and corporate social responsibility. As part of human nature, social responsibility guides corporate activities and financial considerations. In the global rise of financial social conscientiousness, differing national legislations and regulatory traditions have led to various SRI practices, which are harmonized by the United Nations (UN) (Puaschunder, 2010). The societal demand for imbuing social responsibility in economic markets has risen steadily in recent decades due to globalization and socio-political trends. In the aftermath of the 2008/09 World Financial Crisis, the call for social responsibility in financial markets climaxed. The announcement of the recapitalization of the banking system in October 2008 created a need for reconsideration of social responsibility in a newly defined finance world. Novel sources of economic tension make ethical, environmental, social and governance-oriented investments appear as more stable investment option to deal with global imbalances and other structural problems.

The historic emergence of Financial Social Responsibility shows social conscientiousness to peak in the wake of socio-economic deficiencies, humanitarian downfalls and legislative compulsion, which provides a convincing case for the appreciation of the current crisis' role to ingraining ethicality in economic markets.

Social and ethical considerations in financial markets have a long tradition stemming from religious roots. The early beginnings of modern SRI are attributed to social responsibility concerns in the face of social, environmental and political deficiencies and humanitarian crises (Puaschunder, 2016c; Williams, 2005). In the post-World War II era, first financial social considerations ideas sparkled in the wake of legislative compulsion, information disclosure and governmental policies encouraging trustees' social responsibility (Solomon, Solomon & Norton, 2002; Sparkes & Cowton, 2004). During the 1960s stakeholder pressure and anti-Vietnam War movements alerted institutional investors to sell napalm-producing Dow Chemical shares (Biller, 2007). Civil rights campaigns and social justice initiatives opposed college endowments funding warfare. Minority empowerment, consumer rights activism and environmentalism sensitized for financial social conscientiousness (Renneboog et al., 2007; Sparkes, 2002). Since 1969 the Council on Economic Priorities rated corporate social and environmental performance. After a Yale conference introduced Financial Social Responsibility, universities established committees to advise trustees on social investment. Subsequently Methodist clergy created the PAX World Fund aimed at divestiture from Vietnam War supporters (Broadhurst, Watson & Marshall, 2003; Renneboog et al., 2007). The Dreyfus Third Century Fund opened the following year to avoid 'sin stocks' and improve social labor standards. By the mid-1970s, a significant number of governments had enacted shareholder rights to address corporate activities that caused 'social injury' and many universities established committees to advise trustees on SRI and shareholder rights. The Investor Responsibility Research Center (IRRC) and the Interfaith Center on Corporate Responsibility (ICCR) were launched to promote shareholder advocacy and proxy resolutions around the same time (Social Investment Forum Report, 2006). In 1972 activists criticized Harvard University for owning shares in petroleum corporations. Political divestiture became firstly discussed in the case of the Angolan repressive government (Alperson, Tepper-Marlin, Schorsch & Wil, 1991). In 1976 Reverend Leon Sullivan – a civil rights activist and director of General Motors – developed the Sullivan Principles to foster equal remuneration and workplace opportunities to empower minorities (Voorhes, 1999). During the 1980s political divestiture was practiced by US universities, investors, churches, city and state governments as

a means to dismantle the South African Apartheid regime featuring racial segregation and economic discrimination against non-European groups (Schueth, 2003; Soros, 2008). Environmental catastrophes in Chernobyl, Bhopal and the Exxon Valdez oil spill perpetuated shareholder activism. With the desire to set standards for corporate social engagement and environmentally conscientious conduct, social investors started positive screenings in the beginning of the 1990s. The Domini 400 Social Index institutionalized ratings of Standard & Poor's 500 (S&P) corporations. The microfinance revolution and the co-operative banking system further galvanized the idea of SRI (Brenner, 2001). The 2008/09 World Financial Crisis has put a novel perspective to the promotion of Financial Social Responsibility. Above the advancement of global governance goals through the engagement of financial markets, the idea of SRI began to offer the prospect of market stability and means to imbue trust in the post 2008/09 World Economy (Puaschunder, 2016c).

Within recent decades Financial Social Responsibility boomed in the wake of globalization and political trends. An unprecedented interconnectivity of globalized financial markets strengthened the societal role of financial institutions. Political libertarianism implicitly shifted social responsibility onto the private sector. Deregulated liberalization attributed a rising share of global governance onto financial markets. Financial social considerations leveraged into an implicit fiduciary responsibility (Solomon et al., 2002; Sparkes & Cowton, 2004). As social global governance increasingly entered financial markets since the turn of the millennium, a growing proportion of investment firms and governmental agencies around the world adopted a more socially conscientious investment philosophy (Knoll, 2008; McCann, Solomon & Solomon, 2003; Sparkes, 2002). Information disclosure on corporate social conduct in combination with benchmarking of corporate social engagement and governmental encouragement of trustees' social conscientiousness propelled SRI. Institutional investors concurrently used their clout to influence corporate conduct and actively demanded corporate governance reforms to act on societal and intergenerational concerns (Puaschunder, 2015b, 2017e).

The advanced consideration of Financial Social Responsibility by major institutional investors matured SRI from a niche market option that was offered by specialist retailers to a more mainstreamed asset allocation style (Mathieu, 2000; Sparkes & Cowton, 2004). SRI reached unprecedented diversity featuring a wide range of social engagement possibilities (Rosen, Sandler & Shani, 1991). As SRI gained in prominence and broadened in size, scale and scope; practitioners and academics started documenting state-of-the-art Financial Social Responsibility practices. Business professionals reported and analysts monitored social, ethical and environmental corporate performance. Social and environmental stock exchange rating agencies and certifications measured SRI impacts. Today the range of shareholder engagement possibilities is more sophisticated than ever and trends forecast a further maturation of SRI from a niche segment solution into a mainstream market feature. In the international arena, various SRI practices emerged concurrently as national rules and legal jurisdictions shape corporate and financial social conduct (Steurer, 2010). Legal boundaries guide financial considerations and institutional frameworks predestine Financial Social Responsibility practices (Reinhardt et al., 2008).

The beginning of the 21st century has proven to be a time of novel opportunities and unknown risks for corporate innovation, economic stability and human progress. With current trends predicting a polarization of either globalization or protectionism trends that play out in heightened environmental concerns in the light of climate change; global governance on sustainable finance must create a stable, competitive market economy whilst ensuring sustainable social development. Given this background, corporate and financial actors face

unfamiliar risks and unprecedented social responsibility demands (World Bank, 2015). In the light of these challenges, future research must address social responsibility as a world-wide societal phenomenon that is construed by human constituents and exogenous influences (World Development Report, 2015).

Socially conscientious asset allocation styles add to expected yield and volatility of securities social, environmental and institutional considerations (Puaschunder, 2017c). Altruism, need for innovation and entrepreneurial zest alongside utility derived from social status enhancement prospects and transparency may steer investors' social conscientiousness. Self-enhancement and social expression of future-oriented SRI options may supplement profit maximization goals. SRI can be seen as crises-robust, long-term sustainable market options that are extraordinary stable diversification means during external market shocks. Focus on ethics, environment, social and governmental concerns is a crisis stable market option that alongside helps improving financial markets and economic market systems (Puaschunder, 2017b).

In the eye of globalized markets and international societal challenges, such as foremost climate change; international organizations currently harmonize differing SRI practices throughout the international arena. International organizations define SRI standards and guideline the Financial Social Responsibility implementation from a global governance perspective. A more harmonious picture of concerted Financial Social Responsibility is meant to foster financial markets' global governance impetus in the pursuit of societal goals (Hong, Li & Xu, 2016). Transnational entities play a pivotal role in institutionally supporting Financial Social Responsibility and streamlining disparate SRI practices throughout the world. The United Nations (UN) leads the international public administration of Financial Social Responsibility in the United Nations Global Compact's (UNGC) Board launched 'Principles for Responsible Investment' (PRI).

Future multi-stakeholder analyses may attribute the newly-defined role of public and private constituents in social contributions and search for the optimum balance of deregulated market systems and governmental control in providing Financial Social Responsibility. Capturing real-market social responsibility phenomena could thereby not only help finding well-tempered public-private partnership networks to support modern market economies. Oversight accountability could also present information on corporate and financial social conduct that will lead academics, technocrats and practitioners to reflect deeper about responsibility within market systems and rethink their roles in backing socially-favorable market structures.

Additional general investigations of the perception of SRI in the age of climate change could determine in what way the warming earth has changed the financial community's view of economic markets' social responsibility obligations. Once-in-a-century-available information on the social representations of financial social conscientiousness in the post-COP21 agreement era should be reaped as a unique source on the economic versus ecologic responsibility predicament of global governance. Studying investors' cognition on SRI in this unique point in time also provides an innovative snapshot of how to ingrain ethicality in competitive market systems.

Innovatively coupling individual decision making research findings' with insights on external influences on social responsibility promises to help managing financial market social responsibility risks with respect for sustainable development for society. While micro-behavioral economists may in particular unravel human socially responsible cognition in the

search for human-imbued ethicality nudges; macro-economists may explain how individual social responsibility can shape collective market outcomes in harmony with the greater societal common goods endeavors.

Science may attribute how a globalizing world moderates individuals' decision making on social responsibility in order to avert predictable surprises of future global crises. Future research on the fallibility of human decision makers and external, global influences on social responsibility may help deriving recommendations on how to steer socially conscientious behavioral patterns in modern economic markets. For instance, as a fortification of political divestiture advocating for conscientiousness of financial market transactions; societally-harmful short-sighted day-trading in externally-shocked crises markets could be considered for ethical scrutiny (Puaschunder, 2016d).

An extraordinarily interesting application of environmental investment appears in the light of global warming. Climate change accounts for one of the most pressing problems in the age of globalization as for exacerbating more complex risks than ever before (Puaschunder, 2011). As never before in history since the birth of the earth, there is an environmental sensitivity to economic growth (The World Economic Forum Report, 2015). Today climate control needs have reached unprecedented momentum. Climate change has leveraged intergenerational equity as contemporary challenge of modern democracy and temporal justice an ethical obligation for the sake of sustainable development (Puaschunder, 2017a, d).

In the current post-COP21 Paris agreement climate change mitigation and adaptation efforts, the financialization of the ambitious goals has leveraged into an internationally challenging demand. While scientists call for stabilizing climate and regulators structure climate change mitigation and adaptation efforts around the globe; economists are concerned with finding proper and fair financing mechanisms. What is blatantly lacking are sophisticated mathematically-well-calibrated models in finding the optimal solution when to phase in what climate mitigation strategy. Most recent political predicaments arise whether politicians have a responsibility to their direct voting populace, the contemporary world population or even future generations. Problematic appears that curbing carbon emissions was traditionally related to lowering economic activity and therefore lowers economic growth. Current generations thereby are seen to sacrifice for future generations' uncertain living conditions. But not does an economic growth versus sustainable development predicament arises, paying today for climate change mitigation and adaptation also raises intergenerational equity considerations and implementation feasibility questions. As an innovative approach to raise interest in climate mitigation and adaptation financialization and the overcome humane decision making inconsistency over time but also curb myopia in light of future uncertainty and individually limited life spans, green bonds have recently been proposed to steer action on climate stability as for offering a favorable intertemporally balanced, economically dominant solution.

In an overlapping-generations framework, Sachs (2014) solves the climate change mitigation economic growth versus sustainable development predicament that seems to pit today's against future generations. Sachs (2014) thereby proposes that the current generation mitigates climate change financed through bonds to remain financially as well off as without mitigation while improving environmental well-being of future generations through ensured climate stability. Bonds are traditionally issued by companies, municipalities, states and sovereign governments to raise money and finance a variety of future-oriented long-term projects and activities (Puaschunder, 2016c). As debt investment in which investors loan money to an entity, bonds allow to borrow funds from the populace for a defined period of

time at a variable or fixed interest rate. A green bonds solution is introduced as real-world relevant means to tap into the worldwide USD 80 trillion bond market in order to fund the incentives to a transition to a sustainable path (Puaschunder, 2016c, 2017a, c; Sachs, 2014; World Bank, 2015). Historically, bonds have been used to fund large-scale investment projects ranging from infrastructure development to wars. The funds raised by bonds could be used in order to offset for the industry losses incurred in the wake of climate change. At the same time, funds available would also allow to incentivize industries to transition into green energy. For example, if the bonds fund corporations and allow tax breaks for sectors that transition to renewable energy, the previous price-cutting race to the bottom in competitive market situations could be transformed to a race to the top. Firms would ideally then compete over positive market incentives, such as tax breaks and direct funds for a clean production. It would become economically efficient to turn to climate change mitigation and adaptation.

In combination with carbon tax, sharing the costs of climate change aversion between and across generations appears as important strategy to instigate immediate climate change mitigation through incentivizing emission reduction and provide adaptation. In an innovative tax-and-transfer-strategy, climate stability could be financed immediately by the current generation, while future generations repay the bonds through taxation. Overall this turns climate change burden sharing into a Pareto improving option over time (Marron & Morris, 2016; Puaschunder, 2016b).

The clear advantages of this approach is the simple Pareto-improving economically dominant strategy backed by powerful examples in history of ideologies funded by bonds. In a loss-averse world, the bonds solution appears to avoid disincentives of curbing economic growth. Public servants and global governance experts embrace this solution as a fairly easily implementable solution that avoids scaring the populace by economic drawbacks or fear over a depleting favorable climate. The historic successes of bonds-financed ideologically-driven projects let this solution appears as the most favorable to embrace the many stakeholders climate stabilization will demand (Puaschunder, forthcoming b). Most novel developments most innovatively determine climate justice around the globe in considering the gains and losses of a warming globe (Puaschunder, 2017a, d). Shedding unprecedented light onto the gains for a warming earth (e.g., if considering GDP growth prospects in cooler parts of the world) offers unknown opportunities for raising funds for climate change mitigation and adaptation. In addition, by calculating the unequal global warming gains and losses distribution, ethical imperatives for climate justice naturally follow (Puaschunder, 2017a, d).

Recommendations target at ingraining social responsibility in economic systems by global governance, multi-stakeholder management and governmental assistance of the implementation and administration of ethics of environmental, social and governance-oriented investments (Puaschunder, 2015a). In the future, governmental assistance should contribute to the implementation and administration of SRI with attention to private sector and civil demands. As the basis for stakeholder engagement and monitoring, transparency and accountability are key for advancing corporate and financial social market behavior. The newly emerging sustainable finance phenomena open avenues for future research with respect for current social responsibility trends. Transparency and accountability are key for monitoring financial social responsibility. As for the ongoing adaptation and adoption of SRI, future research must attribute the newly defined role of social responsibility in the interplay of public and private actors given concurrent sustainable development trends (Marron & Morris, 2016; Puaschunder & Schwarz, 2012; Puaschunder, 2017a).

All these endeavors are aimed at fostering Financial Social Responsibility as a future guarantor of economic stability and sustainable social progress throughout the world. As an overarching goal, helping to leverage SRI into a more mainstream economic trend by fostering financial social conscientiousness as an implicit financial crises mitigation means can aid financial market stability. This piece hopefully will contribute to a future rise of social responsibility in our currently globalizing, economically-transforming and environmentally-fragile world, in which we should feel responsible.

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SOCIETY FOR SCIENCE AND EDUCATION

Fadama Iii Project And Output Performance Of Agricultural Enterprises: An Empirical Evaluation

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ABSTRACT
This paper evaluates the impact of the Fadama III Project on output performance of agricultural enterprises of the beneficiaries in Akwa Ibom State, Nigeria. The study employed the Survey method wherein Questionnaire was administered and interview held. Data collected were analysed using Tables, Percentages and Chi-Square (X^2) statistical method. Findings revealed that Fadama III project impacted positively on the beneficiaries in Akwa Ibom State as it contributed to the increase in the output performance of beneficiaries. This further contributed immensely to increased access to finances and a remarkable increase in the income of the beneficiaries. The study recommends among others, that government, relevant agencies and stakeholders should sustain the Fadama III project to ensure food security in the society and also for the benefit of the rural poor who are mostly engaged in agricultural activities in order to increase their ouput and improve their incomes.

INTRODUCTION

Societies have defined themselves by the way and degree in which they have succeeded in increasing agricultural production (FAO, 2004). Agricultural production requires a lot of activities that needs value addition with the ultimate intention of increasing the economic value of the final product. Various governments especially of developing economies have been adopting programmes and policies which are formulated to take cognizance of these value addition and marketing of farm outputs to encourage farmers in their production process such that food security is guaranteed and their livelihood is such that they live above subsistence or absolute poverty.In line with this development, Ja'afar-Furo, Bello, Mshelia, and Hammanyaji (2011) stressed that developing countries should rapidly transform their agriculture and massively embark on holistic food production system which involves processing and clearly defined channels of appropriate marketing in order to provide sustainable avenues for income generation for farmers.

Development economists have focused on how agriculture can best contribute to overall economic growth and modernization. Kuznets (1964) noted that agriculture made four contributions to economic development; the product contribution of inputs for industry such as textiles and processing of food, the foreign exchange contribution of using agricultural export revenues to import capital equipment; the market contribution of rising rural income creating more demand for consumer products, and the factors market contribution divided into labour contribution and capital contribution (Meller, 1986; Ghatak, 1987; Timmer, 1988 and Kuznet, 1964). Today, development economists share the consensus that agriculture has

been assumed to play a passive and supportive role in economic development whereas the agricultural sector in particular and the rural economy in general must play an indispensable part in any overall strategy of economic progress especially in the low-income developing economies..

It could then be asked from the foregoing: how can total agricultural output and productivity per capita be substantially increased in a manner that will directly benefit the average small farmer and the poor rural dweller while providing sufficient food surplus to promote food security and support a growing urban industrial sector? Majority of the world's extreme poor are involved in agricultural activities. The ability of agricultural production to keep pace with world population growth has been impressive defying some neo-malthusian predictions that global food shortage would have emerged by now.

A research by International Food Policy Research Institute (IFPRI) points to the fact that a wide range of successful agricultural programmes have reduced hunger while raising agricultural activity over the last several decades (IFPRI, 2009; Wik, Pingl and Broca, 2007). Despite the increase in agricultural production around the world, critics are of the view that the progress has been uneven. This position is predicated on the fact that the United Nations Food and Agriculture Organization (FAO) has repeatedly warned that food production is on the decline given the fact that 270 million out of about 750 million Africans suffer some form of malnutrition associated with inadequate food supplies (Sczpanik, 1970).

In Nigeria, several programmes have always been introduced by successive government over the years with the hope that the farmers and the poor would immensely benefit from such laudable intentions in terms of income generation through improved production. The Nigerian food problem demanded an urgent development of the nation's water resources for irrigation, hence the introduction of the scheme 'Fadama' after the River Basin Development Authority. The word 'FADAMA' is an Hausa word for 'irrigable land'. The first National Fadama Development Project (NFDP I) was designed in the early 1990s to promote simple low-cost improved irrigation technology under World Bank financing (Nwachukwu and Igbokwe, 2012). The main objective of the NFDP I was to sustainably increase the incomes of Fadama users through expansion of farm and non-farm activities with value-added output. The programme was introduced in twelve States which were Adamawa, Akwa Ibom, Bauchi, Gombe, Imo, Kaduna, Kebbi, Lagos, Niger, Ogun, Oyo and Taraba including the Federal Capital Territory (FCT). The Project adopted Community-Driven Development (CDD) approach with extensive participation of stakeholders at early stage of the project. It focused mainly on crop production whereas downstream activities such as processing, preservation and marketing were largely neglected.

Fadama III was introduced after Fadama I and II had been completed. Like the first and second schemes, Fadama III also adopted the CDD approach such that beneficiaries were the main drivers of the scheme. Local Community members under the umbrella of Fadama Community Association (FCAs) and Fadama User Groups (FUGs) oversee the design and implementation of the project to improve their livelihoods by increasing income-generating activities. The scheme established standardized procedures and steps to guide the local people on how they could take part in the decision-making process. The project has six main components which are capacity building, local governance and communication; small-scale community-owned infrastructure; advisory service and input support development; support to ADPs, sponsored research and on-farm demonstration; asset acquisition for individual FUG/Economic Interest Group; project management, monitoring and evaluation.

LITERATURE REVIEW

Theoretical Framework

Agriculture could be said to emanate using anthropological and archeological evidences other than scientific facts. Such facts include artefacts of ancient farming tools and remains of wild grains (Gallery of Agriculture, 2009). It is possible later that a primitive tribe may have discovered a vigorous plant, the seeds harvested for food although it was also understood that some were deliberately sown to ensure supply for the next season. Several theories some of which include the Physiocrats, Arthur Lewis two sector model, Rostow Stages of Growth etc had been advanced to shed light on the historical development of agriculture. Theoretically, growth in agriculture is a key engine for growth, not least to start a growth process in pre-industrial economies (Dercon and Douglas, 2004).

The physiocrats laid emphasis on agriculture in the development of an economy away from mercantilists that emphasized trade and commerce. The source of national wealth was essentially seen in agriculture. They believed that the fate of the economy is regulated by productivity in agriculture and its surplus is diffused through the system in a network of transactions. The agricultural sector, to the physiocrats, is the only genuinely productive sector of the economy and the generator of surplus upon which all depends. Agriculture is that kind of activity which links labour, land or soil, live animals, plants, solar energy and so on. The general idea is that the proprietors of land contribute to production by expenses on improvement of land and by advances to maintain the cultivators. The cultivators in turn, are to procure a surplus over and above all these expenses. This is the net product which goes to the land owners by way of rent. All in all, agriculture's primary purpose was to provide sufficient low-priced food and manpower to the expanding industrial economy (Todaro and Smith,2011). Lewis two sector model is a theory of development that places heavy emphasis on rapid industrial growth with agricultural sector fuelling the industrial expansion by means of its cheap food and surplus labour.

Empirical Literature Review

Bindlish and Evensen (1997) used cross countries data of 30 countries in sub-saharan Africa to test the effectiveness of T&V in agricultural extension programmes. From their data analysis, they concluded that the experience of Kenya and Burkina Faso indicate that T&V management enhances the effectiveness of extension and that such programmes supported agricultural growth and produced high returns on investment. Ashley and Maxwell (2001) reviewed the Washington Consensus on Food, Agriculture and Rural Development. Their findings showed that rural areas were changing with respect to demography, diversification and strengthening of links to national and global economies. They recommended that agriculture should be strengthened as engine of rural development; small farms should be made to non-farm rural community, and that there should be a new thinking on poverty, participation and governance.

Alabi and Osagie (2006) investigated the amount of income generated by increased output expectation by the NDE crop farming programme in Edo State. Data obtained from forty participants surveyed were analyzed using percentage and profit margin. The result showed that the returns management of NDE arable crop farming were positive, indicating that arable cropping is profitable. It was also found that the earning of school leavers in NDE is higher than the earning of their counterparts in the civil service. It was recommended that sufficient loans be granted to farmers as long as there is guarantee that they will use it for agricultural purpose. Mangoel, Ezeokeke, Anyanwu and Okoro (2012) have that agricultural sector contributes enormously to the nation's GDP with job creation, as it accounts for about 90% of jobs in the country. To them, the agricultural sector contributes to the development of the

economy in four major ways; product contribution, factor contribution, market contribution and foreign exchange.

Ja'afar-Furo et al (2011) on their study to evaluate the role of Fadama III in improving the output performance of Fadama User Groups (FUGs) through yield per acre, agro-processing facility and storage accessibility in Adamawa State, found that the most popular choice of economic venture among the FUGs was maize/corn, rice processing machines and collectively, the FUGs recorded 10.54% increase in income from sales/services rendered in terms of value addition on agricultural commodities, whereas, about 15% had access to market information using modern methods.

RESEARCH METHODOLOGY

Research Design
The study adopted the survey research method and this was desirable since the study was non-experimental. The design would enable the researcher to gather both the primary and secondary data needed to guide the study.

Population/Sample
The population of the study consists of all Fadama Community Associations (FCAs) and Fadama User Groups (FUGs) in the 20 participating local government areas (LGAs) in Akwa Ibom State. 5 FUGs from the FCAs in each of the LGAs were selected making a total of 30 FUGs and ten (10) members of each FUG were also randomly chosen making up 300 respondents. The six LGAs selected for the study were: Uyo, Ibesikpo Asutan, Oron, Mkpat Enin, Ikot Ekpene and Etim Ekpo.

Data Collection Instruments
The instruments used for data collection were well structured questionnaires designed to obtain answers from the respondent. All the items in the questionnaire were closed-ended with multiple options such as Yes or No and Undecided, to indicate all available possibilities of response on the subject. Interview was also conducted with the respondents.

Analytical Techniques
Data collected from the survey were analyzed using Tables and Percentages. Chi-square (X^2) statistical method was also employed to test the hypothesis formulated in order to test the degree of independence between the variables.

The formula for the chi-square (X^2) is $X^2 = \sum \dfrac{(O-E)^2}{E}$

where: O = Observed value; E = Expressed value;
Data was analysed based on the null hypothesis(H_0): Fadama III Project has no impact on the output performance of agricultural enterprises in Akwa Ibom State. 5 percent level of significance was used to test the hypothesis of the study with the degree of freedom calculated thus: DF=(R-1)(C-1); where R= row, C-column and DF- degree of freedom. The (R-1) means row total minus one, i.e. (R_t-1), while (C-1) means column total minus one, i.e., (C_t-1). The analysis used the calculated value to compare with the table value and thus if the table value is greater than the calculated value, it means that the null hypothesis (H_0) be accepted while rejecting the alternative hypothesis (H1) otherwise the reverse is the case.

DATA PRESENTATION AND ANALYSIS
In order to facilitate the actual conduct of the research, a total of three hundred (300)

questionnaires were distributed to the beneficiaries comprising of Fadama Community Association and Fadama User Groups as respondents. Two hundred and ninety (290) representing 97% of the questionnaires were returned by the respondents showing a very high percentage of response. Of the returned questionnaires, five were wrongly filled as some of the respondents are not educated and vested with the subject. Therefore, the analysis is based on two hundred and eighty five correctly answered questionnaires.

The first section is on the respondents' personal data such as sex, age, educational qualification and the respondent's line of occupation. The second section required the respondents to give answers that bothered mainly on the study. Chi-square (X^2) method of analysis was used to test the hypotheses formulated for the study, while simple Tables and Percentages were used mainly for the first part of the questions. Questions 1 – 8 with options such as Yes, No and Undecided was used to test the hypotheses.

Analysis Of Personal Demographic Data for Fadama Community Association And Fadama   User Groups in Akwa Ibom State

Table 4.1: Sex distribution of Respondents

SEX	NO. OF RESPONDENTS	PERCENTAGE OF RESPONDENTS (%)
FEMALE	165	58
MALE	120	42
TOTAL	285	100

Source: Field Survey, 2016

Table 4.1 shows respondents' sex distribution. Of the two hundred and eighty five respondents that returned the questionnaires used for the study, one hundred and sixty five (165) or fifty eight percent (58%) were female while one hundred and twenty (120) or forty two percent (42%) were male.

Table 4.2: Age distribution of Respondents

AGE GROUPING	NO. OF RESPONDENTS	PERCENTAGE OF RESPONDENTS (%)
26 – 35	68	23
36 – 45	96	34
46 – 55	85	30
56 AND ABOVE	36	13
TOTAL	285	100

Source: Field Survey, 2016

Table 4.2 shows age distribution of respondents. Of the two hundred and eighty five (285) respondents, sixty eight or 23% were of the age bracket 26 – 35, ninety six (96) or thirty four percent (34%) were of age bracket 36 - 45, eighty five (85) or thirty percent (30%) were of the age bracket 46 - 55, while thirty six (36) or thirteen percent (13%) were of the age bracket 56 and above.

Table 4.3: Educational qualification of Respondents

AGE GROUPING	NO. OF RESPONDENTS	PERCENTAGE OF RESPONDENTS (%)
No Formal Education	-	0
First School Leaving Certificate	58	20
GCE O/L, WASC or its equivalent	82	29
A/L or ND or it equivalents	-	0
HND, B.Sc or its equivalent	106	37
Post Graduate (MA), M.Sc)	39	14
Post Graduate (Ph. D)	-	0
TOTAL	285	100

Source: Field Survey, 2016

In order to get a clearer overview of educational qualification of the respondents, table 4.3 presents seven (7) level of qualification. There is no respondent with no formal education, A/L or ND or it equivalents as well as Post Graduate (Ph. D) levels of qualification. 58(20%) respondents representing had First School Leaving Certificate, 82(29%) respondents representing had GCE O/L, WASC or its equivalent. 106 (37%) of the respondents had HND, B.Sc or its equivalent. while 39 (14%) of the respondents had Post Graduate (MA), M.Sc).

4.1.2a Analysis of Respondents on Questionnaires

S/N	QUESTIONS	YES	NO	UNDECIDED
1.	Has there been any increase (improvement) in the output of your business?	134	88	63
2	Do you have problem of pest and diseases?	75	139	71
3	Has there been any monitoring team to know whether the farm is producing according to expectation?	184	51	50
4	Do you have any idea about the expected quality of your products in terms of seedling, soil type, and general management?	160	71	54
5.	Do you have enough provision for irrigation facilities for your produce?	95	110	80
6.	Has there been any great improvement in the general profitability of the business since you started with the Fadama III scheme?	122	76	87
7.	Do you need storage facilities for your product?	180	80	25
8.	If yes, do you have any form of storage facilities for your products?	70	97	13

On question 1(the respondents view on whether they have had increases and improvements in the output of the business), 134(47%) of the respondents agreed while 88(31%) disagreed to the opinion that there has been improvement in the output of the business since they started with the scheme. 63(22%) were indifferent. On question 2(the respondents view on whether they do have problem of pest and diseases), 75(26%) of the respondents agreed that there is problem of pest and diseases in their establishment. 139(49%) disagreed and claimed that they do not have problem of pest and diseases. 71(25%) were indifferent to the opinion. On question 3(the respondents view on whether there has been any monitoring team to know whether the farm is producing according to expectation), 184(65%) of the respondent agreed with the opinion that there has been a monitoring team to know whether the farm is producing according to expectations. 51(18%) of the respondents disagreed with the opinion that there has been monitoring team to know whether the farm is producing according to expectation.

50(17%) was indifferent to the opinion.

On question 4(the respondents view on whether the respondents have any idea about the expected quality of their products in terms of seedlings, soil type and generational management), 160(56%) of the respondent agreed while 71(25%) of the respondents disagreed and claimed that they do not have idea about the expected quality of their product in terms of seedlings, soil type and general management and 54(19%) were indifferent. On question 5(the respondents view on whether they have enough provision for irrigation facilities for their produce), 95(33%) of the respondent agreed with the opinion while 110(39%) of the respondents disagreed with the opinion that provision is made for irrigation for the produce. 80(28%) was indifferent to the opinion.

On question 6(the respondents view on whether there has been great improvement in the general profitability of the business since they started with Fadama III scheme), 122(43%) of the respondents agreed to the assertion that there has been great improvement in the general profitability of the business since they started with the scheme while 76(27%) of the respondents disagreed to the opinion and 87(30%) were indifferent. On question 7(the respondents view on whether the beneficiaries have need for storage facilities for the products), 180(63%) of the respondents agreed that they need storage facilities for their products. 80(28%) of the respondents were in disagreement that they need storage facilities. 25(9%) were indifferent. On question 8(the respondents view on whether they have any form of storage facilities for their products), 70(39%) of the respondents were in the affirmative that they have storage facilities for their products. 97(54%) of the respondents were in disagreement to the assertion while 13(7%) were indifferent.

Test of Hypotheses

The Questions in Table 4.1.2 were used to test the hypothesis of this study that: Fadama III Project has no impact on the output performance of agricultural enterprises in Akwa Ibom State.

4.1.2b A Summary of Respondents on Questionnaires

QUESTION	YES	NO	UNDECIDED	TOTAL
1	134	88	63	285
2	75	139	71	285
3	184	51	50	285
4	160	71	54	285
5	95	110	80	285
6	122	76	87	285
7	180	80	25	285
8	70	97	13	180
TOTAL	1020	712	443	2175

$$R1C1 = \frac{Rt \times Ct}{Gt} = \frac{1020 \times 285}{2175} = \frac{290700}{2175} = 133.65$$

$$R2C2 = \frac{Rt \times Ct}{Gt} = \frac{712 \times 285}{2175} = \frac{202920}{2175} = 93.30$$

$$R3C3 = \frac{Rt \times Ct}{Gt} = \frac{443 \times 285}{2175} = \frac{126255}{2175} = 58.05$$

4.1.2c   A Table of Calculated Chi-Square

CELL	O	E	O – E	$(O – E)^2$	$\dfrac{(O – E)^2}{E}$
1	134	133.65	0.35	0.1225	0.000
2	88	93.30	-5.3	28.09	0.301
3	63	58.05	4.95	2.5025	0.422
4	75	133.65	-58.65	3439.8225	25.737
5	139	93.30	45.7	2088.4900	22.385
6	71	58.05	12.95	167.7025	2.889
7	184	133.65	50.35	2535.1225	18.968
8	51	93.30	-42.3	1789.29	19.178
9	50	58.05	-8.05	64.8025	1.116
10	160	133.65	26.35	694.3225	5.195
11	71	93.30	-22.3	497.29	5.330
12	54	58.05	-4.05	16.4025	0.282
13	95	133.65	-38.65	1493.8225	11.177
14	110	93.30	16.7	278.89	2.989
15	80	58.05	21.95	481.8025	8.300
16	122	133.65	-11.65	135.7225	1.015
17	76	93.30	-17.3	299.29	3.207
18	87	58.05	28.95	838.1025	14.437
19	180	133.65	46.35	2148.3225	16.074
20	80	93.30	-13.3	176.89	1.896
21	25	58.05	-33.05	1092.3025	18.816
22	70	133.65	-63.65	4051.3225	30.313
23	97	93.30	3.7	13.69	0.147
24	13	58.05	-45.05	2029.5025	34.961

$$X^2 = 245.135$$

Calculated Value of X^2 = 245.135
Degree of Freedom (D/F) = (R – 1)(C – 1) = (8 – 1)(3 – 1) = (7)(2) = 14
Table Value at 0.05 = 23.685

Decision

Since the calculated value of X^2 which is 245.135 is greater than the table value which is 23.685(T-Value = 23.685 < Calculated Value = 245.135), the null hypothesis (H_0) that says that Fadama III Project has no impact on the output performance of agricultural enterprises in Akwa Ibom State is rejected. This means that the Fadama III scheme has an impact on the output performance of beneficiaries in Akwa Ibom State.

Policy Implication of Findings

It can be seen from the analysis that the output performance of the agricultural enterprises of Fadama III beneficiaries in Akwa Ibom state improved tremendously following the scheme's intervention. The scheme provided the beneficiaries with: better and high quality seedlings; improved ways of handling pests and diseases; and the knowledge of the type of soil needed for each crop. The Fadama III project has also been able to provide the beneficiaries with productive assets such as farm tools and equipment that when applied will enable larger production methods for higher yields. Thus, the output performance per acre or per square metre improved tremendously. This enhanced food availability thus checking scarcity. The incomes of the beneficiaries improved as well.

From these findings, the policy implications are easily discernible: Government at all levels and

all stakeholders need to sustain this project for the benefit of the rural poor who are mostly engaged in agricultural activities. For agricultural output to be continually improved, the inputs needed for higher productivity must be made available consistently and in sufficient quantity. Knowledge, information and requisite training on improved farming methods should be made available to beneficiaries. Furthermore, government should facilitate a shift from crude method of farming to mechanised farming as this will guarantee better and higher yields. More interventions of this nature should be instituted and implemented in other sectors for greater and wider impacts on social well being.

SUMMARY, POLICY RECOMMENDATIONS AND CONCLUSION

This study evaluated the impact of Fadama III Project on output performance of the agricultural enterprises of the beneficiaries in Akwa Ibom State. The study employed the survey method wherein Questionnaire were administered and interview held with respondents. Data were analysed using Tables, Percentages and Chi-square (X^2) statistical method. The findings revealed that the Fadama III project had enormous impact on the output performance of the agricultural enterprises of the beneficiaries in Akwa Ibom State. It further revelaed that the Fadama III project impacted on the income of the beneficiaries in Akwa Ibom state as their income improved tremendously.

Based on the findings, the study recommends that: government, relevant agencies and stakeholders should sustain the Fadama III project to ensure food security in the society and also for the benefit of the rural poor who are mostly engaged in agricultural activities in order to increase their ouput and improve their incomes; High quality seedlings must be made available to beneficiaries consistently and in sufficient quantity to ensure higher productivity; Knowledge, information and requisite training on improved farming methods should be made available to beneficiaries. Furthermore, government should facilitate a shift from crude method of farming to mechanised farming as this will guarantee better and higher yields. More interventions should be instituted and monitored for greater and wider impacts.

This paper has revealed that the Fadama III project has been a success in Akwa Ibom State. Therefore Government, relevant agencies and stakeholders should attract more of such donor funded projects in the agricultural sector to the state to help drive sustainable output performance for a guaranteed food security. This study has contributed immensely to the body of knowledge in that it has filled the existing gap in the literature. Specifically, there is a paucity of studies of this nature with Akwa Ibom state as a case study. The study however, suffered some limitation such as the lack of accessibility to all the Fadama User Groups in the selected local government areas who participated in the scheme. Furthermore, there is need for researchers in related disciplines to further investigate the sustainability plans of the Fadama III project in Akwa Ibom state and also carry out comparative analysis of the impact of this project on other states of the federation.

In conclusion, it is pertinent to note that food security and sufficiency should be of great concern to a country with a teeming population such as Nigeria. Thus, any effort aimed at improving food sufficiency and security should be seen as laudable and given priority attention. Besides, the role of agriculture in the economic growth and development of any nation need not be over-emphasized. Given that the agricultural sector not only helps in food production, but also provides raw materials for use by industries towards the production of finished goods and is also a major earner of foreign exchange as well as the greatest employer of the rural poor, projects aimed at its growth and development should be promoted, implemented, monitored and sustained.

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Data Loss Risk: A Multivariate Statistical Methodology Proposal

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ABSTRACT

Given that an adequate prioritization of data losses (DL) events is crucial for risk management in institutions of any nature, the present paper proposes a methodology aimed at hierarchizing the events associated with this type of risk. This proposal incorporates three specifications : parametric independence, objectivity and applicability. To illustrate , a framework was applied to records of DatalossDB, a US risk database. An hierarchy model based on Conjoint Analysis (CA) was developed by associating DL with industry sector, incident source and incident type variables. The flexibility of CA derives from its ability to use metric or non-metric variables, as well as from the lack of rigid rules regarding the relation between the combination of attributes and the preferences. The procedure determined the importance of the attributes involved and allowed the prioritization of risk events, which will certainly be useful in guiding the actions towards minimizing the problem.

INTRODUCTION

The modeling and assessment of operational risk (OR) has been given significant scholarly attention. Currently, there is a wide range of qualitative and quantitative methods and instruments aimed at the mitigation of OR, and the development of academic papers on the management and mitigation of OR has been on the rise – probably because of the relevance of the financial industry in the global context. For instance, the contributions of researchers such as Cruz (2004), Chernobai, Rachev & Fabozzi (2007), Bühlmann, Shevchenko & Wüthrich (2007), Yasuda (2003) and several others should be cited. However, there is still an issue of concern to institutions and researchers: how to objectively prioritize the processes to be modeled, since they generally constitute a reasonable volume in the company and have different patterns of behavior?

Such an issue becomes even more relevant when we consider that the financial resources directed towards the mitigation of OR are generally limited and large. This aspect makes it even more complex to address this type of risk, which, according to Jobst (2007), cannot be considered a "mere segment of other risks", but one that tends to have its "own life".

Reducing corporate risks generally requires the execution of a series of wide-reaching activities aimed at changing processes which are subject to uncertainty. These activities involve internal and external aspects of companies. Thus, given the diversity and complexity of such monitoring, it is necessary to know in detail the source and development of operational risk events (McClave, 1990) and to establish priorities to address them, particularly because of the considerable impact they have on corporate efficiency.

Given that an adequate prioritization of OR events is crucial for risk management in institutions of any nature, the present paper proposes a methodology aimed at hierarchizing the events associated with this type of risk in order to objectively guide those who are

responsible for mitigating or even eliminating threats related to the operational processes of the institution.

The *method* described herein proposes the incorporation of three specifications:
Parametric Independence – As OR encompasses events in the most diverse types originating from several different areas, it is assumed that in most cases it is impossible to model the events through the usual parametric statistical distributions. Therefore, the present proposal is based on the application of nonparametric methods, which allow a greater practical comprehensiveness.

Objectivity - It is necessary to have a formal system for the treatment of OR events. This will prevent the events from being exclusively based on preconceptions about the subject. Nevertheless, the model should allow the integration of data supported by quantitative and subjective metrics, as in the studies by Giudici (2004), Okunev (2005) and Borges & Moura (2010).

Applicability - The methodology should be suitable for different types of sectors, such as industry, governments, medical services, education, and others. In fact, the applicability of the proposal will be proven later on based on the use of a database of real events occurring in different types of sectors.

To illustrate the construction of a framework, a US open database called DataLossDB (OSF, 2014), which has been extensively used by educational, governmental and commercial entities (Gabbay, 2010), was used. This is a free access data structure originated from a research project sponsored by US private entities to document data loss incidents that are reported voluntarily by institutions around the world. The source gathers information about events involving the loss, theft or disclosure of individual and corporate information.

Finally, the need to prioritize risk events is justified by the large investments made by institutions to reduce and control OR. This is particularly true for the public sector and for larger organizations which deal with significant amounts of information and are hence subject to a wide range of threats. The hierarchical methodology proposed in the present study is applicable to practically any sectors. Therefore, it is expected that it will contribute to the planning of activities aimed at mitigating operational risk in general.

METHOD

The framework developed was applied to records of Data Loss (DL) events reported to DatalossDB. Each record refers to a company and contains the following variables: *Industry sector , Date of the incident , Incident source , Country and Incident Description , Quantity of information items affected by the incident, Financial , Type of information items affected and Breach type .*

From 2013 to July 2014, 1982 data loss cases were reported to DatalossDB, including companies that did not report financial losses and those located in other countries. The sample used in the present study included only the cases in which these losses were reported since such information is relevant to the application of the methodology. In addition, cases reported from countries other than the United States were excluded because they generated a very pronounced volatility regarding the types, frequencies and amount of losses. Therefore, the sample was reduced to 355 records with full information on cases of data loss in US companies. The hierarchy model was developed by associating DL with the following variables: *Industry Sector*, *Incident Source* and *Incident Type*, as shown in the following figure:
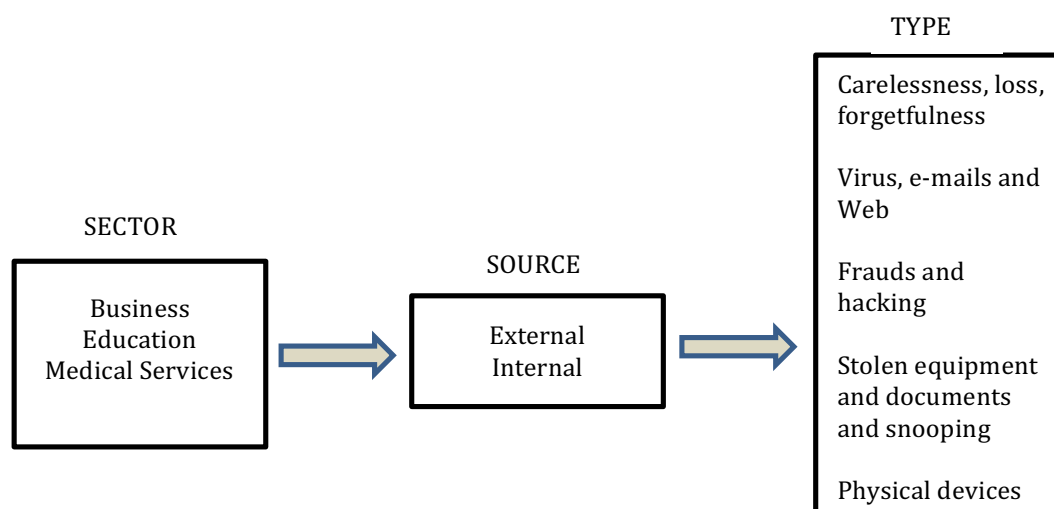
Figure 1. Characterization of DATA LOSS events

An example of an event is the loss of data due to "*Frauds and hacking from outside the business sector*". So, we can deduce that the grand total of events for this application is 30 (3 x 2 x 5), which corresponds to a combination of the attributes displayed in the figure.

The instrument adopted for the prioritization of events was the Conjoint Analysis (CA), a multivariate dependence technique used to investigate the hierarchy of preferences among alternatives with several attributes (Fávero, 2009). The method is indicated to analyze conjoint effects that two or more qualitative attributes have on the respondent's preference (the dependent variable in the model). One of the advantages of using the CA in the present study is that it allows to understand and monitor the process through which the decision-maker makes his preferences (Hair, 2005).

CA assumes that respondents' preferences are a result of the aggregation of the values of each attribute and can be measured by *utilities*, which represent the priorities of each combination of attributes (Ribas & Vieira, 2011). In addition to allowing the hierarchization of events, the technique estimates the relative importance of each attribute and can be applied to each respondent or to the entire sample.

The Conjoint Analysis is suitable for understanding respondents' reactions to various combinations of values associated with each attribute by ranking their preferences , corresponding to dependent variables. The flexibility of the technique derives from its ability to use metric or non-metric dependent variable, as well as from the lack of rigid rules regarding the relation between the combination of attributes and the preferences (Hair, 2005). The CA stands out when compared to other multivariate methods because it allows, first of all, the construction of a set of alternatives combining selected levels of each attribute. Then, the respondent makes his/her choices through the ordinal or interval hierarchization of the alternatives without having to indicate the level of importance of a specific attribute. In fact, the influence of each alternative is generated internally by the CA based on the statistical treatment of all responses , a procedure analogous to discriminant analysis and multiple regression models.

According to the terminology used in CA, the term *Factor* describes a specific variable, such as *Industry Sector, Incident Source,* or *Incident Type*. The values of each of them are called *Levels*. In Figure 1, the factors were displayed above the rectangles and the levels inside them.

After the characterization of the event and the determination of the sample, this framework requires an experiment in which a risk management specialist should be requested to classify the thirty incidents based on the 6 different criteria listed below. In this phase, the respondent should assign scores from 1 to 100. Higher scores indicate high-risk incidents which require greater attention and priority for their mitigation. The criteria suggested are:

Frequency – the number of times each event took place within a period. It is based on the quantity and not on the magnitude of losses;

Mean – the mean financial loss caused by a particular event. It is based on the arithmetic mean of losses;

Median – the central financial loss disregarding the extreme values. The median is the central value of a data set. It represents the value that divides the distribution into two equal halves.

Severity – the amount of losses. It is the product of the mean loss and the number of times the event took place.

Cost – the estimated expenditure to reduce the mean loss (or the severity) to the lowest level acceptable by the company;

Effectiveness – the maximum reduction of the mean loss (or severity) achieved by using the maximum number of resources acceptable by the institution.

Since CA allows to generate composite criteria from a few basic ones, it is possible to generate other criteria from the initial six. In the present case, the following criteria are suggested.

o **Criteria**	o **Observation**
{Frequency , median , cost , effectiveness}	It considers the events and the central losses in addition to the economic rationality of the investment
{Frequency , severity}	Generally adopted by banks, it assumes the independence between frequency and amount of loss
{Frequency , mean}	It considers the number of events and the mean loss
{Cost , effectivenes}	It has an economic connotation as it seeks to apply resources more effectively
{Frequency , severity , cost , effectiveness}	It takes into account the events and the magnitude of the loss in addition to the economic rationality of the investment

Figure 2. Composite criteria for classification generated from the basic criteria.

In this case, the model allows to generate 11 groups with 30 events each, where the first 6 correspond to the basic criteria (hierarchized by the respondent) and the remaining 5 are generated directly in the CA by combining the previous ones.

The model can be applied by using the Conjoint Analysis procedure in SPSS, obtaining the following results:

Utility-generating function coefficients - the inputs used for calculating individual level utilities. Since an additive model is used, the utility calculation is based on the sum of values that make up the event. The generated utilities represent the respondent's preferences in relation to the event formed by the combination of the three attributes already adjusted by the CA procedure.

Correlation and significance – the measurement of the degree of adjustment of the model based on the correlation between the results generated by it and a validation sample represented by virtual inputs called holdouts. This sample, likewise the one used in discriminant procedures, is not used in the construction of the utility-generating function; it is only used to compare observed values with the estimated equivalents, thus indicating the precision of the adjustment.

RESULTS AND DISCUSSION

After knowing the set of events, a public sector risk manager was requested to rank the thirty events in order of importance for risk mitigation purposes. The result is summarized in the figure below:

Order	Basic Criterion	Event1	Event2	Event3	Event4	Event5	...	Event30
1	Frequency	2	1	2	49	5	...	9
2	Mean	1	1	1	4	1	...	2
3	Median	8	3	12	33	31	...	39
4	Severity	1	1	1	3	1	...	1
5	Cost	97	95	98	50	99	...	88
6	Effectiveness	100	100	97	35	97	...	70

Figure 3. Classification scores assigned by the respondent according to basic criteria

The description of the events, shown in the first line of the figure 3, followed the order generated automatically by the CA procedure in SPSS 19.0, where "holdouts" were generated to check on the validity of estimated utilities. In the first line (Frequency), for example, the respondent assigned low importance to the first 3 events and a higher score (49) to event number 4. Regarding the cost and effectiveness of the investments, the respondent assigned major importance to the first 2 events and minor importance to number 4.

The utilities and other measures estimated for the basic criteria are shown in the following table.

Table 1. CA results obtained from basic criteria

Variable	Value	Frequency (1)	Mean (2)	Median (3)	Severity (4)	Cost (5)	Effectiveness (6)
(a)		Utility-generating function coefficients					
Sector	Business	4.167	6.567	-5.267	6.500	-4.367	-2.167
	Education	-3.633	-3.333	-4.267	-3.300	3.633	4.733
	Medical services	-.533	-3.233	9.533	-3.200	.733	-2.567
Source	External	4.300	3.533	1.967	3.400	-4.133	-2.267
	Internal	-4.300	-3.533	-1.967	-3.400	4.133	2.267
Type	Carelessness...	-7.700	-3.567	1.467	-3.400	8.333	11.733
	Virus...	-3.867	-3.233	16.133	-3.400	3.667	-3.433
	Frauds ...	15.300	13.433	-5.367	13.267	-16.000	-20.600
	Stolen equipment ...	5.467	-2.900	-6.867	-3.067	-5.833	-6.933
	Use of physical devices ...	-9.200	-3.733	-5.367	-3.400	9.833	19.233
Constant		12.033	4.733	29.367	4.400	87.667	79.267
(b)		Correlation and significance					
Kendall's tau coefficient for "*holdouts*"		0.600	0.837	0.800	0.667	0.400	0.447
Significance		0.071	0.026	0.025	0.073	0.164	0.148
(c)		Importance of atributes					
Sector		19.071	29.004	35.463	29.459	19.002	14.129
Source		21.027	20.703	9.425	20.441	19.636	8.774
Type		59.902	50.293	55.112	50.100	61.362	77.097

The resulting utilities are based on the values that make up the event. Considering, for example, the "*Frequency*" criterion, the utility of the "*Business-Outside-Fraud*..." event is calculated as 4.167 + 4.300 + 15.300 + 12.033, resulting in 35.8, which corresponds to the priority assigned by the decision maker to that particular event. The utilities of the other events are calculated the same way. It is possible to know the importance that the attribute (level) has for the user: the higher the score, the greater the importance of the attribute. Still about the "*Frequency*" criterion, it is observed that the incident type "*Fraud...*" was the most important, with a score of 15.3. It is also possible to know the importance of each factor associated with DL events. Part (c) shows that the *Incident type* (with weight 59.9) was the indicator that best served to guide the user's choices.

The next table was generated by the CA procedure and describes the utilities and coefficients based on composite criteria.

Table 2. CA results obtained from composite criteria

Variable	Value		{1,3,5,6}	{1,4}	{1,2}	{5,6}	{1,4,5,6}	{1,2,5,6}
		(a)	Utility-generating function coefficients					
Sector	Business		-1.908	5.333	5.367	-3.267	1.033	1.050
	Education		.117	-3.467	-3.483	4.183	.358	.350
	Medical services		1.792	-1.867	-1.883	-.917	-1.392	-1.400
Source	External		-.033	3.850	3.917	-3.200	.325	.358
	Internal		.033	-3.850	-3.917	3.200	-.325	-.358
Type	Carelessness...		3.458	-5.550	-5.633	10.033	2.242	2.200
	Virus...		3.125	-3.633	-3.550	.117	-1.758	-1.717
	Frauds ...		-6.667	14.283	14.367	-18.300	-2.008	-1.967
	Stolen equipment ...		-3.542	1.200	1.283	-6.383	-2.592	-2.550
	Use of physical devices ...		3.625	-6.300	-6.467	14.533	4.117	4.033
Constant			52.083	8.217	8.383	83.467	45.842	45.925
		(b)	Correlation and significance					
Kendall's tau coefficient for holdouts			0.400	0.600	0.600	0.400	-0.200	-0.200
Significance			0.164	0.071	0.071	0.164	0.312	0.312
		(c)	Importance of attributes					
Sector			26.319	23.730	23.590	15.959	24.787	25.128
Source			.474	20.764	20.880	13.709	6.644	7.350
Type			73.207	55.506	55.531	70.332	68.569	67.521

Considering the number of the basic criteria, the representation {1,3,5,6}, for example, corresponds to the criterion composed simultaneously of *Frequency, Mean, Cost* and *Effectiveness.* The other representations follow the same logic.

The results also show the measurement of the degree of adjustment of the model by calculating the correlation between the generated results and the validation sample, which is represented by the "holdouts". This sample, likewise in discriminant analysis procedures, was not used to build the model, but to indicate the accuracy of the adjustment.

With regard to the basic criteria, it was observed that, apart from "Cost" and "Effectiveness", all the other criteria presented correlations above 60% and significance below 10%. As for the composite criteria presented in Table 2, the correlations and significance fell short of those associated with the basic criteria.

This may be explained by the fact that composite criteria are generated by a greater number of simultaneous perceptions, which makes it difficult to form a single function that suits the logic resulting from these choices and gives rise to inconsistencies which are difficult to be understood by the model. Naturally, the use of a single basic criterion leads the user to make his/her choices with the least degree of inconsistency.

However, the inconsistencies resulting from the choices are already foreseen by most of the methods that deal with the understanding of this type of information, such as the Analytic Hierarchy Process (AHP) (Goodwin & Wright, 2004), which even calculates an inconsistency indicator for respondents' choices.

The following table presents a summary of the prioritized events considering some of the criteria adopted.

Table 3 . Hierarchization of risk events in the first 5 positions according to all classification criteria

Classification	Risk event	Utility
	(a) Frequency criterion	
1st	External Frauds in the Business sector	35.8
2nd	External Frauds in the Medical Services sector	31.1
3rd	External Frauds in the Education sector	28.0
4th	Fraudes Internas no setor de Negócios	27.2
5th	External Thefts in the Business sector	26.0
	(b) Mean Loss criterion	
1st	External Frauds in the Business sector	28.3
2nd	Internal Frauds in the Business sector	21.2
3rd	External Frauds in the Medical Services sector	18.5
4th	External Frauds in the Education sector	18.4
5th	External Thefts in the Business sector	11.9
	...	
(c)	Frequency and Median Loss and Cost and Effectiveness criterion	
1st	Other Internal incidentes in the Medical Services sector	57.53
2nd	Other External incidentes in the Medical Services sector	57.47
3rd	Internal Carelessness in the Medical Services sector	57.37
4th	External Carelessness in the Medical Services sector	57.30
5th	Internal Access via Web in the Medical Services sector	57.03

This last table shows the hierarchization of the events obtained by the application of CA and represents the final result made possible by the proposed methodology, which was the objective of present study.

CONCLUSION

The feasibility of the proposal was confirmed by the use of the DatalossDB database, which allowed the grouping of records on data breaches by different industry sectors, types of information breached, financial losses and other variables taken into account.

In the Conjoint Analysis, the decision-maker was requested to classify, in an ordinal ranking, the previously formatted risk events. After that, the procedure determined the importance of the attributes involved and allowed the prioritization of risk events using multiple criteria, which was the purpose of the study.

Another relevant aspect is the possibility of quantifying the importance that levels and factors related to data breaches have for those in charge of risk management, which will certainly be useful in guiding their actions towards minimizing the problem.

Finally, it is worth noting that although data loss has been used as inspiration for the development of the proposed model, this framework can be adapted to other risk events for which there is interest in prioritizing.

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