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PERFORMANCE MANAGEMENT SYSTEM STUDY OF THE IT INDUSTRY USING BALANCED SCORE CARD

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Abstract: *Performance means the process where employees, with their engagement of knowledge and skills, perform the work through the realisation of their objectives effectively. Performance management identifies the organisation's objectives, the necessary results to achieve these objectives, the ways to be effective in achieving these objectives, and the drivers to achieve them. This means that being engaged is not the same as achieving results. It makes us understand that the training, work, and commitment are not results. The performance management system has its focus on achieving the best results within the organisation, department, team, or individual through understanding and orienting efforts towards efficiency, within a framework of planned goals, standards, and skills required. The positive relationship proved in the balance score card (BSC) method that the information technology (IT) industry – case specific, has a balanced framework for performance management system (PMS) practices. The positive relationship also showed that the higher management of the IT industry understand the specific needs of the customers. Examining the relationship between BSC 4 perspectives and employee attitude (EA), it is revealed that BSC customer, BSC finance, and BSC internal processes are significantly related to the EA. The EA would act as a control mechanism among the employees to ensure that the services provided by the IT industry is up to the expectations of the customers, since they are the stakeholders.*

Keywords: *Balanced Scorecard, Employee Attitude, Managerial Performance, Organisation Culture, Performance Management System*

Introduction

Most companies around the world have adopted some sort of performance management system (PMS) in light of the fast-growing global economy, the rise of global competitive business market, and so on. Therefore, most firms have been trying to improve the level of service to stakeholders and the attitude of their employees. Performance indicators or the PMS has been found to be a means of displaying accountability within the private sector. The PMS has been an incentive for the firms to take stock of how well the services are provided.

PMS is a strategic and integrated process (Trivellas et al., 2007) that supports the success of the organisation through the development aspects of organisational performance. On implementation, performance management is not only oriented in one aspect, but also the aspects of integrated support in the course of an organisation. The purpose of PMS is three-fold: strategic, developmental, and administrative. In relation to the strategic purpose, PMS should link employee activities with the organisation's goals. In other words, performance management must be efficient (ensure that employees have the necessary competences for performance), integrated (assure the connections between different aspects of business, human resource management, individuals, and teams), and strategic (refers to long-term objectives). This process helps the employees understand the way they may contribute to the achievement of the organisational strategic objectives and ensure the use of the most appropriate competences for activities useful to the organisation, which have an important impact on its performance.

Due to the globalised business scenario, new trends in the PMS are gradually getting a boost. At present, consideration

of cultural differences belongs to the most important trend. There is no direct distinctive performance evaluation method to be used in the case of multinational IT private companies dealing with software service to customers, and so on. Each method could provide unique advantages, but we should not ignore the drawbacks. This is why many companies implement combined method approaches, based on their needs and according to their mode of operation (Singh, 2013). In addition, in the software industry, software development models add further assistance in the way of managing teams and human resources. This is because their implementation is done at the software-team-level and it is thoroughly associated with the implementation of the work goal (Tao & Yawei, 2009).

This study examines the perception and attitude of the employees of the IT firm, Infosys Ltd., on PMS–BSC and its effectiveness on the organisation. This study is also focused on the influence of the organisation culture (OC) on the implementation of BSC and the effects on the EA. This study investigates the effect of implementing BSC on the attitude of the employees, and takes into account the OC that influences the behaviour of the workers in the firm.

Performance Management System

Performance management system (PMS) can be defined as a systematic process for improving organisational performance by developing the performance of individual employees and teams. It is a means of getting better results by understanding and managing the performance within an agreed framework of planned goals, standards, and competency requirements, as stated by Kennerley and Neely (2003). Measurement of company performance is derived from financial and non-financial performance (operational and administrative). Now, non-financial performance is important because of the increasing interest in higher management levels to find the 'heart' of their business operations. One of the advantages of the use of the non-financial criteria is that the variables are more easily understood by anyone who visits the operating floor, so that the problems in the process of operation, in both the manufacturing and services companies, can be identified as soon as possible.

Stimulation of organisational learning means that PMS should be designed in such a way that all the employees can enhance their technical knowledge, and the organisation as a whole is able to gain experience and increase the scope of knowledge, as well as it is possible to increase the flexibility and innovation oriented towards gaining and sustaining a competitive advantage (Carter, 1991; Hoque, 2004). Continuous improvement of processes and activities run within an organisation supports performance enhancement and strategy execution. Learning and continuous improvement make PMS flexible and adaptable to changes in the external and internal business environments.

Muralidharan (1997) stated that PMS, in and of itself, is an accountability system. It shows everyone, from senior executives to front-line employees, what business results they are accountable for and sets expectations for how they should go about achieving the results. However, to be effectively implemented, the process needs to start at the top. Senior executives need to clearly define the organisation's strategic priorities and communicate them throughout the organisation.

Balanced Scorecard Method

The Balanced Scorecard (BSC), perceived as the most suitable framework, is able to provide significant information pertaining to the organisation's internal and external factors that will subsequently contribute to the organisation's success (Mohrman et al., 1990; Martinsons et al., 1999). The term 'balanced' indicates that the system is balanced between the short-term and long-term objectives, financial and non-financial measures, lagging and leading indicators, as well as internal and external performances perspectives.

BSC is defined as 'the articulation of the links between leading inputs (human and physical), processes, and lagging outcomes, and focuses on the importance of managing these components to achieve the organisation's strategic priorities. The BSC was developed by Norton and Kaplan (1992), to include both financial and non-financial measures that report the results of actions already taken and operational measures on customer satisfaction, internal processes, and the improvement activities – operational measures that are drivers for future financial performance. More specifically, the BSC is based on the combination of four key perspectives in performance measurement: financial perspective, customer perspective, internal business processes, and learning and growth, respectively.

Originally, the BSC prompted users to identify an equal number of measures in each of the four perspectives: financial perspective; customer perspective; internal perspective; and innovation and learning perspective. This demonstrated the need to balance financial and non-financial measures; internal and external measures; leading and lagging measures; and short- and long-term measures. The approach encouraged managers to overcome the shortcomings of traditional financial measurement, ensuring that managers do not take a narrow view of performance, based on too few measures. BSC is a performance metric used in strategic management to identify and improve various internal functions of a

business and their resulting external outcomes. It is used to measure and provide feedback to organisations. In addition, the BSC provides a framework and language that enable us to describe the strategy in a consistent and reliable manner. The ultimate goal behind the BSC theory is to measure the factors that create value for an organisation.

Literature Review

Resulting from the criticism of performance management (PM) only in terms of financial indicators, companies began to employ non-financial measures as well. The reason for the use of non financial measures is that these measures are better indicators of future financial performance than traditional financial measures; they are also valuable in evaluating and motivating managerial performance as depicted by Kaplan and Norton (1992, 2002). This is also confirmed by other research scholars (Ittner et al., 1997) who investigated that customer attitudes are good predictors of future financial performance. The financial and non-financial measures are combined in BSC and eventually linked all of the perspectives that represent the overall organisational performance into firm strategies and goals. Ittner et al. (2003) also argued that there is no direct relationship between the business unit strategy and organisational performance; however, there is a significant positive relationship between the strategy and the use of non-financial measures in the evaluation performance. Typically, companies that make extensive use, primarily non-financial efforts, of the same strategy will get high-value stock returns.

Taking into account the factors limiting the achievement of satisfactory performance, Kaplan (1983 & 1996) clearly indicated the need to introduce non-financial measures under the framework of management accounting. Thus, he proposed three major non-financial factors to be taken into consideration while assessing corporate performance: quality, inventory, and productivity. As a result, it is proposed that a comprehensive set of ten requirements should be fulfilled by modern PMS: (i) linkage to organisational strategy, (ii) focus on stakeholders, (iii) multidimensional and balanced performance measurement, (iv) allowing for critical success factors, (v) stimulation of organisational learning and continuous improvement, (vi) performance reporting, (vii) performance cascading, (viii) orientation on future and planning, (ix) serving as a control tool, and (x) taking into account the motivational aspects.

OC has been identified (Somers & Birnbaum, 2000; Searcy, 2012) as having a significant impact on the performance of a firm. OC has great impact on the growth and related performance of an organisation. Thus, in light of these observations, OC plays a vital role in determining the success of implementing PMS in firms (Duncan, 1989). Furthermore, EA has been found to play a critical role in determining the performance of an organisation in the long run, because it leads to the preferred employee's behaviour and attitude needed to achieve the mission and vision of the company (Blau & Boal, 1987). Besides these, EA is critical to the increase in satisfaction and productivity.

Anand et al. (2005) depicted the enhanced understanding of how performance measurement is practiced in services firm, with special emphasis on IT-related aspects of performance measurement and analysis of the whole life cycle of a PMS, starting with defining the performance indicators and ending with the use of the PMS of performance indicator. A majority of performance indicators that IT-related companies have in place are financial; in addition, non-financial aspects are partially measured, as they are not an integral part of the monthly and annual reporting.

Xin and Jing (2009) reported that the rapid transformation in technological innovation requires organisations to develop a culture that fosters innovation performance for sustainable development amidst the global competition. The core aim of the empirical investigation is to explore the role of OC, particularly an inclusive culture, in the innovation performance of the software industry. To achieve the objective of the study, research was conducted to collect the required information by using a structured questionnaire from software firms via an online data collection system, using Google Forms. The sample size was high; therefore, descriptive statistics, correlation, and multiple regression models are used to determine the association between explanatory factors of OC and innovation performance. The results propose that organisational innovation performance is backed and affected by OC, as supported by Edison et al. (2013) and Yuanchu (2005).

Research Methodology

Questionnaire Survey

The questionnaire (total 70 questions) consists of four major sections, namely part A, B, C, and D. The first section (Part A) contains 20 questions investigating OC, which was adopted from Hofstede (2001). The second part (Part B) contains 18 questions, including the BSC questionnaire adopted from Hoque and Adams (2002). The third part (Part C) consists of the job descriptive index, including job satisfaction and the organisational commitment questions, which include 32 questions adopted from Smith et al. (1969) and Meyer and Allen (1991). The fourth part (Part D) focuses on the demographics of the respondents. The rating scale for the

questionnaire was a five-point Likert scale that varied from 1 (strongly disagree) to 5 (strongly agree).

Hypothesis of the Study

Hypothesis 1: There is evidence of a positive significant relationship between the BSC customer perspective and the EA in the IT industry – case specific.

Hypothesis 2: There is evidence of a positive significant relationship between the BSC finance perspective and the EA in the IT industry.

Hypothesis 3: There is evidence of a positive significant relationship between the BSC internal process and the EA in the IT industry.

Hypothesis 4: There is evidence of a positive significant relationship between the BSC learning and growth perspective and the EA in the IT industry.

Hypothesis 5: There is evidence that OC does moderate the relationship between the four BSC perspectives and the EA in the IT industry.

Key Variables of the Study

- *The Independent Variables*

The four perspectives of the BSC, which includes the customer perspective, the financial perspective, the internal business process perspective, and the learning and growth perspective, are the independent variables of the study. These perspectives are measured on the basis of the Kaplan and Norton (2001) analysis.

- *The Dependent Variable*

The EA is the dependent variable in the study, focused on the relative strength of the organisational commitment and job satisfaction. These two dependent variables are found to be related to the levels of OC of the firm.

- *Moderating Variable*

The OC acts as the moderating variable. Hofstede's six dimensions of OC, namely process versus result, employee versus job dimension, open versus closed dimension, parochial versus professional dimension, normative versus pragmatic dimension, and loose versus tight dimension are used in the present studies.

Results and Discussion

Demographics Analysis

A total of 1,200 questionnaires were distributed among the employees of the Infosys Ltd., IT industry campus, Trivandrum, and 1,100 filled-in questionnaires were collected within a month. The content of the questionnaire are presented in Table 1 and the demographics analysis results of the respondents are presented in Table 2. The respondents are lower-level, middle- and senior-level engineers and managers in the firm. In general, the respondents of the study have a good education background, since 70.6% of them hold technical undergraduate and post-graduate (B.E/B.Tech/ME/M.Tech) degrees, 15.4% have a general (M.Sc./M.Com/MCA) degree, and 14.0% have a management (MBA/PGDCA, and so on) degree. A total of 97.4% respondents are 21-30 years of age, 17.4% are age between 30 and 40, and the remaining 3.2% are above 40.

Table 1: Number of Items in Questionnaire for BSC Perspectives

Questionnaires Category	No. of Items
Financial Perspectives (Questions 31-34)	4
Customer Perspectives (Questions 21-25)	5
Internal Business Process Perspectives (Questions 35-38)	4
Learning, Innovation, and Growth Perspectives (Questions 26-30)	5
Organisational Culture Perspectives (Questions 1-20)	20
Employee's Attitude Perspectives (Questions 38-70)	32

The data (Table 2) also shows that 30.5% of the respondents have at least 1-5 years' work experience in his/her current position, 51.6% employees have 6-10 years of service, 15.4% employees have 11-15 years of service, and the remaining 2.5% have above 15 years of experience. A total of 69.5% of the respondents are male, while 31.5% are female employees. A total of 80.6% are promoted after five years in service, while a total of 19.4% are not promoted after five years of service. The personal information of the respondents in the study indicates that they have sufficient knowledge and experience to answer the questionnaire comfortably.

Table 2: Respondents' Profile Analysis

Variables	%
Age	
21-30 years	79.4
31-40 years	17.4
40 and above	3.2
Gender	
Male	69.5
Female	31.5
Educational level	
Technical (B.E/B.Tech/ME/M.Tech/Diploma)	70.6
General (M.Sc./M.Com./MCA)	15.4
Management (MBA/PGDCA, and so on)	14.0
Employee's category	
Lowe level	60.6
Middle level	29.2
Senior level	10.2
Length of service	
1-5 years	30.5
6-10 years	51.6
11-15 years	15.4
16 and above	2.5

Reliability Analysis of Data

The average score for PMS–BSC, given by the total respondents, based on the Likert scale of 1 (strongly agree) to 5 (strongly disagree) is shown in Table 3. It shows that the average score (mean) for financial perspectives is 42.60, with an SD of 0.86, and that for customer perspectives is 55.89, with an SD of 1.002. The mean for internal business process perspectives is 45.29, with an SD of 0.93, and that for learning, innovation, and growth perspectives is 56.87, with and SD of 0.90. Meanwhile, the mean for EA is 75.12, with an SD of 0.67, and the mean for OC perspectives is 68.56, with an SD of 0.38 (Table 3).

Table 3: Reliability Test – Mean and Standard Deviation of Questionnaires

Perspectives	Mean	Std. Deviation (σ)
Financial Perspectives	42.60	0.86
Customer Perspectives	55.89	1.002
Internal Business Process Perspectives	45.29	0.93
Learning, Innovation, and Growth Perspectives	56.87	0.90
Organisational Culture Perspectives	68.56	0.38
Employee's Attitude Perspectives	75.12	0.67

Cronbach's Coefficient (α) Analysis for Internal Consistency

The Cronbach's coefficient (α) has been used to measure the internal consistency of the scale for the estimation of the consistency of the individual responses to items. Initially, the overall internal consistency of 70 questionnaires were tested and the results are shown in Table 4. It is reported that a scale (α) of 0.7 is widely accepted as consistent and reliable in social science research analysis (Neuman, 2006).

The Cronbach's coefficient (α) for the five items in BSC of customer perspective components is 0.851 (Table 4). Thus, all components in BSC for customer perspectives have been found to be reliable and good. The Cronbach's coefficient (α) for the five items in BSC of learning, innovation, and growth perspectives components is 0.755. Thus, all components in BSC of learning, innovations, and growth perspectives have been found to be reliable and good. The Cronbach's coefficient (α) for the four items in BSC of finance perspectives components is 0.741. Thus, all components in BSC of finance perspectives have been found to be reliable and acceptable for the data collected. The Cronbach's coefficient (α) for the 20 items in BSC of OC perspectives is 0.791. Thus, all components in BSC for OC perspectives have been found to be reliable. The Cronbach's coefficient (α) for the 32 items in BSC of EA perspective is 0.816 (Table 4). Thus, all components in BSC of EA have been found to be reliable and good for the collected data. All the perspectives in BSC are reliable and good, as Cronbach's coefficient (α) values are more than 0.7 in the study.

Table 4: Value of Cronbach's Coefficient (α) for BSC Analysis

Question Category	Cronbach's Alpha (α)	No. of Items (Questionnaire)
Financial Perspective	0.717	4
Customer Perspective	0.851	5
Internal Business Process Perspective	0.723	4
Innovation and Learning Perspective	0.755	5

Question Category	Cronbach's Alpha (α)	No. of Items (Questionnaire)
Organisational Culture Perspective	0.791	19
Employee's Attitude Perspective	0.816	32

Linear Regression Analysis

Pearson Correlation Analysis

Pearson's correlation coefficient (r) is a linear correlation coefficient that returns a value of −1 to + 1, as these are taken as conventionally accepted in social science analysis. A −1 means there is a strong negative correlation and +1 means there is a strong positive correlation. A 0 means there is no correlation, and it is called zero order relation. If the Pearson coefficient (r) value is in the negative range, it means the relationship between the variables is negatively correlated, or as one value increases, the other decreases (Neuman, 2006). If the value is in the positive range, it means the relationship between the variables is positively correlated, or both values increase or decrease together (as stated in the literature for analysis of data).

Pearson Correlation Analysis is evaluated for the BSC of customer perspectives, BSC of financial perspectives, BSC of internal business process perspectives, BSC of learning, innovation, and growth perspectives, four perspectives of BSC and EA, and four BSC and OC perspectives, respectively. Thus, all these variables are positive significant predictors of EA, as r values are greater than 0.50, and all ρ value are less than 0.001 (Table 5), as these threshold values are reported as conventionally accepted for Pearson Correlation Analysis as per the literature (Neuman, 2006). BSC of customer perspective is found to have a greater effect (r = 0.60) on the IT industry's EA, and the finding proves that the firm, as a private service sector MNC has been successfully focusing on customer satisfaction as it is their main goal. The four BSC and OC perspectives have greater r (0.65) values that affect the goals and growth of the IT firm (Table 5). The overall result of the regression model is good and significant as True Pearson coefficient (ρ) is less than the threshold value of 0.001 (it is an agreeable standard consideration for social science statistical data analysis). The analytic results indicate that the four BSC perspectives as the independent variables are positively significant and affect the dependent variable, the OC, in the studies of PMS of the IT firm. F-statistic values of all BSC perspectives are very high (Table 5), which indicates that the analysis of raw data is in good agreement for BSC-PMS analysis of the organisation, as stated. Standard error of estimate values (Table 5) of the Pearson Correlation Regression analysis are very low in the studies; this depicts that a positive significant relationship exists for data collection and statistical analysis and predictions. These results are good predictors of all BSC perspectives and variables considered for the five hypothesis analysis in the PMS study. The overall result of the Pearson Correlation regression model is significant, as ρ is less than the threshold value of 0.001. This indicates that the four BSC perspectives as the independent variables are positively significant and affect the dependent variable, the OC of the firm, as stated in the objectives and hypothesis in the study.

Linear Regression Analysis: SPSS-ANNOVA Model

A standard linear regression analysis is performed between EA as the dependent variable and BSC of all perspectives as the independent variable (Table 6). When we perform a hypothesis test in statistics, regression coefficient, α, value helps determine the significance of the results. The α value (linear regression coeff.) is a number between 0 and 1, and interpreted in the following way: A small α value (typically α ≤ 0.05) indicates strong evidence against the null hypothesis, so we reject the null hypothesis from the analysis data (Table 6). If one-way ANNOVA model reports an α greater than 0.05 (the threshold value), it is called the null hypothesis, and it is not accepted. If α value is less than 0.05, it is positively significant and accepted universally (Neuman, 2006).

Table 5: Results of Pearson Correlation Analysis of BSC Perspectives

Variables	R	R^2	F-Statistic	Std. Error of Estimate	P-Value	Conclusion
BSC Financial Perspectives	0.55	0.3025	92.34	0.017	0.0001	Good and positively significant, as (ρ) < 0.001
BSC Customer Perspectives	0.60	0.360	96.48	0.012	0.0002	Good and positively significant, as (ρ) < 0.001
BSC Internal Business Process Perspectives	0.54	0.2916	93.19	0.016	0.0001	Good and positively significant, as (ρ) < 0.001
BSC Learning, Innovation, and Growth Perspectives	0.62	0.3844	91.53	0.037	0.0003	Good and positively significant, as (ρ) < 0.001

Variables	R	R^2	F-Statistic	Std. Error of Estimate	P-Value	Conclusion
Four BSC and EA Perspectives	0.60	0.360	97.30	0.011	0.0001	Good and positively significant, as (ρ) < 0.001
Four BSC and OC Perspectives	0.65	0.4225	103.89	0.012	0.0002	Good and positively significant, as (ρ) < 0.001

ρ: True Pearson Correlation Coefficient; threshold value of ρ is 0.001.

Table 6: Results of Linear Regression Analysis – ANNOVA Model

Variables	R	R^2	β	Std. Error of Estimate	α Value	Conclusion
BSC Financial Perspectives	0.55	0.3025	0.126	0.017	0.002	Positively significant, as α < 0.05
BSC Customer Perspectives	0.60	0.360	0.151	0.012	0.001	Positively significant, as α < 0.05
BSC Internal Business Process Perspectives	0.54	0.2916	0.130	0.016	0.003	Positively significant, as α < 0.05
BSC Learning, Innovation, and Growth Perspectives	0.62	0.3844	0.131	0.037	0.002	Positively significant, as α < 0.05
Four BSC and EA Perspectives	0.60	0.360	0.148	0.011	0.003	Positively significant, as α < 0.05
Four BSC and OC Perspectives	0.65	0.4225	0.142	0.012	0.001	Positively significant, as α < 0.05

β: Standardised coefficient, α:Threshold value, α = 0.05.

The overall result of the regression analysis ANNOVA model is positively significant (Table 6), as $\alpha < 0.05$, i.e. less than the threshold value. This indicates that all perspectives of BSC as the independent variable positively significantly affect the dependent variable, the EA. The result also indicates that r^2 for BSC customer perspectives is 0.360, which means the independent variable contributes 36% towards the dependent variable (EA). The value of the standardised coefficient (β) indicates the relative importance of this independent variable in the regression analysis. Referring to Table 6, for BSC of customer perspectives, there is evidence of a positive relationship. The result of the standardised coefficient (β) reveals that the BSC of customer perspective (β = 0.151) is positively supportive (very strong relationship) and an important predictor towards EA, as the variable is significant, as stated in the objectives.

Findings of the Study

The findings of the study are shown in Table 7. All the hypothesis tested are strongly positive, significant, and supportive in the present study. This study indicated that OC in the IT industry moderates the relationship between the four BSC perspectives and EA. In the IT industry, the use of BSC is gaining attention, in line with the global push towards PMS as a means of enhancing the industry's growth and maintaining organisational discipline. The challenges in OC are not to be neglected, and any conflict that arises due to the system of hierarchy, adaptation challenges, or work norms would affect the EA of the industry significantly. Thus, the industry should realise that the organisation culture (OC) is one of the components to be taken into consideration when developing a PMS-BSC design and in the implementation process.

BSC that acts as the 'translator' of the strategy in the strategic management could stimulate the communication between the managers and subordinates. Thus, the role of BSC is not only to act as a tool to evaluate performance, but also to stimulate the work relationship between employees in the organisation. The cascading and creating of a strategic map in BSC would enable employees and other stakeholders to understand clearly the goals of the firm. Thus, it would lead to a better understanding among the employees, and promotes job satisfaction and work commitment.

Recommendations

Thus, in the case of the BSC, in this study, OD could play a vital role in improving the internal problem-solving capabilities, as well as its effectiveness. OD could assist

managers or leaders in the firm foster innovation and creativity, which could enhance organisational performance. First, the emergence of the awareness of the OD factor, such as learning and growth in enhancing the level of employees' productivity in the firm, is of first priority. Second, the firm has emerged as a learning organisation to cope with the challenges in the information era and the new business environment in Infosys. Third, OC influenced the attitude and the perception of the organisation's employees towards PMS-BSC. Based on the multiple regression analysis in the study, all BSC perspectives are proved to have a positive significant relationship with EA.

The firm should emerge as the advanced technology-driven organisation, and the top management of the industry must be capable of becoming a role model, to lead the organisation to greater heights, through management strategy. Based on the findings in the study, BSC finance and BSC learning and growth should be given priority, and should not to be neglected by the management. The industry should emphasise on PMS as a means for accelerating growth and achieving the business target and goals. For this purpose, the staff should be trained to measure performance of achievable targets and goals, and the four perspectives of BSC should also be reviewed and revised on a periodic basis, to keep pace with the changing international business environment. The result findings on the BSC learning and growth hypothesis, which is significant with EA, is highly correlated with the human capital factor. Thus, the emergence of a knowledge-technology-based IT industry requires the engagement of the right attitude by the employees of the organisation.

Key Points to the Industry

- First, the firm should review its policies on its functions in developing PMS in the area of business and training.
- Second, the firm should appoint top management through an open recruitment system. Thus, in this way, the key professional personnel will not only be able to lead this private IT company, but also act as change agents.
- Third, using the BSC as a strategic management system will enable the management's strategy and vision to be translated into realistic and achievable goals.
- Fourth, from the hypotheses, the findings also show that through the BSC Learning, Innovations, and Growth perspective, the lack of training and development programmes has caused dissatisfaction among the employees.
- Fifth, the emphasis on OD is found to be critical, which would enable the organisation to engage in a performance-based culture, as well as integrate training, development, and motivation.
- Sixth, this study has found that the organisation should act as a learning organisation to absorb the rapid changes in the business environment, as well as to cater to the needs of the stakeholder community around the globe.
- Seventh, IT industries are continuously challenged by new technologies, and this compels them to change, to compete effectively in the business world. IT firms have to fully equip themselves with sufficient knowledge and skilful workers, due to the new changes in the external and internal environments in the business.
- The globalisation and the dynamic market place contribute to the need for these changes.

Table 7: Summary of the Findings of Study

Hypothesis for the Study	Findings	Remarks	Remarks
There is evidence of a positive significant relationship between BSC customer perspective and EA in the IT industry	Strongly positive and supportive	Significant at (α) < 0.05	Significant at (ρ) < 0.001
There is evidence of a positive significant relationship between BSC finance perspective and EA in the IT industry	Strongly positive and supportive	Significant at (α) < 0.05	Significant at (ρ) < 0.001
There is evidence of a positive significant relationship between BSC internal processes perspective and EA in the IT industry	Strongly positive and supportive	Significant at (α) < 0.05	Significant at (ρ) < 0.001
There is evidence of a positive significant relationship between BSC learning, innovation, and growth perspective and EA in the IT industry	Strongly positive and supportive	Significant at (α) < 0.05	Significant at (ρ) < 0.001
There is evidence that OC does moderate the relationship between the four BSC perspectives and EA in the IT industry	Strongly positive and supportive	Significant at (α) < 0.001	Significant at (ρ) < 0.001
There is evidence that EA does moderate the relationship between the four BSC perspectives and OC in the IT industry	Strongly positive and supportive	Significant at (α) < 0.05	Significant at (ρ) < 0.001

Conclusion

The results of the study showed that using the effects of BSC and the OC on EA in the industry has a positive significant effect. The positive significant relationship proved that the industry has a balanced framework for PMS practices. The positive relationship also showed that the higher management of the IT industry understands the specific needs of the customer. Examining the relationship between the BSC four perspectives and EA, it is revealed that BSC customer, BSC finance, BSC internal business processes, and BSC learning, innovation, and growth perspective are significantly related to EA. The results of the study showed that using the effects of BSC and the OC on the EA in the IT industry has a positive significant effect. Moreover, cost effectiveness would only be made possible if the management knew how to minimise the cost of producing the services, while at the same time increasing the productivity level. Hence, the best way to deal with this is through the understanding of human behaviour, which in this case is the EA. Hence, the EA would act as a control mechanism among the employees to ensure that the services provided by the organisation is up to the expectation of the customers, since they are the stakeholders.

References

Anand, M, Sahay, B., & Saha, S. (2005). *Balanced scorecard in Indian companies*. New Delhi: Vikalpa Publishers.

Bhal, K. T., & Gulati, N. (2007). Pay satisfaction of software professionals in India. *Vikalpa*, *32*(3), 9-21, 2007.

Carter, N. (1991). Learning to measure performance: The use of indicators in organization. *Public Administration Review, 69,* 85-101.

Creelman, J. (1998). *Building and implementing a Balanced Scorecard – International best practice in strategy implementation*. London: Business Intelligence Ltd.

Edison, H., Ali N., & Torkar, R. (2013). Towards innovation measurement in the software company. *The Journal of System and Software, 86,* 1390-1407.

Hofstede, G. (2001). *Cultures consequences: Comparing values, behaviours, institutions and organisation across nations.* Thousand Oaks, California: Sage Publication.

Hoque, Z. (2004). A contingency model of the association between strategy, environmental uncertainty and performance measurement: Impact on organizational performance. *International Business Review, 13,* 485-502.

Hoque, Z., & James, W. (2000). Linking balanced scorecard measures to size and market factors: Impact on organisational performance. *Journal of Management Accounting Research*, *12,* 1-17.

Ittner, C. D., Larcker, D. F., & Randall, T. (2003). Performance implications of strategic performance measurement in financial service firms. *Accounting, Organisations and Society*, *28*(7-8), 715-741.

Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard – Measures that drive performance. *Harvard Business Review, 70*(1), 71-79.

Kaplan, R. S., & Norton, D. P. (1996). Using the balanced scorecard as a strategic management system. *Harvard Business Review*, *74*(1), 75-85.

Kaplan, R. S., & Norton, D. P. (2000). *The strategy-focused organization: How balanced scorecard companies thrive in the new business environment*. Cambridge, MA: Harvard Business School Press.

Kaplan, R. S., & Norton, D. P. (2001). Building a strategy-focused organization. *Ivey Business Journal, 65*(5), 12-19.

Kennerley, M., & Neely, A. (2003). Measuring performance in a changing business environment. *International Journal of Operations & Production Management, 23*(2), 213-229.

Kraemer, D. (2000). Information technology all productivity evidence from country level data. *J. Management Science, 23,* 78-98.

Trivellas, P., Reklitis, P., & Konstantopoulos, N. (2007). A dynamic simulation model of organizational culture and business strategy effects on performance. *American Institute of Physics*, *63*(2), 1074-1078.

Martinsons, M., Davison, R., & Tse, D. (1999). The balanced scorecard – A foundation for the strategic management of information systems. *Decision Support Systems, 25*(1), 71-78.

Meyer, M., & Kolbe, L. M. (2005). Integration of customer relationship management: Status quo and implications for research and practice. *Journal of Strategic Marketing, 56,* 78-89.

Muralidharan, R. (1997). Strategic control for fast moving markets: Updating the strategy and monitoring performance. *Long Range Planning*, *30*(1), 64-73, 1997.

Mohrman, A., Mohrman, S., & Worley, C. (1990). High-technology performance management. In M. Glinow, M. Von & S. Mohrman (Ed.), *Managing Complexity in High-Technology Organisation.* New York: Oxford University Press.

Neely, A., Adams, C., & Kennerley, M. (2002). *The performance prism: The scorecard for measuring and managing business success*. Financial Times Prentice Hall.

Neuman, W. L. (2006). *Social research methods: qualitative and quantitative approaches*. Boston, USA: Pearson, Allyn and Bacon.

Searcy, C. (2012). Corporate sustainability performance measurement systems: A review and research agenda. *Journal of Business Ethics, 107,* 239-253.

Somers, M., & Birnbaum, D. (2000). Exploring the relationship between commitment profiles and work attitudes, employee withdrawal, and job performance. *Public Personnel Management*, *9*(3), 353-365.

Singh, A. (2013). Perception of software professionals regarding performance management process: An exploratory study. *Vikalpa*, *38*(2), 39-60.

Tao, C., & Yawei, Q. (2009). The co-evolution mechanism of information industry technology innovation and industrial system growth in the fusion background. *Science and Management Science*, *11,* 86-93.

Xin, W., & Jing, J. (2009). Study on the dynamic mechanism of information industry evolution. *Information Science*, *12*(27), 1885-1890.

Yuanchu, L. (2005). *Study on the evolution regularity and development mode of information industry.* Wuhan: Wuhan University.