PROJECT MANAGEMENT PRACTICES: CASE STUDIES AT FOOD & BEVERAGE SMEs IN SEBERANG PERAI MUNICIPALITY

By:

LILY BINTI JAMALUDIN

(Matrix no.: 120795)

Supervisor:

Datin Dr. Norizah Binti Mohamad

June 2017

This dissertation is submitted to

Universiti Sains Malaysia

As partial of the requirement to graduate with honors degree in

BACHELOR OF ENGINEERING

(MANUFACTURING ENGINEERING WITH MANAGEMENT)



School of Mechanical Engineering
Engineering Campus
Universiti Sains Malaysia

Declaration

This work has not previously been accepted in substance for any degree and is not being

concurrently submitted in candidature for any degree.
Signed (LILY BINTI JAMALUDIN)
Date
Statement 1
This article is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by giving explicit references.
Bibliography/references are appended.
Signed (LILY BINTI JAMALUDIN)
Date
Statement 2
I hereby give consent for my article, if accepted, to be available for photocopying and for interlibrary loan, and for the title and summary to be made available to outside organizations.
Signed (LILY BINTI JAMALUDIN)
Date
This thesis has been submitted as partial fulfillment of the requirements for the final year project to the respective academic supervisor.
Signed (DATIN DR. NORIZAH MOHAMAD)
Date

ACKNOWLEDGEMENT

"In the name of ALLAH, the Most Gracious and Most Merciful"

First and foremost, I wish to express the greatest gratitude towards Allah Almighty, who

has given me guidance throughout this whole process in completing this research study.

I thank Him for listening to my prayers and giving me His blessings in order to go

through this process successfully. I would like to take this opportunity to express my

gratitude and appreciation to the following individuals whose gave their guidance,

advice and contribution in preparing this research study.

First of all, I would like to express my appreciation to my supervisor, Datin Dr. Norizah

Mohamad for her willingness to guide and advices me throughout the process of

completing this research study. I also thank her for sharing of ideas and suggestions

throughout the duration of completing this research study. Without her, this research

study could not be completed successfully.

Appreciation also goes to the three Food & Beverages SMEs companies that involved,

Teratak Coklat, Kilang Kopi Fajar Menyinsing, Perusahaan Al-Khalifah and all the

managers, Puan Aishah, Puan Murni and Encik Zamri for their cooperation.

I would also like to thanks to my beloved parents and family for their continuous support

throughout the whole process of completing this research study and not forget to all

respondents of this research study, a big thanks to them for their participation. Last but

not least, I would like to thanks to all who are involved direct and indirectly in the

process of completing this study.

Thank you.

i

TABLE OF CONTENTS

Declaration	i
ACKNOWI	LEDGEMENT i
TABLE OF	CONTENTSii
LIST OF TA	ABLESiv
LIST OF FI	GURESv
LIST OF NO	OMENCLATURESvi
LIST OF AI	PPENDICES vii
ABSTRAK	viii
ABSTRACT	Γix
CHAPTER	1: INTRODUCTION
1.0 Ba	ckground of Study1
1.1 Pro	blem Statement
1.2 Re	search Questions
1.3 Re	search Objectives
1.4 Sco	ope of the Study3
1.5 Th	esis Outline
1.6 Sig	nificance of the Study4
1.6.1	SMEs4
1.6.2	F&B industry4
1.7 Li	mitations of the Study5
CHAPTER	2: LITERATURE REVIEW6
2.0 Int	roduction6
2.1 Foo	od & Beverages Small Medium Enterprises
2.3 Pro	eject Management in SMEs
2.4 The	e Project Life Cycle9
2.5 Pro	oject Management Knowledge Area (PMBoK)
2.5.1	Integration Management
2.5.2	Scope Management
2.5.3	Time/Schedule Management
2.5.4	Cost Management
2.5.5	Quality Management
2.5.6	Communication management
2.5.7	Risk Management

2.5.8		Procurement Management	13
2.5	.9	Stakeholders Management	13
2.6	Pro	ject Management Practices in SMEs	14
2.5	.1	Quality Management	14
2.5	.2	Road map or milestones	15
2.5	.3	Work breakdown or activity list	15
2.5	.4	Scope and resource schedule.	15
2.5	.5	Team building	15
2.5	.6	Agile or scrum	16
2.7	Pro	ject Management Success Factors	16
2.8	Sun	nmary of Literature Reviews	17
CHAP7	TER 3	B: METHODOLOGY	18
3.0	Intr	oduction	18
3.1	Res	earch Design	18
3.1	.1	Qualitative Design	19
3.2	Dat	a collection Methods	19
3.4	Res	earch sample	20
CHAPT	ΓER 4	: RESULTS AND DISCUSSION	22
4.0	Intr	oduction	22
4.1	Ove	erview of the three companies	22
4.3 Food		alysis of Interview: Determining the Project Management Adopted by the Beverage SMEs	
4.3	.1	PM Practices-1: Quality Management	26
4.3	.2	PM Practice-2: Client requirements	27
4.3	.3	PM Practice-3: Activity lists	28
4.3	.4	PM Practice-4: Human Resource Management	28
4.3	.4	PM Practice-4: Communication Management	29
4.3	.6	PM Practice-6: Scope and Resource Schedule	29
4.3	.7	Sophisticated Project Management Practices	29
CHAPT	TER 5	S: CONCLUSIONS & FUTURE WORK	30
5.1	Cor	nclusion	30
5.2	Red	commendations for future work	31
REFER	ENC	ES	32
V DDEV	DICI	E C	3/

LIST OF TABLES

Table 2.1 Small and Medium Enterprises (SMEs) of Manufacturing Sector in Malaysia	6
Table 2.2 SMEs share in the Manufacturing Sector by Sub-sector	7
Table 3.1 Nature of project types of the organization	21
Table 3.3 Nature of Project Management practices	21
Table 3.4 Other project management practices essential for SMEs	21
Table 4.1 Overview of case study companies	22
Table 4.2 Details of Company A (Interview: Section A)	23
Table 4.3 Details of company B (Interview: Section A)	24
Table 4.4 Details of Company C (Interview: Section A)	25

LIST OF FIGURES

Figure 2.1 Tasks accomplished by project phase (Source: Organizational life cycle	
implications for major projects(Adams and Barndt 2008))))	. 11
Figure 3.1 Methodology flow chart	. 18

LIST OF NOMENCLATURES

SMEs Small to Medium-Sized Enterprises

F&B Food and Beverages

PMBOK Project Management Book of Knowledge

PMI Project Management Institute

CSF Critical Success Factor

PKS Perusahaan Kecil dan Sederhana(Bahasa Malaysia)

LIST OF APPENDICES

Questions structure for interview.		3	4
------------------------------------	--	---	---

ABSTRAK

Perusahaan kecil dan sederhana (PKS) dalam sektor makanan dan minuman sedang membangun dan menyumbang dari segi ekonomi secara khusus dalam inovasi, perkembangan dan pekerjaan. Pengurusan projek adalah penting dalam hal demikian. Walaubagaimanapun, PKS tidak memerlukan pengurusan projek yang canggih atau moden untuk organisasi mereka. PKS lebih cenderung untuk mengamalkan versi pengurusan projek yang tidak kompleks. Kajian ini dijalankan untuk mengenal pasti amalan pengurusan projek yang diguna pakai oleh PKS dalam sektor makanan dan minuman di sekitar daerah Seberang Perai, Pulau Pinang. dan hasil kajian kes yang dilaporkan dalam laporan ini. Selain itu, kajian ini memberi cadangan amalam pengurusuan projek yang sesuai dengan persekitaran syarikat. Pengurus dan pengasas tiga syarikat PKS dalam sektor makanan dan minuman telah ditemuramah bagi mendapatkan maklumat. Ketiga-tiga syarikat yang untuk mengamalkan pendekatan pengurusan projek yang hampir sama dalam organisasi mereka untuk pembangunan kajian, inovasi dan pembangunan. Gaya pengurusan projek adalah lebih cenderung kepada laissez-faire. Keputusan kajian mengenal pasti amalan pengurusan projek dalam setiap satu kajian, iaitu pengurusan kualiti, keperluan pelanggan, senarai aktiviti iaitu aktiviti vs tarikh akhir dan sasaran, pengurusan sumber manusia secara tidak rasmi, pengurusan komunikasi, dan skop dan pengurusan sumber. Khususnya, ini adalah wajar kerana syarikat mereka adalah syarikat-syarikat bersaiz mikro dan mereka mempunyai pasukan projek kecil untuk menyokong kerja-kerja secara pelbagai atau umum. Walau bagaimanapun, para pengarah merangkumi pengurus atau pengasas perlu mengenai meluaskan pengetahuan tentang PMBOK untuk keberkesanan projek ke arah kejayaan. Kajian ini bukan sahaja memberi manfaat kepada syarikat yang dikaji malah juga dapat memberi impak kepada keseluruhan PKS, perusahaan makanan dan dan minuman, dan pelanggan/pengguna. Selain itu, terdapat cadangan bagi siasatan lanjut kajian ini untuk mengambil kira faktor kejayaan kritikal pengurusan projek dan juga memberi tumpuan kepada jenis projek.

ABSTRACT

Small to medium-sized enterprises (SMEs) in food and beverage sector is developing and has become an indicator for economic specifically in matters of innovation, growth and employment. Project management is complimentary to the contribution but somehow SMEs does not need an advanced or modern project management for their organization. SMEs are more likely to practice less complex version of project management. This study is undertaken to identify the project management practices adopted by food and beverages SMEs in Seberang Perai Municipality, Pulau Pinang. Also, to recommend the project management practices that fits the nature of the company. The results of the three case study are reported in this paper. Managers and founders of the SMEs companies in food and beverage sector are being interviewed through a semi-structured interview. It is found that the companies adopt almost similar project management approaches in their organization for innovation, product development and growth. The style of project management is more to the laissez-faire and not as complex as project management used by large companies with large projects. The results identified project management practices within each of the case study namely Quality management, Customer Requirements, activity list in such activity vs due date and the target, informal human resource management, communication management, and scope and resource management. In particular, the project management practices are appropriate since their companies are micro-sized companies and they have small project teams to support the work of generalists. However, the directors also the managers or founders need to explore more about PMBOK to make project into success. This study will then will not only be beneficial to the companies it selves but also to the SMEs, food and beverage industry and customers. Apart from that, it is suggested that for further investigation of this research to include the critical success factors of project management and also focuses on particular project types

CHAPTER 1

INTRODUCTION

This chapter discusses on the background of study, problem statement, research jjobjectives, research questions, scope of study, significance of study and limitation of the study.

1.0 Background of Study

Small and medium sized businesses (SMEs) in Malaysia has become the drivers of economic growth. About 97.3% of businesses were established in Malaysia stated by Economic Cencus of 2011, Profile of SMEs. One of the industry that dominated by SMEs is the food and beverages processing industry. The government is reported to be investing RM 24.6 billion in the food processing industry (Ayupp 2013). The rapid drives in manufacturing industry has brought organization to deal with serious project management due to uncertainties. Dynamic environment of project management is required to maximize firm performance. Project management process is complex and it required substantial and mutual attention to a broad aspect of human, budgetary and technical variables. Many researchers are concerned about managing projects in SMEs and described that the project management complexity is not suitable for SMEs. The result from past studies indicate project management is significant but less bureaucratic (Turner, Ledwith et al. 2010, Aquil 2013). On the other hand, projects often hold a specific set of critical success factors in which if addressed and attention given will likely improve successful implementation. At the same time, failure of the project management may occur if these two factors are not taken seriously (Bakar and Ahmad 2012). Therefore, an approach towards improving project management practices as to maintain or increase the performance of a firm.

1.1 Problem Statement

SMEs in food and beverage sector plays an important role in Malaysia. However, they are facing the increment in production costs, technological developments, rapid changes in demand and competitions. Innovation is required in order for them to survive(Shah and Ahmad 2015). Operations and growth of SMEs also generate projects apart from innovation. Project management is important and SMEs require less structured method of management with greater flexibility(Aquil 2013). Therefore, project management has to be improved to catered the nature in order for projects in organizations to success. As contended by literatures, there are huge difference in the nature of project management required by SMEs than that traditional forms of project management but none explained specifically for food and beverage SMEs. Hence, further investigation throughout this study would hopefully build up a literature and speculate why traditional project management does not meet their need. However, reviews can be done on written research about the project management practices for SMEs.

1.2 Research Questions

This case study is undertaken in order to identify the project management adopted by food and beverage SMEs. This study is also aim to answer the following questions:

- RQ 1: Does the SMEs in food & beverage sector follow the traditional/normal project management track
- RQ 2: Are the elements in PM also being used/adopted by the food and beverage SMEs
- RQ 3: Why traditional/normal project management does not meet the needs of the food & beverage SMEs

1.3 Research Objectives

This study is undertaken to investigate the project management in the food & beverage SME's. It will focus on project management practices of the organization. The research objective of this research study is:

- To identify the project management methodologies and tools adopted by the food and beverages SME's
- To recommend the project management practices that fits the nature of the company

1.4 Scope of the Study

To achieve the study objective, a research is done on the matter regarding project management practices in SMEs nature. The study focused on SMEs companies in F&B sector within Seberang Perai municipality. Initially, literature study is done as to get the overview of project management methodologies and tools commonly practiced by the SMEs. Secondly, investigation on real multiple case study are made through interview getting know the project management practices by the organizations. Thus, identification of suitable project management practices can be suggested by analysing the results from both the literature study and also from the real case study.

1.5 Thesis Outline

Chapter 1 of the thesis is the introduction of research background regarding food and beverage SMEs in Malaysia and also project management. It gives forward about problem statement, research objective, project scope, significance of the study and its limitations. Chapter 2 presents thorough and extensive literature reviews of the study. This chapter will analyse critically a segment of a published body of knowledge through summary, classification, and comparison of prior research studies, reviews of literature and theoretical articles. Chapter 3 explains the available methodology a and the reason case study is chosen as the methodology. Chapter 4 presents the results and discussion

of the study which commences with research results from the case study. The results are analysed and interpreted. Chapter 5 discussed on conclusion and recommendation. The finding of research is stated in this chapter. This chapter also discuss the recommendations for future research.

1.6 Significance of the Study

This study demonstrates project management practices adopted by Company A, B and C in the SMEs of F&B sector. Therefore, it will give lots of benefits to several parties such as:

1.6.1 SMEs

A project management practices to help SMEs manage their projects and improve the performance of the organizations

1.6.2 F&B industry

Other companies in F&B also can take this study as reference for their company's development activities especially in projects such as R&D, innovation and product development.

1.6.3 Consumers/customers

Project management will improve the way of managing projects by F&B SMEs and also their performance. The quality of the end product or deliverable will also improves satisfying the consumers/customers.

1.7 Limitations of the Study

There are two main limitation to the study. The companies are family owned and the managers are fully incharge of the entire business. Hence, they have limited time to squeeze in time for an interview session for this study. Secondly, the managers are not familiar with the project management specifically since they were all from business school in particular. The terms used as they give feedback from the interview is quite general. They need to be questioned and acknowledge more about a particular question.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This is the overview of current literature in the frame of the presented research problem. Each elements of literature are discussed which is focus on the specific nature of the relevant literatures that relates with the study.

A literature review purpose is to analyse critically a segment of a published body of knowledge through summary, classification, and comparison of prior research studies, reviews of literature and theoretical articles.

2.1 Food & Beverages Small Medium Enterprises

Small and medium enterprises (SMEs) for manufacturing sector in Malaysia is defined by Government as company that employ not more than 200 employees and the sales turnover least than RM 25 million. Over the year, the development of SMEs in the country has shown significant improvement in terms of production.

Table 2.1 Small and Medium Enterprises (SMEs) of Manufacturing Sector in Malaysia

Micro	Small	Medium
Sales turnover of not	Sales turnover of not	Sales turnover of
greater than	greater than	greater than RM 15
RM300,000 or not	RM300,000 or in	million and not greater
greater than 5 fulltime	between 5 to 75	than RM50 million or
employees	fulltime employees	in between 75 to 200
		fulltime employees

[Source: SME Corporation Malaysia (SME Corp. Malaysia), 2016]

SMEs in manufacturing sector are 6% of total 37,861 business establishment. 77% of total SMEs in Malaysia in 2010 are mostly microenterprises. While 20% of total SMEs are accounted for the small-sized businesses and the rest 3% are constitute for medium-size SMEs. Percentage of food and beverage manufacturing sector in Malaysia is about 15.1% of the SMEs share and also the second highest out of all that contribute to Malaysian sector of economy.

Table 2.2 SMEs share in the Manufacturing Sector by Sub-sector

SMEs in the Manufacturing	SMEs	SMEs Total
	Percentage (%)	
Wearing apparel	24	9,096
Food product	15.1	5,723
Fabricated metal product	10.5	3,979
Printing	7.7	2,918
Furniture	4.9	1,857
Rubber and Plastic Products	4.6	1,743
Wood products	3.8	1,440
Non-metallic mineral products	3.6	1,364
Machinery & Equipment	3.2	1,213
Metal Based	2.9	1,099
Chemical Product	2.5	947
Textiles	2.5	947
Others	14.6	5,533
Overall total	100	37,861

[Source:(Department of Statistics Malaysia 2011)]

As seen from Table 2.2, the food & beverage manufacturing SMEs is important in Malaysia. SMEs also contributed to 65.5% of total employment and to total export for other 17.6% in the year 2015. Nonetheless, although the performance of SMEs in recent years is positive yet the contribution of Malaysian SMEs remains relatively small to overall economy compared with their opposite in ad advanced and other middle-income countries. SME Masterplan in 2012 launched by the Government announced the aim to chart the development of SMEs in line with Malaysia's desire to become a high-income country by 2020.

2.3 Project Management in SMEs

Projects in SMEs happen in the process of either providing products to the customers or to manage innovation and growth or maybe both of the operations. These projects in SMEs require less bureaucratic management methods and much more flexible. Furthermore, it is indicated that the project management is strongly focusing on people. The differences between SMEs and larger organization are particularly stated by (Ghobadian and Gallear 1997);

- Processes in SMEs involve simple planning and informal reporting
- SMEs procedures have a low degree of standardization, with visionary decision making.
- SMEs have a low degree of structure specialization, multi-tasking with high degree of innovativeness
- People prefer tested techniques because of high consequences of failure.

SMEs required a very different nature of project management from traditional forms of project management proposed for larger projects (Turner 2010). However, management of the smallest of projects are lightly written and described. Only project management of large projects had its genesis in the management for medium-sized projects and following procedures such as PRINCE2 (Commerce 2009). Traditional project management fails to be used for projects in SMEs because of the following reasons (Ghobadian and Gallear 1997);

- The processes are formal and rigid to be applied
- The procedures are specialized and formal decision making
- Structure of roles are well described and
- Traditional project management is systems rather than people focused.

In this research, simplified project planning and control systems, with simplified reporting mechanisms are expected to be adopted by the SMEs coherent to the constraint suggested by (Ghobadian and Gallear 1997) and (Turner, Ledwith et al. 2010). Standard methodologies such as PRINCE2 is not expected to be used by the organizations since they are too bureaucratic for their needs and give too formalistic structures. People are also expected to be performing a few duties or multitasking and specialist project managers are unnecessary for micro-sized companies. Also, identified techniques and tools for project management are commonly not being used small and medium-sized companies,

2.4 The Project Life Cycle

Project life cycle is very important in this matter of project management practices. The function is to explain the significant of a variety of behavioural issues on project organization (Pinto and Slevin 1988). Significantly, the activities along the project are not easy to be predicted thoroughly. Project's complexity, duration, and its related management roles are to be understood throughout the facilitation of a project's life cycle(Creehan 2004). The life cycle duration of a project can be days, weeks or even matters of years. The tendency towards conflict along the project are common and the way of managing are different in every phases of life cycle (Thamhaim and Wilemon 1975). Somehow, every task in a project are separated through series of phases and required a managerial approach. Therefore, there are four common fundamental of phase or sequential project life cycle (Pinto and Slevin 1987, Creehan 2004);

1. Concept development and project definition;

Initial phase the vision of a project is put in motion. Conceptualization of project and recognition of strategic needs for the project as to accomplish the objectives. Typically, at this point the scope of work, resources, and stakeholders are determined by the top management. Questions are being answered for initial feasibility decision such as:

- What is the problem?
- Will the problem solve by project development?
- What are the specific goals of the project?
- How many resources are required as support for the project?

2. Project planning;

A formalized set of plans is established as to accomplish the goals of the project planned earlier. Development of detailed specifications, schematics, schedules, and other plans. Work packages are broken down, individual assignments are made and completion of process.

3. Project execution or operation;

Actual work of the project is performed at this phase. Operation of project, daily management, monitoring the performance, updating the project plan, and examining potential areas of management are featured. In the end, project results are gained with sufficient materials and resources while the performance capabilities are continually tested to make certain that the project is completed as planned.

4. Project delivery and termination

Completed project is transferred to customer as scheduled in the project plan. The project team is dismissed and the resources are reassigned to other duties after the project is literally closed out.

The project life cycle shows the lifetime of a project starting from the beginning to the end of process developing the project. The requirement of resource and effort during early conceptualization and Planning phases are usually at minimum amount. Then later at Planning and Execution phases, the amount increases rapidly and decline during Termination. The tasks are estimated roughly in these phases. Illustrated below is the level or stages of effort;

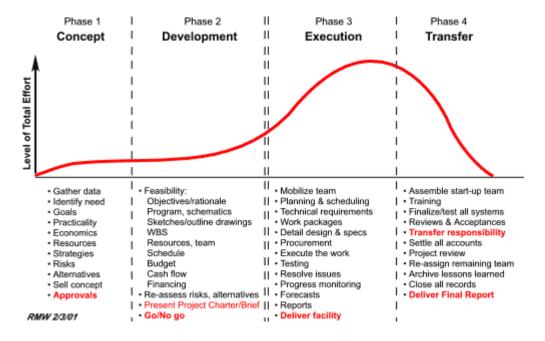


Figure 2.1 Tasks accomplished by project phase (Source: Organizational life cycle implications for major projects(Adams and Barndt 2008))))

The time, cost and performance parameters fluctuate throughout the life cycle progress and therefore the allocation of resources need to be continually managed. Project manager can always refer to the life cycle to ensure that the project scope, time and cost are achieved. The project management is required as the project management of individual tasks cannot be approached.

2.5 Project Management Knowledge Area (PMBoK)

PMI has introduced the A Guide to the Project Management Body of Knowledge (PMBOK Guide) book to keep project management terms and concepts well defined and consistent. PMBOK is fundamental knowledge needed for managing projects. These are also the outlined and the knowledge areas of project management. There are 10 areas of knowledges and disciplines are mention as follows(Watt 2013);

2.5.1 Integration Management

This area of management keeps the activities going around as whole and work collectively. Dynamics integration takes place managing project consent and scope. Also direct planning, managing, monitoring and control change.

2.5.2 Scope Management

Defined scope and parameter are required for projects. The work are broken down and managed through method of wok breakdown structure or WBS. Planning, definition, WBS creation, control and verification are the elements of managing scope.

2.5.3 Time/Schedule Management

Projects are managed within the budgeted time according to a project schedule since it has a specific beginning and ending. It involves definition, resource, sequence and duration estimating, schedule development, and schedule control.

2.5.4 Cost Management

Projects required resources, it needs investment also of creating value (i.e., the benefits derived exceed the amount spent). Involving resource planning, cost estimating, budgeting, and control.

2.5.5 Quality Management

Projects are meant to produce work or deliverables. These deliverables have to meet project performance standards and its objectives. Managing quality involve quality planning, quality assurance, and quality control.

2.5.6 Communication management

Projects are managed by a lot of people whether customer, suppliers or related stakeholder who gives benefit to the end output of project. Communication is crucial to interact with each other for project success. The management includes distribution information, planning and reporting.

2.5.7 Risk Management

Unexpected events can always appear in any projects. The risk has to be identify and manage to avoid instability to the projects. Risk management is about planning and identification of risk, risk analysis, response planning to the risk, and monitoring and control of risk.

2.5.8 Procurement Management

This is about managing outside services such as vendors and contractors for equipment purchasing. It needs to be control throughout the lifecycle of a project.

2.5.9 Stakeholders Management

Identification of stakeholders at initial state of project cycle is a key factor of a success project. Stake holder management involve stakeholders identification, level of stakeholder interest, and their potential to influence the project.

2.5.10 Human Resource Management

Projects are managed by manpower and working as a team during the life cycle since the beginning till the project is being executed. This plays an important role to cope with project objectives. Management of resource include planning, hiring, developing and managing a project team.

2.6 Project Management Practices in SMEs

Both researchers (Turner, Ledwith et al. 2010, Aquil 2013) described that SMEs does not need bureaucratic project management for their projects. This is because the formal project management used by the big companies are too complex and not suitable for small projects. The SMEs fails to implement the formal project management since small company processeses are simple and require informal reporting, procedures are less specialized, structure of roles are not well defined and people tend to multitask, also people focused approach (Ghobadian and Gallear 1997). Therefore (Turner, Ledwith et al. 2010, Aquil 2013) found lite management practices adopted by SMEs in their studies. Apart of the practices mentioned are as follows;

2.5.1 Quality Management

The definition of quality management is related to consumers' needs and providing them satisfaction(Paiva 2013). Turner found that none of the companies applied quality management but Aquil did explained on it. Certification such as ISO, IP (Ingress Protection) and IEC (International Electric Code) and etc. is a requirement of managing quality. Another practice is Quality Assurance as to control their products quality by carrying out inspection/evaluation of equipment (Aquil 2013).

2.5.2 Road map or milestones

Milestone is a significant event or point in a project for an accomplishment on the road to the project's completion(Pinto 2007). The benefits of using milestones to control projects are;

- As signal to the completion of vital projects important pace.
- Motivate the project team
- Allow revaluation of client needs or any necessary changes required
- Coordinate schedules with suppliers and vendors
- Key project of review gates
- Signal other team member when their part is about to begin
- Portray the WBS and promote to develop better overall project view

2.5.3 Work breakdown or activity list

It is an oriented hierarchal decomposition of work executed by the project teams compliant to the project objective and need deliverable. It defines and organizes the total scope of the whole project.(Pinto 2007)

2.5.4 Scope and resource schedule

Managing scope required to ensure that the project is as required and based on its work, and only work required to complete the projects(Pinto 2007)

2.5.5 Team building

The individual that work as a team required facilitation as to ensure the task are well managed as one.

2.5.6 Agile or scrum

According to Pinto, the agile methodology has become famous and important to organizations that are not able to implement highly structured approach in planning a project. It is less rigid and proved that it being used by SMEs(Pinto 2007, Turner, Ledwith et al. 2010).

2.7 Project Management Success Factors

Other than to meet the project goals, project management factors of success are independent on the overall project schedule, quality standard required and also completion of project with the budget. Stated are the factors which may contribute to the success of project management(Avots 1969, Munns and Bjeirmi 1996);

- sufficient basis for project;
- professional project manager;
- supportive top management;
- adequately defined tasks;
- sufficient project management techniques;
- proper management techniques;
- well-planned project closedown;
- sufficient commitments to project.

(Abu, Deros et al. 2014) Mentioned specifically of best 5 critical success factors based on the case study made. The study stated the identified csf as ongoing basis for new products;

- Product Strategy
- commitment of directors or company owners
- project team leader being knowledgeable and skilful
- the involvement of members of the project team and the involvement of outside organizations

Therefore, scf also play an important role towards success of business and need involvement of all the employees available for effective projects.

2.8 Summary of Literature Reviews

As stated in the reviews, all of them are related to each other and significant to this study. Project Management practices in SMEs are important throughout the project life cycle. Project management for projects are considered successful if they are completed within the scope, time and budget. However, the fundamental of project management might be too formal and are not necessarily needed for SMEs. This is purposely for comparisons between the complex and the lite management to manage projects.

CHAPTER 3

METHODOLOGY

3.0 Introduction

This chapter is focusing on the approach of the study. The methodology will discuss on the research design, data collection methods, data analysis and the data interpretation.

3.1 Research Design

Research design in the ways or method on how research is conducted and which source of information is gathered. Multiple-case study design is adapted and introduced as methodology (Bogdan and Biklen 1997). The study gather much finer quality, convincing evidence with multiple cases rather than conducting a single case study(Yin 1994, Flick 2008). Real-life situations governing project management in food and beverage SMEs are identified for further findings through the project. This study acquired the secondary data collection methods and primary data.

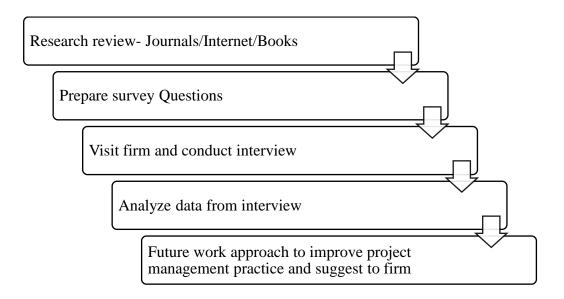


Figure 3.1 Methodology flow chart

3.1.1 Qualitative Design

This approach of design is from appropriate interview process through the interpretation of interview data. Investigation is made by conducting a qualitative research interviews. In-depth information related to the interviewees experiences and viewpoints of the topic discussed are provided is the interest of this particular research design (Turner 2010).

3.2 Data collection Methods

Primary data and secondary data collection methods has been used to gather the data in this research. In the initial stage of this research, secondary data were collected and later semi-structured interviews technique were conducted with experience respondents from SMEs in F&B sector based on questionnaire design to evaluate the SMEs regardless of their project management adoption. Three companies as case studies are selected to be interviewed. Evidences obtained from multiple sources are required to get a good case study(Yin 1994).

3.2.1 Primary data

Primary data is obtained by execution of interviews with the manager/founder of three companies. A layout of questionnaire is prepared to guide to semi-structured interview session and the feedbacks are analysed.

3.2.2 Secondary data

Secondary data were gained through the effort of collecting information from SME-related journals, books, proceedings, case studies, newspaper and internet as being mentioned in Chapter 2.

3.4 Research sample

SME's food processing industries in Seberang Perai, Pulau Pinang is selected as the target population for this study. The companies list was obtained from business unit of Mechanical Engineering, USM. The companies have collaborated with USM to improve their product and process. General background about the company was investigated from the website. A represented sample of 3 was shortlisted and drawn for this case study. The three samples were shortlisted based on:

- Product providers
- Number of employees
- Years of operation
- Area served
- Products

The three organizations shortlisted for this study are all product providers and employed approximately the same number of employees. The organisation were also shortlisted based on its operation year categorised to short, medium and long. This is to observe the project management practices implemented by the organisation by different years of operation. The area served is focused to Malaysia area for comparisons. Besides, different country area served varies in the way of its management because the cultures are different. The firm also must have a few products produces to indicate its productivity of managing projects. Finally, the shortlisted firms in this study were Company A, Company B and Company C.

3.5 Variables of study

Certain project management practices that was found essential to SMEs are client requirements, road map or milestones, work breakdown or activity lists, responsibility assignement matrix, scope and resource schedule(Turner, Ledwith et al. 2010). These are also identified together with a bonus practice which is communication management(Aquil 2013). The questionnaire to assist the interview was then developed and included in the Appendices section. The managers of the companies were asked based on their experiences regardless of the adoption of project management practices for their companies.

Table 3.1 Nature of project types of the organization

Nature	Details
Types of project	Research
	Internal
	Product development
	Tailored products for external customer
	Others

Table 3.2 Nature of Project Management practices

Nature	Details	
Project Management	Quality Management	
Practices	Risk Management	
(Methodologies/	Scheduling Management	
Tools)	Scope Management	
	Human Resource Management	
	Communication Management	
	Customer Requirement	

Table 3.3 Other project management practices essential for SMEs

Nature		Details
Essential	Project	Milestone
Management		Work breakdown/Activity list
		Responsibility assignment matrix
		Team Building

This section discussed the specific project management practices/tools used by the organizations to manage projects for SMEs. Sophisticated project management practices were also asked to ensure the implementation of these are not being adopted by Company A,B and C.

CHAPTER 4

RESULTS AND DISCUSSION

4.0 Introduction

This chapter discusses on the data collection through interviews with representatives who were responsible as the manager or director of the three cases study. The aim is to identify the project management implemented by the food and beverage SMEs.

4.1 Overview of the three companies

The case study companies are included two small sized and one from micro sized. All the organization involved in the development and producing food and beverages products. An overview of the three companies is shown in the following;

Table 4.1 Overview of case study companies

Company	Primary Functions	Market Segments	Recognition/Awards	
A	Design, development	-Malaysia	Halal Certificate	
Small-Sized	and manufacture	-Focus on local	MeSTI Certificate	
	food			
В	Design, development	-Malaysia	Halal Certificate	
Small Sized	and manufacture	-Focus on northern	MeSTI Certificate	
	beverages	Perak and Kedah		
С	Design, development	-Malaysia	Halal Certificate	
Micro Sized	and manufacture		MeSTI Certificate	
	beverages		Malaysia Good	
			Design Mark from	
			Malaysia Design	
			Council	

Company A (small-sized SME)

Table 4.2 Details of Company A (Interview: Section A)

Items	Details
Year founded	2003
Sizes/ No of employees	8
Types of products	• Bread
(Tailored and routine)	• Cookies
	• Cakes
	• Chocolates
Customers	Distributors
	• Agents
	Direct selling from own physical store
Projects	Tailored product for external customers
	Routine processing
	New product development
	Research
Project manager	Not available
Future business planning	Expansion of current business factory with the store

Company A was founded in 2003 and currently has 8 permanent workers. primary products produced are food products such as cookies, bread, cakes and chocolates. Some of the products are routinely produced to be distributed through the agents, distributors, retailers and for direct selling at their physical store. The company managed to approximately produce up to thirty (30) products all together after almost 14 years of business operations. The business run at two different venues since the company has developed from just making cookies until the founder which is also the director discovered to produce chocolate products. Product demands are at peak when it comes to festive season especially Hari Raya and about RM40,000 is generated for that particular month. Normal operation other than hari raya generated about RM20-30,000 monthly. Specific training has been exposed to the workers to enhance working skills and knowledge in production of the products. Projects duration

that the company received are based on the demand/order. New product has its own product strategy to meet the consumer needs.

Company B (small-sized SME)

Table 4.3 Details of company B (Interview: Section A)

Items	Details
Year founded	1946
Sizes/ No of employees	8
Types of products	Coffee
(Tailored and routine)	Teh Tarik
	White Coffee
	Coffee Durian
Customers	Distributors
	• Agents
	Direct selling from factory
Projects	Tailored product for external customers
	Routine processing
	New product development
	Research
Project manager	Not available
Future business planning	Market expansion to abroad

The company was founded in 1964 and presently employed about 8 workers. Seven (7) of the employees are full timer and one (1) part timer. The company is one of the earliest coffee company owned by a Bumiputera and Osman Ahmad as the founder able to get attention from various party especially the government agencies. The campaign if supporting the company managed to help the opening of its own company. It all started at homemaking coffee with small scale before emerging and get a high demand. Business growth experience a decline at one point as they are no longer welcome with existence of many other companies including from abroad. The current manager took over the company while they only open the factory a day per month with value of sales of about RM2,000.