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EDITORIAL PREFACE

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It & Economic Performance a Critical Review of the Empirical Data

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Abstract

The present study undertakes a critical review of the research around the multi-significant issue of the correlation between the IT investments and the economic performance to both micro and macroeconomic level. The aim of this study is to shed light on the interaction of IT with the economy, at corporate, industry and national level and document it's contribution to productivity and therefore to economic growth. The study concludes that there is a positive effect of IT investments to both the above economic indicators in all aspects, but is something that needs further research so as to find a clearer and risk adjusted relation.

Keywords: IT, Economic Performance, Productivity, Growth, Value Added

1. INTRODUCTION

For many years exists a serious debate of whether the revolution of Information Technology (IT) has beneficial impact on productivity. Several studies back to the 80's had shown correlation between the IT investment and the productivity in the US economy, a situation referred to as the **productivity paradox or Solow paradox** [1]. Since then, a decade of research in business and nation level, has proved that the impact of IT investments on labor productivity and hence on economic growth is not only positive but also significant. In this paper is attempted a review of a large number of scientific articles referring to information technology and productivity in micro and macro level. This is achieved with the use of a general framework in order to categorize the research topics that results to the understanding of the knowledge that has been accumulated until today and makes the road for new discoveries and useful conclusions in this very important scientific field. The final conclusion rejects the productivity paradox and this is easily perceived from the fact that IT is not simply a tool for automation of the existing procedures, but recommends an inducement for organizational changes that can lead to additional production benefits. Moreover, in spite of the fact that during the mid 90's the world witnessed a drastic reduction in IT investments and the collapse of many internet related companies, this review shows that we shouldn't ignore the fundamental changes that have occurred as a result of corporate IT investments and also that these benefits are transmitted to the real economy, with the innovating enterprises leading the way.

First of all, in order to organize the research and identify the key points and the gaps as well, the following scheme is cited so as to depict the aggregate findings.

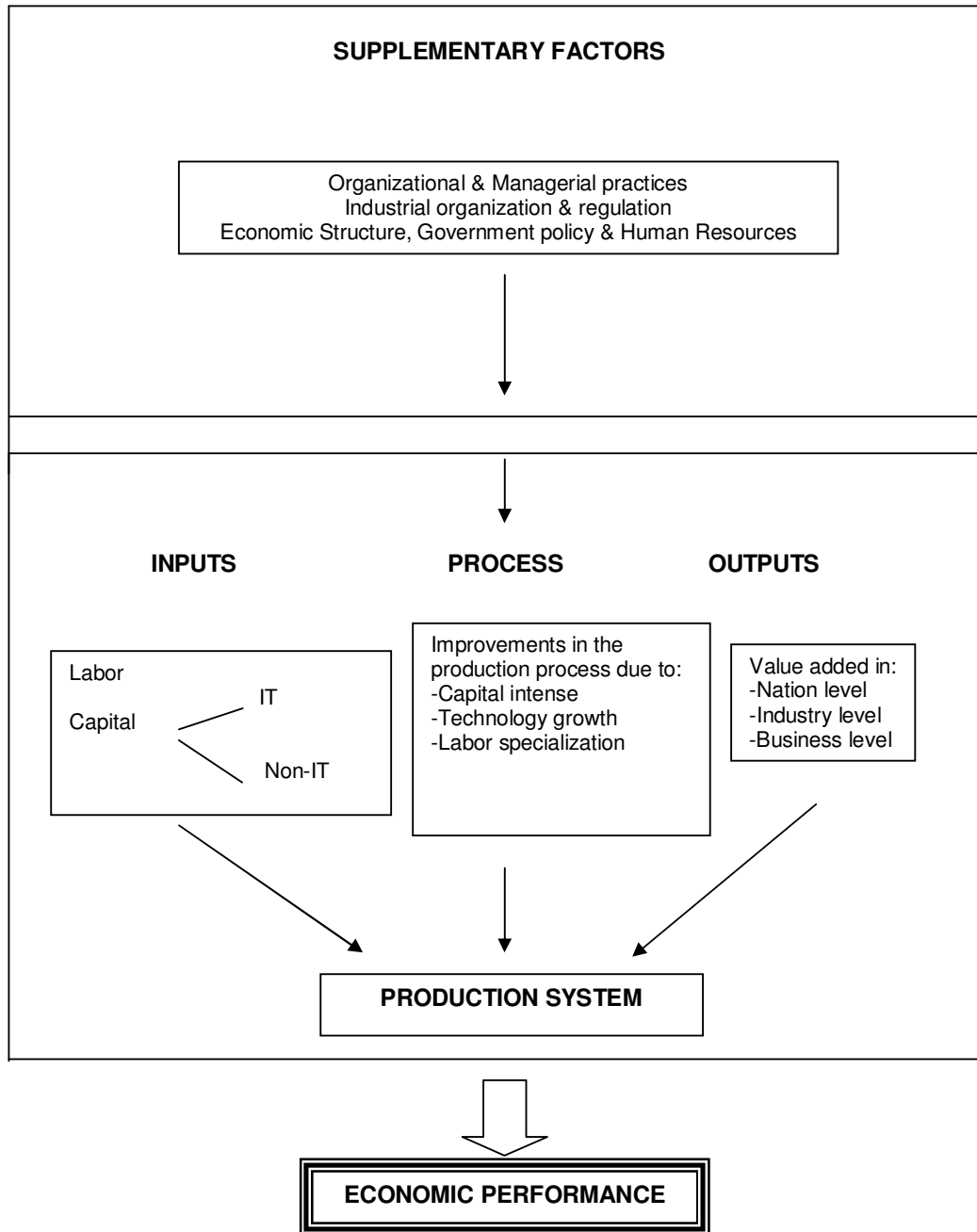


FIGURE 1: Aggregate table of research findings

Moving from left to right, the figure underlines the various inputs (labor and capital) in the production process and the supplementary factors that affect it and allow the assessment of the contribution of those inputs to the outputs (value added, GDP) and the several exported results (economic growth, profitability, labor productivity and consumer surplus). In addition, it goes further by separating between business, industry and national level analysis.

Before going further with the thorough analysis per level, it is very important to specify two fundamental terms, investment on IT and economic performance, as well as to point out the crucial role of IT to the production process and the aggregate impact on the economy.

In the IT and productivity studies, it is of major importance to discriminate capital to its core categories of investment, IT and non-IT. With the general term IT we mean investments on computers and telecommunications and additionally to the related services, equipment (hardware) and software. As for the importance of IT as a percentage of total capital investment, the next table is cited.

		Australia	Canada	Finland	France	Germany	Italy	Japan	United Kingdom	United States
IT equipment	1980	2.2	3.9	2.0	2.5	4.6	4.1	3.3	2.9	5.1
	1990	5.5	4.5	3.6	3.5	5.5	4.2	3.8	6.0	7.0
	1995	8.4	5.7	4.0	3.9	4.6	3.5	4.6	8.6	8.7
	2000	7.2	7.9	2.9	4.4	6.1	4.2	5.2	8.4	8.3
Communications equipment	1980	4.0	3.0	3.2	2.9	3.9	4.0	3.4	1.6	7.1
	1990	3.8	3.8	3.9	3.2	4.8	5.7	4.0	2.0	7.5
	1995	4.7	4.0	9.3	3.5	4.2	6.7	5.3	3.6	7.3
	2000	5.6	4.2	15.3	3.9	4.3	7.2	6.9	3.6	8.0
Software	1980	1.1	2.2	2.6	1.3	3.6	1.7	0.4	0.3	3.0
	1990	4.6	4.9	5.2	2.6	3.7	3.8	3.1	2.1	8.0
	1995	6.4	7.1	9.2	3.5	4.5	4.3	4.0	3.5	10.1
	2000	9.7	9.4	9.8	6.1	5.7	4.9	3.8	3.0	13.6
ICT equipment and software	1980	7.3	9.1	7.8	6.8	12.2	9.7	7.0	4.8	15.2
	1990	13.9	13.2	12.7	9.4	13.9	13.7	10.8	10.1	22.5
	1995	19.5	16.8	22.5	10.8	13.3	14.4	13.8	15.6	26.1
	2000	22.5	21.4	28.0	14.4	16.2	16.3	16.0	15.0	29.9

TABLE 1: Share of ICT investments to total investments

The term economic performance can be translated with a variety of ways in every level of analysis. In national level, where a major part of the scientific debate has focused, it usually refers to economic growth, labor productivity and consumer welfare. (Diagram 1). Economic growth is the percentage change in GDP and is measured in national level. Labor productivity is a measure of efficient utilization of human resources so as to produce value. It allows the economy to provide low cost goods and services in relation to the consumers' incomes and so as to be competitive in the global markets. It is obvious that the rate of labor productivity makes up an indicator of companies' economic performance. The more productive a company is in comparison with its rivals, the higher levels of profitability it enjoys leading to the achievement of greater economic performance. Of course, as it will be shown further in the paper, competition imposes to all the business players to focus on as much productivity they can reach in order to avoid losing market share and finally, get out of the game. This implies the continuous effort for improvements in the production methods, cost reduction and price squeeze, with direct benefit for the consumers, known as consumer surplus. Due to the clarification of the main terms, now we can proceed to the next level which consists of the individual analysis per level.

2. CORPORATE LEVEL

Though the productivity paradox as initially formulated, focused on national level, the real investments on IT take place primarily from companies that are interested in their own performance and not to the country as a whole. Given that IT investments improve the aggregate productivity, this doesn't mean that enterprises individually enjoy the same benefits. In fact, significant social benefits that increase the consumer welfare may be created, but don't have the same impact in companies. So as, it is of great importance the issue of IT investments' effects on business level.

Early studies during the decades of '80 and '90 weren't able to evince the beneficial influence of IT due to the lack of data and minor sampling measures [2],[3]. More discouraging were the studies that concerned the services providing companies, like banks and insurance companies, where the results showed small or non-existent correlation between IT and productivity in spite of the fact that in these sectors becomes very difficult the measurement

and evaluation of the results [4],[5],[6]. The aforementioned studies highlighted the importance of accurate measurements of the findings, especially in technology intense companies where the bigger investments on IT took place. At the dawn of the 90s, more extensive researches were carried out in large US enterprises with the use of data from market analysis companies, experts and in according to the financial data from reliable sources [7], [8]. These studies used econometric methods in order to relate the corporate output (in form of value added) to a sum of inputs, including the work hours and the IT capital stock and evaluate the marginal product or the output elasticity of IT (increase in value added related to 1% increase in IT investments). The results concluded that IT investments contribute to corporate productivity and show higher marginal returns in comparison to non-IT investments. This remark relies on the better, bigger and more precise data, on the more analytic research tools and on the higher levels of investments on IT. On the other side, many unanswered issues are generated concerning the range of the positive react and mainly in comparison to non-IT investments. The higher marginal product from other investments in capital is translated by several scholars as “additional returns” or as I personally call them “side effects”, which have to be adjusted in that way so as to take into consideration the technological depreciation leading in lower net results. Of course, there are studies that with the incorporation of the depreciation (up to 42% per year), end up in higher net results given the estimation that many companies invest in IT. It is very important at this point to mention that most studies don't include the costs of supplementary investments, such as education and specialization that in some cases can be larger than the real direct investments on IT. With the addition of those expenditures, the results may be even more mediocre in combination with bigger standard deviations in results as proved in many studies. Despite the emerging questions, it is still possible an initial positive relation between IT and productivity for a variety of reasons. IT investments pose higher risk by others and that's why companies expect much more benefits in order to cover the additional created risk. Most of the studies don't take into account the impact of this risk. Moreover, it is possible for adjusted costs to exist. It is difficult and costly for companies to introduce new innovations regardless of the continuously reducing prices of IT products. This is due to the delays in the development of new technologies, the withdrawal of older systems and the changes in practices that don't allow the achievement of the optimal level of investments on IT. Recent studies highlight more unanswered issues, like the controversial results per industry and the significance of the right timing to fulfill the invest, as long as the different time periods of the returns with the presence of lags. Two factors are responsible for the wide differentiation between various companies. First of all, the particular characteristics of every company, like the market place, reputation and goodwill or the capability of the executives that affect the strategic choices of the company and hence, the earning of additional benefits by IT. Secondly, the differences in organizational structure, strategy and administration methods that cause restructuring and redesign of the procedures, may affect the final result.

Concerning the effect of IT capital on the measures of financial performance, such as market value and profitability, the results are controversial due to the lack of instant correlation between them. Despite the previous findings which showed that IT investments can influence directly the company's outputs and many organizational indices, financial performance is determined by a broader variety of strategic and competitive factors that exceed the productivity limits. Brynjolfsson and Yang (1997) found that every IT US dollar was related to 5\$ up to 20\$ additional capitalization for public organizations proving the connection between IT and financial valuation, but stressing that this is a result of important non measurable supplementary organizational practices [9]. In the matter of profitability, there is no clear relation, as IT investment affects directly productivity and leads to consumer welfare, but don't necessarily improves the profit levels. The data and model practices are not in position to give as a clear correlation between IT and profitability, but during the evolution of these models incorporating more factors, it is expected that they will finally prove this relation.

3. INDUSTRY LEVEL

In spite of the fact than in corporate level, studies have given serious results and have proceeded the research in satisfactory level, in industry level the research effort encountered many difficulties due to lack of data. Nevertheless, a number of studies at the end of the 90s, have shown that the growth of labor productivity has accelerated in various industry sectors during the period 1995-9 in the US economy [10]. A research by Gordon (2000) came to the

conclusion that the improvement of labor productivity focused on the production sector of durable goods and especially on IT industries, though more recent studies highlighted a speed-up in non durable goods as well [11]. Studies by the Council of Economic Advisors (CEA) are in favor of a positive result ranging from low to very high levels. This is identified by the following Table 1 [12].

Industry	1989-1995	1995-1999	Change
Private industries	0.88	2.31	1.43
Agriculture	0.34	1.18	0.84
Mining	4.56	4.06	-0.50
Construction	-0.10	-0.89	-0.79
Manufacturing	3.18	4.34	1.16
Durable goods	4.34	6.84	2.51
Nondurable goods	1.65	1.07	-0.59
Transportation	2.48	1.72	-0.76
Trucking	2.09	-0.78	-2.82
Air transportation	4.52	4.52	0
Other transportation	1.51	2.14	0.63
Communications	5.07	2.66	-2.41
Electricity	2.51	2.42	-0.09
Wholesale trade	2.84	7.84	5
Retail trade	0.68	4.93	4.25
Finance	3.18	6.76	3.58
Insurance	-0.28	0.44	0.72
Real Estate	1.38	2.87	1.49
Services	-1.12	-0.19	0.93
Personal services	-1.47	1.09	2.55
Business services	-0.16	1.69	1.85
Health services	-2.31	-1.06	1.26
Other services	-0.72	-0.71	0.01
Industries by intensity of IT use			

Intense IT use	2.43	4.18	1.75
Less intense IT use	-0.10	1.05	1.15
Finance, Insurance & Real Estate	1.70	2.67	0.97

TABLE 2: Rate of labor productivity growth, 1989-1999

The CEA studies have also shown that this positive effect in labor productivity is related with even better investments on IT. For instance, as it is demonstrated in the above table, the average growth rate of labor productivity in the time period between 1995 and 1999 concerning the high-tech businesses, is four times as big as that of the low-tech companies. The findings of the aforementioned research are reinforced by the study of Stiroh (2001), who compared the production benefits during the 90s in 61 industrial sectors and found that in the 2/3 of the cases there was positive change in labor productivity after 1995 [13], [14]. Moreover, he concluded that the high intensity IT industries had 1.3% higher acceleration in the growth rates of labor productivity than the rest. A study by the McKinsey Global Institute (2001) showed that 38 industries that correspond to the 70% of GDP, also had positive change in productivity after 1995 [15]. The capstone of the above is founded in the study of Triplett and Bosworth (2002), which focused on 27 industries in the services sector [16]. It was the first study to shed light in this neuralgic section of the economy with such accuracy and recognizes the impact of IT and other factors in the production growth. An instant conclusion is that after 1995, most of the high-tech companies in USA belong in the services sector and the positive effect in their productivity has surpassed that of other sectors. All the above are of major importance as they show that the improvement in productivity, mainly after 1995, is significant and broad-based, affecting the whole of the economy and getting out from micro level. According to the view of Triplett and Bosworth (2002), this improvement often don't originated from new investment on IT, but from IT that existed a priori for over two decades but hadn't been reclaimed properly so as to bring the expected results.

4. NATIONAL LEVEL

The findings of the former studies show the contribution of many factors in economic growth at corporate and industry level that, as many of them proved, may be able to explain to an extent the national growth as well, but the key point in this situation is the as specific as possible effect on IT capital both in terms of labor productivity and general growth. The first studies in national level during the 80s and in the beginning of the 90s, didn't show any notable contribution of IT in productivity and economic growth [17],[18],[19],[20]. This result however, is justified to a high grade from the fact that IT investments occupied only a small portion of the capital stock in the economy so as to have a crucial role.(Sichel 1997) [21]. For example, IT as part of the total investment in capital in US dollar terms, was at 3.5% in 1980 and at 9% in 1990. During the 90s however, IT investments grew drastically reaching 22% of the total capital invest in the US economy. This fact has it's origin in the constantly reducing price of IT products per 17% in annual basis during the period 1959-1995 and 32% in 1995-9 (Jorgenson 2001), pushing many companies to the replacement of other forms of capital with IT [22]. These very important investments on IT had multi-significant effect on economic growth as it is conceivable from the following data. Labor productivity in USA that formerly had an annual growth rate of 1.5% in the period 1973-1995, it almost triple sized at the level of 3.1% per year from 1995 until 2000. Similarly, GDP increased per 3% in annual basis the first period while it reached 5% the last five years of 2000 (CEA 1001). This increase is proved in a lot of macroeconomic researches on the effects of IT investments and even by many scholars that previously had an opposite opinion, showing the large impact on economic growth at national level. A proof of the continuously positive and long-run effect of IT investments in macro level are the data that are cited in the following Table 2.

Jorgenson & Stiroh (2000-1)	1959-1973	1973-1995	1995-1999
GDP growth (annual rate)	4.32	3.04	4.08
Capital Contribution (% of total)	33	50	71
IT contribution to GDP growth	4	13	28
Productivity growth (annual rate)	2.94	1.40	2.11
IT contribution to productivity growth	6	27	42
Oliner & Sichel (2000)		1973-1995	1995-1999
GDP growth		2.99	4.82
Capital contribution		42	38
IT contribution to GDP growth		17	23
Productivity growth		1.52	2.67
IT contribution to productivity growth		31	41

TABLE 3: The contribution of IT to GDP growth and productivity

While therefore, the initial studies indicated a moderate contribution of IT to the rates of economic growth and productivity, 4% and 6% respectively, most recent highlighted a greater and more substantial effect. Specifically, the period 1973-1995 Jorgenson and Stiroh (2000) found that 13% from the 3.04% of economic growth and 27% from the 1.4% of the labor productivity rate is attributed to IT, while Oliner and Sichel (2000) found even greater figures as shown in the following tables [23].

	Time period	France	Germany	Italy	Holland	USA
Labor	1991-1995	1.79	2.70	2.95	1.96	1.50
	1996-1999	1.37	1.53	0.86	0.53	2.60
Total	1991-1995	0.87	1.83	1.98	1.20	0.92
	1996-1999	0.83	0.97	0.45	0.47	1.47

TABLE 4: Productivity Growth Rate

		Time Period	Contribution to GDP			
			Information Equipment	Software	Communication Equipment	Total Productivity
Oliner / Sichel	USA	1991-1995	0.25	0.25	0.07	0.92
		1996-1999	0.63	0.32	0.15	1.47
Jorgenson / Stiroh	USA	1991-1995	0.19	0.15	0.06	0.73
		1996-1999	0.46	0.19	0.10	1.24

TABLE 5: Contribution to GDP

The acceleration of the labor productivity rate between 1995-9 had its roots partially in the radical raise of IT expenditures. The main reason for this effect on productivity was simply the fact that the accumulated IT capital represented a remarkable bigger share of the total capital stock in comparison to the previous periods. Thus, the contribution of IT on economic growth reached the period 1995-9 the level of 28%, according to Jorgenson (2001) and 42% as for labor productivity. Additionally with the investments on IT, the propagation and wide use of internet and e-commerce have contributed positively. A study by Litan and Rivlin (2001) estimated the impact on productivity by the use of Internet between eight industrial sectors that make up for the 70% of US GDP [24]. The results showed a positive reaction of 0.2 to 0.4 basic trend of the productivity rate. In spite of the fact that in the rest of the world there was a lack of significant research in the issue that we examine compared to that of USA, the key findings in the developed countries of Europe and Asia simulate the above. For instance, Schreyer (1999) made a research in the G-7 countries and found that IT had positive impact on productivity in all the countries of the group in the period 1990-6 [25]. Another study by OECD in 2000 by Daveri updated and extended the research in 18 countries [26]. Despite the individual differences between the two studies, the final results were similar.

In conclusion, the big reduction in the price-return ratio of IT equipment has motivated an increase in the investments of IT in the US economy and the rest of the world in the realm of the improvement of economic performance. The big boom in the investments on IT from the mid 90s and therefore, led to an acceleration of the rates of labor productivity and economic growth.

5. CONCLUDING REMARKS

As perceived from the aforementioned, the multi-significant issue of the relation between IT and economic performance stands in the foremost of the scientific attention over the last decades and is a key term in the research field of the telecommunications and informatics. It's importance is also proved by the fact that from the less than 12 studies during the 80s, we reached the over 50 in the 90s. The research concerning the results of IT investments is complicated containing a number of analytic tools so as to study a plethora of companies, industries and countries. Beyond the complexity of the issue, three fundamental conclusions are emerging from the previous review.

First of all, the productivity paradox as initially formulated by Robert Solow in 1987, fall. A large number of studies proved the important effect of IT investments on corporate, industrial and national productivity showing that information technology plays a crucial role.

Secondly, in spite of the fact that the so called "New Economy" and it's benefits pull the attention of the mass media at the end of the 90s, IT investments actually strengthen productivity for over three decades period.

Thirdly, and mainly concerning companies, while the results of IT investments are in general positive, there is a wide scale of performance among different enterprises. Some of them focus on the temper of the companies, while additionally, there is strong evidence that investments in organizational capitals due to managerial practices, like the decentralization of decision making, the education of the staff and the restructuring of the corporate procedures, have catalytic effect on the results of IT investments. The value of IT should be examined in relation with such investments in organizational level and must be treated as supplementary. This is justified by the fact that IT isn't just a simple tool for automation of the existing procedures, but is mainly an instigator for changes that can lead to productive profits.

As the Solow paradox has been solved, this review and evaluation of the studies suggests that the issue of IT returns is much more complicated from the initial estimation and therefore, more research is needed to shed light on several grey areas of the researches, mainly the issues of the measurement of inputs and outputs at corporate and national level. Improved methods of measurement, especially in terms of software and capital such as investments on R&D and human capital is a first step. An even more important but difficult step is the measurement of the outputs. This is of major significance for the services sector that dominates in our days, where the problem becomes bigger. IT results in this area, that consists of the 2/3 of the US economy, become less understood from all the other sectors and possibly are underestimated. The right measurement is defined by the economic theory and always depends on the available statistical data. The measuring process of IT consists of three steps: 1) The quantity measurement in current prices (nominal terms) 2) The price measurement adjusted for quality differences and 3) The measurement of real sizes in fixed prices adjusted for quality. In the first step, the main issue is the right measurement of the nominal added value per sector. For economic aspect, the second step is much more difficult because contrary to the general trend of inflation to other goods and services, in IT we encounter deflation owing to the quality improvements. The problem is that the structure of suitable price indicators prerequisites the readjustment of the observable prices for quality changes. The theory suggests two different methods for the measurement of fixed quality prices: 1) the matched model and 2) the hedonic method (hedonics) that is the dominant. The following table provides an indication of the degree that hedonic methods are adopted by nine representative countries of OECD. Only USA have applied such methods for software and communications equipment.

	Software	Information Equipment	Communication Equipment
Australia	No	US hedonic index for computers adjusted for changes in exchange rates	No
Canada	They don't have own measurements. They adjust & use US hedonic indices	Hedonic indices for computers and peripherals	No
Finland	Average (50:50) profit index of computer sector & US hedonic price index for software	Not referred	Not referred
France	No	Hedonic index for computers: combination of hedonic measures for France & US hedonic price index adjusted for changes in exchange rates	No
Germany	No	No	No
Italy	No	No	No
Japan	No	Hedonic index for computers only	No
United Kingdom	No	No	No
USA	For stock software: hedonic index For software under notice: average non-hedonic index and stock software index	Hedonic index for computers and peripherals	Hedonic index for switching equipment

TABLE 6: Comparative table

Moreover, the present study has given priority to some areas for future research. Three are the most important for professional practice. First of all, more analysis of the mechanisms is necessary through which some companies receive high benefits from IT investments and particularly, from these of supplementary assets. The second priority explains why some industries of IT capital intensity haven't shown benefits in productivity despite the large IT investments. These two priority areas shall help in the direction of the settlement of some of the most difficult and measuring issues. The third part is the paradox of profitability or else the failure of the studies to show a positive relation between IT investments and the measures of financial performance. It is very important for better data bases to be created and also for models to control the additional factors that affect profitability.

Finally, the above findings must be combined with recent facts in the international economic scene such as the current financial crisis. From the mid 00s and more drastically the last 3 years, IT investments have followed a declining route mainly due to the general economic recession that the world economy has encountered with the highlight of the current crisis. Likewise, the fall of many Internet related companies had a negative impact in two ways: not only their own IT investments disappeared but also reduced the competition pressure to the other companies so as to invest on technology.

Nevertheless, IT investments shall continue to exercise positive effect on productivity as shown by the studies not only directly but indirectly too. The indirect way is documented by the fact that companies that invested on IT are tied down in complementary managerial and organizing practices that improve the benefits they enjoy from IT investments, discovering and utilizing the returns that Internet and other networks provoke achieving notable profits in productivity. A strong evidence for this positive impact, in spite of the current crisis, is the data for the role of IT in the largest world economy, the US. These data show that in 2009, IT firms contributed about \$1 trillion to U.S. GDP, or 7.1 percent of GDP. Moreover, from 1991 to the present, IT firms have contributed directly an average of \$577 billion per-year in value-added to America's GDP. These direct contributions were equivalent to nearly one-third of the value-added provided by all manufacturing [27].

The final conclusion is summarized in the words of the Nobel prized economist Joseph Stiglitz for the US economy and the role of IT, that enclose all the meaning of the aforementioned studies:

"For many reasons, the foundations of the US economy remain strong and strengthened further during the 90s. The New Economy is real, in spite of the fact that it's value has been exaggerated. The new technologies have caused increases in productivity that will continue to make a huge difference in our living standards" [28].

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An Effectiveness of Human Resource Management Practices on Employee Retention in Institute of Higher learning: - A Regression Analysis

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Abstract

An effective human resource management practices namely employee empowerment, training and development, appraisal system compensation are the main factor for the success of a firm on employee retention. In this study, we aim to study how employees regard importance of their empowerment, equity of compensation, job design through training and expectancy toward effective performance management on their retention. Quantitative data was collected using the non probability self administered questionnaire that consist of questions with 5-points Likert scales distributed to our samples of 278 individuals. By using a multiple regression analysis, it is found that, training and development, appraisal system compensation are significant to employee retention except employee empowerment. Base on the results, training, compensation and appraisal is a fundamental consideration for University of Y lecturers' retention decision; while empowerment is less fundamental to lecturers' consideration as this can be attributed to the Asian culture characteristic of higher authority conformity.

Keywords: Employee Empowerment, Training and Development, Appraisal System, Compensation, Employee Retention.

1. INTRODUCTION

Employees are the backbone of an organization. Hence, the retention of the employees is important in keeping the organization on track. In order to retain the best talents, strategies aimed at satisfying employee's needs are implemented, regardless of global companies or small-sized firms.

Generally, organization would retain their personnel for a specified period to utilize their skills and competencies to complete certain projects or execute tasks. In another word, we can understand it as employee retention where the scope of task, is however, often larger than a simple task and more preferably a job in real world. Retaining the desirable employees is

beneficial to an organization in gaining competitive advantage that cannot be substituted by other competitors in terms of producing high morale and satisfied coworkers who will provide better customer service and enhanced productivity, which subsequently resulting in sales generating, customer satisfaction, smooth management succession and improved organizational learning (M. Heathfield, 2005).

Malaysia's education sector has always been centered by government to emphasize higher education level provided to the citizens. Malaysia's Ministry of Higher Education thrives to create an outstanding higher education environment for establishment of internationally competitive education institutions in order to nurture knowledgeable, competent and globally competitive human resource base (Rosdi & Harris, 2010). Economic Planning Unit (2008) revealed that privatisation of higher education institutions stimulates intense rivalries to match offer for competent high qualification academicians (Hashim and Mahmood, 2011). In addition, the emphasis on continuing upgrading institutions through global ranking further forces them to focus greater concern on employee retention practices (Lew, 2009). In explaining factors contributing to employee retention, it is essential to consider motivational theories as motivated employees tend to stay with an organization longer. To illustrate further, an employee will be motivated to carry out his job if given sufficient guidance through training & development, appraised through effective performance standard and compensated equally according performance standard. Through the understanding of various well-known motivational theories such as Maslow's Need Hierarchy and McClelland's Need Theory, we can point out the critical factors that have implication toward retention practices focus on physical and emotional needs, working environment, supervision, responsibilities, supervision, fairness & equity, employee development and feedback on performance (Ramlall, 2004).

An effective human resource management practises can be the main factor for the success of a firm *Stavrou-Costea (2005)*. As supported by *Lee and Lee (2007)* HRM practices on business performance, namely training and development, teamwork, compensation/incentive, HR planning, performance appraisal, and employee security help improve firms' business performance including employee's productivity, product quality and firm's flexibility.

In this study, we aim to study how employees regard importance of equity of compensation, job design through training and expectancy toward effective performance management on their retention.

2. PROBLEM STATEMENT

There are many retention practices implementation around the globe operated routinely by either small setups or big enterprise, even in private education sector. As mentioned previously, strong competition especially in developing nation like Malaysia, which has scarce high education talent, makes employee retention a significant move in keeping competitive edge. Institutions tend to satisfy employee's satisfaction in their job by providing support to their motivational aspects, such as self-esteem, self-fulfillment and basic needs. The problem remains on whether how great is the effect of each aspect having toward overall employee's retention.

Empowerment is the process in which the employees are involved in decision-making, are appreciated and provided proper training and support. Nowadays, many organizations are trying to delegate the decision-making process to the lower level employees. According to Bowen and Lawler (1995), there is a significant relationship between employee empowerment and intent to leave. Laschinger, Finegan and Sharmian (2002) showed that empowerment leads to higher job satisfaction among employees. At the same time, there are plenty of ways of executing this process whether by providing adequate training, market competitive compensation or effective performance management.

Many organizations in Malaysia do not provide continual training program for their employees; been less effective in appraisal by ignoring the results (Kennedy & Daim, 2009); and compensation systems are not adequate to provide the desired reward to the academicians especially under current working condition where less respect and recognition has been given to their contribution. These factors made the employees lose their interest to their job and incline for turnover options either to better offers within or out of education

industry.

On top of that, management sometimes neglects to clarify the objectives of training & development programs and performance management. Employees often confused by management's decision to implement any organizational development activity as they might afraid of the backlash of these programs to their job security or even career prospect. Moreover, an untrained supervisor might misunderstand employee engagement as giving directives rather than coaching and support in managing subordinates' performance (Gruman & Saks, 2011), hence undermines employees' participation in engaging critical decisions. In order to solve this problem, the study will investigate influence of empowerment, training, performance appraisal and compensation on their retention with an institution through surveying the University of Y lecturers. The research outcome will reflect degree of impact of empowerment and other elements to academicians' retention with a higher education institution namely University of Y in this study.

3. RESEARCH OBJECTIVES

The main purpose aims at reflecting how employee empowerment, training, job appraisal and compensation affect lecturers in their retention with University of Y. To be more specific, it studies on effectiveness of existing training programs, employee empowerment, job appraisal and compensation in retaining employee from the academicians' perception. By collecting academicians' opinions, it would reflect how they perceive as satisfactory development which may enhance their future career planning and job promotion.

4. HYPOTHESES OF STUDY

Employee Training

H₀: There is no significant relationship between employee training and employee retention.

H₁: There is significant relationship between employee training and employee retention.

Appraisal System

H₀: There is no significant relationship between appraisal system and employee retention.

H₁: There is significant relationship between appraisal system and employee retention.

Employee Compensation

H₀: There is no significant relationship between employee compensation and employee retention.

H₁: There is significant relationship between employee compensation and employee retention.

Employee Empowerment

H₀: There is no significant relationship between employee empowerment and employee retention.

H₁: There is significant relationship between employee empowerment and employee retention.

5. SIGNIFICANCE OF STUDY

This research objective is to provide better understanding in the relationship of effectiveness of Human resource practices on employee retention in University of Y. It will provide useful information of relationship between employee retention and employee compensation, appraisal system, employee empowerment and employee training.

The purpose of this study will help readers to better understand and use as a guide or information to many higher education institutions in Malaysia regarding the relationship of effective human resource practices on employee retention. It will also provide range of solution toward employee retention in Universities. Hence, it enables many universities to identify what are the major factors to be used to retain their employees through better knowledge of the motivational aspect toward achieving academician satisfaction.

6. LITERATURE REVIEW

6.1 Definition and Review of Employee Retention

Employee retention refers to policies and practices companies use to prevent valuable employees from leaving their job. It involves taking measures to encourage employees to remain in the organization for the maximum period of time. Hiring knowledgeable people for the job is essential for an employer. But retention is even more important than hiring. This is true as many employers have underestimated costs associated with turnover of key staffs (Ahlichs, 2000). Turnover costs can incurred with issues such as reference checks, security clearance, temporary worker costs, relocation costs, formal training costs and induction expenses (Kotzé and Roodt, 2005). Other invincible costs and hidden costs such as missed deadlines, loss of organizational knowledge, lower morale, and client's negative perception of company image may also take place.

This is why retaining top talent has become a primary concern for many organizations today. Managers have to exert a lot of effort in ensuring the employee's turnover are always low, as they are gaining increasing awareness of which, Meaghan et al. (2002), employees are critical to organization since their values to the organization are not easily replicated. Many critical analysis are conducted to minimize the possible occurrence of shortage of highly-skilled employees who posses specific knowledge to perform at high levels, as such event will lead to unfavorable condition to many organizations who failed to retain these high performers. They would be left with an understaffed, less qualified workforce that will directly reduce their competitiveness in that particular industry. (Rappaport, Bancroft, & Okum, 2003).

Most researchers (Bluedorn, 1982; Kalliath and Beck, 2001) have attempted to answer the question of what determines people's intention to quit, unfortunately to date, there has been little consistency in findings. Therefore, there are several reasons why people quit their current job and switch for other organization. The extend of the job stress, low commitment in the organization; and job dissatisfaction usually result in resignation of employees, (Firth 2007). Abundant studies have also certified the relation between satisfaction and behavioral intentions such as employee's retention and spread the word of mouth (Anderson and Sullivan, 1993).

Numerous studies showed how high employees involvement is can relate to the intention of leaving an organization (Arthur 1994). Lacking of opportunities to learn and self development in the workplace can be the key for employee dissatisfaction which leads to turnover. Other studies also indicated that employees will retain in their organization if he or she has a good relationship with the people he or she is working around with (Clarke 2001). Organizations are therefore suggested to provide team building opportunities, where interaction and discussion can be carried out not only within but outside their working hours (Johns et al 2001).

This is why managers today must taken care of their employees personal feelings toward the job and satisfaction levels from their working conditions, superiors and peers, as these are the keys to ensure employee retention. The success and survivability of organizations is heavily dependent on customer evaluations (Jolliffe & Farnsworth, 2003, p. 312), whereby the organization must put effort in satisfying their employees since the relationship between customer satisfaction and employee's satisfaction are significant.

In summary, the literature defines retention as continuing relation between employees and their organization and turnover as "any permanent departure beyond organizational boundaries" (Cascio, 1995, p. 581). The benefits of retention are saving cost for further recruitment, fewer training to be conduct for new candidates, improve productivity, increase employee's performance and thus increase profits and meet their organizational goals and objectives. Below we will discussed the relationship between each of the human resource management practices with employees retention and employees turnover, which are the impacts from employee empowerment, employee training & development, performance appraisal and employee compensation.

6.2 Definition and Review of Employee Empowerment

Generally, empowerment is delegating the power of decision and action to the employees and giving more responsibility and authority to complete their task (Dr. Yasar F. Jarrar & Professor Mohamed Zairi, 2010). It means that employees have sufficient authority to determine how they perform their tasks. In a broader view, empowerment includes involvement of employee in goal-setting, decision-making and motivational techniques and enabling employees to work in a participative environment (Osborne, 2002). Undeniably, empowered employees are identified as powerful drive in organization's success (Kaye & Jordan-Evans, 2001). It is because they are more motivated and committed to organizational operation. According to Hummayoun Naeem and Muhammad Iqbal Saif in 2010, employee empowerment can create sense of belongingness and ownership towards the current organization. They tend to be more confident and perform well. Indirectly, it will increase service quality and customer satisfaction.

In this competitive market, retaining competent and capable workforce is important in any organization. High turnover rate in an organization may affect the reputation and image of the organization. Employee replacement is problematic and costly because the organization has to train a new employee if an experienced employee resigned. Some studies have identified that lack of job dissatisfaction (Moore, 2002) and low level of empowerment (Boundrias et al., 2009) and low levels of support of superiors (Hatton and Emerson, 1998) may lead to turnover (Salman, Iqbal and Chandran, 2010). Human resources policies must focus at gaining more self-governing to the employee to avoid turnover and job burnout (Salman, Iqbal and Chandran, 2010). Huselid & Becker (2000) found that HR policies play a strategic role in employee retention through stimulating skilled labour. The goal-setting process that involves employee can enhance employee empowerment as employee consider himself more empowered knowing his or her job (Stanfield and Longenecker, 2006).

Empowered employees tend to be more confident and try to give their best to employer because they are given more authority in decision-making process (Hummayoun Naeem and Muhammad Iqbal Saif, 2010). Employee empowerment can create a feeling of obligation among employees to stay in organization. Hence, the employees will tend to remain in the organization even when face pressure from others that intend to leave the organization because they feel that they are a part of the organization (Choong, Wong and Lau, 2011). In essence, the intention to remain or leave the organization among the employees is based on the job satisfaction of employees. The individual with higher job satisfaction tend to more committed to the organization. They will be more likely to remain in the organization.

6.3 Definition and Review of Training

According to Goldstein (1980) and Latham (1988), training is defined as the systematic acquisition and development of the knowledge, skills, and attitudes required by employees to adequately perform an assigned job or task to boost performance in the job environment. Training should impart new knowledge and skills if the training is relevant, meet employee and organizational needs, efficiently and effectively designed and delivered (Salas, 1999). When the results of training reflected in improvements in relevant knowledge and the acquisition of relevant skills, employee job performance should improve provided that the skills learned in training transfer to the job (Baldwin & Ford, 1998; Salas, 1999). Improvement in performance such as productivity, quality, and services are the training outcomes provided that the job is strategically aligned to the organization's needs. For individual, if the desired needs of employee were fulfilled through the training programs provided, there is no doubt the desired outcome by the organization, retention on employees, will be reached.

Huselid (1995) suggested that perceptions of HR practices such as providing training and job security by the company are important determinants of employee retention. Moreover, some studies also state that HR practices such as benefit and training are positively related to retention because the practices motivate employees and "lock" them to their jobs (Lazear 1986; Madrian, 1994; Gruber & Madrian, 1994), which are so called employee retention.

According to Landsman (2004), he suggested that training is a valuable activity for enhancing skills and improving staff performance, and that training can address some of the factors contributing to staff retention, such as perceived support from the supervisor, the agency, and

community. Training can define roles more clearly to employees, thereby minimizing job stress. Organization with sufficient training opportunities should thus have higher retention rate.

However, training alone cannot address all of the factors contributing to staff retention, however, such as excessive caseloads and promotional opportunities within the agency. It is, therefore, reasonable to say that training can play a role in improving retention, but it may not be sufficient to improve retention if other systematic barriers are not addressed.

6.4 Definition and Review of Compensation

Compensation had been defined in many term by many researcher, but in this research, compensation are which including that are something, typically money, awarded to someone as a compensation for injury, loss or suffering, money received by an employee from an employer as a salary or wages, or do/give something to somebody in return. Compensation is not only in the form of money, but also in non-cash form. Benefits, such as pension, life and health insurance, and retirement plans, and allowances that include company cars or subsidized transportation, represent a significant pay element in many large firms. In addition, for tax advantages and economies of scale of purchasing that make it economically advantageous for the firm to provide those element, the compensation are always viewed benefits as a tools for attracting and retaining desired employees.

Many research had show that employee position and length of employment were traditionally what determined wages in most companies. And there are numbers of research explained with evidence show that compensation satisfaction plays an important part in employee retention. DiPietro and Condly (2007) used the Commitment and Necessary Effort (CANE) model of motivation to find how hospitality employees are motivated. They discovered that nonfinancial compensation or the quality of the work environment played an important part on employee turnover intentions. Companies are in danger of creating an unsatisfactory working environment if there is no any compensation planning. Williams et al. (2007) found that if employees are satisfied with how the company operates and communicates its compensation policies, they remained committed to the organization. Furthermore, an organization's reward system can affect the performance of the employee and their desire to remain employed (e.g., Bamberger & Meshoulam, 2000, MacDuffie, 1995). There are also numbers of researchers demonstrate that there is a great deal of inter-individual difference in understanding the significance of financial rewards for employee retention (Pfeffer, 1998; Woodruffe, 1999).

6.5 Definition and Review of Performance Appraisal

Performance appraisal is a process of inspecting and evaluating an individual's performance in his duty to facilitate the decision of career development of the individual. It evaluates the individual overall contribution to the organization through assessment of his internal characteristics, working performance and his capability to pursue higher position in organization (Gruman & Saks, 2011). In order to enhance organizations' ability to survive through turbulent environment, mostly top corporations take great concern on managing the performance measures of their employees. It is common understanding that top talents are keys to business success today, but how a company manages its talents or human resources would be the fundamental to all the success where effective structure of performance measurement would ensure company fully utilize its competitive resources to maximum.

As extracted from the literature review, performance appraisal plays the role as medium of communication between management and employee. An effective appraisal would result in enhanced employee development from feedback as well as better employee satisfaction comprehension by company.

However, if appraisal is simply applied as a tool of measurement and monitoring, problems would arise where tension overwhelming both the evaluator and respondent. Webster, Beehr & Love (2011) studied how work stressors can result in role ambiguity and conflict, and subsequently causing increased job dissatisfaction and turnover. It is mentioned in the literature review that appraisal can be stressful to both evaluator and respondent if both parties do not take concern of its importance or confusing message is produced from the appraisal. Similar to a negotiation, stress can affect an employee's job performance where he

or she might be too concerned with the effect of the appraisal to career development or compensation (O'Connor, Arnold & Maurizio, 2010).

In advance of stress factor that may cause appraisal to generate negative reaction of respondent, other factor such as perceived fairness may apply in the scenario on how employee may deem an appraisal standard to be equally equitable to judge their ability and effort. Sudin (2011) recently came out with a study on how perceived fairness during appraisal process may influence employee satisfaction and resulted in positive relationship between all organizational justice variables and performance appraisal circumstances from data collected among Malaysia companies. Apart from fairness, studies found out the evaluator problem during appraisal process as managers tend to be personally intentional in choosing his way of conducting appraisal. From Spence & Keeping (2011) research, we obtain a conclusion that appraisal research has shifted from measurement issue to rater cognition in which rater establish, encode, and retrieve judgments about performance to increase appraisal accuracy; at the same time, evaluators focus on thriving good subordinate relationship, solid reputation and adjusted to company objective. This may distort the appraisal system which eventually creating employee confusion and frustration.

6.6 Proposed Theoretical/ Conceptual Framework

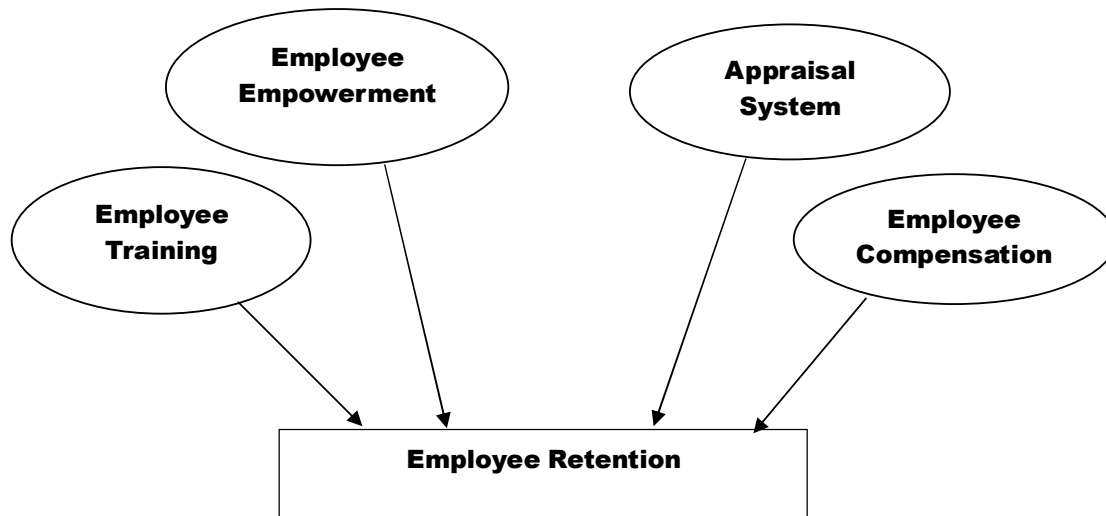


FIGURE 1: Proposed Framework Model

The study aims to study the interrelationship between the independent variables and employee retention by conducting research on how these 4 variables affect the retention of University of Y lecturers. To illustrate, the study tries to figure how appraisal aligns to compensation and how training helps employee gain empowerment. In short, the proposed framework suggests how training, empowerment, appraisal and compensation can be linked together in reaching a conclusion of becoming significant factors of an employee's retention with a firm.

7. RESEARCH METHODOLOGY

Quantitative data was collected using the non probability self administered questionnaire that consist of questions with 5-points Likert scales distributed to our samples of individuals. In analyzing the data collected, Statistical Package for the Social Sciences (SPSS) technique has been employed. This section also introduced the sampling techniques used in order to collect information from target population using questionnaire in scale rating manner to be implemented into the SPSS program to process the reliability test and subsequent empirical analysis.

7.1 Research Design

Research design is an overall framework of a research that explains the direction and method

to be used in the study to gather the information needed, either from primary or secondary sources (Malhotra, 2007). According to Neuman (2006), quantitative approach has the characteristic of measuring objective facts using variables where data is separated from theory, statistically analyzed and emphasized with its reliability. Quantitative approach been used to develop hypotheses that consist of all the variables to empirically investigate the above statement via statistical technique.

Due to adoption of quantitative approach, it is inevitably that the study will be carrying out causal research where the hypotheses formulated in earlier chapter consisting of all the variables will be empirically investigated using statistical technique such as charts, tables and other statistical measurements to prove the cause and effect relationship between employee retention and the independent factors, i.e. empowerment, training, compensation and appraisal.

7.2 Data Collection Methods

In this section, there would be illustration on what methods will be used in collecting the primary and secondary data in order to empirically test the formulated hypotheses, and hence solving the research questions.

7.2.1 Primary Data

For this study, a questionnaire consisting four main variables, namely employee empowerment, training and development, employee compensation and performance appraisal, is conducted by extracting sources from few established questionnaire. The questionnaire would be distributed to sampling amount of lecturers in University of Y to fill up and later be tested of the result using SPSS software. Prior to the data processing, a pilot study would be conducted with detail to be specified in later section to enable the reliability of this instrument to be empirically tested.

7.2.2 Secondary Data

In this study, most secondary data are extracted from online resource such as online databases, internet findings or other sources. The journal articles of relevant study field are adopted from Emerald Library Database, Proquest Database and ScienceDirect database which can be found in University of Y online library databases.

7.3 Sampling Design

7.3.1 Target Population

According to Hair and Bush (2006), target population is said to be a specified group of people or object for which questions can be asked or observed made to develop required data structures and information. Therefore, the target population in the research is focus on the lecturers and tutors in University of Y regardless of campuses.

7.3.2 Sampling Frame & Sampling Location

The sampling frame can be defined as set of source materials from which the sample is selected. The definition also encompasses the purpose of sampling frames, which is to provide a means for choosing the particular members of the target population that are to be interviewed in the survey (Anthony G. Turner, 2003). However, sampling location is a place where a research is conducted or/and a place where information is acquired. In this research, the respondents are from the lecturers and tutors that work in University of Y.

7.3.3 Sampling Technique

According to Malhotra (2007), non-probability sampling is less expensive, less time consuming, and require only little sampling skills. Therefore, this sampling technique is adopted to conduct survey in this research. Moreover, units of sample in this research are selected on the basis of personal judgment or convenient because information and targeted respondent is readily and available.

7.3.4 Sampling Size

Malhortra and Peterson (2006) and Zikmund (2003) stated that, larger the sampling size of a research, the more accurate the data generated but the sample size will be different due to different situation. In this research, sampling size is determined accordingly by using sample

size formula adopted from Krejcie, R.V., and Morgan, D.E. (1970). The total targeted population in this research is counting according to the University's staff directory. There are approximately 1080 lecturers and tutor from all campuses in this University and the information is adopted in the last updated date of 22 July 2011 in their website. Therefore, according to the formula used, the sample size in this research will be 278. 300 copies of questionnaire were distributed to all campuses

7.4 Research Instrument

The research instrument that used by our group is questionnaire. The purpose of using questionnaires survey is because of the direct response and feedback from the respondents that can be collected in short period of time and in an easier manner.

7.4.1 Questionnaire Design

For this research, the questions in the questionnaire are closed-ended or structured in order to ease the process of analyzing the data from respondents. Thus, the results gathered from respondents will increase the speed and accuracy of recording, as well as more comparable. The questions are adopted and modified from previous research papers conducted by other researchers. The questions are designed by simple English to reduce misunderstanding and uncertainties on the questions by the respondents.

This questionnaire consisted of two parts, section A is general information which consisted of nominal scale, ordinal scale, interval scale and lastly ratio scale. In section B, it consists of questions of four factors which have the impact on the employee retention, where the four variables are empowerment, compensation, training and development, and appraisal system. The questions will be formed in a five point Likert scale which allows respondents to indicate how strongly agree or disagree with the statement provided. It will lead to a better understanding towards the factors that have the impact on retention of University of Y lecturers.

7.4.2 Pilot Test

There are 30 sets of questionnaire randomly distributed to the lecturers in university campus. Questionnaires consist of 25 fixed alternatives questions. Fixed alternative questions are the questions in which respondents are given specific, limited-alternative responses and asked to choose the one closest to their own view. SPSS test is important to ensure the reliability of the survey conducted as well as to improve the questionnaire quality before the actual survey takes place.

7.5 Construct measurement

Operational in construct measurement is the process of identifying scales that correspond to variance in a concept involved in a research process. However, the scale is a device that providing a range of values that correspond to different characteristics of amounts of a characteristic exhibited in observing a concept. It is also a tool or mechanism by which individuals are distinguished as to how they differ from one another on the variables of interest to our study.

7.5.2 Origin and Measure of Construct

Table 1 Source Model of Construct Measurement

Item s	Construct Measurement	So urc es
Empower men t	<ul style="list-style-type: none"> ● I have the opportunity to determine how I do the job. ● I take appropriate action without waiting for approval. ● My work makes good use of 	(Pa ula M. Sho rt & Ja me s S.

	<p>my skill and ability.</p> <ul style="list-style-type: none"> ● I make decision about implementation of new program in the university ● I believe that I am empowering student. 	Rin eha rt, 199 2)
Com pens ation	<ul style="list-style-type: none"> ● I am satisfied with the pay that I receive. ● I earn more than others who do similar work at other universities/colleges. ● My pay encourages me to improve the quality of my work. ● I will receive a reward if I do something to improve my work. ● The non-monetary benefits, such as vacation time and medical insurance that I receive here are better than those I could get at similar universities/colleges. 	(Mi njo on Jun , Sha oha n Cai & Hoj ung Shi n, 200 6)
Trai ning and Dev elop men t	<ul style="list-style-type: none"> ● I am sent to extend higher qualification program. ● I have received sufficient training at firm to do my job effectively. ● I am trained in quality improvement skills ● I am arranged with a mentor to facilitate career planning. ● I am given training at a regular basis. 	(Mi njo on Jun , Sha oha n Cai & Hoj ung Shi n, 200 6)
Appr aisal Syst em	<ul style="list-style-type: none"> ● The quality of my work is an important factor in evaluating my job performance. ● I am regularly given feedback on my job performance. ● I am satisfied with existing performance appraisal system. ● The performance ratings were done periodically. 	(Mi njo on Jun , Sha oha n Cai & Hoj ung Shi

	<ul style="list-style-type: none"> The performance rating is helpful to identify my strength and weakness. 	n, 2006)
Employee Retention	<ul style="list-style-type: none"> I am prepared to put in a great deal of effort beyond what is normally expected in order to help this university to be successful. I plan to make this university my own career. I feel a lot of loyalty to this university. This is the best university for me to work for. I would recommend this university to a friend if he/she is looking for a job. 	(Minjon Jun, Shaohan Cai & Hojung Shin, 2006)

8. RESULTS

8.1 Multiple Linear Regressions

The concepts and principles developed in dealing with simple linear regression (i.e. one explanatory variable) may be extended to deal with several explanatory variables.

8.1.1 Model summary

Table 2. Multiple Regression Model Summary
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.680 ^a	.463	.455	.55463

a. Predictors: (Constant), average summated of appraisal, average summated of empowerment, average summated of compensation, average summated of training

b. Dependent Variable: average summated of retention

Source: Developed from the research

According to the model summary above, the R square value had gain 0.680, which is 68 percent. These mean that 68% of dependent variable of retention can be explained by it 4 independent variable. The independent variable refer to include employee empowerment, compensation, training and appraisal system in this research, it will conclude that 32% (100% - 68%) of dependent variable of retention is explained by other potential factors. The value of adjusted R square with value of 0.463 which 46.3% represented the significant contribution of the 4 independent variable toward dependent variable.

8.1.2 ANOVA

Table 3 ANOVA Model Summary

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	72.955	4	18.239	59.290	.000 ^a
	Residual	84.595	275	.308		
	Total	157.551	279			

a. Predictors: (Constant), average summated of appraisal, average summated of empowerment, average summated of compensation, average summated of training

b. Dependent Variable: average summated of retention

Source: Developed from the research

Table above determine satisfactory result as the significance level of the model is not over or smaller than 0.05. Thus, model that used in this research is good.

8.1.3 Multiple Regression Analysis

Table 4. Multiple Regression Coefficient Analysis

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.577	.208		2.778	.006
	average summated of empowerment	.047	.063	.041	.750	.454
	average summated of compensation	.413	.062	.378	6.692	.000
	average summated of training	.155	.062	.145	2.496	.013
	average summated of appraisal	.262	.065	.252	4.042	.000

a. Dependent Variable: average summated of retention

Source: Developed from the research

Multiple Regression equation:

$$Y = C + \beta X_1 + \beta X_2 + \beta X_3 + \dots + \beta X_n$$

Y= Prediction relationship of types of variables toward retention.

C= Constant value.

β = Unstandardized coefficient.

X= Dimension of independent variable (employee empowerment, compensation, training and appraisal system).

Based on the above table, we able to derive the following equation:

$$Y = 0.577 + 0.047X_1 + 0.413X_2 + 0.155X_3 + 0.262X_4$$

This can be interpreted that the increase of 1 unit of employee empowerment (X₁) may incur the raise of 0.047 units in retention (Y). However, for the independent variable of compensation, every 1 unit of increase will incur the raise of 0.413 units in dependent variable, retention. On the others hand, 1 unit increase in training may cause 0.155 units of retention to increase.

Finally, appraisal variable also have a constant relation with retention, it is every 1 unit increase in appraisal with incur the raise of 0.262 units in retention.

The highest beta indicates the independent variable is the most significant variable toward it dependent variable. From the table above, the independent variable of compensation has the highest positive beta of 0.378, this mean that the independent variable of compensation has contribute the most and has stronger effect toward the retention if compare to others independent variable.

9. DISCUSSIONS OF MAJOR FINDINGS

Table 5: Summary of Results

Hypothesis	Result	Supporte d
H ₁ : There is significant relationship between employee empowerment and employee retention.	r =0.417 p=0.454 (p > 0.05)	No
H ₂ : There is significant relationship between employee compensation and employee retention.	r = 0.608 p = 0.00 (p < 0.01)	Yes
H ₃ : There is significant relationship between employee training and employee retention.	r = 0.485 p = 0.013 (p < 0.05)	Yes
H ₄ : There is significant relationship between appraisal system and employee retention.	r = 0.579 p = 0.00 (p < 0.01)	Yes

H₁: There is significant relationship between employee empowerment and employee retention.

From the hypotheses testing, it shows that there is significantly positive relationship between independent variable empowerment and dependent variable retention. The value of 0.417 indicate empowerment is positively correlated to retention. However, p=0.454 (p>0.05). Hence, H₁ is not supported.

Generally, the raise of empowerment of an employee will likely to generate higher retention to the organization. According to Carol Yeh in 2002, an empowering culture nourishes empowering leaders, accelerates the implementation of empowering practices, and encourages employees to be self-managing. However, in countries with high power distance such as Taiwan, Japan and other Asian countries, empowerment may not be implemented effectively. In a Taiwanese's research, employees of local Taiwan companies rated empowering leaders and empowering culture as lowest. This result can show agreement with the paternalistic leadership style of traditional Chinese firms. Leaders in Chinese regard subordinates as their children (Lin, 1991, pp. 33—34). Leaders (parents) arrange most of the important tasks for the employees (children). Without empowerment, the employees (children) will remain in the same organization due to the paternalistic leadership style. Employees (children) will loyal to their leaders (parent). University of Y is an Asian company.

High performance employees are formed in an empowered organization, and eventually they will improve the organization's efficiency and productivity (Hammuda & Dulaimi, 1997).

According to Ugboro studies (2006), the employee empowerment could provide an impact to the organizational commitment. Empowerment is the process of enhancing feelings of self-efficacy among organizational members through the identification of conditions that foster powerlessness, and through their removal by both formal organizational practices and informal techniques of providing efficacy information. Self-efficacy is the personal judgment about one's capability to adopt certain behaviors and actions in order to achieve certain objectives and expected results (Hoy & Miskel, 2001). The main effect of empowerment is the initiation and persistence of behaviour by motivating employees to accomplish task objectives. Besides, the organisation should also provide some power and rights for the employees to control and use the organisation resource to achieve organisation goal. This would motivate and satisfy the employees because the organisation has provided responsibilities to them.

Therefore, empowerment may not be regarded as an important factor in retaining employees due to the paternalistic leadership style of traditional Chinese firms. Employee may feel that a centralized organizational structure can lead organizational success. Moreover, according to Carol Yeh in 2002, in Eastern cultures, with age comes respect. Older employees tend to have more work experience and are more likely to be assigned jobs that require autonomy. Hence, empowerment in Eastern culture may associate with the age of the employee. An older employee may rate an empowerment environment more favorably. From the results above, these results indicate that the relationship is correlated but not significant.

H₂ : There is Significant Relationship Between Employee Compensation and Employee Retention.

From the hypotheses testing, it shows that there is significantly positive relationship between independent variable compensation and dependent variable retention. The value of 0.608 indicate compensation is positively correlated to retention and its p-value is 0.00 ($p < 0.01$). Hence, H₂ is supported.

External competitiveness to attract competent employees and individual equity to retain top talent can be created by a fair compensation system. Employees may feel that they are appreciated by the organization for their performance and contributions if they get good salary (Lai, 2011). Hence, they are motivated to contribute more or perform better for the organization. Indirectly, they tend to retain in the organization since they are valued. Compensation is not only the return and benefits for the work that done, but it also reflects their accomplishments (Ali, 2009). Therefore, an effective compensation system should be designed to compensate employees. The compensation system is particularly important for intelligence-intensive industries like educational institutions because competent employees are the core capabilities or resources to the enterprises (Lai, 2011).

H₃ : There is Significant Relationship Between Employee Training and Employee Retention.

From the hypotheses testing, it shows that there is significantly positive relationship between independent variable training and dependent variable retention. The value of 0.485 indicate training is positively correlated to retention and its p-value is 0.013 ($p < 0.05$). Hence, H₃ is supported.

According to Thomas Acton and Willie Golden in 2002, job-related training can enhance the ability of problem solving of employees. Once they are confident and motivated to perform a task, they are more likely to be committed to their job and reduced the turnover rate. Mikeal suggests that organizations should provide appropriate training and development program to keep them confident and updated to current operation. Through training, they are able to work with little supervision and more committed to the organization (Mikeal, 2011). According to American Public Transportation Association in 2009, it suggested that organizations should give sufficient training program for employee development to retain employees. Hence, it can show that employee training is important for retaining employees in any industry.

H₄: There is Significant Relationship Between Appraisal System and Employee Retention.

From the hypotheses testing, it shows that there is significantly positive relationship between independent variable appraisal and dependent variable retention. The value of 0.579 indicate appraisal is positively correlated to retention and its p-value is 0.00 ($p < 0.01$). Hence, H₄ is

supported.

A fair appraisal system is essential in any organisation to retain valuable employees. It enables employees to understand their job responsibilities and show them the path towards individual growth. Employee participation in the appraisal process, equity, fairness and justice will give benefits to to organizational commitment (A.K. Paul and R.N. Anantharaman 2003) .Therefore, a fair appraisal helps in extracting the best from workers. An unfair appraisal system can result in unrest and dissatisfaction amongst employees. Scholars usually argue that performance appraisals that are conducted properly can produce positive organizational results (Pettijohn, 2001).

Appraisal system should be transparent in nature. Managers should conduct the process without holding any grudges or any bias against any team member. The process should be well established and straightforward to avoid any kind of doubt. This will make the employees accept feedback on their work with an open mind. This is consistent with the research done by A.K. Paul and R.N. Anantharaman (2003) where performance appraisal has a direct positive causal connection with employee retention.

10. IMPLICATION OF STUDY

The findings found from this study will be particularly useful for top organization to understand how they can do better to improve their employee retention strategy. The research explores how employees perceive the importance of empowerment, training, compensation and appraisal aspects when they make decision to stay loyalty with an organization. These aspects are all essential human resource tools that often been utilized by most of the corporation nowadays to facilitate their strategic management.

Based on the findings generated, employees are generally concerned with all these aspects as result shows close relationship between these independent variables and employee retention. Hence, manager must be sensitive to needs of employees in learning new skills & knowledge, delegation of power on action and decision, desire for competitive compensation package and recognition on existing appraisal system. The study assumes that if an organization fulfils employee satisfaction in all these aspects, there will be higher possibility that the retention rate would be boosting in that organization.

However, empowerment is not adopted effectively in Asian countries due to high power distance. Managers may not take employee empowerment seriously because managers are treated as the person who can make the best decision in Asian organization. Managers may be the constraint of empowerment because the decision made by the empowered employee may not be implemented to improve organizational efficiency due to jealousy. On the other hand, empowered employees may misuse the authority or power that given by the organization. According to Carol Yeh in 2002, empowerment rated as the least concerned factor in retaining employee due to traditional centralized decision-making style of Asian countries. Hence, this study figures out the difference of aspects that retain employee between Eastern and Western countries.

Moreover, this study reveals an opportunity for organization to manipulate these four aspects to attract potential talents. By establishing a reputable image as an organization, the organization will directly become favorites among the workers. When an organization is able to motivate its employees in a more specific manner, it will directly increase productivity and efficiency of its operation.

11. LIMITATION OF THE STUDY

In this research, researchers encountered a few limitations. The researchers solved the problems faced to make sure the research can be done in time.

Single Source of Respondent

In this research, 280 respondents from the same university were chosen to conduct a research. It was hard to make sure the result of the research can be estimated accurately. The single source of respondent was difficult to determine the research objective well and effectively. Moreover, the respondents were chosen from a single private university in

Malaysia. The views and needs of lecturers from other universities might be different due to the different working environment in different universities.

Short Time Frame

Time constraint was one of the problems that the researchers faced. To complete the research, the researchers have to gather information, collect supporting document, conduct survey and run the entire test to show the reliability of the results within limited time.

Respondents' Biasness

Respondents tend to be biased in answering the questionnaire provided by the researchers because the respondents were chosen from a single private university. The views of lecturers may be different in different universities. They have the tendency to agree or disagree with certain questions since they were working in a similar working environment. This may lead to inaccuracy and unreliability of the answer.

There are many other factors influencing the employee's retention except the empowerment, compensation system, training program and appraisal system. Researchers should carry out the research about employees' retention continuously due to it is a very important factor in an organization. In the dynamic working environment and changes of human force, retaining competent employee should be a vital issue in many organizations.

12. CONCLUSION

As what the study has shown, there are significant relationship between the factors of training, compensation and appraisal on University of Y lecturer's retention. However, the factor of empowerment is not so significantly related to employee retention as founded from this study. This reflects the major finding of this study on how different culture might have different expectation on determining their employment satisfaction and retention.

Prior to the result, the study provide empirical evidence that supports all the above independent variables to be significantly affecting the employee retention. Most of the researchers agree with these statements as shown in literature review by providing all the empirical evidence from each study's result. Hence, the formulated hypotheses are constructed according to these researchers' fundamental findings as foundation, and awaited to be tested in later stages through this study's result.

After establishing firm and reasonable design instrument, primary data is gathered from the targeted respondent, i.e. lecturers in University of Y to implement these data into SPSS software to process meaningful information. Eventually, empowerment as the only independent variable to not been supported by this study. To illustrate this situation, the study carried out further investigation and countered the opposing result with supporting journals.

As conclusion, the whole study successfully identify that training, compensation and appraisal is a fundamental consideration for University of Y lecturers' retention decision; while empowerment is less fundamental to lecturers' consideration as this can be attributed to the Asian culture characteristic of higher authority conformity.

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Pricing Strategies and Business Alliances – A Comparative Integrated Study of the Fruits and Vegetables Markets from Italy and Romania

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Abstract

This paper aims to analyze the fruits and vegetables market landscape and reveal this industry major dynamics by making a comparative review between Italy and Romania and analyzing the influence of several key factors (e.g. natural factors, farm structure, demographics, crops area and yield values) on price levels. Assuming that price is a key purchasing driver and also that profitability of fruits and vegetables growers is a long-term competitive issue in the European Union, especially at the small and medium-sized enterprise level, this paper concludes that producers should focus on obtaining higher yields, enlarging farm sizes, strengthening the actual producers' associations and establishing new collaborative forms in order to increase their negotiation power with retail chains and other stakeholders. They also should focus their key strategic actions in becoming more competitive by accessing the latest agro-food technologies and implementing stronger trade and marketing initiatives.

Keywords: Fruits and Vegetables, Business Competitiveness, Pricing, Single Market, Business Alliances

1. INTRODUCTION

The last economic evolutions, in the context of the actual global crisis, proved the incapacity of the developing countries to implement sustainable strategies in agriculture and food production. Therefore, their domestic companies have been failing to produce competitive products and to satisfy the increasing food demand. Moreover, in the case of the European fruits and vegetables market, the lack of involvement of the technological research and the old technical heritage of the former communist countries from the Eastern Europe have caused not only an overall decrease in agricultural competitiveness, but also deepened the differences between East and West [1]. The reduction or total elimination of the trade barriers, have created the possibilities for companies from the EU15 countries to successfully trade their products to the new members (former members of the Communist bloc), broadening the negative quantum of the newcomers' trade balances. The Romanian fruits and vegetables sector, which has continuously been under a negative trend after 1989, needs a fast re-organization within the actual context of the EU single market. Moreover it is considered that the EU Common Agricultural Policy (CAP) mechanisms do not help the new members in general, being limited to measures targeted on fueling the agriculture mechanisms based on producers associations [2], which are practically non-functional for the East European new members. Structural changes in the East European economies that have occurred in recent years have led to the emergence of frequent market failures that have generated high prices, difficulties of the local farmers to sell their products, the apparition of supplementary entities in the commercial chain that do not add value and many cases of unfair competition from retailers that trade imported fruits and vegetables. All these distortions came on top of a range of economic weaknesses of local farmers, such as their chronic incapacity to

develop sustainable relations with the modern trade, the low quality of life that mitigates the productivity levels in the rural areas or their inability to develop a coherent marketing approach, local products being sold at bargain prices.

The above presented industry flaws and business issues deeply impacted the income distribution fairness, only a small fraction of the overall income reaching producers. These inconsistent dynamics are also the result of the fact that the horticultural products are in general highly perishable and seasonal as well, therefore the majority of transactions often racing against the clock. The increasing transport tariffs and their bulkiness claim improved logistics and a superior integration of retailer-producer relations [3] as well as other industry peculiarities such as: farm size, geographic location, type of technology used, the degree of internationalization, vertical integration, standards and certification system or regulatory environment.

The last years were marked by shifts in consumption habits and lifestyle, many nutrition experts from around the world highlighted the increasing importance of fruits and vegetables in the daily diet and the need to increase consumption [4]. The new occurred interrelationships between agricultural business and other sectors, such as trade, nutrition science, consumer behavior (food consumption customs and habits) and health [5] have increased the economic and social echoes of this vital sector.

2. BUSINESS KEY DRIVERS OF THE FRUITS AND VEGETABLES SECTOR

In Romania, a country with a large rural population (45% of the total), the youth migration towards large cities or abroad has significantly increased in the last decade. The rural side presents many economic setbacks, remaining underdeveloped in terms of GDP (only 12% of the country total) and exports (only 9% of the Romania's total) [6]. Yet, the rural employed population is estimated at about 32%, representing a huge developing base for agriculture. Another weak point is the quality of life in this area, which is very low, in general, with only one third of the rural population connected to the water supply network and only 10% to the sewerage systems. Infrastructure is also a weak point, only 10% of the rural roads being considered at an adequate level. Also other life quality factors like education, health, financial systems are well below national average, encouraging the emigration to urban areas or abroad. 71 % of the land owners are aged 55 or more and only 2.9 % are under 35 years old [6].

The farm structure is another negative point at country level, driven by on-going issues with the land ownership and production structures. The relative small size of farms inhibits the ability to gain credit for farm inputs thereby further reducing actual yields. One of the consequences of the land restitutions done after the fall of the communism is that many holdings are operated on a subsistence basis and which are not economically viable. According to a study made by the Romanian Ministry of Agriculture & Development, at present exist more than 3.9 million farm holdings, of which 1.6 million are less than 1 hectare, 1.1 million are less than 3 Ha, 290,000 are in the range of 10-20 Ha and 255 are more than 2,000 Ha (the latter are cultivating 11% of the utilized agricultural area) [7]. The severe land fragmentation has been accompanied by a reduction in the living standards of the rural communities causing 76% of the total holdings (38.2% of the total area) producing for self-consumption and only 2.3% of the holdings (31.2% of area) being market oriented [8].

Despite the above mentioned setbacks, Romania is acquainted with a generous agricultural land surface; in 2009 this was 14.7 million hectares, representing 61.7% from the total country area [6]. Romania occupies a good place among EU countries taking into account the total land used in agriculture, representing 7.7% of the total agricultural land used in the EU-27. The structure of the land used for different types of crops, including fruits and vegetables, is given in the following graphs. In Fig. 1 it is presented the evolution of the area harvested with fruits and vegetables in Romania. Plums and apples are the most representative fruit categories that are grown in this country. Both categories recorded the highest values in terms of cultivated areas in the mid 90's after that they have had a continuous decline, the last years (2005-2011) being marked by the most dramatic decrease (-36% for apples and -21% for plum trees plantations).

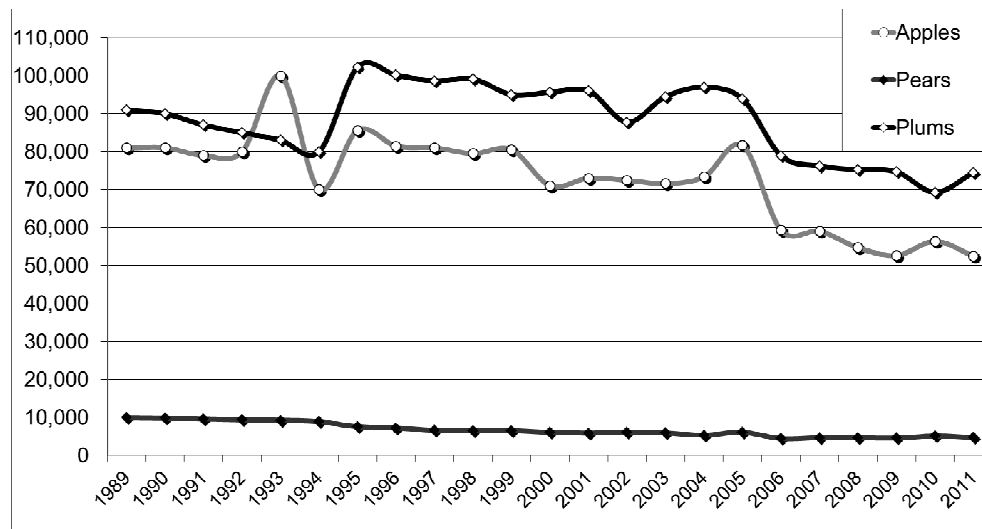


FIGURE 1: Area harvested (ha) – for the main fruits categories – Romania (source EUROSTAT [9])

In the case of vegetables, the values indicate a fluctuating evolution, cabbage being on a positive trend, onions steady and tomatoes on a slight decline. The apples and plums yields have been fluctuating (as shown in Figure 2), with large variances among successive years. This proves a heavy correlation between crop yields per hectare and meteorological conditions, Romanian fruit growers having very limited capabilities to prevent/diminish unfavorable weather impact. Very often droughts and floods had a deep impact on fruits and vegetables production levels.

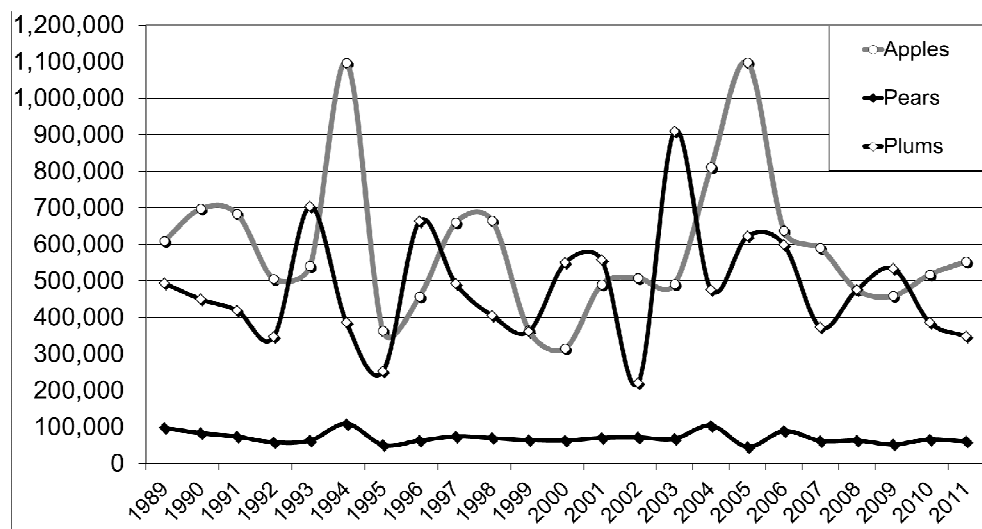


FIGURE 2: Fruit production (tonnes) – Romania (source EUROSTAT [9])

Italian fruits and vegetables producers delivered superior productivity in this sector, as shown in Figure 3. By comparing the similar categories' yields, it can be observed that the Romanian farmers' average results are well below in the case of all the analyzed categories, except cabbage. The highest differences between productivity values are for apples (Italy vs. Romania index is 388) and tomatoes (Italy vs. Romania index is 328). The closest productivity is for cabbage (Italy vs. Romania index is 94). The analyzed yields reveal the Romanian producers' low capability in implementing technological innovation in agriculture as well as the influence of seasonal factors (as shown in the forthcoming sections). These factors have a deep influence on the Romanian fruits and vegetables cost structure, therefore their competitiveness is affected by

the impossibility to sell a much more expensive product in a price driven market. Local producers' dilemma is whether to cut the profits or find a way to differentiate or a niche market (e.g. eco/bio fruits and vegetables). Their incapacity to conduct coherent marketing initiatives and to gain the modern trade support (due to their small scale) is very often pushing them to accept lower revenues, therefore limiting their access to new (expensive) technologies. Finally this status quo is impacting their efficiency and yields levels. Therefore a vicious circle occurs, affecting the overall consumers' life and macroeconomic results, both countries having a substantial agricultural potential.

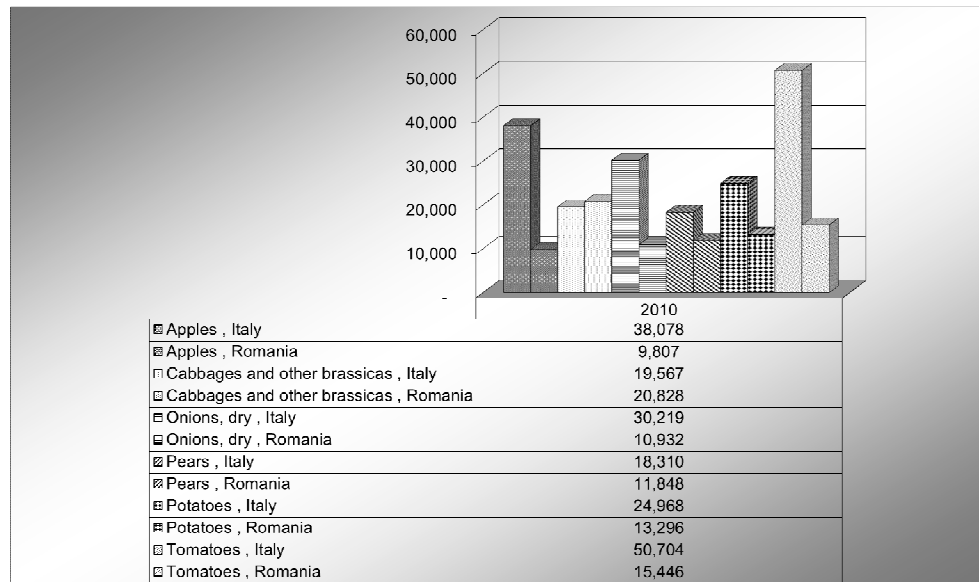


FIGURE 3: Fruits and vegetables yields (kg/ha) – Italy and Romania (source FAOSTAT [10])

The funds allocated to support the EU farmers are also an important factor that influences overall competitiveness in agriculture. The levels of farms subsidies awarded by the EU for Italy and Romania are shown in the Table no. 1.

Country \ Year	2006	2007	2008	2009	2010	2011	2012	2013
Italy (Euro/ha)	288.00	290.00	316.00	317.00	318.00	318.00	318.00	318.00
Romania (Euro/ha)	35.00	50.50	60.80	72.00	82.00	102.00	122.00	143.00

TABLE 1: Direct payments from the EU per eligible hectare in Romania and Italy (source EUROSTAT).

3. FRUITS AND VEGETABLES PRICING IN ROMANIA AND ITALY

Fresh fruits and vegetables represent two key categories for Romanian consumers. One of the conclusions of a study conducted last year in Romania [11], which aimed to investigate the shopping habits of the Romanians in urban areas, is that in 2011, the top five categories purchased by consumers from urban areas were: bread and bakery products (96%), fresh fruits (95%), personal care products (94%), dairy (94%) and fresh vegetables (93%). Romanian consumers frequently buy fresh fruits and fresh vegetables from specialized or traditional stores (33%), the other principal sources for both categories being modern trade (30%) and open markets (37%). The study revealed that the main purchase criterion for horticultural products is their shelf price. This process is also determined by the decreasing buying power of the majority of Romanian and Italian consumers, due to the economic crisis effects, most of them becoming smart shoppers/value seekers. Additionally, most of the people are not aware about the long-term negative effects of consuming low quality/cheap foods, their concern being the procurement of the daily food basket. The common thinking is that a high consumption level of fruits and vegetables is in general good for health. This paper, however does not deal with the increasing

health concerns due to the extensive usage of pesticides, genetically modified organisms or other modern technologies aimed to increase fruits and vegetables resistance, shelf life and to make them look better.

3.1 Research Methodology

Following a survey made by the article authors in several commercial locations in Bucharest, Romania and Messina, Italy, prices of various fruits and vegetables categories were collected based on personal observation according to products' price tags; the countries of origin were identified after the indications mentioned on the products' packaging or communicated by vendors. The survey included 4 hypermarkets, 2 discounter outlets, 3 supermarkets, 2 specialized stores and 3 open markets. For each store category was calculated an average price and afterwards the average price was obtained by an arithmetic mean of the five categories. The analyzed fruits and vegetables categories were chosen according to: their significant percentage from the total cultivated surface and also the total fruits and vegetables production at country level, large share of shelf observed in stores and markets, significant share of consumers' preferences.

3.2 Research Findings & Discussion

The majority of fruits and vegetables on sale in Bucharest, Romania are imported mainly from other EU countries, the largest share of shelf being held by fruits and vegetables from countries such as: Holland, Greece, Spain and Germany. Other non-EU noticeable countries of origin are Turkey, Argentina and Chile. Romanian products have a weak market presence, being represented by just a few categories such as tomatoes, onions and potatoes (Tables 2 and 3).

Romanian products have in general higher prices than their competitors from abroad. Hypermarkets, practicing very aggressive price offers, have succeeded to attract more shoppers and attain a higher scale than the traditional open markets; this fact occurred due to the lack of capability or concern of the public authorities to create proper venues for the small producers such as agro-food markets, seasonal fairs or traditional food exhibitions. Very often, the penury of space for commercial purposes in urban area determined the local producers to become street vendors or to sell their products to market speculators or various intermediaries who obtain an additional 40-50% of the product price paid by the final consumer, while the local producer can hardly obtain a 10-15% margin. The issue of the fairness of the income distribution due to supply chain disruptions remains open.

Trade type	Hypermarkets		Hard-discounters		Supermarkets	
Fruits/vegetables category	Country of origin	Price/Kg (EUR, w/o VAT)	Country of origin	price/Kg (EUR, w/o VAT)	Country of origin	Price/Kg (EUR, w/o VAT)
Apples	Italy	0.88	Slovenia	0.93	Slovenia	0.98
	Austria	1.01	Austria	0.84	Austria	1.08
	-	-	-	-	Greece	1.57
Pears	Argentina	1.53	Argentina	1.43	Chile	1.37
	Italy	1.36	-	-	Italy	2.15
	Belgium	1.14	-	-	-	-
	Portugal	1.57	-	-	-	-
Tomatoes	Turkey	0.96	Turkey	1.09	Turkey	1.37
	-	-	Spain	1.12	Romania	1.57
Potatoes	Germany	0.55	Romania	0.78	France	0.70
Onions	Poland	0.51	Romania	1.13	Germany	0.78
	Austria	0.72	Austria	0.72	Holland	1.08
Cabbage	Germany	0.46	Germany	0.59	Greece	0.65

TABLE 2: Prices collected from modern trade outlets – Bucharest, Romania

The economies of scale of large retail chains is, judgmentally, the main cause for the substantial price gaps between them and small/convenience shops/open markets, the latter being in need of a different configuration of their supply chain. The failure in progressing or the sluggish activity below the designed capacity of some government projects (e.g. *Bucharest Wholesale Market*), as well as the competitive pressure from some influential importers (often operating under the sign of circumventing tax obligations) have compelled the local producers to sell their crops at very small prices. Some of them tried a desperate vertical integration, transforming themselves in retailers of their own products. They have had only a few opportunities to create their own points of sale being very limited due to crops seasonality and lack of financial resources; therefore they became very dependent on the capacity of the (local) public authorities to create proper commercial venues for small agro-food producers (agro-food markets, seasonal fairs or traditional exhibitions). Very often, the lack of success of these projects influenced the local producers to become street vendors or to sell their products to occasional market speculators. The interviewed producers appreciated that a much fair income distribution would mean an increase in profits from currently 10-15% to 25-30%, given that the intermediaries usually obtain a 50% margin.

Trade type	Specialized stores		Open markets		Avg. price/kg (EUR, w/o VAT)
Fruit/veg. category	Country of origin	Price/Kg (EUR, w/o VAT)	Country of origin	Price/Kg (EUR, w/o VAT)	
Apples	Romania	1.08	Romania	0.98	1.04
Pears	Argentina	1.96	Argentina	1.96	1.70
Tomatoes	Turkey	1.66	Italy	1.57	1.35
	Romania	1.47	Greece	1.96	
Potatoes	n.a.	0.59	Egypt	1.08	0.69
Onions	n.a.	0.59	Romania	0.68	0.75
Cabbage	n.a.	0.59	Romania	0.78	0.61

TABLE 3: Prices collected from traditional trade locations – Bucharest, Romania

In Romania the agricultural year starts during spring and ends in late autumn. It is supposed that, following poor yearly productions, during the spring, the market could be populated by imported goods. However the poor presence of the Romanian products, especially in modern trade has also other causes: (1) Local producers' weak negotiation power with the international retail chains and lack of consistency in delivering the goods in time and desired quantities; (2) Failure of the Romanian farmers to organize themselves into strong and durable business associations or commercial alliances, that could secure not only their future development, access to new technologies but even their very existence within a more and more competitive environment.

As shown in the graph from Figure 4, the fruits and vegetables market prices record significant fluctuations following the agricultural year cycle, usually have the highest level during spring and the lowest during autumn – the main harvest period in Romania. Among the analyzed categories, the most dynamic are: onions, cabbage and pears. However, potatoes had in 2010 a very substantial and quite continuous price increase (+65%), mainly because of the decrease of the local yields per hectare and of cultivated area compared with a year ago. Apples also had an unusual evolution, not having a significant autumn price decline, but an overall price increase (+11%), mainly because of the continuous decline of the local fruits sector and continuous growth of imported quantities.

The instability of the Romanian fruits and vegetables offer coming from local growers, affects the rhythmicity of the product supply and therefore the entire logistic system with negative effects in trading with large companies, like big retailers, who seized a large part of fruits and vegetables trade in Romania. The instability, atomization and frequent variations of cultivated surface also have a negative impact on price competitiveness.

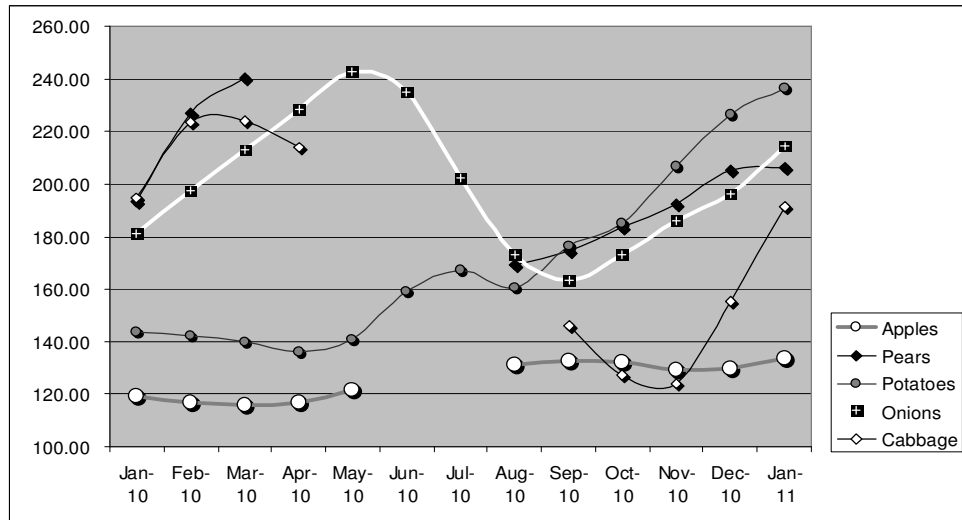


FIGURE 4: Fruits and vegetables price seasonality – Romania (source The National Institute of Statistics of Romania [12])

For the same period and the same fruits and vegetables categories, Italy recorded steadier prices, as shown in Fig 5. The most dynamic goods in terms of price were pears (+23% Jan 2011 vs. a year ago) and potatoes (+54% Jan 2011 vs. a year ago). Also cabbage had significant variations but in general, the prices evolution does not reveal a seasonal character like in the case of Romania. Therefore the Italian local producers are less vulnerable to imports. We assume that this steadiness is a result not only of climatic factors, but also to higher yields per hectare. In terms of productivity, Romania has an underdeveloped capacity to compete with foreign producers, including the ones from the EU.

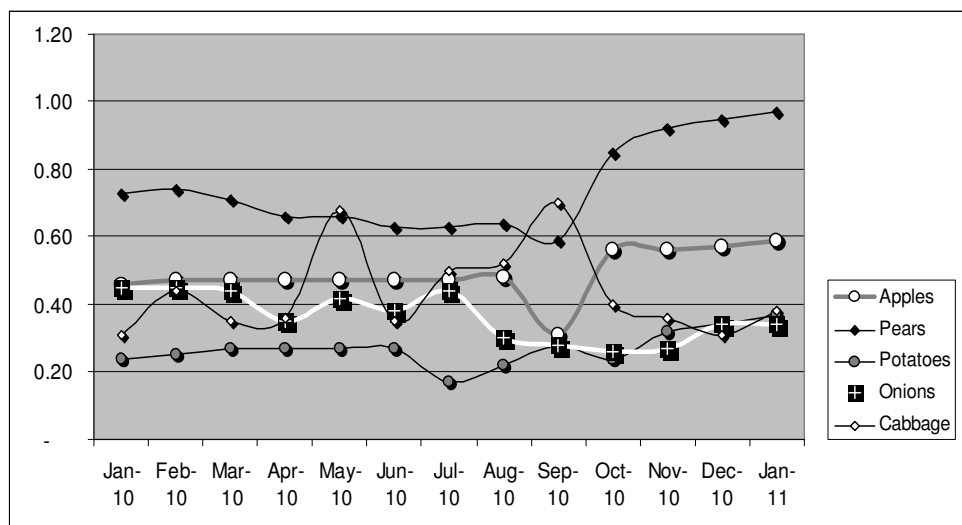


FIGURE 5: Fruits and vegetables price seasonality – Italy (source ISMEA [13])

In terms of prices per kilogram, the Romanian fruits and vegetables market has higher value per unit, the biggest gap are for tomatoes and onions, while the closest price is for cabbage (please see the Table no. 4).

Fruits/vegetables category	Average price w/o VAT in Italy (Euro/kg)	Average price w/o VAT in Romania (Euro/kg)	Price index Romania vs. Italy
Apples	0.60	1.04	173
Pears	0.81	1.70	210
Potatoes	0.40	0.69	173
Onions	0.19	0.75	395
Cabbage	0.44	0.61	139
Tomatoes	0.36	1.35	375

TABLE 4: Prices for various fruits and vegetables categories in Italy and Romania (Euro/kg) - sources: The National Institute of Statistics of Romania and ISMEA)

Following a qualitative exploration of the relationship between producers, on the one hand, and traders (particularly those involved in the vegetables and fruits business) on the other hand, carried out in both countries, there have been revealed a few factors that are decisively influencing the overall agro-food business environment. In terms of business profitability, many local producers from both countries are practicing trade markups around 20%, exceptions being the modern retail, with values below 10%, while convenience stores have an average level of 30 % mark-up. Most of the small and medium size traders from Romania and Italy declared that they often practice a wide variety of commercial markups, using various forms of psychological pricing combined with cost based pricing – depending on product category and time/season. Trade offers coming from international importers play an important role, especially in Romania during the winter season, when the local production is very low.

Small convenience shops, open market and street (in Italy)sellers consider as the main competitors not the similar categories, but the multinational retail chains, indicating that many customers prefer to purchase from hypermarkets where they can find fresh fruit and vegetables 10-15% cheaper and also can fill a large shopping list in a very short time.

3.3 Horizontal Business Alliances – a Valuable Strategic Option to Overpass the Crisis

In order to reduce the market risks, to gain bargaining power with the international retail chains and to increase consistency and market presence, is an inherent need for the local producers to organize themselves into powerful business associations/commercial partnerships, which could assure them not only the future development but their very existence.

Business alliances have become an important and common institutional structure for international agri-business industry - a rapidly changing economic environment. Although business alliances have received considerable attention in the literature, two areas of research in this field have been less explored: (1) the horizontal alliances (2) the relationship between horizontal and vertical alliances, horizontal alliances being very important in horticultural production around the world. [14]

The horizontal alliances have been created following the consolidation of the modern retail sector, which requires suppliers with economies of scale. They are basically resource management centers, primarily informational, having complex market strategies, involving partners with diverse specializations and backgrounds. Some regions/market segments may require specialized and vast informational, financial and technological resources, with resources pooling among firms as a prerequisite. The integrated companies may have different competitive advantages, but they should have enough in common to make business together. These horizontal alliances are regularly mentioned in the agro-food industry literature, but did not receive a particular consideration given that the focus was mainly on supply chain management and transaction cost economics, which led to studies focusing especially on vertical alliances. [15].

The main advantages of creating this type of business structures are: 1) a successful partnership with the modern trade representatives, who want to collaborate with a small number of suppliers

able to provide large volumes of goods at a constant high quality and 2) an increased efficiency through the synergy of the shared resources. The need for such an approach is dictated by the fact that the expanding modern retail already represents over 40% of the total trade and for 2015 is projected to reach 55-60%.

4. IMPLICATIONS, LIMITATIONS AND OPPORTUNITIES FOR FURTHER RESEARCH

This study has identified a significant imbalance between international players operating in the field of fruits and vegetables sector (commercial chains, major international producers) and local producers /merchants. Apart of significant price distortions in Romania, this research revealed that, in order to reduce the competitive gap, to gain a stronger negotiating position with international retail chains and to obtain a more consistent market presence, local producers should organize themselves in large trade alliances, in order to ensure their business development in an increasingly hostile economic environment. We believe that due to the research method qualitative character, including the limits generated by the reduced sample size, this study should be continued, strengthened and extended towards a further (national level) quantitative research, involving a representative number of distributors / retailers, producers and buying/purchasing experts from international trade chains.

5. CONCLUSIONS

This paper reveals different situations for Romanian and Italian fruits and vegetables producers in terms of seasonal climatic conditions, yields and economics, due to differences in farm structure, usage of agro-food new technologies, EU subsidies, trade integration and business coherence. The research results explain the difficulties that small and medium sized companies are facing in this field. Small farmers keep on striving to survive in the middle of an increasing competition from abroad, while being caught between the chronic underdevelopment of the local/rural areas and the increasing competition on an agro-food global market dominated by hi-tech giants.

Exposed to competitive pressures generated by the multinational retail chains, the Romanian fruits and vegetables growers are looking forward to adapting their offers through a more efficient cooperation with local partners (e.g. specialized stores and open markets). It is expected, however, that the incoming market entries of a few global producers and the expansion of the existing international retailers will increase the competitive pressures in the following years. Moreover, the economic crisis has deepened the scarcity of financial resources and mitigated the perspectives for companies' development. In this context, this article proposes several strategic options for local fruits and vegetables producers, such as: 1) improvement of the crop yields, by increasing the farm size, encouraging young entrepreneurs to invest in agriculture, accessing latest technologies to increase productivity) 2) development of regional logistics and trade systems, which should decrease the distribution costs and the final prices and also should facilitate the relation with larger retailers 3) develop business partnerships with similar producers through superior networking and organize into large producer associations to attain a stronger market position. Judgmentally, both international wholesale and retail chains should look for stronger relations with farmers/growers organized into business/trade partnerships, capable to sustain better marketing and trade initiatives tailored to local consumers' needs and habits. Small and medium-sized producers from Romania should also focus on increasing their productivity through integration of new technologies.

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An Exploratory Study of Internal Control and Fraud Prevention Measures in SMEs

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ABSTRACT

Small business and entrepreneurship has emerged as an important area of research over the past 40 years. This paper revolves around the issues of the internal controls and fraud prevention measures on SMEs performance. The level of fraud incidence as reported by owners is still at a very low level and the overall cost incurred is still within expectation. However, there is a question of whether the low reported rate of fraud is due to adequate preventive actions currently employed by owners, or whether the owners are reluctant to reveal the truth in order to portray their efficiency and effectiveness in running their businesses. This conceptual paper attempts to analyze relevant literature on internal control, fraud, current trends on fraud and business crime prevention measure adopted by SMEs. Based on the literature, a future research could be suggested in the context of Malaysia. It is hoped that future research in this aspect will uncover the relationship between the effectiveness of internal control within SMEs and to gauge the adequacy of fraud prevention measure taken by owners of SMEs in Malaysia. It is expected that effective internal control and the presence of appropriate fraud preventive measures will help to improve SMEs performance.

Keywords: Internal Control, Fraud and Prevention Measures, Small and Medium Enterprises

1. INTRODUCTION

Small and medium enterprises (SMEs) are much more vulnerable proportionally to fraud by employees, and much less able to absorb these losses than large corporation. The entrepreneur's principal objectives are profitability and growth, the business is characterized by innovative strategic practices and continued growth and may be seen as having a different perspective from small business owners in the actual development of their firm [1]. Contribution from SMEs to the Malaysian economy is also very important. They provide indirect support or income to economic growth. SMEs are also able to provide goods and services the same as large companies do albeit in smaller quantities. SMEs play a vital role in the Malaysian economy and are considered to be the backbone of industrial development in the country [2]. There is always an increase in the interest to establish SMEs because of small firms generating most new employment; the public favoring on small business; knowledge on entrepreneurship at high schools and colleges; the growing towards self-employment as well as small business being

attractive to people of all ages [3]. The research will be focusing on the effect of internal control and fraud prevention measures on SMEs performance.

2. RESEARCH BACKGROUND

The Association of Certified Fraud Examiners (ACFE) of the United States (1998) reported that businesses employing less than 100 persons were the most vulnerable to fraud and abuse by employees. According to KPMG's Fourth Fraud Survey Report Malaysia 2009, it is showed that a significant number of respondents believe that fraud is a major problem for businesses in Malaysia. 61 percent of respondents expect the level of fraud to increase over the next two years. In addition, 89 percent believe that the trend of fraud as well as financial statements fraud (78 percent) will significantly rise as a result of the economic crisis which took place in 2008. The value of fraud reported in the survey period was RM63.95 million. Not all respondents disclosed information on the number of fraud incidents or the value of fraud detected (15 percent of the 85 respondents responded they were victims of fraud were unsure of the number of incident whereas 53 percent were unsure of the value of financial losses due to fraud).

Hence, this suggests that losses may be far bigger than the disclosed amounts of the 56 percent of respondents who reported some form of recovery of assets that were misappropriated, 43 percent reported partial recovery while 13 percent reported full recovery. On the other hand, the number of identity fraud (when the person knowingly or intentionally obtains personal identifying information of another person and using it) victims increased by 12 percent in 2009 and the amount of fraud increased by 12.5 percent. This is the highest rate of increase in the seven years that the company has been issuing the report since 2002. New account fraud represents 39 percent of all 2009 fraud cases, versus 33 percent in 2008. Many of these fraudulent accounts were opened online. New account fraud is not limited to credit card accounts. Fraudulent cell phone accounts make up 29 percent of total new account fraud. Existing credit cards are also highly targeted, making up 75 percent of fraud attacks on existing accounts. This indicates that fraud and theft was rampant, and statistics show the rate increasing from year to year (for last seven years). If this problem is not addressed from an early stage then it will lead to huge losses to owners of SMEs.

Most of the studies and researches done on internal control and fraud against SMEs were mainly US-based. Not many studies have been conducted on the Malaysian environment. The total numbers of SMEs in Malaysia in the year of 2005 based on survey was conducted by the Department of Statistics; SME Corp Malaysia, showed that there were 514,079 active establishments of SMEs in the manufacturing and services sectors out of the 552,849 companies registered with the Companies Commission of Malaysia (CCM).

Source:	Type	Number of Establishment	Share (%)	Census of
	Micro	434,939	78.7	
	Small	100,608	18.2	
	Medium	12,720	2.3	
	Total SMEs	548,267	99.2	
	Large	4,582	0.8	
	Total	552,849	100	

Establishment and Enterprises, 2005 by Department of Statistics, Malaysia

TABLE 1: Number of Establishment of SMEs

Based on Table 1, the total number of establishment was 552,849, and 99.2 percent were SMEs. Out of this number, a total of 86.6 percent is made up from services sector (comprises of wholesale and retail, restaurant and hotel, professional services, transportation and

communication). It is followed by the manufacturing sector by 7.2 percent (consists of textiles and apparels, metal and non-metallic products and food and beverages) while the agriculture sector is made up from 6.2 percent (includes plantation and horticulture, fishery and poultry farming).

An appropriate definition of SMEs is essential as it will give various advantages to SMEs as well as for policy makers and supporting agencies in nurturing the SMEs sectors. In determining the best definition of SMEs, both quantitative and qualitative criteria should be met in order to represent the true nature of SMEs [4], [5]. According to Small Medium Enterprises Corporation Malaysia, SMECorp (previously known as SMIDEC), Malaysian SMEs can be defined according to size, annual sales turnover, number of full time employees as well as the activities run by the enterprises. Furthermore, the definition of SMEs in Malaysia is divided into three categories namely; Micro-enterprise, Small-enterprise, and Medium-enterprises. The detail is depicted in Table 2.

Category	Micro-enterprise	Small-enterprise	Medium-enterprise
Manufacturing, manufacturing-related services and agro-based industries	Sales turnover of less than RM250, 000 OR fewer than five full-time employees.	Sales turnover between RM250, 000 and RM10 million OR between five and 50 full-time employees.	Sales turnover between RM10 million and RM25 million OR between 51 and 150 full-time employees.
Services, primary agriculture and information and communication technology (ICT).	Sales turnover of less than RM200, 000 OR fewer than five full-time employees.	Sales turnover between RM200, 000 and RM1 million OR between five and 19 full-time employees.	Sales turnover between RM 1 million and RM 5 million OR between 20 and 50 full-time employees.

Source: SMECorp (Formally known as SMIDEC), (2000)

TABLE 2: Definition of SMEs in Malaysia

In addition, internal control and fraud can be considered as emerging issues among SMEs. It is worth to note that fraud is not actually a new issue. It has been a problem to SMEs before and continues to be until now. In other words, it is an old issue, but the form of fraud in SMEs has been evolving over time. There might be some differences between frauds perpetrated in 1970s and those committed in 1990s and in 21st century especially due to extensive use of sophisticated information and communication technology (ICT). Further details on internal control, risk management and fraud will be discussed in the following section.

2. LITERATURE REVIEW

It is emphasized that the factor is rarely examined as having a possible impact on failure of SMEs are internal control and fraud [6]. In Malaysia, research related to this area is still at a 'primitive stage' on SMEs performance. This issue is rarely highlighted and Malaysians seem to regard this as a sensitive one. As a result, they tend to put this matter aside, even though the real problem of fraud does exist in the Malaysian business environment. The purpose of this paper is to gather literature to propose an appropriate study on internal control and fraud prevention measures in Malaysia. It is also hoped that the paper could help to identify the level of SMEs owners' awareness on fraud and to assess how serious is the fraud affecting the SMEs in Malaysia. If this issue is neglected, it may badly affect the performance of SMEs. This would result in an

unhealthy phenomenon in this country, which could harm the growth of SMEs. Consequently, the root of the problem which contributes to the insolvency of SMEs will not be uncovered and the owners of the businesses are unaware that they are repeating the same mistakes over their business lifecycle. In other words, this study is able to enhance the understanding of the public at large and more specifically the owners of SMEs towards fraud and how to tackle the issue accordingly.

2.1 Internal Control

Internal control is a broad term with a wide area of operation [7]. It includes a number of methods and measures, which are exercised by the management to ensure smooth and economic functioning of business entity. It assists the management in the performance of various functions. Furthermore, internal control is a whole system of controls for the business entity on financial and non-financial, established by the management in the conduct of a business including internal check, internal audit and other forms of control [7].

Thus, it is apparent that internal control expression is used in a wide sense and includes internal check and internal audit besides other forms of controls. Besides that, internal control is a process designed and affected by those charged with governance [8], management and other personnel to provide reasonable assurance about the achievement of the entity's objectives with regard to reliability of financial reporting, effectiveness and efficiency of operation and compliances with applicable laws and regulations. It follows that internal control is designed and implemented to address identified business risks that threaten the achievement of any these objectives.

Similar definition was stated by Committee of Sponsoring Organisations (COSO) of the Treadway Commission in a report (1992) entitled *Internal Control - Integrated Framework* [9]. Effective internal control system provides a way to meet its stewardship or agency responsibilities. For example, management must maintain controls which may provide reasonable assurance that adequate control is exist over the entity's assets and records. This can be accomplished by developing internal controls that require employees to follow company policies and procedures such as proper authorization for transactions. Such internal control system not only ensures that assets and records are safeguarded but also creates an environment in which efficiency and effectiveness is encouraged and monitored. It is becoming more important as entities automate their information system and they operate more globally [10].

Previous studies found that effective internal control in SMEs have led to the success of the business and it is also a fundamental and important step in reducing employee theft [11], [12]. For example, the implementation of internal control is fulfilled by follow-up or oversight the employee functions by delegation of their duties. Internal control also was effective on SMEs and it is a tool to measure the SMEs performance [13] and within a firm, better internal control should yield more reliable on internal data such as inventories, payables and performance measure, thus leading to better internal decision making, improved operations, and lower employee fraud [14], [15]. Strong internal control system strengthens enterprise governance, allows management objectives to be achieved and mitigates the risk of fraud by increasing employee perception of detection [16].

Normally control is the main task of executives either owners' or managers and these control is important as part of internal control on SMEs performance [17]. In a typical small business, the executive is in a better position to exercise control over the organization activities than his counterpart in a larger business. The executive should be aware of employee activities which may in high possibility of fraud occurrence such as incoming orders, production and shipping schedules, receipts goods, cash receipts and disbursements and customer complaints. Another key element of executive controls is the approval of transactions. Even though the executive may not be able to review or approve all the transactions and documents related to these transactions, at least he or she should consistently identify types of transactions, amounts of transactions, credit practices and inventories policies [17].

Effective internal controls are essential no matter how small the company for many valid reasons. Fraud prevention, embezzlement detection, and accurate financials are all reasons to justify for good internal control practices. Implementing controls into the financial accounting software alone is not enough to ensure compliance because it takes some people's power too [16]. Since most small business owners have very little accounting background, accountants are expected to play a key advisory role in helping a business design and implement sound internal controls [15]. Many private companies are benefited from implementing internal control provisions relating to accountability, independent audits, internal controls and document retention.

Internal control can provide reasonable, not absolute, assurance that the objectives of SMEs will be met [14]. The concept of reasonable assurance implies a high degree of assurance, constrained by the costs and benefits of establishing incremental control procedures that can lead to high performance of SMEs. Effective internal control implies that the small business generates reliable financial reporting and substantially complies with the laws and regulations that apply to it [13]. However, whether a small business achieves operational and strategic objectives or not may depend on factors outside the enterprise such as competition or technological innovation. Therefore, effective internal control provides only timely information or feedback on progress towards the achievement of operational and strategic objectives, but cannot guarantee their achievement.

2.2 Fraud

According to the Institute of Chartered Accountants of England and Wales (ICAEW) (2001), fraud is generally defined in the law as an intentional misrepresentation of material existing fact made by one person to another with knowledge of its falsity and for the purpose of inducing the other person to act, and upon which the other person relies with resulting injury or damage. Fraud may also be made by an omission or purposeful failure to state material facts, which nondisclosure makes other statements misleading. Fraud, however, is not an easily defined term. According to District Judges Association US, the definition may change depending upon the statute in which the word appears. For example, in the crime of conspiracy to, "defraud" include a dishonest obstruction of a government agency. The definition can also be reflective of particular precedent in a jurisdiction. In some cases the definition of fraud may not be limited to fraud methodology, but may also include the harm or consequences of the fraudulent conduct [18].

To constitute fraud, the misrepresentation or omission must be made knowingly and intentionally, not as a result of mistake or accident, or in negligent disregard of its truth or falsity. Also, the plaintiff must prove that the defendant intended for the plaintiff to rely upon the misrepresentation and/or omission; that the plaintiff did in fact rely upon the misrepresentation and/or omission; and that the plaintiff suffered injury or damage as a result of the fraud [10]. Damages may include punitive damages as a punishment or public example due to the malicious nature of the fraud. There are many state and federal laws to regulate fraud in numerous areas. Some of the areas they are most heavily litigated include consumer fraud, corporate fraud, and insurance fraud.

Employees in SMEs will commit fraud when they have opportunity to do so [19]. There are two separate but related theories about why employees commit fraud [19]. Based on the study conducted by Hollinger and Clark on 12,000 employees in the workforce, it was found that nearly 90 is percent engaged in "workplace deviant", which included behaviour such as goldbricking, workplace slowdowns, sick time abuses and pilferage [19]. In addition, one-third of employees actually had stolen money or merchandise on the job. A second theory about why employees commit fraud is related to financial pressure. In the late 1940's criminologist Donald R. Cressey interviewed nearly 200 incarcerated embezzlers, including convicted executives. He found that the majority committed fraud to meet their financial obligations. Cressey observed that two other factors had to be present for employees to commit fraud. They must perceive an opportunity to commit and conceal their crimes, and able to rationalise their offenses as something other than criminal activity.

Small business normally does not have internal auditing staff. Touche Ross (1974), Kapnick (1975) and Foster (1975) reported that in most of fraud cases they studied, effective internal auditing staffs was absent [20]. Psychological theory suggests that where there is an organisation (such as an internal auditing staff) that provides some deterrent or fear of being caught, the opportunity to commit crime is decreased. Poor internal control system also increases opportunities to commit fraud. In most instances, it was posited that poor internal control contributes to management fraud [20]. The surest avenue to fraud prevention and detection is a proper system of internal control, conscientiously implemented by management and must be regularly reviewed by auditors. Arens and Loebbecke (1976) and Kapnick (1975) suggest that a firm with poor accounting records is more susceptible to fraud compare to one that does not [20].

Basically there are several types of fraud could occur in SMEs and theft is one of the major fraudulent activities. Therefore, theft is always a serious problem for small business. In 2005, total retail losses were close to USD40 billion [21]. Because of the extent of the problem, many national merchandising businesses add 2 to 3 percent to their prices to cover the cost of theft, but even this may not be enough to compensate for the total loss. The two major types of theft are theft by outsiders (usually known as shoplifting) and theft by employees. Shoplifting is a major hazard of retail establishment [21]. Professional shoplifters, not amateurs and kleptomaniacs (a mental illness in which they have a strong desire, which they cannot control, to steal things) cause the greatest prevention problems. The amateur may be a thrill seeker who takes an item or two to see whether or not he or she can get away with it. The kleptomaniacs have an uncontrollable urge to take things, whether needed or not. Business owners and managers are often shocked by the techniques people use to remove merchandise from their premises, and by the people who do it. A new twist on shoplifting is high-tech. For example, shoppers purchase inexpensive items and reproduce the bar code. While shopping at a later date, they pasted the copied bar code to expensive items and then paid the cheap price. These high-tech criminals then resell it on the web [21].

According to John Warren, an Associate General Counsel for the Association of Certified Fraud Examiners (ACFE), employee theft is the single most expensive form of crime [22]. It may range from the simple act of an individual who takes only small items (such as pens or paper clips) to raids by groups that remove truckloads of merchandise. Furthermore, it is reported that, one out of every 33 employees is accused of theft each year [23]. Sometimes employees conspire with outsiders to steal from their employees, for example, by charging the outsiders a lower price or by placing additional merchandise in accomplices' packages.

Research has shown that employees who think their income is too low, or stagnating, steal more often and in greater amounts than other employees. A study showed that those who steal tend to be young, full-time employee operating alone, and that they steal merchandise more often than cash. A classic study found that the high turnover rate among temporary employees can cause serious security problems [24].

The most prevalent types of fraud are likely to be those that impact on the profit and loss account as a result of the overstatement of expenses or the understatement of income. These may not necessarily be large and so they may be difficult to identify. A time when an SME is particularly vulnerable to fraud is during a period of rapid expansion. The dynamics of the situation may mean that it is more difficult for managers to have an overview of the business. Advances in technological developments mean that all organizations that are connected to the internet are vulnerable to attack from outside. Whilst larger organizations may have the technical knowledge to minimize this threat, SMEs may not even recognize the risks. Whilst SMEs may not be able to have as many internal controls as larger organizations, it is imperative that their managers evaluate the risks that their businesses face and ensure that they at least have defenses in their key areas.

2.3 Current Trends on Fraud

Apart from traditional forms of fraud in small businesses, computer-related fraud comes into the pictures as a phenomenon brought about by advances in information-processing technologies. Before the invention of computers, fraud did occur but in different forms. The computer did not usher in a new wave of fraud, but it merely changed the form of older frauds, for example embezzlers can now steal by making electronic entries in books of accounts rather than pen and ink or electro-mechanical entries [25].

The largest threat to a computer system comes from within, with 85 percent of frauds being perpetrated by staff [26]. A study in the US estimated that the annual loss from computer fraud at USD3 to USD5 billion annually [27]. The survey of 1,200 security managers in the US was found that nearly 20 percent of the companies had detected a computer fraud within the five years covered, and that the rate of these frauds was directly related to the number of employees using computers [28]. This shows that employee fraud by using computers is a serious threat to business nowadays.

Owners of SMEs should be alert on current trends of fraud especially fraud related to information and communication technologies (ICT). Most of the owners of SMEs should be up-to-date with new knowledge on information technologies as well as tactics that could lead to failure of the businesses.

2.4 Business Crime Prevention

In order to prevent fraud in small business organizations, most previous literature suggested reviews on fraud prevention policy within company [29], company's internal control and attention on code of ethics amongst members of organization [30],[31]. In addition, some researches go further by proposing new ideas such as the implementation of fraud auditing and forensic accounting. These are attempts to minimize the likelihood of crime from occurring in small business organizations.

The greatest financial impact of fraud can occur in a small-business environment. A loss of 6% of revenues is significant for any company, however large, but a small operation whose margins are thin and reserves non-existent will go out of business [32]. Even if an operation survives the fiscal loss, its business continuity can be in jeopardy and it may no longer be able to function as an independent entity. Failing to address these issues places a company at a competitive disadvantage when fraud becomes a cost of doing business.

Fraud is a business risk in just the same way as an organization faces the risk of a customer becoming insolvent and unable to pay their debts [33]. The absence of an established policy means no position has been taken by the business. Therefore, the company has to come up with fraud prevention policy, for the business to communicate to its employees what is expected from them in terms of preventing, deterring and detecting fraud. Such a policy is essential as fraud prevention must always be proactive.

Welton and Davies looked at recommendation to focus attention on professional ethics within business organizations in order to minimize fraudulent activities [26]. They argued that high standards imposed from the top down can help raise the level of technical behavior within his business environment. They also concluded that an apparently strong internal control structure, without sound employee ethical behavior, is vulnerable. They suggested that business organizations should involve in continued efforts to keep employees aware of ethical issues. This may be accomplished by having in-house programs or requiring employees to attend a certain number of courses on ethics and ethical development.

Hunt emphasized on forensic accounting to prevent fraudulent activities in business organizations [29]. Unlike traditional auditing, forensic accounting is designed to detect and investigate fraud. The role of forensic accountants continues to expand as international white collar crime increases in scope and complexity. They will become the private investigators or detectives of corporate

governance and culture and deal with a variety of specialized functions in addition to investigating fraud, which includes asset tracing and recovery. Ideally, the existence of forensic accountants seems to benefit businesses, however, it costs the business more, especially to the small businesses with small amount of funds. Therefore, small business owners might not perceive hiring forensic accountants as important to their businesses.

When small businesses are victims of crime, they often react by changing their operation hours, raising their prices to cover their losses, relocating outside the community, or simply closing down the business. SMEs owners should take a hard look and aware of their businesses in areas such as physical layout, number of employees, hiring practices, and overall security to determine vulnerability to various kinds of crime, from burglary to embezzlement.

3. FUTURE RESEARCH

Fraud by employees could be serious and harmful to SMEs performance. Thus, SMEs must be ready to take appropriate actions to face the challenges and implications caused by fraud. Future research on this study should be able to uncover the relationship between the effectiveness of internal control and fraud preventive measures on SMEs and to gauge the adequacy of fraud prevention measures taken by SMEs in Malaysia. It is expected that effective internal control and the presence of appropriate fraud preventive measures will help to improve SMEs performance.

The future study may use a questionnaire as a tool to obtain feedbacks from respondents. The questionnaire may contain a section on demographic items such as gender, business age and number of employees. The next section could be on internal controls activities that are suggested to be in place in small and medium enterprises. The purpose of this section is to identify types of internal control that have been implemented by the respondents.

Apart from that, the following section may contain common fraudulent activities by employees in small and medium enterprises and the purpose of this section is to indicate the level of owners' concern on the type of fraudulent activities that occurred within their businesses. Another section also may deal with the best preventive actions taken by owners of SMEs that could prevent fraudulent activities within their business organizations.

There are several expected outcomes could be obtained from the study. The first possible outcome could be to prove that there is significant positive relationship between internal control and SMEs performance. This means that good internal control will lead to high SMEs performance. It is also expected that a high frequency of common fraudulent activities occurred in the past will lead to high level of owners concern on it. Thus, high level of owners' concern on common fraudulent activities will lead to high preventive actions to be taken by the owners.

4. CONCLUSION

As a conclusion, internal control and fraud prevention measures play a vital role and could have influence on SMEs performance. SMEs are much more vulnerable to fraud by employees because it is operated in a small scale where the owners invested only small amount of capital. Government, regulators, policy-makers, academicians and stakeholders should realize that SMEs are considered as the backbone of industrial development in Malaysian economy. Consequently, they should be more concerned towards the future growth and SMEs contribution to the whole economy. However, Malaysian SMEs should be prepared to face the highly challenging and globalised environment such as lack of financing, low productivity, lack of managerial capabilities, poor access to management and technology and heavy regulators burden. Government should also play their part by organizing training programs for entrepreneurs to equip them with relevant knowledge as an effort to increase the successful rate of SMEs established in Malaysia.

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