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The Effectiveness of Performance Management System  
in Manufacturing Industry

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The Effectiveness of Performance Management System  
in Manufacturing Industry

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## TABLE OF CONTENTS

Page

Copyright @ 2019.....	iii
DECLARATION .....	iv
ACKNOWLEDGEMENT .....	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES .....	ix
LIST OF FIGURES .....	x
ABSTRACT.....	xi
CHAPTER 1 .....	1
INTRODUCTION .....	1
1.0    Introduction .....	1
1.0.1    Performance Management .....	1
1.0.2    Performance Management System (PMS).....	2
1.1    Problem Statement .....	3
1.2    Research Objectives .....	4
1.3    Research Questions .....	5
1.4    Research Framework and Hypothesis .....	5
1.4.1    Conceptual Framework.....	6
1.4.2    Research Hypothesis.....	6
1.5    Significance of the Study .....	7
1.5.1    Manufacturing Companies.....	7
1.5.2    Human Resource (HR) Personnel.....	8
1.5.3    Malaysia National Human Resource Centre (NHRC).....	8
1.6    Definition of Terms .....	8
1.6.1    Employee Involvement.....	8
1.6.2    Management Committee.....	9
1.6.3    Performance Appraisal .....	9
1.6.4    Reward System .....	10
1.6.5    Effectiveness of Performance Management System (PMS).....	10
1.7    Conclusion.....	11
CHAPTER 2 .....	12
LITERATURE REVIEW .....	12
2.0    Introduction .....	12

---

2.1	Objectives of Performance Management System .....	12
2.2	Importance of Performance Management System .....	14
2.3	Benefits to Implement Performance Management System .....	15
2.4	Theories of Performance Management System .....	16
2.4.1	Goal Setting Theory.....	16
2.4.2	Expectancy Theory .....	17
2.4.3	Control Theory.....	18
2.4.4	Two-Factor Theory.....	18
2.5	Development of Performance Management System.....	19
2.6	Employee Involvement towards Performance Management System Effectiveness .....	20
2.7	Management Commitment towards Performance Management System Effectiveness .....	21
2.8	Performance Appraisal towards Performance Management System Effectiveness .....	22
2.9	Reward System towards Performance Management System Effectiveness .....	23
2.10	Conclusion.....	24
CHAPTER 3 .....		25
RESEARCH METHOD.....		25
3.0	Introduction .....	25
3.1	Research Design.....	26
3.2	Population & Sampling Design.....	27
3.2.1	Target Population & Sampling Frame .....	27
3.2.2	Sampling Techniques.....	28
3.2.3	Sampling Size Determination .....	28
3.3	Research Instrument.....	29
3.3.1	Questionnaire Design.....	30
3.3.2	Pilot Test.....	34
3.4	Data Collection Method .....	35
3.4.1	Questionnaires .....	36
3.5	Data Analysis Method .....	36
3.6	Conclusion.....	37
CHAPTER 4 .....		38
RESEARCH RESULTS .....		38
4.0	Introduction .....	38

---

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4.1	Frequency Data .....	38
4.2	Descriptive Analysis .....	41
4.2.1	Descriptive Statistics of Demographic Information .....	42
4.2.2	Descriptive Statistics of Dependent Variable - Effectiveness of Performance Management System.....	44
4.2.3	Descriptive Statistics of Independent Variables .....	47
4.3	Pearson Correlation.....	49
4.4	Multiple Regression .....	51
4.5	Data Interpretation.....	55
4.5.1	Demographic Data .....	55
4.5.2	Employee Involvement.....	56
4.5.3	Management Commitment .....	57
4.5.4	Performance Appraisal .....	58
4.5.5	Reward System .....	59
4.5.6	Effectiveness of Performance Management System .....	60
4.6	Conclusion.....	60
CHAPTER 5 .....		62
DISCUSSION AND CONCLUSION.....		62
5.0	Introduction .....	62
5.1	Discussion .....	62
5.1.1	Discussion on Demographic Data .....	62
5.1.2	Discussion on Employment Involvement.....	63
5.1.3	Discussion on Management Commitment .....	64
5.1.4	Discussion on Performance Appraisal.....	65
5.1.5	Discussion on Reward System.....	65
5.1.6	Discussion on Effectiveness of Performance Management System	66
5.2	Limitations of the Research.....	67
5.3	Managerial Implication .....	68
5.4	Recommendation.....	70
5.5	Summary and Conclusion .....	71
REFERENCES .....		72
APPENDIX A – Questionnaire .....		83
APPENDIX B – Frequency Distribution Tables .....		86
APPENDIX C – Descriptive Statistic of Dependent Variable .....		87

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## LIST OF TABLES

	Page
Table 1: Required Sample Size .....	28
Table 2: Questionnaire Design for Employee Involvement .....	31
Table 3: Questionnaire Design for Management Commitment .....	31
Table 4: Questionnaire Design for Performance Appraisal .....	32
Table 5: Questionnaire Design for Reward System .....	32
Table 6: Questionnaire Design for Effectiveness of Performance Management System .....	33
Table 7: Reliability Statistics on the Pilot Study .....	34
Table 8: Item-total Statistic on the Pilot Study .....	34
Table 9: Descriptive Statistics of Gender .....	42
Table 10: Descriptive Statistics of Age Range .....	42
Table 11: Descriptive Statistics of Position .....	43
Table 12: Descriptive Statistics of Year of Services .....	43
Table 13: Descriptive Statistics of Effectiveness of Performance Management System .....	44
Table 14: Normality Test of Effectiveness of Performance Management System .....	45
Table 15: Descriptive Statistics of Independent Variables – Employment Involvement .....	47
Table 16: Descriptive Statistics of Independent Variables – Management Commitment .....	47
Table 17: Descriptive Statistics of Independent Variables – Performance Appraisal .....	48
Table 18: Descriptive Statistics of Independent Variables – Reward System .....	49
Table 19: Correlations on Dependent Variable & Independent Variables .....	50
Table 20: Model Summary .....	52
Table 21: ANOVA Table .....	53
Table 22: Coefficient .....	53
Table 23: Statistic of Employee Involvement .....	56
Table 24: Statistic of Management Commitment .....	57
Table 25: Frequency of Performance Appraisal .....	58
Table 26: Statistic of Performance Appraisal .....	58
Table 27: Statistic of Reward System .....	59
Table 28: Statistic of Effectiveness of Performance Management System .....	60

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## LIST OF FIGURES

	Page
Figure 1: Conceptual Framework .....	6
Figure 2: Respondent's Gender .....	38
Figure 3: Respondent's Age Range .....	39
Figure 4: Respondent's Current Position.....	40
Figure 5: Respondent's Year of Services in Current Company.....	40

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## ABSTRACT

Performance Management System (PMS) is a systematic tool to measure and improve employee performance and company performance. It helps to establish the consistency on selection of employees on career plan development decision and improve the employee retention in a company as employees who being motivated are likely to be more loyal. There are lot of benefits to implement Performance Management System in the company. For instance, Performance Management System could improve employee morale, boost up enjoyment in job, enhance job satisfaction, increase employee output, and reduce employee overtime work as efficiency will be enhanced. An effective Performance Management System implementation will bring all these benefits to the company and employees.

The objective of this study is to investigate whether the Performance Management System in the manufacturing companies are effective from the factors of employee involvement, management commitment, performance appraisal and reward system. In this study, research will identify if these factors - employee involvement, management commitment, performance appraisal and reward system have a significant relationship between the effectiveness of Performance Management System in manufacturing industry. Researcher believe that this study will benefit to the existing manufacturing companies and human resource personnel. They would able to understand more on Performance Management System, its benefits and the relationship between employee involvement, management commitment, performance appraisal and reward system with effectiveness of Performance Management System.

In this study, primary data will be used through survey of questionnaires. Manufacturing companies at Klang Valley, Penang and Johor will be chosen for this research study. SPSS will be used to analyze the data collection and researcher will include the data interpretation and data findings it the last two chapters.

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# CHAPTER 1

## INTRODUCTION

### 1.0 Introduction

#### 1.0.1 Performance Management

Performance management is a process which improve employees' performance in company (Mustafa, 2013) and manage employees performance to achieve their desired goals (Sahoo & Mishra, 2016). Cho and Lee (2012) mentioned that the topic on performance improvement and their importance have been emphasised for decades. According to Susan (2018), performance management is more than an annual performance review. Morrison (2014) claimed that there are ways to differentiate performance management and performance appraisal. Performance management is a proactive process and more related to company, while performance appraisal is reactive process and only measure individual.

According to Bagul (2014), Performance Management is a process which ensure company employees output contribution benefit to the company mission achievement. The process including employees have to understand task which they carry out, feedback from managers and discuss on expectations. Employee performance management implementation is the basic principal to achieve effective company operation as company shall retain and develop talented or potential employees (Mustafa, 2013). Furthermore, employees' individual objective shall align with the department plan and company vision (Kumari, 2017).

Sathornkich N. (2010) states that the objective of performance management is to ensure company's strategic direction established, company objectives defined and accomplishment on desired results. Besides, Kumari (2017) mentioned in

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performance management implementation the individual shall take up responsibilities in the business operation process or departmental operation procedures by using own competency and abilities to solve problems, e.g. employees' empowerment. Simultaneously, employees are able to develop their leadership style through empowering task to them. In addition, employees with good performance shall be rewarded to motivate them to do better in the future. Aguinis (2013) mentioned that in order to increase the motivation of employees, both managers and employees shall provide feedback on task performance and supply recognition for accomplishment.

### **1.0.2 Performance Management System (PMS)**

Performance Management System (PMS) is a measurement tool to improve work performance of employees (Bouic, 2017) and company performance (Seotlela, 2014). Taylor and Pierce (1999) states that PMS is a longitudinal evaluation which leads to merit-based bonus pay by evaluate employees' attitudes and work effort. According to Akella S. & Waqif A. (2017), the successful of PMS requires planning, measuring and reviewing of performance.

In the PMS, employers have to develop a comprehensive job description to be use in the recruitment and selection processes. Employer need to identify the selection criteria for a particular position and job role to ensure that the candidate is potential to be fill up the position. An employee has to know the accomplishment-based performance standards and ways of measurement by the employer. Employer shall provide on-going training and coaching to helps employee effectively carry out task and perform well. Communication is important to make Performance Management System effective and efficient. Employer shall communicate with employee on the performance development planning semi-annually or yearly, including promotional and career development opportunities (Sherman, 2014).

By implementing PMS, it helps to establish the consistency on selection of employees on career plan development decision, e.g. job promotion, job rotation, etc. If employees are highly motivated, they are encouraged to improve their

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performance in order to obtain company reward. PMS should improve the employee retention in a company as employees who being motivated are likely to be more loyal. Furthermore, employee morale will improve, more enjoyment in job, job satisfaction improved, output increased, and overtime work will be reduced (Mid Atlantic Employers' Association, 2015). An effective Performance Management System implementation will bring benefits to the company and employees (Bulawa, 2011).

## **1.1 Problem Statement**

Even though Performance Management System (PMS) had been discussed for decades, however, there are challenges on Performance Management System implementation and whether is the PMS effectively carry out by companies. Most of the time, company will only link the performance appraisal and reward system to Performance Management System but omitted to involve employee involvement and management commitment. In the finding of Mehmood et al. (2013), they concluded that reward system is the stronger factor to manage employee's performance as he found that company could manage employee's performance by providing some sort of recognition for motivation to produce efficiency work. According to Mughal et al. (2014) and DeNisi & Murphy (2017), they mentioned that performance appraisal has been considered one of the important aspects in PMS to improve individual performance and productivity. Ratnawat & Jha (2013) also mentioned performance appraisal is one of the most discussed factors in PMS.

Researcher believe that if employee involvement is important by taking initiative to understand the company direction and willingness to enhance their own competencies to perform. In addition, the top management shall contribute in the PMS development and implementation process to ensure that the objectives of PMS are achievable. According to Seotlela & Miruka (2014), an effective and successful PMS shall come with full support from employees. Senior management and top management shall show commitment to the system to influence employees to treat PMS seriously. However, Richard (2007) mentioned that many managers were refused to rate their subordinates and the subordinates will doubt on the fairness of

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rating given by their managers. Gerard Bouic (2017) mentioned that it is difficult to implement PMS effectively if employees' objectives are not aligned with the company's vision, mission & core values. Employees shall move in a same direction with company in order to make PMS workable. Managers shall have trained to apply the system as well as plan the objective, monitoring and review employee's performance. Furthermore, PMS shall have supported and implemented by Executive director rather than Human Resource Department.

The purpose of this study is to investigate if the PMS in the manufacturing companies are linked with employee's involvement, management commitment, performance appraisal and reward system to meet the effectiveness of PMS. Employment involvement referring to employee initiative on knowledge enhancement and understand company's objectives. On the other hand, management commitment include supports from Executive Director and managers on establishing and implementation of PMS. The top management shall involve in PMS activities to influence employees' perspective on PMS and motivation towards PMS execution. Besides, participation of top management on PMS activities could also show confidence to employees and ensure the PMS implementation is reliable, meaningful and beneficial to both company and employees.

PMS is an important systematic tool for the company to evaluate employee performance. However, there is limited of study in Malaysia discussing the PMS which has been conducted in Malaysian organizations or determining the effectiveness of implemented PMS. In the qualitative study of M.A. & A. K (2009), they determined the process of PMS in the Malaysian government linked company through interviews and they found that PMS is not link with any company activities. PMS was treated just to appraise employees' performance. According to Mohd Saud (2014) quantitative research, he investigated employee attitude through Balanced Scorecard as the PMS in Malaysia Majlis Amanah Rakyat (MARA) and good PMS practices which shall be applied.

## **1.2 Research Objectives**

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General objective:

The general objective of this study is to investigate whether the Performance Management System in the manufacturing companies are effective from employee involvement, management commitment, performance appraisal and reward system's point of view.

Specific objectives:

- 1) To determine if employee involvement and management commitment involve in the implementation and execution of Performance Management System (PMS) in manufacturing industry.
- 2) To determine if performance appraisal procedure has been carried out when Performance Management System (PMS) is implementing in the manufacturing industry.
- 3) To determine if reward system is aligned with the Performance Management System (PMS) in manufacturing industry.

### **1.3 Research Questions**

The research questions are:

- 1) Do employees involve in the implementation of Performance Management System in manufacturing industry?
- 2) Do management committed in the implementation of Performance Management System in manufacturing industry?
- 3) Is performance appraisal included in Performance Management System framework in manufacturing industry?
- 4) Do reward system aligned with Performance Management System in manufacturing industry?

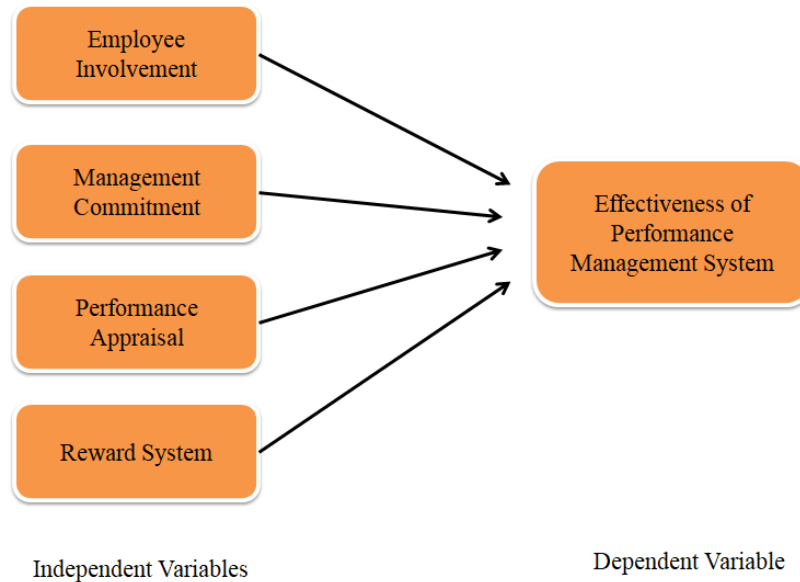
### **1.4 Research Framework and Hypothesis**



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### 1.4.1 Conceptual Framework

Figure 1: Conceptual Framework



### 1.4.2 Research Hypothesis

Five hypotheses have been developed for this study based on dependent and independent variables are given as below:

$H_0$  = There is no significant relationship between employee involvement and effectiveness of performance management system.

$H_1$  = There is a significant relationship between employee involvement and effectiveness of performance management system.

$H_0$  = There is no significant relationship between management commitment and effectiveness of performance management system.

$H_2$  = There is a significant relationship between management commitment and effectiveness of performance management system.

$H_0$  = There is no significant relationship between performance appraisal and effectiveness of performance management system.

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H<sub>3</sub> = There is a significant relationship between performance appraisal and effectiveness of performance management system.

H<sub>0</sub> = There is no significant relationship between reward system and effectiveness of performance management system.

H<sub>4</sub> = There is a significant relationship between reward system and effectiveness of performance management system.

H<sub>0</sub> = There is no significant relationship between at least one of the variables and effectiveness of performance management system.

H<sub>5</sub> = There is a significant relationship between at least one of the variables and effectiveness of performance management system.

## **1.5 Significance of the Study**

### **1.5.1 Manufacturing Companies**

This study will help the manufacturing companies to understand the effectiveness of Performance Management System (PMS). Employers shall brief employees on the company's objective and vision. On the other hand, employee shall understand their role and enhance their own individual competencies in order to achieve the company objectives. The company's objective and employee's goals shall align in order to achieve PMS effectiveness.

Furthermore, the company's top management & manager shall always communicate their expectation on employees. Managers get to know more on their subordinates' performance and individual goals as PMS practice should improve the communication between employees and the managers. It also gives more responsibilities to employees and reinforce them to develop themselves and to obtain a higher level of position in order to attain their individual goal in the company. The PMS evaluation shall include the monitoring of employee's

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individual performance by the managers and the rewards system shall linked with the results from PMS evaluation.

### **1.5.2 Human Resource (HR) Personnel**

This study could beneficial to HR Personnel by understanding how the effectiveness of PMS currently happening in the manufacturing industry. The literature part shall also provide more understand of PMS towards employee involvement & management commitment. PMS framework shall align with a clear and transparent reward system to employees and bring positive influence on employee retention and performance. Also, the performance appraisal shall include in the PMS of the company to establish the effectiveness of PMS.

### **1.5.3 Malaysia National Human Resource Centre (NHRC)**

This study could let the NHRC understands that the current standard of PMS in the manufacturing companies. If the Human Resource Ministry would like to promote the productivity-linked wage system (PLWS) in Malaysia, then the PMS structure of the companies shall be firmed and solid in order to carry forward to the execution of PLWS. The government shall promote more on the PMS to companies by sharing the benefit for companies to executive a proper PMS and benefit of employees who involve in the PMS structure. A proper PMS implementation might be a good start for productivity-linked wage system (PLWS).

## **1.6 Definition of Terms**

### **1.6.1 Employee Involvement**

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Bretz et al. (1992) stated that employee's development goals shall create opportunity on mutual discussion. According to Gifford, Neathey & Loukas (2005), employee involvement including employees shall understand the company performance, employee shall commit to the necessary change of company growth, employees is being motivate in job and understanding their contribution to the company.

In this study, researcher determined the definition of employee involvement is company shall inform employees on the PMS implementation and briefed on the company objectives to employee. Furthermore, employees shall develop own career development which aligned with the company objectives.

### **1.6.2 Management Committee**

In the findings of Sole (2009), he mentioned that management commitment will influence the PMS. Mughal et al. (2014) commented that managers shall be active in PMS implementation as PMS requires managers feedback and participation of employee towards goals achievement.

Researcher determined that the definition of management commitment in this study is the managers shall fully support the PMS implementation and provide guidance and feedback to employees to achieve their personal goals.

### **1.6.3 Performance Appraisal**

DeNisi & Murphy (2017) stated that performance appraisal shall include feedback and training shall be provided when poor performance has been assessed during the performance appraisal procedures. According to Toppo & Prusty (2012), performance appraisal shall also review their personal development objectives and assess how their contribution could be rewarded with higher remuneration. Besides, the manager who completed the assessment of employee's performance shall provide guidance and feedback to help the employees.

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Researcher determined that the definition of performance appraisal in this study is to assess employees' performance periodically, guidance and feedback shall be provided after assessment and training shall be provided to improve employees' weaknesses.

#### **1.6.4 Reward System**

According to Ratnawat & Jha (2013), an appropriate reward system is to link with performance appraisal results to attain the effectiveness of PMS. Armstrong (1998) determined that the recognition of reward system includes pay increase, opportunity of promotion and employer praise.

In this study, researcher determined the definition of reward system as both intrinsic and extrinsic reward. Intrinsic reward included compensation like salary, commission, incentives and bonuses. While extrinsic reward is refer to additional employee benefits such as medical insurance, retirement scheme, subsidized on mobile phone and housing loan, company car provided, flexi working schedule, work from home, entertainment and transport allowance, etc.

#### **1.6.5 Effectiveness of Performance Management System (PMS)**

Soltani et al. (2005) explained that PMS is to enhance the level of employee performance by implement an effective training method, giving clear objectives and obtaining recommendation from the company. In addition, Roberts (2003) and Sahu et al. (2016) mentioned that PMS is to ensure the employees are looking for success and able to help the company to achieve the objectives and goals.

To concluded, the definition of effectiveness of PMS in this study shall include all these in PMS implementation:

- a) Employee are informed on PMS implementation.
- b) Employee shall develop own career development which aligned with company objectives.

- 
- c) A proper performance appraisal structure with assessment, supervisor's feedback and periodic monitoring on performance.
  - d) Training shall be provided to improve weaknesses.
  - e) Reward system shall link with performance appraisal.

## **1.7 Conclusion**

This chapter has covered the foundation of this study. It has included a brief introduction on the definition of performance management and performance management system (PMS). The problem statement, research objectives and research questions also stated in this chapter. Besides, the research framework and hypothesis has indicated to show the direction of this study and follow by a justification for significance of study. Lastly, definition of terms were included to explain the independent variables and dependent variable indicated in the research framework.

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## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

Chapter one provides the orientation of the research study by telling the objective and purpose of this research study with some brief introduction of Performance Management System (PMS). The motivation of this research study also been shared in previous chapter. Besides, the problem statement, the research questions of the research study were also presented.

Many authors had discussed what is Performance Management System (PMS) and the factors which affecting PMS effectiveness, however these authors have different perspectives and come out their own definition. In Chapter 2, the different perspectives will be gathered especially on the objective of PMS, the importance of PMS and the process of PMS. In addition, the four (4) factors - employee involvement, management commitment, performance appraisal and reward system will be discussed with the PMS effectiveness. Some PMS investigation and cases will also be presented to support the said 4 factors. Through this Chapter 2, researcher understand why the said 4 factors are related to the with PMS effectiveness. After that, researcher will be conducting a survey to investigate how effective of PMS implemented currently in the manufacturing companies throughout employee involvement, management commitment, performance appraisal and reward system.

#### **2.1 Objectives of Performance Management System**

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According to Soltani et al. (2005), the objective of performance management system is to enhance the level of employee performance by implement an effective training method, giving clear objectives and obtaining recommendation from different stakeholder of the company. Therefore, PMS could have defined as a broad system included performance appraisal, counselling, reward system, coaching, career planning and training (Sripirabaa & Krishnaveni, 2009). Sahoo & Jena (2012) determined that top management shall aware of the processing tendency of information within the company in order to management performance effectively. Roberts (2003) defined that PMS is to ensure the employees are looking for success and able to help the company to achieve the objectives and goals (Sahu et al., 2016). Besides, Armstrong (2006) mentioned that PMS could improve the performance of business as it helps to increase employee motivation and management able to improve company development.

Sahu et al. (2016) defined that PMS is to ensure the capacity of employee to full potential by reaching the expectation of company in terms of role and responsibilities, competencies and positive behavior. According to Zhang (2012), the major objective of PMS is to make employees understand the expectation of employers, pertaining the quality of work which expected from employer. Furthermore, PMS able should able to define the salary increment range based on employee performance and able to identify employee career development (Almohtaseb et al., 2017). Lawler (2003) mentioned that performance of employee could be motivated and able to develop a high-performance culture in the company. Besides, employees able to support each other on departmental task and sharpen each other's knowledge and skills from the performance management system.

According to Mughal et al. (2014), there are six (6) basic objectives of PMS.

- a) PMS shall align company goals with employee individual goals in order to make employee have more initiate on goals achievement.
- b) PMS implementation is to gather more information about salary increment, employee retention, employee recognition of performance, reward system. Also, PMS shall able to identify employees who are underperformed.
- c) PMS able to eliminate communication gap. Employees shall be informed on the expected of their employers.



- 
- d) PMS able to help managers to identify employees' weaknesses. The weaknesses could be improved through coaching program.
  - e) PMS able to determine the workforce planning of company. It could assist company to identify performance of each employee and allocate them at a proper position to avoid wastage on human resources allocation.
  - f) Also, PMS shall have the purpose of documented gathered information. Documentation is important for company decision making and establish future company goals.

## **2.2 Importance of Performance Management System**

According to Mustafa (2013), a good performance management system (PMS) enables employee to understand and contribute to the company's objectives and company able to know the employees' performance. PMS could increase the productivity as it keeps the employees functioning at an optimum level. Employees are able to act productively because they are being filled in the right position and giving proper training for them to carry out their task. Besides, employees are motivated to perform better as they have their individual career path development opportunities which given by company. PMS helps managers to identify top performers and poor performers. Talented individuals are getting chance for career development, while managers could improve weaknesses of poor performers to align with company objectives. Also, it helps to retain and keep good employees in the company.

Lessard (2017) also mentioned that PMS can help managers to understand the employees' skill sets and competency level. Since employees are proper trained and coached, so their quality of task could be increased. Quality task refers to task completed by eliminate wastage of process, no delay of work, no unnecessary re-work and overproduction (Debenedetti, 2017). In addition, PMS could motivate employees since they are allowed to offer own opinion and feedback on task, which it is creating a transparent working environment (Lessard, 2017).

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## **2.3 Benefits to Implement Performance Management System**

According to Abrduan & Coita (2008), an effective performance management system (PMS) able to lead and improve the employees, so that they can help to obtain the company's objective and mission towards successful accomplishment. Mustafa (2013) concluded that there are four major benefits to implement PMS in the company. PMS able to improve employee's working method and employee's productivity will be increased. Employee morale will be improved from employee performance assessment and it will lead to the success of the company. When employee morale improved, their productivity will be increased. In addition, employees who able to meet the work accomplishment will stay longer in the company, meaning to say, it also improving the employee retention in the company. When there are a lot of loyalty employees, performance of work will be improved, quality of deliver of work will also improve and profitability of the company will be increased. Employee's motivation will be enhanced when they get support from the company and giving rewards on their contribution.

Bulawa (2012) stated that employees able to understand more on the company objectives and mission during the implementation process of performance management system in the company. Employees may develop own personal achievement & career development from the company milestone and vision. In addition, the implementation of performance management system in the company could improve performance and delivery sustainable productivity. In other words, the company's objectives will be obtained through employees' targeted goals with high productivity. Holmes (1987) mentioned that performance management system able to improve the decision making and understand the risk on certain matters as employees aware of the company's objectives and mission in performance management system.

According to Suhardi (2015), company could develop company sustainability, consistent performance delivery and financial stability from performance

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management system. Company's performance and employees' performance also be determined through the implementation of performance management system.

## **2.4 Theories of Performance Management System**

Buchner (2007) mentioned that goal setting theory, control theory, expectancy theory and two-factor theory shall be combined in order to provide a comprehensive framework to ensure the effectiveness of Performance Management System.

### **2.4.1 Goal Setting Theory**

Goal setting theory was developed in 1968 by Locke. He commented that people are motivated with targeted goals (Landers, Bauer & Callan, 2017). According to Latham, Brcic & Steinhauer (2017), goal setting theory is to set a goal which able lead to higher job task and performance and it has a significant relationship between difficulties on goals and performance. Employees shall have certain abilities and competencies to perform task and accomplish goals in goal setting theory. Effort and sustainability are important elements in this theory.

Shoaib & Kohli mentioned goal setting theory and employee involvement is a motivational structure. It explained a positive correlation with job satisfaction, meaning to say goal setting and employee involvement could able to lead to a high job satisfaction. A goal could motivate employee to use their skills and knowledge on work. Besides, goal could also motivate employees to learn new things and improve self-knowledge. Therefore, a high goal could reflect a higher performance on work.

According to Lunenburg (2011), difficult and challenging goals could bring greater motivation to employees compared to easy and common goals. Employee's output and productivity could be improved with clear and specific goals from the company. Therefore, performance management system with the design of goal setting theory able to bring positive impact towards employee performance. Furthermore, goal accomplish could be work in a continuous pattern when the current outcome could

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be the input for the next level of goal setting. Yurtkoru et al. (2017) determined that pre-planned goal could be the performance inducer to employees. Performance goals are targeted to improve employee performance, obtain better results on work and enhance satisfaction. When goals are not achieved and employee performance does not meet the expectation of company, it could trigger employee's dissatisfaction.

#### **2.4.2 Expectancy Theory**

According to Lunenburg (2011), it determined that employee's behavior which helps employee to achieve desired performance goals. This theory would also determine whether employees have such abilities and knowledge to complete task accurately. As agreed by Mohamed (2015), when there is high benefits provided, employees will show motivated. If employee could ensure that he or she could complete the task, the expectancy of employee will be 1 from the range from 0 to 1. There are three important implications on expectancy theory which are expectation towards effort to performance, expectation towards performance to reward and reward valence. On the other hand, the three important elements of expectancy theory are:

- a) Employee's effort will lead to the expected performance
- b) Performance will be rewarded systematically
- c) The value of rewards is positively high

In the research of Zhang, Song, Hackett & Bycio (2006), DeNisi and Pritchard's literature determined that in order to improve the performance management system's function, a detailed and comprehensive of motivational structure has to be designed based on expectancy theory. They claimed that the framework of DeNisi and Pritchard has interpreted the key factors which could enhance the appraisal effectiveness and performance management process. Expectancy theory shall involve in the establishment of performance management system as it could helps employee to be motivated and achieve better performance. Hence, communication is very important in the performance assessment to determine their current competency on performing current task (Lunenburg, 2011). According to Pulakos

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(2004), performance appraisal could be treated as an effective tool for performance appraisal with the application of expectancy theory.

### **2.4.3 Control Theory**

Eneanya (2018) stated that control theory is focuses on shaping behavior by providing feedback. Feedback is an important element in performance management process as it allows employees to know their performance and how well is their skill and knowledge to obtain the desired goals. Islami, Mulolli & Mustafa (2018) mentioned that control theory will motivate employees when they realized the differences between the standard performance and actual performance. Employers shall provide employees objectives and feedback on their actual performance to boost up employee productivity and job satisfaction.

The use of control theory is relied on the knowledge of managers and their ability on setting and measuring performance (Arthur, 1994). Besides, Jarrell, Harley & Lajoie (2016) also mentioned that achievements are goal directed and appraisal driven. Achievements has a significant relationship with individual appraisal and assessment on performance.

### **2.4.4 Two-Factor Theory**

According to two-factor theory or Herzberg's theory, employees might not be satisfied with their current salaries or working conditions provided rather than recognition and advancement. There are four important elements in two-factor theory which are job satisfaction, employee performance, motivational factors and hygiene factors. Employees able to meet satisfaction and achievement on their work with motivational factors and hygiene factors (Khan, Abbas & Zaki, 2017). Motivational factors (e.g. recognition, promotion, etc.) could increase the long-term job satisfaction, while hygiene factors (e.g. salaries, job security, safety working environment, etc.) are for short term purposes (Dartey-Baah & Amoako, 2011). William (2010) explained that some employees will be motivated by high pay, while some high performance employees were triggered by company policies, recognition system and working environment. Habib, Awan & Sahibzada (2018)

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mentioned that the presence of two-factor theory is to separate the elements which caused satisfaction and dissatisfaction of employees in workplace. This theory could provide a strong based for a successful and effective performance management system.

## **2.5 Development of Performance Management System**

Observation and documentation are very important in the performance management process, however most of the time employees are not being inform and report their performance. Besides, there is always lack of communication on employee's performance. Therefore, Haynes & Bobrow (n.d.) mentioned that feedback is significant, and managers should respond immediately to employee's behavior after an action or behavior. There are 3 stages shall be considered when developing the performance management system: prepare for appraisal meeting, conduct appraisal meeting, and follow up after the meeting. They believed that these could improve the effectiveness of performance management system and reaction of the employees.

In the development of performance management system, it shall firstly define the job description and develop individual objectives. Secondly is to establish a development plan to obtain objectives. Next, on-going review shall be monitored, and support shall be delivered by managers to the employees to encourage their performance. Lastly, outstanding performance shall link with the reward system and pay shall be aligned with the formal performance assessment (Kelly, 2012).

According to Lempinen (2013), company need to put in efforts on the design and development of performance management system. Model and metrics of the performance management shall be developed in the system. The procedure shall also develop which able to capture, store and process the collected data. Lastly, the system shall design which able to deliver individual performance information to all users (employees).

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## **2.6 Employee Involvement towards Performance Management System Effectiveness**

Coens & Jenkins (2000) mentioned that there is a survey of police department in Madison, US found out that their state, Madison have the highest level of citizen satisfaction among others as the police station is using the system with individual goal setting and employee involvement. Employees choose what they want to do. Bretz et al. (1992) stated that shall create opportunity on mutual discussion of employee's development goals and plan to achieve the decided goals (Sahu et al., 2016). According to Mughal et al. (2014), employee development is one of the main purposes of performance management system which included training, enhance job experience and monitoring of job activities. It is essential to ensure that employees are competence enough by measuring their skills and knowledge.

In order to ensure performance management system is effective, employees shall be evaluated on relevant job competency. In the study of Fletcher and Williams (1992) determined that performance management system able to improve employee commitment, employee motivation, increase sense of individual value and improve their view on empowerment (Almohtaseb et al., 2017). According to Maina (2015), performance management system can be enhanced by fostering employee involvement. Zhang (2012) mentioned that a typical performance management system shall included individual employee goal setting to ultimate the company's mission. Besides, company shall communicate the company's objectives and mission to all employees so that employees could contribute to achieve company's mission and individual performance enhancement.

According to Gruman & Saks (2011), a good human capital management is an important aspect in the performance management process and it also reflects the company effectiveness through employee productivity. Besides, employee involvement is a factor to produce more outcome compared to traditional and it promote the performance management process. So particularly, it could stabilize the performance management system of the company. Kleingeld et al. (2004) claimed that the main factor of influence on performance management system is

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employee involvement. In addition, participation of employee should be emphasis during the designing of performance management system high participation of employees able to develop more better and related benefits to employees. Ginac (2018) mentioned that many companies do not emphasis on involvement of employees in recent years. But according to her study, the higher employment involvement, produces higher profitability, high productivity and lower employee absenteeism as employment involvement able to enhance the work motivation and improve the relationship between peers.

## **2.7 Management Commitment towards Performance Management System Effectiveness**

Sole (2009) mentioned that there are two main factors influence the performance management system which are internal factors and external factors. Internal factors included management commitment, leadership, employee engagement while external factors referred to labor unions and legal terms and condition (Jain & Gautam, 2016). Effective performance management system shall able to motivate managers. Managers could be active in performance management system implementation as it requires managers feedback and participation of employee towards goals achievement (Mughal et al., 2014). Locke & Latham (2002) stated that managers could improve the employees work in performance management system process by setting their expectation to employees, monitor employees result, review the results and giving rewards to good performers (Wairumu, 2015). Lessard (2017) also mentioned that managers shall regular feedback to employees on their performance and conduct performance review, so employees have better understanding what kind of knowledge that they need to develop. According to Sahoo & Mishra (2012), the managers play an important role in performance management system. They shall review the employees in performance management system and to ensure the employees' performance level is consistently in the company. Furthermore, sufficient of resources and full of support from mangers shall be provided when executing an important task for the team. Managers shall concern that the performance gap of each individual in the team shall not be far



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from each other and consequences if employees unable to meet the standard of performance. Marrelli (2012) determined that managers communication with employees is important in order to improve motivation and create trust and respect to employees from managers.

However, it is difficult to get managers to involve in performance management system for information (Gifford et al., 2005). Bigony (2018) mentioned that many managers do not understand about performance management system and its strategic which lead to company success.

## **2.8 Performance Appraisal towards Performance Management System Effectiveness**

In performance management system implementation will involve employee development. Therefore, appraisal system is required in the performance management system process. It is mainly for the use of salary increment, job promotion, job transfer and rotation assignments (Mughal et al., 2014). As mentioned by DeNisi & Murphy (2017), the performance appraisal has been considered one of the important aspects in PMS to improve individual performance and productivity. In addition, performance appraisal included feedback and training shall be provided when poor performance has been assessed during the performance appraisal procedures. As mentioned by Kadiresan et al. (2015), training and development also important in performance appraisal in order to build up employees' involvement and commitment. Pan (2011) also mentioned that performance management activities shall include performance appraisal and feedback in performance appraisal not only for pay increment, promotion but also training.

According to Toppo & Prusty (2012), performance appraisal is important in performance management system to maximize employee performance in order to improve company performance. Performance appraisal in performance management system not only reviewing employee's salary, bonus or promotion

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from their performance but also reviewing their personal development objectives obtained and assess how their contribution rewarded with higher remuneration or bonuses. Appropriate training and some development programs shall be assigned to employees in order to overcome their weakness and improve productivity. Besides, managers shall provide guidance and feedback to help the employees.

According to Hosian (2016), the traditional feedback after performance appraisal is normally a one-way feedback source. While 360 feedback is a new concept on giving feedback from several sources. Apart from managers, 360 feedback also included feedback from peers, customers, subordinates and self-evaluation. Marlinga (2006) determined that no matter is positive or negative feedback given to employees, it could also enhance employee's satisfaction and improvement performance. DeNisi & Pritchard (2006) determined feedback on performance shall provide after performance appraisal as it could help company to make decision on further step up on salary and promotion.

## **2.9 Reward System towards Performance Management System Effectiveness**

Mehmood et al. (2013) defined that reward system is a tool to motivate and raise employees to be more productive and accomplish the company goals. Hamukwaya & Yazdanifard (2014) also agreed that a reward could be a mechanism to enhance work quality and encourage knowledge sharing among the team. Armstrong (1998) mentioned that performance management shall include motivation employees through pay increase, opportunity of promotion and employer praise.

Company can stimulate and motivate by understand employees' individual goals and desired needs (Mikander, 2010). According to Mughal (2014), a performance management system able to provide salary information and plan of compensation. Therefore, defining and measuring of reward shall include the implementation of performance management system in order to improve the performance of employees (Zhang, 2012). As mentioned by Best Practices LLC (n.d.), company

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has to ensure that the reward and recognition system is aligned with the company objectives and goals. If the reward and recognition system has misaligned, company will not achieve their desired objectives and goals.

On the other hand, Murphy (2015) stated that team performance is more critical. If employees only emphasis and focus on own individual performance may damage the performance of team. Hence, his thought was rewarding to team will be more proper than individual rewards. He elaborated that it might be more suitable for manufacturing to implement team rewards to build up the team concept, while individual rewards still could have rewarded for continuous improvement activities as encourage employee to improve with innovation ideas. Kramar & Syed (2012) determined that group rewards are more effective on performance collaborative approach and easier to reach the shared goals among the team (Murphy, 2015). In the study of Kerrin & Oliver (2002), team rewards are compatible with individual performance as both are directly related to the company culture.

## **2.10 Conclusion**

This chapter had analyzed the definition of performance management system and it also discussed the importance of performance management system from various authors' perception. It also reviewed the literature which relevant to variables for effectiveness of performance management system. Employments engagement is important during the performance management system process as they are required to be initiative and develop own individual goals which align with the company objectives. Managers are important in performance management system implementation as they could motivate and influence employees. Besides, manager could provide continuous training to employees to ensure quality work is produced

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by employees. Performance appraisal system is a monitoring mechanism of performance management system to evaluate employees' performance, while reward system comes at the end of the process. Rewards system will justify by using information from performance appraisal system to see whether to provide salary increment, promotion, incentives or termination. Finally, it has drawn the relationship between each variable with effectiveness of performance management system.

## **CHAPTER 3**

### **RESEARCH METHOD**

#### **3.0 Introduction**

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The principle of this study is to define how effective is current manufacturing companies implementing Performance Management System and how do employees feel on the Performance Management System of their current company. The concept of Performance Management System (PMS), research questions and problem statement of study had been introduced in Chapter 1. In addition, Chapter 2 had discussed the literature review which relevant to variables that affect PMS effectiveness. In this chapter will be presenting the research methodology which covered the population and sampling design, data collection methods and data analysis method of the study.

According to Rajasekar, Philominathan & Chinnathambi (2013), research method is the procedures and scheme which apply in the research, e.g. theoretical and statistical studies. Its help to collect samples and data to solve a problem. While research methodology is to solve problems in a more systematic method by explaining and forecasting the situation. It is important to do research methodology for researcher to solve a problem.

### **3.1 Research Design**

According to Pavan & Nagarekha (2014), research design is important to researcher as it will provide guidance to researcher on data analyze and data collection. It is a foundation of a research in order to carry out the purpose of the research. Rajasekar et al. (2013) mentioned that researcher has to determine the useful materials for research in research design and test out whether the data collection is valid or not.

Creswell (2014) determined that there are three types of approaches for research study, which are qualitative approach, quantitative approach and lastly is the

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combination of qualitative and quantitative approach. The most simple way to differentiate both qualitative and quantitative approach is qualitative is using words and open-ended questions, while quantitative is using numbers and closed-ended questions.

On the other hand, Akhtar (2016) stated that there are 4 types of research design. Exploratory research is useful when researcher wants to investigate problems with a set of hypotheses. Descriptive research or sometimes it also named as statistical research by other researchers. Descriptive research is widely used in determining current situation. Researcher is recommended to use explanatory research when the study is to investigate new topic which has not been discussed or studied by any researchers before. Lastly, experimental research is used when researchers want to test out if the relationship between independent variables and dependent variables are valid.

In this study, descriptive and qualitative research will be applied as researcher want to know whether Performance Management System in the manufacturing companies are effective from companies' current situation on employee involvement, management commitment, performance appraisal and reward system. Besides, questionnaire will be used in this study to collect primary data from the respondents by researcher.

## **3.2 Population & Sampling Design**

### **3.2.1 Target Population & Sampling Frame**

Taherdoost (2016) stated that researchers shall define the target population in the beginning stage in sampling process. Alvi (2016) also mentioned that targeted population is required in order to meet the specified criterion for this investigation of study. According to Malaysia Department of Statistics (2019), the number of employees in manufacturing sector is around 1,090,000 persons.

According to Li (2011), sampling frame is to narrow down the total population

range to be selected as samples for the research survey. Manufacturing companies at Klang Valley, Penang and Johor will be chosen for this research study. The reason of choosing Klang Valley because it has a high connectivity with Port Klang which it played an important role to improve Selangor's industrial development and the economy of Malaysia. While, Penang is known as the Industries' Silicon Valley of the East and it is the main electronics manufacturing hub within Malaysia. Penang is also the main electronic manufacturing hub in Malaysia. Johor is the leading the investment for manufacturing sector in 2018, according to Malaysian Investment Development Authority (2018). In the past five years, Johor has maintained at the top in manufacturing sector.

### 3.2.2 Sampling Techniques

There are two major types of sampling techniques, which are probability sampling methods and non-probability sampling methods (Alvi, 2016; Taherdoost, 2016). According to Singh (2018), probability sampling is a random technique to ensure everyone in the population able to get an equal opportunity to be the research sample. While non-probability sampling is not a randomization type and high bias will be existed. In this study, non-probability convenient sampling will be used as the target population is very board. Respondents who are easy to approach with the 2 requirements, (1) employee from manufacturing sector and (2) whom company is conducting performance management system will be included as part of the sample.

### 3.2.3 Sampling Size Determination

Table 1: Required Sample Size

Population Size	Confidence level = 95%			Confidence level = 99%		
	Margin of error			Margin of error		
	5%	2.5%	1%	5%	2.5%	1%
100	80	94	99	87	96	99
500	217	377	475	285	421	485
1,000	278	606	906	399	727	943
10,000	370	1,332	4,899	622	2,098	6,239
100,000	383	1,513	8,762	659	2,585	14,227
500,000	384	1,532	9,423	663	2,640	16,055
1,000,000	384	1,534	9,512	663	2,647	16,317

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Note. From: Dessel, G. V. (2013). How to determine population and survey sample size? Retrieved from <https://www.checkmarket.com/blog/how-to-estimate-your-population-and-survey-sample-size/>

As mentioned by Dessel (2013), a correct sample size is very important in a research study. There are two measurement will affect the accuracy of data, which is margin of error and confidence level. Refer to Table 1, the sample size will be different depends to preferred margin of error and confidence level.

In this study, the estimate population of manufacturing employees is 1,070,000. If confidence level at 95% and margin of error at 5%, the number of sample size will be 384. But the questionnaire distribution to respondents shall more than 384 as Taherdoost (2016) reminded most of the researchers will never obtain 100% of response rate in real life. In order to obtain at least 384 of responded questionnaire for this study, the number to invite to response on the questionnaire shall be 550 with an estimated of 70% response rate.

However, Halim & Izhak (2014) & Hill (1998) found that Roscoe's rules of thumb determined the appropriate sample size is from 30 to 500. If sample size is larger than 500, it will affect the significant level between dependent variables and independent variables. As stated by Jung (2013), the sample size ranges from 100 to 200 is enough to provide good and quality results.

### **3.3 Research Instrument**

In this study, questionnaire will be used in this study to collect primary data from the respondents by researcher. According to Bird (2009), questionnaire is a popular tool to obtain information for present behavior or situation associated with the research topics and purpose. As mentioned by Stehr-Green, Stehr-Green & Nelson (2003), hypothesis shall be identified before design a questionnaire as the question shall focus on the leading hypothesis of the research.



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In order to design a good questionnaire, the format of questionnaire, sequence, length and wording shall be considered to obtain valid and reliable data from the respondents. Questionnaire could be more reliable and valid if Likert Scale has been applied (Krosnick & Presser, 2009). Mathers, Fox & Hunn (2007) suggested questionnaire shall to be clear, simple and avoid any complex instructions. Frary (2002) advised when the questionnaire has many questions and it requires longer time to complete, then the response option should not include “Other” as it will affect the response rate of questionnaire.

### **3.3.1 Questionnaire Design**

In this study, quantitative data collection will be applied, and questionnaire will be distributed by using non-probability convenient sampling. Respondents are employees from manufacturing industry and whom company is conducting performance management system. Employees from manufacturing industry are being approached to complete the questionnaire via Google Form (e-form).

The questionnaire consists of two sessions. 1<sup>st</sup> session is the demographic question. For instance, personal information of the respondents, like age, gender, position level and years of service in the current company. The 2<sup>nd</sup> session is consisting of questions based on the four independent variables - employee involvement, management commitment, performance appraisal, reward system and the dependent variable – effectiveness of performance management system. In 2<sup>nd</sup> session, there are four to five questions for each independent variables and dependent variable.

The questions of employee involvement were adopted and modified from Abu Mansor, Chakraborty, Tay & Mahitapoglu (2012). In his study, the questions are designed for education institutional however it is also can be applied for this research. The following questions are being used in the questionnaire of this research for the independent variable - employee involvement.

- a) I was informed during the implementation of PMS.
- b) I feel involved during the implementation of PMS.
- c) There are trainings provided in PMS for me.

- d) I was encouraged to accountable own development and individual goals.
- e) I understand how my work contributes to company performance.

**Table 2: Questionnaire Design for Employee Involvement**

<b>Original Question</b>	<b>Adopted Question</b>	<b>Source</b>
Employees are informed about development of PMS	I was informed during the implementation of PMS.	Abu Mansoret al. (2012)
Employees feel involved during the development of PMS.	I feel involved during the implementation of PMS.	Abu Mansoret al. (2012)
There is sufficient training provided on PMS	There are trainings provided in PMS for me.	Abu Mansoret al. (2012)
Employees are made accountable to their own development	I was encouraged to accountable own development and individual goals.	Abu Mansoret al. (2012)
Employees understand how their work contributes to their organization performance.	I understand how my work contributes to company performance.	Abu Mansoret al. (2012)

The questions of management commitment were adopted and modified from Abu Mansor et al. (2012) and Kumar & Kumar (2010). The following questions are being used in the questionnaire of this research for the independent variable - management commitment.

- a) Strong support from top management/ managers in PMS implementation.
- b) My manager/ superior constantly monitor my performance.
- c) My manager/ superior constantly communicates their expectation to me.
- d) My manager/ superior established my career plan objectives.
- e) My manager/ superior able to guide me to achieve individual goals.

**Table 3: Questionnaire Design for Management Commitment**

<b>Original Question</b>	<b>Adopted Question</b>	<b>Source</b>
There is strong support from top managers about involving in PMS	Strong support from top management/ managers in PMS implementation.	Abu Mansoret al. (2012)
Manager constantly monitors activities performed by staff through PMS	My manager/ superior constantly monitors my performance.	Abu Mansoret al. (2012)
Your seniors provide you with the continuous feedback	My manager/ superior constantly communicates their expectation to me.	Kumar & Kumar (2010)
Does the manager establish plans and work objectives with you?	My manager/ superior established my career plan objectives.	Kumar & Kumar (2010)
Your seniors assist you at the time of your need.	My manager/ superior able to guide me to achieve individual goals.	Kumar & Kumar (2010)

The questions of performance appraisal were adopted and modified from Bintu (2014). The following questions are being used in the questionnaire of this research for the independent variable - performance appraisal.

- a) How often performance appraisal form filled or been done?
- b) My manager/ superior deals with my performance appraisals fairly.
- c) After assessment, my manager/ superior will give feedback and guidance to me & ways of improving my weaknesses.
- d) Appropriate training will be given to me if I failed to meet the expected performance level.

**Table 4: Questionnaire Design for Performance Appraisal**

<b>Original Question</b>	<b>Adopted Question</b>	<b>Source</b>
Appraisal process is regularly reviewed.	How often performance appraisal form filled or been done?	Bintu (2014)
Appraisal process is fair.	My manager/ superior deals with my performance appraisals fairly.	Bintu (2014)
Feedback provided to workers	After assessment, my manager/ superior will give feedback and guidance to me & ways of improving my weaknesses.	Bintu (2014)
Helped in identifying barriers to performance and helped in professional development	Appropriate training will be given to me if I failed to meet the expected performance level.	Bintu (2014)

The questions of reward system were adopted and modified from Bintu (2014) and Ibrar & Khan (2015). The following questions are being used in the questionnaire of this research for the dependent variable - reward system.

- a) The reward system is aligned with Performance Management System.
- b) Pay decisions are linked with individual performance achievements.
- c) Promotion is linked with performance appraisal.
- d) Promotion criteria is well defined in Performance Management System.

**Table 5: Questionnaire Design for Reward System**

<b>Original Question</b>	<b>Adopted Question</b>	<b>Source</b>
Does the reward system linked to employee performance?	The reward system is aligned with Performance Management System	Ibrar & Khan (2015)
Pay decisions are linked to performance achievement.	Pay decisions are linked with individual performance achievements.	Ibrar & Khan (2015)

Appraisal does not reflect in employee development.	Promotion is linked with performance appraisal.	Bintu (2014)
Reward system facilitates the strategy of performance management	Promotion policy is well defined in PMS.	Ibrar & Khan (2015)

The questions of effectiveness of performance management system were adopted and modified from Woyessa (2015). The following questions are being used in the questionnaire of this research for the dependent variable - effectiveness of performance management system.

- a) I understand the structure and objectives in Performance Management System.
- b) PMS motivate me to achieve my individual goals & improve self-development.
- c) I understand my strength and weakness from Performance Management System.
- d) My individual goals are linked with the company objectives.
- e) The Performance Management System is effective in improving company and my performance.

**Table 6: Questionnaire Design for Effectiveness of Performance Management System**

<b>Original Question</b>	<b>Adopted Question</b>	<b>Source</b>
I am aware that the performance management system is evaluated	I understand the structure and objectives in Performance Management System.	Woyessa (2015)
My development needs have been taken into account in the goal setting process	PMS motivate me to achieve my individual goals & improve self-development.	Woyessa (2015)
I have a good understanding of how my behavioral standards relates to my specific jobs	I understand my strength and weakness from Performance Management System.	Woyessa (2015)
My expectations of results are linked to the universities strategic directions and goals	My individual goals are linked with the company objectives.	Woyessa (2015)
The performance standard able to improve employees' performance and universities strategic goals	The Performance Management System is effective in improving company and my performance.	Woyessa (2015)

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### 3.3.2 Pilot Test

Table 7: Reliability Statistics on the Pilot Study

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.927	.927	23

Tavakol & Dennick (2011) determined that if the Cronbach's Alpha value is 0.70 to 0.95, it is considered acceptable values. If the Cronbach's Alpha value is below 0.70, researchers shall increase the number of questions in the questionnaire survey and improve the interrelatedness between dependent and independents values. Refer to Table 7, the Cronbach's Alpha value is 0.927 which is acceptable, and it is a high level of internal consistency.

Table 8: Item-total Statistic on the Pilot Study

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
A1	74.8125	206.286	.697	.881	.921
A2	75.1250	205.274	.689	.897	.922
A3	75.2500	212.323	.480	.792	.926
A4	74.6250	210.952	.584	.914	.924
A5	74.2812	217.434	.597	.875	.924
B1	74.5625	216.254	.472	.861	.926
B2	74.5938	217.410	.552	.863	.924
B3	74.9062	211.055	.699	.920	.922
B4	75.1562	208.975	.664	.892	.922
B5	75.2500	216.387	.456	.931	.926
C1	74.8750	242.371	-.373	.849	.936
C2	74.5938	217.346	.580	.887	.924
C3	74.8750	217.468	.479	.916	.925
C4	75.3125	212.544	.557	.866	.924
D1	75.2812	207.499	.807	.908	.920
D2	74.8125	214.931	.563	.943	.924
D3	74.8438	212.136	.601	.969	.923
D4	75.4375	213.093	.592	.888	.923
E1	74.5625	213.415	.684	.921	.922
E2	74.9375	214.835	.729	.938	.922
E3	74.7812	213.531	.740	.967	.922
E4	74.8125	213.964	.722	.930	.922
E5	75.1875	210.673	.715	.907	.921

From the Table 8, it shown that any items deleted from the data does not affect much on the Cronbach's Alpha value of reliability test. Therefore, researcher plan not to remove or do any changes on the questions of the research survey.

### 3.4 Data Collection Method

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This study will be using primary data. The primary data will be done through a survey by using questionnaire. Employees from manufacturing industry will be approaching to complete the survey via Google Form (e-form). A questionnaire will be consisting of 2 parts. Part 1 will be the personal information of the respondents, like age, gender, position level and years of service in the current company. While, part 2 will included questions based on the four variables (employee involvement, management commitment, performance appraisal and reward system) and to ask employees' opinion whether their company has all the variables included in their Performance Management System and met the objectives of performance management system. The sampling locations in this research study are Klang Valley, Penang and Johor.

### **3.4.1 Questionnaires**

The questions are all closed ended question. The questions will be measured by using 5-point Likert Scale in part 2. Likert Scales is a measurement tools to know the respondents' opinions, behaviors and perceptions (McLeod, 2008). According to LaMarca (2011), Likert Scale allow respondent to respond in a degree of agreement which is the most universal method and easiest to understand rather than force respondent to take a stand and provide a concrete answer whether yes or no.

## **3.5 Data Analysis Method**

Data analysis is a process to interpret a large amount of collected data to make use of it (Kawulich, 2004). Data analysis referring to both qualitative methods and quantitative methods of data process and information summarizing. In this study, quantitative method will be used to compare the relationship of each variables to the effectiveness of Performance Management System.

SPSS (Statistical package for the social sciences) will be used as the statistical software for data analysis.

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## **3.6 Conclusion**

This chapter had summarized the research methodology which used and conducted for this study. Besides, it also included the target population, sampling frame, sampling technique and proposed sample size. Questionnaire design for all variables and pilot test will also be discussed. Finally, the data collection method and data analysis method will be described in this chapter.



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## CHAPTER 4

### RESEARCH RESULTS

#### 4.0 Introduction

In this chapter, it will be presenting the analysis of data collected through the questionnaire survey from the manufacturing employees in Klang Valley, Penang and Johor. It will also demonstrate the pilot test results before conducting the actual research survey. Demographic information of the respondents and data analysis on independent variables towards effectiveness of performance management system will also be presented in this chapter. The collection of data will be analyzed by using SPSS and interpretation will be included. Moreover, data findings will be discussed and related to the literature review in Chapter 2.

#### 4.1 Frequency Data

Figure 2: Respondent's Gender

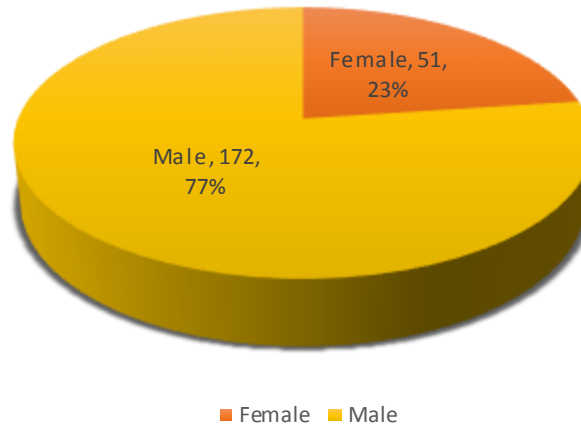
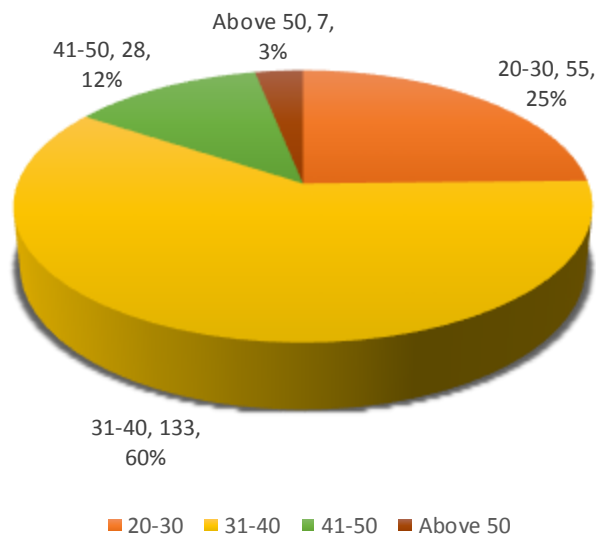


Figure 2 shown that there are 172 of male respondents and 51 of female respondents, total there are 223 respondents involved in the questionnaire survey to investigate whether the Performance Management System in the manufacturing companies are effective. In short, there are 77.1% of male and 22.9% of female in this questionnaire survey of 223 respondents.

Figure 3: Respondent's Age Range

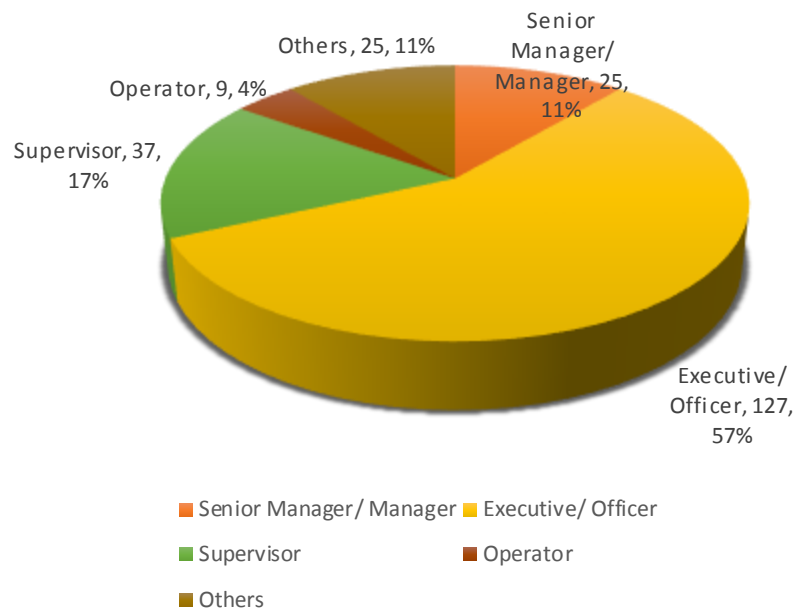


From the data of Figure 3, it indicated that most of the respondents who involved in the questionnaire survey are manufacturing employees who are between the age of 31 and 40, which consists of 133 respondents (59.6%). The second highest age range is manufacturing employees who are between the age of 20 and 30 which have 55 respondents (24.7%). The third highest age range is manufacturing employees who are between the age of 41 and 50 which have 28 respondents

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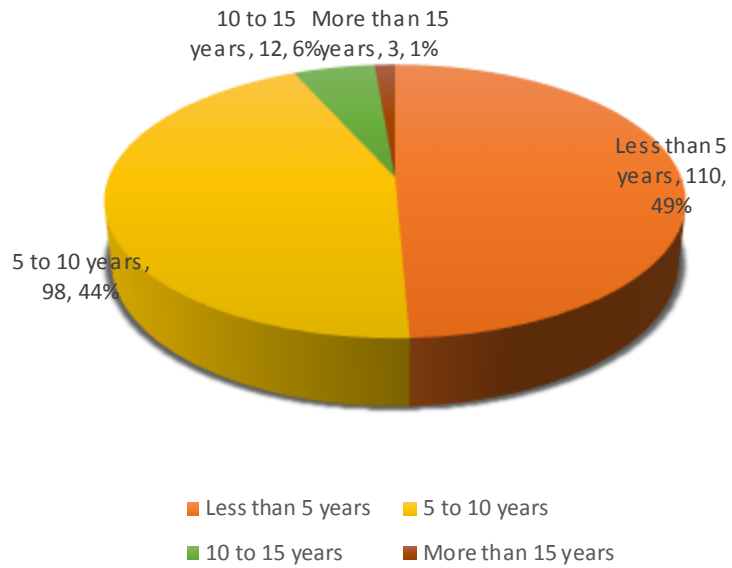
(12.6%). The fewest age range in the questionnaire survey is employees who are above 51 years old which only have 7 (3.1%) from 233 respondents.

Figure 4: Respondent's Current Position



As shown in Figure 4, there are 127 respondents (57%) who participated in the questionnaire survey are in the position of Executive/ Officer, which is the highest frequency among others position. There are 37 respondents are in the position of Supervisor, 25 respondents are in the position of Senior Manager/ Manager and 9 respondents are Operators from the manufacturing company. There is also 25 respondents who taking part in the questionnaire survey are in others position like Programmer, Director, Lab Assistant, Production Assistant, Technician, etc.

Figure 5: Respondent's Year of Services in Current Company



Refer to Figure 5, there are 110 respondents (49.3%) are working less than 5 years in current manufacturing company. 98 respondents (43.9%) are working more than 5 years but less than 10 years in current company. The frequency of respondents who work in current company for 10 to 15 years is 12 (5.4%). There are only 3 respondents (1.3%) out of 223 work for more than 15 years in the company.

## 4.2 Descriptive Analysis

#### 4.2.1 Descriptive Statistics of Demographic Information

Table 9: Descriptive Statistics of Gender

Descriptives		Statistic	Std. Error
Gender	Mean	1.2287	.02819
	95% Confidence Interval for Lower Bound	1.1731	
	Mean Upper Bound	1.2843	
	Median	1.0000	
	Std. Deviation	.42094	
	Skewness	1.301	.163
	Kurtosis	-.311	.324

As shown in Table 9, the gender mean in this study is 1.229 with standard deviation of 0.421. The median value of gender is 1, indicating that at least 50% of the gender is 1 (Male). Since the mean value is close to median value, hence the data is assumed to be symmetrical. The Kurtosis value is -0.311, which is within  $\pm 1$ . However, the Skewness value is 1.301 which is more than 1. Therefore, the data could be assumed as left skewness distribution. The 95% confidential interval is [1.173, 1.284], 95% confidence interval of the mean of gender is between 1.173 and 1.284.

Table 10: Descriptive Statistics of Age Range

Descriptives		Statistic	Std. Error
Age	Mean	1.9417	.04719
	95% Confidence Interval for Lower Bound	1.8487	
	Mean Upper Bound	2.0347	
	Median	2.0000	
	Std. Deviation	.70469	
	Skewness	.628	.163
	Kurtosis	.788	.324

Refer to Table 10, the age mean is 1.941 with standard deviation of 0.705. The median value of age is 2, indicating that at least 50% of the age is 2 (31 to 40 years old). Since the mean value is close to median value, hence the data is assumed to

be symmetrical. The Skewness value is 0.628 and Kurtosis value is 0.788, which is within  $\pm 1$ . Therefore, the data could be assumed as symmetrical. The 95% confidential interval is [1.849, 2.035], 95% confidence interval of the mean of gender is between 1.849 and 2.035.

Table 11: Descriptive Statistics of Position

<b>Descriptives</b>		Statistic	Std. Error
Position	Mean	2.4709	.07434
	95% Confidence Interval for Lower Bound	2.3244	
	Mean Upper Bound	2.6173	
	Median	2.0000	
	Std. Deviation	1.11007	
	Skewness	1.161	.163
	Kurtosis	.611	.324

The position mean is 2.471 with standard deviation of 1.111 as shown in Table 11. The median value of position is 2, indicating that at least 50% of the position is 2 (Executive/ Officer). Since the mean value is close to median value, hence the data is assumed to be symmetrical. The Kurtosis value is 0.611, which is within  $\pm 1$ . However, the Skewness value is 1.161 which is more than 1. Therefore, the data could be assumed as left skewness distribution. The 95% confidential interval is [2.324, 2.617], 95% confidence interval of the mean of gender is between 2.324 and 2.617.

Table 12: Descriptive Statistics of Year of Services

**Descriptives**

		Statistic	Std. Error
Year of Services	Mean	1.5874	.04405
	95% Confidence Interval for Lower Bound	1.5006	
	Mean Upper Bound	1.6742	
	Median	2.0000	
	Std. Deviation	.65775	
	Skewness	.967	.163
	Kurtosis	1.047	.324

As shown in Table 12, the year of services mean is 1.587 with standard deviation of 0.658. The median value of position is 2, indicating that at least 50% of the position is 2 (5 to 10 years). Since the mean value is close to median value, hence the data is assumed to be symmetrical. The Skewness value is 0.967 which is within  $\pm 1$ . The Kurtosis value is 1.047, which is very close to 1. Hence, the data is symmetrical. The 95% confidential interval is [1.501, 1.674], 95% confidence interval of the mean of gender is between 1.501 and 1.674.

**4.2.2 Descriptive Statistics of Dependent Variable - Effectiveness of Performance Management System**

Table 13: Descriptive Statistics of Effectiveness of Performance Management System

**Descriptives**

		Statistic	Std. Error
PMS	Mean	3.6493	.03322
	95% Confidence Interval for Lower Bound	3.5839	
	Mean Upper Bound	3.7148	
	Median	3.6000	
	Std. Deviation	.49601	
	Skewness	-.044	.163
	Kurtosis	2.092	.324

Refer to Table 13, the mean of effectiveness of performance management system for 223 respondents is 3.649 with a standard deviation of 0.496. The median effectiveness of performance management system rate is 3.6 which indicate that there is at least 50% of the respondents rated effectiveness of performance

management system in their company as 3.6. From Table 13, it shown that the mean (3.649) and median (3.6) values are very close to each other, therefore researchers could assume that the data is symmetrical. The 95% confidence interval is [3.584, 3.715], which means the 95% of confidence interval for the mean of effectiveness of performance management system is between 3.584 and 3.715.

Brown (1997) defined that a normal distribution of skewness statistic should be around zero. A negative skewness value (-0.044) could be accepted as it is very close to zero. According to Rose et al. (2015), a positive skewness value will show a positive and right-skewed, while a negative skewness value will show a negative and left-skewed. From Table 13, the skewness value is -0.044 which is very close to zero. Based on skewness value, the collected data is acceptable, and the data could be assumed as symmetrical.

However, the kurtosis value is 2.092 according to Table 13. Brown (2011) determined that a standard normal distribution of kurtosis value of 1 is called mesokurtic. A distribution of kurtosis value less than 1 will be determined as platykurtic which the bell-shaped curve is broader, central peak will be lower. On the other hand, a distribution of kurtosis value more than 1 will be determined as leptokurtic which the bell-shaped curve is sharper, central peak is higher. Therefore, the data based on kurtosis value has a sharper peak than bell-shaped.

Table 14: Normality Test of Effectiveness of Performance Management System

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PMS	.116	223	.000	.956	223	.000

a. Lilliefors Significance Correction

There are 2 types of methods in SPSS to assess the normally distributed data which is Kolmogorov-Smirnov test and Shapiro-Wilk test. According to Ghasemi et al. (2012), Shapiro-Wilk test will be recommended for testing with sample size which less than 50 ( $n < 50$ ). The normality test most often to determine in normal



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distribution when the sample sizes is small. Hanusz & Tarasinska (2015) mentioned that the rate of normality shall be at a significant level of 0.05.

Assumption made as below:

$H_0$ : Samples are normally population

$H_1$ : Samples are not from normally distributed population

Kolmogorov-Smirnov test will be use in this research since the sample size is 223 which is more than 50. Refer to Table 14, the significant value for Kolmogorov-Smirnov test is 0.00 which is less than 0.05. Therefore, the researcher could assume the data is not normal distributed.

Refer to Appendix C, the histogram of effectiveness of performance management system looks quite symmetrical. According to Wijsman (2003), a stem-and-leaf plot able to show the distribution of data. Instead of line chart and histogram, stem-and-leaf plot is also another method to show data distribution. It could provide results same as line chart and histogram. It able to provide an exact picture of all the collected data (Dean & Illowsky, 2011).

According to Appendix C, most respondents rated at 3.4 (17.9% of 223 respondents) and 3.8 (18.3% of 223 respondents). The first row of the stem-and-leaf plot show that there are 3 extremes with value less than 2.4 and the last row of stem-and-leaf plot has 5 extremes which are greater than 5.0. As a result, this stem-and-leaf plot does not distinguish an outlier with extreme value.

Lorenz (2016) stated that the most common distribution for P-P plot function is the normal distribution. Refer to Appendix C, the data distribution in normal P-P plot is lie along the diagonal line. Therefore, the data could be assumed as normally distributed. In the box plot at Appendix C, it shown that the median (the horizontal line) is within the box and falls very close to the middle of the box. However, there is one '\*' sign and three '○' signs in the box plot. These signs are represented that case number 24 is an extreme value and case number 20, 25 and 196 are outliers.

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### 4.2.3 Descriptive Statistics of Independent Variables

Table 15: Descriptive Statistics of Independent Variables – Employment Involvement

		Descriptives		
		Statistic	Std. Error	
EI	Mean	3.6045	.03567	
	95% Confidence Interval for Mean	Lower Bound	3.5342	
		Upper Bound	3.6748	
	Median	3.6000		
	Std. Deviation	.53269		
	Skewness	-.167	.163	
	Kurtosis	2.367	.324	

Refer to Table 15, the employee involvement mean for 223 respondents is 3.605 with a standard deviation of 0.533. The employee involvement median is 3.6 which indicate that there is at least 50% of the respondents rated employee involvement in their company is 3.6. From Table 15, it shown that the mean (3.605) and median (3.6) values are very close to each other, therefore the collected data is assumed to be symmetrical. The skewness value is -0.167 which is within  $\pm 1$ , therefore the data could be assumed as symmetrical. But Kurtosis value is 2.367 and it is more than 1. Hence, the data distribution based on Kurtosis value is sharper peak than bell-shaped. The 95% confidence interval is [3.534, 3.675], which means the 95% of confidence interval for the mean of employee involvement is between 3.534 and 3.675.

Table 16: Descriptive Statistics of Independent Variables – Management Commitment

**Descriptives**

		Statistic	Std. Error
MC	Mean	3.7848	.03945
	95% Confidence Interval for Lower Bound	3.7070	
	Mean Upper Bound	3.8625	
	Median	3.6000	
	Std. Deviation	.58904	
	Skewness	-.510	.163
	Kurtosis	.000	.324

As shown in Table 16, the management commitment mean in this research is 3.785 with standard deviation of 0.589. The median value of management commitment is 3.6, indicating that at least 50% of the management commitment is rated as 3.6. Since the mean value is close to median value, hence the data is symmetrical. The Kurtosis value is 0 and Skewness value is -0.510 which is within  $\pm 1$ . Hence, the data is symmetrical distribution. The 95% confidential interval is [3.707, 3.863], 95% confidence interval of the mean of the management commitment is between 3.707 and 3.863.

Table 17: Descriptive Statistics of Independent Variables – Performance Appraisal

**Descriptives**

		Statistic	Std. Error
PA	Mean	3.7018	.03435
	95% Confidence Interval for Lower Bound	3.6341	
	Mean Upper Bound	3.7695	
	Median	3.7500	
	Std. Deviation	.51298	
	Skewness	-.871	.163
	Kurtosis	4.114	.324

The performance appraisal mean is 3.702 with standard deviation of 0.513 (refer Table 17). The median value of performance appraisal is 3.75, indicating that at least 50% of the performance appraisal is rated as 3.75. Since the mean value is close to median value, hence the data is symmetrical. The Skewness value is -0.871 which is within  $\pm 1$ . However, the Kurtosis value in this research is 4.114 which is more than 1. So, the data distribution based on Kurtosis value is sharper peak than

bell-shaped. The 95% confidential interval is [3.634, 3.770], 95% confidence interval of the mean of the performance appraisal is between 3.634 and 3.770.

Table 18: Descriptive Statistics of Independent Variables – Reward System

Descriptives		Statistic	Std. Error
RS	Mean	3.4877	.03811
	95% Confidence Interval for Lower Bound	3.4126	
	Mean Upper Bound	3.5628	
	Median	3.5000	
	Std. Deviation	.56911	
	Skewness	-.526	.163
	Kurtosis	.702	.324

As shown in Table 18, the reward system mean in this research is 3.488 with standard deviation of 0.569. The median value of reward system is 3.5, indicating that at least 50% of respondents rated the reward system for the survey questions as 3.5. Since the mean value is close to median value, hence the data is symmetrical. The Skewness value is -0.526 and the Kurtosis value is 0.702 which is within  $\pm 1$ . Therefore, the research assumed that the collected data is symmetrical distribution. The 95% confidential interval is [3.413, 3.563], 95% confidence interval of the mean of the reward system is between 3.413 and 3.563.

### 4.3 Pearson Correlation

Sedgwick (2012) determined that Pearson Correlation coefficient is one of the methods to measure the validity and relationship of two variables. It also indicates

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the direction, the strength and significant of the relationship among all variables. The Pearson correlation is measure and scaled on the value within  $\pm 1$ . If the value is positive, meaning to say the correlation is existed positively. But if the value is negative, then the two variables are negative correlation.

There is a rule of thumb to interpret the value of correlation coefficient (Mukaka, 2012). Kameli & Baki (2012) mentioned that when the correlation value is between 0.90 to 1.0 (-0.90 to -1.0), it defined that the correlation is a very high positive (negative) correlation. When the value is between 0.70 to 0.90 (-0.70 to -0.90), it means that the correlation is high positive (negative) correlation. The value between 0.40 to 0.70 (-0.40 to -0.70), it is determined as moderation positive (negative) correlation. While value between 0.20 to 0.40 (-0.20 to -0.40) presented a low positive (negative) correlation. If the correlation value is 0.00 to 0.20 (0.00 to -0.20), it is mean negligible correlation and insignificant relationship between two variables.

Table 19: Correlations on Dependent Variable & Independent Variables

**Correlations**

		PMS	EI	MC	PA	RS
Pearson Correlation	PMS	1.000	.817	.493	.402	.518
	EI	.817	1.000	.475	.389	.484
	MC	.493	.475	1.000	.788	.479
	PA	.402	.389	.788	1.000	.471
	RS	.518	.484	.479	.471	1.000
Sig. (1-tailed)	PMS	.	.000	.000	.000	.000
	EI	.000	.	.000	.000	.000
	MC	.000	.000	.	.000	.000
	PA	.000	.000	.000	.	.000
	RS	.000	.000	.000	.000	.
N	PMS	223	223	223	223	223
	EI	223	223	223	223	223
	MC	223	223	223	223	223
	PA	223	223	223	223	223
	RS	223	223	223	223	223

According to the data, it represented the results of correlations between the dependent variable (effectiveness of performance management system) and all the independent variables (employee involvement, management commitment, performance appraisal and reward system). The analysis (refer to Table 19) shows that all the independent variables have significant relationship to dependent variable. The employee involvement has a high and positive correlation with effectiveness of performance management system as the coefficient correlation value is 0.817. The coefficient correlation value of management commitment, performance appraisal and reward system are 0.493, 0.402 and 0.518 respectively, which indicate positive and moderate relationship with effectiveness of performance management system.

#### 4.4 Multiple Regression

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$H_0$  = There is no linear regression between independent variables and dependent variables.

$H_1$  = There is a significant relationship between independent variables and dependent variables.

Table 20: Model Summary

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

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.833 <sup>a</sup>	.694	.689	.27680	1.903

a. Predictors: (Constant), RS, PA, EI, MC

b. Dependent Variable: PMS

Refer to Table 20, R is determined as 0.833 which it is a positive and high correlation between the dependent variable (effectiveness of performance management system) and all the independent variables (employee involvement, management commitment, performance appraisal and reward system) according to Kameli & Baki (2012).

Fonticella (1999) claimed that R square is used to measure the slope of regression line whether it is close to zero and to explain mean from the regression model. If the R square value is close to 1, it explained that it has a high degree of relationship between independent variables and dependent variable. If R square value is equal to 1, it explained that it has a perfect liner relationship between the variables. But if R square value is 0, it means that there is no relationship between the variables. In other words, the independent variables are not explaining by the variation in the dependent variable. Refer to Table 20, the R square is 0.694 which is closer to 1 and the adjusted R square is 0.689. Therefore, the researcher could interpret that the explanatory variables accounted for about 69.4% of the variation in the effectiveness of performance management system.

According to Karadimitriou & Marshall (n.d.), the data is autocorrelated if the value of Durbin Watson is between 1.5 and 2.5. If the value of Durbin Watson is lesser than 1.5 or greater than 2.5, it could be assumed that data is not autocorrelated.

From Table 20, it shown that the value of Durbin Watson is 1.903 which is between 1.5 and 2.5, hence researcher could conclude that the data is autocorrelated.

Table 21: ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37.914	4	9.479	123.708	.000 <sup>a</sup>
	Residual	16.703	218	.077		
	Total	54.617	222			

a. Predictors: (Constant), RS, PA, EI, MC

b. Dependent Variable: PMS

In Table 21, it shows the output of ANOVA analysis and show that the value of F value is 123.71 and the significant p-value is 0.000 which is less than  $\alpha$  value 0.05 level. Therefore, it shown the significant evidence as  $H_0$  is rejected, meaning to say at least one of the independent variables is useful in evaluating the effectiveness of performance management system.

Table 22: Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.595	.160		3.716	.000	.279	.910		
	EI	.661	.042	.710	15.721	.000	.578	.744	.688	1.453
	MC	.093	.054	.110	1.722	.086	-.013	.199	.342	2.927
	PA	-.023	.060	-.023	-.379	.705	-.141	.095	.367	2.727
	RS	.116	.040	.133	2.899	.004	.037	.195	.665	1.504

a. Dependent Variable: PMS

According to the coefficient table from Table 22, researcher could make the unstandardized equation of effectiveness of performance management system as below:

Effectiveness of performance management system



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$$= 0.595 + 0.661 (\text{Employee Involvement})_i + 0.093 (\text{Management Committee})_i - 0.23 (\text{Performance Appraisal})_i + 0.116 (\text{Reward System})_i$$

The significant value of employee involvement is 0.000 which is lesser than  $\alpha$  value 0.05 level of significant. Therefore, there is a relationship between employee involvement and effectiveness of performance management system. In addition, the significant value of reward system is 0.004 which is also lesser than  $\alpha$  value 0.05 level of significant, meaning to say there is a relationship between reward system and effectiveness of performance management system.

On the other hand, the significant value of management commitment and performance appraisal is 0.086 and 0.705 which is greater than  $\alpha$  value 0.05 level of significant. Hence, researcher could conclude that there is no relationship between management commitment and performance appraisal and effectiveness of performance management system.

According to Akinwande et al. (2015), the variance inflation factor (VIF) value is to measure the level of multicollinearity, while multicollinearity is defined the standard errors of the coefficients. The VIF value is accepted if below 5 and means that the models are not multicollinearity. When VIF value is greater than 5, it means the multicollinearity occurs. When the multicollinearity is serious, it might be due to two or more variables are measuring the same area. Hence researcher could choose to drop an unessential variable. By adding extra variables, it will also increase the standard error and increase the VIF value. Alternatively, researcher could increase the sample size as Williams (2015) determined that large sample size will decrease standard errors and reduce the variance of coefficient. Refer to Table 22, all VIF value for all variables are less than value 5, therefore, it could assume there is no multicollinearity occurred between the variables.

David (2014) mentioned that a low tolerance value explains the possibility of collinearity occurred in the data. The presence of collinearity is high if the tolerance value is lesser than 0.20. In Table 22, it indicates that all the tolerance value of employee involvement (0.688), management commitment (0.342), performance

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appraisal (0.367) and reward system (0.665) are greater than 0.2. Again, it is proven that there is no multicollinearity occurred in the data.

## **4.5 Data Interpretation**

In this session, the data was being explained on the mean score by using the 5 points Likert scales from always to never. The researchers will be conducted the measurement by using SPSS software.

### **4.5.1 Demographic Data**

From the collected demographic data, there are 77.1% of male and 22.9% of female in this questionnaire survey of 223 respondents. Most of the respondents who involved in the questionnaire survey are between the age of 31 and 40, which consists of 133 respondents (59.6%). There are 127 respondents (57%) who participated in the questionnaire survey are in the position of Executive/ Officer, which is the highest frequency among others position. The data also shown that most of the respondents who involved in the questionnaire survey are manufacturing employees who are working less than 5 years in current manufacturing company.

Therefore, the researcher can conclude that majority of the respondents in this research is male employees from manufacturing which consists of 77.1% from the total of 223 respondents. There are 133 respondents (59.6%) are between the age of 31 and 40. Besides, 57% of respondents who participated in this research survey are in the position of Executive/ Officer and 110 respondents (49.3%) are working less than 5 years in current manufacturing company.

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## 4.5.2 Employee Involvement

Table 23: Statistic of Employee Involvement

<b>Statement</b>	<b>Mean</b>	<b>Std. Deviation</b>
I was informed during task implemented in Performance Management System.	3.579	0.749
I feel involved during the task implementation of Performance Management System.	3.511	0.770
There are trainings provided for me in Performance Management System.	3.511	0.764
I was encouraged to accountable own development and individual goals.	3.646	0.726
I understand how my work contributes to company performance.	3.776	0.680

Refer to Table 23, there are 2 mean value in 3.511 which are is the lowest mean value in Employee Involvement. The statements for mean value 3.511 are “I feel involved during the task implementation of Performance Management System” and “There are trainings provided for me in Performance Management System”. The statement “I was informed during task implemented in Performance Management System” obtained a mean value of 3.579. The mean value for statement “I was encouraged to accountable own development and individual goals” is 3.646. The highest mean value in employee involvement is 3.776 for the statement “I understand how my work contributes to company performance”.

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### 4.5.3 Management Commitment

Table 24: Statistic of Management Commitment

<b>Statement</b>	<b>Mean</b>	<b>Std. Deviation</b>
Strong support from top management/ managers in Performance Management System implementation.	3.619	0.731
My manager/ superior constantly monitor my performance.	4.278	0.731
My manager/ superior constantly communicates their expectation to me.	3.516	0.703
My manager/ superior established my career plan objectives.	4.153	0.867
My manager/ superior able to guide me to achieve individual goals.	3.359	0.763

The mean value for statement “Strong support from top management/ managers in Performance Management System implementation” is 3.619. The statement for “My manager/ superior able to guide me to achieve individual goals” only obtain a mean value of 3.359 which is the lowest in Management Commitment. However, the statement “My manager/ superior established my career plan objectives” mean value is 4.153, which is the second highest in Management Commitment. According to the data collection, the highest mean value is 4.278 for the statement of “My manager/ superior constantly monitor my performance” but mean value is only 3.516 for the statement of “My manager/ superior constantly communicates their expectation to me”.

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#### 4.5.4 Performance Appraisal

Table 25: Frequency of Performance Appraisal

Description	Frequency	Percent (%)
Fortnightly	4	1.8
Monthly	15	6.7
Half Yearly (1 year twice)	62	27.8
Yearly (1 year once)	126	56.5
Not Fix	16	7.2
Total	223	100.0

Table 26: Statistic of Performance Appraisal

Statement	Mean	Std. Deviation
My manager/ superior deals with my performance appraisals fairly.	4.251	0.697
After assessment, my manager/ superior will give feedback and guidance to me & ways of improving my weaknesses.	3.493	0.690
Appropriate training will be given to me if I failed to meet the expected performance level.	3.457	0.733

According to the data collection of this research (Table 25), majority respondent's (56%) company is doing annual performance appraisal which means performance will be access 1 year once. The second popular performance appraisal period is semi-annually performance appraisal (conducted 2 times per year) which consisted of 27%. Around 7% on monthly performance appraisal and is only 1.8% of respondents shared that their company is will carry out performance appraisal fortnightly. On the other hand, there is around 7% of respondents claimed that their performance appraisal in the company is not fixed, which means performance appraisal can be carried out randomly, sometimes yearly, monthly or whenever necessary. Majority of respondents felt that there is a high level of degree (88%) on fair performance appraisal.

According to Table 26, the statement of "Appropriate training will be given to me if I failed to meet the expected performance level" obtained the lowest mean of 3.457. The second lowest mean value is 3.493 for statement of "After assessment, my manager/ superior will give feedback and guidance to me & ways of improving

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my weaknesses”. Statement of “My manager/ superior deals with my performance appraisals fairly.” obtained the highest mean value of 4.251

#### 4.5.5 Reward System

Table 27: Statistic of Reward System

<b>Statement</b>	<b>Mean</b>	<b>Std. Deviation</b>
The reward system is aligned with Performance Management System	3.484	0.728
Pay decisions are linked with individual performance achievements.	3.556	0.732
Promotion is linked with performance appraisal.	3.489	0.728
Promotion criteria is well defined in Performance Management System.	3.422	0.766

According to data collection in Table 27, the highest mean value is 3.556 for the statement of “Pay decisions are linked with individual performance achievements”. While the lowest mean value is 3.422 for statement of “Promotion criteria is well defined in Performance Management System”. The mean value for statement “Pay decisions are linked with individual performance achievements” and “The reward system is aligned with Performance Management System” is 3.556 and 3.484.

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#### 4.5.6 Effectiveness of Performance Management System

Table 28: Statistic of Effectiveness of Performance Management System

Statement	Mean	Std. Deviation
I understand the structure and objectives in Performance Management System.	3.623	0.705
Performance Management System motivate me to achieve my individual goals & improve self-development.	3.579	0.624
I understand my strength and weakness from Performance Management System.	3.664	0.664
My individual goals are linked with the company objectives.	3.664	0.690
The Performance Management System is effective in improving the company and my performance.	3.718	0.695

The highest mean value of Effectiveness of Performance Management System is 3.718 for the statement of “The Performance Management System is effective in improving the company and my performance”. There are two statement are in the same mean value of 3.664 which are “I understand my strength and weakness from Performance Management System” and “My individual goals are linked with the company objectives”. The mean value for statement “I understand the structure and objectives in Performance Management System.” is 3.623. On the other hand, the lowest mean value is 3.579 for the statement of “Performance Management System motivate me to achieve my individual goals & improve self-development”.

#### 4.6 Conclusion

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From the summary findings of data, there are 49.3% of respondents participated in this research are male in the position of Executives/ Officers between the age of 31 and 40 and work less than 5 years in current manufacturing company. The majority cycle time to conduct performance appraisal is one (1) year once. Research could conclude that the effectiveness of performance management system in manufacturing industry is 72% presence according to the data from 223 employees from manufacturing company.



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## **CHAPTER 5**

### **DISCUSSION AND CONCLUSION**

#### **5.0 Introduction**

In this chapter, limitation will also be shared throughout the entire research study and recommendation will be proposed for future researchers. In addition, researcher will also include a conclusion for entire research study in the chapter.

#### **5.1 Discussion**

The objective of this study is to investigate whether the Performance management system in the manufacturing companies are effective from employee involvement, management commitment, performance appraisal and reward system's point of view. Research would like to identify if employee involvement and management commitment involve in the implementation and execution of performance management system in manufacturing industry. Besides, research would like to know if performance appraisal procedure has been carried out when performance management system is implementing in the manufacturing industry. Lastly, this study also wants to identify if reward system is aligned with the performance management system in manufacturing industry.

Therefore, the data findings and analyze will be discussed on the four independent variables - employee involvement, management commitment, performance appraisal, reward system and dependent variable – effective of performance management system in this section.

##### **5.1.1 Discussion on Demographic Data**

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According to the data collection, researcher could assume that there are around 49.3% of respondents participated in this research are male Executives or Officers between the age of 31 and 40 and work less than 5 years in current manufacturing company.

According to Department of Statistics Malaysia report in 2015, it stated that there are 67% of male employees in the manufacturing sector (“Report on Survey”, 2016). Researcher believe that it is still the trend that manufacturing industries are engaged more male employees than female employees due to industries culture. Generally, Malaysia manufacturing industries will require to work long hours and shift work system. Besides, most of the time physical labor is required especially technician work, e.g. machine technician. As a result, male employability is still higher as compared to female in manufacturing industries.

### **5.1.2 Discussion on Employment Involvement**

From the Pearson correlation analysis, it indicated that there is a significant relationship between Employment Involvement and Effectiveness of Performance Management System as  $H_0$  has been rejected. The finding is consistent with the study of Kleingeld et al. (2004). He mentioned that the participation of employee is necessary during the designing of performance management system as it helps to develop better structures and create benefits which desired from the point of view of employees. There also finding from Mughal et al. (2014). They determined that performance management system shall include employee development which are training in order to enhance skills and knowledge to improve work performance. According to Maina (2015), performance management system can be enhanced by fostering employee involvement.

From the perceptive of researcher, employees should be encouraged to involve in Performance Management System by understand the structure the Performance Management System, company’s objectives and goals. Employee should also have their individual goal which aligned with the company’s goals in order to achieve the company’s vision. Goal alignment is important as it drive the consistency between employee and the company. The improving of employee performance and

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efficiency will naturally lead to the increasing of company profitability and productivity.

According to the finding from Bretz et al. (1992) and Sahu et al. (2016), they defined that opportunity shall be created on mutual discussion of employee's development goals and plan to achieve the decided goals. As stated by Zhang (2012), individual employee goal setting shall be included a typical performance management system to achieve the company's mission. Therefore, it explained that the high and positive correlation with employee involvement and effectiveness of performance management system in this study.

### **5.1.3 Discussion on Management Commitment**

Pearson correlation analysis indicated that there is a significant relationship between Management Commitment and Effectiveness of Performance Management System, therefore  $H_0$  has been rejected. According to the study Mughal et al. (2014) claimed that performance management system implementation shall include managers feedback towards goals achievement. It also consistent in the finding of Locke & Latham (2002) by mentioning that managers could communication their expectation to employees and monitor employees result in order to improve the employee's performance in performance management system.

The highest mean value is 4.278 for the statement of "My manager/ superior constantly monitor my performance" but researcher is agreed with Bigony (2018) which mentioned that there are many managers do not understand about the objectives and purposes of performance management system. Managers are constantly monitoring employee's performance maybe is because there is a key performance indicator (KPI) for the department which will bring direct impact to the whole team on annual salary increment or bonuses. Therefore, managers have to carry out the monitoring task on employee's performance by following company policy.

On the other hand, 82% of respondents mentioned that their managers will establish their career plan in the company, but it is abnormal that less guidance will be provided on accomplishment and achievement after created the plan to employees.

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The statement “My manager/ superior established my career plan objectives” mean value is 4.153, which is the second highest in Management Commitment. One of the explanations for this circumstance is there might be an instruction from the company’s top management or human resources department to develop employee’s career plan for company succession planning or any human resource manpower planning in the company. In order to follow the company policy, managers have to propose the career plan for their subordinates to human resources department. That explained why thereafter there is no following up or guidance provided from managers to employees on the created career plan.

#### **5.1.4 Discussion on Performance Appraisal**

From the Pearson correlation analysis, it indicated that there is a significant relationship between Performance Appraisal and Effectiveness of Performance Management System as  $H_0$  has been rejected. According to the finding of Toppo & Prusty (2012), performance appraisal is one of the important factors in performance management system in the cause of employee performance maximization and company performance improvement. Pan (2011) mentioned that providing feedback in performance appraisal is mandatory for employees to improve from weaknesses. Feedback after performance appraisal could help company to make decision on further step up on salary and promotion (DeNisi & Pritchard, 2006). Toppo & Prusty (2012) and DeNisi & Murphy (2017) mentioned that appropriate training and some development programs shall be assigned to employees in order to overcome their weakness and improve productivity. Kadiresan et al. (2015) also agreed that training and development also important in performance appraisal procedures in order to build up employees’ involvement and commitment.

#### **5.1.5 Discussion on Reward System**

Pearson correlation analysis indicated that there is a significant relationship between Reward System and Effectiveness of Performance Management System,

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therefore  $H_0$  has been rejected. Mehmood et al. (2013) and Hamukwaya & Yazdanifard (2014) both also determined that reward system is a tool to motivate and raise employees, enhance work quality and encourage knowledge sharing among the team. According to Armstrong (1998), he mentioned that performance management shall include motivation employees through pay increase, opportunity of promotion and employer praise.

Zhang (2012)'s finding also stated that the implementation of performance management system shall define and measure with rewarding performance. Mughal (2014) mentioned that a performance management system able to provide salary information and plan of compensation. As mentioned by Best Practices LLC (n.d.), company has to ensure that the reward and recognition system is aligned with the company objectives and goals. If the reward and recognition system has misaligned, company will not achieve their desired objectives and goals. Therefore, it explained the positive and moderate relationship between reward system and effectiveness of performance management system.

#### **5.1.6 Discussion on Effectiveness of Performance Management System**

From the Pearson correlation analysis, it indicated that there is a significant relationship between at least one of the variables and Effectiveness of Performance Management System as  $H_0$  has been rejected, meaning to say the research model is significant.

Refer to Table 16 in Chapter 4, R value is determined as 0.833 which is close to 1, it explained that it has a high degree of relationship between independent variables and dependent variable. Therefore, research could conclude that there is a positive and high correlation between the independent variables (employee involvement, management commitment, performance appraisal and reward system) and the dependent variable (effectiveness of performance management system). In addition, the R square is 0.694 which is closer to 1 and the adjusted R square is 0.689. Therefore, researcher could interpret that the explanatory variables accounted for about 69.4% of the variation in the effectiveness of performance management system. According to the Table 17 in Chapter 4, the ANOVA analysis indicated that

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the value of F value is 123.71 and the significant p-value is 0.000 which is less than  $\alpha$  value 0.05 level. Therefore, it shown the significant evidence as  $H_0$  is rejected, meaning to say at least one of the independent variables is useful in evaluating the effectiveness of performance management system.

Mughal et al. (2014) mentioned that performance management system shall enable to help managers to identify employees' weaknesses. Besides, employees shall align their individual goals to company goals in performance management. In the finding of Zhang (2012), employers shall communicate their expectation to employees in order to achieve quality work).

## **5.2 Limitations of the Research**

Researchers do discovered limitations while conducting this research study due to limited of relevant research studies on performance management system in manufacturing industry in Malaysia. In this study, researcher only covered four independent variables which are employee involvement, management commitment, performance appraisal and reward system. Furthermore, this research study is only focus on manufacturing industry at Klang Valley, Penang and Johor. It does not have a clear information on what kind of manufacturing industry are the respondents are from as there is a lot of manufacturer categories such as food & beverage, plastic, electronic, automobile, computer, furniture, etc.

Moreover, researcher only use quantitative research method in this study, while qualitative research method or mix method could be considered. The data analysis of this study was limited to a sample size of 223. A larger sample size could be considered for future study. More human management theories could be discussed and involve in this study to be more comprehensive and detailed. Theories can be included such as management by objective, balance scorecard, etc.

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### 5.3 Managerial Implication

This study provides a theoretical concept and statistical data to manufacturing companies, especially policy maker and the Top Management on Performance Management System (PMS) and the significant variables which explained the effectiveness of PMS. In chapter 4, research has analyzed and concluded that there is a relationship between employee involvement and effectiveness of performance management system because the significant value of employee involvement is 0.000 which is less than  $\alpha$  value 0.05 level of significant. Also, there is a relationship between reward system and effectiveness of performance management system as the significant value of reward system is 0.004 which is also less than  $\alpha$  value 0.05 level of significant. Hence, policy maker and the Top Management from manufacturing companies shall take note that these two variables, employee involvement and reward system could factor the effectiveness of PMS in the company.

Obviously, employees are being motivated by the reward system when they accomplished their goals. The reward or benefits not only about promotion and salary increment but also included some non-financial benefits such as training & development, career path development, empowerment, job enrichment and praise on outstanding performance by employer. A fair reward system could promote positive job behavior and enhance job satisfaction. Besides aligning with reward system, performance management system framework shall and introduce a transparent reward system to employees will bring positive influence on employee performance.

While most of the time especially manufacturing companies, increasing productivity will be their main objectives. Hence, sometimes the performance management system in manufacturing companies was to boost up productivity by increase output and reduce additional cost. An amount of incentive will be given to employees when productivity has been improved compared to previous month. But mostly, employees were not being invite or involve in the development process of performance management system and employees are just requested to follow the

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designed system which is not relevant or not interest to employees. But in order to ensure effectiveness of performance management system, employee involvement is important in the system development stage as it helps to make sure employees understand the objective of system and buy in the concept by considering it in daily operation. It also helps employees to understand the benefits of performance management more in depth.

Refer to the literature review at Chapter 2, the effectiveness of performance management system will be trigger only if employees understand the company's objectives and develop individual's goal which aligned with the company's objectives. However, most of the organization do not encourage employees to develop own objective and managers are not being trained to provide feedback and guide to achieve the goals. Hence, it is important for employees to develop own goals and understand their role and competencies in order to achieve the company objectives and individual's goals. Communicate on expectation with employees is an important task to the company's top management & managers. Managers shall monitor their subordinates' performance periodically and provide feedback when necessary. In addition, policy maker of the company shall aware that the rewards system shall linked with the performance appraisal.

As a human resource personnel, it is important to understand the actual definition and concept of performance management system to helps the establish of system in the company. It does not focus on individual goals, monitoring scheme and periodic feedback given to employees. Human resource personnel shall be well trained in order to develop strategic system to improve company productivity and able to advise the Top Management when establish of system.

Furthermore, since the Human Resource Ministry would like to promote the productivity-linked wage system (PLWS) in Malaysia, then they should use this study as a reference and the important factors also can be applied in the development of productivity-linked wage system (PLWS). Researcher believe employee involvement and reward system are also important and shall consider in the designing of productivity-linked wage system (PLWS) in future.



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## 5.4 Recommendation

From this study, researcher found that employee involvement has the highest correlation (0.817) to effectiveness of performance management system as compared to management commitment (0.493), performance appraisal (0.402) and reward system (0.518). As mentioned by Kameli & Baki (2012), the correlation value between 0.70 to 0.90 will be defined as high positive correlation. Therefore, future researchers could consider studying more in-depth on employment involvement and reward system towards effectiveness of performance management system. In future, employers shall invite employees on designing performance management system since they are the users and they understand what motivated themselves to work better. Researcher believe since there is only employment involvement and reward system which significant, the future researchers could omit the other factors and included other relevant factors which have significant relationship towards dependent variables – the effectiveness of performance management system.

In addition, the current research only covered three areas in Malaysia which are Klang Valley, Penang and Johor. Hence, the results may not represent or as a concluded for all manufacturing companies in Malaysia. Future researcher could also enhance this study by involving more states in Malaysia. Besides, future study could also record and analyzed the data collection by states, then it could have a different outcome compared to current research study as current study did not record the respondent's location. Future researchers could categorize the respondents by different states (location) and different types of manufacturer such as food & beverage, plastic, electronic, automobile, computer, furniture, etc. It might produce a different statistical data and analysis results by categorized the location and types of manufacturer. Researcher will also suggest the future researchers to study and investigate in others industry or sector rather than only manufacturing industry as researcher believe other industries such as banking, insurance, healthcare and tourism will have different results and outcome based on

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the generated independent variables - employee involvement, management commitment, performance appraisal and reward system in this research.

Furthermore, qualitative research method or mix method could be considered for future study. As both research methods are different, quantitative research method is more to close-ended question and qualitative research method will be using open-ended questions. According to Rahman (2017), qualitative research method able to generate a more detailed information through individual respondent's experience and feelings through a set of open-ended questions. Besides, researcher could also build up relationship with respondents for more specific information. Mix research method could also be applied in future study.

In order to improve the effectiveness of performance management system, employers shall improve by introducing the company objectives to employee and encourage employee to have their individual goals which aligned with the company objectives. Human resource personnel could propose to implement career path development workshop to encourage designing of individual goals and managers have opportunities to understand their subordinate's goal. Also, they could provide guidance and periodic feedback and monitoring on employee's goals. When designing the reward system which linked with performance management system, human personnel shall do a simple survey on the needs and wants from employees. Employees will only be motivated when the rewards and benefits given are something which employees desire.

## **5.5 Summary and Conclusion**

Performance management system could improve the performance of business and increase employee motivation (Armstrong, 2006). Roberts (2003) and Sahu et al.,

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(2016) determined that it could ensure employees are looking for success and help achieve the company objectives and goals. An effective performance management system could lead employees to obtain the company's objective and mission towards successful accomplishment (Abrudan & Coita, 2008). Therefore, company shall encourage employees to set individual goals and establish plan to achieve. Employees will be able to perform well and enhance motivation through reward system. Reward system is highly encouraged to apply in the system and consistent feedback shall be provided by managers to employees towards goal achievement. Researcher sees these are the important determinants of the effectiveness of performance management system.

According to the data analysis part, researcher could conclude that the independent variables - employee involvement, management commitment, performance appraisal and reward system are significant towards effectiveness of performance management system as all the proposed hypothesis in the research shown that all the variables have the significant relationship with the effectiveness of performance management system. According to the data analysis, employee involvement has the highest correlation, followed by reward system. Therefore, a future study could be conducted in order to develop more solid strategies for the company performance management system and to bring in the benefits of conducting performance management system in order to improve employee's performance and enhance company productivity as well as profitability.

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APPENDIX A – Questionnaire

**Questionnaire About Effectiveness of Performance Management System in Manufacturing Industry**

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We would be grateful if you could spend few minutes of your precious time to fill out this questionnaire. Your answers will be part of a research project on effectiveness of Performance Management System in manufacturing industry. There is no right or wrong answer. You will not be required to reveal your identity in this research and all answers will be handled with confidentiality.

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**\*\*Performance Management System (PMS)** is a tool to identify, measure, manage, and develop the performance of the human resources in an organization.

**1. Gender**

- Male                       Female

**2. Age**

- 20 – 30  
 31 – 40  
 41 – 50  
 Above 50

**3. Position level**

- Operator  
 Supervisor  
 Officer/ Executive  
 Manager/ Senior Manager  
 Others: \_\_\_\_\_

**4. Years of service in current company**

- Less than 5 years  
 5 to 10 years  
 10 to 15 years  
 More than 15 years

Please circle to what extent, on a scale of 1 to 5, you do agree with the statement below.  
(1: Never, 2: Rarely, 3: Sometimes, 4: Frequently, 5: Always)

**1.0 Employee Engagement**

- 1.1 I was informed during the implementation of PMS.      1      2      3      4      5

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1.2	I feel involved during the implementation of PMS.	1	2	3	4	5
1.3	There are trainings provided in PMS for me.	1	2	3	4	5
1.4	I was encouraged to accountable own development and individual goals.	1	2	3	4	5
1.5	I understand how my work contributes to company performance.	1	2	3	4	5

**2.0 Management Commitment**

2.1	Strong support from top management/ managers in PMS implementation.	1	2	3	4	5
2.2	My manager/ superior constantly monitor my performance.	1	2	3	4	5
2.3	My manager/ superior constantly communicates their expectation to me.	1	2	3	4	5
2.4	My manager/ superior established my career plan objectives.	1	2	3	4	5
2.5	My manager/ superior able to guide me to achieve individual goals.	1	2	3	4	5

**3.0 Performance Appraisal System**

3.1	How often performance appraisal form filled or been done?	Fortnightly	Monthly	Half Yearly	Yearly	Not Fix	
3.2	My manager/ superior deals with my performance appraisals fairly.		1	2	3	4	5
3.3	After assessment, my manager/ superior will give feedback and guidance to me & ways of improving my weaknesses.		1	2	3	4	5
3.4	Appropriate training will be given to me if I failed to meet the expected performance level.		1	2	3	4	5

**4.0 Reward System**

4.1	Is the reward system aligned with Performance Management System?	1	2	3	4	5
4.2	Pay decisions are linked with individual performance achievements.	1	2	3	4	5
4.3	Promotion is linked with performance appraisal.	1	2	3	4	5
4.4	Promotion criteria is well defined in Performance Management System.	1	2	3	4	5

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Please circle to what extent, on a scale of 1 to 5, you do agree with the statement below.



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(1: Very Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Very Agree)

**5.0 Effectiveness of Performance Management System (PMS)**

5.1	I understand the structure and objectives in Performance Management System.	1	2	3	4	5
5.2	PMS motivate me to achieve my individual goals & improve self-development.	1	2	3	4	5
5.3	I understand my strength and weakness from Performance Management System.	1	2	3	4	5
5.4	My individual goals are linked with the company objectives.	1	2	3	4	5
5.5	The Performance Management System is effective in improving company and my performance.	1	2	3	4	5

<b><u>THANK YOU</u></b>
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APPENDIX B – Frequency Distribution Tables

Respondent's Gender

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**Gender**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	172	77.1	77.1	77.1
Female	51	22.9	22.9	100.0
Total	223	100.0	100.0	

Respondent's Age Range

**Age**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 20-30	55	24.7	24.7	24.7
31-40	133	59.6	59.6	84.3
41-50	28	12.6	12.6	96.9
Above 50	7	3.1	3.1	100.0
Total	223	100.0	100.0	

Respondent's Current Position

**Position**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Senior Manager/ Manager	25	11.2	11.2	11.2
Executive/ Officer	127	57.0	57.0	68.2
Supervisor	37	16.6	16.6	84.8
Operator	9	4.0	4.0	88.8
Others	25	11.2	11.2	100.0
Total	223	100.0	100.0	

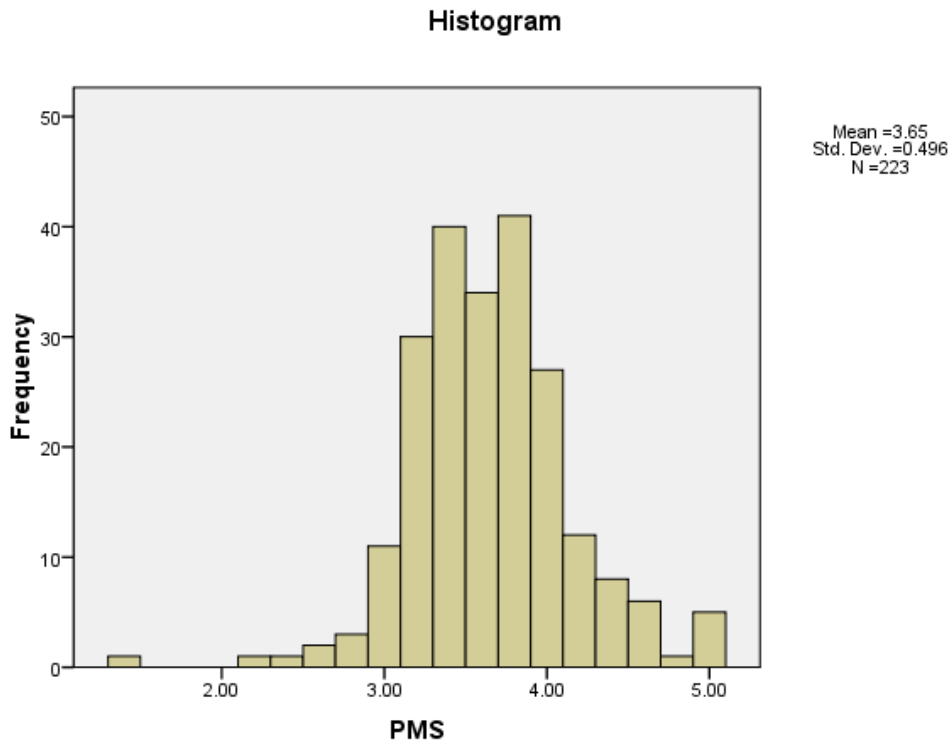
Respondent's Year of Services in Current Company

**Year of Services**

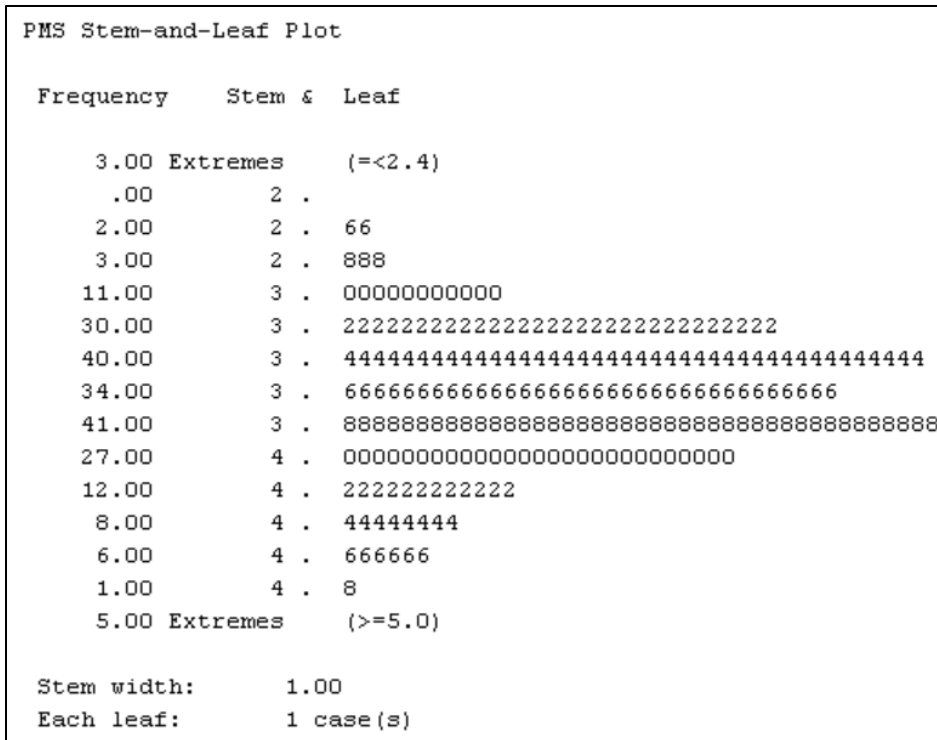
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Less than 5 years	110	49.3	49.3	49.3
5 to 10 years	98	43.9	43.9	93.3
10 to 15 years	12	5.4	5.4	98.7
More than 15 years	3	1.3	1.3	100.0
Total	223	100.0	100.0	

APPENDIX C – Descriptive Statistic of Dependent Variable

Histogram of Effectiveness of Performance Management System

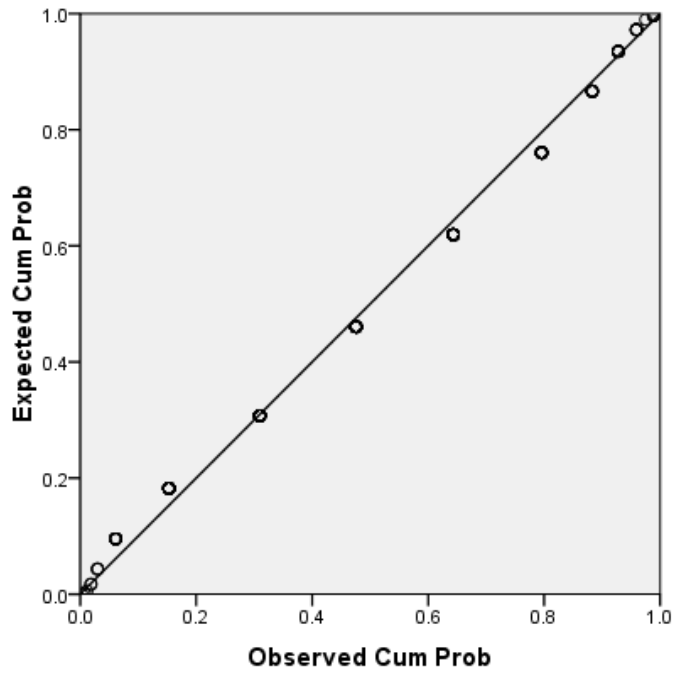


Stem-and-leaf Plot of Effectiveness of Performance Management System



Normal P-P plot of Effectiveness of Performance Management System

Normal P-P Plot of PMS



The Box Plot of Effectiveness of Performance Management System

