APPLICABILITY OF BALANCE SCORECARD IN SME'S: WITH REFERENCE TO COLOMBO DISTRICT

ADTS Jayawardena[1#], RMCLK Rathnayaka[2]

[1&2]*General Sir John Kotelawela Defence University, Ratmalana, Sri Lanka*

[#]thanushajayawardena563@gmail.com

Abstract— *The Balanced Scorecard (BSC) is a performance measurement and strategic management system which appears suitable for use by all types and sizes of business. The BSC's greatest strength for most businesses comes from its innate ability to integrate financial and non-financial measures together by measuring both strategic and business performance across four interrelated perspectives. Many studies have shown that the BSC can be successfully implemented within large-scale companies and organizations. However, there is limited empirical evidence regarding the use of the BSC within small companies. This study adds to the existing literature by reporting the results of a comparative investigation of BSC awareness and use within small companies located in the Colombo district. In addition, the study examines the reasons for non-adoption by small companies and whether these companies use performances measures that are similar to those typically contained within the BSC model. The research data was collected from self-completed questionnaires that were distributed to 30 companies in the Colombo. The findings of the survey suggest that the SMEs, especially in the Colombo district which are using Balance Scorecard tend to perform well. Certain respondents believed that BSC is an unsuitable tool for small companies and that its implementation is beyond the resources available to such entities. However, the findings also suggest that even though SMEs doesn't use the BSC technically, many such companies appear to use performances measures and indicators similar to those typically included within a BSC model.*

Keywords—**Balance Scorecard, Small and Medium Enterprises (SMEs), Colombo district.**

I. INTRODUCTION

Small and Medium scaled enterprises play an important role in determining a country's economic and societal performances. According to National Human Resources and Employment Policy of Sri Lanka (2014) Small and Medium Enterprises (SMEs) make up a large part of Sri Lanka's economy, accounting for 80% of all businesses. This indicates that the large contingent of Sri Lankan economy is made up of SMEs. Hence it is important as a nation to improve the performances of SMEs to increase the economic growth and create favorable economic conditions to the general public.

With the development of modern technology traditional methods of evaluating performance has become outdated. In order to gain competitive advantage, it has become important for SMEs to look at their organization through different perspectives rather than a single perspective. Hence we have to see how SMEs perform after and before using Balance Scorecard and see potential difficulties in implementing such technique in SMEs.

The main objective of the current study is to determine how each perspective of the Balance Scorecard helps in improving the performance of SMEs. Where the sub objectives of the study have focused on observing the theoretical applicability of the Balance Scorecard on SMEs with their frequency of use and awareness about the Balance Scorecard technique by the SME owners. The current study also makes an attempt to find out the indirect usage of Balance Scorecard perspectives.

From the finding of Suprapto et al (2009) showed that Balance Scorecard is applicable in the Malaysian SME context. This is proved by the factor analysis and the reliability test done in the study. Conclusively, the adoption of four Balance Scorecard components which are learning and growth, financial, customer and internal business perspectives. The Balance Scorecard has been applied successfully across many diverse industries and within the public sector in the USA (Hepworth, 1998). These were all reported in a positive manner as no failures of the concept were identified.

Amaratunga et al. (2015) has stated on their work study that Balance Scorecard helps to improve the internal process of businesses. Honjo and Harada (2006) has found out that financial structure effects the growth of the organization by considering a sample of manufacturing organizations in Japan. Wonglimpiyarat (2015) has found out in his study that modern day SMEs need to innovate and do something new in order to survive and expand their business in the market. Kwaku Appiah-Adu Satyendra Singh, (1998), research on "Customer orientation and performance: a study of SMEs" has found out that there is a positive relationship between customer orientation and performance of the business.

II. METHODOLOGY AND EXPERIMENTAL DESIGN

In the current study the research problem is to check whether Balance Scorecard can increase the performance of SME. Hence the conceptual framework should be prepared by keeping SMEs performance as the dependent variable and using four perspectives of the Balance Scorecard as independent variables which will affect the performance and efficiency of SMEs. Performance of the SMEs is the dependent variable in the study whereas the Finance, Customer, Internal business process and Innovation perspectives are the independent variables.

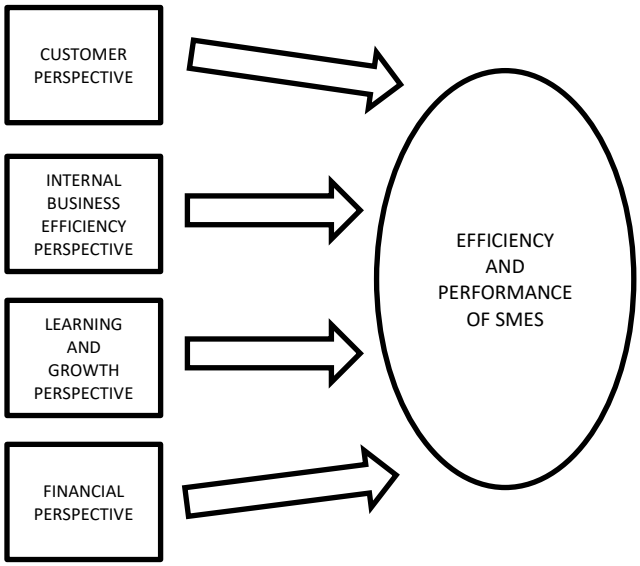

Figure 1 Conceptual Framework

The conceptual framework indicates that the four perspectives (Customer perspective, Internal Business efficiency perspective, Learning and Growth perspective and Financial perspective) performance to be reflected upon overall SME efficiency.

The framework shows that the SMEs performance can/cannot be increased via focusing on all these four perspective not only one or two. This framework has used both financial and non-financial perspectives to increase the efficiency of SMEs. (Kaplan and Norton,1996) has stated that it is important to look at the business from various angles rather than just one angle, and the business who uses at least four perspectives will increase the business efficiency in the long run.

A questionnaire was designed in order to get the response from the sample with regard to the four perspectives of the Balance Scorecard and their impact on the performance of SMEs. Another set of questionnaire was designed to extract the response with regard to the theoretical acceptability of a Balance Scorecard as a performance measurement tool. There are two set of samples focused in the current study one sample group is university students, where the author is going evaluate how effective Balance Scorecard is as a Strategic Management tool theoretically. Then using the other sample group which is consist with SMEs owners the practicality of Balance Scorecard in SMEs can be identified. The sample size of SMEs were selected using random sampling method by obtaining a list of SMEs maintaining their accounts in three commercial banks in Sri Lanka.

The questions which are structured according to Likert scale is analyzed through SPSS technique. Due to factors like; ability to have better output organization, effective data management and due to wide range of options SPASS has (Daniel, 2012) it is considered to be effective analytical tool when the research has more than two variables. The current study has also used Microsoft excel for further analysis.

III. RESULTS&DISCUSSION

The sample of the current study consists with two sample groups, one being SMEs and the other being university students. Out of thirty questionnaires which were sent to SMEs holding their accounts in three banks twenty-two organization responded with a response rate of 73.3 percent.

Out of twenty-two organizations only twenty

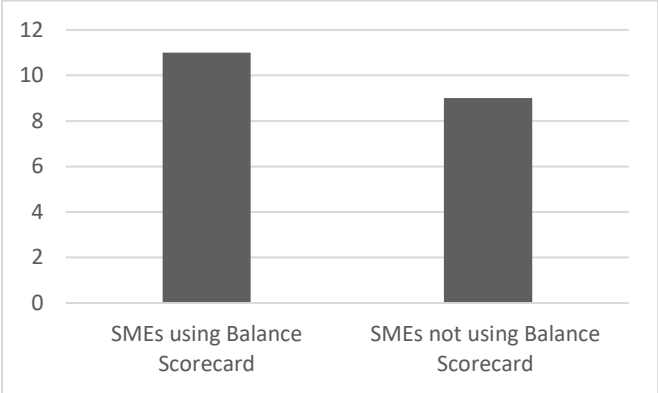

Figure 2Usage of Balance Scorecard comparison

organizations fulfilled the defining criteria of SME which were put forwarded by the current study. From the twenty organizations eleven organizations (55 percent of total respondents) are using Balance Scorecard whereas nine organizations out of the respondents have not used Balance Scorecard. As claimed by Giannopoulos et al (2013) response rate was close 54 percent as well. Hence the current study has also met the response requirement of the model literature.

Financial perspective was measured with four indicators in the questionnaire. Following table depicts the descriptive statistics of the four indicators.

	N	Minimum	Maximum	Mean	Std. Deviation	Median	Mode
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Profit	11	2	5	3.73	.237	.786	4
Revenue	11	2	5	3.82	.263	.874	4
ROCE	11	2	4	3.73	.195	.647	4
Cash flow	11	2	4	3.55	.247	.820	4
Valid N (list wise)	11						

Figure 3Descriptive statistic of financial indicators

When profit is taken as an indicator the maximum response given to the indicator is 5 whereas the lowest response given by a responder is 2. The mean of this indicator is 3.73 where the 11 responses deviate with a standard deviation of 0.786 along the mean of the profit. Most responses from the respondents have been 4 whereas the median is also 4.

The revenue indicator depicts a mean of 3.82 where the maximum response given by a respondent is 5 and the lowest being 2. There is a standard deviation of 0.876 of all the responses from the mean. In this case both the mean and mode is 4 as well.

When ROCE is taken as an indicator the maximum response is 4 where the lowest being 2. The mean of this indicator is valued at 3.73 where the responses of 11 respondents have deviated within the range of 0.647 from the mean. Both mean and mode of this indicator is 4. The cash flow which works as an indicator to measure the financial perspective like the above three indicators has a mean of 3.55, where the standard deviation from the mean is 0.820. The highest response given to this indicator is 4 whereas the lowest being 2. The mode and median for this indicator depicts as 4 like the above three indicators.

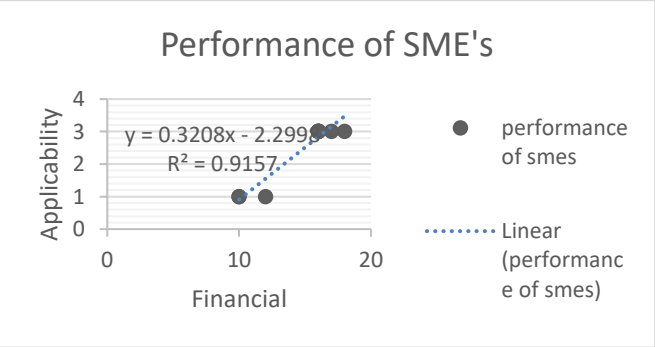

Figure 5Bivariate analysis between finance and performance of SMEs

Assuming all the other factors are held constant, the upward sloping lines indicates that the financial perspective has a positive relationship with the performance of SMEs. This graph explains that, when SME performance goes up when they focus and improve financial indicators of the business. The impact of financial indicators of the SMEs is to its performance is measured at 91.57% as indicated by R square in the above figure.

The financial perspective was analyzed through four questions in the questionnaire correlation between the financial perspective and performance of SME was 95.7 percent. Even the bivariate analysis indicates that when all other factors held constant finance perspective will effect 91.57 percent for the performance of SMEs. From all the responses profit has a mean of 3.73 with a standard deviation of only 0.786 and ROCE with a mean of 3.73 which has a standard deviation of 0.647. Kaplan and Norton (1996), has stated that most of the organizations need to give more

	N	Minimum	Maximum	Mean	Std. Deviation	Mode	Median
Customer profitability	11	3	5	4.18	.603	4	3
Customer retention	11	2	5	4.00	.894	4	2
Customer satisfaction	11	4	5	4.18	.405	4	4
Market share	11	3	5	3.82	.603	4	3
Customer acquisition	11	3	5	4.09	.539	4	3
Reduction in customer complaints	11	4	5	4.45	.522	4	4
Supplier status	11	3	4	3.73	.467	4	3
On time delivery	11	2	5	3.73	.905	4	2
Valid N (list wise)	11	3	5	4.18	.603	4	3

Figure 4Descriptive statistic of Customer perspective

emphasis to Profits and ROCE of the firms in order to get a clear understanding about the financial performance of the business. By saying that current study also has found out that the business which are using the Balance Scorecard technique in the modern day tend to focus on Revenue and Cash flows of the business as well in order to get an appropriate picture about the financial performance of SMEs. Customer perspective of this thesis has been measured using eight indicators. The eight indicators help to give an overall idea of customer perspective. The following table depicts the descriptive statistics of this perspective.

Customer profitability indicators maximum response is 5 whereas the lowest being 3. The mean of this indicator is 4.18 where the 11 responses deviate from the mean within the range of 0.603. The mode of this indicator is 4. The median value is also 4. Customer retention indicator has the maximum response of 5 where the lowest response is 2. The mean of the indicator is 4 where the responses has a standard a deviation of 0.894 from the mean. Both the median and mode of this indicator is 4. Customer satisfaction indicator's maximum response is 5 and the minimum

response is 4. The mean of this indicator 4.18 where the standard deviation is 0.405. The mode of the indicator is 4 and the median is also 4. Market share is also an indicator which uses to measure the customers' perspective like the above three indicators. The maximum response is 5 where the minimum response is 3 where the mean is 3.82 with a standard deviation of 0.603. The mode and median of this perspective is 4. Customer acquisition indicators highest response is 5, the lowest response is 3 where the mean of this indicator is 4.09. The responses will deviate from the mean with a standard deviation of 0.539. Most of the respondents' response have been 4 where the median is also 4. Reduction in customer complaint

indicator's highest response given by a respondent is 5 whereas the lowest response being 4. The mean of the indicator is 4.45 where the standard deviation from the mean is 0.522. Both the mode and median of this indicator is 4. The highest response of the Supplier status indicator is 4 whereas the lowest being 3. The mean of this indicator is 3.73 where the standard deviation is 0.467 with a mode and median of 4. On time delivering indicator also assist to get an idea about the customer perspective like the other seven indicators discussed above. The maximum response of this indicator is 5 whereas the lowest response being 2. The mean of this indicator is 3.73 where the standard deviation of the responses from the mean is 0.905. Most of the responses have given the response as 4 where the median is also 4.

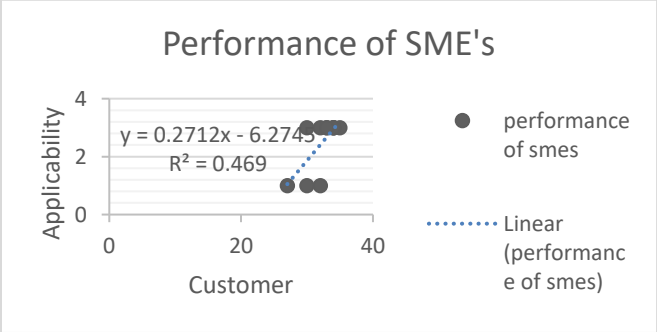

Figure 6Bivariate analysis between customer and SME performance

With all other factors held constant the upward sloping curve indicates a positive relationship between Customer perspective and performance of SMEs. It is visible that when SME focus on their customer and try to enhance their satisfaction, it will increase the performance of SMEs as well. There is a 46.9% of a relationship between the emphasis on customer perspective of the SMEs and performance of SMEs.

Customer perspective of the SMEs have affected the performance of SMEs by 68.5 percent. The mean of customer satisfaction indicator was 4.18 with a standard deviation of 0.405 whereas the Reduction in customer complaints indicator had a mean of 4.45 with a standard deviation of 0.522. Agarwal (2008) has stated in his study that small companies can easily capture customer complaints since they deal closely with the customer. Most of the SMEs in the current study have also thought in the same way. The mean which is close to 4.5 for that particular indicator states that majority of the SMEs have given favorable response with regard to the importance of reduction in customer complaints.

In the questionnaire 5 indicators have been illustrated to get the response from the respondents so an overall idea about Internal Business perspective can be captured. The following table indicates the descriptive statistics of the five indicators used.

	N	Minimum	Maximum	Mean	Std. Deviation	Mode	Median
Sales from new products	11	3	5	3.73	.647	4	4
Sale from existing products	11	2	5	4.27	.905	4	4
Unit cost reduction	11	2	5	3.82	.982	4	4
Cycle time	11	2	5	3.82	.982	4	4
New product	11	3	5	3.64	.809	3	3
Valid N (listwise)	11						

Figure 7Descriptive statistics of internal business indicators

Sales from new products maximum response is 5 where its lowest response is 3. The mean of this indicator is 3.73 where the standard deviation range is 0.647. Most respondents have chosen 4 as the response, where the median of this indicator is 4. Sales from existing product indicators highest response is 5 where the lowest response is 2. The mean of this indicator 4.27 where it has a standard deviation of 0.905 with a mode and median of 4. Unit cost reduction indicators highest response is also 5 like the above two indicators where its minimum response is 2. Mean of the indicator is 3.82 where its responses deviate with a standard deviation of 0.982 from the mean. Mode and median of the indicator depicts as 4. Cycle time indicator indicates the maximum

response as 5 and least response as 3, which has a mean of 3.64. Standard deviation of this indicator is 0.809. Most of the respondents have selected the option 3 and it also has a median of 3.

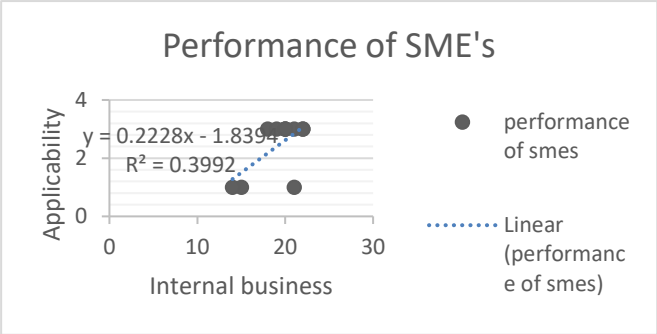

Figure 8Bivariate analysis between business processes and SME performance.

When other factors are held constant a positive relationship can be seen between the Internal Business perspective of SMEs and performance of SMEs. SMEs who try to improve their internal business process efficiency will in return increase the performance of SMEs. There is a 39.92% relationship between these two variables as indicated by R square in the graph above.

The current study indicates that there is a correlation of 63.2 percent between the internal business perspective and performance of SMEs with a significance level of 0.37. The bivariate analysis indicates that when all other factors held constant Internal Business perspective has a 39.92 percent relationship with the performance of the SMEs. The current study has found out that most of the owners of SMEs tend to concentrate more on Sales from existing products where the mean of that particular indicator was 4.27 with standard deviation of 0.905. When compared to the mean of Focus on new product indicator which amounts to 3.64 explains the fact that SMEs tend to give more emphasis on the current products than giving focus to new products. SMEs who do not use balance scorecard indirectly focus on improving the internal business process of their firms according to figure 4.19 out of the 9 SMEs which doesn't use the Balance Scorecard 7 SMEs have stated that they focus on internal business efficiency. In order to enhance the performance of the business SMEs do need to focus on internal business processes and they need to improve them continuously.

There are four indicators which captures the learning and growth perspective. The descriptive analysis of these four indicators are presented in the following table.

	N	Minimum	Maximum	Mean	Std. Deviation	Mode	Median
Employee satisfaction	11	4	5	4.27	.467	4 5	4 5
Employee retention	11	2	5	4.27	1.009	4 4	4 4
Employee productivity	11	2	5	4.09	.944		
Time to market	11	3	4	3.82	.405		
Valid N (list wise)	11						

Figure 9Descriptive statistics of learning and growth indicators

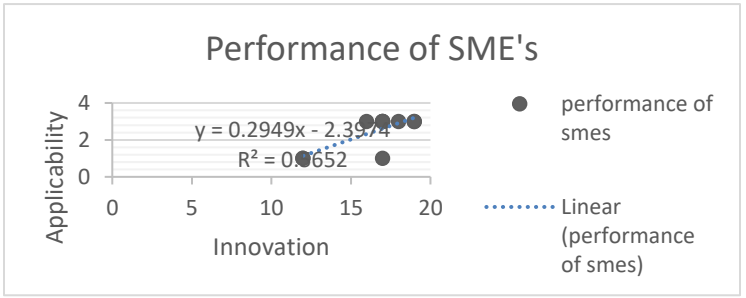

Figure 10Bivariate analysis between innovation and performance of SMEs

The upward sloping curve of this diagram indicates that there is a positive relationship between innovation and performance of SMEs provided that all other factors are held constant. The relationship between this two indicators is 56.52%. SMEs which focus and emphasize on learning and growth tend to improve their performance.

Through the above analysis we can observe that each independent variable reacts positively with the dependent variable. When a SME tends to focus and emphasize on improving performance of the four perspectives it will in return enhance the overall performance of SMEs. Hence a positive relationship of each independent variable with the dependent variable is visible.

Employee satisfaction indicators maximum response was 5 where as its minimum response was 4. It has a mean of 4.27 with standard deviation of 0.467. Mode and the median of this indicator is 4. Employee retention had a maximum response of 5 and the minimum response of 2. The mean of this indicator is 4.27 with a standard deviation of 1.009. The mode of this indicator is 5 whereas the median is also 5. Employee productivity indicators highest response is 5 whereas the lowest response is 2. The mean of this indicator

is the 4.09 with a standard deviation of 0.944. Mode and the median of this indicator is 4. Time to market indicators highest response is 4 whereas its minimum response is 3. The average of this indicator is 3.82 which has a standard deviation of 0.405. Mode and the median of this indicator is 4.

The current study has found out that customer perspective has 75.2 percent correlation with the performance of SMEs. The significance value of 0.008 between these two variables further prove that innovation plays a big part in performance of the business. When all the other factors held constant Innovation has a 56.52 percent relationship with the performance of SMEs. the current study has found out that SME owners has given high prominence to employee satisfaction, employee retention and employee productivity where all these indicators has a mean response more than 4, which indicates as high prominence whereas mean value of 3.82 is given to the indicator of time to market indicating that SME owners has given less prominence to that particular indicator with respect to other three indicators. Generally, SMEs hardly use techniques such as JIT (Just-In-Time) due to lack of resources. That can be one reason why SME owners has given less prominence to the "time to market" factor. In the current thesis it is visible that there is very less focus given by the SMEs for innovation by the SMEs who do not use Balance Scorecard.

Since the basis of the hypothesis study is proved with the help of using the questionnaire of the SMEs who uses Balance Scorecard, it is important to see the adequacy of the sample which uses the Balance Scorecard. Out of twenty SMEs only eleven SMEs uses the Balance Scorecard.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.662
Bartlett's Test of Sphericity	Approx. Chi-Square	47.398
	df	10
	Sig.	.000

Figure 11Sample adequacy Test

The current thesis has a sample adequacy of 66.2 percent. With reference to the sample adequacy of Evans (2005) which was 61.6 percent, the current study has an adequate sample to measure the variables and come into a reliable conclusion. The most important of it all is the significance of the current study is zero percent. It indicates that there is no standard error in the sample. Generally, scholars believe that if the Sig. of the sample is less than 5 percent, the sample of the study is adequate.

It is also important to analyse the goodness of the fitness of the sample. The below model have calculated the goodness of the fitness of the sample through R square.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.982[a]	.964	.940	.228

Figure 12 Goodness of the fitness of the sample

The current study has an R square of 96.4 percent. It indicates the goodness of fitness of the sample is acceptable in the current study. Evans (2005) had a goodness of fitness of the sample amount 83 percent where, Agarwal (2008) had an R square pf 96.3 percent.

Reliability Statistics

Cronbach's Alpha	N of Items
.905	5

Figure 13 Reliability of the variables

Reliability of the model used in the current study is indicated below in the summary.

The Cronbach's alpha indicates the reliability of the four independent variables and that of dependent variable. According to the reliability statistic the current study's reliability of 90.5 percent is ideal to come into a reliable conclusion. Evans (2005) reliability analysis showed a reliability of 76.4 percent with the variables he used in his study where he stated as reliable compared to the literature he has used.

The ANOVA table is used to measure the significance effect of the variables used in the current study.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.414	4	2.104	40.342	.000[b]
	Residual	.313	6	.052		
	Total	8.727	10			

a. Dependent Variable: Applicability

b. Predictors: (Constant), Innovation, Customer, Internal Business, Financial

Figure 14 ANOVA table

If the number (or numbers) found in this column is (are) less than the critical value of alpha (□) set by the

experimenter, then the effect is said to be significant. this value is usually set at .05, any value less than th result in significant effects while any value greater tha value will result in non-significant effects (Crawshaw, 2011). In the current study, the significance is .000, so the effects would be statistically significant.

The current study also analyses the correlation of the variables and their significance. The below table will illustrate the correlation and significance of the variables.

Correlations

		SME performance	Financial	Customer	Internal Business	Innovation
SME performance	Pearson Correlation	1	.957**	.685*	.632*	.752**
	Sig. (2-tailed)		.000	.020	.037	.008
	N	11	11	11	11	11
Financial	Pearson Correlation	.957**	1	.645*	.780**	.812**
	Sig. (2-tailed)	.000		.032	.005	.002
	N	11	11	11	11	11
Customer	Pearson Correlation	.685*	.645*	1	.583	.731*
	Sig. (2-tailed)	.020	.032		.060	.011
	N	11	11	11	11	11
Internal Business	Pearson Correlation	.632*	.780**	.583	1	.787**
	Sig. (2-tailed)	.037	.005	.060		.004
	N	11	11	11	11	11
Innovation	Pearson Correlation	.752**	.812**	.731*	.787**	1
	Sig. (2-tailed)	.008	.002	.011	.004	
	N	11	11	11	11	11

**. Correlation is significant at the 0.01 level (2-tailed) , *. Correlation is significant at the 0.05 level (2-tailed).

Figure 15 Correlation of the variables

A significant correlation between the independent variables and the dependent variable is visible through this table. Financial perspective has a 95.7 percent correlation with the performance of SMEs. The significance of the relationship is zero. So there is a very high significance between financial perspectives with the performance of SMEs. The customer perspective also has a correlation of 68.5 percent with the performance of SMEs, where the significance is 0.02. Hence the significance is less than 0.05 the two variables tend to have a significant correlation. Internal business efficiency has a correlation of 63.2 percent with a significance of 0.37 which indicates a significant correlation between the internal business perspective and the performance of SMEs. Innovation perspective which is an independent variable also have a correlation with the performance of SMEs. The Pearson correlation indicates 0.752 correlation with the two variables and the significance value of 0.008 shows that innovation has a very significant correlation with the performance of SMEs.

Even though finance perspective and customer perspective are independent variables they too have a correlation of 64.5 percent with a significance of 0.32. And also finance and internal business perspectives have a positive correlation of 78 percent with significance of 0.05 between the two independent variables. Innovation and Finance perspective have a very high significance of 0.02 with a correlation of 81.2percent.

Customer perspective and internal business perspective have a correlation indicator of 58.3 percent with a significance level of 0.06 which indicates that these two independent variables do not co relate with each other. Customer perspective has a correlation of 73.1 percent with the Innovation perspective with a significance of 0.011. Even though these two are independent variables a relationship between these two variables can be seen. Internal business has a correlation of 78.7 percent with the innovation perspective and the significance of the two independent variables is 0.04. There is a significant relationship between these two independent variables as well.

As stated in the conceptual framework the current study capture that there is a positive correlation between the dependent variable with the independent variables. The performance of SMEs depends upon the four perspectives of the Balance Scorecard. The above model summaries and tables illustrates the relationship and the reliability of the variables.

V. CONCLUSION

This chapter has highlighted that there is a positive correlation between the dependent variable with the independent variable, where the author has found out that the four perspectives in the Balance Scorecard assist in improving the performance of the SMEs. Along with this major finding the study has also pointed out a trend of more mature firms using Balance Scorecard than newly established firms. And also the fact that by using the Balance Scorecard at the end of each financial year it can help to capture a clearer picture about the business. Balance Scorecard has also met theoretical aspects of a good strategic management tool and it is important to see the reasons for SMEs not using Balance Scorecard and addressing this issue.

Looking at the managerial implication of this study the main focus should be on improving the awareness of the Balance Scorecard tool. This can be done through seminars, web journals, conveying the importance through tutors or publishing articles on business magazines and newspapers.

Once the SMEs start using the Balance Scorecard it has the possibility of improving the performance of SMEs. With SMEs in a country performing well it well enhance the economic condition of the country. So it is well advised to use Balance Scorecard which is also has a good measure theoretical applicability.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to the supervisor of the study Ms. RMCLK Ratnayake for her guidance, knowledge and untiring help throughout this study. Further I would like to thank Dr. MM Jayawardana who is the Dean of the Faculty of Management, Social Science and Humanities, all the administrative staff members of the Faculty of Management, Social Science and Humanities. Finally, I would like to express my gratitude to my parents for their commitment and motivation given throughout this study for the successful completion of this research.

REFERENCES

Anand, M., Sahay, B., & Saha, S. (2005). Balanced Scorecard in Indian Companies. Vikalpa, 23-25.

Budi Suprapto, H. A. (2009). The Implementation of Balance Score Card for Performance Measurement in Small and Medium Enterprises: Evidence from Malaysian Health Care Services . The Asian Journal of Technology Management , 76-87.

Manville, G. (2007). Implementing a balanced scorecard framework in a not for profit SME. International Journal of Productivity and Performance Management, 162-169.

Nigel, E. (2005). Assesing Balance Scorecard as a Management tool for hotels. International Journal of contemporary hospitality managemnt, 17(5), 370-390.

Otley, D. (2008). Did Kaplan and Norton get it right? Accounting, Auditing and Accountability Journal, 229-239.

Strategic Direction. (2008). What about the little guys?: How SMEs can benefit from the balanced scorecard approach". Strategic Direction, 17-19.

Tapinos, E., Dyson, R., & M Meadows. (2011). Does the Balanced Scorecard make a difference to the strategy development process? The Journal of the Operational Research Society, 888-899.