

THE INFLUENCE OF LEARNING ORGANIZATION TOWARDS THE  
PERFORMANCE: A STUDY ON SMALL AND MEDIUM ENTERPRISE (SME)  
OF MANUFACTURING FIRMS IN JOHOR BAHRU, JOHOR

By

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in Fulfillment of the Requirement for the Master of Science (Management)

## DECLARATION

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## ABSTRACT

The purpose of this study is to investigate the influence of learning organization towards the performance of small medium-sized enterprises (SME). The study focuses on manufacturing firms in Johor Bahru, Johor. Specifically, this study is to examine the link between the dimensions occur in Systematic Learning Organization Model (SLOM) namely dynamic learning, organizational transformation, empowering people, knowledge management and technology application with the performance of SMEs manufacturing firms. The performance of SMEs firms includes overall performance of SMEs manufacturing firms and performance of SMEs firm relative to their major competitor. 102 respondents were involved in this study. The data was analyzed using '*Statistical Package for Social Science*' SPSS version 19. Collectively, the result shows that the learning organization is able to influence the performance of SMEs manufacturing firms in Johor Bahru. The Systematic Learning Organization Model (SLOM) is able to influence overall performance of SMEs manufacturing firms and performance of SMEs manufacturing firms relative to their major competitors. However, for individually, analysis using multiple regression analysis indicates that only one of SLOM dimension; dynamic learning is able to influence overall performance of SMEs manufacturing firms in Johor Bahru. The dimension of dynamic learning and technology application of SLOM demonstrates the significance influent on performance of SMEs manufacturing firm relative to their major competitors. Therefore, the owner or manager of SMEs manufacturing firm in Johor Bahru should focus on the dynamic learning and technology application in order to enhance the performance of their firms.

## ABSTRAK

Tujuan kajian ini dijalankan adalah untuk mengkaji pengaruh pembelajaran organisasi terhadap prestasi Perusahaan Kecil dan Sederhana (PKS). Kajian ini akan memfokus kepada firma pembuatan di Johor Bahru, Johor. Secara khususnya, kajian ini juga dilaksanakan untuk mengkaji perkaitan antara dimensi di dalam Model Pembelajaran Organisasi yang Sistemik (SLOM) yang diwakili oleh dinamik pembelajaran, transformasi organisasi, memperkasakan manusia, pengurusan pengetahuan, adan penggunaan teknologi dengan prestasi firma pembuatan IKS. Prestasi firma pembuatan PKS termasuk keseluruhan prestasi dalam firma pembuatan PKS dan prestasi firma pembuatan PKS berbanding dengan pesaing utama. Sebanyak 102 responden terlibat dalam kajian ini. Data dalam kajian ini dianalisis dengan menggunakan ‘*Statistical Package for Social Science*’ SPSS versi 19. Secara kolektif, keputusan kajian menunjukkan bahawa pembelajaran organisasi mampu mempengaruhi prestasi firma pembuatan PKS di Johor Bahru. Model Pembelajaran Organisasi yang Sistemik (SLOM) mempunyai pengaruh yang signifikan terhadap keseluruhan prestasi dalam firma pembuatan PKS dan prestasi firma pembuatan PKS berbanding dengan pesaing utama. Bagaimanapun, secara individu, analisis yang menggunakan regresi berbilang menyatakan bahawa hanya satu daripada dimensi di dalam SLOM iaitu dinamik pembelajaran yang mampu untuk mempengaruhi keseluruhan prestasi dalam firma pembuatan PKS. Dimensi dinamik pembelajaran dan penggunaan teknologi di dalam SLOM juga menunjukkan pengaruh yang signifikan terhadap prestasi firma pembuatan PKS berbanding dengan pesaing utama. Oleh itu, pemilik atau pengurus firma pembuatan IKS di Johor Bahru perlu memfokuskan terhadap dinamik pembelajaran dan penggunaan teknologi untuk meningkatkan prestasi firma mereka.

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## TABLE OF CONTENTS

Declaration.....	i
Permission to Use.....	ii
Abstract.....	iii
Abstrak.....	iv
Acknowledgment.....	v
Table of Contents.....	vi
List of Tables.....	xi
List of Figures.....	xiii
List of Abbreviations.....	xiv

## TABLE OF CONTENTS

### CHAPTER 1: INTRODUCTION

1.1	Background of the Study.....	1
1.2	Problem Statement.....	6
1.3	Research Questions.....	10
1.4	Research Objectives.....	11
1.5	Significance of the Study.....	12
1.6	Research Scope.....	14
1.7	Limitations of the Study.....	14
1.8	Organization of the Study.....	15

### CHAPTER 2: LITERATURE REVIEW

2.1	Introduction.....	17
2.2	Small Medium Enterprise (SME).....	18
2.2.1	Definitions of Small Medium Enterprises (SME).....	18
2.2.2	The Role of Small Medium Enterprise (SME) in Malaysia....	20
2.2.3	Activities of Small Medium Enterprises (SME) Manufacturing Firms in Malaysia.....	22
2.2.4	The SMEs Performance in Malaysian Manufacturing Sector.....	23
2.3	Organizational Performance.....	25
2.3.1	Definitions of Organizational Performance.....	26
2.3.2	Types of Organizational Performance .....	27
2.3.3	The Measurement of Organizational Performance.....	28

2.4	Learning Organization.....	31
2.4.1	Definitions of Learning Organization.....	32
2.4.2	The Importance of Learning Organization.....	35
2.4.3	The Characteristic of Learning Organization.....	36
2.4.4	Systematic Learning Organization Model (SLOM) .....	39
2.4.4.1	Dynamic Learning.....	39
2.4.4.2	Organizational Transformation.....	40
2.4.4.3	Empowering People.....	41
2.4.4.4	Knowledge Management.....	42
2.4.4.5	Technology Application.....	43
2.5	Learning Organization and Organizational Performance.....	44
2.5.1	Dynamic Learning and Organizational Performance.....	44
2.5.2	Organizational Transformation and Organizational Performance.....	45
2.5.3	Empowering People and Organizational Performance.....	46
2.5.4	Knowledge Management and Organizational Performance....	47
2.5.5	Technology Application and Organizational Performance.....	48
2.6	Resource-Based View (RBV) Theory.....	49
2.7	Summary.....	52

### **CHAPTER 3: RESEARCH METHODOLOGY**

3.1	Introduction.....	53
3.2	Theoretical Framework.....	54
3.2.1	Dependent Variables.....	55
3.2.2	Independent Variables.....	55
3.3	Research Hypotheses.....	55

3.4	Operational Definitions.....	57
3.5	Research Design.....	60
3.6	Research Sample and Population .....	61
3.7	Instrumentation Method.....	63
3.8	Measurement of Variables.....	65
3.9	Data Collection Method and Procedure.....	66
3.10	Pilot Test.....	67
3.11	Reliability Test.....	68
3.12	Data Analysis Technique.....	70
	3.12.1 Descriptive Analysis.....	70
	3.12.2 Validity and Reliability Test.....	72
	3.12.3 Normality Test.....	73
	3.12.4 Pearson’s Correlation Analysis.....	74
	3.12.5 Multiple Regression Analysis.....	74
3.13	Summary.....	76

#### **CHAPTER 4: RESULT AND DISCUSSION**

4.1	Introduction.....	77
4.2	Descriptive Analysis.....	78
4.3	Validity and Reliability Analysis.....	87
	4.3.1 Validity Test for Dependent Variables.....	87
	4.3.2 Reliability Test.....	88
4.4	Pearson’s Correlation Analysis.....	89
4.5	Multiple Regression Analysis.....	91
4.6	Hypotheses Summary.....	96
4.7	The Discussion of Hypotheses Result.....	98

4.8 Summary.....107

**CHAPTER 5: CONCLUSION AND RECOMMENDATION**

5.1 Introduction.....108

5.2 Research Implication.....109

5.2.1 Managerial and Practical Implication.....109

5.2.2 Academic Implication.....111

5.3 Recommendations from the Research.....111

5.3.1 Recommendation from the Researcher.....111

5.3.2 Recommendation from the SMEs Entrepreneur / Owner /  
Manager.....113

5.4 Limitation of the Research.....114

5.5 Suggestion for Future Research.....115

5.6 Conclusion.....116

**REFERENCES.....117**

**APPENDICES**

## LIST OF TABLES

### ITEM

2.1	SME Definition Based on Number of Full-Time Employees.....	20
2.2	SME Definition Based on Number of Annual Sales Turnover.....	20
3.1	SME Definition Based on Number of Full-Time Employees.....	57
3.2	SME Definition Based on Number of Annual Sales Turnover.....	57
3.3	Summary of the Questionnaire.....	64
3.4	Likert Scale.....	65
3.5	Coefficient of Cronbach's Alpha.....	68
3.6	Reliability Statistic for Pilot Test.....	69
3.7	The Table of Marquardt's Learning Organization Analysis.....	71
3.8	The Coefficient Scale and Relationship Strength of Correlation.....	74
3.9	Summary of Data Analysis Technique.....	75
4.1	Composition of Respondents by Gender.....	79
4.2	Composition of Respondents by Age.....	79
4.3	Composition of Respondents by Race.....	80
4.4	Composition of Respondents by Highest Level of Education.....	80
4.5	Composition of Respondents by Position of Respondents at Firm.....	81
4.6	Composition of Respondents by the Total Working Experience.....	81
4.7	Composition of Company Establishment Years.....	82
4.8	Composition of Employees at Firm.....	82
4.9	Composition of Type of Firm's Ownership.....	83
4.10	Composition of Types of Industry.....	83

4.11	Summary of Descriptive Analysis.....	86
4.12	Reliability Statistic for the Data Gathered from Survey.....	89
4.13	Correlation Analysis.....	91
4.14	Multiple Regression Analysis for Hypothesis 1.....	93
4.15	Multiple Regression Analysis for Hypothesis 2.....	96
4.16	Summary of All Hypotheses.....	97

## LIST OF FIGURES

### ITEM

2.1	Resource-Based Theory Model.....	50
3.1	Theoretical Framework.....	54

## LIST OF ABBREVIATIONS

<b>Abbreviation</b>		<b>Meaning</b>
ETP	=	Economic Transformation Programme
GDP	=	Gross Domestic Product
K-Eco	=	Knowledge-Based Economy
LO	=	Learning Organization
MARDI	=	Malaysian Agricultural Research and Development Institute
MATRADE	=	Malaysian External Trade Development Corporation
MITI	=	Ministry of International and Trade Industry
MLOA	=	Marquardt's Learning Organization Analysis
MPC	=	Malaysian Productivity Council
NEW	=	New Economic Model
P-Eco	=	Production-Based Economy
PKS	=	Perusahaan Kecil dan Sederhana
R&D	=	Research and Development
RBV	=	Resources-Based View
ROA	=	Return on Asset
ROE	=	Return on Equity
ROI	=	Return on Investment
SLDN	=	Sistem Latihan Dual Nasional
SLOM	=	Systematic Learning Organization Model
SME	=	Small Medium Enterprise
SME Corp.	=	Small Medium Enterprise Corporation
SME Bank	=	Small Medium Enterprise Bank
SMIDEC	=	Small Medium Industries Development Council
SPMS	=	Strategic Performance Measurement System

## CHAPTER 1

### INTRODUCTION

#### **1.1 Background of the Study**

Over recent decades, the parties involving employees, organization, and country are recommended to continue to work more vigorously to achieve success. The Era of globalization and rapid development in Malaysia in organizational learning system accompanied by the emergence of cluster users who increasingly intelligent, and knowledgeable, and has a wide stance has led to competition among organization became more intense and continuous. In this regard, a variety of methods and strategies needed to be done in order to continue in creating a learning organization management and the development of education process in order to increase competitiveness and business domination in the region. This is because the productivity can be increased by the effective and efficient management in the organization and it will assist the firm to attain its target due to the systematic management (Hassan and Hakim, 2005).

Basically, the organization is like humans where learning and knowledge in an organization is the key power for the organization in order to ensure the continuity of the firm legacy. Therefore, organizations need to be sensitive with the changes in the environment either external or internal. The organization should search for new findings when the rate of changes has been increased in order to survive in the environment

where learning is the significant sources for organizations to acquire competitive advantages (Hasmiah and Noraidah, 2009). The adoption of knowledge and up-to-date information is critically important because if the organization does not make changes and late in gaining knowledge and latest information, then, most likely the organization will encounter situations where the firm is not able to compete with other organization which possesses advanced learning system organization and productive culture.

At present, the development of knowledge develops drastically along with the development of information technology which provides the opportunity for organizations or companies producing a wide range of products and services that have been introduced in various forms. Development of knowledge is very fast and many scholars have the same opinion that the innovation of knowledge became the main catalyst as a driving force for the future to improve efficiency, productivity and competitiveness of the national economy. Referring to the Malaysian Budget (2010), the innovation of knowledge becomes the main agenda of the country in which the Government will be committed and serious to shift to a new economic model to transform Malaysia through comprehensive innovation process includes a variety of innovation includes innovation industry (Malaysian Budget, 2010). These matters will directly or indirectly affected on small and large industries in Malaysia including small and medium enterprises (SMEs) in particular.

Small and medium enterprises obtained adequate attention in the policies of economic and social development either in the countries that have developed or the developing countries. Since 1990s in United Kingdom, a series of Government White Papers on Competitiveness had given greater effects to the roles and contribution of

SMEs sector to the economic growth to more competitively (Smallbone, 2004). Moreover, several big countries like United Kingdom, United States of America (USA), and Australia are successes to generate jobs, innovation and growth through the contribution of SMEs in the country (Matlay, 2004; Carter and Van Auken, 2006; and Ehrich and Billett, 2006). In line with the development of industrial, East Asian countries such as Japan, Korea and Taiwan, for example, also depends on SMEs and most of economic resources of the countries are developed by the development of SMEs (Asri and Darawi, 2012). An important role as shown by SMEs to the economic development in particular is to provide job opportunities, promote the process of urbanization, improving the living standards of local residents, and create linkages between industries. In Malaysia, small and medium enterprises is one of the main strengths of country's economic growth and almost a total of 99.2% of the total entrepreneurs in Malaysia is a registered trader of SMEs and accounted for 32% of the gross domestic product (GDP) (Asri and Darawi, 2012). The above statistics show that the contribution of SMEs to the economy of the country is so important. In addition, the developments of SMEs is also important for the growth of the industry and contribute to a more aggressive competition in the industrial sector as it can be supporting industries or complementary industry to other industries.

Learning organization can affect the way a person to think and change their attitude in dealing with the matter, situation or environment. Employers and employees should consider that the aspects of learning process in the organization are lifetime process to improve competitiveness arising from the development and modernization (Malaysian Leadership and Strategies Foundation, 2012). The government also gives

encouragement to SMEs operators to innovate, to shift their mindset, and adapt to new business models to improve the competitiveness and stand to benefit from globalization (Malaysian Leadership and Strategies Foundation, 2012).

Although the statistics for the number of SMEs in Malaysia has increased, there is no exception for SMEs to face of challenging business environment in order to ensure the continuity of the industry. Tough challenges appear when viewed to the number of SMEs that can cause intense competition between them. To compete with other SMEs firm, SMEs should take an initiative to explore for the wide market for their products or services, carry out the innovation activities, continuous research and development (R&D), produces a quality products and so on. This matter shows that knowledge management efforts in the learning organization have an essential relation on the performance of SMEs in Malaysia.

In 2011, according to the Annual Report of Malaysian Productivity Council (MPC), the report stated that 1,107 companies of SMEs in Malaysia adopt Organizational Excellence Framework, but the statistics still show only 25.6% of the Malaysian SMEs products are exported. Although the government and other related agencies strive to encourage local SMEs to explore the global market, but the number of SMEs which work towards the global market is still low. This matter had raised the interest for researcher to study whether the learning organization is able to influence the performance of SMEs or not.

The involvement and interest of SMEs in Malaysian economic growth and development of labor is undeniable. Various parties played a role on the development of SMEs such as SME Corp. (Small Medium Enterprise Corporation), SME Bank, the

Small Medium Industries Development Council (SMIDEC), Malaysian Productivity Council (MPC), Ministry of International Trade and Industry (MITI) as well as other related bodies which are working hard to develop the sector with a wide range of facilities and infrastructure to ensure that this sector continues to generate economic growth.

For example, Malaysian Agricultural Research and Development Institutes (MARDI) with the distinctive approach is strives to produce innovative SMEs entrepreneurs, so that they are not left behind in the globalization of business. One of the approaches adopted by MARDI is by practicing innovation in terms of human capital development that is knowledgeable and skilled in order to develop SMEs entrepreneur (Awang, Abbas, Nizam, and Top, 2010). In other words, it means that knowledge and organizational learning is an essential issue to the development of SMEs in particular as the approach taken by MARDI for the future of SMEs.

In addition, the government is also implementing the National Dual Training System (SLDN) to SMEs entrepreneur under the National Vocational Training Council (MLVK) to develop entrepreneurs and workforce that meets the needs of SMEs in the actual work situation required by the industry. One of the things that play big roles and give contribution to the development of SMEs in the SLDN is training and organizational learning in SMEs which provide great interest to entrepreneurs (National Vocational Training Council, 2005). Refers to the Phang (2008), he indicates that the SMEs are spearheaded by SMEs entrepreneur with their good employees who are capable in using technology and new materials optimally by using creativity and innovation effectively. However, the involvement of SMEs in the SLDN is less well-

received by the SME industry in Malaysia which only 300 companies which is 30% of the 1000 companies attends in the activity session which is organized by National Vocational Training Council (MLVK) as a coordinator for the project (National Vocational Training Council, 2005).

Based on the significant challenges and issues that had been faced by the SMEs entrepreneurs who are driven by a number of factors involved, researchers argue that the study on relationship between learning organization in the firms with the performance of SMEs firms needs to be done. Therefore, this research can be considered as an interesting topic and issues to be reviewed and explored in detail and this study will focus whether learning organization is able to influence the performance of small and medium enterprises (SMEs) by choosing the types of manufacturing firms in Johor Bahru as a survey.

## **1.2 Problem Statement**

Small and medium enterprise (SME) had been recognized by the government as one of the big contributors towards the percentage of gross domestic products (GDP) in every year. Several years ago, economic transformation programmed (ETP) had been launched as one of the government efforts to improve national economic condition which is obviously will affect SMEs performance. By the year of 2020, governments strive to transform Malaysia from middle income to high income which is parallel with the economic changes (Economic Transformation Programme, 2010). Thus, education is targeted as major essential roles to changes Malaysia as one of the high-income nation.

A government's announcement about transforming the nation's economic strategy from a production-based economy (P-Eco) to knowledge-based economy (K-Eco) has been triggered a big paradigm shift to the organization (Tan, Wong, and Noor, 2006). These changes indirectly will provide organization new challenges that require to be faced. Through the government's efforts, it is expected that many job opportunities will be created and for this matters, education and learning process will play a vital role in order to fulfill the demands from many respective firms. Organization requires knowledgeable individual to ensure the stability of company performance and operation continuity. Knowledgeable employees derived from continuous learning process and task experience in the organization including SMEs particularly. Thus, it shows that learning organization is the important subject that organizations need to consider in this recent business world. In Malaysia, the topic of learning organization is still new and fresh compared to other nation. According to Ahadi (2011), the empirical study of learning organization in Malaysia is still limited compared to other western countries which are only focused on private organization. It is found to be a serious research gap and this research can be considered as an interesting topic to be reviewed.

Many scholars prove that new and up-to-date knowledge and skills derived through learning process have a power to improve firm capabilities and innovativeness, thus enhancing the level of company's competitiveness and performance (Keiser and Koch, 2008). Therefore, learning process in organization can lead the SMEs to boost the firm performance to be competitive in marketplace. And the researcher is asked to view the role of learning organization whether it can influence the SMEs performance in Malaysia or not.

With the rapid technology development, the benefit of technology provides value-added to the performance of firm as well as SMEs firms. In this country, the employers and employees of SMEs are facing a tough challenges and problems. For instance, 1,107 companies of SMEs in Malaysia is adopting Organizational Excellence Framework, but the statistics still show only 25.6% of the Malaysian SMEs products are exported (Malaysian Productivity Council (MPC), 2011). This reason of lack exported products and service is due to the lack of knowledge about technology and how to apply it. The adoption of technology in today's business world is very important in order to remain competitive with other firms whether from inside or outside countries.

According to Galerikami Media Network (2012), the total of SMEs firms in Malaysia is more than 700,000, but the total of SMEs firms that possess their own websites is only 100,000 more or less, so it means that there are still a lot of firms left behind and unknown by the Internet users whether in Malaysia or global internet users. It proves that technology learning approach is not widely applied by the SMEs owners or entrepreneurs. According to Datuk Zulkifli Mahmud who is the Senior Director of Export Development Department in MATRADE, he stated that consumers is hoping that SMEs have their own website, thus website will benefitting them and easy to communicate with any interest parties of the firms (Galerikami Media Network, 2012). So, the learning process and knowledge practice in term of technology adoption is needed to be concern by SMEs as a step to improve the marketing and communication elements in the business.

When focused on the SMEs types of manufacturing firms at Malaysia, the SMEs firm is still not able to compete with other SMEs from other region. According to Soon and Zainol (2011), the fast development of China as the world's leading manufacturing indirectly has posed new challenges to Malaysian SMEs in manufacturing. Therefore, the Malaysian SMEs need to change from a traditional manufacturing management to knowledge management concept in order to compete with outside competitors.

Referring to Ramayah, Sulaiman, Jantan, and Ching, (2009), they mentioned that there are still limited literature on manufacturing strategy and performance. In addition, it is very hard to get the actual performance information of financial and management such as annual revenues, stock prices, net profit, return on investments, etc. (Kaplan and Norton, 1992). This is because SMEs not typically provides their financial to the public like larges companies. Thus, it hard for many scholars or researchers to define the current condition of firms performance because firm performance is mostly become an indicator for many strategic and management field. Due to the firm performance evaluation, many research objectives can be reached because if the changes occur in the firm performance, so it will affect the other parts in the business routine. By considering this matter, there is lack of comprehensive study about the influence of learning organization towards SMEs manufacturing performance and it is clearly important for the researcher to view this as an interesting study to be measured.

### **1.3 Research Questions**

This research is conducted to examine whether the independent variables, which is Systematic Learning Organization Model (SLOM) which includes dynamic learning, organizational transformation, people empowerment, knowledge management and technology application are able to influence the dependent variables, namely performance of the SMEs manufacturing firms in Johor Bahru which includes the overall performance of firms, and firm performance relative to their major competitors. Based on the issues and problems above, several questions have arisen which is become the basis for this study. This study will try to identify and find the answers for the questions as follows:

1. Does the Systematic Learning Organization Model (SLOM) which includes dynamic learning, organizational transformation, people empowerment, knowledge management, and technology application are able to influence the overall performance of the SMEs manufacturing firms in Johor Bahru?
2. Does the Systematic Learning Organization Model (SLOM) which includes dynamic learning, organizational transformation, people empowerment, knowledge management, and technology application are able to influence the performance of the SMEs manufacturing firms in Johor Bahru relative to their major competitors?

## **1.4 Research Objectives**

The main objectives of this study are to examine whether there is a relationship between independent variables with the performance of SMEs manufacturing firms in Johor Bahru, Johor. Based on the problems and research questions that already discussed, the researcher has indicates several research objectives for this study. Specifically, the objectives are listed below:

1. To examine whether the Systematic Learning Organization Model (SLOM) that includes dynamic learning, organizational transformation, people empowerment, knowledge management, and technology application are able to influence the overall performance of the SMEs manufacturing firms in Johor Bahru.
2. To examine whether the Systematic Learning Organization Model (SLOM) that includes dynamic learning, organizational transformation, people empowerment, knowledge management, and technology application are able to influence the SMEs manufacturing firms in Johor Bahru relative to their major competitors.

## **1.5 Significance of the Study**

This study aims to examine whether the Systematic Learning Organization Model (SLOM) is able to influence the performance of the SMEs manufacturing firm in Johor Bahru, Johor. In order to support the SMEs firms to be responsive and quality, the company should transform to be learning organization alongside with the drastic changes in social and economy which stems from globalization process and technology development. Therefore, this research is able to open the space for viewing the influence of learning organization towards the performance of SMEs manufacturing firms to the respective reader.

In term of academic interest or theoretical, this research provides the empirical proves which is important to the SMEs entrepreneurs in order to explore and identify whether the independent variables can influence the dependent variables, so that SMEs firms in Johor Bahru is able to drive and reach towards the more developed, competitive and respected. The importance of this study is viewed as a positive things where SMEs firms of manufacturing is seen contributed in the economic sector of a country even though the profit achieved by SMEs is not equivalent with other types of large companies such as private limited company (Pty Ltd) and limited company (Ltd).

Furthermore, the study also is expected to be able to provide strength to the local SMEs firms especially in Johor Bahru to strive and adapting the importance of learning organization as a step to achieve a high level of knowledge, productivity and innovation, profitability, planning either short or long term as targeted. This is because competition between organizations in today's business world becomes more intense from time to time. Thus, this research suggest some practices for managers on how to improve the

learning organization process and adaptation that might have decisive influence on the performance of SMEs manufacturing firms in Johor Bahru.

In term of practical contribution, the findings of this study also could provide the benefits for SMEs firms in the form of the provision of training and development to improve learning organization, organizing events like knowledge course, workshop, lecture and other activities, improve cooperation and coherence between employees, organize research and development (R&D) and so on. These matters directly or indirectly would bring the positive outcomes to the firms in any aspects. Various research and development (R&D) can be done in order to increase the efficiency and effectiveness of the organization to achieve organizational objectives as expected. The implementation of a learning organization is relied upon to provide benefit input and support to SMEs, so that firms can reduce vulnerability and incompetence that is capable of causing economic activity to be weak through many activities. In addition, the importance of the learning organization in the organization is expected to generate SMEs strength to penetrate the global market through the production of a quality product or service and has distinctive variation as well as adopting new business models and updated to improve the competitiveness of the organization on a par with the output from the other region.

## **1.6 Research Scope**

The scope of the research will be focused on the owner or entrepreneur or manager or other top management of the SMEs manufacturing firms. The reason the researcher chooses the top management of the company is because they must be alert with overall performance of their company. Manager or owner is often described as having a vision of where to go and ability to articulate it (Barry, 2008).

This research is restricted to the individual only even though the contribution of groups and teams in learning organization is undeniable. According to Senge (1990) in his writings, he mentioned that learning in an organization is based on individual learning, however, individual learning does not guarantee the firm to be a learning organization, but organization will not learn without individual learning. For that matter, the specialization towards individuals will provide more detail in this research and become a basis for learning organization. The individuals that are chosen by the researcher such as owner or entrepreneur of SMEs will represent the organization to participate in this study.

## **1.7 Limitation of the Study**

This study is limited to examine the influence of Systematic Learning Organization Model (SLOM) towards the SMEs firm performance in which the study is only focusing on manufacturing firms of SMEs. The setting for the study is a several random SMEs firms in Johor Bahru. This study will focus to test the relationship of five independent variables under the Systematic Learning Organization Model (SLOM) which includes

dynamic learning, organizational transformation, empowering people, knowledge management, and technology application towards dependent variables. Whereas the dependent variables in this study are the firm performance of manufactured SMEs which are divided into two elements includes the overall performance of firms, and firm performance relative to their major competitor.

The data from this study was gathered through questionnaires and the survey is limited to 150 respondents only. The research survey which is based on questionnaires is depending on the willingness of cooperation from the respondents. Pursuant to Isaac and Michael (1990), an interpretation and understanding of potential respondents might be different from non-respondents in the study. The sample size is based on the Yamane (1967) and the respondents in this study involve the entrepreneur, owner, founder, manager or other top management level in the SMEs manufacturing firms at Johor Bahru.

## **1.8 Organization of the Thesis**

This study is well-organized by the researcher and divided into five chapters. Chapter 1 is an introduction for this study which describes the direction of this study by presenting a statement of the problem that has led to the concepts, research objectives and research questions, significance of the study, the research scope, and the limitation of the study. This chapter is important in order to provide an understanding to the reader about the roadmap of the study.

In the next chapter, the study will discuss on the literature review concerning to the definitions and concepts that related to the small medium enterprises (SMEs), organizational performance, and learning organization. On the other hand, Chapter 2 also will demonstrate the details about organizational performance, roles and activities of SMEs firms, and information of learning organization in term of importance of learning organization, characteristics, the disciplines and the systematic model of learning organization. Then, the research will touch the outcomes of previous studies related to learning organization and performance of the SMEs firm.

Moreover, Chapter 3 will explain the research methodology for the study. The researcher will describes regarding to theoretical framework, research hypotheses, research design, operational definition, research sample and population, data collection method and procedures, and the data analysis techniques.

After that, the findings of the study and data analysis are indicates in Chapter 4. This chapter will present the complete results from the analysis in the form of text, tables, and figure to the reader. Then, the explanation and discussion about the result will be done by the researcher properly.

Finally, Chapter 5 will focus on conclusion and recommendations that would be the end of this study. The researcher would highlight the implications of the study in two dimensions which are including managerial and practical implication, and academic implications. Furthermore, the researcher will provide a recommendation for this study and give a suggestion for future research. Eventually, the researcher will conclude and summarize the study based on the analysis results.

## CHAPTER 2

### LITERATURE REVIEW

#### **2.1 Introduction**

In this chapter, the researcher will describe the important matters relating to the several definitions and concepts based on analysis of the studies that have been made by previous researchers whether local or foreign researcher on the subject that is very similar to the study. The basic definition and concept is very crucial in order to strengthen this research topic and give a meaningful understanding towards the respective reader. Previous study demonstrates that the learning organization is critical to the development of the organization, particularly for small and medium enterprises (SMEs) in any types of firms. At the end, underpinning theory also will be explained and resource-based view theory is selected by the researcher to demonstrate that performance is strongly depends on the resource and capabilities of the firms. It is important to know and understand the basis of literature review through the comprehension of underpinning theory.

## **2.2 Small Medium Enterprise (SME)**

Small and medium enterprise (SME) is one of catalyst for economic growth in Malaysia and has grown in line with modernity. According to Asri and Darawi (2012), in their writings, almost 99.2% of the total entrepreneurs in Malaysia are the merchant of SMEs that have registered and contribute by 32% of Malaysian gross-domestic product (GDP). Realizing the importance of the benefits and the contribution of this industry to the national economy and in line with the government's agenda of achieving the status of high income country by 2020, the government has provided various opportunities and assistance to encourage Malaysians to enter the business field from the small stage to large-scale and international. Rapid economic growth rate will not be fruitful without huge contributions and supports from SMEs industry. In fact, SMEs can be used as a basis, the backbone and pillar in fulfilling the wishes and aspiration of the country to achieve sustainable economic growth.

### **2.2.1 Definitions of Small Medium Enterprise (SME)**

In Malaysia, the definitions of SMEs are more depends on the government agencies that provide assistance to the SMEs industry. Due to that point, the definitions of SMEs is varied in many purposes. Pursuant to SME Corporation (2014), SMEs are divided into three categories which include micro, small and medium and the SME undertaken by SME operators or owners that using small capital. This is because a SME product does not require high costs and spacious office to operate due to the small production of the

products and services to accommodate the demands and needs for a particular region or local area only.

Next, Malaysian Productivity Council define the small scale industry of SMEs as a domestic firms with less than 50 full time workers with annual sales not exceeding RM10 million. Medium scale industry is a domestic firms with 50 to 150 full time employees with annual sales between RM10 million to RM25 million (Annual Report of MPC, 2011). The definition given by MPC has in common with the definition provided by Small Medium Industries Development Council (SMIDEC).

In fact, the definition of SME is referred and approved by the National SME Development Council in 2005. The definition of SMEs will be based on two criteria namely number of employees and annual sales turnover. Based on this research which focusing on SMEs manufacturing firms, the researcher would only define the meaning of SMEs manufacturing firms. According to the National SME Development Council (2005), the general definition of SME in manufacturing is an enterprise with full-time employees not exceeding 150 or with annual sales turnover not exceeding RM25 million. Nevertheless, due to the National SME Development Council Meeting in January 2014, the new definition was announced by the Malaysian Prime Minister, YAB Dato' Seri Mohd Najib Tun Haji Abdul Razak. Therefore, refers to the National SME Development Council (2014), the definition of SME in manufacturing is an enterprise with full-time employees not exceeding 200 or with annual sales turnover not exceeding RM50 million. For specific definition of SME in manufacturing, the Table 2.1 and 2.2 below shows the approved SMEs manufacturing definition based on total of full-time employees and annual sales turnover.

Table 2.1  
*SME Definition Based on Number of Full-Time Employees*

<b>Size/Sector</b>	<b>Manufacturing Firms (Including Agro-Based &amp; MRS)</b>
<b>Micro</b>	Less than 5 employees
<b>Small</b>	Between 5 and 75 employees
<b>Medium</b>	Between 75 and 200 employees

(Source: SME Corporation, 2014)

Table 2.2  
*SME Definition Based on Number of Annual Sales Turnover*

<b>Size/Sector</b>	<b>Manufacturing Firms (Including Agro-Based &amp; MRS)</b>
<b>Micro</b>	Less than RM300,000
<b>Small</b>	Between RM 300,000 and RM15 million
<b>Medium</b>	Between RM15 million and RM50 million

(Source: SME Corporation, 2014)

### **2.2.2 The Role of Small Medium Enterprise (SME) in Malaysia**

The contribution and importance of SMEs in Malaysia as a whole can be seen in several aspects. SMEs provide a lot of benefit for many parties not only to individuals, the community, the agencies or organization but the importance to the growth of the country as well. For instance, the benefits for economic development includes job opportunities, increasing the amount of reserves and save foreign exchange, creating a better income distribution to the society, assisting to develop and enhance skills among the workforces, engaging both employee and management level, helps in increasing the foreign technology transfer and assist in increasing the relationship between other large firms and strengthen the basic structure of national industry (Asri and Darawi, 2012).

In addition, the roles of SMEs to the society need to be recognized because SMEs provides an opportunity for individual to venture in the business field, access to talent, inventiveness and creativity, employment opportunities, and meet the needs of community (Annual Report of MPC, 2011). The benefits can help the peoples that do not have job due to low levels of education to gain a job opportunity in which can change the economic status of the family and reduce unemployment rate especially in rural areas. Moreover, the technology that adopted in SMEs industry is a simple technology that can be inherited and easily learned by anyone, regardless of educational background. Employment opportunities also are able to avoid the migration of rural people to the urban areas which can cause the population density at the residential area.

In terms of contribution to the nation, SMEs are able to reduce unemployment rate in the country, increasing of savings in national economy, fair distribution of country's income to the community due to the high wages for workers offered by SMEs, provides training and development to the employees. Referring to Akbal and Afkari (2012), one of the SMEs function is to assist the industry basis of the country in order to prevent the occurrence of dependence of the global economic sensitivity. SMEs need to be developed in an integrated manner because SMEs is the heart and engine of domestic investment in generating the Malaysian economy. On the other hand, country's industrial base can be strengthened through the relationship and technology transfer with international company and SMEs have provided options to the nation to reduce imports of products and services (SME Corporation, 2014).

The role and contribution of SMEs has become increasingly important in achieving Malaysia Vision of 2020 and make the country as a leading industrialized

nation. The government has drawn-up an industrial plan for SMEs for the period from 2010 to 2020 which become part of the New Economic Model (NEW) to make Malaysia as one of the respective industry country in the world (Annual Report of MPC, 2011).

### **2.2.3 Activities of Small Medium Enterprise (SME) Manufacturing Firms in Malaysia**

There are various categories of activities of the manufacturing SMEs in Malaysia in which play an essential role in developing the economy by creating, developing and strengthening the basic structure of industrial component of the country. Referring to SME Corporation (2014) websites, the divisions of manufacturing SMEs types are:

- i) Automotive and component parts
- ii) Building materials and related products
- iii) Cement, concrete products, ceramics and tiles
- iv) Chemical, chemical and plastic products
- v) Electrical and electronics products
- vi) Food, beverages and tobacco
- vii) Furniture and wood related products
- viii) Household appliances
- ix) Industrial and engineering products
- x) Iron and steel products
- xi) Laboratory products
- xii) Packaging, labeling and printing

- xiii) Pharmaceutical, medical equipment, cosmetics, toiletries, and household
- xiv) Rubber products
- xv) Stationery
- xvi) Textiles and wearing apparel

Based on the activities undertaken by manufacturing SMEs in Malaysia, SMEs proved that the firms have an ability to lead the economic development of the nation in every aspect of products to be delivered to the customers. Afterwards, the production of variety of goods in daily used by the buyers could affect the rate of supply and demand as well as products life cycles. Industrial process activities especially in Malaysia through the contribution of manufacturing SMEs firm strongly proves that the roles are very important in providing support and complement to national industrial process.

#### **2.2.4 The SMEs Performance in Malaysian Manufacturing Sector**

According to Census Report on SMEs (2011) based on Department of Statistic in Malaysia, a total of 645,136 SMEs in which represent 97.3% establishment of the total business in this nation. Although the SMEs manufacturing sector is the second largest percentage in Malaysia with 5.9% after service sector, but contribution of manufacturing sector in undeniable because this kind of SMEs is becoming complementary for another large companies and ultimately enhance the economic growth in Malaysia. On the other hand, the gross domestic products (GDP) growth in 2012 for SMEs manufacturing sector is 6%, so the significance of this sector cannot be disputes. These matters occurs

due to the investment activity and efforts, consumption by both parties includes final consumer and business consumer, and strong domestic demands and needs which vigorously supported the growth of GDP of SMEs manufacturing (Annual Report of SME Corporation, 2012).

In addition, the big contributors of SMEs manufacturing in Malaysia is the firms of petroleum, rubber products, chemical products and plastic products with 28.8% in 2012 (Census Report on SMEs, 2011). Due to high value of products and ability to generate huge profitability compared to other sector in manufacturing, it is directly affects the direction of economic growth in this country. These sectors actually are benefitting from many business and household activities to perform daily routine, so this sectors gain advantages from strong consumption and demands in domestic economy. Then, it follows by the sectors of food, beverages and tobacco in manufacturing activities as a second contributor with the percentage of 18.8% (Census Report on SMEs (2011). In Malaysia, food and beverages industry gain value added where the industry is concerned with 'Halal' product. Thus, it has a big opportunity to get high demand from the community which has the majority of Muslim community in Malaysia. In addition, it follows by the basic and fabricated metal products with 28.6% which ranked the third place and furniture, wood and paper products with 12.7% in fourth place. For SMEs manufacturing in Malaysia, it still have low market exposure for the export market (Annual Report of MPC, 2011). Thus, its demonstrate the lower growth for external market for all of the firms of SMEs manufacturing sector and this poor performance as export-oriented firms should be taken into accounts especially by the government and other related agencies or bodies.

### **2.3 Organizational Performance**

The development of organization is depends on the good and outstanding performance by the firms in which the performance is influenced by many factor. In order to improve the performance in any aspect, the contributions and cooperation between employers and employees is very crucial to ensure the performance can be achieved. Most of the organizations specify that performance is becoming an indicator as the firm objective. Thus, it is become a responsibility for the top management to introduce a good aspect of firms such as values and norms to ensure that the workers are familiar with the organizational system to achieve performance as desired by the firms.

To concern with the organizational performance, neither employers nor employees needs to focus with internal and external forces which lead them to become competitive in a marketplace. The concept of management such as planning, organizing, leading and controlling should be done by top management with the quality and creative way because it has a strong relationship with organization performance. Through the entire management concept, the wise decision making by the top management will distinguish the performance of the organization with their rivals.

Previously, a lot of study in term of organizational performance had been made by many researchers. According to Sutton and March (1997), organizational performance was commonly used by many researchers as dependent variables to measure the company's profitability and capabilities. This is because performance is a wide subject and has a variety of aspects in management and strategic field. Therefore, the performance of firms also becomes an indicator in this research to study whether the performance of the firms is able to affect by the learning organization.

### **2.3.1 The Definitions of Organizational Performance**

As one of the popular variables in most research, organizational performance has variety of definitions. Different scholars or researchers have a different point of views in defining the meaning of organizational performance. High level of company's performance is often classified as a successful organization because performance can be defined in any aspects. According to Cascio (2006) in his writings, organizational performance refers as mission achievement at the organization or workplace that develops or builds up workers job. So, it means that performance can be related as mission in which focuses on short term achievement only.

While according to Carton (2004), firm performance refers to the transformation measure of the organizational financial statement, or a financial outcome which is resulting form decision making by top management and any parties in the company. For this definition, Carton (2004) is more focusing on performance that related with organizational finance. Obviously, most of the people measure the performance of the firms due to the company's financial statement which indicates the extrinsic value likes profitability and equity possess by the firms.

Furthermore, organizational performance also can be defined as an efforts of the members in the organization to achieve shared purpose through the idea that firms is the productive assets in developing human capital, resources capital and physical (Barney, 2001). In other words, the whole assets, resource and manpower are the strength of company performance to attain positive shared purpose. Therefore, the strong combination of the firm capital is the way in indicating the level of firm performance.

### **2.3.2 Types of Organizational Performance**

Organization members and expert scholars evaluate performance of firms in two types namely financial and non-financial performance. Both of this performance is used to analyze the effectiveness and efficiency in the respective firms and it cannot be separated in evaluating the position of the company.

Firstly, known as accounting performance, the financial performance is the clear ways to determine the company's direction and future steps due to the figure or number shown in which indicates the firm performance. The top management is able to observe the past and current condition of organization's economic based on the accounting and financial reports. For instance, the financial performance can be observe through profit rate, turnover and sales growth rate, return on assets (ROA), return on investment (ROI), return on equity (ROE), total expenses by the firms, etc. According to Calori (1991), the ratio of return on investment which is crucial important to measure the efficient and effective resource utilization in the firms in certain time.

Secondly, the non-financial performance is quite difficult to evaluate because it needs the perspective and observation from some parties to such situation. In addition, the awareness of social responsibilities is required to measure the non-financial performance (Calori, 1991). It can be observed through employee satisfaction, consumer satisfaction, quality of the products and services, the utilization of technology and knowledge, communication between employee, relationship with supplier, and so forth. Some of the instruments are applied to evaluate the non-financial performance such as Key Performance Indicator (KPI) for internal measures and customer and market research for external measure.

### **2.3.3 The Measurements of Organizational Performance**

Organizational performance is measured to identify whether it has an opportunity to attain company's objective or goals. Non-financial and financial performance is applied as an approach to determine the efficiency and effectiveness of the firms in performing their business operation. Referring to Richard, Devinney, Yip and Johnson (2009), three areas of firm yield demonstrates organizational performance which includes:

- a) Financial performance (profit, ROI, ROE, ROA, etc.)
- b) Product market performance (Sales turnover, market share, return on sales, etc.)
- c) Return for shareholder (Dividend percentage, shareholder value-added, etc.)

Nevertheless, according to Ahmad, Wilson and Kummerow (2011) through their business performance model, they specified that organizational performance can be measured through overall business performance, performance relative to major competitor, and performance due to business growth. For this study, performance model by Ahmad, Wilson and Kummerow (2011) is used as dependent variables. The model is very comprehensive in which suitable to measure the current performance and condition of the company.

First, the measurement of overall performance of organization can be divided into two categories which include non-financial measures and financial measures. Organization highlighted that profitability is the ordinary measurement of company performance in term of financial measures. It can be described through the financial statements and reports, accounting figure, and calculation of ratio. Pursuant to Doyle (1994), the most ordinary measure of organizational performance in western nation is

pointed as profitability. It is because company often targeted their goals and objectives based on the profitability achieved. In Malaysia, most of the firms prefer to measure the financial performance through the assessment of net profit, gross profit, sales turnover and sales growth especially for Malaysian manufacturing company (Abu Kasim, Aziah, Minai, Badriay, and Chun, 1989).

However, the financial performance and non-financial performance is quite different due to its focus. Financial performance is more focused as an internal measure but non-financial performance is focused both internal and external measures. Afterwards, the non-financial performance can be measured through customer satisfaction and retention, business image, relationship with supplier and other parties for external measures, and workplace industrial relation, employees' satisfaction, employees' turnover and balance of work and life for internal measures (Ahmad, Wilson and Kummerow, 2011). According to Frost (2014), non-financial performance is critically important to reach long-term goals, firm profitability, competitive strength in marketplace, and become a good indicator for firm's future performance.

Second, in order to measure the firm performance, some of the corporation especially giant companies benchmark their performance based on their major competitor's performance (Miller and Pazgal, 2002). This kind of approach become popular in this current business evaluation because the number of competitors which produces the same products or services is definitely increases through the years. The firms are required to strive to enhance their performance through a lot of activities and efforts to ensure that their competitors are unable to intercept their performance. So, the firms will work and try to dominate a lot of consumer in order to dominate the market

share in certain area or region. Mostly, the firms will make the comparison of performance with their competitors in terms of financial performance comparison because it is easy to obtain and compare the figure and the financial reports on their competitor's performance. For instance, the companies are able to compare net profit, return on sales, cash flow, return on investment and market share (Ahmad, Wilson and Kummerow, 2011).

It is very important for organizations to make performance measurement system to evaluate the performance of the organization, which is very helpful to evaluate the achievement of organizational goals and in developing strategic plans for the organizations. Strategic performance measurement system (SPMS) is a new approach to measure the performance rather than traditionally because the SPMS provide a way to translate and measure the both financial and non-financial performance. Furthermore, this measurement technique also provides the potential to increase the strategic competitiveness of the organization. The use of multiple performance measures which consists financial and non-financial is generally most good for owner and management, which is helpful to enhance protection towards the uncontrollable events outside the organizations.

## **2.4 Learning Organization**

According to Drucker (1985), he states that knowledge is the major economic resources and might be the only source of a competitive advantage. Knowledge within the organization is very significant in an industrial establishments, agencies, and interest organizations. Along with the wave of modernization, organizational structure is said to be very important in contributing to the success of an organization. In addition, learning organization plays an important role as an organizational management technique.

According to Espejo, Schuhman, Schwaninger, and Bilello (1996) in his writings, he explained that the competitive landscape that undergone changes and a new model for competitiveness are needed to address the various challenges that lie ahead. The statement indicates that organizations are required to develop and enhance the knowledge to be able to produce quality products and services to consumers with a reminder of the growing competition. Furthermore, there is also a competition in the learning organization. This is because smart organization will strive for their business future with the renewal of its knowledge through learning process. Competition between organizations at the present and future are expected to be more flexible. Flexible attributes will result in a long-term commitment in developing and expanding the knowledge of the organization.

Moreover, a learning organization is not an organization that merely follows a lot of training, courses, workshops, and other activities, but should have the development of knowledge and individual credibility in line with the concept of learning organization. The purpose of the transformation process is to organize the activity that is

capable to producing new ideas, solutions for the problems, and new opportunities for learning and able to leverage competitive advantage in a competitive world.

Pursuant to Peter Senge (1990), a learning organization is a business that continues to expand its capacity to create its future and believes that they are distinguished by five disciplines; include personal mastery, mental models, shared vision, team learning, and system thinking. Therefore, each individual or community involved in the organization requires skills from many areas as benefits to be practiced in administering the organization with distinction. Lack of basic learning in managing the organization will affect the supremacy of an organization whether directly managed or suffer impaired.

#### **2.4.1 The Definition of Learning Organization**

There are many definitions of learning organization from previous study by different scholars. Since childhood, people are encouraged by their families to continuously learn and gain knowledge. When someone become part of the organization, it is important for him as a worker to identify the organizational goals and objectives, to recognize their coworkers, and to know the things or tasks that need to be done. This process of knowing and learning will help the employee to improve their knowledge and capability individually and collectively.

Referring to Munandar (2003) in his research, he defines the learning organizations as those who have taking part in the systems, mechanisms, and processes that are used to continually improve their ability to achieve sustainable objectives for

themselves and the society in which they participate. With the individual knowledge and ability, it will be easy for someone to gain a power in decision making process which is important for future performance of organization.

Referring to other scholar, learning organization can be defined as a system of actions, actors, symbols and processes that enable the organization to enhance the capacity of long-term application through the transformation of the information into valuable knowledge that can be used by organization (Schwandt, 1993). This is because knowledge is critically important in driving the long-term prospects for the success of an organization based on the mission, vision and objectives.

Marquardt (1996) in his writing defines the learning organizations as an organization that learn in groups and make a continuous efforts to collect, manage and use knowledge for corporate success with high spirits. It will be a benefit for the people in organization to improve their knowledge and skills through the information that have been collected and managed perfectly.

According to Simon, Germans and Ruijters (2003), learning organization is a system that has complex relationship which involving people, technology, practices and methods. Result from the combination of human, technical, technology and systematic method would lead the organization to achieve positive impact on the performance based on the valid and complete information obtained.

Dale (2003) in his writing defined that learning organization is a purposed activity which is directed to the output, development of skills, knowledge and the application of knowledge. While referring to Kerka (1995), the most conceptual of

learning organization is that learning is important and effective, and learning activity must be continuous, and it also provides advantages that every experience is a good opportunity to learn something. The approach taken by an organization in planning the knowledge management among members of the organization can provide a positive impact of the organizational growth. In addition, learning process also has a power to make changes in terms of knowledge, beliefs and attitudes. Further learning in organization directly can influence the capacity of the organization to evolve and increase the employees understanding about some matters in any field.

Based on the all the definition above, learning organization provides learning opportunities to all of the members in the organization and they are able to evaluate their ability continuously. Through learning organization, the organization could give a commitment and capacity to learn in all organizational level with a new perspective in term of creating the new thinking skills, systematic management of firms, capability improvement, cognitive changes and knowledge sharing between coworkers. Everybody have different knowledge, opinion and experience. So, it is benefit the communication between workers due to the different view by different people. The domination and expansion of knowledge is requiring at any firms in the world, so the firms are able to create valued-added whether in external or internal organization.

#### **2.4.2 The Importance of Learning Organization**

There is a wide range of interest provided by learning organization process to the various parties especially for members of the organization. According to Yusufhadi (2002), there are several reasons due to the importance of implementing a learning organization in today's business world.

Firstly, with the sophisticated framework of sustainable economic development nowadays, organization cannot longer rely on a workforce that is abundant and cheap, but the workers should well-trained, well-educated and well-informed. Organizational changes to adapt changes in the environmental whether internal or external environment is the foundation of a learning organization.

Secondly, in parallel with the movement of the informative society, the organization should have a power to dominate the information system that related with comprehensive environment. Firms need more intelligent and knowledge workers as an important asset in adapting to the work and learning culture and environment for the future company's capability.

The importance of learning organization exists in the context of environmental changes and competitiveness between organizations in which the organization requires efficiency and leadership to transform and deliver the knowledge to all members of the organization. Thus, with the support of the learning process in organization, it is expected to produce individuals with knowledge, effectiveness, efficiency, quality and other positive character.

### **2.4.3 The Characteristic of Learning Organization**

Although the study of learning organization is still fresh in Malaysia, but this topic has long been viewed as a major topic for researchers in Western country. Many scholar of business study has made an effort to provide grand theory based on their research that related to this topic. For examples, the famous leader in this subject are Bandura (1986), Senge (1990), Garvin (1993), Marquardt (1994), Watkins and Marsick (1993), etc. which become an icon for this subject who are responsible for popularizing this study to all parts of the world.

There are several versions of the characteristics of a learning organization that has been introduced by scholars in management field. According to Peter Senge (1990) in his books, *The Fifth Discipline*, he characterizes the learning organization as:

- i. **Shared Vision** – Shared Vision is an ordinary inspiration that provide future hope to be attained by organization. It is also become an aspiration and can be developed with members of the organization. Learning organization has a power to foster individuals or groups to have similar direction among its member to achieve organizational objectives.
- ii. **Personal Mastery** – Personal mastery is positive commitment and efforts by personal or individual towards organizational performance. Individuals need to have self-discipline and constantly learning to improve their knowledge through a variety of methods. According to Bandura (2003), an individual should act based on the principles and standards which is contained in thought and action, as shown by others. In other words, people can learn something by observes other people actions and behavior because knowledge is quite intense.

- iii. Mental Model – Mental model refers to individuals view on some aspects that required the people to change. Individuals in the company should forming a concept and understanding through the reading and their past experiences that related to the tasks and simultaneously appreciate the concept and understanding of others in the team or group.
- iv. Team Learning – Team learning is a capacity to build team with a view to attain firm objectives. In this circumstance, the members need to learn to work together to generate new ideas and make an improvements. Learning organization striving to enhance the skills and ability of individuals to seek the common objectives in the team particularly.
- v. System Thinking – System thinking is ability to observe and understand some situation as a system. Individuals within the organization, especially top and middle manager or leader should evaluate some matters as a whole for the benefits of their followers. This system thinking provides a high value-added in producing a high quality of products.

Next, Marquardt and Reynolds (1994) indicate that the successful of learning organization should possess the essential characteristics such as:

- i. Continuous improvement – An effort in in which providing a lot of learning opportunities based on experience.
- ii. Climate of openness – The situation or condition in which the people in the organization embrace the honest culture in sharing the information through feedback system.

- iii. Relationship between learning and management – Consumer is the priority in which community and wide networking is very important in any transaction.
- iv. Expert in various fields – Leader or manager that encourages their administration to be coaches, mentors or facilitators in learning process.
- v. People empowerments – Make a decision and empowering the workers, protect them, and provide a rewards and recognition for their best performance in the team.
- vi. Technology application and web-learning system – Sharing-knowledge system in every business routine.

However, all the business matters that pursued by the organization is not automatically going to be a learning organization. This is because it needs to be ensured that all the actions only based on the company's need. Several positive actions must be nurtured and maintained, so that it will become a habit and routine for the individuals. According to Dale (2003) in his journal, learning will become a core or source of strength in business operation, the way in how to behave and make transformation, make a radical changes and continuously improvement. The success of adaptation of learning organization needs an effort from various parties involved in the organization. Then, the output form the learning process should be embrace by the individuals toward other individuals or group or organization to ensure that the dissemination of knowledge is benefitting large number of peoples. So, each member in the firms will strive to increase the organizational potential to achieve high competitiveness and competencies in marketplace.

#### **2.4.4 Systematic Learning Organization Model (SLOM)**

Learning organization currently becomes a new paradigm that requires continuously adaptation towards the environment to achieve effective firm performance. This is because environment is always changes and develops due to many factors. Generally, an organizational effectiveness in managing the human resource and information system factor has contributes towards readiness of organization to be a learning organization. The model of systematic learning organization was introduced by the Michael J. Marquardt (1996) which emphasize five sub-system of learning organizational model including learning (dynamic learning), organization (organizational transformation), people (people empowerment), knowledge (knowledge management), and technology (technology application). These sub-systems could be used as a complimentary for the firms to determine the company's strength and become a major asset to be a knowledgeable or genius company.

##### **2.4.4.1 Dynamic Learning**

According to Marquardt (1994), he explained that the main sub-system of learning organization is dynamic learning. This sub-system composed of three essential complimentary level of learning such as individuals, group or team and organizational. Before the groups or teams are formed, individual learning is needed because individual can contribute to the group if they have meaningful knowledge or experience. Then, teamwork must be able to think, discuss, share, learn, and invent as one entity. Team learning will be more effective if the members are rewarded by the organization due to their contribution.

In addition, the successful of organization to embrace a learning organization is depends on individuals learning and team learning. According to Chen and Lee (2008), competitive capabilities are able to create superb advantages that cannot be imitated by competitors through the mechanism of learning organization. Pursuant to Evans, Stalk and Shulman (1992), a high sustainable value can be attaining through the articulation of knowledge and dynamic learning mechanism. It proves that dynamic learning process became an assistant for firm development especially for knowledge articulation and experience improvement. Francis (2013) describes that many large organization works for collaborative learning and broad cross-functional knowledge by the creation of dynamic learning networks between many parties. Thus, even the small or medium companies also need to keep track of the large organizational steps in applied dynamic learning networks in organization for the future benefits of the firms.

#### **2.4.4.2 Organizational Transformation**

Organization sub-system is the frameworks for firms in which the transformation process will occur due to the learning process. Vision, structure, strategy and culture are becoming four key dimensions in the organizational transformation sub-system. Top level management will play a role in supporting and ensuring that the company strives to be an excellence learning organization. Learning activity will occur which in line with the company's objective in creating knowledgeable workers.

According to Cummings and Worley (2001), the organization has already performed the transformation if the firm looks different and better in its appearance, image, character and operations. Sometimes, the transformation of the firms could give an aspirations and spirits for the individual or worker to be wise, innovative and quality

in making decision. In regard to the firm objective or goals, the transformation process will create various ways of thinking, acting, and behaving based on the situation which is affected the objective targeted by the firms. Landrum and Gardner (2005) indicate that the learning experience will enable people to transform the organization for the improvement and better workplace. Therefore, organizational transformational is required due to the certain circumstances to ensure the company is still on track, guarantee the continuity and survival, and not lag behind the competitors.

#### **2.4.4.3 Empowering People**

People are vital key in encouraging the learning activity in the organization. Empowering people sub-system includes managers or leaders, workers, business partner, community or society, suppliers, shareholders, clients, customers, etc. All of the people involved with the organization need to empower and enabled to learn. Communications between all the parties need to be done in order to gain accurate information to make sure the company is running well.

The firms surely need to keep the relationship between interest parties especially supplier and customers keep for the long term. If the conflicts happen between the influential parties, it is certainly will cause negative implications to the performance of the company. Thus, it would be the responsibility of the manager to monitor and empower their workers and fostering the organizational empowerment, so the firm can actively committed and engages the whole operations to be meaningful (Feldman and Khademian, 2003) and maintaining the performance of the organization in terms of non-financial and financial.

#### **2.4.4.4 Knowledge Management**

Knowledge management is more gaining attention in today's business world. This knowledge sub-system is significant in providing the learning process to be the learning organization. The process includes the acquisition, creation, storage and retrieval, transfer and utilization of knowledge. Organization requires information from both internal and external sources. Usually, most large companies are able to create their knowledge and information because they have strength to make research and development (R&D) in any aspects of their organization. Then, organization also needs to determine what important information to keep, meaningful to the company, and can be reuse and retain if the company want to store the information. Through all of the learning process for knowledge management, the organization is benefitted to encourage innovation and invention of their workers as well as provides inquiry attitudes to the people and knowledge environment and culture.

Knowledge is possesses superb characteristic to be a valuable commodity for firms to create competitiveness and used to develop the product's value added (Dalkir, 2005). So, the knowledge strength will be the opportunities for future goals, the way in how to make a decision, flexibility and availability of the business operations, and enhance value of the business. Pursuant to Bhojaraju (2005), knowledge management is known as important intellectual assets which possess unique source that can benefit the business routine. Thus, the knowledge should be managed properly to make sure that the appreciation and application of the knowledge will drive the firms to reach the future potential of business opportunity.

#### **2.4.4.5 Technology Application**

Lastly, the technology application sub-system has contributes to the modern business world. Information technology tools have an advantage that allows access and exchange of learning and information. Due to the sophisticated technology tools, many companies currently applying electronic performance support system (EPSS) which is using databases to keep, store, and deliver the information throughout the organization, so it will help all workers in any department to attain the knowledge for company's benefit. The application of technology will facilitate the learning process in the firm and improve the communication level through the brilliant technology equipment which drives the company faster to gain better output.

Suitable with the current technological business's world, most of the company used technology to facilitate the job or tasks efficiently and systematically. In order to enhance the business process efficiency, support decision making, and improve productivity and quality, the firms progressively disburse their investment for the application of information technology (Kim, Lee, and Law, 2006). Due to the innovativeness in the technological world, the company should alert with the current and sophisticated technology. Technology systems proved that it can boost performance through learning activity, increase productivity, reduce cost, improve customer services, and measuring competitor performance (Namasivayam, 2000). Thus, the technology can be a basis for the organizational members to involve in learning organization due to the advances technology in this current day. And the firms are able to generate high result of performance with the advantages of technology.

## **2.5 Learning Organization and Organizational Performance**

The relationship between learning organization and firm performance is crucial aspects in daily business routine. Organizations from any region are learning to work progressively in order to survive with the current business development and new changes in which it will lead the business to achieve good performance. According to Howton, Ellinger, Ellinger, and Yang (2002), he stated that learning organization and the performance of firms have a positive relationship. It means that learning is important for the organization to ensure a better performance of the firms. However, there is still less considered and attention by the firm to alert with the relationship between firm performance and learning organization (Koupahi, Fakhri, and Ghanimat, 2013).

### **2.5.1 Dynamic Learning and Organizational Performance**

With the today's current business situation, the organizations are requiring good learning to still have a position in a market (Lester and Hannah, 2009) because learning organization is able to enhance the creativity of employee and innovation increment (Zhao, Calantone, and Cavusgil, 2002), so the company are able to maintain their best performance. Knowledge-based economy is depends on the dynamic learning to generate creativity and innovation of the firms that become a basis for the firm development. Through the workers creativity and innovation, the process of mutual learning and sharing knowledge between workers within the firms can be done by learning process. Dynamic learning is positively can enhance the quality of the individuals and organization. The quality workers are able to produce quality production

and quality idea based on the learning experience. According to Button, Mathieu and Zajac (1996), the individual who is full of spirit and prefer challenging jobs is the people that practice dynamic learning in order to increase the firm performance. The superb thinkers and proactive learner strive to improve organizational performance through the continuous learning for improvement and learn from mistakes and error (Sujan, Weitz, and Kumar, 1994). Therefore, the dynamic learning seeks as high capabilities to lead the firm in achieving great performance.

### **2.5.2 Organizational Transformation and Organizational Performance**

Due to the changing trends in business, the firms also need to decide to transform from the traditional to modern business perspective if the modern business can provide them better benefits and values. The business require to change together with the changing environment such as changing in consumer demand and trends, and changing in technological advances to ensure the sustainable performance of company. According to Burtonshaw-Gunn and Salameh (2011) in their article, the firms need to concern if the company want to transform and take several matters into account such as introduction of new pieces of equipment and new process which in accordance with the current situation and performance. New process and equipment are required because it is not easy to transform without enough resources and capabilities.

In transforming the business, the top management should looking for many things without neglecting the company's structure, culture, shareholder interest, employee interest whether the transformation is affects that items or burdening the

parties involved in the organization. But the changes in firms should be taken as natural parts in business drama for the future performance. Burtonshaw-Gunn and Salameh (2011) also added that organizational transformation is crucial significant with the performance of firm because the transformation will lead the firm to pursue new direction which can affects the firm performance.

### **2.5.3 Empowering People and Organizational Performance**

In order to increase the qualities in learning activity and knowledge practice, the continuous learning should be done and embrace by employers and employees in the firms because the quality of learning organization will guarantee the quality of decision making process. The quality of learning practice is become a key to improve company's performance because the quality will able to transform the traditional-practiced firms to modern-practiced firms. Qualities will empower workers to make an effort in putting the performance of the firm to the high place.

Furthermore, the learning organization effectively will affect organizational routines and workers behavior and attitudes. Internal learning and external learning positively proved that it can reflect the performance to be better than competitors in the long run (Inkpen and Crossan, 1995). Internal learning is more depends on firm employers and employees. According to Prusk (1997), he argued that internal learning in the organization might happen in unpredictable ways and it will lead to spontaneous actions by the employees or employers in performing their task and decision making. In a meanwhile, the external learning needs a good relationship with external parties such

as customers, suppliers, government, and other agencies. A closed relationship with customer will bring the company with meaningful source of knowledge which is not easy to imitate by the rivals. The market domination rate, new or shifting trends by consumer, total demands of customer, feedback from customer about the product or services, customer satisfaction and retention, and other information are able to empower workers to reach business goals. So, the firms are able to drive the better performance compared to their market rivals with the enough information. Linkages with supplier also are important for the firm performance. Garvin (1993) indicates that unique capability and performance can be achieved through the long-term relationship with vendors which can improve competitive advantages to the firms.

#### **2.5.4 Knowledge Management and Organizational Performance**

Knowledge in the organization is a main resource as a sustainable competitive advantages and necessary to form the business operation and strategy. In addition, the existence or learning approach and learning instrument can lead the company's sustainable performance to become efficient in its operation and strategy development. According to Snyman and Kruger (2004), in order to improve efficiency and competitive advantages of the organization, the strategic knowledge management required to be integrated with firm performance. The application and expansion of knowledge within the organization should be important part in develop business strategy because it can affect the whole business operation.

Argyris and Schon (1996) claimed that organizations have ability to demand for latest knowledge like an individuals, so through the existing experience and new knowledge, the organization can develop a plan and drafting for its future performance. Up-to-date knowledge and information help in increase capabilities towards individuals and organization, so they are not lag behind the others. Lee and Choi (2003) mentioned that creativity in the company is positively related by creation of the knowledge through good learning by the company's members, so it will bring positive effects to the organizational performance. Hence, the good learning process and knowledge practices will drive the firm to achieve good performance.

#### **2.5.5 Technology Application and Organizational Performance**

Most of the firms need to face big challenges of the Era of information technology which are able to affect company's performance. Suitable with the current technological business's world, most of the company used technology to facilitate the job or tasks efficiently and systematically to increase performance.

According to Soon and Zainol (2011), the firms especially in Malaysia are require in transforming the business operation in order to be more creative and innovative to enhance firm performance and reach high competitiveness via the application of technology. The technology systems evidence that it can improve performance through learning activity, increase productivity, decrease cost, systematic management of customer services, and measuring competitors position (Namasivayam, 2000), so it positively can increase the performance of firms in such aspects.

## **2.6 Resource-Based View (RBV) Theory**

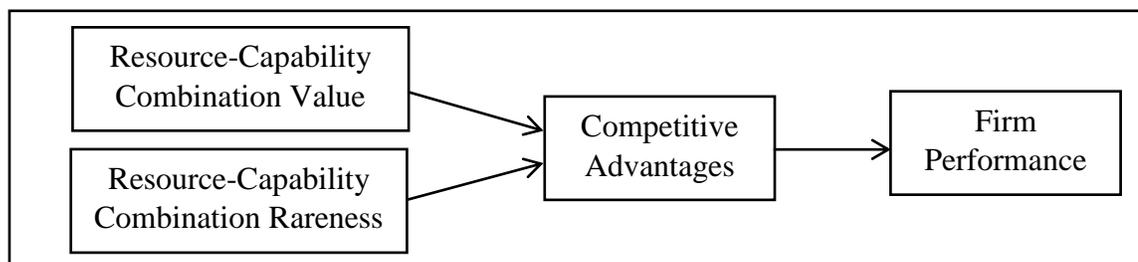
For the underpinning theory, the researcher used resource-based view theory. According to Amit and Shoemaker (1993), this theory is focused on the available sources that are owned or controlled by the firm and the firm capability to mobilize the resources. A firm resource is valuable and meaningful to the firm in creating the productivity. Das and Teng (2000), claims that long-term performance and competitive advantages can be achieved through the resources possession and maximization by the organization. Das and Teng (2000), also added that most of empirical research that used the theory is strongly supported the resource-based view. Thus, for this study, the organization's resource-based view sets the theoretical foundation in exploring the learning organization which is relatively effect on performance of the firms.

The influential and strength of the resource in the organization will describes the abilities of firms to reach high performance. Referring to Wernerfelt (1984) in his writings, the ultimate firm performance and the differentiation of the products is due to the organizational resources which play a role as a firm backbone. Organizational can reach sustainable performance through the strategic planning of resources and how efficient the people in the organization maximize it. Obvious that the firm resource and capabilities is one of the primary factors that determine the firm performance, so it found that it is a good theory to be applied in the review.

Pursuant to Newbert (2007), many experts in resource-based theory used the 'resource heterogeneity approach' in order to test the hypotheses which mean that the specific resource and capabilities provides a high value, difficult to imitate by the rivals and unchangeable, so it will benefitting the firm performance with the resource and

capabilities possesses by the firms. Barney (1991) mentioned that the firms which exploited the resources and capabilities are able to gain competitive advantages. Therefore, Barney (1991) was introducing the Resourced-Based Theory Model and demonstrates that company with competitive benefits will finally increase their firm performance. The model is shows at Figure 2.1.

Figure 2.1  
*Resourced-Based Theory Model*



(Sources: Barney, 1991)

The theory is relevant with this study because the utilization of resources such as learning and knowledge resource and capabilities of the firms are able to influence the firm performance. Learning and knowledge can be categorized as an essential intangible resource because it cannot be seen, touch and feel but it contribute to the firm development. Drucker (1985) states that knowledge is the major economic resources and might be the only source of a competitive advantage. To gain knowledge, the individuals are requiring learning process and procedures. With intangible resource like knowledge, the community can distinguish the company with their competitors (Dollinger, 2003). On the other hand, the knowledge and learning practices also possess high intrinsic values in which the value can describes the positive image and culture of the firms.

Many strategy models are only focus on the firm external competitive business and environment. For example, Porter's five forces model and PESTEL analysis only focus on the external environment to evaluate the performance, but it can be deny that internal factors also are the big contributors for the firm performance. Nevertheless, Barney (1991) indicates that the application of resource-based view theory encompasses the internal and external factor of the business.

According to Polanyi (1966), the organizational are able to reach competitive advantages from the important resource such as knowledge and learning. For instance, the knowledge of external information such as customer satisfaction and retention, business image, relationship with supplier and customer, market share, technological updates, economic condition, etc. is useful for strategic planning and decision making. The knowledge of internal information such as workplace industrial relation, employees' satisfaction, employees' turnover, balance of work and life, changing trends in workplace, job satisfaction, etc. is useful for the internal improvement and workplace condition. Thus, the knowledge and learning activities is important resource in which this resource is required in both internal and external situations. Due to this study, the resource-based view theory is suitable for both learning and knowledge, and firm performance because this both resources will be examined by the researcher in this study.

## **2.7 Summary**

This chapter presents the literature on Small and Medium Enterprise and the concepts of organizational performance and learning organization. The review of the literature suggests that resource-based view (RBV) theory were found to be the literature source which describes organizational performance. Furthermore, studies on learning organization from previous study indicated positive relationship between learning organization and organizational performance. As a whole, the literature review seems to indicate evidence of the relationship between learning organization and performance of SMEs manufacturing firms.

Thus, the following chapter describes the research methodology. Chapter 3 will explained in detail the procedures and methodology that were used for data collection and analysis of the study. The chapter will explained on the method of this research which is covers theoretical framework, research hypothesis, research design, operational definition, research sample and population, instrumentation method, measurement of variables, data collection method and procedure, pilot test, reliability test, and data analysis technique.

## CHAPTER 3

### RESEARCH METHODOLOGY

#### **3.1 Introduction**

This chapter will explained more details in how the research is implemented and conducted by the researcher. In this study, the research methodology is an essential factor to ensure that the results have a high reliability and validity. Thus, the approach to analyzing data and sampling data method should be identified for hypothesis testing in order to ensure whether it is compatible with the research objectives that have been described. Inaccurate information, blurred or vague, and information overload could occur if the researcher fails to use the methods of data collection or research methodology properly and effectively.

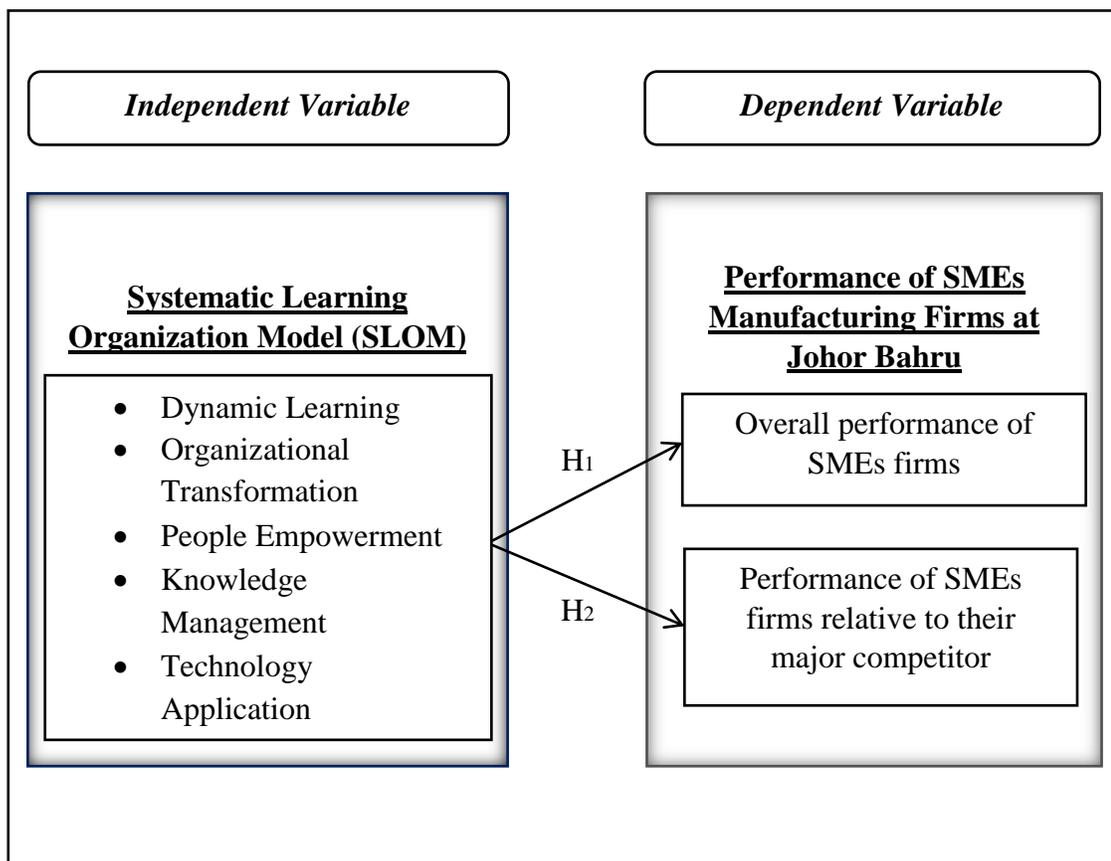
Afterwards, this chapter will explain the research method or approach used to measure and analyzed data which are include theoretical framework, research hypotheses, research design, operational definition, research sample and population, instrumentation methods, measurements of variables, data collection methods and procedures, pilot test and reliability test, and the data analysis techniques.

### 3.2 Theoretical Framework

This study is focuses on reviewing the influence of independent variables named Systematic Learning Organization Model (SLOM) which includes dynamic learning, organizational transformation, empowering people, knowledge management and technology application towards firm performance of SMEs manufacturing that become dependent variables.

Next, to examine the relationship between these two variables, a theoretical frameworks model is formed as shown in Figure 3.1. Description of the framework is as follows:

Figure 3.1  
*Theoretical Framework*



### **3.2.1 Dependent Variables**

The dependent variable of this research is the performance of SMEs manufacturing firms in Johor Bahru which are divided into two basic performance measures includes overall performance of SMEs manufacturing firms, and performance of SMEs manufacturing firms relative to their major competitors.

### **3.2.2 Independent Variables**

In this study, there are five independent variables have been used under the Systematic Learning Organization Model (SLOM) introduced by Michael J. Marquardt (1996) which are includes dynamic learning, organizational transformation, empowering people, knowledge management and technology application.

## **3.3 Research Hypotheses**

Based on the study conducted, the researcher found that there are two main hypotheses, which is then formulated into five sub-hypothesis in each main hypothesis. The study is intended to investigate the influence of independent variables towards the performance of SMEs manufacturing firms at Johor Bahru. The hypotheses are:

H<sub>1</sub>     There is the influence of Systematic Learning Organization Model (SLOM) towards the overall performance of the SMEs manufacturing firms.

H<sub>1a</sub>    There is the influence of dynamic learning towards overall performance of the SMEs manufacturing firms.

- H1b There is the influence of organizational transformations towards overall performance of the SMEs manufacturing firms.
- H1c There is the influence of empowering people towards overall performance of the SMEs manufacturing firms.
- H1d There is the influence of knowledge management towards overall performance of the SMEs manufacturing firms.
- H1e There is the influence of technology applications towards overall performance of the SMEs manufacturing firms.
- H2 There is the influence of Systematic Learning Organization Model (SLOM) towards SMEs manufacturing firm performance relative to their major competitors.
- H2a There is the influence of dynamic learning towards SMEs manufacturing firm performance relative to their major competitors.
- H2b There is the influence of organizational transformations towards SMEs manufacturing firm performance relative to their major competitors.
- H2c There is the influence of empowering people towards SMEs manufacturing firm performance relative to their major competitors.
- H2d There is the influence of knowledge management towards SMEs manufacturing firm performance relative to their major competitors.
- H2e There is the influence of technology applications towards SMEs manufacturing firm performance relative to their major competitors.

### 3.4 Operational Definitions

**Small Medium Enterprises (SMEs) Definitions:** SMEs have variety of definitions and varies by the country or region. The definition of SMEs also differs depending on the type of SMEs sectors due to the many business sectors in SMEs. In Malaysia, the new definition of SMEs is refers and approved by the National SME Development Council in 2014 and definition of SMEs will be based on two criteria namely number of employees and annual sales turnover. Due to the research that only focusing on SMEs manufacturing firms only, so the researcher would only define the meaning of SMEs manufacturing firms. According to the National SME Development Council Meeting (2014), the general definition of SMEs in manufacturing is an enterprise with full-time employees not exceeding 200 or with annual sales turnover not exceeding RM50 million. For more specific definition of SMEs in manufacturing, the Table 3.1 shows the approved SMEs definition based on total of full-time employees and annual sales turnover.

Table 3.1  
*SMEs Definition Based on Number of Full-Time Employees*

<b>Size/Sector</b>	<b>Manufacturing Firms (Including Agro-Based &amp; MRS)</b>
<b>Micro</b>	Less than 5 employees
<b>Small</b>	Between 5 and 75 employees
<b>Medium</b>	Between 75 and 200 employees

(Source: SME Corporation, 2014)

Table 3.2  
*SMEs Definition Based on Number of Annual Sales Turnover*

<b>Size/Sector</b>	<b>Manufacturing Firms (Including Agro-Based &amp; MRS)</b>
<b>Micro</b>	Less than RM300,000
<b>Small</b>	Between RM 300,000 and RM15 million
<b>Medium</b>	Between RM15 million and RM50 million

(Source: SME Corporation, 2014)

**Organizational Performance:** The result or outcome with indicator of efforts and achievement including productivity, effectiveness, customer and staff satisfaction, profit and service quality (Burke and Litwin, 1989). Organizational performance is the ultimate dependent variable of interest for researchers concerned with just about any area of management (Richard *et al.*, 2009). Most studies of organizational performance define performance as a dependent variable and seek to identify variables that produce variations in performance (March and Sutton, 1997). In addition, Richard *et al.* (2009) also stated that organizational performance encompasses three specific areas of firm outcomes (1) financial performance (profits, return on assets, return on investment, etc.); (2) market performance (sales, market share, etc.); and (3) shareholder return (total shareholder return, economic value added, etc.).

**Learning Organization:** Learning organization as an organization that learn in groups and enthusiastic in continuing efforts to collect, manage, and use knowledge for corporate success (Marquardt, 1996). Pursuant to Dixon (1994) in his writings, he defines a learning organization as an organization's ability to use and maximize the potential of its human resources at maximum level that will enhance processes to improve quality.

**Dynamic Learning:** According to Marcum (2006) in his journal, dynamic learning is engaged and reflexive participation in a life-discovery process that assists the individuals to build new and up-to-date knowledge, increase the skills and competence developments which is appropriate to the personal, social, and technical aspects.

**Organizational Transformation:** Referring to Manmath (2006), organizational transformation is a collective activity or efforts such as reengineering, redesigning and redefining organizational system or procedures.

**Empowering People:** According to McCoy (2006), people empowerment is an authority or individuals that have capability to take independent and free action, within well-defined parameters and measurement, in which will actively influence the results.

**Knowledge Management:** According to Anand (2011), knowledge management is the systematic management of significance knowledge and process of creating, collecting, organizing, spread or shared, apply and exploit it. Then, it requires the individuals to turn their personal knowledge into corporate knowledge that can be widely shared through the firms.

**Technology Application:** Pursuant to Daintith (2009), technology application is the application or used of technology equipment or facilities in order to store, receive, transmit and applied the data or information.

### 3.5 Research Design

According to Kerlinger (1986) in his journal, he mentioned that:

*“Research design is the plan structure and strategy of investigation conceived so as to obtain answers to research questions and to control the variance”.*

In other words, research design is important as an instrument of methods and procedure which is act as frameworks or patents of study in order to acquire the information from specific source at some procedures. Research design should state the various approaches to be applied in solving the problem of the study, information, data and sources that related to the problem, time frame, etc. (Rajasekar, Philominathan and Chinnathambi, 2013). Thus, it is very useful to structure the study properly and overcome the problems effectively in the research.

Then, the study conducted by the researcher is form of quantitative study which is involving hypothesis testing. This research can be classified as descriptive study. Descriptive study attempts to describe systematically about situation, problem, phenomenon, programme, or provide information about, say, living, or indicate attitudes towards an issue (Kothari, 1985). Descriptive study is intended to explain some situation or phenomenon occurs and allow researchers to understand the characteristics of the variables involved in this study. Before this, the descriptive studies were adopted by many researchers because it facilitates the researcher the view and clear illustration of some circumstances.

### **3.6 Research Sample and Population**

Research sampling is a significant methodology in order to run the social science research. According to Cavana, Delahaye and Sekaran (2001), the main purpose of the sampling method is to attain representative cross-sectional sample of the total population. Pursuant to Leowenthal (1996), a huge sample will benefitting in improving the statistical power, so it is easy to detect significant association or relation of the difference or related to sample size.

For the purpose of this study, the population covers the SMEs firms located in Johor Bahru which is focused on manufacturing firms only. Johor Bahru is the capital state of Johor and the second largest city in Malaysia after Kuala Lumpur. It has an area of 185 km<sup>2</sup> and located at the edge of the Tebrau strait which separates Malaysia and Singapore. With a population that is constantly increasing and reached 2.6 million in Johor Bahru, so it become an important industrial and commercial centre. Johor Bahru continued to grow and become large metropolitan area where there has been Regional Plan of Iskandar, with expected population more than three million people by the year of 2025 and Johor Bahru will be the second largest of industrial hub after the Klang Valley. And this will open opportunities for SMEs in particular to introduce and promote their products to the world and contributes substantially to the economy and national development (Asri and Darawi, 2012). Thus, this is the reason of why Johor Bahru was selected by the researcher as population and sample in the study.

The target population of this study is the owners or entrepreneur or manager or other top management of the SMEs firms. The reason on why researcher is selecting the owner or manager of the company is because this kind of top management must be alert

with overall performance of their company. According to Barry (2008), manager or owner is often described as having a vision of where to go and ability to articulate it. Thus, top management have an ability to scan and evaluate better to their firms, and they must be aware of their firms in term of performance, decision making, operation, relation between workers, etc.

For this study, researcher used simple random sampling because the researcher is free to select any elements or respondents in the population of Johor Bahru to be the subject. On the other hand, researcher also obtained the directory of Malaysian SMEs manufacturing firms from Federation of Malaysian Manufacturer (FMM) websites, so it easy for researcher to get some details about the company.

Referring to Yamane (1967), he has provided a table for determining the sample size based on the population. According to information obtained from the Federation of Malaysian Manufacturers (2013), the total number of SMEs manufacturing firms in 2013 at Johor Bahru is only 912 firms. Therefore, based on Yamane's table of sample size, when population size,  $N=900$  and above, sample size  $(n) = 90$  is sufficient for the respondents to answer the questionnaire to get an accurate results. As the population in this study exceed 900 firms, so the sample size used by the researcher was 90 of respondents. As indicated by Martin and Bateson (1986), the more data collected is better, because the higher sample size, it will improve the statistical power in the study. Instead of using 90 samples, the researcher has chosen to use 102 samples to get more confident and accurate result.

### **3.7 Instrumentation Methods**

Research instrument is one of the modes to collect data and information. Various methods can be used in order to attain data through observations, interviews, questionnaires, focus group and so on. Pursuant to Zikmund (2000), questionnaire is the most common method to collect a data due to its inexpensiveness and ability to cover wide number of respondents. Thus, the data collection in this research was conducted through the questionnaire method. Questionnaires method is used because it has more advantages compared with other data collection methods such as interviews and observations (Sekaran, 2003). The questionnaire is also used to obtain information on the facts, beliefs, desires, needs, and feelings (Majid, 1993). The questionnaires were distributed in order to identify the influence of learning organization towards performance of SMEs manufacturing firm.

Section A consists of 10 items that are geared to the respondent demographic information such as gender, age, race, highest level of education, respondent's position in the company, respondent's working years at the company, years of company establishment, total employee at the company, types of company's ownership, and types of industry.

Then, Section B of the questionnaire consists of 15 items that related to the dependent variables namely performance of SMEs manufacturing firms. The dependent variables are divided into two parts such as overall performance of the SMEs manufacturing firms, and the SMEs manufacturing firm performance relative to their major competitors. The questionnaire is adopted from Ahmad, Wilson and Kummerow, (2011).

Section C of the questionnaire consists of 50 items or questions that related to the independent variables. It is divided into five independent variables under the Systematic Learning Organization Model (SLOM) that was introduced by Marquardt (1996) which are includes learning dynamic, organizational transformation, empowering people, knowledge management, and technology application. The questionnaire of Systematic Learning Organization Model (SLOM) was developed by Michael J.O. Brien (1996) and one of the independent variables representing 10 items in the questionnaire.

Lastly, Section D in this study serves as suggestion and views based on the respondents in which the respondents were asking to put their suggestion or recommendation about their working experience or performance at SME's firms or other comments. All comments and suggestions given will be review by researchers and will be used as recommendations in chapter five of this study.

The Appendix A shows the completed questionnaire of the survey. The summary of all items for each section in the questionnaire is shown as in Table 3.3 below:

Table 3.3  
*Summary of the Questionnaire*

<b>Variables</b>	<b>No. of Items</b>	<b>Question No.</b>
<b>Section A:</b>		
Gender	1	Section A: 1
Age	1	Section A: 2
Race	1	Section A: 3
Highest level of education	1	Section A: 4
Position in the company	1	Section A: 5
Years working with company	1	Section A: 6
Company's establishment	1	Section A: 7
Total Employees	1	Section A: 8
Type of ownership	1	Section A: 9
Types of industry	1	Section A: 10

<b>Section B</b>		
Overall performance of SME firms	10	Section B: 1-10
SME performance related to major competitors	5	Section B: 11-15
<b>Section C</b>		
Dynamic Learning	10	Section C: 1-10
Organizational Transformation	10	Section C: 11-20
Empowering People	10	Section C: 21-30
Knowledge Management	10	Section C: 31-40
Technology Application	10	Section C: 41-50
<b>Section D</b>		
Recommendations	1	Section D

### 3.8 Measurement of Variables

Apart from that, this study also has used a Likert scale in order to obtain a statistical measure in Section B and C. According to Keegan (2009), a Likert scale is a measure of attitude that developed by Likert Rensis. Likert scale provides big advantage because this scale is easy for researcher to construct and administer the scale, and it also facilitate respondent to understand the scale (Malhotra, 2006). This questionnaire has been designed using a five point Likert Scale method as indicated below:

Table 3.4  
*Likert Scale*

<b>No. of Scale</b>	<b>Scale</b>
<b>1</b>	Strongly Disagree
<b>2</b>	Disagree
<b>3</b>	Not Sure
<b>4</b>	Agree
<b>5</b>	Strongly Agree

### **3.9 Data Collection Method and Procedure**

The method of data collection for this study is through the use of questionnaires. This questionnaire is based on the questions that relevant to the study conducted by the researcher which based on readings of related topics and the questionnaire about learning organization was adopted from Michael J.O. Brien (1996) in order to identify whether it can influence the performance of the SMEs manufacturing firms or not. The selection of the SMEs in Johor Bahru is because Johor Bahru is one of the biggest providers of SMEs and rapid industrial development in Johor Bahru have made it as one of the industrial centres, logistics and trade (Asri and Darawi, 2012).

In order to accomplish this research, questionnaire forms are submitted to the SMEs entrepreneur or owner or manager in private firms that will help researcher to obtain the information required. The process of data collection is done by researcher without assistance from other parties. Researcher has started the process of questionnaire distribution on 15 March 2014 through area planned based on FMM directory. The period of time it takes to collect all the questionnaire is one month. Then, questionnaire is delivered by hand to the SMEs manufacturing randomly and also retrieved by hand. The time provides for the respondent to answer the questionnaire is very reasonable and the questionnaire forms were delivered in stages and not at the same time because the large number of SMEs in Johor Bahru. Along with the questionnaire, the researcher brought the accompanying letter to describe the purpose of questionnaire distribution and hope that researcher able to get positive feedback from the organization. A total of 150 questionnaire were distributed and researcher also responsible to give information to the respondents in how to answer and fill the questionnaire. At the end, researcher has

only gained back a total of 102 or 68% of completed questionnaire to be used in to create the analysis in this study.

### **3.10 Pilot Test**

Pilot test was conducted by researcher at the end of February 2014 in order to test the reliability of the research instrument used by the researcher. Questionnaire must be tested through a pilot test to identify whether it has the weakness contained in the forms or not. This test is needed in order to know the level of understanding of the respondents against instructions and the words contained in the questionnaire, and the test should be implemented using reasonable samples which represent the target population. According to Cooper and Schindler (2006), through pilot study, weakness in design and instrumentation can be detected because pilot test can provide proxy data for selection of probability sample.

Therefore, the questionnaire was tested on 30 respondents which is consisted the staffs and officers of any SMEs firms at Johor Bahru in order to measure the reliability and validity of each item to identify the influence of independent variables towards dependent variables. Pursuant to Bullen (2014), a sample for pilot test around 30 -50 respondents is usually enough to identify any weakness or mistakes in the study. Afterwards, the questionnaires were collected three days later and feedback about the clarity of works and direction is positive. As a whole, the respondents gave a good cooperation with researcher and can answer the question properly.

### 3.11 Reliability Test

In general, reliability is a measurement of the ability of research instrument in measuring the variables of the research according to the samples. Pursuant to Salkind (2006) in his writings, reliability of data occurs when a test to measure the data was done repeatedly and produces the same results. There are many methods of measurement that can be used in order to determine the reliability coefficient of the instrument. Reliability of questionnaire was tested using Cronbach's Alpha procedures based on the model of internal consistency.

According to Sekaran (2003), he noted that the closer the Alpha value to 1, it indicates a high level of reliability (Cronbach's Alpha = > 0.90). If the Alpha value is less than 0.6, it may be assumed that the instrument used in the study had low reliability (Cronbach's Alpha = < 0.60). Good and acceptable reliability if the value of Alpha is more than 0.7 (Cronbach's Alpha = 0.7 to < 0.90). Table 3.5 shows the range of reliability values of Cronbach's Alpha are as follows:

Table 3.5  
*Coefficient of Cronbach's Alpha*

<b>Value</b>	<b>Level of Reliability</b>
< 0.6	Weak
0.6 to < 0.7	Moderate / Received
0.7 to < 0.8	Good
0.8 to < 0.9	Very Good
> 0.9	Strong

(Source: Hair, Money, Samouel, and Page (2007); Sekaran, U. (2006))

A reliability test result of pilot test is show at table of 3.6. Based on the pilot test, the reliability statistics of the variables are very good and excellent. For dependent variables, the Cronbach's Alpha value shows a good reliability of 0.951 which represent all of the dependent variables. In a meanwhile, the Cronbach's Alpha value also shows an excellent reliability of 0.973 for Systematic Learning Organization Model (SLOM). A range of Cronbach's Alpha value for dependent variables is 0.912 and 0.931. While Systematic Learning Organization Model (SLOM) which include five independent variables, the range is from 0.856 to 0.945.

Table 3.6  
*Reliability Statistic for Pilot Test*

<b>Items</b>	<b>Number of Items</b>	<b>Cronbach's Alpha</b>
<b>Dependent Variables</b>	<b>15</b>	<b>0.951</b>
Overall performance of SME firms	10	0.912
SME performance related to major competitors	5	0.931
<b>Independent Variables</b>	<b>50</b>	<b>0.973</b>
Dynamic Learning	10	0.915
Organizational Transformation	10	0.938
Empowering People	10	0.856
Knowledge Management	10	0.902
Technology Application	10	0.945

### **3.12 Data Analysis Technique**

The data of this study was analyzed using quantitative methods. In this research, *Statistical Package for the Social Science* Version 19.0 (SPSS) was used to analyze the data. Descriptive statistics is a method used by researchers to compile and interpret the raw data (Malin and Birch, 1997) because this is one of the easy methods to be applied. This statistic is a technique used to take a raw data and summarized or be processed in a more concise form. In this research, the data collected from survey of respondents was tested using statistical techniques such as descriptive analysis which represents analysis of demographics and test of mean, reliability test, normality test, correlation analysis and multiple regression analysis. The statistical analysis results are shown at Appendix B.

#### **3.12.1 Descriptive Analysis**

Descriptive analysis is applied by the researcher in order to perform frequency analysis and identify the mean test. In order to start the analysis in this study, the researcher will analyze the frequency distribution of respondents demographic. A frequency analysis is tabular information from the set of data and information from the survey and it shows the value and percentage of the data efficiently. Pursuant to Oosterbaan (1994), this analysis is important which used to predict in how frequent the certain figures or values of a variables phenomenon might happen and to evaluate the reliability of the forecast. By using the analysis, researcher is able to organize and summarize the data effectively and systematically. Mostly, the analysis is used to measure the data of respondent's demography. The researcher is using frequency analysis to analyze of 10 demographic

information in section A which includes gender, age, race, highest level of education, respondent's position in the company, respondent's working years at the company, years of company establishment, total employee at the company, types of company's ownership and types of industry.

Afterwards, the mean test is used to examine the level of learning organization adaptation and application by the workers or employers in the SMEs manufacturing firms. To identify the level of the learning organization, the researcher used mean as a midpoint to separate the lower level and upper level of adaptation. Consistent with the statement by Healey (2005), descriptive measurement is better to determine the center of numbers in which it serves as an instrument to balance the marks accurately. For this research, the researcher has used Marquardt's Learning Organization Analysis (MLOA) (1996), to measure the adaptation level of learning organization which is based on the mean from descriptive analysis. The measurement score is indicates at the Table 3.7 as follows:

Table 3.7  
*The Table of Marquardt's Learning Organization Analysis (MLOA)*

<b>Value</b>	<b>Level of Reliability</b>
< 2.9	Not ready for learning organization
3.00	Neutral
> 3.1	Ready for learning organization

(Source: Marquardt (1996))

### **3.12.2 Validity and Reliability Test**

According to the Hair, Babin, Money and Samuel (2003), validity analysis is supposed to be used by the researcher to measure what are claim to measure. Validity is answered that how far the social reality can be measured through the study which is in line with the arrangement of the study by the origin researcher. The research instrument used by the researcher is the instrument that developed by the expert in the learning organization field named Michael J.O. Brien (1996) and Ahmad, Wilson and Kummerow, (2011) for organizational performance. The researcher argues that the validity test for independent variables which represent Systematic Learning Organization Model (SLOM) is does not need to be done because this instruments is long-term establish and well-known by the many scholars of learning and management field. On the other hand, this instrument also was used by many researchers previously and become one of the essential instruments to study the learning organization mechanism. Thus, it proved that this independent variables instrument possesses high level of validity and certainly can be applied by the researcher to get the outcomes from the SMEs manufacturing firms especially in Johor Bahru.

However, the researcher still want to make a validity test for those dependent because researcher want to identify whether Malaysian employers is understand with the questionnaire or not. The reason is because the instrument of dependent variables is recently developed by the Ahmad, Wilson and Kummerow in 2011. Thus, validity test for these variables is needed to be concern by the researcher to ensure the quality results of the research.

The reliability test refers to the consistent and stability of the test in measuring the variables of the study based on the samples. For this matter, the researcher used Cronbach's Alpha analysis to measure the reliability of the research instrument. The reliability test was used for pilot test and will be used by the researcher for actual research which will be emphasized in the next chapter. In addition, the validity test is prerequisite to reliability test. In other words, it means that if the validity test is not valid in the study, so there is no point to discuss reliability test. The relationship between both of test is important in order to improve the quality of the research results.

### **3.12.3 Normality Test**

According to Hair, Babin, Anderson, and Tatham (2007), normality test is one of the prerequisite for inferential analysis and it is conducted to ensure that the data obtained from the survey is almost to or normally distributed. The normality assumption is crucial when constructing intervals for variables (Royston, 1991). Many steps can be done in order to test the normality such as histogram, *stem-and-leaf* plot, and *boxplot* to prove that the data distributed in the survey is normal. Thus, appendix 2 shows the histogram, *Normal Q-Q Plot*, *Detrended Normal Q-Q Plot*, and *boxplot* for every variable tested.

For brief explanation, histogram is used to indicate the tabulation of variables in which normal curve indicates the comparison between actual distribution and normal curve. In addition, *Normal Q-Q Plot* is used to describe normal distribution that each of the sample unit is located near the straight line. Then, *boxplot* provides clear indication of the scores in the distribution and using median to summarize the distribution.

### 3.12.4 Pearson's Correlation Analysis

The analysis of Pearson's correlation is used to measure between two or more variables whether it have significant relationship and either positive or negative correlations of relationship (Sekaran, 2003). In theory, this analysis will demonstrated the correlation coefficient which symbolize by  $r$  in which the value is between -1 and +1. The researcher has indicates the scale which is outlined by Hair, Money, Samouel, and Page (2008) that can be applied to interpret the relationship between two variables as follows:

Table 3.8  
*The Coefficient Scale and Relationship Strength of Correlation*

<b>Coefficient Scale</b>	<b>Relationship Strength</b>
$\pm 0.91 - \pm 1.00$	Very Strong
$\pm 0.71 - \pm 0.90$	Strong
$\pm 0.41 - \pm 0.70$	Moderate
$\pm 0.21 - \pm 0.40$	Weak
$\pm 0.01 - \pm 0.20$	Very Weak

(Source: Hair, Money, Samouel and Page (2008))

### 3.12.5 Multiple Regression Analysis

Multiple regression analysis refers to bivariate correlation expansion. Due to the two or more independent variables used by the researcher to make a prediction towards dependent variables, so the multiple regression analysis is appropriate and will be used. The result of regression is the figures that determine whether dependent variables have prediction to independent variables or not. Thus, it can be measure whether independent variables are able to influence the dependent variables or not.

Table 3.9  
*Summary of Data Analysis Technique*

<b>Hypothesis</b>		<b>Statistical Analysis</b>
<b>H1</b>	There is the influence of Systematic Learning Organization Model (SLOM) towards the overall performance of the SMEs manufacturing firms.	Multiple Regression Analysis
<b>H1a</b>	There is the influence of dynamic learning towards overall performance of the SMEs manufacturing firms.	Multiple Regression Analysis
<b>H1b</b>	There is the influence of organizational transformations towards overall performance of the SMEs manufacturing firms.	Multiple Regression Analysis
<b>H1c</b>	There is the influence of empowering people towards overall performance of the SMEs manufacturing firms.	Multiple Regression Analysis
<b>H1d</b>	There is the influence of knowledge management towards overall performance of the SMEs manufacturing firms.	Multiple Regression Analysis
<b>H1e</b>	There is the influence of technology applications towards overall performance of the SMEs manufacturing firms.	Multiple Regression Analysis
<b>H2</b>	There is the influence of Systematic Learning Organization Model (SLOM) towards SMEs manufacturing firm performance relative to their major competitors.	Multiple Regression Analysis
<b>H2a</b>	There is the influence of dynamic learning towards SMEs manufacturing firm performance relative to their major competitors.	Multiple Regression Analysis
<b>H2b</b>	There is the influence of organizational transformations towards SMEs manufacturing firm performance relative to their major competitors.	Multiple Regression Analysis
<b>H2c</b>	There is the influence of empowering people towards SMEs manufacturing firm performance	Multiple Regression Analysis

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relative to their major competitors.

<b>H2d</b>	There is the influence of knowledge management towards SMEs manufacturing firm performance relative to their major competitors.	Multiple Regression Analysis
<b>H2e</b>	There is the influence of technology applications towards SMEs manufacturing firm performance relative to their major competitors.	Multiple Regression Analysis

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### 3.13 Summary

This chapter has explained on the method of this research which is covers theoretical framework, research hypothesis, research design, operational definition, research sample and population, instrumentation method, measurement of variables, data collection method and procedure, pilot test, reliability test, and data analysis technique. Development stage of the questionnaire also discussed and it has aligned with the aims and research objectives and also the literature reviewed. Furthermore, this chapter also shows the reliability of the variables used through the pilot test that have been conducted. The analysis of the results of this study will be presented in the next chapter. Based on the needs of the study, the next chapter will explain about the findings or results obtained in this research.

## CHAPTER 4

### RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter in this research discussed the findings of the survey which based on the research objectives as described in Chapter 1. In addition, the researcher also explained the findings from the statistical analysis including the interpretation of data that have been analyzed and the results for research hypotheses. The data obtained were analyzed by using the software of *Statistical Package for the Social Science (SPSS)* version 19. The presentation of the data analysis and result is explained in the following categories:

- i) Descriptive Analysis
- ii) Validity and Reliability Test
- iii) Pearson's Correlation Analysis
- iv) Multiple regression Analysis

The hypotheses testing would be performed by the researcher in which the researcher is requiring to decide whether to accept or reject the hypotheses in the study. On the other hand, several findings can summarize and discussed due to the basis of the research findings. The summary of the results was elaborated in this chapter in order to enhance the understanding of the reader about this study.

## 4.2 Descriptive Analysis

Descriptive analysis is applied by the researcher in order to perform frequency analysis and identify the mean test. First of all, the researcher will elaborate about the frequency analysis. A total of 150 questionnaires were distributed to the respective respondents who are the top management of the SMEs manufacturing firms by using simple random sampling method. Then, researcher has only gained back a total of 102 (N = 102) or 68% of completed questionnaire to be used to create the analysis in this study. However, the researcher is able to reach the target of respondents because the researcher needs only 90 samples to make the research analysis.

Frequency analysis is one of the vital analyses in the research development. This analysis is conducted in order to get a count of the total respondents that participate in this study with different value and indicates the percentage value. In the Section A of the questionnaire, there are ten information related with the respondent's and his/her firm background which includes gender, age, race, and highest level of education, position at the company, total working years, company establishment, total employees, type of ownership and type of industry that the SMEs firms involved.

Due to the 102 samples gained by the researcher with different background and values, the demographic analysis can be done effectively. The demographic information is divided into two categories which are personal information and firm information. In term of personal information based on the findings, the gender composition shows that 51% are male respondents who participate in the study, while 49% are female respondents. Table 4.1 shows the composition of gender in more details.

Table 4.1

*Composition of Respondents by Gender*

<b>Gender</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Male	52	51.0
Female	50	49.0

Then, the highest group composition of respondents' age is from 31-40 years which is 42.2%, followed by the 41 – 50 years and 51 – 60 years with 35.2% and 14.7%. While the lowest group composition of age is below 30 years which is only 7.8%. All of the respondents that are composing by the age are shown at Table 4.2.

Table 4.2

*Composition of Respondents by Age*

<b>Age (Years)</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Below 30	8	7.8
31 – 40	43	42.2
41 – 50	36	35.3
51 – 60	15	14.7

Due to the race composition, the Chinese are ranked as the largest number of respondents at 67.6%, following by Malay respondents at 28.4% and Indian shows the lowest respondents at 3.9%. The Table 4.3 below shows the composition of respondents by race.

Table 4.3

*Composition of Respondents by Race*

<b>Race</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Malay	29	28.4
Chinese	69	67.6
Indian	4	3.9

Afterwards, the large number of respondent's highest level education is the Degree level which shows that 44.1%. Next, it is followed by the diploma and secondary schools with 28.4% and 24.5%. The slight number of respondents due to their highest level education is PhD, Master, and primary schools which shows only 1%. The summary of race composition in this study is shown at the Table 4.4.

Table 4.4

*Composition of Respondents by Highest Level of Education*

<b>Education</b>	<b>Frequency</b>	<b>Percentage (%)</b>
PhD	1	1.0
Master	1	1.0
Degree	45	44.1
Diploma	29	28.4
Secondary School	25	24.5
Primary School	1	1.0

In relation to position of respondents at the respective company, the Senior Manager is the most with 35.5%. And the lowest number of position of respondents at the SMEs organization is business partner and general manager with only 5.9%. The other items are representing Operation Manager, Production Manager, and Supervisor. The Table 4.5 shows the number of respondent's position in the firms.

Table 4.5

*Composition of Respondents by Position of Respondents at Firm*

<b>Position</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Business Owner	7	6.9
Senior Manager	37	36.3
Business Partner	6	5.9
HR Manager	13	12.7
General Manager	6	5.9
Other	33	32.4

Next, the data of respondent's experience years working with the company shows that the years from 5-10 of works experience at the firms is the highest with 36.3%. And the lowest years of working experience at the firm is more than 20 years. All of the respondent's compositions of working experience are shown at Table 4.6.

Table 4.6

*Composition of Respondents by the Total Working Experience*

<b>Working Experience</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Less than 5 years	21	20.6
5 – 10 years	37	36.3
11 – 15 years	30	29.4
16 – 20 years	9	8.8
More than 20 years	5	4.9

In term of firm information, the composition of respondents includes company establishment, total employees, type of ownership and type of industry that the SMEs manufacturing firms involved. Refers to the respondent's information in which the company that establishes with more 20 years is ranked highest number in the survey with 38.2%. In a meanwhile, the less than 5 years of company's establishment show the

low percentage at 3.9%. The Table 4.7 below shows the information about composition of company establishment years from the survey.

Table 4.7

*Composition of Company Establishment Years*

<b>Company Establishment</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Less than 5 years	4	3.9
5 – 10 years	14	13.7
11 – 15 years	24	23.5
16 – 20 years	21	20.6
More than 20 years	39	38.2

Furthermore, most of the respondent's business or organization possesses a 5-49 workers with 63.7% as total employees in the firms. And the lowest figure of the total employee in SMEs organization is less than 5 employees at the 2.9%. The precise of the composition is describes at the Table 4.8 below.

Table 4.8

*Composition of Total Employees at Firm*

<b>Total Employees</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Less than 5 employees	3	2.9
6 – 49 employees	65	63.7
50 – 150 employees	34	33.3

After that, the respondent's types of firm ownership in which the local company of non-Bumiputera are ranked as the highest number at 72.5%, followed by the local company of Bumiputera with 11.8%, foreign company at 10.8% and joint local-foreign company at 4.9%. The composition of types of firm ownership is summarizing below at the Table 4.9.

Table 4.9

*Composition of Type of Firm Ownership*

<b>Types of Ownership</b>	Frequency	Percentage (%)
Local Company - Bumiputera	12	11.8
Local Company - Non Bumiputera	74	72.5
Foreign Company	11	10.8
Joint Local-Foreign Company	5	4.9

Lastly, the largest number of type of SME's manufacturing industry in this study is food, beverages and tobacco industry which shows the percentage at 21.6%. In a meanwhile, the slightly number of type of SME's manufacturing industry is laboratory equipment and other (leisure equipment) at the percentage of 1%. The firms of cement, concrete, ceramic and tiles products, household appliances, rubber products, and stationary is not participate in this study with 0%. The summary of types of industry statistics is illustrated in Table 4.10.

Table 4.10

*Composition of Types of Industry*

<b>Types of Ownership</b>	Frequency	Percentage (%)
Automotive and Component Parts	3	2.9
Building Materials and Related Products	10	9.8
Chemical, Chemical and Plastic Products	16	15.7
Electric and Electronic Products	15	14.7
Food, Beverages and Tobacco	22	21.6
Furniture and Wood Related Products	4	3.9
Industrial and Engineering Products	14	13.7
Iron and Steel Products	3	2.0
Laboratory Equipment	1	1.0

Packaging, Labeling and Printing	6	5.9
Pharmaceutical, Medical Equipment, Cosmetics, Toiletries, and Household	2	2.0
Textiles and Wearing Apparel	5	4.9
Others	1	1.0

In most of the research, the descriptive analysis is becoming the measure instrument and general trends in a data set. Pursuant to Thomson (2009), descriptive statistics are numbers that summarize and ease the readings of the data with the purpose of explaining on what occurred in the sample. Table 4.11 shows the descriptive statistic for all dependent variables and independent variables. The full analysis of descriptive statistical analysis is shown at Appendix 3.

The findings of the analysis shows that overall performance of SMEs firms recorded the highest number of mean with 4.04, and the least means is performance of SMEs firms relative to their major competitors with 3.79. For standard deviation as can be seen, it shows that the performance of SMEs firms relative to their major competitors show the highest figure at 0.56. Henceforth, the lowest figure of standard deviation for dependent variables is overall performance of SMEs firms with only 0.49.

According to the data provided at the table, it shows that the highest mean for independent variables is 4.20 which is represent knowledge management, and followed by empowering people, technology application, dynamic learning with 4.16, 4.11, and 4.01, and the last is organizational transformation with mean values of 3.96. Referring to Marquardt's Learning Organization Analysis (MLOA) Table, if the mean is more than 3.1 (mean > 3.1); it means that the organization is ready for learning organization. In other words, the SMEs manufacturing firms at Johor Bahru is ready for learning

organization because the mean value for every independent variable is positively more than 3.1. For standard deviation, the most highly value is technology application with 0.60 and the least figure is 0.41 which represents knowledge management.

Based on Table 4.11, the dependent variables for overall performance of SME manufacturing firms is negatively skew at -0.117. Then, the performance of firms relative to major competitor is positively skew at 0.289. For independent variables, all of the variables are negatively skew in which dynamic learning at -0.376, organizational transformation at -0.176, empowering people at -0.257, knowledge management at -0.155, and technology application at 0.452. However, the values for skewness for both variables of independent and dependent are great because the number is between +1 and -1. In other words, it means that the value for skewness is near to normal (normal = 0) or symmetrical and the tabulation is not too skew.

For Kurtosis, the dependent variables also shows the good value in which overall performance of SMEs manufacturing firms at -1.082 and -0.589 for performance of firms related to their major competitors. For independent variables, all of the items show the negative value except technology application. Dynamic learning shows -0.248, organizational transformation at -0.847, empowering people shows -0.423, and knowledge management at -0.360. But there is positive value for technology application at 0.039. In conclusion, the kurtosis value for both independent and dependent variables is good because the figure is between +3 and -3. Therefore, it means that the value for kurtosis is near to normal (normal = 0) and the curve of kurtosis is not too high or not too sloping.

Table 4.11

*Summary of Descriptive Analysis (N = 102)*

<b>Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Skewness</b>	<b>Kurtosis</b>
<b>DV</b>				
Overall performance of SMEs manufacturing firms	4.04	0.49	-0.117	-1.082
Performance of SMEs manufacturing firms relative to their major competitors	3.79	0.56	0.289	-0.589
<b>IV</b>				
Dynamic Learning	4.01	0.45	-0.376	-0.248
Organizational Transformation	3.96	0.52	-0.176	-0.847
Empowering People	4.16	0.42	-0.257	-0.423
Knowledge Management	4.20	0.41	-0.155	-0.360
Technology Application	4.11	0.60	-0.452	0.039

### **4.3 Validity and Reliability Analysis**

This part will illustrate the analysis of validity and reliability in order to identify whether the questionnaire used by the researcher is accurate or not.

#### **4.3.1 Validity Test for Dependent Variables**

The data about overall performance of firms from the survey was analyzed by using the Principal Component Analysis (PCA), with Varimax rotations on data which obtained from 102 respondents. The Kaiser-Meyer Olkin (KMO) is to measure of sampling sufficiency recommended that sample was factorable (KMO = 0.806). The rotated component matrix is divided into two components. It is because the component 1 items are based on the firm productivity and financial which has ability provides a firm with profitability. While component 2 is more focused on image of the business in how they keeps the relations with any interests parties who contributes for the firms production such as employees and suppliers. The findings of Varimax rotation of the solution for overall performance of SMEs Manufacturing firms is shown at Appendix 4.

Based on the data derived from the survey for SME performance relative to their major competitors, the Kaiser-Meyer Olkin (KMO) which is used to identify sampling adequacy suggested that sample also was factorable (KMO = 0.820). The items in the rotated are consistent and not divided into many parts. There are only one component are extracted and the results of Varimax rotation of the solution for performance of SMEs Manufacturing firms relative to major competitors cannot be rotated. Then, the result is shown at Appendix 4.

For independent variables, the instruments which represent Systematic Learning Organization Model (SLOM) is valid due to the long-term establish and well-known by many scholars of learning and management field. In addition, this instrument also was used by many researchers previously and become one of the essential instruments to study the learning organization mechanism. Therefore, it proves that this independent variables instrument possesses high level of validity and certainly can be applied by the researcher to get the outcomes from the SMEs manufacturing firms in Johor Bahru.

#### **4.3.2 Reliability Test**

Reliability is significantly important to measure the data consistently, so the researcher is able to know whether the inferences are valid or not. According to Weiner (2007), reliability is the degree to which a measurement technique can rely upon to ensure consistency of the findings from repeated application. Some of the method can be used to determine the reliability of the instruments. Reliability of questionnaire was tested by using Cronbach's Alpha procedures based on the model of internal consistency.

Referring to Sekaran (2003) in his writings, he stated that the closer the Alpha value to 1, it indicates a high level of reliability of the research data (Cronbach's Alpha = > 0.90). If the Alpha value is less than 0.6, it may be assumed that the instrument used in the study had low reliability (Cronbach's Alpha = < 0.60). Good and acceptable reliability if the value of Alpha is more than 0.7 (Cronbach's Alpha = 0.7 to < 0.90).

A reliability test result of data gathered from the survey is show at Table 4.12. Based on the data obtained, the reliability statistics of the dependent variables and independent variables are very good. For dependent variables, the Cronbach's Alpha

value shows a better result of reliability of 0.891 which represent all of the dependent variables. On the other hand, the Cronbach's Alpha value also shows an excellent reliability of 0.951 for Systematic Learning Organization Model (SLOM) or independent variables. A range of Cronbach's Alpha value for dependent variable items is from 0.824 until 0.827. While learning organization model which include five independent variables, the range is from 0.807 to 0.919. The Appendix 5 shows the statistic of reliability analysis of dependent and independent variables.

Table 4.12

*Reliability Statistic for the Data Gathered from Survey*

<b>Items</b>	<b>Number of Items</b>	<b>Cronbach's Alpha</b>
<b>Dependent Variables</b>	19	0.891
Overall performance of SME firms	11	0.827
SME performance related to major competitors	5	0.824
<b>Independent Variables</b>	50	0.951
Dynamic Learning	10	0.821
Organizational Transformation	10	0.861
Empowering People	10	0.808
Knowledge Management	10	0.807
Technology Application	10	0.919

#### **4.4 Pearson's Correlation Analysis**

For this analysis, the researcher is tried to examine whether the independent variables have the relationship with dependent variables or not. The Table 4.13 below shows the correlation analysis of the research. The full analysis of correlation is shown at the table at Appendix 6.

The Table 4.13 of correlation analysis shows that dynamic learning, organizational transformation, empowering people, knowledge management, and technology application with overall performance of SMEs firms have a positive correlation in which  $r = 0.526, 0.522, 0.366, 0.475$  and  $0.458$ , and  $p = 0.000; p < 0.05$ . The strength of the relationship between these two variables also was moderate for dynamic learning, organizational transformation, knowledge management, and technology application. And the relationship between empowering people and the dependent variables is weak. In conclusion, it was found that dynamic learning, organizational transformation, empowering people, knowledge management, and technology application have a significant relationship with overall performance of SMEs manufacturing firms in Johor Bahru.

Pursuant to Table 4.13, the analysis shows that there was positive correlation between dynamic learning, organizational transformation, empowering people, knowledge management, and technology application with SME manufacturing firm performance relative to their major competitors with  $r = 0.438, 0.366, 0.328, 0.393$  and  $0.386$ , and  $p = 0.000; p < 0.05$ . Thus, the relationship strength was weak for organizational transformation, empowering people, knowledge management, and technology application with SME manufacturing firm performance relative to their major competitors. But the relationship between dynamic learning with this variable is moderate. In summary, it was found that dynamic learning, organizational transformation, empowering people, knowledge management, and technology application have a significant relationship with SME manufacturing firm performance relative to their major competitors.

Table 4.13

*Correlation Analysis (N=102)*

		<b>Mean_OP</b>	<b>Mean_PC</b>
<b>DL_Mean</b>	<b>Pearson Correlation</b>	0.526**	0.438**
	<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.000</b>
<b>OT_Mean</b>	<b>Pearson Correlation</b>	0.522**	0.366**
	<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.000</b>
<b>EP_Mean</b>	<b>Pearson Correlation</b>	0.366**	0.328**
	<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.001</b>
<b>KM_Mean</b>	<b>Pearson Correlation</b>	0.475**	.393**
	<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.000</b>
<b>TA_Mean</b>	<b>Pearson Correlation</b>	0.458**	.386**
	<b>Sig. (2-tailed)</b>	<b>.000</b>	<b>.000</b>

\*\* Correlation is significant at the 0.01 level (2-tailed)

#### 4.5 Multiple Regression Analysis

Due to two or more independent variables used by the researcher to make a prediction towards dependent variables, so the multiple regression analysis is appropriate and used in this study. Multiple regression analysis was used to analyze whether the independent variable (Systematic Learning Organization Model) influence the dependent variables (performance of SMEs manufacturing firms). For this analysis, 12 hypotheses are tested to ensure whether the independent variables are able to influence dependent variable which is in line with the objectives of the study. The details analysis of multiple regressions can be referred at Appendix 7.

As shown in Table 4.14, the result of regression analysis indicates the influence of learning organization towards the first dependent variable which is representing the overall performance of SMEs manufacturing firms. There are six hypotheses is tested in this part and Table 4.14 indicates the hypotheses results whether the researcher decide to accept or reject the hypotheses.

The result of H<sub>1</sub> was tested using multiple regression analysis. Collectively, the result explained that R Square value is 0.335. This demonstrates that 35.5% of variance that describes the DV (overall performance of the SMEs manufacturing firms) was accounted to the IVs (Systematic Learning Organization Model) where the F value = 9.651 and significant value is 0.000 ( $p < 0.1$ ). Therefore, the hypothesis is accepted. It means that the Systematic Learning Organization Model (SLOM) is able to influence overall performance of the SMEs manufacturing firms.

However, the results vary if it indicates individually. For H<sub>1a</sub>, the dimension of dynamic learning of SLOM demonstrates that  $\beta = 0.279$  and the  $t$  value is 1.778 which is more than 1.645 ( $t > 1.645$ ). The significant value is 0.079 which is less than 0.1 ( $p < 0.1$ ). Thus, the hypothesis is accepted. It means that the dynamic learning is able to influence overall performance of the SMEs manufacturing firms.

For H<sub>1b</sub>, the second dimension which represents organizational transformation of SLOM describes that  $\beta = 0.132$  and the  $t$  value is 0.906 which is less than 1.645 ( $t < 1.645$ ). The significant value is 0.367 which is more than 0.1 ( $p > 0.1$ ). Thus, the hypothesis is rejected. It means that the organizational transformation is not able to influence overall performance of the SMEs manufacturing firms.

The dimension of empowering people of SLOM which represents H1c describes that  $\beta = -0.012$  and the  $t$  value is  $-0.089$  which is less than  $1.645$  ( $t < 1.645$ ). The significant value is  $0.929$  which is more than  $0.1$  ( $p > 0.1$ ). Thus, the hypothesis is rejected. It means that the empowering people are not able to influence overall performance of the SMEs manufacturing firms.

For H1d, the dimension of knowledge management of SLOM describes that  $\beta = 0.142$  and the  $t$  value is  $0.933$  which is less than  $1.645$  ( $t < 1.645$ ). The significant value is  $0.353$  which is more than  $0.1$  ( $p > 0.1$ ). Thus, the hypothesis is rejected. It means that the knowledge management is not able to influence overall performance of the SMEs manufacturing firms.

The last hypothesis, H1e shows that  $\beta = 0.134$  and the  $t$  value is  $1.470$  which is less than  $1.645$  ( $t < 1.645$ ). The significant value is  $0.145$  which is more than  $0.1$  ( $p > 0.1$ ). Thus, the hypothesis is rejected. It means that the technology application is not able to influence overall performance of the SMEs manufacturing firms. The details of the results are summarized in Table 4.14.

Table 4.14

*Multiple Regression Analysis for Hypothesis 1 (N=102)*

<b>Learning Organization and SMEs Performance</b>	<b>Variables</b>	<b>Hypotheses</b>	<b>Performance (<math>\beta</math>)</b>
<b>Independent Variables Statistic Summary</b>	Overall performance of SMEs manufacturing firms	H <sub>1</sub>	0.300
	R <sup>2</sup>		0.335
	F		9.651

	p		.000 <sup>b</sup>
Dynamic Learning	H1a		0.279
Organizational Transformation	H1b		0.132
Empowering People	H1c		-0.012
Knowledge Management	H1d		0.142
Technology Application	H1e		0.134

p\* < 0.1, p\*\* < 0.05, p\*\*\* < 0.01

Based on Table 4.15, the result of regression analysis determines the influence of learning organization towards the second dependent variables which is representing the SMEs manufacturing firm performance relative to their major competitors. There are six hypotheses is tested in this part and Table 4.15 indicates the hypotheses results whether the researcher decide to accept or reject the hypotheses.

Collectively, the result explained that R Square value for H<sub>2</sub> is 0.485. This demonstrates that 48.5% of variance that describes the DV (SMEs manufacturing firm performance relative to their major competitors) was accounted to the IVs (Systematic Learning Organization Model) where the F value = 5.897 and significant value is 0.000 (p<0.1). So, the hypothesis is accepted. It means that the Systematic Learning Organization Model (SLOM) is able to influence SMEs manufacturing firm performance relative to their major competitors.

However, the results vary if it describes individually. For H<sub>2a</sub>, the dimension of dynamic learning of SLOM demonstrates that  $\beta = 0.362$  and the *t* value is 1.889 which is more than 1.645 (*t* > 1.645). The significant value is 0.062 which is less than 0.1 (p < 0.1). Thus, the hypothesis is accepted. It means that the dynamic learning is able to influence SMEs manufacturing firm performance relative to their major competitors.

For H2b, the dimension of organizational transformation of SLOM describes that  $\beta = -0.141$  and the  $t$  value is  $-0.788$  which is less than  $1.645$  ( $t < 1.645$ ). The significant value is  $0.432$  which is more than  $0.1$  ( $p > 0.1$ ). Thus, the hypothesis is rejected. It means that the organizational transformation is not able to influence SMEs manufacturing firm performance relative to their major competitors.

For H2c, the dimension of empowering people of SLOM describes that  $\beta = 0.081$  and the  $t$  value is  $0.514$  which is less than  $1.645$  ( $t < 1.645$ ). The significant value is  $0.608$  which is more than  $0.1$  ( $p > 0.1$ ). Thus, the hypothesis is rejected. It means that the empowering people are not able to influence SMEs manufacturing firm performance relative to their major competitors.

For H2d, the dimension of knowledge management of SLOM describes that  $\beta = 0.205$  and the  $t$  value is  $1.102$  which is less than  $1.645$  ( $t < 1.645$ ). The significant value is  $0.273$  which is more than  $0.1$  ( $p > 0.1$ ). Thus, the hypothesis is rejected. It means that the knowledge management is not able to influence SMEs manufacturing firm performance relative to their major competitors.

The last hypothesis, H2e shows that  $\beta = 0.187$  and the  $t$  value is  $1.680$  which is more than  $1.645$  ( $t > 1.645$ ). The significant value is  $0.096$  which is less than  $0.1$  ( $p < 0.1$ ). Thus, the hypothesis is accepted. It means that the technology application is able to influence SMEs manufacturing firm performance relative to their major competitors. The details of the results are summarized in Table 4.15.

Table 4.15

*Multiple Regression Analysis for Hypothesis 2 (N=102)*

<b>Learning Organization and SMEs Performance</b>	<b>Variables</b>	<b>Hypotheses</b>	<b>Performance (<math>\beta</math>)</b>
<b>Independent Variables Statistic Summary</b>	SMEs manufacturing firm performance relative to major competitors	H <sub>2</sub>	0.195
	R <sup>2</sup>		0.235
	F		5.897
	p		.000 <sup>b</sup>
	Dynamic Learning	H <sub>2a</sub>	0.362
	Organizational Transformation	H <sub>2b</sub>	-0.141
	Empowering People	H <sub>2c</sub>	0.081
	Knowledge Management	H <sub>2d</sub>	0.205
	Technology Application	H <sub>2e</sub>	0.187

p\* < 0.1, p\*\* < 0.05, p\*\*\* < 0.01

#### 4.6 Hypotheses Summary

There are variations of the hypothesis results that can be seen in this study and Table 4.16 indicates briefly about the hypothesis results which analyzed by the researcher. An analysis of Multiple Regression coefficient explained that five hypotheses are accepted and have a significance influence between independent variables and dependent variable. Meanwhile, the other seven hypotheses in this study are rejected.

Table 4.16

*Summary of All Hypotheses (N=102)*

<b>Hypothesis</b>		<b>Accepted (Have a significant influence)</b>	<b>Rejected (Did not have a significant influence)</b>
<b>Multiple Regression Analysis</b>			
<b>H1</b>	There is the influence of Systematic Learning Organization Model (SLOM) towards the overall performance of the SMEs manufacturing firms.	Accepted	
<b>H1a</b>	There is the influence of dynamic learning towards overall performance of the SMEs manufacturing firms.	Accepted	
<b>H1b</b>	There is the influence of organizational transformations towards overall performance of the SMEs manufacturing firms.		Rejected
<b>H1c</b>	There is the influence of empowering people towards overall performance of the SMEs manufacturing firms.		Rejected
<b>H1d</b>	There is the influence of knowledge management towards overall performance of the SMEs manufacturing firms.		Rejected
<b>H1e</b>	There is the influence of technology applications towards overall performance of the SMEs manufacturing firms.		Rejected
<b>H2</b>	There is the influence of Systematic Learning Organization Model (SLOM) towards SMEs manufacturing firm performance relative to their major competitors.	Accepted	
<b>H2a</b>	There is the influence of dynamic learning towards SMEs manufacturing firm performance relative to their major competitors.	Accepted	

<b>H2b</b>	There is the influence of organizational transformations towards SMEs manufacturing firm performance relative to their major competitors.	Rejected
<b>H2c</b>	There is the influence of empowering people towards SMEs manufacturing firm performance relative to their major competitors.	Rejected
<b>H2d</b>	There is the influence of knowledge management towards SMEs manufacturing firm performance relative to their major competitors.	Rejected
<b>H2e</b>	There is the influence of technology applications towards SMEs manufacturing firm performance relative to their major competitors.	Accepted

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#### **4.7 The Discussion of the Hypotheses Results**

This part illustrates the hypotheses result of the study that are divided into two parts includes the accepted hypotheses and rejected hypotheses based on 12 hypotheses. The researcher concludes and discusses the results based on the findings and related them with previous studies.

H<sub>1</sub> There is the influence of Systematic Learning Organization Model (SLOM) towards the overall performance of SMEs manufacturing firms.

The hypothesis is accepted and shows significant influence of Systematic Learning Organization Model (SLOM) towards the overall performance of the SMEs manufacturing firms. According to Gephart (1996), learning organization is a capability and opportunity to accept new pattern and ideas that can reflex the firm performance. It

means that through the learning, the firm is able to control the performance by using new ideas and ability to control the idea. Besides, the scholars also found that learning organization and organizational performance have a positive relationship (Howton, 2002). In line with the analysis results, Jashapara (2003) also agreed that learning organization has strong relationship with organizational performance. Therefore, this study indicates that Systematic Learning Organization Model (SLOM) is able to influence the overall performance of the SMEs manufacturing firms at Johor Bahru.

H<sub>1a</sub> There is the influence of dynamic learning towards overall performance of SMEs manufacturing firms.

The hypothesis is accepted and shows significant influence of dynamic learning towards the overall performance of the SMEs manufacturing firms. Many scholars support that dynamic learning in the firms is able to drive the performance better than previous performance. Beeby and Booth (2000) stated that individual learning is becoming strategic component of learning organization that can influence the successful of organizational development. Button, Mathieu and Zajac (1996) also indicated that the individual who is full of spirit and prefer challenging jobs is the people that practice dynamic learning in order to increase the firm performance. The team learning also positively can help the organization build the strategy, so it will affect the firm performance (Tucker, Edmondson, and Spear, 2002). The superb thinkers and proactive learner is able to improve organizational performance through the continuous learning for improvement and learn from mistakes and error (Sujan, Weitz, and Kumar, 1994). Thus, this study proves the significant relationship between dynamic learning and overall performance of the SMEs manufacturing firms at Johor Bahru.

H<sub>1b</sub> There is the influence of organizational transformations towards overall performance of SMEs manufacturing firms.

The hypothesis is rejected and shows that the influence of organizational transformation towards the overall performance of the SMEs manufacturing firms is not significant. It means that the organizational transformation is not affecting the overall performance of SMEs manufacturing at Johor Bahru. Even though Burtonshaw-Gunn and Salameh (2011) agreed that organizational transformation is crucial significant with the performance of firm, but some scholars believe that adaptation to transform is insufficient to sustain the organizational competitiveness (McGill, Slocum, and Lei, 2003; Senge, 1990; and Gardiner and Whiting, 1997). These matters occur due to different assumption about transformation in Asian context. According to Hallinger (1998), most of the study is only focus in western region likes North America and Europe, but Asia as an east region is possibly different from the western. This is due to the individualism in Western culture which is excellent to stimulate the innovation and changes in organization compare to Eastern culture which is more collectivism in which the changes or transformation is difficult to done because the organization is concern with many parties and other things (Hallinger, 1998). Asian culture view changes within the context of community and it can be considered that difficult to apply transformation due to the unexpected effects and issues against many parties after the organization transformation. Therefore, this study proves the insignificant relationship between organizational transformation and overall performance of the SMEs manufacturing firms at Johor Bahru.

H<sub>1c</sub> There is the influence of empowering people towards overall performance of SMEs manufacturing firms.

The hypothesis is rejected and shows that influence of empowering people towards the overall performance of the SMEs manufacturing firms is not significant. It means that the empowering people is not affected the overall performance of SMEs manufacturing at Johor Bahru. This matter happens probably because empowering people did not influence directly against the overall performance of SMEs manufacturing at Johor Bahru. Perhaps, there is some factors that mediate the relationship with the overall performance of SMEs firms such as system and structure (Levitt and March, 1988); organisational values and assumptions (Argyris and Schön, 1978); skills (Fiol and Lyles, 1985); and employee satisfaction (Bontis, Crossan, and Hulland, 2002). So, this study proves the insignificant relationship between empowering people and overall performance of the SMEs manufacturing firms at Johor Bahru.

H<sub>1d</sub> There is the influence of knowledge management towards overall performance of the SMEs manufacturing firms.

The hypothesis is rejected and shows that influence of knowledge management towards the overall performance of the SMEs manufacturing firms is not significant. It means that the knowledge management is not affected the overall performance of SMEs manufacturing at Johor Bahru. This matter happens probably because knowledge management did not influence directly against the overall performance of SMEs manufacturing at Johor Bahru. The mediating factors might be needed in determining the relationship between knowledge management and overall performance of SMEs firms such as system and structure (Levitt and March, 1988); organisational values and

assumptions (Argyris and Schön, 1978); skills (Fiol and Lyles, 1985); employee satisfaction (Bontis, Crossan, and Hulland, 2002); core competencies (Prahalad and Hamel, 1990); and organizational competitiveness and innovativeness (Nason, 1994). Thus, it can conclude that knowledge management is not able to influence overall performance of the SMEs manufacturing firms at Johor Bahru.

H1e There is the influence of technology applications towards overall performance of the SMEs manufacturing firms.

The hypothesis is rejected and shows that influence of technology application towards the overall performance of the SMEs manufacturing firms is not significant. It means that the technology application is not affected the overall performance of SMEs manufacturing at Johor Bahru. This matter raises due to the less application of technology in SMEs firms, so it can be describes that Malaysian manufacturing SMEs still have less intention to use technology in their business. That is the reason of most Malaysian SMEs is still applied traditional manufacturing management (Soon and Zainol, 2014). According to Galerikami Media Network (2012), the total of SMEs firms in Malaysia is more than 700,000, but the total of SMEs firms that possess their own websites is only 100,000 more or less, so it proved that there are still a lot of firms that left behind in technology application It indicates that technology learning approach is not widely applied by the SMEs owners or entrepreneurs especially in Johor Bahru. Thus, this study proves the insignificant relationship between technology application and overall performance of the SMEs manufacturing firms at Johor Bahru.

H<sub>2</sub> There is the influence of Systematic Learning Organization Model (SLOM) towards SMEs manufacturing firm performance relative to their major competitors.

The hypothesis is accepted and shows significant influence of Systematic Learning Organization Model (SLOM) towards SMEs manufacturing firm performance relative to their major competitors. Chodak (2001) claimed that the concept of learning organization and the benefit of learning organization can drive the organization in increasing competitive advantages compared to their competitor and positively affect the performance. Next, Senge (1990) and Stata (1989) demonstrate that the concept of learning organization is important which concern to the development strategies in organization in order to achieve competitiveness and superior performance in a highly dynamic environment. Thus, this study proves the significant relationship between Systematic Learning Organization Model (SLOM) and SMEs manufacturing firm performance relative to their major competitors at Johor Bahru.

H<sub>2a</sub> There is the influence of dynamic learning towards SMEs manufacturing firm performance relative to their major competitors.

The hypothesis is accepted and shows significant influence of dynamic learning towards SMEs manufacturing firm performance relative to their major competitors. Pursuant to Zhao, Calantone and Cavusgil (2002), learning organization is able to enhance the creativity of employee and innovation increment so the companies are able to maintain their best performance compared to their major competitors. The effective learning in the firms will in the long run perform better than their competitors (Inkpen and Crossan, 1995). On the other hand, Morgan, Katsikeas, and Kwaku (1998) also stated that

dynamic learning is definitely can improve organizations and exhibit excellence in the delivery of products or services to their respective consumers compared to their competitors. Therefore, it can conclude that dynamic learning is able to influence SMEs manufacturing firm performance relative to their major competitors at Johor Bahru.

H2b There is the influence of organizational transformations towards SMEs manufacturing firm performance relative to their major competitors.

The hypothesis is rejected and shows that influence of organizational transformation towards the SMEs manufacturing firm performance relative to their major competitors is not significant. It means that the organizational transformation is not affected SMEs manufacturing firm performance relative to their major competitors at Johor Bahru. Some experts believe that adaptation to transform in the firms is insufficient to sustain the organizational competitiveness (McGill, Slocum, and Lei, 2003; Senge, 1990; and Gardiner and Whiting, 1997). The value structure of the Asian culture appears to differ from Western culture in which this matter give an impact to the organizational management and change (Hofstede, 1991; and Inkeles, 1997). While the western is obsessed with the transformation for good results, the Asian is pay attention to the cooperation with the community and other parties (Hallinger, 1998). The transformations in the firms are less considered by the firms at Asian country especially for SMEs due to those matters. Therefore, this study proves the insignificant relationship between organizational transformations and SMEs manufacturing firm performance relative to their major competitors at Johor Bahru.

H2c There is the influence of empowering people towards SMEs manufacturing firm performance relative to their major competitors.

The hypothesis is rejected and shows that influence of empowering people towards the SMEs manufacturing firm performance relative to their major competitors is not significant. It means that the empowering people is not affected the SMEs manufacturing firm performance relative to their major competitors at Johor Bahru. This matter occurs probably because empowering people are not able to influence directly towards the SMEs manufacturing firm performance relative to their major competitors at Johor Bahru. There is maybe some factor that become the mediating factor for the relationship with the SMEs manufacturing firm performance relative to their major competitors such as system and structure (Levitt and March, 1988); organisational values and assumptions (Argyris and Schön, 1978); skills (Fiol and Lyles, 1985); employee satisfaction (Bontis, Crossan, and Hulland, 2002); core competencies (Prahalad and Hamel, 1990); and organizational competitiveness and innovativeness (Nason, 1994). Thus, this study proves the insignificant relationship between empowering people and SMEs manufacturing firm performance relative to their major competitors at Johor Bahru.

H<sub>2d</sub> There is the influence of knowledge management towards SMEs manufacturing firm performance relative to their major competitors.

The hypothesis is rejected and shows that influence of knowledge management towards the SMEs manufacturing firm performance relative to their major competitors is not significant. It means that the knowledge management is not affected the SMEs manufacturing firm performance relative to their major competitors at Johor Bahru. This matter occurs probably because knowledge management is not able to influence directly towards the SMEs manufacturing firm performance relative to their major competitors at

Johor Bahru. There is maybe some factor that become the mediating factor for the relationship with the SMEs manufacturing firm performance relative to their major competitors such as system and structure (Levitt and March, 1988); organisational values and assumptions (Argyris and Schön, 1978); skills (Fiol and Lyles, 1985); employee satisfaction (Bontis, Crossan, and Hulland, 2002); core competencies (Prahalad and Hamel, 1990); and organizational competitiveness and innovativeness (Nason, 1994). Therefore, this study proves the insignificant relationship between knowledge management and SMEs manufacturing firm performance relative to their major competitors at Johor Bahru.

H2e There is the influence of technology applications towards SMEs manufacturing firm performance relative to their major competitors.

The hypothesis is accepted and shows significant influence of technology application towards SMEs manufacturing firm performance relative to their major competitors. In order to compete with other rivals, the application of information technology is important. Pursuant to Soon and Zainol (2011), the firms in Malaysia are requiring in transforming the business operation in order to be more creative and innovative to enhance firm performance and reach high competitiveness via the application of technology. The technology systems evidence that it can improve performance through learning activity, increase productivity, reduce cost, systematic management of customer services, and measuring competitors position (Namasivayam, 2000), so it positively can increase the performance relative to major competitors. Therefore, this study proves the significant relationship between technology application and SMEs manufacturing firm performance relative to their major competitors at Johor Bahru.

## 4.8 Summary

In this chapter, the researcher discussed the hypothesis tested that has been formed to implement the analysis which related to the variables of the research. The research findings show that there is significant influence of Systematic Learning Organization Model (SLOM) towards overall performance of SMEs manufacturing firms and SMEs manufacturing firm performance relative to their major competitors.

This study also has identified the influence of independent variables towards dependent variables which is in parallel with the research objectives of number 1 and 2. Based on the Table 4.14 and 4.15, the research analysis using the Multiple Regression analysis found that 5 from 12 hypotheses are significant and the dependent variables have an ability to influence the independent variables. The Systematic Learning Organization Model (SLOM) and the dimension of dynamic learning of SLOM have a significant influence towards overall performance of SMEs manufacturing firms. For the second dependent variable which representing performance of SMEs manufacturing firms relative to their major competitors, there are only Systematic Learning Organization Model (SLOM) and its two element of SLOM such as dynamic learning and technology application have a significant influence with it.

As a conclusion, dynamic learning in Systematic Learning Organization Model (SLOM) is the crucial important dimension in which can influence the performance of SMEs manufacturing in Johor Bahru and have capacity to drive Malaysia to be Knowledge-Based Economy (K-Eco). Therefore, the adaptation of dynamic learning is very essential to SMEs in Johor Bahru in order to enhance their performance.

## CHAPTER 5

### CONCLUSION AND RECOMMENDATION

#### **5.1 Introduction**

In this last chapter, the researcher will provide a brief overview and summarize the findings which were obtained from Chapter 4. It is important that the researcher needs to conclude and provide recommendations in this study which are based on the research findings. The section in this chapter will be divided into the following categories: namely research implication, recommendation of the research, limitation of the study, suggestion for future research, and conclusion.

Research implication is divided into two components which include managerial and practical implication, and academic implication. The recommendations of research include opinion from the researcher and opinion from the SMEs entrepreneur or owner or manager. Besides that, the researcher also provides suggestion for future research in order to enhance the value of the study that benefits many parties in the future.

With the division of sections in this chapter, it directly will facilitate the reader to understand the implication of this study, recommendation, and suggestion for future research. Many parties are benefited by this study because it clearly demonstrates the way to be effective and efficient through the learning process.

## **5.2 Research Implication**

The study was able to emphasize several important things that some parties need to concern. Thus, this part will illustrate the division of research implication into two categories such as managerial and practical implication, and academic implication.

### **5.2.1 Managerial and Practical Implication**

The findings in this research demonstrate that several things have necessary attention and some efforts need to be done by the management parties of SMEs manufacturing especially top management of the company in order to develop informative, smart thinkers, technological residents, and competence employees or workers. Due to the academic background of SMEs top management by referring at demographic information of respondents, most of the owner or manager possesses a Bachelor's Degree with 44.1%. It indicates that most of owner or manager is preferred as knowledge and qualified individuals. Therefore, it is become responsibility of the top management of SMEs manufacturing firms to strive to familiarize the learning process and culture among workers.

In today's modern world in managerial field, the learning element cannot be underestimated and the firms should always put the learning interest as the major concerns between employees. It is important because knowledge is the primary source for the company to compete and continue their survival in today's business matters. So, the top management of firms need to provide an opportunity for the workers to attain knowledge through learning activities and concentrate on ensuring that their workers are prepared with the skills, ability and knowledge to encounter with everyday routines.

Then, the firm decision makers should always focused on improving the learning organization practices for their staffs or employees because they are the main strength of company's success, therefore the top management should build up an ambitious strategy to deal with the changing desires and needs of learning process in the firms. The analysis results of this study are very essential to the top management of SMEs firms because the firms need to make efforts with the proper approach and strategy to improve the learning organizational practice especially for SMEs manufacturing at Johor Bahru. For sure, it will provide some insight and benefitting the both parties including the employers and employees.

In term of practical implication, based on the findings of this study, many parties are able to understanding the importance of learning process and applied it as firm advantages. In order to ensure that the performance of companies still on top, organization can apply many practice for their staffs. For instance, they can provides their workers with opportunity to achieve rewards for encouraging learning process, being promoted due to the individuals skills and knowledge, teamwork orientation, etc.

Many parties like organization, government, and policy makers should use these variables as mechanism and steps in order to improve learning process in which this matter will affect the development of social life and economy. For example, Ministry of International and Trade Industry (MITI) in Malaysia is responsible to monitor the development and movement of the industry and SME Corporation also play a role to ensure that SMEs in Malaysia is positively achieve potential of being a learning organization. The provision of funds by the any lenders agency can assists SMEs firms to improve to be knowledgeable companies.

### **5.2.2 Academic Implication**

In general, this study is able to enhance the contribution to expand the existing knowledge, especially related with the topic of learning organization. According to Drucker (1993), the only meaningful resource in today's world is knowledge. This research is very interesting and able to help the reader to experience the current situation of Malaysian industry's performance especially for small medium enterprise in adapting with the learning organization practices. On the other hand, this study will increase the collection of learning organization research in this country due to the lack of studies about this topic. Therefore, the researcher hopes that this study will help the readers to improve their knowledge, understanding, and attract readers to do research on the learning organization topic.

## **5.3 Recommendations from the Research**

In this part, the researcher and the representative from SMEs manufacturing firms provide an opinion for the development of the SMEs in embracing the learning organizational practices. So, this part will clarify the recommendation from researcher and the SMEs Entrepreneur/Owner/Manager.

### **5.3.1 Recommendation from the Researcher**

Firstly, the SMEs firms should recruiting and selecting the candidates with the required knowledge, ability, and skills because these kinds of individuals are capable to perform and encourage the learning organization in the firms. The continuous learning by the individuals will helps the firms to achieve good performance for the short and long term.

Secondly, the SMEs manufacturing firms should providing some funds to invest in employees training and development, and the use of any kind of methodologies that are helpful to increase the performance. For instance, the formal courses, workshop, on the job training, and others are able to enhance worker's knowledge and job skills.

Thirdly, the manager or owner also can support the vision of learning organization by encouraging their workers to learn from one another and applying knowledge sharing technique in order to improve their decision making skills. Variety of instrument can be used to share knowledge such as through communication by using e-mail, social media, etc.

Fourthly, the top management of firms should responsible to demonstrate the concept of learning organization and provides a reward for their contribution in learning process. For example, the workers are able to being promoted if they are contributing to enhance learning process and maximize the communication between their co-workers.

Finally, the top management of the SMEs firms also are recommended to maximize the utilization of technology because technology is one of the main character in building creativity and innovative individuals and organization. Through the data access, the workers can effectively doing their job quickly and accurately. Technology is able to enhance the communication between people and with the assistance from technology equipment, the knowledge can be generated. Thus, it directly or indirectly can enhance the learning opportunities of the workers in the organization. Through the technology, the firms also can develop new strategies and approaches to boost their performance positively.

### **5.3.2 Recommendation from the SMEs Entrepreneur/Owner/Manager**

In order to attain some knowledge or experience from the respondents, researcher gave an opportunity for respondents to express their recommendation that they wish to made. From the questionnaire, the researcher has provided a space in Section D for respondents to fill their recommendation or experiences. Some of the respondents were willing to share their recommendation and some views that they experienced.

Firstly, one of the respondents mentioned that his/her is unaware and out of knowledge with the existence of some SMEs agencies or bodies in Malaysia. He/she also did not know the function and role of those agencies. Therefore, he/she recommended that the related agencies or bodies of SMEs should down to the ground and taking parts for the developments of overall SMEs in Malaysia. On the other hand, the related agencies or bodies of SMEs should organize many activities and efforts to appreciate the contribution of SMEs in Malaysia. In that way, the related agencies are able to introduce and promote their image to the public as well as community.

Then, another respondent expressed that major way for SMEs to success is through the production of quality products and services. He recommended that the company who strive to produce quality product, the company is able to attain big benefits. He also stated that the quality of the products will represent the company's image and operation as a whole. One of the Muslim's respondent said that the main strength Muslim's products is because of quality in term of 'halal', clean and sacred. Thus, it benefitted the Muslim's company because most of foods and beverages SMEs in Malaysia are dominated by Muslims.

#### **5.4 Limitation of the Research**

There are limitations of the study where the study is only focused on manufacturing types of SMEs. On the other hand, the sampling frame for this research was only limited to the SMEs organizations of firms at Johor Bahru. Therefore, the finding and result of this study was unable to be generalizing to all population of SMEs organization in Johor as well as Malaysian firms.

In addition, another limitation of this study is respondents cooperative. Some of the respondents were irresponsible in answering the questionnaire. There are a total of 150 questionnaire were distributed to the respective respondents in order to increase the accuracy of the data based on data sample, but the researcher only gained back the total of 102 of total questionnaires.

By the way, the simple random sampling method was selected since it is cheap and fast way to obtain information from the respondents. Questionnaire is commonly used by the researcher due to many benefits. The accuracy of the data collected through the questionnaire was depending on the sincerely of the answer given by the respondents. The method is limited due to many kinds of method can be used such as interviews, focus group, observations, etc.

Last but not least, the final limitation of the study is time constraint. The researcher was only given 5 month period to complete this research and submit the study. Thus, the researcher needs to work hard and spend the time more efficiently in order to finish the study based on the time as prescribed.

## 5.5 Suggestion for Future Research

Even though there were a lot of research regarding to learning organization and performance of company at the international level, but this study is critically important especially in Malaysia because the topic of learning organization is still new and lack of studies and need to be explored. According to Kamaruddin (2009), due to the different culture and the way of life compared to other country in the world especially west country in which pioneered this research, in fact, for sure that characteristic possess by Malaysian community is definitely different with other nation. For those matters, it will make that learning organization in Malaysian firms or bodies is an interesting topic to be viewed by future researcher. Hence, it will be beneficial if the future researchers are consider in making a research as suggested below:

- Extending the study into another industry of SMEs in order to increase the results consistence from the findings. For this study, the researcher is focused on manufacturing firms of SMEs, but in fact, there are many types of SMEs in Malaysia such as agriculture and landscapes, advertisement firms, mining, legal consultations, financial services, telecommunications, tourism services, and other firms.
- Future research also can examine another element for learning organization, so that this will improve the understanding of this topic that could impact the SMEs. For instance, it can view the Fifth Discipline of Learning Organization by Peter Senge (1990), characteristics of learning organization by Marquardt and Reynolds (1994), etc.

## **5.6 Conclusion**

The purpose of this study is to investigate the relationship between Systematic Learning Organization Model (SLOM) with performance of SMEs manufacturing firms at Johor Bahru, Johor. The population sample was entrepreneur or owner or manager or other top management of the SMEs manufacturing firms and the total of questionnaire gathered from respondents was 102.

The statistical multiple regression analysis have shown that learning organization is positively associated and able to influence the overall performance of SMEs manufacturing firms and performance of SMEs manufacturing firms in relative to their major competitors. Thus, it means that learning organization is able to influence the dependent variables. Eventually, with the results from vary analysis, with the high level of learning organization process and practices; it will be able to influence and improve the performance of firms in any aspects and indirectly, then, support the economic growth of the nation and transforming the nation's economic strategy from a production-based economy (P-Eco) to knowledge-based economy (K-Eco).

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# APPENDIX A



OTHMAN YEOP ABDULLAH (OYA) GRADUATE SCHOOL OF BUSINESS

UNIVERSITI UTARA MALAYSIA

QUESTIONNAIRE FORM

THE INFLUENCE OF LEARNING ORGANIZATION TOWARDS THE  
PERFORMANCE: A STUDY ON SMALL MEDIUM ENTERPRISE (SME) OF  
MANUFACTURING FIRMS IN JOHOR BAHRU, JOHOR



OYA GRADUATE SCHOOL OF BUSINESS  
UNIVERSITI UTARA MALAYSIA

SURVEY  
FOR ACADEMIC PURPOSE ONLY

**Dear respected Owner / Manager,**

**A SURVEY ON THE INFLUENCE OF LEARNING ORGANIZATION  
TOWARDS THE PERFORMANCE OF SMALL AND MEDIUM-SIZED  
ENTERPRISES (SME) IN JOHOR BAHRU, JOHOR.**

Recognizing that the future of SMEs in Malaysia relies heavily on the efforts of the SME owners such as yourself, we are eager to learn about your own experiences in managing your business. Particularly, we are looking for information and feedback about the influence of learning organization towards organizational performance of SMEs. We are convinced that your contribution serves as a guideline for realizing the positive efforts in producing more successful SMEs in Malaysia.

Therefore, you can display your commitment to develop SMEs in Malaysia by completing this survey. We are interested in your opinions, there are no right or wrong answers. All the information provided will be treated as confidential and will only be used for academic purposes of my dissertation (BPMZ69912). Your participation in completing the questionnaire is very important and critical to ensure the success of this research. Your honesty and sincerity is very important for my research in order to attain more clear understanding about research findings data analysis. This survey should take approximately 20 minutes to answer. It will be an honor if you could return the completed questionnaire before or by **4 April 2014**.

We would appreciate it if you could return the questionnaire at your earliest possible convenience. Thank you in advance for your cooperation. If you have any inquiry, you can contact me by **phone numbered 014-9049832** or e-mail me at **saifulhafizi89@gmail.com**.

Yours faithfully,

---

SAIFULHAFIZI BIN HASSAN  
Master of Science (Management)  
OYA Graduate School of Business  
UUM

## SECTION A

The following questions ask for information concerning yourself and your company background. Please answer each question by ticking the appropriate box and fill-up the required information.

**Please tick (/) in the appropriate box.**

1. Gender  Male  Female
2. Age  Below 30  31- 40  41-50  
 51-60  61 and above
3. Race  Malay  Chinese  Indian  
 Others, please specify: \_\_\_\_\_
4. What is the highest level of education you have completed?  
 PhD  Master  Degree  
 Diploma  Secondary school  Primary  
 Other, please specify: \_\_\_\_\_
5. What is your position at this company?  
 Business owner  Senior manager  
 Business partner  Human resource manager  
 General manager  Other, please specify: \_\_\_\_\_
6. How many years have you been working with the company?  
 Less than 5 years  16 – 20 years  
 5 - 10 years  More than 20 years  
 11 – 15 years
7. How long has your company been established?  
 Less than 5 years  16 – 20 years  
 5 - 10 years  More than 20 years  
 11 – 15 years

8. How many employees does your company hire?

- Less than 5 employees       50 – 150 employees  
 5 - 49 employees       More than 150 employees

9. Type of ownership:

- Local company-Bumiputera  
 Local company-non-Bumiputera  
 Foreign company  
 Joint local-foreign company

10. Please select the type of industry which most closely represents your company's industry group. **(You may tick more than one answer)**

<input type="checkbox"/>	Automotive & Component Parts
<input type="checkbox"/>	Building Materials & Related Products
<input type="checkbox"/>	Cement, Concrete Products, Ceramics & Tiles
<input type="checkbox"/>	Chemicals, Chemical & Plastic Products
<input type="checkbox"/>	Electrical & Electronics Products
<input type="checkbox"/>	Food, Beverages and Tobacco
<input type="checkbox"/>	Furniture & Wood Related Products
<input type="checkbox"/>	Household Appliances
<input type="checkbox"/>	Industrial & Engineering Products
<input type="checkbox"/>	Iron & Steel Products
<input type="checkbox"/>	Laboratory Equipment
<input type="checkbox"/>	Packaging, Labeling & Printing
<input type="checkbox"/>	Pharmaceutical, Medical Equipment, Cosmetics, Toiletries & Household
<input type="checkbox"/>	Rubber Products
<input type="checkbox"/>	Stationary

<input type="checkbox"/>	Textiles & Wearing Apparel
<input type="checkbox"/>	Other, please specify: _____

## SECTION B

With reference to the performance of your company **over the past 12 months**,

- a) Please indicate **the degree to which you are satisfied with your company's performance over the past 12 months** by *circling* the number of your choice:

Performance criteria		Degree of satisfaction with business performance				
		Very dissatisfied			Very satisfied	
1	Profitability	1	2	3	4	5
2	Sales turnover	1	2	3	4	5
3	Sales growth	1	2	3	4	5
4	Return on investment	1	2	3	4	5
5	Market share	1	2	3	4	5
6	Customer satisfaction	1	2	3	4	5
7	Customer retention	1	2	3	4	5
8	Business image	1	2	3	4	5
9	Workplace industrial relation	1	2	3	4	5
10	Work and life balance	1	2	3	4	5

- b) Please indicate your **company's performance relative to that of your major competitors over the past 12 months** according to each of the following criteria by *circling* the number of your choice:

		Significantly lower	Moderately lower	About the same	Moderately higher	Significantly higher
11	Return on sales	1	2	3	4	5
12	Cash flow	1	2	3	4	5
13	Net profit	1	2	3	4	5
14	Market share	1	2	3	4	5
15	Return on investment	1	2	3	4	5

## SECTION C

The following statements describe the possible **view or opinion that the owners/managers might have about the Learning Organization that is applied by the organization.** Please indicate your views on the following statements by circling the scale for each statement and make sure it describes yourself and your organization.

<b>Strongly Disagree</b>				<b>Strongly Agree</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

	<b>A. Learning Dynamic</b>	<b>Scale</b>				
1	We see continuous learning by all employees as a high business priority.	1	2	3	4	5
2	We are encouraged and expected to manage our learning and development.	1	2	3	4	5
3	People avoid distortion of information and blocking of communication channels through skills such as active listening and effective feedback learning approaches.	1	2	3	4	5
4	Individuals are coached and trained in how to learn.	1	2	3	4	5
5	We use a range of methodologies e.g. on the job, formal courses etc. as means of improving our job skills.	1	2	3	4	5
6	People expand knowledge through adaptive, anticipatory, and creative.	1	2	3	4	5
7	Teams and individuals use the action-learning process ( i.e. learning from careful reflection on the problem or situation, and applying it to future actions).	1	2	3	4	5
8	Teams are encouraged to learn from one another and to share learning in a variety of ways (e.g. via electronic bulletin boards, printed newsletters, intergroup meeting etc.).	1	2	3	4	5
9	People are able to think and act with a comprehensive systems approach (i.e. we look at impacts of our decisions on areas outside their immediate area or function).	1	2	3	4	5
10	Teams receive training in how to work and learn in groups.	1	2	3	4	5
	<b>B. Organizational Transformation</b>					
11	The importance of being a learning organization is understood throughout the organization.	1	2	3	4	5
12	Top-level management supports the vision of a learning organization.	1	2	3	4	5

13	There is a climate that supports and recognizes the importance of learning.	1	2	3	4	5
14	We are committed to continuous learning for improvement.	1	2	3	4	5
15	We learn from our failures as well as our successes (i.e. failures are tolerated as part of the learning process).	1	2	3	4	5
16	We reward people and teams for learning and helping others to learn.	1	2	3	4	5
17	Learning opportunities are incorporated into operations and programs.	1	2	3	4	5
18	We design ways to share knowledge and enhance learning throughout the organization (e.g. systematic job rotation across teams, structured on-the-job learning systems).	1	2	3	4	5
19	The organization is streamlined, with few levels of management, to maximize communication and learning across levels.	1	2	3	4	5
20	We coordinate on the basis of goals and learning rather than maintaining separation in terms of fixed departmental boundaries.	1	2	3	4	5
	<b>C. Empowering People</b>					
21	We strive to develop an empowered work force that is able and committed to qualitative learning and performance.	1	2	3	4	5
22	Authority is decentralized and delegated so as to equal one's responsibility and learning capability.	1	2	3	4	5
23	Top management and staffs work together in partnership, to learn and solve problem together.	1	2	3	4	5
24	We take on the roles of coaching, mentoring, and facilitating learning.	1	2	3	4	5
25	We generate and enhance learning opportunities as well as encourage experimentation and reflection on what was learned so that new knowledge can be used.	1	2	3	4	5
26	We actively share information with our customers, to obtain their ideas and inputs in order to learn and improve services/products.	1	2	3	4	5
27	We give customers and suppliers opportunities to participate in learning and training activities.	1	2	3	4	5
28	Learning from partners/subcontractors, teammates, and suppliers is maximized through up-front planning of resources and strategies devoted to knowledge and skill acquisition.	1	2	3	4	5
29	We participate in joint learning events with suppliers, community groups, professional associations, and academic institutions	1	2	3	4	5
30	We actively seek learning partners amongst customers, vendors and suppliers.	1	2	3	4	5

	<b>D. Knowledge Management (KM)</b>					
31	People actively seek information that improves the work of the organization.	1	2	3	4	5
32	We have accessible systems for collecting internal and external information.	1	2	3	4	5
33	People monitor trends outside the organization by looking at what others do (e.g. benchmarking, best practices, attending conferences, and examining published research).	1	2	3	4	5
34	People are trained in the skills of creative thinking and experimentation.	1	2	3	4	5
35	We often create demonstration projects where new ways of developing a products and/or delivering a service are tested.	1	2	3	4	5
36	Systems and structures exist to ensure that important knowledge is coded, stored, and made available to those who need and can use it.	1	2	3	4	5
37	People are aware of the need to retain important organizational learning and share such knowledge with others.	1	2	3	4	5
38	Cross-functional teams are used to transfer important learning across groups, departments and divisions.	1	2	3	4	5
39	We continue to develop new strategies and mechanisms for sharing learning throughout the organization.	1	2	3	4	5
40	We support specific areas, units, and projects that generate knowledge by providing people with learning opportunities.	1	2	3	4	5
	<b>E. Technology Application</b>					
41	Learning is facilitated by effective and efficient computer-based information systems.	1	2	3	4	5
42	People have ready access to information highway (e.g. local area networks, internet, on-line etc.).	1	2	3	4	5
43	Learning facilities (e.g. training and conference rooms) incorporate electronic multimedia support and a learning environment based on the integration of art, colours, music and visuals.	1	2	3	4	5
44	People have available to them, computer-assisted learning programs and electronic job aids (e.g. just-in-time and flowcharting software).	1	2	3	4	5
45	We use groupware technology to manage group processes (e.g. project management, team process, meeting management).	1	2	3	4	5
46	We support just-in-time learning, a system that integrates high technology learning systems, coaching, and actual work on the job into a single, seamless process.	1	2	3	4	5

47	Our electronic performance support systems enable us to learn and to do our work better.	1	2	3	4	5
48	We design and tailor our electronic performance support systems to meet our learning needs.	1	2	3	4	5
49	People have full access to the data they need to do their jobs effectively.	1	2	3	4	5
50	We can adapt software systems to collect, code, store, create, and transfer information in ways best suited to meet our needs.	1	2	3	4	5

**SECTION D**

Please provide your own experiences and comments you wish to make:

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Thank you for your cooperation

# APPENDIX B

1. Reliability Test for Pilot Test
2. Normality Test
3. Descriptive Analysis
4. Validity Test
5. Reliability Test
6. Correlation Analysis
7. Multiple Regression Analysis

## Reliability Test for Pilot Test

- Reliability Test for DV - Performance of SMEs Manufacturing Firms

**Reliability Statistics**

Cronbach's Alpha	N of Items
.951	15

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Profitability	56.90	85.886	.822	.946
Sales turnover	57.03	86.309	.785	.946
Sales growth	57.33	83.747	.741	.948
Return on investment	57.10	85.266	.819	.946
Market share	57.03	82.171	.860	.944
Customer satisfaction	56.50	88.948	.726	.948
Customer retention	56.57	87.082	.821	.946
Business image	56.57	89.357	.645	.949
Workplace industrial relation	56.70	89.183	.562	.951
Work and life balance	57.03	89.482	.362	.959
Return on sales	57.17	87.316	.731	.948
Cash flow	57.13	88.326	.778	.947
Net profit	56.93	84.409	.852	.945
Market share	56.90	82.369	.888	.944
Return on investment	57.10	85.128	.829	.945

- Reliability Test for DV 1 - Overall Performance of SMEs Manufacturing Firms

**Reliability Statistics**

Cronbach's Alpha	N of Items
.912	10

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Profitability	37.13	34.326	.818	.896
Sales turnover	37.27	34.685	.769	.898
Sales growth	37.57	33.495	.682	.904
Return on investment	37.33	34.644	.735	.900
Market share	37.27	32.685	.786	.896
Customer satisfaction	36.73	36.409	.704	.903
Customer retention	36.80	35.131	.812	.897
Business image	36.80	36.028	.699	.903
Workplace industrial relation	36.93	35.857	.610	.907
Work and life balance	37.27	35.720	.404	.927

- Reliability Test for DV 2 - Performance of SMEs Manufacturing Firms relative to their major competitors

**Reliability Statistics**

Cronbach's Alpha	N of Items
.931	5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Return on sales	15.93	9.375	.749	.928
Cash flow	15.90	10.024	.729	.932
Net profit	15.70	8.493	.867	.905
Market share	15.67	7.885	.896	.901
Return on investment	15.87	8.602	.871	.905

- Reliability Test for IV - Systematic Learning Organization Model (SLOM)

**Reliability Statistics**

Cronbach's Alpha	N of Items
.973	50

- Reliability Test for IV 1 - Dynamic Learning

**Reliability Statistics**

Cronbach's Alpha	N of Items
.915	10

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Continuous learning	35.10	37.817	.638	.909
Manage learning & development	35.17	37.661	.722	.905
Avoid distortion	34.87	37.775	.586	.911
Coached and trained	35.23	35.909	.709	.904
Ranges of methodologies	35.13	35.568	.707	.905
Expand knowledge	35.27	36.202	.638	.909
Action-learning process	35.23	35.909	.675	.907
Share learning	34.87	35.223	.821	.898
Think & act with comprehensive system	35.03	36.033	.609	.911
Receive training	35.10	34.507	.791	.899

- Reliability Test for IV 2 - Organizational Transformation

**Reliability Statistics**

Cronbach's Alpha	N of Items
.938	10

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Understand LO	35.77	42.461	.713	.934
Support the vision	35.50	40.810	.900	.925
Climate that supports & recognized	35.43	40.254	.821	.928
Committed to continuous learning	35.63	41.689	.834	.928
Learn from failure	35.20	44.441	.579	.939
Rewards people	35.60	41.145	.704	.935
Learning opportunities	35.63	39.068	.813	.929
Share knowledge	35.57	42.599	.683	.935
Organization is streamlined	35.17	42.764	.743	.933
Coordinate goals	35.40	40.800	.754	.932

- Reliability Test for IV 3 - Empowering People

**Reliability Statistics**

Cronbach's Alpha	N of Items
.856	10

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Empowered work force	36.60	19.283	.712	.829
Authority	36.77	21.013	.525	.846
Work together	36.57	21.013	.571	.843
Roles of manager	37.17	20.902	.343	.867
Enhance learning	37.07	19.237	.597	.840
Share information	36.77	19.082	.751	.826
Suppliers opportunities	36.87	21.637	.469	.850
Up-front planning of resource	36.97	19.895	.690	.833
Joint learning event	36.93	19.789	.585	.841
Learning partners	37.00	21.034	.471	.850

- Reliability Test for IV 4 - Knowledge Management

**Reliability Statistics**

Cronbach's Alpha	N of Items
.902	10

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Information to improve	38.07	28.478	.229	.913
Internal & external info	38.13	26.671	.619	.896
Monitor trends	38.20	25.200	.654	.892
Creative thinking & experimentation	38.50	24.810	.628	.893
Demonstration projects	38.40	24.248	.782	.884
System & structure	38.53	23.568	.727	.887
Retain learning	38.77	22.185	.836	.878
Cross-functional teams	38.80	22.441	.784	.883
New strategies & mechanisms	38.43	24.668	.583	.897
Specific areas, units, & projects	38.47	24.602	.695	.889

- Reliability Test for IV 5 - Technology Application

**Reliability Statistics**

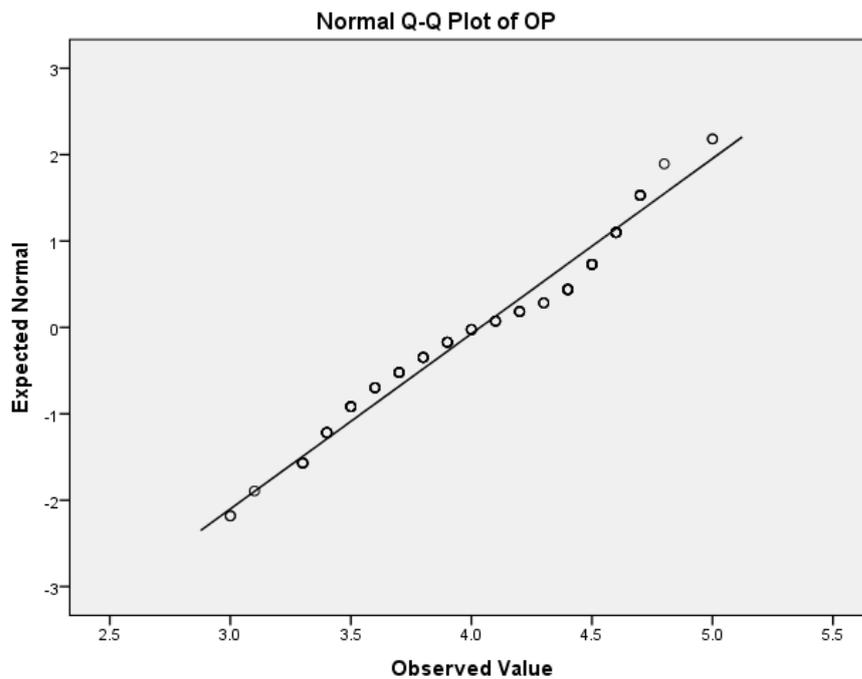
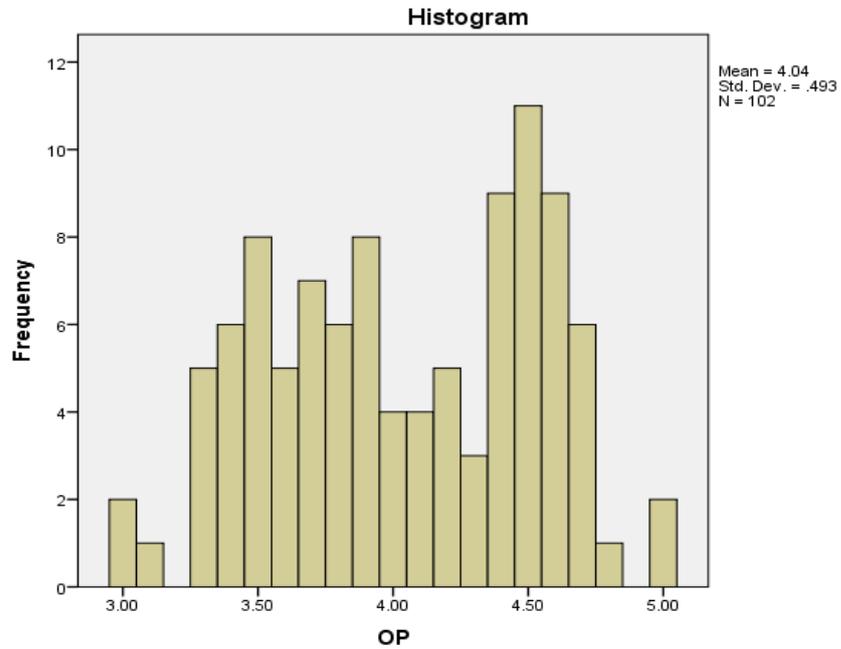
Cronbach's Alpha	N of Items
.945	10

**Item-Total Statistics**

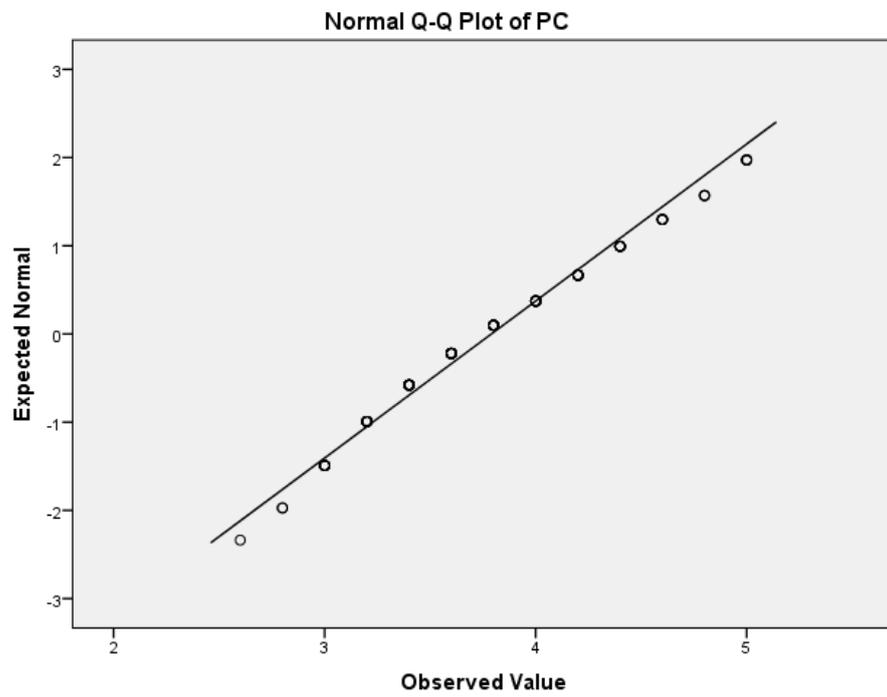
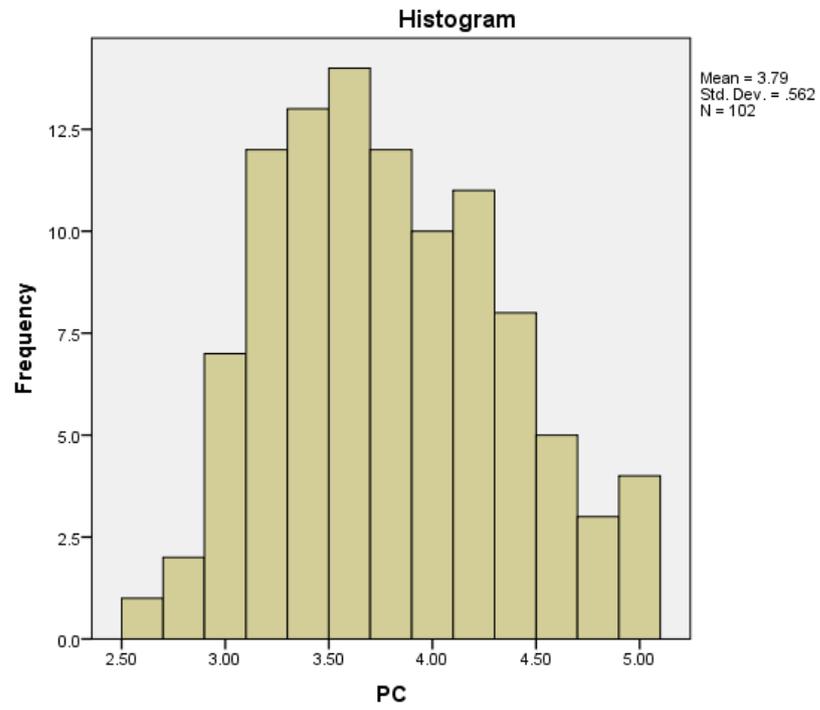
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Computer-based information	36.23	41.220	.749	.941
Access to information highway	36.30	40.010	.802	.938
Learning facilities	36.60	39.421	.687	.944
Computer-assisted learning programs	36.37	38.378	.861	.935
Groupware technology	36.60	38.455	.816	.937
Just-in-time learning	36.67	38.506	.746	.941
EPSS - Electronic performance support systems	36.33	40.368	.836	.938
Design & tailor EPSS	36.53	40.326	.751	.940
Full access to the data	36.37	41.275	.746	.941
Adapt software system	36.80	36.993	.813	.938

Normality Test

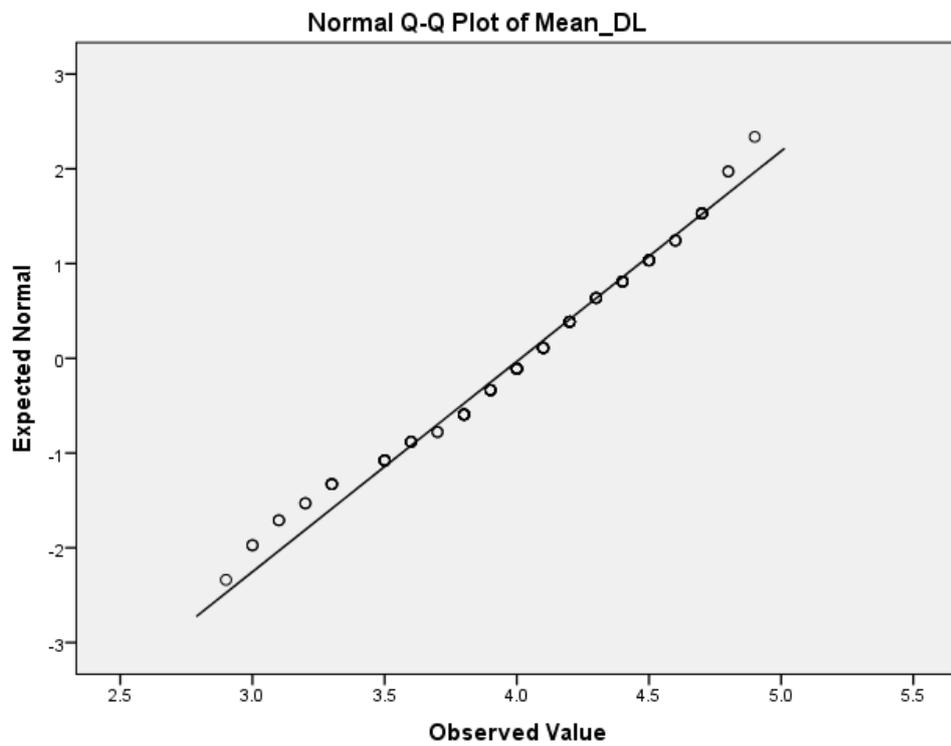
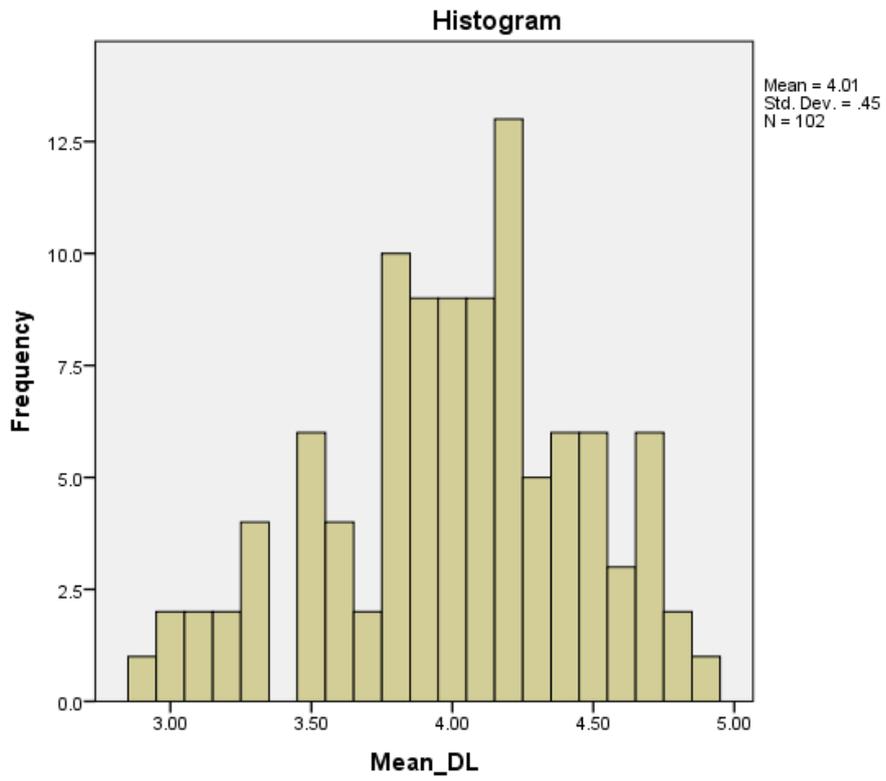
- Normality Test for DV 1 - Overall Performance of SMEs Manufacturing Firms



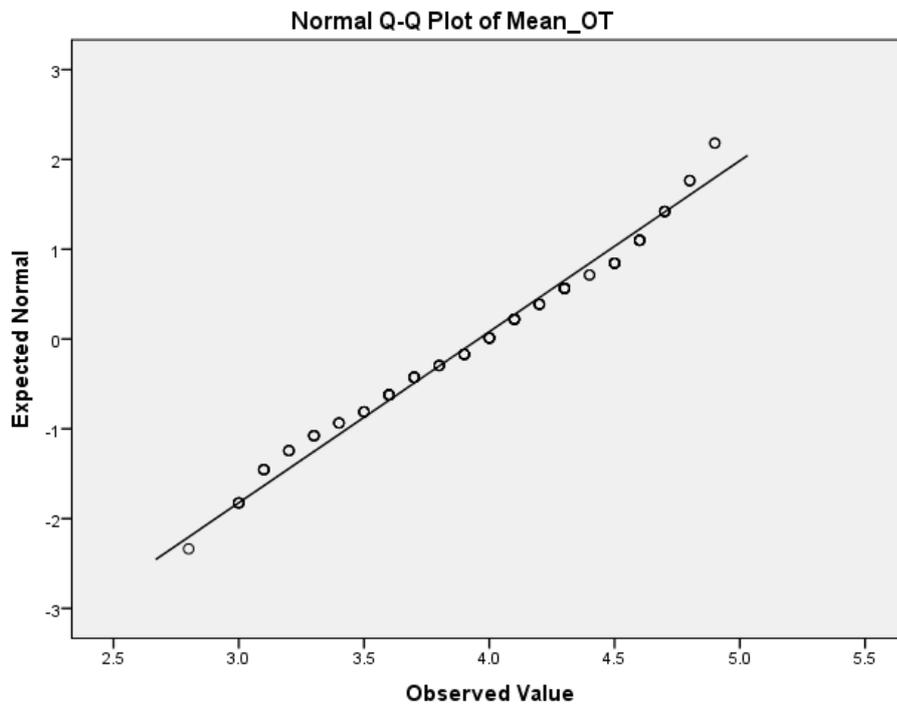
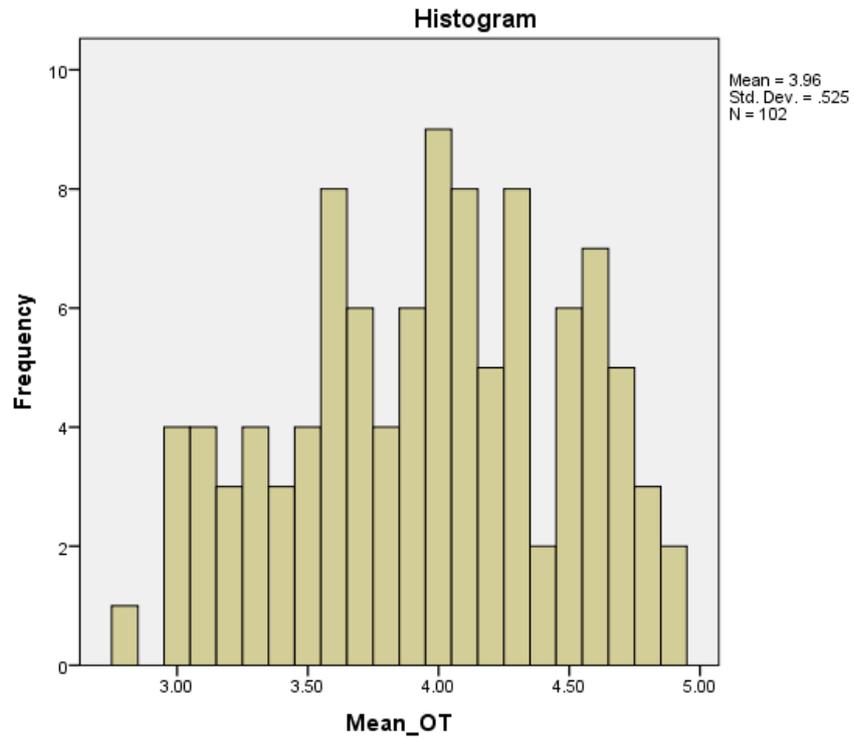
- Normality Test for DV 2 - Performance of SMEs Manufacturing Firms relative to their major competitors



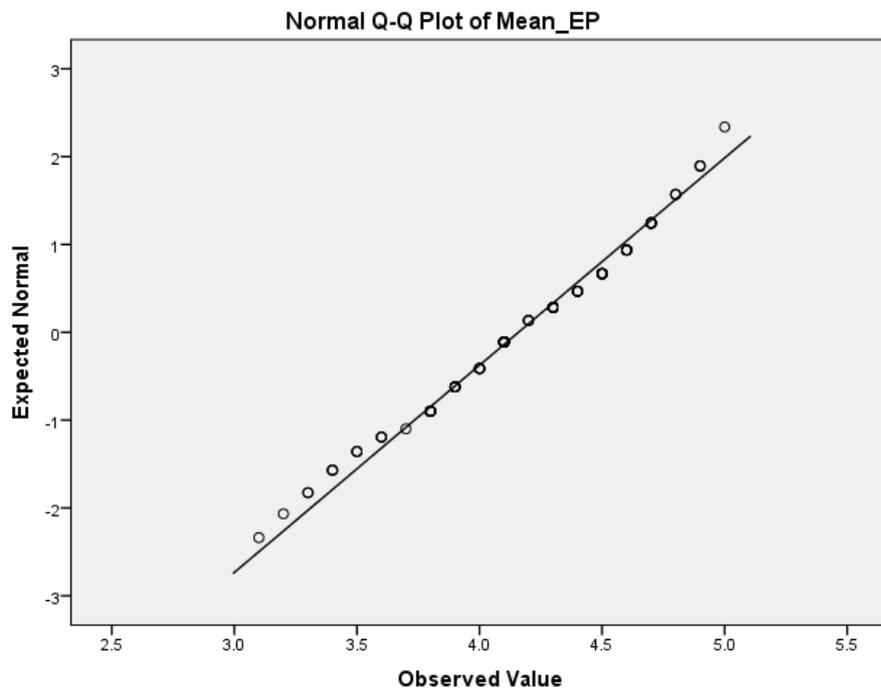
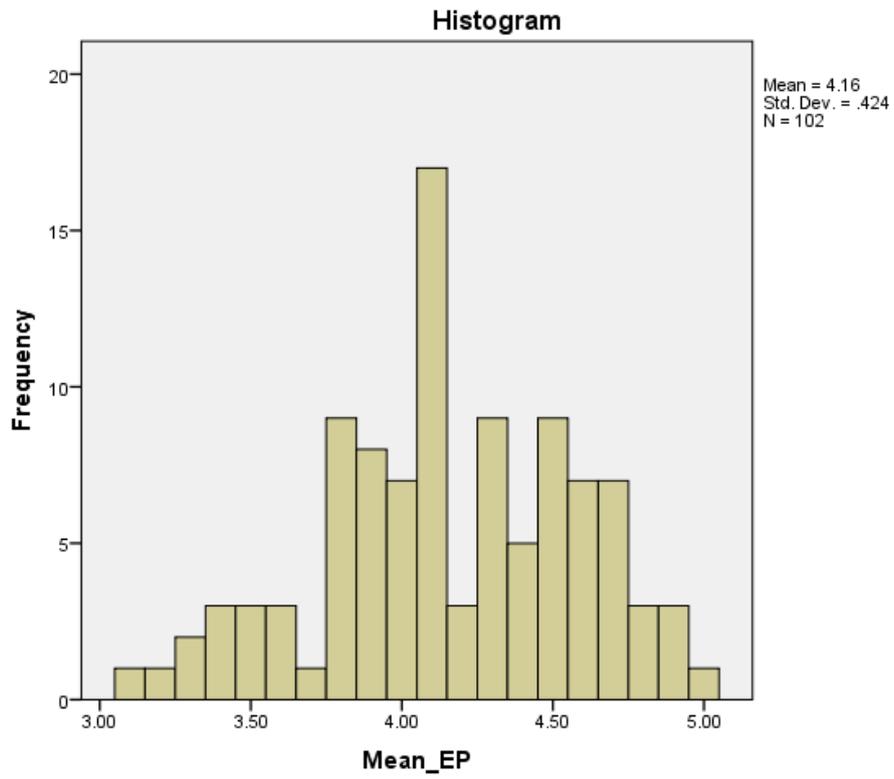
- Normality Test for IV 1 – Dynamic Learning



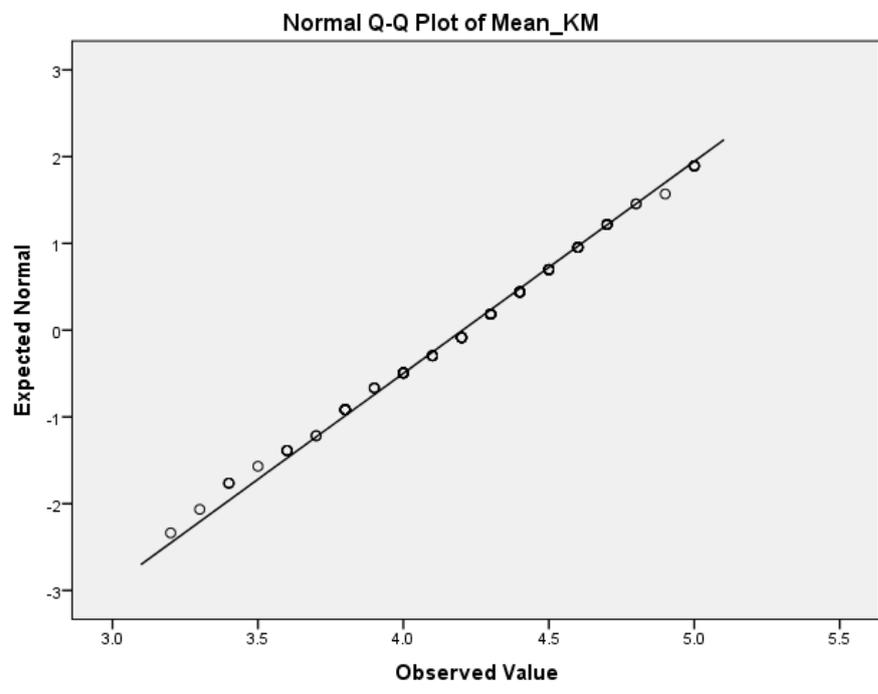
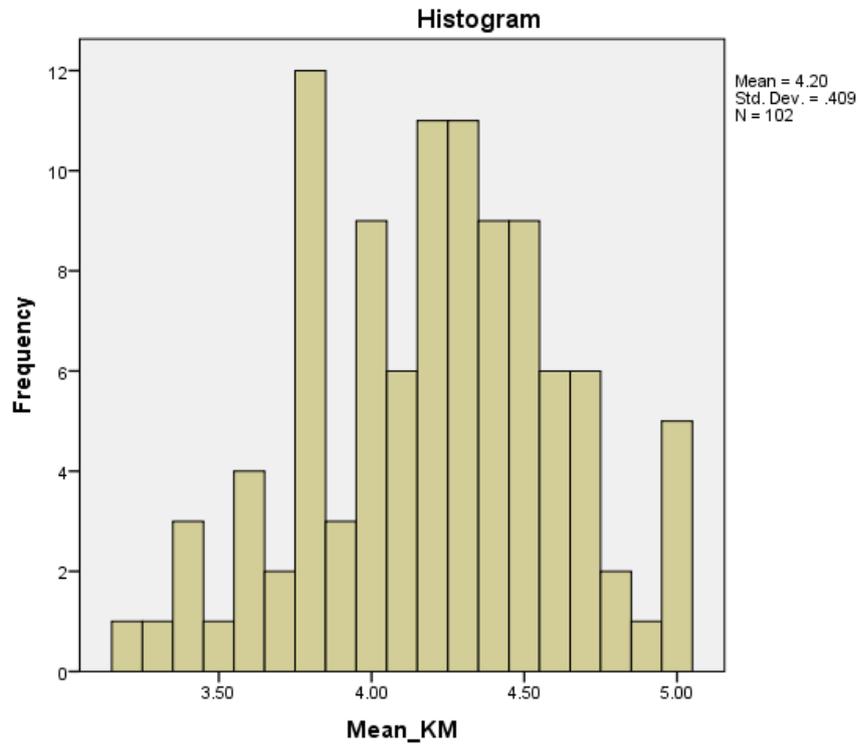
- Normality Test for IV 2 – Organizational Transformation



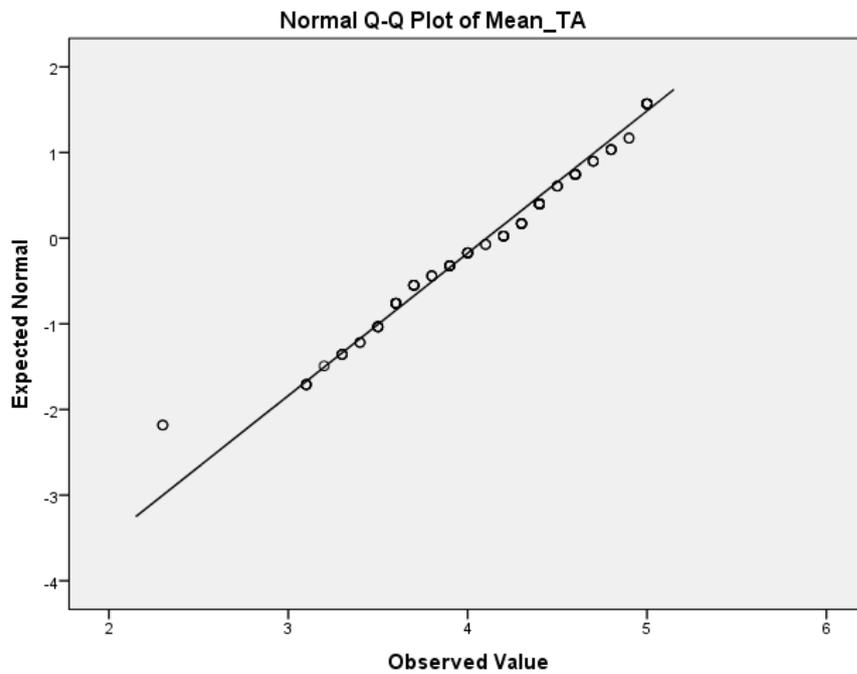
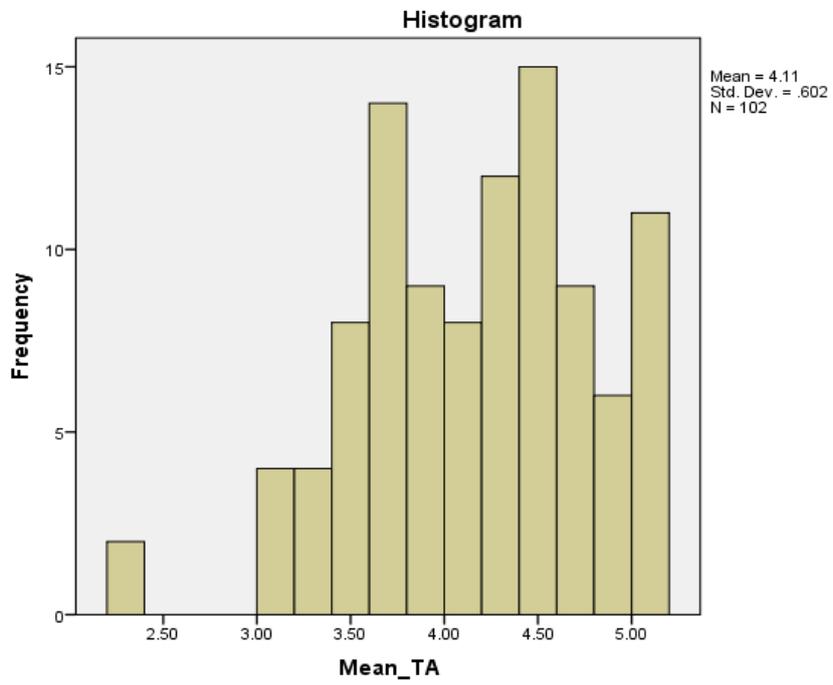
- Normality Test for IV 3 – Empowering People



- Normality Test for IV 4 – Knowledge Management



- Normality Test for IV 5 – Technology Application





## Validity Test

- Validity Test for DV 1 - Overall Performance of SMEs Manufacturing Firms

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.806
	Approx. Chi-Square	366.769
Bartlett's Test of Sphericity	df	45
	Sig.	.000

**Rotated Component Matrix<sup>a</sup>**

	Component	
	1	2
Profitability	.776	
Sales turnover	.751	
Sales growth	.726	
Return on investment	.759	
Market share	.691	
Customer satisfaction	.659	
Customer retention	.674	
Business image		.596
Workplace industrial relation		.759
Work and life balance		.753

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

- Validity Test for DV 2 - Performance of SMEs Manufacturing Firms relative to their major competitors.

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.820
	Approx. Chi-Square	184.415
Bartlett's Test of Sphericity	df	10
	Sig.	.000

**Rotated  
Component  
Matrix<sup>a</sup>**

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a. Only one component was extracted. The solution cannot be rotated.

## Reliability Test for Actual Study

- Reliability Test for DV - Performance of SMEs Manufacturing Firms

**Reliability Statistics**

Cronbach's Alpha	N of Items
.891	15

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Profitability	55.37	45.246	.715	.878
Sales turnover	55.62	45.684	.628	.881
Sales growth	55.62	46.139	.559	.884
Return on investment	55.42	46.682	.585	.883
Market share	55.29	44.863	.672	.879
Customer satisfaction	54.97	46.643	.582	.883
Customer retention	55.14	45.248	.640	.880
Business image	54.92	47.083	.482	.887
Workplace industrial relation	55.17	48.814	.351	.892
Work and life balance	55.25	48.509	.224	.903
Return on sales	55.54	46.211	.653	.881
Cash flow	55.53	48.153	.451	.888
Net profit	55.51	45.460	.689	.879
Market share	55.46	45.102	.643	.880
Return on investment	55.58	45.355	.673	.879

- Reliability Test for DV 1 - Overall Performance of SMEs Manufacturing Firms

**Reliability Statistics**

Cronbach's Alpha	N of Items
.827	10

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Profitability	36.42	19.474	.670	.797
Sales turnover	36.67	19.611	.605	.803
Sales growth	36.67	20.066	.509	.812
Return on investment	36.47	20.529	.517	.812
Market share	36.34	19.238	.624	.800
Customer satisfaction	36.02	20.000	.599	.804
Customer retention	36.19	18.985	.671	.795
Business image	35.97	20.405	.474	.816
Workplace industrial relation	36.22	21.280	.387	.823
Work and life balance	36.30	21.125	.224	.851

- Reliability Test for DV 2 - Performance of SMEs Manufacturing Firms relative to their major competitors

**Reliability Statistics**

Cronbach's Alpha	N of Items
.824	5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Return on sales	15.18	5.573	.567	.803
Cash flow	15.17	6.061	.419	.840
Net profit	15.15	4.978	.727	.756
Market share	15.10	4.802	.680	.770
Return on investment	15.22	4.943	.705	.762

- Reliability Test for IV - Systematic Learning Organization Model (SLOM)

**Reliability Statistics**

Cronbach's Alpha	N of Items
.951	50

- Reliability Test for IV 1 - Dynamic Learning

**Reliability Statistics**

Cronbach's Alpha	N of Items
.821	10

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Continuous learning	36.12	16.204	.556	.799
Manage learning & development	36.22	17.399	.503	.806
Avoid distortion	35.90	17.218	.474	.808
Coached and trained	36.19	16.391	.555	.800
Ranges of methodologies	36.06	16.610	.501	.806
Expand knowledge	36.30	17.184	.438	.812
Action-learning process	36.23	17.008	.458	.810
Share learning	36.05	16.918	.517	.804
Think & act with comprehensive system	36.25	16.306	.456	.812
Receive training	36.02	16.336	.612	.794

- Reliability Test for IV 2 - Organizational Transformation

**Reliability Statistics**

Cronbach's Alpha	N of Items
.861	10

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Understand LO	35.68	22.597	.589	.846
Support the vision	35.76	21.489	.726	.834
Climate that supports & recognized	35.56	21.556	.712	.835
Committed to continuous learning	35.66	22.782	.597	.846
Learn from failure	35.50	23.064	.530	.851
Rewards people	35.85	22.602	.499	.855
Learning opportunities	35.74	22.533	.583	.847
Share knowledge	35.58	23.236	.524	.852
Organization is streamlined	35.32	24.003	.447	.857
Coordinate goals	35.56	22.764	.506	.854

- Reliability Test for IV 3 – Empowering People

**Reliability Statistics**

Cronbach's Alpha	N of Items
.808	10

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Empowered work force	37.25	15.578	.460	.795
Authority	37.40	15.173	.448	.796
Work together	37.17	15.427	.400	.801
Roles of manager	37.66	15.772	.284	.814
Enhance learning	37.63	14.434	.491	.791
Share information	37.30	15.105	.468	.794
Suppliers opportunities	37.48	14.549	.532	.786
Up-front planning of resource	37.50	14.054	.663	.771
Joint learning event	37.46	14.211	.561	.783
Learning partners	37.44	14.328	.569	.782

- Reliability Test for IV 4 – Knowledge Management

**Reliability Statistics**

Cronbach's Alpha	N of Items
.807	10

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Information to improve Internal & external info	37.49	15.044	.339	.803
Monitor trends	37.71	13.358	.645	.772
Creative thinking & experimentation	37.75	14.009	.410	.798
Demonstration projects	37.97	13.989	.427	.796
System & structure	37.88	13.412	.588	.778
Retain learning	37.76	14.499	.385	.800
Cross-functional teams	37.95	13.948	.510	.787
New strategies & mechanisms	38.14	13.704	.458	.793
Specific areas, units, & projects	37.82	13.236	.551	.781
	37.87	13.399	.525	.785

- Reliability Test for IV 5 – Technology Application

**Reliability Statistics**

Cronbach's Alpha	N of Items
.919	10

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Computer-based information	36.65	31.300	.651	.913
Access to information highway	36.85	29.513	.708	.910
Learning facilities	36.97	29.237	.720	.909
Computer-assisted learning programs	36.92	29.103	.712	.909
Groupware technology	36.95	28.899	.739	.908
Just-in-time learning	37.03	29.811	.632	.914
EPSS - Electronic performance support systems	36.75	30.627	.685	.911
Design & tailor EPSS	36.99	29.356	.716	.909
Full access to the data	37.04	30.256	.658	.913
Adapt software system	37.38	27.724	.761	.907

APPENDIX 6

Correlation Analysis

		Correlations						
		Mean_DL	Mean_OT	Mean_EP	Mean_KM	Mean_TA	OP	PC
Mean_DL	Pearson Correlation	1	.774**	.639**	.665**	.556**	.526**	.438**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	102	102	102	102	102	102	102
Mean_OT	Pearson Correlation	.774**	1	.601**	.720**	.643**	.522**	.366**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	102	102	102	102	102	102	102
Mean_EP	Pearson Correlation	.639**	.601**	1	.533**	.406**	.366**	.328**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.001
	N	102	102	102	102	102	102	102
Mean_KM	Pearson Correlation	.665**	.720**	.533**	1	.563**	.475**	.393**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	102	102	102	102	102	102	102
Mean_TA	Pearson Correlation	.556**	.643**	.406**	.563**	1	.458**	.386**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	102	102	102	102	102	102	102
OP	Pearson Correlation	.526**	.522**	.366**	.475**	.458**	1	.743**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	102	102	102	102	102	102	102
PC	Pearson Correlation	.438**	.366**	.328**	.393**	.386**	.743**	1
	Sig. (2-tailed)	.000	.000	.001	.000	.000	.000	
	N	102	102	102	102	102	102	102

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

Multiple Regression Analysis

- The influence of IV towards DV 1

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.578 <sup>a</sup>	.335	.300	.41258	.335	9.651	5	96	.000

a. Predictors: (Constant), Mean\_TA, Mean\_EP, Mean\_KM, Mean\_DL, Mean\_OT

b. Dependent Variable: OP

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.214	5	1.643	9.651	.000 <sup>b</sup>
	Residual	16.342	96	.170		
	Total	24.556	101			

a. Dependent Variable: OP

b. Predictors: (Constant), Mean\_TA, Mean\_EP, Mean\_KM, Mean\_DL, Mean\_OT

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.296	.486		2.667	.009
	Mean_DL	.279	.157	.255	1.778	.079
	Mean_OT	.132	.146	.141	.906	.367
	Mean_EP	-.012	.130	-.010	-.089	.929
	Mean_KM	.142	.152	.118	.933	.353
	Mean_TA	.134	.091	.163	1.470	.145

a. Dependent Variable: OP

- The influence of IV towards DV 2

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.485 <sup>a</sup>	.235	.195	.50396	.235	5.897	5	96	.000

a. Predictors: (Constant), Mean\_TA, Mean\_EP, Mean\_KM, Mean\_DL, Mean\_OT

b. Dependent Variable: PC

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.489	5	1.498	5.897	.000 <sup>b</sup>
	Residual	24.381	96	.254		
	Total	31.870	101			

a. Dependent Variable: PC

b. Predictors: (Constant), Mean\_TA, Mean\_EP, Mean\_KM, Mean\_DL, Mean\_OT

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.928	.593		1.563	.121
	Mean_DL	.362	.192	.290	1.889	.062
	Mean_OT	-.141	.178	-.131	-.788	.432
	Mean_EP	.081	.159	.061	.514	.608
	Mean_KM	.205	.186	.149	1.102	.273
	Mean_TA	.187	.111	.200	1.680	.096

a. Dependent Variable: PC