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*Review Paper*

# Examine the relationship between balanced scorecard views with each other and impact on the overall Strategy of the organization

**Ladan Mozarmni[1], Rasoul Aghadavoud[2], Sayyed Mohammad Reza Davoodi[3*]**

1 M.S.C. industrial management, Islamic Azad University, Science and Research Branch-Fars, Iran

2Assistant professor, Management Department, Islamic Azad University, Branch of Dehaghan, Iran.

3PhD Student, Faculty of Management, Islamic Azad University, Dehaghan Branch, Isfahan, Iran

## Abstract

The main aim of this research is analyzing the relations between balanced scorecard views with each other and their effects on the general strategy of organization. The framework of this study is based on balanced scorecard system and thus, the effect fourfold views as financial, customer, internal process and growth and learning views on each other, are evaluated. The statistical population of this research included Zamzam beverage production co. that produces non-gaseous and gaseous beverages. The volume of the statistical samples for the research is 125 people and the statistical analyses are done by the use of descriptive and inferential statistics and also using SPSS and IMOS software packages.The obtained results of the hypotheses in this research show that balanced evaluation fourfold views have no effects on determining organizational strategy and it is the strategy that could help the organization for achieving a lofty perspective through directing these views with the expressed goals of the organization and also each view could increase the competitive potentials of the organization for obtaining the opportunities and environmental advantages as well as confronting with the threats by getting affected from other views of the system.

**Key words**: Strategy, balanced scorecard, financial view, customer view, internal process view, growth and learning view

## Introduction

Various articles were published by the end of 1980s in different publications, about the inefficiency of the evaluation on methods of company's performances and lots of authorities criticized the extensive and exclusive use of financial criteria in evaluating the performances. Hoap Wood (1972) had pointed to the inadequacy of conventional financial indexes in evaluation of organizations performances (Wang An Wing & et al. – 2007).

Today, lack of evaluations in various dimensions of the organizations such as evaluation of using resources and facilities of the organization, employees, goals and strategies is considered as an organizational disease. It could be said that are of the most credited and prevailed new systems for performance evaluation is the balanced scorecard system (Shokoufi-2005). Kaplan and Norton (1990) did some studies about the measures of tomorrow`s organizational performances with the aim to develop the new model to illustrate the performance that have the potentials in better conditions than the performance data. Balanced scorecard is a new management ideology with its principles laid in 4 criteria, to be financial, customers, internal process and growth and learning measures that have casual relations with each other (Kuing V – 2011). Kaplan and Norton scorecard is a management tool that supports the successful execution of the company's strategies. (Fig. et al. – 2002)

## History of Research

By investigating the relation between strategy and balanced scorecard measures, Ratensigm (2009) expressed that system as a holistic process of companies through simultaneous testing of 4 vi ewes of this evaluation system including customer, financial, internal process and growth/learning measures, in two companies that were active in agriculture.

By providing performance evaluation indexes and using balanced scorecards, Parhizgar, et al. (2011) determined that the measures regarding financial views could affect other measures. The financial views could be considered as a basis for the processes regarding customers and the employee's views.

Daneshfard et al. (2010) stated about improving the performance of organizations by implementing balanced scorecards. The study shows that there is a balance between the four perspectives, Because of results survey of the gap between the existing balanced scorecard indicators, indicative that there is no significant difference between dimensions. It means that the balance is between Dimensions.

In a research "Presenting the determining model for the prerequisites of IT for the balanced scorecard system in Bank Mellat", Shokouh (2005) considered that analyzing the infrastructures of each system will be necessary for successful execution of that system and hence the research was done through focusing on the required infrastructures for implementation of balanced scorecard system with regards to information technology measures.

In a research under the title of "Analyzing the effects of executing balanced scorecards on financial performance", Davis and Albright (2004) compared the performances between the headquarters of the banks that had executed balanced scorecard model and the headquarters that did not execute the model. The results indicated satisfaction of the banks that had executed the model and the system had direct effects on financial performance on the tangible incomes.

## Research Conceptual Model

This model indicates the main criteria of the research.

**\*Correspondent Author:** Sayyed Mohammad Reza Davoodi (**Smrdavoodi@yahoo.com**)

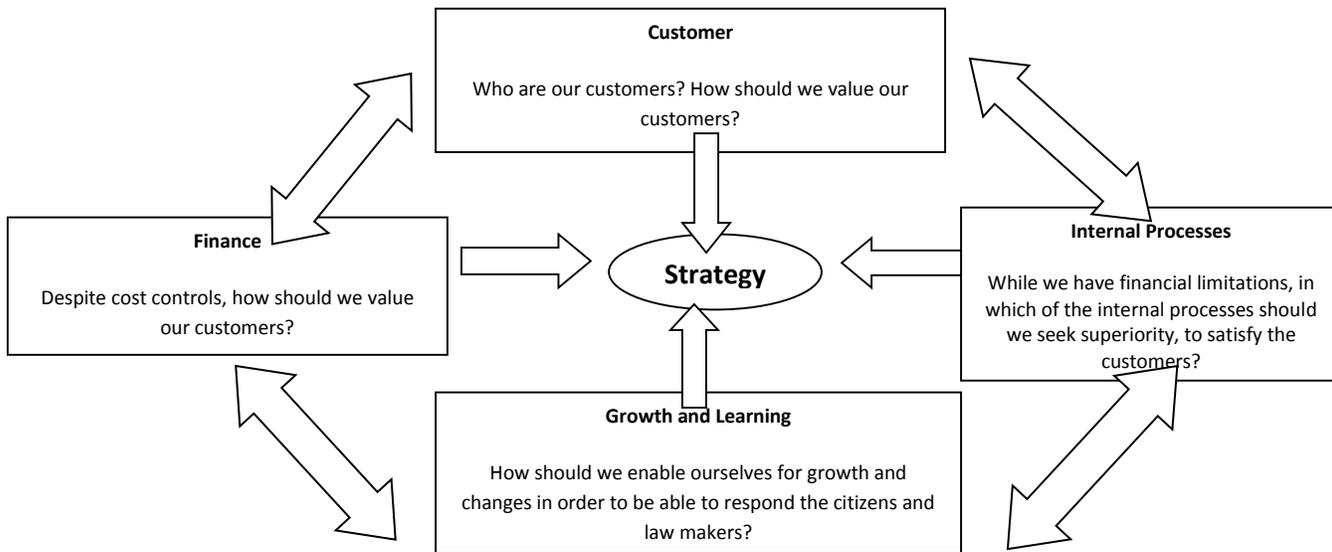**Manuscript No: IJSMD-KINA-2014-177**

**Fig.1**: Balanced evaluation model for public sector (Newn – 2008)

**Hypotheses of the Research**

**Main Hypotheses of the Research**

> ➢ There are relations between the 4-fold views regarding balanced scorecards and determination of organization strategies.

**Subordinate hypotheses of the research**

> ➢ There is a relation between the financial view measures and other viewing measures.
> ➢ There is a relation between the customer view measures and other viewing measures.
> ➢ There is a relation between the internal process view measures and other views.
> ➢ There is a relation between the view of growth and learning and other viewing measures.

**Research Methodology**

According to the main goal of the research that is the investigation views of balanced scorecards with each other and their effects on organizations strategies, this research is of correlation type that analyzed the type and relations between the variables according to the research aims. It is an applied research due to its goals, and it is a field research due to its situation. It is also a periodic and foresighted research with regards to time. It is periodic since it involves a definite part of time, in such a way that by the changes of strategies in an organization, the essential measures of each view may also change with regards to balance of scorecards and the measures that used to be considered necessary before may be replaced with other necessary measures.

**Testing the hypotheses**

**Testing the research main hypothesis:**

**Table 1:** Analyzing the relations of the path between the views of balanced scorecards and strategy

| Relations | Estimation | Standard Error | T-Student | Significant Level | Test Result |
|---|---|---|---|---|---|
| Finance ↔Strategy | -0.004 | 0.020 | -0.217 | 0.828 | Note rejected the zero hypothesis |
| Customer ↔ Strategy | -0.017 | 0.020 | -0.826 | 0.409 | Note rejected the zero hypothesis |
| Internal Process ↔ Strategy | -0.013 | 0.017 | -0.795 | 0.427 | Note rejected the zero hypothesis |
| Growth & Learning ↔ Strategy | -0.001 | 0.020 | -0.061 | 0.951 | Note rejected the zero hypothesis |

Thus the 4-fold views of balanced scorecards do not cause general strategic determination of the organization.

**Testing the 1st subordinate hypothesis**

**Table 2**: Analysis of the relations of the path between the measures of financial views and other measures in views

| Relations | Estimation | Standard Error | T-Student | Significant Level | Test Result |
|---|---|---|---|---|---|
| Finance ↔ Internal Process | 0.204 | 0.031 | 6.678 | P<0.05 | Note rejected the zero hypothesis |
| Finance ↔ Customer | 0.243 | 0.037 | 6.655 | P<0.05 | Note rejected the zero hypothesis |
| Finance ↔ Growth & Learning | 0.230 | 0.035 | 6.522 | P<0.05 | Note rejected the zero hypothesis |

Thus there is a positive and significant relation between the measures of financial views and other viewing measures.

**Testing the 2nd subordinate hypothesis**

**Table 3**: Analyzing the relations of the path between the measures of the customers views and other views

| Relations | Estimation | Standard Error | T-Student | Significant Level | Test Result |
|---|---|---|---|---|---|
| Customer ↔ Finance | 0.243 | 0.037 | 6.655 | P<0.05 | Note rejected the zero hypothesis |
| Finance ↔ Internal Process | 0.209 | 0.031 | 6.673 | P<0.05 | Note rejected the zero hypothesis |
| Customer ↔ Growth & Learning | 0.201 | 0.034 | 5.910 | P<0.05 | Note rejected the zero hypothesis |

Thus there is a positive and significant relation between the measures of customer's views and other views

**Testing the 3rd subordinate hypothesis**

**Table 4**: Analyzing the relations of the path between the measures of the view for internal process and other viewing measures

| Relations | Estimation | Standard Error | T-Student | Significant Level | Test Result |
|---|---|---|---|---|---|
| Internal Process ↔ Finance | 0.204 | 0.031 | 6.678 | P<0.05 | Note rejected the zero hypothesis |
| Internal Process ↔ Customer | 0.209 | 0.031 | 6.673 | P<0.05 | Note rejected the zero hypothesis |
| Internal Process ↔ Growth & Learning | 0.190 | 0.030 | 0.403 | P<0.05 | Note rejected the zero hypothesis |

Thus there is a positive and significant relation between the measures of internal processes and other views

**Testing the 4th subordinate hypothesis**

**Table 5**: Analyzing the relations of the path between the measures of the growth / learning views and other views

| Relations | Estimation | Standard Error | T-Student | Significant Level | Test Result |
|---|---|---|---|---|---|
| Growth & Learning ↔ Customer | 0.201 | 0.034 | 5.910 | P<0.05 | Note rejected the zero hypothesis |
| Growth & Learning ↔ Finance | 0.230 | 0.035 | 6.522 | P<0.05 | Note rejected the zero hypothesis |
| Growth & Learning ↔ Internal Process | 0.190 | 0.030 | 0.403 | P<0.05 | Note rejected the zero hypothesis |

Thus there is a positive and significant relation between the measures of growth and learning and other views

**Pearson correlation coefficient**

Pearson correlation coefficients between the research variables are observed in the following table:

**Table 6**: Pearson correlation table for the research variables

|  | Finance | Customer | Internal Process | Growth & Learning | Strategy |
|---|---|---|---|---|---|
| Finance Correlation Coeff. <br> Significant Level <br> No. | 1 <br> <br> 105 | 0.861** <br> 0.000 <br> 105 | 0.866** <br> 0.000 <br> 105 | 0.832** <br> 0.000 <br> 105 | -0.021 <br> 0.829 <br> 105 |
| Customer Correlation Coeff. <br> Significant Level <br> No. | 0.861** <br> 0.000 <br> 105 | 1 <br> <br> 105 | 0.865** <br> 0.000 <br> 105 | 0.711** <br> 0.000 <br> 105 | -0.081 <br> 0.410 <br> 105 |
| Internal Process Correlation Coeff. <br> Significant Level <br> No. | 0.866** <br> 0.000 <br> 105 | 0.865** <br> 0.000 <br> 105 | 1 <br> <br> 105 | 0.807** <br> 0.000 <br> 105 | -0.78 <br> 0.428 <br> 105 |
| Growth & Learning Correlation Coeff. <br> Significant Level <br> No. | 0.832** <br> 0.000 <br> 105 | 0.711** <br> 0.000 <br> 105 | 0.807** <br> 0.000 <br> 105 | 1 <br> <br> 105 | -0.006 <br> 0.951 <br> 105 |
| Strategy Correlation Coeff. <br> Significant Level <br> No. | -0.021 <br> 0.829 <br> 105 | -0.081 <br> 0.410 <br> 105 | -0.078 <br> 0.428 <br> 105 | -0.006 <br> 0.951 <br> 105 | 1 <br> <br> 105 |

\* Correlation coefficient is significant in 0.01 level

According to the above table, there is a positive/significant correlation between the measures of balanced scorecards with each other ($P<0.05$), but there is no significant correlation between the balanced scorecards and the general strategy of the organization ($P>0.05$).

**Table 7**: Property indexes of structural model

| Indexes | Chi-Square | Degree of Freedom | Significant Level | Degree of Freedom / Chi-Square | Average of Square of Model Errors | RFI | AGFI | GFI | RMR |
|---|---|---|---|---|---|---|---|---|---|
| Index Values | 0.682 | 1 | 0.409 | 0.682 | 0.000 | 0.897 | 0.961 | 0.997 | 0.007 |

 The p-value shows the rate of propriety of the model. Since p-value = 0.000 has been obtained, it shows that the model is appropriate. RMSEA, index is the average of the model errors square                                                    values. The index is built based on the model errors and the limit is 0.8. It is normal for the rate to be less than 0.8 and is better below 0.5. This rate is less than 0.05 for the models having proper fitness. Hence the RMSEA index has a value equal to 0.000, it has a proper fitness.

Since RMSEA is equal to 0.000, the above model has a good and proper fitness. The other measure to be considered is RFI. The value of this criterion changes in the range of zero and "1", such that the closer values to "1" are interpreted as better fitness of the data. In this research RFI=0.897 that shows the property of the model to be suitable.

RMR index is for measuring the average of reminders and is only changed with regards to the variances and covariance's. The smaller is this criterion (closer to zero) the better fitness has the model. In this research RMR=0.007 indicates proper fitness. Also

**Property indices of the model**

In IMOS software, chi-square divided by the degree of freedom is defined and RMSEA index is the average of the square values of the model errors.

the closer GFI and AGFI criteria to "1", the more suitable are the model fitness with the observed data. In the present research GFI=0.997 and AGFI=0.961 that indicate proper fitness of the model and in other words the model is approved.

**Conclusion**

Each of the 4 views of balanced evaluations in this research effect the others and are affected by the others. Hence the mere emphasis on a view could not provide acceptable results in this regard. The financial view could be considered as a basis for the process regarding customers and internal processes. In fact, this view is a starting point for identifying financial goals of the other 3 views (customer, internal process and growth/learning) and the success of the other views is measured by this view. Each of the 4 views could have an effective role in the quality of executing the strategies, but they could not cause the determination of general strategies of the organization, on their own. Thus selecting essential and challenge measures of the criteria should be done property, so that the essential and efficient measures

could be replaced with the improper and ineffective measures, by the time of changing the strategies of the organization.

**Proposals based on the research hypotheses**
**The proposal based on the main hypothesis of the research**: According to the project and the obtained results, it is suggested for the executing bodies of balanced evaluation system in the organizations to have effective steps in reaching the proper perspectives of the organizations after determining the strategies by the managers and by creating the relations between the 4-fold views of this system in each of the organizational units and determining the necessary measures of each of the relevant views in accordance with the general strategies of the organizations.

**Suggestion based on the 1st subordinate hypothesis:** It is proposed to the managers of companies and users of the research results to identify the essential measures of this view that are balancing short-term and long-term strategies and have more attention to the position of the measures with regards to organizational strategies.

**Suggestion based on the 2ns subordinate hypothesis:** It is proposed for the balanced evaluation system executing bodies to analyze the customer view as the main artery in organization life, and identifies the strengths and weaknesses of the organization with regards to the environment and the conditions of the organization to do necessary actions for achieving the opportunities and confronting with environmental threats.

**Suggestion based on 3rd subordinate hypothesis:** It is proposed that the managers should identity the important measures of this view, since the feedback of the measures of internal process view will help achieving the proper aims of the financial and customers views.

**Suggestion based on 4th subordinate hypothesis:** It is proposed that the managers transform the organization to a learning organization in order to be able to continue improvements and creation of values. The capabilities of the employees, the quality of information systems, producing and the competence of the staff and their motivations should be increased by focusing on the growth/learning view to reduce the organizational failures.

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