THE IMPACT OF RECOVERY MOVEMENT CONTROL ORDER TOWARDS HUMAN RESOURCE MANAGEMENT IN CONSTRUCTION SITE IN MALAYSIA

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THE IMPACT OF RECOVERY MOVEMENT CONTROL ORDER TOWARDS HUMAN RESOURCE MANAGEMENT IN CONSTRUCTION SITE IN MALAYSIA

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A project report submitted in partial fulfilment of the requirements for the award of Master of Project Management

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23 APRIL 2021

DECLARATION

I hereby declare that this project report is based on my original work except for citations and quotations which have been duly acknowledged. I also declare that it has not been previously and concurrently submitted for any other degree or award at UTAR or other institutions.

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ABSTRACT

The pandemic outbreaks of Covid-19 have affected many countries impose on travelling and movements controls especially Malaysia. The pandemic outbreaks announced and imposed with movement control order (MCO) and subsequently phase with recovery movement control order (RMCO) which take effect start from 10th June 2020 up till 31st August 2020 which planned recovered strategy and regulations to recovery the countries all range of sectors to survival and its most directly affected to construction sector as the construction site involved huge amount of manpower which major affected in group of blue collar and white collar. This study aims to investigate and determine the impact of recovery movement control order towards human resource management in construction site in Malaysia. This study implied with one type of methods which are include with questionnaire survey to focus on impact of recovery movement control order (RMCO) towards human resource management in construction site in Malaysia and found the most conspicuous impact of recovery movement control are the human resource for the construction site in our country. This research study findings are help the project stakeholders to understanding and well-planned strategy on human resource management to recover the impact towards the construction industries during the recovery movement control order period.

This research study is to identify and analysis the data collected focus on importance of human resource management in construction site, the impacts of RMCO towards human resource management in construction site in Malaysia and to recommend the potential strategies for human resource management in construction site in Malaysia which to improve the overall human resource management in construction site and reduce the negative impacts of human resource management during RMCO. The analysis data results have shown the factors and achieve the research objective by using difference types of analysis methods and the results are shown the difference factors included in the demographic of respondents, mean value ranking for the data analysis and Kruskal-Wallis H test show the significance between the difference groups of data, this analysis results is identified the research study objectives.

TABLE OF CONTENTS

DECLARATION ..... **iii**

APPROVAL FOR SUBMISSION ..... **iv**

ACKNOWLEDGEMENTS ..... **vi**

ABSTRACT ..... **vii**

TABLE OF CONTENTS ..... **viii**

LIST OF TABLES ..... **xiv**

LIST OF FIGURES ..... **xvi**

LIST OF EQUATIONS ..... **xvii**

LIST OF SYMBOLS / ABBREVIATIONS ..... **xviii**

LIST OF APPENDICES ..... **xix**

CHAPTER

1 Introduction **1**

1.1 General Introduction 1

1.2 Background of study 1

1.3 Problem Statement 5

1.4 Research Aim 8

1.5 Research Objectives 8

1.6 Research Methodology 8

1.7 Research Scope 9

1.8 Significant of Research 10

1.9 Research Gap 11

1.10 Research Contribution 11

1.11 Chapter Outline 11

1.12 Chapter Summary 12

CHAPTER

2 Literature Review 13

2.1 General Introduction 13

2.2 Importance of Human Resource Management in Construction Site in Malaysia 14

2.2.1 Leadership development 14

2.2.2 Mentoring and coaching 15

2.2.3 Managing employee's relationship 15

2.2.4 Professional development 15

2.2.5 Performance Management 15

2.2.6 Strategies Management 16

2.3 Potential Impacts of RMCO towards Human Resource Management in Construction Site in Malaysia 16

2.3.1 Environmental Impacts 16

2.3.1.1 Government policies 16

2.3.1.2 Low Health and Safety Environment 17

2.3.2 Economy Impacts 18

2.3.2.1 Unemployment Rate Increase during RMCO 18

2.3.2.2 Overall Construction Sectors Affected 20

2.3.2.3 Increase Remote Working Rate 21

2.3.3 Social Impacts 21

2.3.3.1 Social Threat 21

2.3.3.2 Physical Health Hazards 22

2.4 The Impact of Recovery Movement Control Order Towards Human Resources Management in Construction Site in Malaysia Assessment Criteria 22

2.4.1 Potential Human Resources Management Assessment Criteria 22

2.5 Potential Human Resources Management Strategies 23

2.5.1 Human Resources Plan 23

2.5.2 Training for safety and health to employees 24

2.5.3 Set up a clear communication 24

2.5.4 Backup plan for all level of human resources 25

2.5.5 Develop employees support solutions 25

2.5.6 Employees' feedback frequently 25

2.5.7 Reward and recognize employees 26

2.6 Chapter Summary 26

CHAPTER

3 Methodology 28

3.1 General Introduction 28

3.2 Research Methods 28

3.2.1 Quantitative Research 31

3.2.2 Qualitative Research 31

3.3 Justification of Selection 31

3.4 Literature Review 33

3.5 Questionnaire Design 33

3.6 Sampling Determination 35

3.7 Questionnaire Distribution 36

3.8 Data Analysis 36

3.8.1 Demographics of Respondents 37

3.8.2 Cronbach's Alpha Reliability Test 37

3.8.3 Mean Value Ranking 38

3.8.4 Kruska-Wallis H Test 39

3.9 Chapter Summary 40

CHAPTER

4 Results And Discussions 41

4.1 Introduction 41

4.2 Survey Response Analysis 41

4.3 Demographic Data of Respondents 42

4.4 Cronbach's Alpha Reliability Test 44

4.5 Mean Value Ranking 44

4.5.1 Mean Value Ranking of Importance of Human Resource Management in Construction Site 45

4.5.2 Mean Value Ranking of Impacts of RMCO towards Human Resource Management in Construction Site in Malaysia 46

4.5.3 Mean Value Ranking of potential strategies to drive the impacts of RMCO towards construction Site in Malaysia 47

4.6 Kruskal-Wallis Test 48

4.6.1 Kruskal-Wallis Test for impacts towards Human Resource Management Assessment Criteria 49

4.7 Chapter Summary 56

CHAPTER

5 Discussions 57

5.1 Introduction 57

5.2 Demographic Data of Respondents 57

5.3 Mean Ranking of Importance of Human Resource Management in Construction Site 59

5.4 Mean Value Ranking of Impacts of RMCO towards Human Resource Management in Construction in Malaysia 60

5.5 Mean Value Ranking of potential strategies to drive the impacts of RMCO towards Human Resource Management in Construction in Malaysia 61

5.6 Kruskal-Wallis Test 62

5.7 Chapter Summary 63

CHAPTER

6 Conclusions and Recommendation 65

6.1 Introduction 65

6.2 Summary Chapters 65

6.2.1 Objective 1, to identify the importance of the human resource management in construction site 66

6.2.2 Objective 2, to identify the impacts of RMCO towards human resource management in construction site in Malaysia 66

6.2.3 Objective 3, to identify the potential strategies to drive the impacts towards human resource management in construction site in Malaysia 67

6.3 Research Limitations 67

6.4 Research Recommendations 68

6.5 Research Contributions 68

6.6 Chapter Summary 68

REFERENCES 70

APPENDICES 74

LIST OF TABLES

TABLE	TITLE	PAGE
1.1	Number of active migrant workers with visit pass temporary employment (VP-TE), by nationality for construction sector, June 2019. Source from Ministry of Human Resources (MOHR), 2019	2
1.2	Number of Public and Private sector Projects, Source from CIDB Malaysia Annual Report 2018	3
1.3	Number of Registered Contractors by states, Source from CIDB Malaysia Annual Report 2018	4
1.4	Number of Registered Construction Personnel by category, Source from CIDB Malaysia Annual Report 2018	5
3.1	Ranging Value of the Cronbach's Alpha Reliability Coefficient	38
4.1	The Rate of Responses from the Questionnaire Survey	42
4.2	*Respondent's Position of the 306 numbers Sample*	42
4.3	*Respondent's working experience in construction industry of the 306 numbers Sample*	43
4.4	*Respondent's construction project involved in construction industry of the 306 numbers Sample*	43
4.5	*The Reliability Level of The Importance of HRM towards Construction Site in Malaysia*	44

4.6	*Mean Value Ranking of Importance of Human Resource Management in Construction Site*	45
4.7	*Mean Value Ranking of Impacts of RMCO towards Human Resource Management in Construction Site in Malaysia*	46
4.8	*Mean Value Ranking of potential strategies to drive the impacts of RMCO towards HRM in construction site in Malaysia*	47
4.9	*Chi-square Table*	48
4.10	*Results of Significant Differences through Kruskal-Wallis Test*	49
4.11	*Mean Rank of Significant Differences for the 29 factors among the group of Developer, Consultant and Contractor*	51
5.1	*Statistic of the Respondents from their Nature of Company*	58

LIST OF FIGURES

FIGURE	TITLE	PAGE
2.1	Malaysia Unemployment rate from 2008 to May 2020 (Source from Department of Statistics Malaysia)	19
2.2	The value of construction work done in the third quarter 2020 (Department of Statistics Malaysia)	20
3.1	Flow of Research study	30
3.2	The differentiate of Quantitative method and Qualitative method. Source From: (Ivancevich, 2003)	32
3.3	Likert Scale 5-points answer	34
3.4	The Analysis Test for data collected	37

LIST OF EQUATIONS

EQUATIONS	TITLE	PAGE

3.1	Cochran's Formula	35
3.2	Cronbach's Formula	38
3.3	Mean Value Ranking Formula	39
3.4	H - Value Calculation Formula	39

LIST OF SYMBOLS / ABBREVIATIONS

n	sample size
p	estimated proportion of the population
d	desired level of precision (the margin of error)
Z	z-value found in Z Table
RMCO	Recovery Movement Control Order
HRM	Human Resource Management
Arch.	Architect
Eng.	Engineer
Q.S	Quantity Surveyor
P.M	Project Manager
S.H.O	Safety and Health Officer
Implem.T	Implementation Team
H.R	Human resource officer
S.O.P	Standard Operating Procedure

LIST OF APPENDICES

APPENDIX A: QUESTINNAIRE

CHAPTER 1

INTRODUCTION

1.1 General Introduction

The first chapter for this research is to covered the background of study, problem statement, aim and objective, research question, research gap, significant of research, contribution of study and scope and limitation of the research.

1.2 Background of study

As cities representing to the pandemic of COVID-19 outbreak crisis as reported start on December 2019 globally and spread over worldwide more than 200 countries. In Malaysia, this pandemic outbreak are shows deep affected to whole Malaysia in economy and living in categorise of cultures, quality, politically, ecologically and behaviours. The pandemic outbreak has been changing the construction site human resources management and morphology planning in Malaysia especially during the recovery movement control order period. The recovery movement control order in Malaysia is imposed several restrictions to control the spread of infectious disease to improve or recovery the economic activities in the extensions of Movement control Order since 18th March 2020.

This study is to focus on the impacts of recovery movement control order towards human resource management in construction site in Malaysia to reducing and strategies to improving to the impacts. The pandemic of COVID-19 can define as “Sudden Threat” as the pandemic crisis are developed in Malaysia suddenly and its affected not only to specific sectors or organisation, but also whole Malaysia’s economic contribution sectors. The impact of RMCO towards human resource management in construction site in Malaysia is known crucial that the recovery is essential to help the sector back to normal conditions. But there are many challenges and impacts towards the human resource management in construction site in Malaysia on RMCO period. This study paper recommends that focus on human resource

management strategy to minimise negative impacts in construction site in Malaysia especially challenges as implementing safety and health measures for the construction site employees, remote working, limit of face-to-face communication, security of prevention pandemic outbreak, cost-cutting measures and reviewing human resource management guideline.

Table 1.1: Number of active migrant workers with visit pass temporary employment (VP-TE), by nationality for construction sector, June 2019. Source from Ministry of Human Resources (MOHR), 2019

Nationality	**Construction Sector Workers (No.)**
Indonesia	162,421
Nepal	7927
Bangladesh	197,796
India	11,033
Myanmar	11,704
Pakistan	27,464
Philippines	2939
Vietnam	2804
China	9593
Thailand	951
Sri Lanka	240
Cambodia	130
Lao PDR	0
Total	**435,002**

According to table 1.1, source from Ministry of Human Resources (MOHR) June 2019, the number of active migrant workers with visit pass temporary employment (VP-TE) for construction sector there are 435,002 workers in construction site in Malaysia, this are huge number of workers as blue-collar level play important role in human resource for construction site in Malaysia. The obvious impacts towards human resource management in construction site in Malaysia is the employees are movement with term and conditions for the work construction site. For the white-collar employees as construction site supervision team and the blue-collar employees as workers for the construction site, there are only allowing 50 percent of the total normally present to the construction site and also many of regulations and steps to be enforce and record daily.

Table 1.2 Number of Public and Private sector Projects, Source from CIDB Malaysia Annual Report 2018

Sector	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Public	1,954	2,011	1,971	1,800	1,902	2,188	2,328	1,093
Private	5,771	5,997	6,228	6,276	5,653	6,042	6,046	4,915
Total	**7,725**	**7,998**	**8,199**	**8,076**	**7,555**	**8,230**	**8,374**	**6,008**

According to CIDB Malaysia 2018 annual report, refer to table 1.2, 1.3 and 1.4, there are total 6,008 construction site, total 95,997 registered contractors and total 850,754 construction personnel in Malaysia, that mean there are many of construction site located in Malaysia in difference regional. The impact of recovery movement control order towards human resource management in construction site in Malaysia is thus a critical topic to concern for recovery the construction site activities back to normal. Hence, this study dedicated focus to the issues which the impact of RMCO toward human resource management in construction with difference strategies to solve the negative impacts and challenges.

Table 1.3: Number of Registered Contractors by states, Source from CIDB Malaysia Annual Report 2018

State	**Total Contractors**
Johor	9,370
Kedah	4,327
Kelantan	4,423
Melaka	2,871
Negeri Sembilan	4,050
Pahang	4,714
Perak	5,561
Perlis	1,208
Pulau Pinang	4,758
Sabah	12,371
Sarawak	8,549
Selangor	17,883
Terengganu	4,516

Wilayah Persekutuan KL	11,028
Wilayah Persekutuan Labuan	303
Wilayah Persekutuan Putrajaya	65
Total	**95,997**

Table 1.4: Number of Registered Construction Personnel by category, Source from CIDB Malaysia Annual Report 2018

Category	**Local Workers**		**Foreign Workers**		**Total Workers**	
	2017	**2018**	**2017**	**2018**	**2017**	**2018**
General Workers	63,671	69,865	2,353	3,213	**66,204**	**73,078**
Skilled Workers	78,316	16,996	18	336	**78,334**	**17,332**
Site Supervisor	66,101	93,238	1,862	3,808	**67,963**	**97,046**
Administration	22,986	96,151	246	3,558	**23,232**	**99,709**
Trainee	93,484	80,193	1,921	13	**95,405**	**80,206**
Total	**605,884**	**729,406**	**95,777**	**121,348**	**701,661**	**850,754**

1.3 Problem Statement

Covid-19 Pandemic outbreak is seriously threat and topic in year 2020. Malaysia government have announced and launched RMCO after the pandemic is under control on early of May 2020. The construction site in Malaysia is predicted with massive issue on human resource with the sudden enforcement with term and conditions during RMCO put the manpower and human resources in jeopardy. The construction site in Malaysia probably lead to slow down the activities as the employees for construction site are difficulty for product their activities contribution to the progress, without well planning strategies on human resources will caused the construction site activities back to normal and also will caused the devastating for overall of construction site.

The previous human resource management are changed during RMCO period and there are few critical factors shall identify and clarify to make better strategies to suit

the barriers and implementation for human resource management for construction in Malaysia. The enforcement for RMCO, there is prohibited on movements and gatherings and also many of health care measures for preventing the pandemic outbreak in construction site. Construction site in Malaysia generally consists huge number of employees and the workplace are congested, there are difficulty to avoid maintain the regulation such as 1m distancing. For the current situation, the changed of the human resource management are facing difference type of critical problem compare to previous such as pay benefits to employees, some of construction site employees are reduce their pay compare previous during the RMCO period as the overall economic sectors are affected by the pandemic. Some of employees are arranged for work from home, this makes the construction site employees shall work with technologies to remote the work from home. The construction site environment is mostly congested and the employees are difficult avoid body touch together especially in high level building area, and this make the employees indirectly work with difference planning and the management shall set up a new human resource management plan to suit the existing condition avoid for pandemic outbreak in construction site.

According to report interview to CEO of Mywave Sdn Bhd om 15th May 2020, Ms.Khoo Siew Ling has mentioned the human resource are failing in the dark during these unprecedented times, Khoo says “The greatest challenge,” she admits, “is the interpretation of announcements during this time.” During the critical period to avoid the pandemic spread, human resources management for construction site in Malaysia have new challenges, new demands and new responsibilities to focus executing the human resource management in construction site to adopt the new normal ways.

Malaysia’s Prime Minister Tan Sri Muhyiddin announced on 7th June 2020 the RMCO, the RMCO plan, themed on “Building the economy together”, will cost RM35b and include across main three key areas as empower the people, propel business and stimulate the economy (Sunil, 2020). The recovery plan for RMCO also benefits to human resource management to construction site as note about the package “PENJANA” which as “Wage’s subsidy programme” and “Prihatin package” to challenges for rising the unemployment rate and ensuring the employment retention which government are allocated around RM9bn, this package is estimated benefits to

three million of workers include for construction site workers (Sunil, 2020). To temporary measures for the impact towards to the construction site in Malaysia, the construction site management team has been modifying the relevant provision in various standard and method which could potentially affect the contractual obligations of existing contracts and affected on the human resources management.

According to The Star, many of companies have recovered operating their business between 60% and 100% during RMCO period as compared to 20% to 40% during MCO period (STAR, 2020) , it means the government announced policy is helping and push up the recovery for the overall market in the positive position. The construction site is operation way back to near normal but changed of human resources management to the construction site in Malaysia are difference to the previous human resource management plan. The changed of human resources management plan shall suit to current condition to minimise the risks of spread of the pandemic and the current impacts towards the human resource management to the construction site in Malaysia.

The construction site, the human resource management is always change and modify due to the demographic of the workforce. During the RMCO period, the human resource management plan for difference construction site in Malaysia is facing the changing as because change of amount qualified construction site management team employees and qualified workers as one of the factors are the government prevention of pandemic plan rules are affected the workforce plan compare to previous. Therefore, human resource management are become more critical and important to the construction site overcome the impacts of RMCO towards human resource management to the construction site in Malaysia. According to Norrell, Kevin M; Loan-Clarke, John; Wilkinson & Adrain J's book as title Organisational change and employee turnover, publisher (Norrell, Kevin M; Loan-Clarke, John; Wilkinson & Adrain J, 2004) mentioned on the theory of two major factors that the employee's termination is "perceived ease of movement' and "perceived desirability" that related to employees' satisfaction to their career path and ambitions. During RMCO period, there are many of standby human resource in market waiting for new opportunities as who's affected by the pandemic, thus the turnover due to the employee poor job performance, absenteeism of workplace culture, management and others negative impacts.

The construction site management shall propose the strategies and solutions to prevent the widely changed, unforeseen risks, culture and resource's structure to develop the human resource planning and implementation the standard and solutions for the construction site human resource management during the RMCO critical period which mostly affected impacts can categorised to internal impacts and external impacts. For internal impact for the human resources management, can define related to communication between employees, work flow arrangement, human resources support and others. For external, the impact for human resource for construction site can define related to local authorities, environmental, economic and others.

Therefore, this study is dedicated focus on the impact of RMCO towards human resources management in construction site in Malaysia. In practically of the human resource management in construction site, it is systematic and theoretical guidance to minimise the impacts and neglect for the construction site.

1.4 Research Aim

The research aim for this study are to enhance the potential value for identify, clarify, planning and implementation focus on the impact of RMCO towards human resource management in construction site in Malaysia.

1.5 Research Objectives

To achieve the research aim, are three research objectives are listed and formulated.

(i) To study the important of human resource management in construction site in Malaysia.
(ii) To identify the impacts of RMCO towards human resource management in construction site in Malaysia.
(iii) To outline potential strategies to reduce the impacts of RMCO towards human resource management in construction site in Malaysia.

1.6 Research Methodology

The research is starting with literature review for finding out the relevant threats and negative impacts which in term on environmental aspect, social aspect and economic aspects to achieve the research objective (i). The literature review are further study and reference for assessment framework to current impacts towards human resource

management in construction site in Malaysia during RMCO and propose applicable strategies based on findings from research objective to gain the initial planning to propose analogous evaluation framework to evaluate the impacts of RMCO towards human resource management in construction site in Malaysia. The evaluation is for determine the quality measures of analogous assessment criteria of the impacts of RMCO towards human resource management in construction site in Malaysia to achieve the research objective (ii) in related to analysis the critical impacts, changed and challenges to improve current impacts of human resources in construction site in Malaysia with a total of 500 sets of questionnaire survey are distributed to the difference construction site personnel and 500 sets of responded received for evaluate and analysis the data with Cronbach's Alpha Reliability Test, Measure of Tendency, and Kruskal-Wallis H Test through SPSS software. To achieve the research objective (iii), to propose and suggestion the strategies that may improve the existing human resource management during RMCO period for construction site in Malaysia based on the research data and analysis data.

1.7 Research Scope

The study are focusses on perspectives from difference construction site personnel and difference construction team to the value of the impact of the RMCO towards human resource management in construction site in Malaysia to differences states with the questionnaires via Google Form format. The research also concerns on analogous evaluation criteria for evaluate potential initiation and demonstrate to the impacts RMCO towards human resource management in construction site in Malaysia to capable the construction human resources management in Malaysia working effectively and suit to the challenges on this critical period. The goal for this research study is to address the impacts of RMCO towards human resources management in construction site in Malaysia, which together the proposal for challenges, strategic and others of the construction site team of the projects via the questionnaire. All range of construction site within Malaysia especially Klang valley and Selangor, Pahang, Johor, Penang, Perak, Melaka, Negeri Sembilan and others construction site are trying invited for participate for this research due to time constraints. The construction site human resources team are a group of individual working together in the construction site to achieve the goal, thus for this research are only invited define to two major groups in

construction site as white-collar range groups and blue-collar range groups. White-collar range groups can define to the construction management team especially the project manager, construction manager, project engineer and other white-collar range personnel, for blue-collar range are define to the workers whose contribute specialist work force with hand on technical direct to the construction activities. This study is major to determine the major impacts which influences and these influences will be derived. Those impacts are will listed and categorised into positive and negative impacts of RMCO towards human resource management in construction site in Malaysia to analysis and study a possibility strategic and objective to suit to current situation during RMCO period.

1.8 Significant of Research

The research study is firstly focus on the values of the impact of RMCO towards human resource management in construction site in Malaysia are carried out and followed with the aim of increase of appreciation among the community towards the potential of negative impacts by RMCO towards human resource management in construction site in Malaysia. Furthermore, the strategies and suggestions for improve the impacts of RMCO towards human resource management in construction site in Malaysia are critical to maintain the construction site human resource management is operation and implementation can minimise the current negative risk to meet the requirements and concept of the research study. The study is following by demonstrate and exploring the impacts of RMCO towards human resource management in construction site in Malaysia with the assessment and guidelines to understand the existing impacts, strategic, recovery plan and others. This study also to demonstrate the sustainable approaches, strategies and improvement ways to bring a new plan improve the impacts of RMCO towards to the human resource management in construction site in Malaysia. This aspect is to focus on the potential criteria and strategies for improve the human resource management which affected during the RMCO period for construction site in Malaysia to improve the current critical impacts affected to the construction site. The purpose and significance for this research are to analysis and identify the impacts of RMCO towards human resource management in construction site in Malaysia, to identify the sustainable approaches and propose the strategies and evaluating the framework for the research study.

The focus for the research on impacts of RMCO towards human resource management in construction site in Malaysia which included of identify, propose strategies and others are the directly reduce the negative impacts and improve the overall construction site's human resource management in Malaysia during RMCO period and understand the value for this research and implement the propose strategic to the human resource management in construction site in Malaysia.

1.9 Research Gap

In Malaysia, we are never meet and facing for RMCO and to research the human resource management in construction site in Malaysia. This research study is concern more emphasized for identify the importance of Human Resource Management, the impacts of RMCO towards to human resource management in construction site in Malaysia and suggest potential strategies for HRM for construction site in Malaysia.

1.10 Research Contribution

For this research study, the research contribution is to emphasized for the importance of human resource management in construction site, to identifying the impacts of RMCO towards human resource management in construction site and to recommend potential strategies for human resource management in construction site in Malaysia to reduce the negative impacts and improve for the overall construction site in Malaysia' human resource management during the RMCO period.

1.11 Chapter Outline

This research study is formulated to six (6) chapters as listed:

Chapter 1 are providing the information for the research background and elaborates to overview structures of the research study. Research background structure of the study define to foundation and framework for the research study. The background frameworks of the research of study, problem statement, research aim, research objectives, research methodology, research scope, significant of research, chapter's outline and chapter summary.

Chapter 2 consists of a review on literature from difference sources such as journal, reports, media, conference record and others regarding the impact of RMCO towards

human resource management in construction site in Malaysia. The literature can reference to fact data and information on impacts of environment aspects, economy aspects and social aspects to understanding related on threats, opportunity, weakness and strength.

Chapter 3 are to build up the appreciate research methodology apply to the research study for analysis and evaluate the theoretical framework. This chapter is to describe and define the study on designed and conducted achieve to the research aim and objectives perform in the research study.

Chapter 4 are shown the proper information and data based on the data received from the survey respondents and generate the analysis results via the software Statistical Package for Social Science (SPSS) test.

Chapter 5 are to discuss for the significance findings based on the analysis data and result from the survey.

Chapter 6 are to conclusions and propose the suggestions for the research study to improve the negative impacts of the research study.

1.12 Chapter Summary

For the research study chapter, there are important to study on the changed, impacts, implementation, strategies and recommendation for the impacts of the RMCO towards human resource management in construction site in Malaysia. This chapter mainly is to determine the aim of research, research objectives, research methodology, research scope, significant of research and outline of research for the study. The processing and flow of this chapter is the initial step to understanding the research study topic as outline.

CHAPTER 2

LITERATURE REVIEW

2.1 General Introduction

The chapter for this research is to involves and related to the previous study research which included the cases and researches to allow further and deeper understanding on current RMCO period issues and problems for the study research. The main objective for the research is to identify and understanding information for the impacts of RMCO towards human resource management in construction site in Malaysia.

According to famous Randstad, the Employer Brand Report 2020 (Randstad, 2020), there are many changing market attitudes and behaviours due to the pandemic. Those market trend which affected by the pandemic is directly influence to the Malaysia construction industry especially human resource management planning for the construction site. There have several major impacts affected change in human resource management in construction site in Malaysia as the management team downsizing to the workforce structure or re-structuring the human resource structure for the construction site to suit the impacts of RMCO. During the pandemic outbreaks period, there are many of construction site have been delayed by few months with uncertainty factors. The construction site management team are changing their human resource management plan for increase the productivity to make sure the construction site team meet for the deadlines and achieve the goals. The human resource management plan for the construction site are benefits to meet the impacts of RMCO towards human resource management in construction site in Malaysia with potential strategies, increase the positive impacts to human resource of construction site and identify the sustainable approaches to the human resource management plan. According to John Ivancevich, human resource management are contributing to organisation efficiency, which also included on assist organisation achieve the goals, develop and maintain quality of work life for employee, managing change for mutual change on individual, group or public. (Ivancevich, 2003). For construction site human

resource management, there can divided to four major categories define to human resource planning, acquire project team, develop project team and manage project team (PMI, 2008) to execute the human resource management plan towards success.

2.2 Importance of Human Resource Management in Construction site in Malaysia

Human Resource Management for construction site is a process for manage people for the organisation which main concern for ensuring the construction site consist of sufficient human resource. Human Resource Management is a system for manage all level of employees for the organisation to achieve the organisation goals. According to John storey (1995), HRM is a distinctive approach to employment management which seeks to achieve competitive advantage through the strategic deployment of a highly committed and capable workforce, using an integrated array of cultural, structural and personnel techniques (Storey, 1995).

Human Resource Management is a central system to manage people and performance to became key functions and for all level of organisation. According to Mathis and Jackson (2005), HRM deals with the design of formal systems in an organisation to ensure the effective and efficient use of human talents to accomplish organisational goals (Robber L.Mathis & John Harold Jackson, 2005).

When the Human Resource Management comes to the construction site in Malaysia, implementation of HRM is much important as due to the nature of construction site human resource structural. Human resource management helps to link up the gap between employees' performance and organisation's objectives and goals to be a success.

Human Resource Management is important for construction site to ensure the operation contribution to the organisation of construction site achieve the goals and success.

2.2.1 Leadership development

Leadership development are referring to events or activities to enhance the skills, anilities and morale of a leader. According to Baldwin and Ford (1988), the success of leadership development is influenced heavily by the quality of the programme, level of support and acceptance from superiors, and the characteristics or learning style of the person being developed (Timothy T.Baldwin and J.Kevin Ford, 1988)

2.2.2 Mentoring and coaching

Coaching and mentoring are an approach for management and skills to foster employees and deliver results. Mentoring and coaching fundamentally are learning and develop events for share similar knowledge to employees. According to Alexa Michael (2008), Mentoring relates primarily to the identification and naturing of potential for the whole person and coaching relates primarily to performance improvement in a specific skills area. (Michael, 2008)

2.2.3 Managing employee's relationship

Managing employee's relationship is important part of Human Resource Management. The human resource manager are responsibilities for conduct events and activities or other ways to enhance employee's relationship with the organisation. According to Dr.D.S Chaubey (2017), The human resource department can play a critical role in the process of employee relationship management (DR.D.S.Chaubey, 2017), to strengthening employees' roles and communication for ensure objective of the organisation are being met.

2.2.4 Professional development

Professional development is important for part of human resource management in construction site. According to Lee M.R (2014), professional development generally includes in training and performance, training normally is a systematic and planned for develop the related knowledge, attitudes, abilities and skills through learning to attain effective performance in an activity (Lee Mao Rui, Syuhaida Ismail & Mohammad Hussaini, 2014).

2.2.5 Performance Management

Performance management are always a highly argument issue (Storey, 1992). According to John Storey (1992), proposed that performance management "refers to any designed activity related to the performance of employees", which performance management shall include characteristics as clear communication of goals to the employees, overseeing formal review for the progress to set up training requirements. Performance management are to identify employees among level of motivation, improve employees' attitude and morale, progress of employees for the organisation goals, the area to improve by employees and training to develop employees' knowledge.

2.2.6 Strategies Management

Strategy management are important in the organisation. According to Ruth Mayhew (2019), Human resource improve the company's bottom line with its knowledge of how huma capital affects organisational success (Mayhew, 2019). The HR manager shall manage the strategies to ensure the organisation achieve the organisation goals which include in assessments for existing employees.

2.3 Potential Impacts of RMCO towards Human Resource Management in Construction Site in Malaysia.

The construction site in Malaysia individual can define as project which categorised in nature of temporary work, which designated with start period and completion period. Construction site human resource management define the effectively of adopt the human source for the project. During RMCO period, the human involved in the construction site may change due to difference impacts affected by the critical period. The construction site consists of difference types of activities tends to be achieve the goals. As many impacts including the negatively of RMCO towards to human resource management in construction site in Malaysia, that caused number of threats and negative impacts during the RMCO period compare to previous before the pandemic outbreak period. The major threats can categorise to three major group of threats and define as environmental impacts, economic impacts and social impacts directly affected to construction site in Malaysia.

2.3.1 Environmental impacts

Environmental factors are one of the factors will affected for human resource management during RMCO period. Environmental impacts for the human resource management generally can describe to those factors affected the human resource management system functioning.

2.3.1.1 Government policies

In the construction site, there consists of large-scale rate of human resource and other types of resources. During the RMCO period, the overall environment of construction site is the major affected by the resources support especially critical resources in construction site which affected by the government policies. According to Fadillah

that due to Covid-19 pandemic, the cash flow for whole country's supply chain was influenced and the most crucial impacts were root by the financial topics, labour constraints and project delivery matters. This included in disappearance of labour force and labour pay by a rate around 30 per cent and dropping the usage of construction materials resources around 42 percent. (HANA NAZ HARUN & SAFWAH ABDUL RAZAK, 2020). In general, government policies are one of the threats will affected the environment of construction site during the RMCO period, upon the pandemic crisis and affected the whole construction site environment and make the resource support for construction site shortage with many of uncertainty factors. At the same time, the government are announced several major points during the RMCO period for recovery the countries overall condition but with some restriction. The policies announced by government is make many changed compared to previous condition and thus affected the construction site operation method changed especially impacts to human resource management for construction site. For the environment impacts during the RMCO towards human resource management in construction site in Malaysia, generally there are affected by the government policies define to two major categorised as external and internal impacts by the environmental. For the external impacts by government policies, there are threats by the overall condition of countries is still in many of restriction, and caused the resources support for construction site is directly affected especially the human resources support. For the internal impact by environmental, the construction site operation method especially for human resources arrangement is difference from the previous normal time.

2.3.1.2 Low Health and Safety Environment

In the construction site, to reduce the pandemic outbreaks impacts on construction site or any others public, it is important to plan for the pandemic outbreaks time (OSHA, 2020) to minimise the potential threats of low health and safety environment impact to the construction site. The low health and safety are the critical threat for the construction site environment and will caused the high negative impacts.

The low health and safety that are the unmaintained leads for the negative prevention for the construction site will became a threat for the community of the construction site. Due to low health and safety environment for construction site, it become easily the negative impacts bring in to the construction site. Thus, to ensure

compliance with safe work and risk control for health and safety to the construction site is to ensure all the employees in the construction exposure to the risk. According to the Director-General of Health Malaysia, Tan Sri Dr. Noor Hisam said that Malaysia is not to poised to enter COVID-19 “Exist Strategy Phase” yet as the number of cases still continues remain in 2 digits during RMCO period (Vlaanderan, 2020).

The construction site low health and safety environment are the critical threat and the involved human team in the construction site shall encourage the people to work together to minimise the low health and safety environment threat for the construction. According to the newspaper NST, Malaysia Prime Minister have mentioned thar “the same applies to employers, you must be responsible and ensure all of your workers comply with the SOP at your respective works place” (Adib Povera & Dawn Chan, 2020).

The low health and safety in construction site especially the workspace for the employees is congested, there are difficulty to avoid distancing between body to body. Besides, the living lifestyle for the employees in the construction site is definitely high risk on health and safety, as the employees living area are not fulfil the standard and too congested, the living area are with simple facilities and this are making the employees living in the high-risk environment. Many of employees are nor really aware on the low health and safety will caused high risk during the RMCO period, they keep in mind that RMCO is fewer pandemic outbreaks with risks under control, they not aware the important of health of safety is one of threat and risk to the employees in construction site.

2.3.2 Economy Impacts

Economic impacts are those factors affected the human resource management which will shape and form to the economic activities. The economic impacts will be affected by various of impacts to the human resource management including of economic system, general economic situation and others.

2.3.2.1 Unemployment Rate Increase during RMCO

The pandemic outbreaks have caused serious economic impacts to the construction industry and directly impact to the unemployment rate increase during the RMCO

period. According to the newspaper NST, the pandemic outbreak continues a lasting impact to the construction industry in the country which sustained RM18.5 billion losses during the initial phase between 18th March 2020 to 28th April 2020 and according to Senior Work Minister Datuk Seri Fadillah, the most significant impacts were caused by financial issues, project delivery and labour constraints (HANA NAZ HARUN & SAFWAH ABDUL RAZAK, 2020). As based on inspections by Construction Industry Development Board (CIDB) on 7,590 construction sites along Malaysia nationwide from April 2020 to September 2020 still not yet resumed for operation, that caused major factor by the labour constraint. The high unemployment rate for the construction site in Malaysia is a new threat due the construction site high overhead cost and lack of funding for new employment to the construction site, it causes contributed towards decline of the construction site industry. According to The Edge Markets' report on October 2020 and mentioned that Malaysia labour force expends but unemployment rate stays at 4.7% (Shankar, 2020). This are a negative phenomenon due to the negative trend for the labour demand.

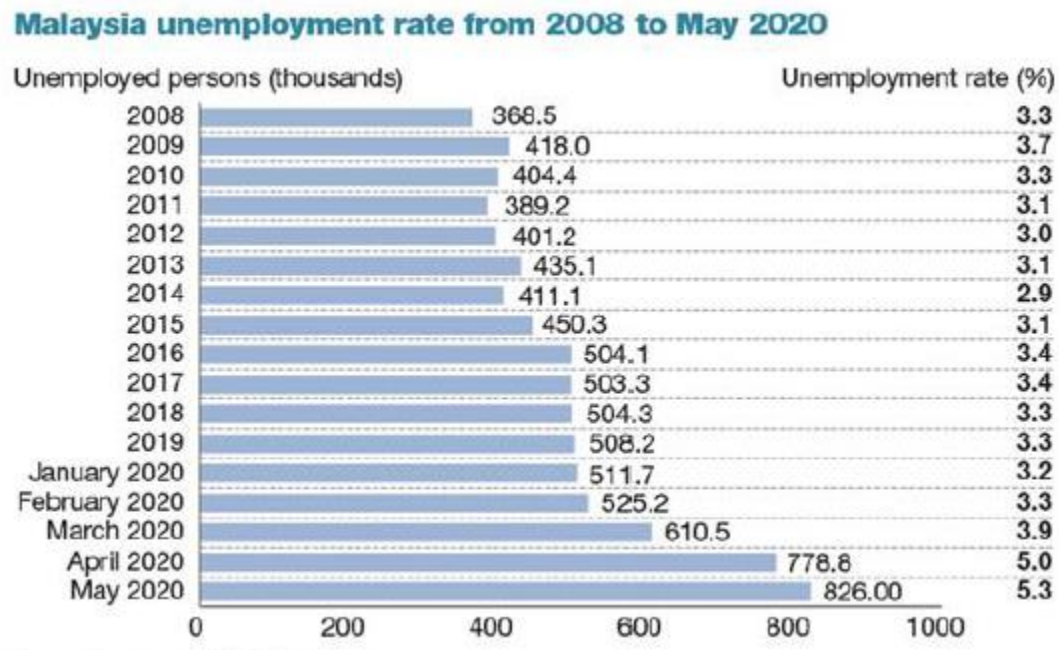

Figure 2.1 Malaysia Unemployment rate from 2008 to May 2020 (Source from Department of Statistics Malaysia)

2.3.2.2 Overall Construction Sectors Affected

During the RMCO period and the pandemic outbreak crisis, the overall construction site is affected. According to Senior works Minister Datuk Seri Fadillah Yusof reported by New Straits Times on 23th September 2020, the global covid-19 outbreak continues to leave a lasting impact on the construction industry (HANA NAZ HARUN & SAFWAH ABDUL RAZAK, 2020). During the RMCO period initial stage kicked off, coupled with shorth term recovery packages announced by government to help the overall market improve, as mentioned by the condition that the overall construction sectors is affected by the pandemic and start to recovery from the negative impacts which was gradually adjusted to include RMCO as the situation evolved. According to Department of Statistics Malaysia's report on 10th November 2020, the value of construction work done are advanced 58.6 per cent in the third quarter of year 2020 as compared to second quarter of year 2020 with the value of construction work done are improved -13.1 per cent on third quarter compared to second quarter as -44.9 per cent (MALAYSIA, 2020). From the data show by Department of Statistics Malaysia, shown that construction sectors are starting improve and recovery which affected by the pandemic.

Figure 2. 2 The value of construction work done in the third quarter 2020 (Department of Statistics Malaysia)

2.3.2.3 Increase of Remote Working Rate

Since the pandemic, remote working is a new trend for mostly industries sectors including construction sector which include management employees and executive level employees in the construction site in Malaysia. The RMCO is implemented to improve the market condition. According to Malaysiakini, reported that remote working has become a new trend and according to a study by the World Bank Group in 2018, 26% of Malaysian workforce forms a part of the growing gig economy and the numbers has been expanding as Malaysians opt for flexible working hours, in line with their interests and skills (Malaysiakini, 2020).

The construction site employees are changing their work types from traditional method to remote working type. Some construction site organisation decides to rotate their daily schedule with certain scheduled employees to minimise the pandemic outbreak risks. By remote working for construction site, that will be affected on certain part human resource structure in the construction site especially for the professional and skilled employees.

2.3.3 Social Impacts

The social impacts affected to the human resource management is a direct impact to the various aspect of organisation. As human resource management, social impacts are including as attitude, beliefs, expectation, desires and others from the social.

2.3.3.1 Social Threat

The construction site during RMCO period, reported that many of pandemic outbreak cases and become high risks group affected to the social. The construction site contains huge volume of employees especially the foreign workers for difference trade for construction activities, they work under a clouded working environment and thus directly increase the risks of spread the pandemic outbreak. As reported in mainly media during RMCO period, there are many clusters of Covid-19 pandemic outbreak are from construction site, thus indirectly show that construction is a source difficulty to monitor and control with SOP during this critical period. The high risks of outbreak source from construction site is importance related to HRM for the construction site, with change a structure and structure of HRM and effective for arrange for

implemented the SOP as set by local authorities. Moreover, lack of social distance and close range of work environment are the major impacts contributed to increase in number of cases of pandemic for the social.

2.3.3.2 Physical Health Hazards

According to CIDB investigation, the construction site in Malaysia are many of not proper implemented the Standard Operating Procedures (SOPs) and detected many of cases from construction site which steamed from closely contacts with existing cluster and employees movement from one construction site to another construction site. The potential hazards to the construction site during this critical period mostly affected to the human resource management of construction site, the construction site straight implemented the SOPs and make sure all the employees in the construction site are followed. The SOPs is a guidance for the construction site employees for safety and health on guide for practise can be carried out the construction activities to prevent the safety and health issues to the employees and public surround the construction site.

2.4 The Impact of Recovery Movement Control Order Towards Human Resources Management in Construction Site in Malaysia Assessment Framework.

2.4.1 Potential Human Resources Management Assessment Criteria.

Human resource management for construction site in Malaysia may perform assessments to anticipate the subsequent performance of the employees for changes in RMCO period. Unequivocal assessments are extremely helpful for an individual in consider as a candidate for the open position of an organisation. The assessments may inform the organisation that the potential employees are the suitable candidates. The assessment is helping on identify the employees' individual strength, deleterious characteristics and others during the critical period as RMCO. The potential human resources management assessment criteria can categorise in individual assessment as define to cognitive and personality assessment, motivational assessment, evaluation according to performance requirements and organisational assessment (Penn, 2020).

Cognitive and personality assessment is a type of assessment by human resource department of the organisation conduct cognitive tests for access both on knowledge and brainpower before offering the position to the consider candidates. The

assessment helping organisation human resource department understanding the candidate's capacity and individual's personality for identify their strengths, deleterious characteristics for determine the candidates.

Motivational assessment is for ensure the right candidates are fit for the organisation. The human resource department have to conduct a motivational inventory assessment for identified the individual wants. This type of assessment is for the human resource department focus on looking a suitable candidate whose are motivational for achieve a high level of performance.

Evaluation according to performance requirements is type of assessment with clear job descriptions and specific the requirements with expectations on performance. Human resource department are responsibilities for develop the job description for the candidates and requirements expectations.

Organisational assessment is type of assessment look into area for advising to the organisation. This type of assessment is focus on the context on which individual employees for their jobs. Human resource department concern on the organisational structure, workflow, conclusion and customer satisfaction. The assessment are to looking out the opportunities for improve the commitment and appointment on the employees.

2.5 Potential Human Resources Management Strategies

2.5.1 Human Resources Plan

Human resource planning (HRP) is a continuous process of a systematic planning which for ahead to achieve optimum use of an organisation's most quality employees (Fahed-Sreih, 2018). Human resource planning is to ensure a best plan of human resource suitable for the construction site during the critical period and to ensure avoid by manpower shortage. During the RMCO, the construction shall review and revise the existing human resource plan to suit the current condition. Generally, the human resource plan shall take consideration into four major key steps as analysis existing manpower supply, forecasting the labour demand, balance projected labour demand with supply and support for organisation objective and goals. During RMCO, there are many changes for construction site especially human resource structure, work culture

and others; thus, the site management team shall revise the human resource management plan to remain the both productive and profitable also ensure the employees work under a safety environment.

2.5.2 Training for safety and health to employees.

Training for safety and health to employees are key element play important in construction site to mitigate the construction risks and improve the construction processes with proper knowledge. The construction site environment quality interrelated with human's health which the construction environment consists huge number of employees contributed to the construction site. Training safety and health for employees to develop an effectively for carried out their safety and health responsibilities to ensure them understanding the safety management system, hazards and control measures for the construction site, safety procedures and practise and others during the RMCO period for prevention any negative impacts regarding the safety and health issues happen in the construction site.

2.5.3 Set up a clear communication.

A clear communication is important elements for construction site especially during RMCO period. Communications occurs are key element for improve efficiency in all construction activities and human resource management, the communication will reduce the frustration to avoid misunderstanding in difference group of employees in construction site, clear communication enhanced understanding of other person and to more effective management for the relationship in between the employees in the construction site. Clear communication for the construction site is very important on-site management team to share the information to the employees to ensure them are clearly understanding the information, it may improve the work environment and reduce the risks of misunderstanding. Some of critical information especially those information related cover safety and health and also benefits for the employees, they shall receive the information clearly from the sender and implemented the information carefully in correct position avoid to put on any dangerous situation. According to Patricia M.Buhler "The effectively communication and clear communication with communicate "up" to superiors, "down" to subordinators, and "sideways" to peers."

(Patricia M. Buhler & Joel D.Worden, 2013) and thus, the clear communication is play important and key element for communication in the organisation.

2.5.4 Backup plan for all level of human resources.

Backup plan play important key in human resource management especially for construction site. Human resources shall estimate advanced and scheduled advanced in order to do all the activities for construction site as planned. Thus, the construction site management team shall have back up plan for all level for human resource management plan during the critical period as change may occur at any time. The goal of backup plan for all level of human resources is to assign back up resources for each level in difference activities in the construction planning schedule. According to Sharlyn Lauby (Lauby, 2018) "If there's one activity that has more of an impact than succession planning and talent pools, it's replacement planning, although the term is frequently used in conversations about succession planning. They are two difference things. A replacement plan identifies "backups" for positions. Traditionally, it focuses on top-level positions, but it can be done for any key position in the organisation." Backup plan is standby for replacement a planning usually mentioned for certain changes in the planning and for alternative planning on certain unforeseen for make sure the planning is implemented smoothly.

2.5.5 Develop employees support solutions.

According to Christine Soeun Choi (2019) mentioned that employee's retention is one of the biggest threats to business throughout the country (Choi, 2019). Develop a employees' support solution for mitigate and decrease the human resource risks for the construction site organisation and also increase the employee's growth initiatives and skilled for employees' increase their loyalty in the environment. The construction site organisation shall support the employees growing and professional in their skills range for increase the whole organisation efficiency.

2.5.6 Seek employees' feedback frequently.

According to a study from Wakefield research, a more than 90 percent of employees feel like more to the manager address learning opportunities and point out the mistakes in real-time, not only during an annual review session only (Choi, 2019). Employees'

feedback frequently improve the organisation to continuous grow and develop in the area which are struggle and knowing the organisation weaknesses. Employees' feedback helps the organisation access and improve the strength especially during the RMCO period, it may help the organisation response immediately to make an alternative solution for solve the issues in the construction site. The employees' feedback also helping on continuously develop the opportunities, to mitigate the human resources turnover and decrease the productivity risks for the construction site.

2.5.7 Reward and recognise employees.

That is importance to reward and recognise the benefits to the employees for the construction site organisation. Unfortunately, many of construction site organisation lack of senses of importance for reward and recognise of the employees as the stakeholder more prefer to venture into others sustainable elements and many of them are not aware that the importance of reward and recognise to employees which leads for changes on productivity. Thus, the importance of create reward and recognise to employees from all the stakeholder to maintain the quality of employees. According to Joan P.Klubnik " Clarify around how giving rewards and recognition benefits the organisation – it must be positioned as value-added. Everyone must recognise that the time and effort spent on recognition results in payback to organisation." (P.Klubnik, 1995), mean the rewarding and recognise the employees are important in a human resource structure to ensure and appreciate their contribution.

2.6 Chapter Summary

This chapter had summarised and delved into the impacts of RMCO towards human resource management in construction site in Malaysia where definition of impacts and strategies for human resource management during RMCO period for construction site in Malaysia. After thorough the review of literature, many of impacts and strategies methods were identified based on their characteristics. This chapter are then probed at great length previous literatures regarding of identified impacts and potential strategies, with prime focus on the driving factors, hindering barriers and potential strategies to accelerate the impacts of RMCO towards human resource management in construction site in Malaysia. Last but not least, all the significant factors, barriers and strategies

identified were then used to structure the preliminary questionnaire for pre-testing to ensure the robustness and validity of data.

CHAPTER 3

METHODOLOGY

3.1 General Introduction

The research for further research for the specific data and information to generate the specific knowledge. This research study is for further study on a scientific exploration the potential knowledge for impacts of RMCO towards human resources management in construction site in Malaysia. The research for this study also will further study and define on the potential strategies to drive the impacts towards HRM in construction site in Malaysia. The primary data are pertaining the factors for the importance of human resource in construction site in Malaysia and impacts towards human resources management in construction site in Malaysia and the potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia by rating tools, the data will be collected and analysed.

In this study chapter, the survey data collected method, questionnaire design framework, sampling size calculation and the survey data analysis technique for this research study are discussed detailing follow as one by one through the following sub-sections used for the research study.

3.2 Research Methods

The research is referring to make search for further new knowledge, according to Shyama Prasad Mukherjee that “Research is search for new knowledge or for new applications of existing knowledge or for both. Knowledge, here, connotes knowledge about different phenomena which take place (often repeatedly) in the environment or the economy and society – together constituting the perceptual world – or even in the conceptual world of human imagination or thought” (Mukherjee, 2020) . According to C.R.Kothari, research is an academic activity and as such the term should be used in a technical sense (C.R.Kothari, 1985), the research study are include define and re-define to the problems, work out for suggestions, collection the analysis data and

evaluation the survey data to testing and find out the data results for the study conclusions and determine the research data suit to the set up hypothesis. The systematic methods are concern to the research and the research is for discover for the answers to the question via the scientific procedures. The general research methods are normally defined to the research methods as quantitative, qualitative and mixed methods. The three general research methods are designed with difference frameworks by elements, processes and methods to achieve the research study' objectives. For this research, are the only quantitative method is employed for collect the survey data from the targeted respondents.

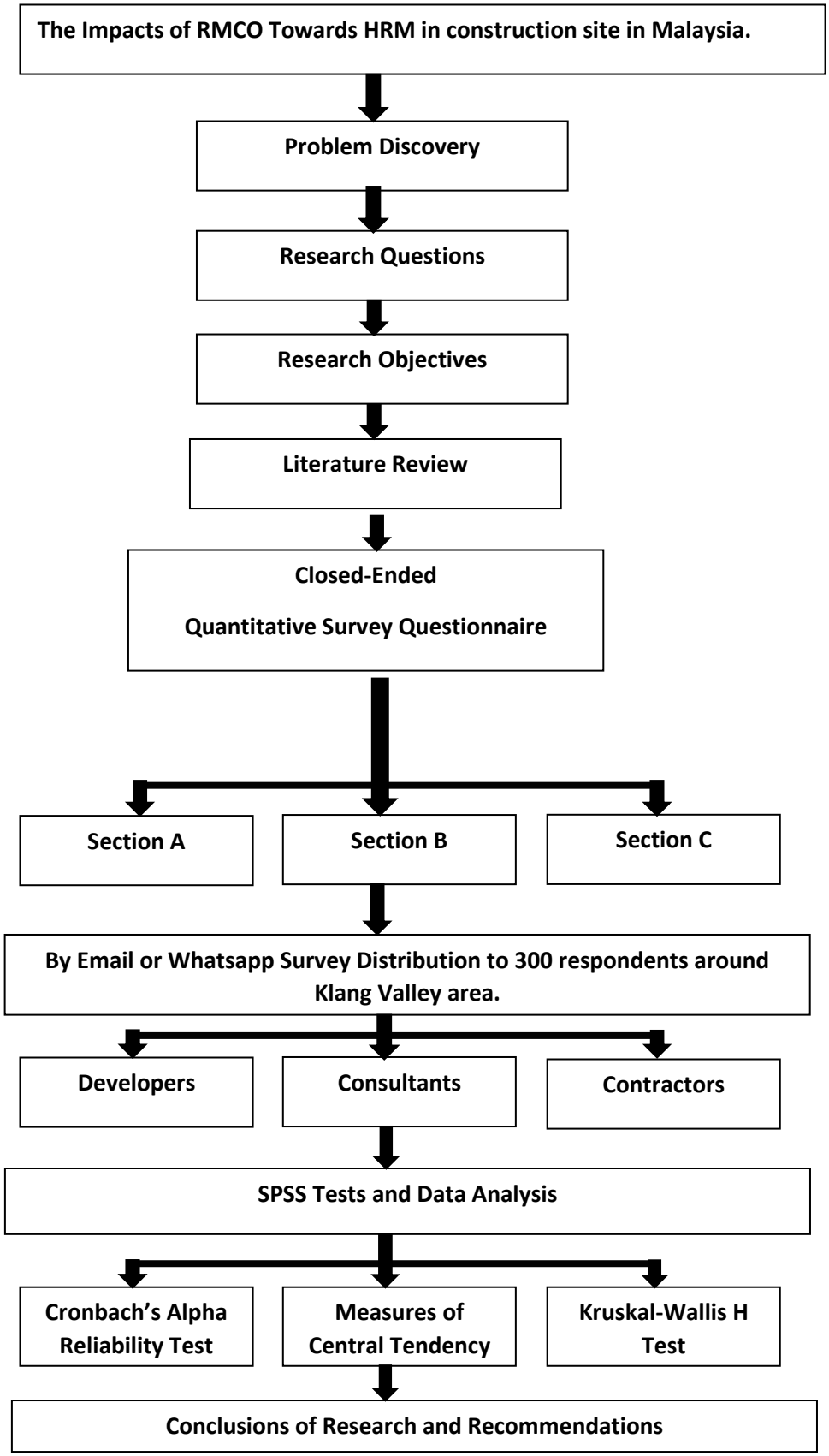

Figure 3.1 Flow of Research study

3.2.1 Quantitative Research

Quantitative research is defined to concerned with the phenomena related for the investigation with scientific and systematic method to gather, carrying out and measure quantifiable perceptions and opinion from the respondents, quantitative research method generally focuses on the gather series of numerical data as collected from differences group respondents. According to Aliga and Gnderson (2002:14), quantitative research is mean that by quantitative research as "explaining phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics)" (Tim Grant, Urszula Clark, Gertrud Reershemius, David Pollard, Sarah Hayes & Garry Plappert, 2017). The quantitative research are falls under the category of empirical studies, quantitative modes are including in experimental studies, quasi-experimental studies, pretest-postest designs, and others where to control the randomisation, variables, valid and reliable measures which requires from the sample to the population are the aim (Isadore Newman & Carolyn R.Benz, 1998).

3.2.2 Qualitative Research

Qualitative research is a method are those normally subsumed under heading ethnography, qualitative research is always design only on one subject, single case or one point to focus for research or investigation (Isadore Newman & Carolyn R.Benz, 1998) defined as non-quantitative types of analysis methods which for finding the quality of the particular phenomenon based on the feelings, wordings, sound or and other non-measurable or non-numerical elements. According to Steven D.Lapan, Marylynn T.Quartaroli (2012), qualitative research as contrasted with qualitative studies, places more emphasis on the study of phenomena from the perspective of insiders, qualitative research is aim for generalising findings which from critical theoretical view uses interpretive frameworks and refer to the kinds of tools used for collect data (Stephen D.Lapan & Marylynn T.Quartaroli, 2012).

3.3 Justification of Selection

For the objective of this research, for study the important of human resource management in construction site in Malaysia, to identify the impacts of RMCO towards human resource management in construction site in Malaysia and to outline potential strategies to reduce the impacts of RMCO towards human resource

management in construction site in Malaysia. Quantitative research method is applied for this research study to achieve the aim of the research study objectives. Quantitative research method using questionnaire are considered widely and prevalent to gain and collect the data for solicit the primary data compared to adopt qualitative research method which qualitative are only suitable for certain small sample cases study. Quantitative research method is collected data generally for series of numerical data and collected data via differences group of respondents via questionnaire survey. The questionnaire survey is used the survey research comprises with closed-ended questions, open-ended questions, matrix questions and contingency questions (R.Babble, 1983). For this research study, closed-ended questions method is adopting for the respondents feedback their opinions in the questionnaire provided. The quantitative research method applied for the research study, the results are tending to more reliable which the higher numbers of data are collected for analysis to determine and achieve the aim and objective of the research study. Refer to the figure below to understanding more on the differences between qualitative and quantitative methods in the steps following of methods.

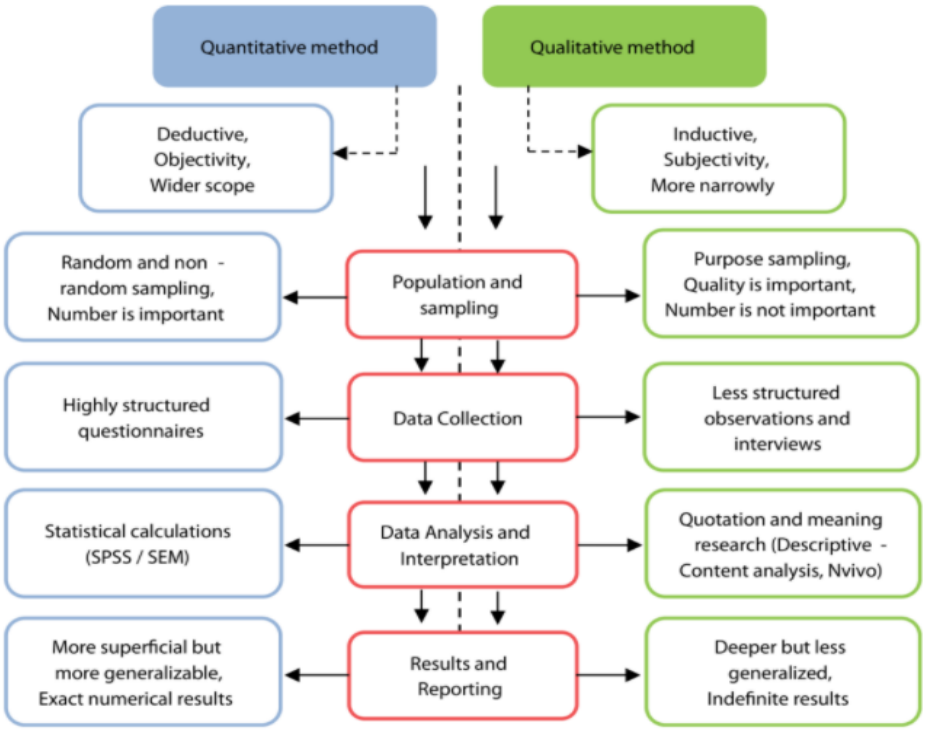

Figure 3.2 The differentiate of Quantitative method and Qualitative method. Source From: (Ivancevich, 2003)

3.4 Literature Review

According to Diana Ridley, the literature review is an activity which has many facets and it is not unusual to feel somewhat baffled when trying to work out exactly what is expected (Ridley, 2008). According to Arlene Fink, Literature review is a systematic, explicit and reproducible method for identifying, evaluating and synthesizing the existing body of completed and recorded work produced by researchers, scholars and practitioners (Fink, 2009). The reviewing of the relevant literature is a comprehensive process for summarise and refers those previous research study for specific research study. The literature review methods are defined for secondary data source for the research study and the data generally are refer and collected from books, journals, article in periodical, reports, website and others which contribution the secondary source of data help on to generate and assists the current research study. The literature review is for identify the significant hypothesis and support for the research study which need to identification for the research problems.

3.5 Questionnaire Design

For this research study, closed-ended type questionnaire survey is adopted. Closed-ended questionnaire survey consider as most widely and prevalent for data collection technique for solicit the primary data from large group of respondents from construction site in Malaysia to obtain and achieve the aim and objective for the research study. According to John Blair, Ronald F.Gzaja & Edward A.Blair, survey research is inherently interdisciplinary. Sampling and estimation have a theorical basic in probability theory and statistic (John Blair, Ronald F.Gzaja & Edward A.Blair, 2014)

Research study closed-ended type questionnaire shall distribute to the targeted group respondents via differences ways such email, mobile phone and among others to collect the respondents feedback data. Closed-ended questionnaire are exposed all participants to the same response categories and allow standardised quantitative analysis. According to Burke Johnson and Larry Christensen, the closed-ended questionnaire are focuses for getting the participants responses on a standardise form in which specific variables to measures and hypotheses are tested (Burke Johson & Larry Christensen, 2012).

For the questionnaire design, a well structures and split concept questionnaire design was applied, the optima splitting questionnaire by differences sections are allow the respondents burden and minimise the risks of data loss to identifying the research purpose aim and objectives. The questionnaire is split to four (4) section, section A are designed focused to demographic section which for demographic profile for the respondents, which includes nature of work company, roles in the organisation, work experience in the industry and types of construction project involved. Section B are designed focuses to the importance of human resource management in construction site in Malaysia which to identifying the human resources management in construction site in Malaysia with five (5) importance level which rating by 5-points of Likert scale, a rating 5 is very importance and 1 is not importance. Section C are designed focuses on impacts of RMCO towards human resources management in construction site in Malaysia which to identify the impacts of RMCO towards human resources management in construction site in Malaysia with sixteen (16) impacts which rating by 5-points of Likert scale, a rating of 5 is strongly agree and 1 is strongly disagree. Section D are designed focuses on the potential strategies to drive the impacts of RMCO towards human resources management in construction site in Malaysia which to identifying the most potential strategies promoting to the impacts of RMCO towards human resources management in construction site in Malaysia with seven (7) potential strategies which rating with 5-points Likert scale and a rating of 5 is very important and 1 is not important.

For the data collection, Google form is the most common and popular online survey channel and adopted Google form format is most suitable for this research study survey in terms of cost saving and time effective.

Code	Importance of HRM towards Construction Site in Malaysia	Very Importance	Importance	Moderately Importance	Slightly Importance	Not Importance
A01	Leadership development	□	□	□	□	□

Figure 3.3 Likert Scale 5-points answer

3.6 Sampling Determination

Sampling process is to ensure the research collect data from correct sample size for statistically sound results. The sampling determination shall consider the sample size variables on the population size, margin of error, confidence level and standard deviation. This research study required differences respondents formed from differences group of professionals whose involve in construction site in Malaysia. As the construction site are widely population in Malaysia and difficult for study the whole Malaysia construction site and thus the questionnaire survey is only conducted to portion selected of total selection which adopt the sampling method on statistical process (Academy, 2021), to identify the sufficient respondents are required for this research study to achieve accurate results.

For construction site with huge numbers of professionals, Cochran's Formula are applied for the sampling calculation for this research study. Cochran's formula is suitable for the large population especially for construction site which the population greater more than fifty thousand (50,000) for calculate a consummate sample size for a desired level accuracy and confidence level.

$$n = \frac{Z^2\ p(1-p)}{d^2} \qquad (3.1)$$

Equation 3.1 Cochran's Formula

Where, n = sample size

p = the estimated proportion of the population

d = confidence interval (Margin of error)

Z = z-value found in the Z table.

For the sampling size determination adopt Cochran's formula for this research study, we are assuming that half of the construction site professionals, this give a maximum of variability, so p = 0.5, and we want the confidence is 95% and at least 5% (plus minus) precision, a 95% confidence level are giving the Z values of 1.96 as per the normal tables. So, the calculation as shown

((1.96)2(0.5) (0.5)) / (0.5)2 =

(3.8416 x 0.25) / 0.0025

= 384.16

So, 385 respondents are needed.

The formula calculation shows a result of random sample of 385 construction professionals should enough to provide the confidence level as need for the research. With the limitation of time constraints, the research study survey are limited to the construction site located in Klang Valley area for the data collection.

3.7 Questionnaire Distribution

For the questionnaire distribution methods there could with difference's ways, the distribution methods usually using by internet, deliver by post, deliver by hand and others. The difference's methods shall affect the response rate and the effectiveness of data collection.

For this research study, the questionnaire is created via through the internet online Google Form and distribution the questionnaire via internet email and mobile phone application to the targeted respondents. The online Google Form questionnaire survey is convenient to the respondents as the respondents can response for the questionnaire on any time any place as just with the internet connection. The targeted duration for the data collection from the respondents is within 6 weeks' time.

3.8 Data Analysis

IBM Statistical Package for Social Science (SPSS) version 25 software and Microsoft Excel 2019 are adopted for conduct the statistical analysis those data collected from the questionnaire survey distributed. The IBM SPSS software adopted for analysis the data collected which the SPSS software is specific designated statistical software which with a range of built-in parametric and non-parametric tests for assist the researchers to resolving the research related analysis problem with widely range of tests methods with charts and ways of presented results for the data analysis and tabulated differences types of reports in basic function (Wikipedia, 2021).

For this research study, there are various of statistical analysis test is conduct in five (5) pronged data analysis framework, which namely as demographics of respondents, Cronbach's alpha reliability tests, mean value ranking, measure of central tendency and Kruskal-Wallis H test.

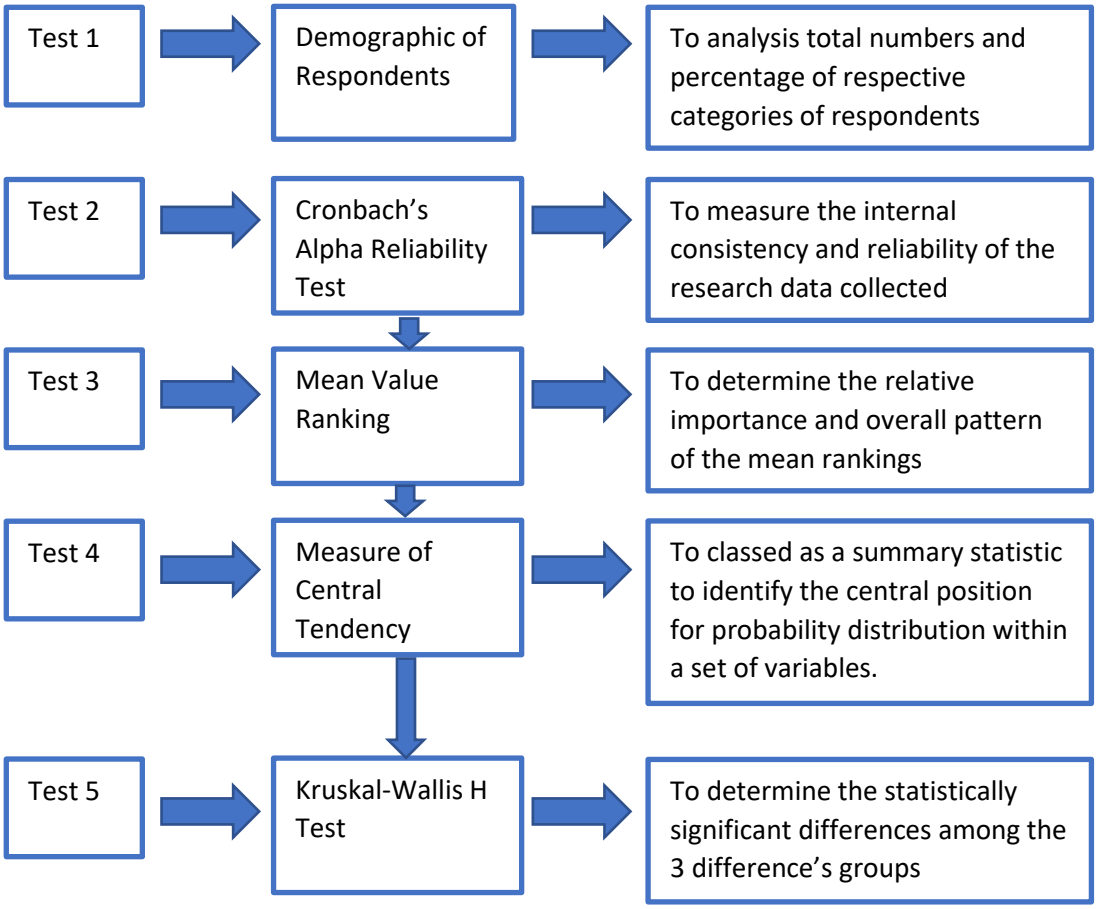

Figure 3.4 The Analysis Test for data collected

3.8.1 Demographics of Respondents

Respondents' demographic analysis is important to provide the background and characteristics of the survey respondents to more understanding on the total numbers and percentage of the following respective respondents categories in the questionnaire section A.

3.8.2 Cronbach's Alpha Reliability Test

Cronbach's alpha is a measure used for assess the reliability or internal consistency which is a set of scale (D.Nguyen, 2010). The test purpose is for analysis to minimise

the inevitable errors for the measurement and increase the quality of the test results. The formula of Cronbach's Alpha Reliability formula computed as shown:

$$\propto = \frac{kr^1}{(1+(k-1)r^1} \qquad (3.2)$$

Where,

K = Number of the responses

r^1 = Average correlation

$\propto$ = Cronbach's alpha

Equation 3.2 Cronbach's Formula

Table 3.1: Ranging Value of the Cronbach's Alpha Reliability Coefficient

Cronbach's Alpha Consistency	**Internal**
$\propto \geq 0.9$	Excellent
$0.9 \geq \propto \geq 0.8$	Good
$0.8 \geq \propto \geq 0.7$	Acceptable
$0.7 \geq \propto \geq 0.6$	Questionable
$0.6 \geq \propto \geq 0.5$	Poor
$0.5 \geq \propto$	Unacceptable

Source from (Nurul Fadly Habidin, Anis Fadzlin Mohd Zubir, Nursyazwani Mohd Fuzi & Azman M.N.A, 2015)

The value of the alpha generally are ranges from zero (0) to one (1) for provide degree of the reliability for the overall valuation. The Cronbach's Alpha Reliability Test is aim for survey the reliability level to of the respondents' dynamism for define the objective for the research study.

3.8.3 Mean Value Ranking

For the research study, mean ranking is defined as a summary statistic in order for rank the variables. Mean is a mathematical average and adopt for measure the central tendency of the data. Measure of the central tendency by a numerical value with three valid measures data of central tendency which the arithmetic mean, median and mode.

Mean is defined as a arithmetic average and usually adopting for explore the relationships of the differences variable and determine the mean values and the sum values for the data collected from the survey.

The standard formula for the central tendency calculation is shown below:

Mean. $\bar{X} = \bar{X}\frac{\sum x}{n}$ (3.3)

Where, $\bar{X}$ = The sample mean

$\sum x$ = Summation of each single x value

N = The sample size

Equation 3.3 Mean Value Ranking Formula

3.8.4 Kruska-Wallis H Test

Kruska-Wallis H Test adopt widely for non-parametric method for research study analysis testing for compare two or more independent samples to determine the test results are statistically significant differences a group of independent variables (i.e. developers, consultants and contractors). For this research study, the Kruskal-Wallis H Test with two hypotheses formulated for examine the significance perception differences among the various groups of professional respondents.

The formula for H-value calculation is shown below:

$$H = [\frac{12}{n(n+1)} \sum_{j=1}^{c} \frac{T_j^2}{n_j}] - 3(n+1) \qquad (3.4)$$

Where, n = The summation of all sample size

C = The number of samples

Tj = The sum of ranks in jth sample

Nj = The size of the jth sample

Equation 3. 4 H - Value Calculation Formula

3.9 Chapter Summary

In this research study, quantitative research method is using for operate and carry out the test and research data and the results are measurable statistically and explainable based on the statistical analysis. This chapter is described and explain on the formulation the questionnaire and the ways of collect the data from the differences groups respondents form conduct the survey. The questionnaire is designed into four (4) structures sections, there are demographic data, section B are designed focuses to the importance of human resource management in construction site in Malaysia which to identifying the human resources management in construction site in Malaysia with five (5) importance level which rating by 5-points of Likert scale, a rating 5 is very importance and 1 is not importance, section C are designed focuses on impacts of RMCO towards human resources management in construction site in Malaysia which to identify the impacts of RMCO towards human resources management in construction site in Malaysia with sixteen (16) impacts which rating by 5-points of Likert scale, a rating of 5 is strongly agree and 1 is strongly disagree, section D are designed focuses on the potential strategies to drive the impacts of RMCO towards human resources management in construction site in Malaysia which to identifying the most potential strategies promoting to the impacts of RMCO towards human resources management in construction site in Malaysia with seven (7) potential strategies which rating with 5-points Likert scale and a rating of 5 is very important and 1 is not important. The questionnaire survey will distribution to the targeted respondents via the Google Form and distribute via differences ways. The targeted respondents are 400 numbers in various groups of professional respondents which include from developers, consultants and contractors. The collected data will proceed the analysis wit SPSS software and Microsoft excel and analysis via the specific test as Cronbach's Alpha Reliability Test, Mean Value Ranking and Kruska-Wallis H Test.

CHAPTER 4

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter is to identify and interpreted the key factors and data analysis for reflected the results behind the impacts of RMCO towards human resource management in construction site in Malaysia.

In terms for the data analysis from the data collected, the statical analysis techniques from the previous chapter. The collected data for analysis is imperative for study carefully and proceed the data for analysis using the IBM Statistical Package for the Social Science (SPSS). The analysis data results are interpreted and to identify the aim and objective as highlighted in chapter 1.

4.2 Survey Response Analysis

To determine the sample size for analysis the collected data, the Cochran's formula is applied for the sampling analysis and calculation. Refers to the calculation which using the Cochran's formula, the size of 385 respondents is required to be collected and total of 500 sets of questionnaires are distributed to the targeted respondents in the related industries professionals via Google form format by email and others internet ways. 40 respondents are conducted for pilot test and completed for the pilot test which focus on the professionals around Klang Valley area on developer, consultants and contractors. The data collection period for the questionnaire data has been undergoes for timeframe as 4 weeks which from 20th February 2021 to 19th March 2021. There are 306 numbers of respondents was response for the questionnaire survey due to insufficient response rate by the respondents from the survey questionnaire. The table below shows the data received from the survey questionnaire.

Table 4.1: The Rate of Responses from the Questionnaire Survey

Respondent	**Total Distribution**	**Total Responses**
Developers	150	64
Consultants	150	94
Contractors	200	148
Total	**500**	**306**

4.3 Demographic Data of Respondents

This research study survey is targeted to the professionals from the construction site in Malaysia and focus on respondents from the developer, consultants and contractors.

Table 4.2: Respondent's Position of the 306 numbers Sample

Source	**Professional Position**	**n**	**%**
Developer /	Architect	25	8.2
Consultant /	Engineer	58	19.0
Contractor /	Quantity Surveyor	48	15.7
	Project / Construction Manager	53	17.3
	Surveyor	23	7.5
	Safety and Health Officer	31	10.1
.	Implementation Team	54	17.6
	HR Personal	14	4.6
Total		**306**	**100**

Table 4.3: Respondent's working experience in construction industry of the 306 numbers Sample

Source	**Experience years**	**n**	**%**
Developer /	Less than 5 years	55	18.0
Consultant /	6 – 10 years	64	21.0
Contractor /	11 – 15 years	56	18.4
	16 – 20 years	69	22.6
	More than 20 years	61	20.0
	Unknown	1	0
Total		**306**	**100**

Table 4.4: Respondent's construction project involved in construction industry of the 306 numbers Sample

Demographic Data	**Project Categories**	**n**	**%**
Types of projects	Residential buildings projects	110	36.1
	Non-residential building projects	46	15.1
	Mix development projects	82	26.9
	Infrastructure projects	33	10.8
	Social amenities	20	6.6
	Industries power projects	14	4.6
	Unknown	1	0
Total		**306**	**100**

4.4 Cronbach's Alpha Reliability Test

This research study survey is collected from 306 respondents in Malaysia's construction site and analysed by the SPSS software. According to the table 4.5, the internal consistency for the collected data shall verified to ensure the reliability of the research study analysis results and using the Cronbach's Alpha test for this research analysis purpose. The table 10 are shown the reliability statistic. According to the table 4.5 as shown, the Cronbach's alpha coefficient values for importance of HRM in construction in Malaysia is 0.992, which indicating excellent internal consistency; the factors for impacts of RMCO towards HRM in construction site in Malaysia and potential strategies to drive the impacts of RMCO towards HRM in construction site in Malaysia are 0.994 and 0.989 respectively which indicating high reliable and internal consistency.

Table 4.5: The Reliability Level of The Importance of HRM towards Construction Site in Malaysia

Cronbach's Alpha Reliability Statistics

Category / Variable	Number of Items	Cronbach's Alpha
Importance of HRM in Construction Site in Malaysia	6	0.993
Impacts of RMCO towards HRM in Construction Site in Malaysia	16	0.995
Potential Strategies to Drive The Impacts of RMCO towards HRM in Construction Site in Malaysia	7	0.990

4.5 Mean Value Ranking

Mean value ranking (or define as arithmetic means) is using for this research study to analysis and compute the mean values for rank the variables from the data collected

by the respondent's group via the questionnaire survey. The mean value for the factors to the importance of the HRM in construction site in Malaysia, the impacts of RMCO towards HRM in construction site in Malaysia and potential strategies to drive the impacts of RMCO towards in construction site in Malaysia are compute and ranked the value and standard deviation value which based on data from the targeted group of respondents. In the questionnaire, there are 6 indicators for the questionnaire section for importance of human resource management in construction site which ranked the respondents, 16 indicators for the section impacts of RMCO towards human resources management in construction site in Malaysia assessments and 7 indicators for the section of potential strategies to drive the impacts of RMCO towards HRM in construction site in Malaysia.

4.5.1 Mean Value Ranking of Importance of Human Resource Management in Construction Site

The analysis and compute the mean value for importance of human resource management in construction site is for analysis the ranking from 306 respondents via the targeted survey respondents which 64 respondents from developer, 94 of respondents from consultants and 148 of respondents from contractor.

Table 4.6: Mean Value Ranking of Importance of Human Resource Management in Construction Site

Ref	**Factors of Adoption**	**Overall (N=306)**		
		Mean	**SD**	**Ranking**
A01.	Leadership development	4.558	0.58797	1
A02.	Mentoring and coaching	4.4804	0.59059	4
A03.	Managing employee's relationship	4.3562	0.60645	6
A04.	Professional development	4.4085	0.59489	5
A05.	Performance management	4.4935	0.58530	3
A06.	Strategies management	4.5229	0.60690	2

4.5.2 Mean Value Ranking of Impacts of RMCO towards Human Resource Management in Construction Site in Malaysia

The analysis and compute the mean value for impacts of RMCO towards human resource management in construction site in Malaysia is for analysis the ranking from 306 respondents via the targeted survey respondents which 64 respondents from developer, 94 of respondents from consultants and 148 of respondents from contractor.

Table 4.7: Mean Value Ranking of Impacts of RMCO towards Human Resource Management in Construction Site in Malaysia

Ref	Factors of Adoption	Overall		(N=306)
		Mean	SD	Ranking
B01.	Local Authorities policies	4.4608	0.66290	2
B02.	Banned for Cross border	4.4248	0.60806	4
B03.	Limit of SOP	4.2614	0.63008	14
B04.	Enforcement of policies	4.2876	0.65460	13
B05.	Environmental Protection	4.3203	0.67899	9
B06.	Turnover of workforce	4.3529	0.66254	8
B07.	Work cultures	4.3693	0.65103	7
B08.	Create Job Opportunities	4.2516	0.91906	16
B09.	Unemployment Rate Increase	4.5229	0.62814	1
B10.	Expectations of the organization	4.3007	0.70674	12
B11.	Physical health hazards	4.4020	0.65677	6
B12.	Mental Health Hazards	4.4281	0.66510	3
B13.	Awards and Recognition	4.2614	0.80792	15
B14.	Technology Innovations	4.3203	0.73466	10

B15.	Defining Nature of Jobs	4.3007	0.74292	11
B16.	Organization's Strategies	4.4118	0.72001	5

4.5.3 Mean Value Ranking of potential strategies to drive the impacts of RMCO towards HRM in construction site in Malaysia

The analysis and compute the mean value for potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia is for analysis the ranking from 306 respondents via the targeted survey respondents which 64 respondents from developer, 94 of respondents from consultants and 148 of respondents from contractor.

Table 4.8: Mean Value Ranking of potential strategies to drive the impacts of RMCO towards HRM in construction site in Malaysia

Ref	**Factors of Adoption**	**Overall Mean**	**(N=306) SD**	**Ranking**
C01.	Human resource plan	4.5294	0.57896	1
C02.	Training doe safety and health to employees	4.4902	0.59636	2
C03.	Set up a clear communication	4.3725	0.57125	5
C04.	Backup plan for all level of human resources	4.3660	0.58114	6
C05.	Develop employees support solutions	4.4314	0.61420	4
C06.	Seek employees' feedback frequently	4.4444	0.63647	3
C07.	Reward and recognize employees	4.4673	0.64826	7

4.6 Kruskal-Wallis Test

Kruskal-Wallis Test is using for determine the statistically significant differences among the three respondents' groups to identify the factors behind the importance of human resource in construction, impacts of RMCO towards human resource management in construction site in Malaysia and potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia.

There are two null hypotheses, H_0 there are no significant differences in between the three respondents' groups; developer, consultants and contractors. H_1 there are significant differences in between the three respondents' groups; developer, consultants and contractors. For reference, the Chi-square table 4.9 is shown as below:

Table 4.9: Chi-square Table

Chi-square Table

Degree of Freedom	**P-value**			
	0.10	**0.05**	**0.025**	**0.01**
1	2.706	3.841	5.024	6.635
2	4.605	5.991	7.378	9.210
3	6.251	7.815	9.348	11.345
4	7.779	9.488	11.143	13.277
5	9.236	11.07	12.832	15.086
6	10.645	12.592	14.449	16.812

Source from: Plant and Soil Science eLibrary (eLibrary, 2021)

The alpha value for this research study is adopted as 0.05 with freedom degree as of 2 for the three groups of respondents. The null H_0 is rejected once the significance value is less than or equal to 0.05 which for the alternative 95% of confidence level (eLibrary, 2021). There are 3 differences groups of respondents, which are the developers, consultants and contractors to identify the significant differences, the critical chi-square table is computed by the p-value and degree of freedom. As the result, the null hypothesis H_0 and the H-value smaller than 5.991 is indicated and result that no significant difference among the three group of respondents. The alternative H_1 and

the H-value is greater than 5.991 which is indicated the significant differences among the three groups of respondents.

4.6.1 Kruskal-Wallis Test for impacts towards Human Resource Management Assessment Criteria

Kruskal-Wallis H Test and summaries in Table 4.10 and Table 4.11 which show the significant in the test for evaluating and identify the impacts towards human resource management assessment criteria and the mean rank with 306 respondents and categories by developer (group 1), n = 64, consultants (Group 2), n = 94 and contractors (group 3), n = 148.

Table 4.10: Results of Significant Differences through Kruskal-Wallis Test.

Kruskal-Wallis Test

Criteria		Chi-Square	Asymp.Sig.
Importance of human resource in construction site			
A01.	Leadership development	10.017	0.007*
A02.	Mentoring and coaching	12.024	0.002*
A03.	Managing employee's relationship	6.191	0.045*
A04.	Professional development	3.135	0.209
A05.	Performance management	1.364	0.506
A06.	Strategies management	4.551	0.103
Impacts of RMCO towards Human Resource Management in Construction Site in Malaysia			
B01.	Local Authorities policies	9.125	0.010*
B02.	Banned for Cross border	5.403	0.067
B03.	Limit of SOP	2.564	0.278

B04.	Enforcement of policies	4.303	0.116
B05.	Environmental Protection	3.870	0.144
B06.	Turnover of workforce	1.314	0.518
B07.	Work cultures	4.442	0.108
B08.	Create Job Opportunities	2.418	0.298
B09.	Unemployment Rate Increase	0.745	0.689
B10.	Expectations of the organization	0.793	0.673
B11.	Physical health hazards	1.865	0.394
B12.	Mental Health Hazards	7.530	0.023*
B13.	Awards and Recognition	1.124	0.570
B14.	Technology Innovations	1.971	0.373
B15.	Defining Nature of Jobs	6.960	0.031*
B16.	Organization’s Strategies	8.095	0.017*

Potential Strategies to Drive the Impacts of RMCO towards Human Resource Management in Construction Site in Malaysia

C01.	Human resource plan	18.837	0.000*
C02.	Training doe safety and health to employees	4.606	0.100
C03.	Set up a clear communication	6.726	0.035*
C04.	Backup plan for all level human resources	2.382	0.304
C05.	Develop employees support	12.027	0.002*
C06.	Seek employees’ feedback	11.926	0.003*

C07.	Reward and recognize employees	14.553	0.001*

Note: Symbol * are indicated there are significant perception difference on the level of 0.05 of significant.

According to Table 4.10 and Table 4.11 analysis by Kruskal-Wallis H Test and summaries, the 29 factors indicate above consist 11 factors is greater than the critical value 5.991 and 18 factors is below the critical value of 5.991. The 11 factors indicated there are significant difference among the three groups and 18 factors indicated there are no significant difference among the three groups.

Table 4.11 are computed the mean rank for these 29 factors and show the degree of significance among the three groups and three categories of respondents that are developer, consultant and contractor.

Table 4.11: Mean Rank of Significant Differences for the 29 factors among the group of Developer, Consultant and Contractor.

Factor		Group	n	Mean Rank
Importance of human resource in construction site				
A01.	Leadership development	Developer	64	126.84
		Consultant	94	161.46
		Contractor	148	159.98
A02.	Mentoring and coaching	Developer	64	131.06
		Consultant	94	174.02
		Contractor	148	150.33
A03.	Managing employee’s relationship	Developer	64	132.02
		Consultant	94	157.31
		Contractor	148	160.35

A04.	Professional development	Developer	64	138.37
		Consultant	94	155.33
		Contractor	148	158.86
A05.	Performance management	Developer	64	144.30
		Consultant	94	158.94
		Contractor	148	154.06
A06.	Strategies management	Developer	64	141.50
		Consultant	94	166.73
		Contractor	148	150.40

Impacts of RMCO towards Human Resource Management in Construction Site in Malaysia

B01.	Local Authorities policies	Developer	64	128.80
		Consultant	94	153.83
		Contractor	148	163.99
B02.	Banned for Cross border	Developer	64	133.94
		Consultant	94	154.56
		Contractor	148	161.24
B03.	Limit of SOP	Developer	64	139.77
		Consultant	94	159.12
		Contractor	148	155.89
B04.	Enforcement of policies	Developer	64	143.19
		Consultant	94	145.09
		Contractor	148	163.18
B05.	Environmental Protection	Developer	64	138.28
		Consultant	94	151.09
		Contractor	148	161.54

B06.	Turnover of workforce	Developer	64	144.98
		Consultant	94	159.77
		Contractor	148	153.24
B07.	Work cultures	Developer	64	138.44
		Consultant	94	165.48
		Contractor	148	152.49
B08.	Create Job Opportunities	Developer	64	145.07
		Consultant	94	163.91
		Contractor	148	150.62
B09.	Unemployment Rate Increase	Developer	64	148.34
		Consultant	94	151.02
		Contractor	148	157.27
B10.	Expectations of the organization	Developer	64	145.69
		Consultant	94	154.41
		Contractor	148	156.29
B11.	Physical health hazards	Developer	64	141.52
		Consultant	94	155.54
		Contractor	148	157.37
B12.	Mental Health Hazards	Developer	64	130.16
		Consultant	94	155.22
		Contractor	148	162.46
B13.	Awards and Recognition	Developer	64	144.31
		Consultant	94	157.92
		Contractor	148	154.68
B14.	Technology Innovations	Developer	64	143.19
		Consultant	94	150.95
		Contractor	148	159.92

B15.	Defining Nature of Jobs	Developer	64	131.78
		Consultant	94	152.32
		Contractor	148	163.57
B16.	Organization's Strategies	Developer	64	128.80
		Consultant	94	156.91
		Contractor	148	161.98

Potential Strategies to Drive the Impacts of RMCO towards Human Resource Management in Construction Site in Malaysia

C01.	Human resource plan	Developer	64	116.96
		Consultant	94	167.89
		Contractor	148	160.21
C02.	Training doe safety and health to employees	Developer	64	135.38
		Consultant	94	161.24
		Contractor	148	156.45
C03.	Set up a clear communication	Developer	64	132.39
		Consultant	94	164.62
		Contractor	148	155.63
C04.	Backup plan for all level human resources	Developer	64	144.92
		Consultant	94	148.24
		Contractor	148	160.47
C05.	Develop employees support	Developer	64	126.17
		Consultant	94	151.02
		Contractor	148	166.79
C06.	Seek employees' feedback	Developer	64	124.52
		Consultant	94	167.41
		Contractor	148	157.27

C07.	Reward and recognize employees	Developer	64	126.76
		Consultant	94	174.93
		Contractor	148	151.61

According to Table 4.11, the results also show the highest mean ranking and the lowest mean ranking. Refer to the analysis results, the group of consultant consists highest level factors on indicator item on "A01, A02, A05 and A06" and group of contractors consist highest level factors on indicator item on "A01, A2, A05 and A06" and group of contractors consist highest level factors on indicator item on "A03 and A04" which focus on importance of human resource management in construction site, where statically difference in factor A01, leadership development for importance of human resource management in construction site, (Kruskal-Wallis H Value = 10.017,asymptotic significance = 0.007), the factor A02, mentoring and coaching for importance of human resource management in construction site, (Kruskal-Wallis H Value = 12.024,asymptotic significance = 0.003), the factor A03, managing employees' relationship for importance of human resource management in construction site, (Kruskal-Wallis H Value = 6.191 asymptotic significance = 0.045).

The group of consultants consist highest level factors on indicator item on "B03, B06, B07, B08 and B13" and group of contractors consist highest level factors on indicator item on "B01, B02, B04, B05, B09, B10, B11, B12, B14, B15 and B16" which focus on impact of RMCO towards human resource management in construction site in Malaysia. The factor B01, local authorities' policies for impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 9.125 asymptotic significance = 0.010), The factor B12, mental health hazards for impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 7.530 asymptotic significance = 0.023). The factor B15, defining nature of jobs for impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 6.960 asymptotic significance = 0.031). The factor B16, organization's strategies for impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 8.095 asymptotic significance = 0.017).

The group of consultants consist highest level factors on indicator item on "C01, C02, C03, C06 and C07" and group of contractors consist highest level factors on indicator item on "C04 and C05" which focus on potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia. The factor C01, human resource plan for potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 18.837 asymptotic significance = 0.000), The factor C03, set up a clear communication for potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 6.726 asymptotic significance = 0.035), The factor C05, develop employees support solutions for potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia,

(Kruskal-Wallis H Value = 12.027 asymptotic significance = 0.002), The factor C06, seek employees' feedback freqently for potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 11.926 asymptotic significance = 0.003), The factor C07, reward and recognize employees for potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 14.553 asymptotic significance = 0.001)

4.7 Chapter Summary

This chapter are explored comprehensively for the impact of recovery movement control order towards human resource management in construction site in Malaysia discern with the three targeted respondents' groups which are the developer, consultants and contractors. Total 306 sets of questionnaire survey data received from the respondents and the collected data analysis using the SPSS software for compute the analysis data. The analysis results explained details into table form which easy for understanding the differences results for identify the research objective.

The first part of questionnaire was conducted focus on the respondent's profile background in terms of their professional position, projects field and working experience in the construction industries. This analysis processes for identify the demographic profile is for screening and ensure that the valid respondents from the differences category group of professionals which using the Cronbach's Alpha Test for analysis the data collected and identify the internal consistency and reliability.

Secondly, the questionnaire is split to another three-part using Likert scale questionnaire for collected the data. As total 306 respondents which 64 respondents from developer, 94 respondents from consultants and 148 respondents from contractors. There is total 29 factors were identified from the data collected from the respondents using mean value ranking and Kruskal-Wallis method to proceed for identify the factors to achieve the research objective.

CHAPTER 5

DISCUSSIONS

5.1 Introduction

This chapter is to reveal the discussion for the results obtained from the data analysis process and understanding for the impact of recovery movement control order towards human resource management in construction site in Malaysia. This chapter is focus on the importance of human resource management in construction site, impacts of RMCO towards human resource management in construction site in Malaysia and the potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia.

5.2 Demographic Data of Respondents

Table 4.2, table 4.3 and table 4.4 explained the demographic data for the 306 respondents from the survey which have define to the respondents' background on aspect of the nature of the work company, respondents work position in the organisation, work experience in the industries and project involved in their work company. The demographic data of the respondents are mainly targeted on three groups as developer, consultant and contractors all the professionals from construction industries. There are 64 respondents from developer groups, 94 from consultant groups and 148 respondents from contractor groups.

Table 5.1: Statistic of the Respondents from their Nature of Company

Nature of Company	**Position**								
	Arch.	**Eng.**	**Q.S**	**P.M**	**Survey.**	**S.H.O**	**Implem.T.**	**H.R**	**Total**
Developer	6	6	14	10	4	5	11	8	64
Consultant	15	37	11	6	5	9	9	2	94
Contractor	4	15	23	37	14	17	34	4	148
Grand Total:	**25**	**58**	**48**	**53**	**23**	**31**	**54**	**14**	**306**

Note:

Arch. = Architect

Eng. = Engineer

Q.S = Quantity Surveyor (or Contract Executive)

P.M = Project Manager

Survey. = Surveyor

S.H.O = Safety and Health Officer

Implem.T = Implementation team

H.R = Human resource officer

Based on Table 5.1, the total 306 respondents are from differences nature of company and position for their work background. The developer group respondent, the highest number of respondents are work as position with Quantity Surveyor (14) and the lowest number of respondents are work position as surveyor (4). For the consultant group, the highest number of respondents are work as position with engineer (37) and the lowest number are work with position as human resource officer (2). For the contractor group, the highest number of respondents are work as position with project

manager (37) and the lowest number are work with position as human resource officer (2) and architect (2). The respondents are mostly work in residential project which consists of 110 respondents shown from table 7. Thus, the most of construction professional's participant for the questionnaire survey are work in residential building project. The range of work experience for the respondent's response to the survey which group in work experience with 16 years to 20 years, it shows that the overall respondents consider is mature experience for the construction industries and help for the data collected are more accuracy. The mean ranking result shown that the overall factors and presented the each particular of the respondents for their selected data on the indicated factors.

5.3 Mean Ranking of Importance of Human Resource Management in Construction Site

Table 4.6 explained the mean value ranking among the factors behind the importance of human resource management in construction site. The factors which have 6 indicators and representative the agreement level of importance of human resource management in construction site. The higher mean value for the indicated factors is represented the respondents agree on the level of the selected criteria of the factors and consist of 6 factors for this part. The highest factors are the leadership development and the lowest is managing employees' relationship.

The first objective is achieved and successful perform by the analysis results as show:

1. Leadership development (mean = 4.5580, $\sigma = 0.58797$)
2. Mentoring and coaching (mean = 4.4804, $\sigma = 0.59059$)
3. Managing employee's relationship (mean = 4.3562, $\sigma = 0.60645$)
4. Professional development (mean = 4.4085, $\sigma = 0.59489$)
5. Performance management (mean = 4.4935, $\sigma = 0.58530$)
6. Strategies management (mean = 4.5229, $\sigma = 0.60690$)

The analysis data results show the data collected from the respondents are selected and voted for the "leadership development" is the highest factor for importance of human resource management in construction site. These results show and finding show

that leadership development play the most important key factor and the less importance factor is the managing employee's relationship for the first objective of research study.

5.4 Mean Value Ranking of Impacts of RMCO towards Human Resource Management in Construction Site in Malaysia

The analysis and compute the mean value for impacts of RMCO towards human resource management in construction site in Malaysia is for analysis the ranking from 306 respondents via the targeted survey respondents which 64 respondents from developer, 94 of respondents from consultants and 148 of respondents from contractor. Table 4.7 shown that the higher mean value for the indicated factors is represented the respondents agree on the level of the selected criteria of the factors and the survey consists of 16 factors for this part. The highest three factors are the unemployment rate increase, local authorities' policies and mental health hazards, for the three lowest are limit of SOP, awards and recognition and create job opportunities.

The second objective is achieved and successful perform by the analysis results as show:

1. Local authorities' policies (mean = 4.4608, σ = 0.66290)
2. Banned for cross border (mean = 4.4248, σ = 0.60806)
3. Limit of S.O.P (mean = 4.2614, σ = 0.63008)
4. Enforcement of policies (mean = 4.2876, σ = 0.65460)
5. Environment protection (mean = 4.3203, σ = 0.67899)
6. Turnover of workforce (mean = 4.3529, σ = 0.66254)
7. Work cultures (mean = 4.3693, σ = 0.65103)
8. Create job opportunities (mean = 4.2516, σ = 0.91906)
9. Unemployment rate increase (mean = 4.5229, σ = 0.62814)
10. Expectations of the organisation (mean = 4.3007, σ = 0.70674)
11. Physical health hazards (mean = 4.4020, σ = 0.65677)
12. Mental health hazards (mean = 4.4281, σ = 0.66510)
13. Awards and recognition (mean = 4.2614, σ = 0.80792)
14. Technology innovations (mean = 4.3203, σ = 0.73466)
15. Defining nature of jobs (mean = 4.3007, σ = 0.74292)
16. Organisation's strategies (mean = 4.4118, σ = 0.72001)

The analysis data results show the data collected from the respondents are selected and voted for the “unemployment rate increase” is the highest factor for impacts of RMCO towards human resource management in construction site in Malaysia. These results show and finding show that unemployment rate increase play the most important key factor and the less importance factor is the create job opportunities for the second objective of research study

5.5 Mean Value Ranking of potential strategies to drive the impacts of RMCO towards HRM in construction site in Malaysia

The analysis and compute the mean value for potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia is for analysis the ranking from 306 respondents via the targeted survey respondents which 64 respondents from developer, 94 of respondents from consultants and 148 of respondents from contractor. Table 4.8 shown that the higher mean value for the indicated factors is represented the respondents agree on the level of the selected criteria of the factors and this survey section consists of 7 factors and the highest factors human resource plan, for the lowest is backup plan for all level of human resource.

The third objective is achieved and successful perform by the analysis results as show:

1. Human resource plan (mean = 4.5294, σ = 0.57896)
2. Training and safety and health to employees (mean = 4.4902, σ = 0.59636)
3. Set up a clear communication (mean = 4.3725, σ = 0.57125)
4. Backup plan for all level of human resources (mean = 4.3660, σ = 0.58114)
5. Develop employees support solutions (mean = 4.4314, σ = 0.61420)
6. Seek employees’ feedback frequently (mean = 4.4444, σ = 0.63647)
7. Reward and recognise employees (mean = 4.4673, σ = 0.64826)

The analysis data results show the data collected from the respondents are selected and voted for the “human resource plan” is the highest for importance of human

resource management in construction site. These results show and finding show that human resource plan play the most important key factor and the less importance factor is the reward employees' feedback frequently for the third objective of research study

5.6 Kruskal-Wallis test

The Kruskal-Wallis Test is using for determine the statistically significant differences among the three respondents' groups to identify the factors behind the importance of human resource in construction, impacts of RMCO towards human resource management in construction site in Malaysia and potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia. According to Table 16, the results also show the highest mean ranking and the lowest mean ranking. Refer to the analysis results, the group of consultant consists highest level factors on indicator item on "A01, A02, A05 and A06" and group of contractors consist highest level factors on indicator item on "A01, A2, A05 and A06" and group of contractors consist highest level factors on indicator item on "A03 and A04" which focus on importance of human resource management in construction site. The group of consultants consist highest level factors on indicator item on "B03, B06, B07, B08 and B13" and group of contractors consist highest level factors on indicator item on "B01, B02, B04, B05, B09, B10, B11, B12, B14, B15 and B16" which focus on impact of RMCO towards human resource management in construction site in Malaysia. The group of consultants consist highest level factors on indicator item on "C01, C02, C03, C06 and C07" and group of contractors consist highest level factors on indicator item on "C04 and C05" which focus on potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia.

The results of Kruskal-Wallis H test as per analysis data are show that the there was a statically significant difference in pain score between the different among the importance of human resource in construction site, the impacts of RMCO towards huma resource management in construction site in Malaysia and the potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia.

Where statically difference in factor A01, leadership development for importance of human resource management in construction site, (Kruskal-Wallis H Value = 10.017,asymptotic significance = 0.007), the factor A02, mentoring and coaching for importance of human resource management in construction site, (Kruskal-Wallis H Value = 12.024,asymptotic significance = 0.003), the factor A03, managing employees' relationship for importance of human resource management in construction site, (Kruskal-Wallis H Value = 6.191 asymptotic significance = 0.045).

The factor B01, local authorities' policies for impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 9.125 asymptotic significance = 0.010), The factor B12, mental health hazards for impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 7.530 asymptotic significance = 0.023). The

factor B15, defining nature of jobs for impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 6.960 asymptotic significance = 0.031). The factor B16, organization's strategies for impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 8.095 asymptotic significance = 0.017).

The factor C01, human resource plan for potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 18.837 asymptotic significance = 0.000), The factor C03, set up a clear communication for potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 6.726 asymptotic significance = 0.035), The factor C05, develop employees support solutions for potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 12.027 asymptotic significance = 0.002), The factor C06, seek employees' feedback freqently for potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 11.926 asymptotic significance = 0.003), The factor C07, reward and recognize employees for potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia, (Kruskal-Wallis H Value = 14.553 asymptotic significance = 0.001)

5.7 Chapter Summary

This chapter are explored discussion and the results of analysis for the impact of recovery movement control order towards human resource management in construction site in Malaysia discern with the three targeted respondents' groups which are the developer, consultants and contractors. Total 306 sets of questionnaire survey data received from the respondents and the collected data analysis using the SPSS software for compute the analysis data. The analysis results explained details into table form which easy for understanding the differences results for identify the research objective.

For identify and to achieve the three objectives for the research, the importance of human resource in construction site, impacts of RMCO towards human resource management in construction site in Malaysia and potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia, great numbers of journals and previous research data and other web site data are referring and for identify for the three objectives. The first part of questionnaire was conducted focus on the respondent's profile background in terms of their professional position, projects field and working experience in the construction industries. This analysis processes for identify the demographic profile is for screening

and ensure that the valid respondents from the differences category group of professionals which using the Cronbach's Alpha Test for analysis the data collected and identify the internal consistency and reliability.

Secondly, the questionnaire is split to another three-part using Likert scale questionnaire for collected the data. As total 306 respondents which 64 respondents from developer, 94 respondents from consultants and 148 respondents from contractors. There is total 29 factors were identified from the data collected from the respondents using mean value ranking and Kruskal-Wallis method to proceed for identify the factors to achieve the research objective.

With the discussions, the analysis test result provide evidence for identify the factors for achieved the objective of research study. The analysis are adopting Cronbach's Alpha Reliability Test, Mean Value Ranking and Kruskal-Wallis Test for analysis the collected data from the respondents.

CHAPTER 6

CONCLUSIONS AND RECOMENDATIONS

6.1 Introduction

This final chapter is to reveal the discussion for the summary of obtained from the data analysis process and understanding for the impact of recovery movement control order towards human resource management in construction site. The summary in this chapter including the findings and explanation for all the research study approaches. This research study concludes that the impacts of RMCO towards human resource management in construction site in Malaysia. The collected survey data are from various ethnic background and different work groups and work experience for contribution to the research survey. This research study are proved that the impacts of RMCO towards human resource management are achieved the research objectives. The limitation for this research study was discuss and provide the recommendation for improve future research study.

6.2 Summary Chapters

For the Chapter 1, there are focus on introduce the topic's background for research study, problem statement, research aim, research objective, research methodology, research scope, significant of research and research gap. Chapter 1 is the generally focus to the introduction elements or the starting up topic for the research which to help the researcher understanding the general outline of the research objectives.

Chapter 2, focus on literature review which the source can refer to the journal, article, books, newspaper and others. Chapter 2 is outlining the fundamental of the research factors which for achieved the aim and objectives of the research study.

Chapter 3, focus on the methodology for research study which including the research methods, justification for selection, literature review, questionnaire design, sampling determination, questionnaire distribution and data analysis methods. This

chapter 3 focus more on the initial part for data analysis, especially for the questionnaire survey.

Chapter 4, focus on the data analysis adopting various method to identify the factors. The survey analysis including survey response analysis, demographic data of respondents, Cronbach's Alpha Reliability Test, Mean value ranking and Kruskal-Wallis Test.

The chapter 5, focus on the discussions and the result and the identified factors of the analysis.

The chapter 6, a final chapter for this research study. This chapter are focus on the summaries all the analysis data results, recommendation for the research which also include research limitations.

The summary for findings on each represents research objective are shown in the following sub-section

6.2.1 Objective 1, to identify the importance of the human resource management in construction site

In order for achieve the research objective 1, many of journals, articles, records, books and others written records by difference ways for identify the most significant factors of importance of the human resource management in construction site. The questionnaire survey is adopted the 5 points Likert scale methods for the three targeted various background of respondent groups which are developers, consultants and contractors. The analysis collected are adopted the Cronbach's Alpha Reliability Test, Mean Value Ranking and Kruskal-Wallis Test for identified the analysis results. The analysis results are shown the importance level and identified the 6 factors of the human resource management in construction site by collected by the 306 respondent's data.

6.2.2 Objective 2, to identify the impacts of RMCO towards human resource management in construction site in Malaysia.

In order for achieve the research objective 2, many of journals, articles, records, books and others written records by difference ways for identify the most significant factors of the impacts of RMCO towards human resource management in construction site in

Malaysia. The questionnaire survey is adopted the 5 points Likert scale methods for the three targeted various background of respondent groups which are developers, consultants and contractors. The analysis collected are adopted the Cronbach's Alpha Reliability Test, Mean Value Ranking and Kruskal-Wallis Test for identified the analysis results. The analysis results are shown the agreement level and identified the 16 factors of the human resource management in construction site by collected by the 306 respondent's data.

6.2.3 Objective 3, to identify the potential strategies to drive the impacts towards human resource management in construction site in Malaysia.

In order for achieve the research objective 3, many of journals, articles, records, books and others written records by difference ways for identify the most significant factors of the potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia. The questionnaire survey is adopted the 5 points Likert scale methods for the three targeted various background of respondent groups which are developers, consultants and contractors. The analysis collected are adopted the Cronbach's Alpha Reliability Test, Mean Value Ranking and Kruskal-Wallis Test for identified the analysis results. The analysis results are shown the agreement level and identified the 7 factors of the human resource management in construction site by collected by the 306 respondent's data.

6.3 Research Limitations

All researchers have own research limitations on the research study. However, finally the research study achieved the research aim and the research objective, but unpreventable numbers of the research limitations have been identified by this research. The research limitations are highlighted below,

a) Response rate – Total of 500 sets of questionnaires are distributed out for the targeted groups of respondents. 306 respondents are response the survey and successfully collected the data, a representing effective response rate as 61.20%.
b) Lack of valid targeted respondents – Each representative of construction site is limit with valid targeted respondents. The researcher is difficult to obtain the targeted respondents contact method for distribution the questionnaire survey.

c) Research methodology - Research approaches adopted for research study in Malaysia are not mature and strong, the research methodology will be affected by the respondent's attitude and others factors for them justify the answer of the questionnaire.

6.4 Research Recommendations

There are three research recommendation suggest for future. Firstly, a larger numbers of distribution rate for the questionnaire shall proposed. The larger numbers of distribution rate of the questionnaire will improve the response rate for the questionnaire survey. To obtain and collected more respondents survey data, directly affected the accuracy of the analysis data result.

Secondly, the targeted valid respondents shall obtain their contact ways at the pre-initial stage, allow the researchers obtain the contact method from targeted respondents for preparation the future may have many of uncertainty.

Third, the research methodology has to prepare and review before distribute to the targeted respondents. Selected the right time and make appointment for follow up the questionnaire survey distribution will minimise the risks of respondents affected by others factors such work environmental issues and thus also affected on the accuracy of the survey analysis.

6.5 Research Contributions

This research study mainly focusses on human resources management in construction site during RMCO. This research study identified those the factors and listed out the results which help on provide a knowledge for others understand the impact of RMCO towards human resource in construction site in Malaysia. This research study is for understand the importance value of human resource management in construction site, impacts of RMCO towards human resource management in construction site and the potential strategies to drive the impacts of RMCO towards human resource management in construction site in Malaysia.

6.6 Chapter Summary

This chapter was summarised all the findings from the survey and all the chapter. The analysis results were achieved the research objective and focus on the future research

recommendation, research limitations and research contributions. This chapter was concluded all the chapter findings and recommendation based on the analysis and finding.

For the research limitations, is very importance for future researchers proceed any research study. The limitations are shown the improvement of the process for the research study. The limitation for the research study has to proper discuss and planning to solve the limitation improve for future research study.

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APPENDICES

APPENDIX A: Questionnaire

Questionnaire Survey

CONSENT FORM FOR QUESTIONNAIRE SURVEY OF MEBH15109 PROJECT

THE IMPACT OF RECOVERY MOVEMENT CONTROL ORDER TOWARDS HUMAN RESOURCE MANAGEMENT

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Description

This questionnaire survey is being undertaken as part of Master of Project Management Program.

The purpose of this project is to enhance the impact of recovery movement control order towards human resource management in construction site Malaysia.

The research team requests your assistance due to your input are important to provide us with an understanding of the industry practice and key strategies for future development of project management.

Participation

Your participation for this questionnaire is voluntary. If you rejected for participate the questionnaire survey, you are able to withdraw from the participation of the questionnaire on any time without any fine or penalty. Your decision for participate this questionnaire survey are no any impact upon participants on current or future status with UTAR.

Your participation for this questionnaire by an online questionnaire survey for approximately 15 – 30 minutes.

Confidentially

All respondents' responses and comments are unnamed by treated confidentially. The respondents' personal name are not required provide in any of the questionnaire form.

Question / Further information about the project

If you need any clarification or further information for the questionnaire survey, you are pleased to contact the researcher team members.

Section A: Demographic Section

Please tick (√) in the appropriate box.

1. What is the nature of your company?
    - Developer
    - Consultant
    - Contractor
2. What is your position in the organization?
    - Architect
    - Engineer (Civil or Mechanical & Electrical)
    - Quantity surveyor
    - Project / Construction Manager (including assistant manager)
    - Surveyor
    - Safety and Health officer
    - Implementation Team (Project engineer, clerk of work, supervisor)
    - HR Personal
3. How long you have been working in the construction industry?
    - Less than 5 years
    - 6 – 10 years
    - 11 to 15 years
    - 16 – 20 years
    - More than 20 years
4. What are the types of construction project that your company involved in?
    - Residential buildings projects (Landed houses, Apartment, Condominium etc.)
    - Non-Residential buildings projects (Office, Hotel, Commercial buildings, Mall etc.)
    - Mix developments projects
    - Infrastructure projects (Road, Bridge, Stormwater works, Water supply, Sewerage, Airport etc.)
    - Social amenities projects (Hospital, School, Sport center etc.)
    - Industries power projects (Power plant, Factories etc.)

Section B – Importance of Human Resource in Construction Site

The following are showing a list of **Importance** which towards of HRM in construction site in Malaysia.

Based on your professional experience, please rate and indicate the level of importance (or not importance) of each difference impacts below on the scale by **Importance** by each of the statements.

5 = Very Importance, 4 = Importance, 3 = Moderately Importance, 2 = Slightly Importance, 1 = Not Importance

Code	Importance of HRM towards Construction Site in Malaysia	Very Importance	Importance	Moderately Importance	Slightly Importance	Not Importan
A01	Leadership development	□	□	□	□	□
A02	Mentoring and coaching	□	□	□	□	①
A03	Managing employee's relationship	□	□	□	□	①
A04	Professional development	□	□	□	□	①
A05	Performance Management	□	□	□	□	①
A06	Strategies Management	□	□	□	□	①

Section C: Impacts of RMCO towards Human Resources Management in Construction Management in Construction Site in Malaysia Assessments

The following shows a list of impacts of RMCO which towards human resource management in construction management in construction site in Malaysia assessments.

Based on your professional experience, please rate and indicate the level of agreement (or disagreement) of each difference impacts below on the scale by **Agreement** by each of the statements.

5 = Strongly Agree, 4 = Agree, 3 = Neither Agree nor Disagree,

2 = Disagree, 1 = Strongly Disagree

Code	Impacts of RMCO Affected HRM in Construction Site in Malaysia	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
	A. Impacts of RMCO towards HRM Construction Site in Malaysia					
B01	Local Authorities policies	□	□	□	②	①
B02	Banned for Cross border	□	□	□	②	①
B03	Limit of SOP	□	□	□	②	①
B04	Enforcement of policies	□	□	□	②	①
B05	Environmental Protection	□	□	□	②	①
B06	Turnover of workforce	□	□	□	②	①
B07	Work cultures	□	□	□	②	①
B08	Create Job Opportunities	□	□	□	②	①
B09	Unemployment Rate Increase	□	□	□	②	①
B10	Expectations of the organization	□	□	□	②	①
B11	Physical health hazards	□	□	□	②	①
B12	Mental Health Hazards	□	□	□	②	①
B13	Awards and Recognition	□	□	□	②	①
B14	Technology Innovations	□	□	□	②	①
B15	Defining Nature of Jobs	□	□	□	②	①
B16	Organization's Strategies	□	□	□	②	①

Section D – Potential strategies to drive the impacts of RMCO towards HRM in construction site in Malaysia.

The following are showing a list of **Potential Strategies** which in promoting to the impacts of RMCO towards HRM in construction site in Malaysia assessments.
Based on your professional experience, please rate and indicate the level of importance (or not important) of each difference impacts below on the scale by **Important** by each of the statements.
5 = Very Important, 4 = Important, 3 = Moderately Important, 2 = Slightly Important,

1 = Not Important

Code	Strategies for Adoption	Very Important	Important	Moderately Important	Slightly Important	Not Important
C01	Human resource plan	□	□	□	□	□
C02	Training doe safety and health to employees	□	□	□	□	□
C03	Set up a clear communication	□	□	□	□	□
C04	Backup plan for all level of human resources	□	□	□	□	□
C05	Develop employees support solutions	□	□	□	□	□
C06	Seek employees' feedback frequently	□	□	□	□	□
C07	Reward and recognize employees	□	□	□	□	□

Thank you for completing this questionnaire!

Your time is greatly appreciated.