



What factor(s) affect employee engagement of different generations in the manufacturing industry in South China

A Dissertation submitted for the

Master of Business Administration (MBA) 2020

University of Wales Trinity Saint David

Submitted: 8th October 2020

Student Name: KWOK Man Kam, Ken

Student Number: 1812206

Supervisor: Dr. Ho, Leo

Declaration/Statements page

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.



Signed (candidate)

Date 8th October 2020.....

STATEMENT 1

This work is the result of my investigations, except where otherwise stated.

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.



Signed (candidate)

Date 8th October 2020.....

Acknowledgments

My journey on acquiring Master of Business Administration is about to come to an end. Across the whole study of two years, I have been fortunate enough to receive all kind of assistance from many people in both studying and daily living.

First and foremost, I would like to express millions of thanks to my thesis supervisor Dr. HO, Leo Leo, who, with great patience, had provided significant support and motivation along the path of completing this thesis. Dr. HO, Leo's continuous yet professional guidance had helped me a lot in solving variety of arising issues along the way for which I can successfully complete the thesis as what I originally expected and intended. Apart from the academic aspect, Dr. HO, Leo made me mentally prepared for this thesis with his meticulous care and thoughtfulness, and his kindness and warmth are deeply appreciated.

Secondly, I would like to express great appreciation to all the working staff at the university for their limitless help, especially the lecturers who are parts of the MBA course. They spent time and efforts to deliver as many useful professional knowledge and skills as possible to me and other students, which will eventually endow us the advantages that benefits our lives in near future.

Last but not least, I would like to especially thank my family and fellow friends and classmates, whom I have received significant support and encouragement from. Along the path of completing this thesis, their assistance had been the reason that I can successfully complete my graduation thesis.

Abstract

This research paper discussed the factors that would be affected by the employee engagement of different generations in the manufacturing industry in South China. The purpose of conducting this research is to understand how important employee engagement in the manufacturing industry in South China, the lower the level of employee engagement would affect the efficiency, productivity, and quality of the products of the companies in the industry. This research aims to indicate the factors which are affecting the employee engagements of the companies and help the companies in the industry to design a more suitable employees' remuneration packages or improve the working environment to attract or retain the good and effective employees. In South China's manufacturing industry, a research report done by The Society for Human Resource Management (Shrm.org, 2019) indicated that human resources were facing a challenge to recruit and retain productive and quality talents. Moreover, A research published by Lapoint and Liprie-Spence (2017), they have suggested that different generations have different views and action when it came to employee engagement. Therefore, this research is to figure out which are the majority factors in different generation groups, which could enhance a better understanding of the different concerns for each generation group, and to determine the best way to relieve the high turnover rate and retain the talented.

In this research, the author used the quantitative method to collect the supporting evidence for the result, 475 samples survey had collected and provided a useful result to indicate the relationships among the different generations and their contribution level to employee engagement. In the final result, it has indicated which factor(s) would have a significant relationship in the consideration of the employee when they are practicing their engagement to their workplace, the findings determined communication, work environment, leadership, compensation, and organisation policies are having a significant relationship to the different generations' engagement to their

companies. The employee engagement of age group of below 20 would be affected by the work environment, leadership, compensation, and organization policies; Age group 21-30 would be affected by organisation policies; Age group of 31-40 would be affected by communication; Age group of 41-50 would be affected by organisation policies. The results have important insights into the manufacturing industry in South China as a reference to design a better -and effective package or strategy for enhancing the employees' engagement from different generations.

Keyword: Employee engagement, Generation, Manufacturing industry, Work environment, Compensation, Workplace well-being

Table of Contents

FRONT PAGE	I
DECLARATION	II
ACKNOWLEDGMENTS	III
ABSTRACT	IV
LIST OF TABLES	IX
LIST OF FIGURES.....	XI
CHAPTER 1: INTRODUCTION	1
1.1 Introduction	1
1.2 Research Background.....	2
1.3 Research Rationale.....	4
1.4 Aim and Objectives of the Research	4
1.5 Structure overview	6
1.6 Section Conclusion.....	7
CHAPTER 2 – LITERATURE REVIEW	8
2.1 Definition	8
2.1.1 Definition of different generation	8
2.1.2 Definition of Employee Engagement and Employee Engagement Index.....	9
2.2 The relationship between different factors, generation and employee engagement	11
2.3 Research Hypothesis and Theoretical Model.....	15
2.3.1 Influence of working environment on employee engagement.	16
2.3.2 Influence of leadership on employee engagement.	16
2.3.3 Influence of team and co-worker on employee engagement.....	17
2.3.4 Influence of training and career development on employee engagement.	18

2.3.5 Influence of compensation on employee engagement.	18
2.3.6 Influence of organizational policies on employee engagement.	19
2.3.7 Influence of workplace well-being on employee engagement.	20
2.3.8 Influence of communication on employee engagement.	21
2.3.9 Influence of work life balance on employee engagement.	21
2.4 Conclusion.....	22
CHAPTER 3 – RESEARCH METHODOLOGY	23
3.1 Introduction	23
3.2 Research aims and objectives.....	23
3.3 Research Approach	24
3.4 Research Methods	24
3.4.1 Primary and Secondary Research.....	24
3.4.2 Quantitative and Qualitative Research.....	25
3.5 Research Design.....	26
3.5.1 Sampling and sample size	26
3.5.2 Questionnaire design/Measurement of variables	26
3.5.3 Piloting the Questionnaire/Pilot Test	27
3.5.4 Data analysis	28
3.6 Limitations of the research.....	28
3.7 Conclusion.....	29
CHAPTER 4 – DATA COLLECTION AND ANALYSIS.....	30
4.1 Backgrounds of the respondents	30
4.1.1 Gender of the respondents.....	30
4.1.2 Age of the respondents.....	31
4.1.3 Marital Status of the respondents	31
4.1.4 The number of kids of the respondents	32
4.1.5 Education level of the respondents.....	32

4.1.6 Interval and ratio variable	33
4.1.7 Cross-tabulation	35
4.2 Inferential Statistics.....	46
4.2.1 Reliability Analysis	46
4.2.2 Correlation test	47
4.2.3 Regression Analysis	54
4.3 Section conclusion.....	71
CHAPTER 5 – CONCLUSIONS AND RECOMMENDATIONS	72
5.1 Discussion	72
5.1.1 Demographics.....	72
5.1.2 Descriptive statistics of the different factors.....	72
5.1.3 Inferential statistics of the satisfactory of different factors.....	73
5.2 Recommendation.....	76
5.3 Conclusion.....	77
REFERENCES	78
APPENDIX A – QUESTIONNAIRE.....	85
APPENDIX B – PILOT TEST	90
APPENDIX C – RESEARCH PROPOSAL	91
APPENDIX D – ETHICS FORM.....	101

List of Tables

Table 1 - Basic formation of employee engagement	33
Table 2 - Questions related to the basic formation elements	33
Table 3 - Descriptive statistics of different factors	34
Table 4 – Descriptive statistics of the satisfactory level of different factors	34
Table 5 – Descriptive statistics of employee engagement	34
Table 6 – Top 3 important factors to different generation	42
Table 7 - Reliability analysis of question 19.1-19.9	47
Table 8 – Correlation coefficient interpretation level	48
Table 9 – Correlation level of different factors among different age groups.....	48
Table 10 – Correlation of different factors and engagement level (below 20)	49
Table 11 - Correlation of different factors and engagement level (21 to 30).....	50
Table 12 - Correlation of different factors and engagement level (31 to 40)	51
Table 13 - Correlation of different factors and engagement level (41 to 50)	52
Table 14 - Correlation of different factors and engagement level (51 to 60)	53
Table 15 – Different factors effects on the age groups	54
Table 16 - Regression analysis of the employee engagement (below 20: first round)	55
Table 17 - Regression analysis of the employee engagement (below 20: final round)	56
Table 18 - Regression analysis of the employee engagement (21 to 30: first round).....	58
Table 19 - Regression analysis of the employee engagement (21 to 30: final round).....	59
Table 20 - Regression analysis of the employee engagement (31 to 40: first round).....	61

Table 21 - Regression analysis of the employee engagement (31 to 40: final round)	62
Table 22 - Regression analysis of the employee engagement (41 to 50: first round)	64
Table 23 - Regression analysis of the employee engagement (41 to 50: final round)	66
Table 24 - Regression analysis of the employee engagement (51 to 60: first round)	67
Table 25 - Regression analysis of the employee engagement (51 to 60: final round)	69
Table 26 – Comparison of the standardized coefficients	70
Table 27 – Results of the hypothesizes	70
Table 28 – Different factors effects on the age groups	74

List of Figures

Figure 1 Factors toward employee engagement	15
Figure 2 Gender of the respondents.....	30
Figure 3 Age of the respondents	31
Figure 4 Martial status of the respondents.....	31
Figure 5 The number of kids of the respondents	32
Figure 6 Education level of the respondents.....	32
Figure 8 Training and career development	35
Figure 9 Compensation.....	36
Figure 10 Working environment.....	36
Figure 11 Organisation policies	37
Figure 12 Work-life balance	38
Figure 13 Team and co-worker	38
Figure 14 Workplace well-being.....	39
Figure 15 Engagement level	40
Figure 16 Leadership	41
Figure 17 Communication	41
Figure 18 Satisfactory level of the top 3 important factors- below 20	43
Figure 19 Satisfactory level of the top 3 important factors- 21 to 30.....	43
Figure 20 Satisfactory level of the top 3 important factors- 31 to 40.....	44
Figure 21 Satisfactory level of the top 3 important factors - 41 to 50.....	45

Figure 22 Satisfactory level of the top 3 important factors - 51 to 60	46
Figure 23 Result of the research model	70

Chapter 1: Introduction

1.1 Introduction

Employee engagement has been gaining importance in recent years. In this research paper, a comparison would be conducted between the majority factors that be affected the employee engagement between the different generation groups. In the previous studies and literature, several theories have been proposed to explain there are different factors would affect the employee engagement, which the employee engagement has a great influence on the companies' performance and profitability.

For example, the top ten workplace aspects affecting employee engagement are identified in the renowned Towers Perrin Talent Report (2003). In the report, Perrin (2003) ranked senior management's interest in employees' well-being, challenging work, and decision-making authority as the top three employee engagement drivers. In other reports, it was found that communication between employees as well as management is the leading factor that results in employee engagement (CIPD, 2007). Besides, the Institute of Employment Studies (Robinson, Perryman & Hayday, 2004) emphasised that the main driver of employee engagement is a sense of feeling valued and involved, which can be reflected by employees' involvement in decision making, their feeling of being able to raise their opinion or ideas, their opportunities to gain development on their jobs, as well as the extent to which their employers are concerned for their health and well-being.

However, the previous studies did not cover enough topics with the consideration of different generations, which means different generation groups are having their considerations or concerns about the factors that might affect their employee engagement for the companies. The objective of this paper is to propose the relationship between the different generation groups and employee

engagement, to figure out the best alternative to enhance the employee engagement of the company by providing an appropriate approach to each generation groups.

1.2 Research Background

In 1990, employee engagement has formally defined by William Kahn (1990) as “The harnessing of organization members’ selves to their work roles to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performance.” After 3 years, employee engagement was described in the academic literature by Schmidt et al. (1993), which was “An employee's involvement with, commitment to, and satisfaction with work. Employee engagement is a part of employee retention.” In 1997, a meta-analysis was conducted by Harter et al. (2006), to find out the true relationship between employee engagement and business performance in different areas. In a later time, a world-widely meta-analysis was conducted and constantly updated in over 190 organizations by the same group of experts, to express the importance of employee engagement in the business.

Employee engagement (Kruse, 2012) is important to the company's productivity and competitiveness. This is the reason why companies focus on the employee experience, treat the employee as a guest, optimize the company's management procedures and the process of handling things, let employees feel that their work environment keeps pace with the times, and the humanized experience is also one of the factors they consider.

Due to the rapid development of the manufacturing industry (Levinson 2018) in South China (Baik.baidu.com, 2019) the demand for talent has increased (Mason and Sardone, 2019), therefore, companies will use different approaches, retaining talents and attracting more talents, produce greater productivity and competitiveness for the company. With the development of China’s economy, the development of the manufacturing industry in the South China areas being

rapid and fast, according to the statistic, in July 2020, China's Manufacturing Production Index (Tradingeconomics.com, 2020) has an increase with 5.8%, compared with 5.1% in June 2020 and the market expectation of 4.9%, the result in July 2020 has been over the market expectation. In the past, the company's welfare and support for employees became the main consideration for employees' engagement. However, due to the improvement of the overall education level and the increasing concern on satisfaction from the work of employees, their requirements for the sense of satisfaction brought by the work increased, and the welfare and support for employees were no longer the main consideration. According to the Global Talent Trends Study: Connectivity in the Human Age in 2019 (Mercer, 2019), even though companies are offering new and diversified incentives, better technology to improving employees' well-being, still a third of satisfied employers are considering quitting.

According to Stats.gov.cn (2019), China's 2019 GDP is 99.08 trillion. Although total South China contributed GDP is 12.246 trillion, ranked the third GDP, but Guangdong province contributed 9.727 trillion about 10.8% of total GDP, ranked the first province in China. Also, the Guangdong province is the earliest province in which a lot of Hong Kong and Taiwan SMEs started manufacturing business. So we selected South China for this research. Also, as there are not consistent findings with the employee engagement factors, therefore, this research conducts as to explore further.

The purpose of this research is to explore finding and study the factors that affect employee engagement, whether the company's employee experience can enhance employee engagement, and the considerations of different age groups, and compare the ideas of employees of different ages to how the company brings them the experience. The results of the research can help the company develop different employee experience programs for employees of different ages, improve

employee engagement, retain and attract talents, and increase productivity and competitiveness for the company.

1.3 Research Rationale

In South China, due to the rapid development of the manufacturing industry, the needs of talented in the manufacturing industry have been increasing through these years, and employee engagement has been proved that is the main factor which could affect the companies' performance and productivity.

Therefore, in this research paper, the researcher would focus on how the different factors that might affect the employee engagement, and the different generations were taken into consideration as a major influence of the employee engagement, to find out what are the majorities in different generations. Upon completing this research paper, the outcomes might help companies' decision-makers and management to potentially enhance employees' engagement between different generations across the companies, to improve performance and productivity.

1.4 Aim and Objectives of the Research

Employee engagement is an important factor in the company's productivity and competitiveness. Employees' sense of responsibility and quality of work are among the important factors that determine the quality of a company's products and services. According to the research done by Csr.mit.edu (2017), the potential business impact of the employee experience is also great. By studying the behaviour and concerns of employees, we understand what factors would be the consideration for the company's employees to contribute their employee engagement. According to previous research by Chandani et al. (2016), Pandita and Bedarkar (2015) suggested in their research in 2015, and Memon's research in 2018 (Memon et al., 2018), they suggested that there are different factors would directly affect the employee engagement. Besides, according to the

research published by Lapoint and Liprie-Spence in 2017 (Lapoint and Liprie-Spence, 2017), they have suggested that different generations have different views and action when it came to employee engagement. Therefore, the study will investigate:

1. The composition of employees' engagement with the company
2. The considerations of employees of different ages for employee engagement
3. Factors relationship to employee engagement
 - 3.1 Work environment has a significant relationship with employee engagement?
 - 3.2 Leadership has a significant relationship with employee engagement?
 - 3.3 Team and co-worker have a significant relationship with employee engagement?
 - 3.4 Training and career development have a significant relationship with employee engagement?
 - 3.5 Compensation has a significant relationship with employee engagement?
 - 3.6 Organization policies has a significant relationship with employee engagement?
 - 3.7 Workplace well-being has a significant relationship with employee engagement?
 - 3.8 Communication has a significant relationship with employee engagement?
 - 3.9 Work life balance has a significant relationship with employee engagement?

The contribution of this research will be based on a systematic analysis of what factors will affect employee engagement. This will constitute a company's way of designing employee experiences for different age groups and increasing their engagement. To retain the company's talents in this highly competitive market and improve their engagement.

1.5 Structure overview

To carry on a better study work, there has a simple overview of the main chapters that the researcher would mention in this dissertation according to the rational order of implementing study target.

In chapter 2, based on the background information in this chapter, chapter 2 would be a literature overview to discuss the relevant studies and researches on the relationship between employee engagement and businesses' performance, and the importance of employee engagement in talent retention. Also, the studies and researches on different factors that would affect employee engagement will be discussed. The literature overview of the previous studies and researches is to provide theoretical support for achieving the dissertation's study objective.

Chapter 3 will mainly focus on the methodology of this dissertation based on the literature overview and provide guidelines and instruction on the specific study and analysis through the examples and methods introduced in this chapter.

Chapter 4 will focus on the analysis of the collected data and transmit the primary data into tables and graphs by using the SPSS program, to determine what factors would be the main consideration of different generations according to their demographic backgrounds.

Chapter 5 will focus on the analysis for a further discussion and the recommendation would be discussed based on the results the researcher obtained from Chapter 4.

1.6 Section Conclusion

In this chapter, the researcher explores the development of industry in southern China, the increasing demand for talent in the industry, and the changing emphasis on employee engagement for talent. Besides, this chapter explores the history of employee engagement and the importance companies attach to it, as well as the different factors that can affect employee engagement. Based on this chapter, the researcher has determined the research problem, reason, and aim for this dissertation. In the next chapter, the researcher would identify the factors for affecting employee engagement and the concept of employee engagement in the business, to find out the relationship between the employee engagement and business.

Chapter 2 – Literature Review

Introduction

Based on the previous literature, this chapter summarizes the theories of employee engagement and different factors and makes a literature review. Firstly, this chapter describes the background and characteristics of employee engagement, as well as the relationship and background between different factors and employee engagement. Secondly, this chapter also studies the related concepts of employee engagement and different causes, which focuses on the factors that affect employee engagement, such as management mode and work environment, and the influence of age factors on employee engagement. Lastly, this chapter will select appropriate theories as research hypotheses based on the issues studied and discussed in this paper, establish the theoretical models, and discuss the influence of different factors and age groups on employee engagement.

2.1 Definition

2.1.1 Definition of different generation

A generation difference or known as generation gap (Ramana, 1992) is the different opinions and considerations between one generation and another regarding beliefs, politics, or values. The sociological theory of a generation gap first came to light in the 1960s (Ramana, 1992), when the younger generation (later known as Baby Boomers) seemed to go against everything their parents had previously believed in terms of music, values, governmental and political views. Sociologists now refer to "generation gap" as "institutional age segregation". Generation gap refers to the difference of opinions between two generations. To express it more specifically, the generation gap can be used to describe the differences in political, values and other issues between the younger generation and the older members in their actions, beliefs and tastes. Although the generation gap

is common in all historical periods, it has widened in the 20th and 21st centuries. In the business world now, the generations mainly divided into 4 generations: Baby Boomers, Generation X, Generation Y and Generation Z. Baby Boomers (Newport News Daily Press, 1963) was the result of a strong post-war economy, in which Americans felt confident they would be able to support a larger number of children. Generation X, which is sometimes shortened to Gen X, is the name given to the generation of Americans born between the mid-1960s and the early-1980s, which is inspired by a Canadian author Douglas Coupland, in his own "Generation X: Tales for an Accelerated Culture" (Coupland, 1991). Generation Y is also known as the Millennial Generation, the publication Ad Age was one of the first to coin the term "Generation Y," in an editorial in August 1993. The Y generation refers to the people born during the 1980s and early 1990s (Bonnie, 2001). Generation Z is the demographic cohort succeeding Millennials and preceding Generation Alpha, the people born during the late 1990s and early 2010s. In today's business world, these four generations are the main labour force and they are the one who practise employee engagements in the workplace.

2.1.2 Definition of Employee Engagement and Employee Engagement Index

Employee engagement (Kruse, 2012) is important to the company's productivity and competitiveness. This is the reason why companies focus on the employee experience, treat the employee as a guest, optimize the company's management procedures and the process of handling things, let employees feel that their work environment keeps pace with the times, and the humanized experience is also one of the factors they consider. According to the study by Blessing (2006), strong manager-employee relationship (Markos & Sridevi, 2010) is a crucial ingredient in the employee engagement, and training and career developments are also the important factors for employee engagement; While the research report by the Society for Human Resource Management (Lee et al., 2016) suggested that the relationship of team and co-workers and the meaningfulness of the job would be the crucial factors of employee engagement.

To determine the employee engagement level to the company, the Employee Engagement Index (Croswell, 2020) measures employees' engagement with their jobs or day-to-day work. It is based on survey questions that assess factors such as the effort and enthusiasm they put into their daily activities. There are five questions that can be used to measure the employee engagement index.

1. *"I am proud to work for my company"*: This question gets at an employee's pride in the place that they work. The benchmark to this question is 80-90% agreement, which is quite high. However, scores for this question should be high, and a low score (below 70%) is a red flag that there may be concern about your brand internally.
2. *"I would recommend my company as a great place to work"*: This is our version of the Employee Net Promoter Score question. The benchmark for this question is again around 80-90% which indicates that people really like the experience of working at their company. Scores below 60% indicate that there may be day to day problems in people's roles or overall concerns about the workplace environment.
3. *"I rarely think about looking for a job at another company"*: This question gets at the present commitment of an employee to your company. The benchmark for this question is a range of 55-60%, 70% would be a very high score. The variation across demographics for this question would take into account. If the scores below 40% are a strong indicator of churn.
4. *"I see myself still working at my current company in two years' time"*: This question is a similar analysis of commitment as "I rarely think about looking for a job at another company" but with a specific time frame. Employees that aren't looking for a job at another company still may not intend to stay for another two years. Together these questions give

you a picture of present and future commitment and so we can calculate an overall engagement index. The benchmark responses for this question are in the 60-65% range. If the score is higher on this question than the one above, the concerns about employee engagement can be discounted somewhat.

5. *“My company motivates me to go beyond what I would in a similar role elsewhere”*: This is a discretionary effort question that is getting at whether your company is motivating people to do their very best. Benchmark responses here are in the 70-75% range, and it’s generally a tough question to score highly on. Scores below 55% are sometimes an indicator that people feel disconnected to the company mission or don’t feel enabled to get things done.

2.2 The relationship between different factors, generation and employee engagement

Based on the previous studies and research, there are different factors that would affect the employee engagement. There are mainly divided into 9 categories.

1. **Work environment**: The composition of three major sub-environments which include the technical environment (as tools, equipment and technological infrastructure), the human environment (as peers, employee relationship and interactional issue) and the organisational environment (as managerial policies, philosophies and legislation) (Noah & Steve, 2012). Deci & Ryan (1987) suggested a supportive working environment is one which takes employees’ needs and feelings into consideration, provides positive feedback and encourages them to actively raise their concerns in order to help develop new skills and solve work-related issues. Therefore, a meaningful work environment enhances employees’ engagement towards to their workplaces.

2. Leadership: A leader is one or more people who selects, equips, trains, and influences one or more follower(s) who have diverse gifts, abilities, and skills and focuses the follower(s) to the organization's mission and objectives causing the follower(s) to willingly and enthusiastically expend spiritual, emotional, and physical energy in a concerted coordinated effort to achieve the organizational mission and objectives (Winston & Patterson, 2006). According to the research published by Schneider, Macey & Barbera (2009), a decent and supportive leadership is theorised to influence the engagement of subordinates in terms of enhancing their involvement, satisfaction and enthusiasm for work. Therefore, leadership has a relationship with the employee engagement in the workplace.

3. Team and co-worker

- **Team:** A group of people who are interdependent with respect to information, resources, and skills and who seek to combine their efforts to achieve a common goal (Thompson, 2014). As such, building a healthy and trusting interpersonal relationships between team workers could promote employee engagement (Kahn, 1990).
- **Co-worker:** A person who you work with, especially someone with a similar job or level of responsibility (Dictionary.cambridge.org, 2019).

In the research of May, Gilson & Harter (2004), they stated that a better relationship between teammates and co-workers, a higher employee engagement level towards to workplaces. Besides, according to the Locke and Taylor research in 1990 (Locke & Taylor, 1990), they suggested that if the employees were having a better relationship with their co-workers, the employee engagement level would be higher. Therefore, team and co-workers is having an important influence to the employee engagement level.

4. Training and career development: Career development theories have been focusing on human lifespan, traits, vocational choice, assessment tools, values and self-understanding to guide adults in their career decisions (Conlon, 2004). Training will improve consistency of

product quality or increase service accuracy, whereby the service performance and employee engagement will be affected (Paradise, 2008). Therefore, training and career development would have a great impact to the employee engagement since if the employees have the chances to grow professionally, they would feel themselves were caring by the companies.

5. **Compensation:** All forms of financial returns and tangible benefits that employee receives as part of employment relationship. Compensation as it were being divided into two parts and these are cash compensation which is the direct pay provided by employer for work performed by the employee and fringe compensation which refers to employee benefit programs (Das et al. 2014). The recognition towards employee's contribution and thus rewards disbursed are both indispensable antecedents of employee engagement (Saks & Rotman, 2006). Therefore, there is a positive relationship between compensation and employee engagement, better compensation or remuneration package, higher employee engagement towards to workplace since the employees feel obliged to contribute more efforts to their works.
6. **Organization policies:** A set of guidelines and best practices put in place to protect the company, employees, and customers. Organizational policies may cover employment practices, employee conduct, disciplinary procedures, Internet and e-mail use (Reporting.talent20.co.za, 2008). A good organisational policies are those best promote flexible working arrangements to help employees in balancing employee's work and home environments, such organisations tend to have employees with greater engagement (Woodruffe, 2005).
7. **Workplace well-being:** Wellbeing is the state of being of an individual that is characterised not only by good health or wellness, but also by comfort, satisfaction with one's work and home life, personal prosperity and some measure of happiness. (Pruyne, 2011). The

researchers at Towers Perrin Talent Report suggested that workplace wellbeing is crucial as their research had shown that senior management's interest in employee wellbeing was the most significant driver of employee engagement level.

8. **Communication:** Long-term engagement begins with excellent communication between employer and employees as well as amongst co-workers. Kress (2005) suggested that a seamless internal communication had been recognized as something that can influence an organisation's ability to engage its employees. According to the research of Schaufeli et al. (2002), they have suggested that internal communication has a great influence to the employees' engagement. Therefore, communication has a positive relationship with the employee engagement.
9. **Work life balance:** Work life balance contributes to employee engagement, which will lead to a higher productivity and a lower organisational turnover (Grawitch, Gottschalk & Munz 2006). Great sense of satisfaction obtained from work life balance and job involvement generate higher level of employee engagement, thus diminish turnover intention amongst employees (Arshad & Puteh, 2015)

The 9 independent factors above are the bases for forming a healthy working environment for the employees and are the motivation that drives the employees to engage themselves in the business. To operate a business, different departments and different people need to cooperate and work together; In business, the employees are from different backgrounds and different generation, therefore, based on the 9 independent factors, the employees would have their consideration whether the business itself is worth or not for them to give their engagement into the workplace. As a result, different factors and the differences between the generations are having a tight relation with employee engagement.

2.3 Research Hypothesis and Theoretical Model

The subject of this paper is the factors that influence employee engagement of different age groups in the manufacturing industry in Southern China. Therefore, this chapter proposes corresponding research hypotheses for the main problem in the research, constructs a theoretical model of the influence of different factors on employee engagement of different age groups, and converts the problems into a measurable relationship. The research model is as figure 1 below:

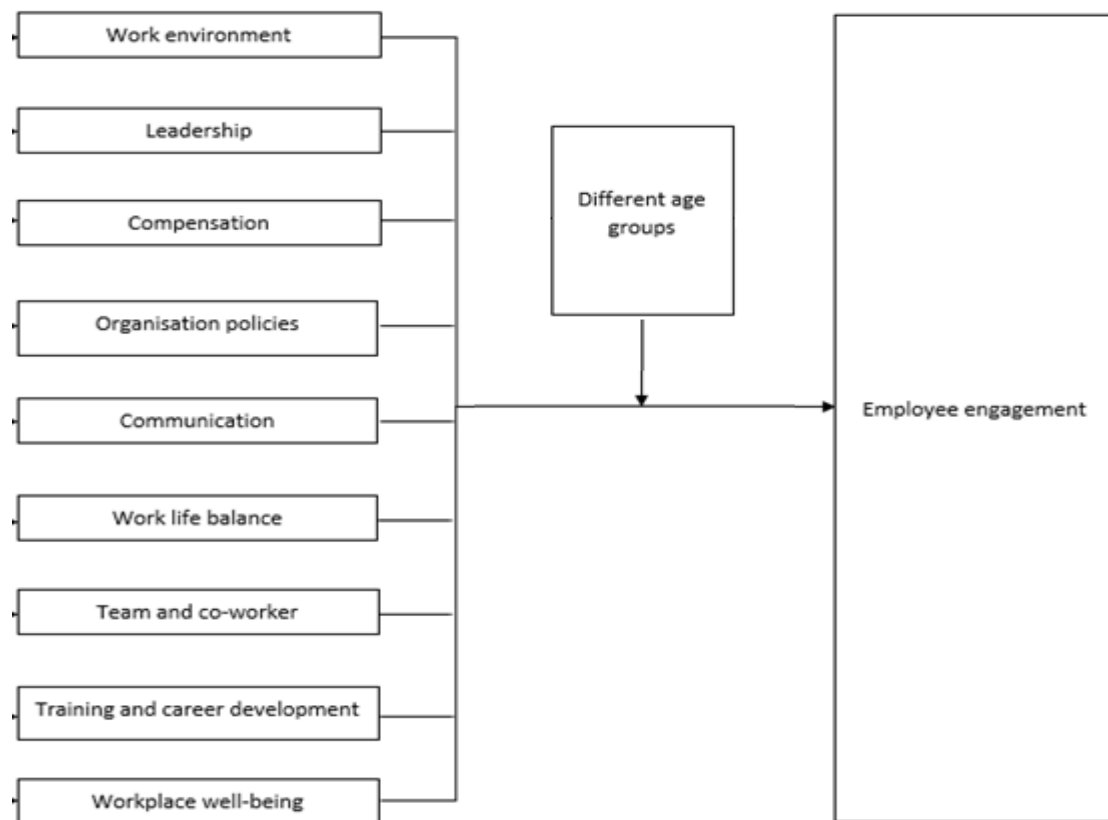


Figure 1 Factors toward employee engagement

In this research, the researcher sets different factors as antecedent variables, employee engagement is the outcome variable. By studying and summarizing relevant literature, the research is divided the different factors into 9 major categories: working environment, leadership, team and co-worker, training and career development, compensation, organizational policies, workplace well-being, communication, and work life balance. On the basis, the researcher discusses and analyses the relation between the different factors that affect the employee engagement of different generations,

and then the research hypotheses of this dissertation are put forward “**Different factors are having impacts on different generations for employee engagement in the business.**”. To prove this hypothesis, the researcher subdivides it into 9 parts to discuss, as shown below:

2.3.1 Influence of working environment on employee engagement.

According to previous literature, there is an obvious relationship between work environment and employee engagement (Anitha, 2014). Workplace conditions play an important role in whether employees want to continue working in the organization. The work environment plays an important role because people want to work in a safe workplace, a work environment that allows employees to work safely attracts employees to be more focused on their work and promotes employees' enthusiasm for their work. According to research findings, different working environments lead to different levels of employee engagement (Miles, 2001). In fact, supportive and trusting interpersonal relationships and supportive management promoted psychological security (Kahn, 1990). Organization members feel safe in an open and supportive work environment. Work environment has an impact on employee engagement, and a meaningful work environment is considered to be the key determinant of employee engagement. Therefore, the researcher wants to have a better understanding of these factors in the manufacturing industry in South China among different generations. Thus, in line with prior empirical studies, the following hypothesis was postulated:

H1. Working environment has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China.

2.3.2 Influence of leadership on employee engagement.

Leaders are an important part of an organization, considering that they are responsible for communicating and connecting with employees and have the ability to make employees feel

motivated, engaged and supported in their work. When leaders demonstrate respect, support, motivation, and effective management, followers feel fulfilled, engaged, and challenged to show a high degree of commitment to their work. When employees receive support and guidance, they will be more aware of their authority and ability in task progress and results, and thus develop more autonomy (Spreitzer, 1996). When subordinates are internally motivated, they advocate the company's principles and guidelines (Gagné & Deci, 2005), which naturally leads to higher investment in the company and higher employee engagement. Millennials require interest in them as a person and view engaging as the ability to reach out and relationally connect with their direct report, while finding points of connection (Espinoza, Ukleja, & Rusch, 2010). Since there might have differences between the opinions among the different generations, thus, in line with prior empirical studies, the following hypothesis was postulated:

H2. Leadership has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China.

2.3.3 Influence of team and co-worker on employee engagement.

According to previous literature, there were obvious relationships between executive relationships, team and colleague relationships and employee engagement (Anitha, 2014). A study by Tsao (2016) shows that the quality of colleague relationship reflects the efficiency of communication between two parties, as well as the degree of synchronization. The behaviour of colleagues can also affect the rapport among colleagues. The study also highlighted how to organize relationships among colleagues; That is, the better the collaborative relationship between managers and employees, the higher the employee engagement. This study concluded that the relationship between the team and colleagues affects employee engagement. Baby Boomers have learned the value of teamwork; they have an inordinate appreciation for the power of teams and for working in harmony with others while Generation Xers tend to be highly independent workers, not liking to work in teams (Johnson

& Johnson, 2010). From the current literatures, there have a gap between the opinions of different generations to the employee engagement of this factor, the researcher wants to have a deeper understanding of the situation in the manufacturing industry in South China. Thus, in line with prior empirical studies, the following hypothesis was postulated:

H3. Team and co-worker has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China.

2.3.4 Influence of training and career development on employee engagement.

Several studies have been conducted to understand the interrelationship between training, career development and employee engagement. Dobbs (2000) found that employees benefit from employee training and career development programs by acquiring the soft and technical skills needed for the job. Wagner (2000) pointed out that the training and development program can help reduce the staff turnover rate and improve the staff satisfaction. Satterfield et al. (2007) emphasized that training leads to positive changes in employees' behaviour and work skills, thereby improving their performance. From the current literatures, there is different opinions of how this factors could affect the employee engagement, thus, in line with prior empirical studies, the following hypothesis was postulated:

H4. Training and career development has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China.

2.3.5 Influence of compensation on employee engagement.

Compensation is an important component of employee engagement and can motivate employees to make additional efforts for personal and organizational development, including monetary and

non-monetary rewards. A study (Men, 2012) found that rewards and recognition are the main factors for participation. Salary is an essential element of employee engagement, which promotes employees to get more and pay more attention to personal development and work (Anitha, 2014). Compensation is a set of benefits, in the form of salary, incentives, job opportunities, good working conditions, bonuses, retirement plans and life insurance plans, provided to employees of an organization and awarded to them according to their performance (Bhatnagar, 2007). For employees, compensation and benefits are essential because they are the means to meet basic living needs. These are also important for employers: pay and benefits are one of the most important rewards in the recruitment process (Milkovich & Newman, 1996); It is a means to attract and retain excellent employees (Vandenberghe & Tremblay, 2008). It is a means of employee motivation in skill development (Milkovich & Newman, 1996). Finally, they are used to exchange properties (Vandenberghe & Tremblay, 2008). However, engagement can vary from employee to employee as perceptions of the compensation they receive from their role change. Therefore, employees with a high level of job role benefits show greater engagement (Kahn, 1990). However, from the current literatures, there are conflicts since different employees might have different opinions on this factors. Thus, in line with prior empirical studies, the following hypothesis was postulated:

H5. Compensation has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China.

2.3.6 Influence of organizational policies on employee engagement.

A good organisational policies are those best promote flexible working arrangements to help employees in balancing employee's work and home environments, such organisations tend to have employees with greater engagement (Woodruffe, 2005). Six & Sorge (2008) stated that a favourable organizational policies build trust within the organization as empirically proved. Organisation policies act as an internal communication between the company and the employees,

and the employees are one of the most critical stakeholders because they are the strongest supporters and possibly the most vocal critics of the organization if internal policies do not meet their expectations (Waters, Bortree & Tindall, 2013). However, from the current literatures, there is inconsistency findings between different researchers, thus, in line with prior empirical studies, the following hypothesis was postulated:

H6. Organizational policies has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China.

2.3.7 Influence of workplace well-being on employee engagement.

The research of Shuck et al. (2011) provides evidence that the psychological atmosphere in the workplace is closely related to employees' engagement and autonomous efforts. Furthermore, in their study, climate and engineering were strong predictors of employee turnover intentions and effort, highlighting the unique role each factor plays in leveraging employee-related outcomes that influence organizational performance. O'Neil & Arendt (2008) found a positive correlation between emotional climate (autonomy, stress, structure, self-expression, and trust) and performance-based outcomes. Employee determine how hard they will work, how satisfied they are, and how committed they are to the organization based on their understanding of the workplace climate (O'Neil & Arendt, 2008). However, from the current literatures, the different components within this factors might have effects on the employees' engagement and there are inconsistent results between various researchers. Thus, in line with prior empirical studies, the following hypothesis was postulated:

H7. Workplace well-being has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China.

2.3.8 Influence of communication on employee engagement.

Researchers have shown that the effectiveness of internal communication is a leading indicator of organizational success. According to Meng et al. (2012), the values created by excellent internal communications in organizations are often future-oriented, such as issue recommendations and potential growth in investor opportunities. In recent years, as companies have begun recognizing the importance of engaged employees for direct business outcomes such as good performance, innovation, and productivity (Bakker & Demerouti, 2008). However, from the current literatures, the focus points of the researchers might be having a gap, thus, in line with prior empirical studies, the following hypothesis was postulated:

H8. Communication has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China.

2.3.9 Influence of work life balance on employee engagement.

Work–life balance strategies, family-friendly culture and higher work-life balance can, and usually do, demonstrate a positive correlation with an employee’s job satisfaction, organisational commitment and citizenship and decision to remain with an employer (Allen 2001). Sturges & Guest (2004) found that while graduates professed work–life balance was very important to their intentions to stay with their organisation, work/non-work conflict, fulfilment of psychological contract and number of hours worked did not significantly predict organisational commitment. However, from the current literatures, there is inconsistent findings on the relationship between employee engagement and this factors. Thus, in line with prior empirical studies, the following hypothesis was postulated:

H9. Work life balance has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China.

2.4 Conclusion

In this chapter, the researchers reviewed the references, analysed and summarized employee engagement and different factors, and explained the concepts of different age groups. After identifying, the constituent factors and concepts of employee engagement and various factors that affect employee engagement, this paper makes an analysis, which provides a basis for this paper, and proposes the research hypothesis and theoretical model of this paper, and discusses the relationship among these factors in detail. The first and second phases of this article have been completed. In the next chapter, the researcher will choose the appropriate research method according to the research hypothesis and foundation of this paper.

Chapter 3 – Research Methodology

3.1 Introduction

In this part, the methodology and the overview of the research problem would be introduced.

In this research, the problem that has to be investigated is what are the factors that affected the employee engagements of different generations in the manufacturing industry in South China. The quantitative methods would be used; this method gathers the numerical data that could be measured or categorised through statistical. A questionnaire has been designed and would be invited the employees that worked in the manufacturing industry in South China, the questions are designed to figure out which factors are more important to the employees, the questionnaire included the rating scale questions, multiple questions and open-ended questions. The survey would be conducted on the online platform and sent to the manufacturing industry in South China, after the collection of the questionnaire, the data would be analysed and explained. This survey was conducted anonymously and confidentially through the online platform, 475 questionnaires have collected from 10 manufacturing factories in the South China area, the total population is around 4500 people, which the response rate was about 10.5%.

3.2 Research aims and objectives

The main purpose of research in this dissertation is to explore the influence of different factors on different generations' engagement in their workplace in the manufacturing industry in South China.

In order to achieve the overall target, it will be break down into servals points:

- a) Identification of the factors that would affect the different generation on their employee engagement
- b) Exploration of the relationship between the different factors and different generations by delivering their employee engagement in the manufacturing industry

- c) Assessment of the factors that would affect the different generation on their employee engagement
- d) Recommendation for long-term development and improvement for enhancing employee engagement

This chapter will discuss the research process of this paper, explain the methods of data collection and relevant basic principles, in order to achieve the purpose of this study.

3.3 Research Approach

In order to better understand what factors affect the engagement of employees of different ages, this study will adopt a two-stage approach. The first phase focuses on theories and materials in the literature, with the aim of generating meaningful project samples for research topics. In the second phase, the quantitative method will be used as the relationship between the data collected in the first phase of the analysis.

3.4 Research Methods

The methodology was a system for collecting and/or analysing data (Bowen, 2009). A better convenience for research work could be provided by finding and collecting valid data. Therefore, in order to better screen out suitable research methods, it can be mainly divided into the following two aspects:

3.4.1 Primary and Secondary Research

The primary research is a popular and effective method by collecting first-hand and original data with a particular topic directly, and the research is usually carried out by the researchers, which is a time-consuming process since the researchers need to conduct the data collection process by

themselves. On the other hand, secondary research is the process of primary research and analysis in which all the information previously completed by another person is collected. The secondary research is quick and fast, which is not time-consuming, but the data or information might not be specific for a particular topic.

In this research paper, the questionnaires would be conducted, and the returned questionnaires would be the primary research data, which would be used to analysis the relationship between each factor and the different generations. Questionnaires is an effective approach to measure different preference of people, and it can be distributed to a large number of respondents and the comparisons could be made between the demographic groups.

3.4.2 Quantitative and Qualitative Research

Qualitative research is mainly exploratory research. It is used to understand underlying causes, opinions, and motivations. It provides insight into the problem or helps develop ideas or assumptions for potential quantitative research. Qualitative research is also used to discover trends in ideas and opinions, and to delve into issues. Quantitative research quantifies problems by generating numerical data or converting data into usable statistics. It is used to quantify attitudes, opinions, behaviours and other defining variables and to generalise results from a larger sample of the population.

After the consideration, the quantitative research would be used by the researcher to conduct this research, since the quantitative method is more suitable. This method can help the researcher to determine which factors would affect the employee engagement of different generations in the manufacturing industry in South China. The data could be collected by questionnaires or face-to-face survey questionnaires, under this circumstance, it is impossible to conduct individual interviews to all the employees due the costs and human resources. Therefore, the main data

collection method would be the questionnaires, online questionnaire platform/manual distribute and collect questionnaire would be used in this survey.

3.5 Research Design

The research design is the blueprint of the overall design or planning that used to carried out the research projects (Malhotra, 2004). It clarified and specified the steps that required to collect the information needed, which included the methods, procedures, analysis, result and conclusion and recommendation.

3.5.1 Sampling and sample size

Although there is no clear and certain standard as to the required sample size in structural equation modelling, an approach based on the number of indicators included in each study was proposed, in which the minimum sample size should be $k(k+1)/2$, where k is the number of indicators (Jöreskog, 1993). Maximum number of indicators to form the largest subscale for this study is expected to be 25, thus, a sample size of 325 will be sufficient according to this criterion. However, an argument by Stevens (2012) suggested that misspecification errors in modelling could be avoided only if a minimum sample size of 400 is adopted. In this study, a fairly prudent sample size will be selected, that is of 500. As Kerlinger (1973) suggested that the average response rate to voluntary survey to be 50%, based on this assumption, it is necessary that approximately 1000 workers to be approached to fulfil the adequate sample size.

3.5.2 Questionnaire design/Measurement of variables

The questionnaire aims to collect the data about the influences of different factors toward to the employee engagement of the different generations in the manufacturing industry in South China. Therefore, the questionnaire included several elements. The first part of the questionnaire is mainly focused on the demographic backgrounds of the respondents, such as gender, age, education level,

incomes, marital status and number of kids. These questions aim to collect the background information that might affect the respondents' employee engagement to their companies. The researcher took the questionnaire that conducted in Memon's research in 2018 (Memon et al., 2018) as a reference, and Question 18 and 19 were designed based on the factors that he mentioned which were related to the employee engagement. The researcher also added 2 more factors into these two questions according to the researches done by Meng et al. (2012) in 2012 of communication and Allen (2001) in 2001 of work life balance.

The second part is focused on what factors that would be the consideration of the different generations to have a better engagement with their companies, therefore, the researcher has designed a ranking question with all the variable factors that might affect the employee engagement, the respondents could rank the factors and choose the most important factor to the least important according to their own preference, 1 is "the most important"; 9 is "the least important". This ranking question could help the researcher to clearly determine what is the distinction between the different generations.

The third part is focused on the current situation of the factors that would affect employee engagements to their companies. In the questionnaire, the researcher has designed a 10-point Likert-type scale, the respondents could rate the scores of different factors with their current working environment, 1 is "not satisfied"; 10 is "very satisfied". This question can help the researcher to understand how the employee engagement of the respondents would be affected when they are not satisfied with the current working environment.

3.5.3 Piloting the Questionnaire/Pilot Test

The pilot test is a pre-assessment of the research study, which allowing the researcher to test the research approach with a small amount of the respondents before the start of the researcher's main

study, to ensure the validity and whether the questions are suitable for the research study. The pilot tested has been conducted successfully with 30 respondents and the approval from the supervisor before proceeding the final sampling (Appendices B). The result of Cronbach's Alpha value was 0.918, which is greater than the acceptable value 0.7 (Cortina, 1993).

3.5.4 Data analysis

In accordance with the objectives of the study, data will be analysed using the Statistical Package for Social Science (SPSS). Frequency of distribution and mean will be utilised as a description for employees' engagement in the companies. Exploratory factor analysis will be adopted to determine fundamental components or factors behind employees' responses. SPSS will be undertaken to vindicate those factors, then to justify their relationships. The result would be further discussed in Chapter 4. In Chapter 4, the researcher would use descriptive analysis such as charts to describe the demographic information of the respondents, and the cross-tabulation relationship between different generations and different factors. Besides, the researcher would use reliability test to test the consistency of the Likert question and use the correlation test to test whether there is significant linear relationship evidence between the satisfactory level of the respondent from different generations and their employee engagement. Furthermore, the researcher would use regression test to investigate the significant relationship and strength of impact between the dependent variable versus multiple independent variables. The ANOVA test would be used to test the significant level of the results.

3.6 Limitations of the research

As the quantitative research was the most appropriate method for collecting the required data or information for this paper, therefore it has been chosen for conducting this research study. Therefore, the lack of qualitative research led to the missing of in-depth investigation of the respondents' behaviours and a better understanding of the related fields. Moreover, under the

COVID-19 situation, it is a time-consuming process to collect the questionnaires in the manufacturing industry in South China, due to the serious pandemic, the researchers spent almost four months to collect the data and conduct the following SPSS analysis.

3.7 Conclusion

In this chapter, it explained the methods the researcher used in this research paper, the quantitative research has been selected to collect the primary data in order to conduct this study since it could collect a comprehensive data from a large group of respondents which the researcher could have a better analysis. In the next chapter, the researcher would be focused on the results which are generated by the collected data, and analysis the hypotheses.

Chapter 4 – Data Collection and Analysis

The primary data that have been collected would be sorted and analysed by using the descriptive and inferential statistics function of IBM Statistical package for social science (SPSS) program version 25, in order to determine what factors would affect the employee engagement of different age groups. By using the SPSS statistical analysis, the data could be converted into tables and graphs, which are accurate and reliable for solving the 7 hypotheses. The outcomes would be shown in tables and graphs for further explanation and analysis. The 475 questionnaires were valid after screening and the data have been analysed by descriptive and inferential statistics method.

4.1 Backgrounds of the respondents

The background information of the respondents is the demographics details, which include age, gender, marital status, kid and education. The target of the questionnaire is the people who are working in the manufacturing factories in the South China area. The following sections are the briefly description of the respondents' demographics background.

4.1.1 Gender of the respondents

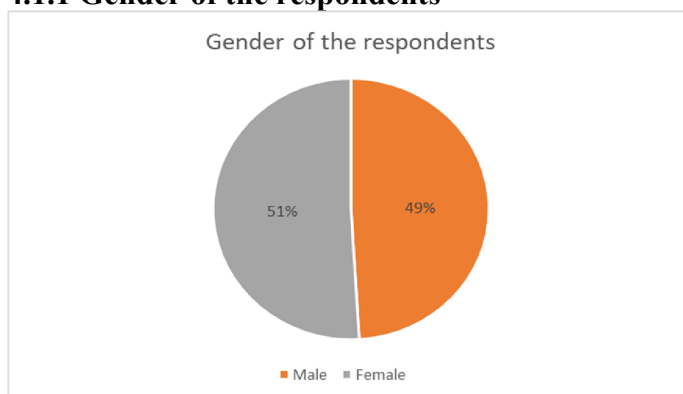


Figure 2 Gender of the respondents

Figure 2 shows that 51% of the respondents is female and the remaining 49% is male. The female respondents are slightly higher than male respondents.

4.1.2 Age of the respondents

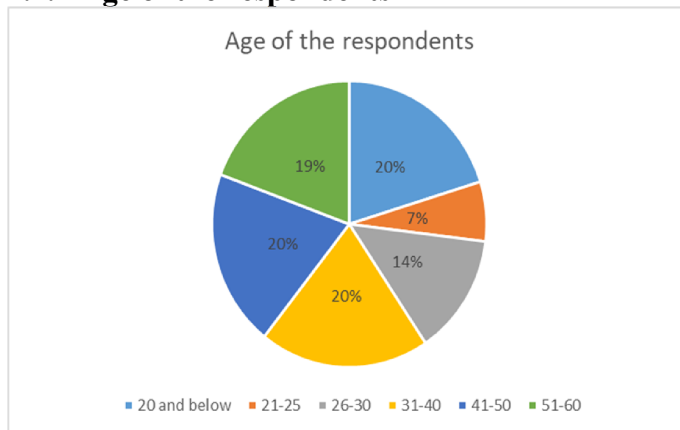


Figure 3 Age of the respondents

Figure 3 shows the different age ranges of the respondents, the distributions of the age is mostly even, age groups of below 20, 31 to 40 and 41 to 50 are 20%, age group of 51-60 is 19% and age group of 21-30 is 21%.

4.1.3 Marital Status of the respondents

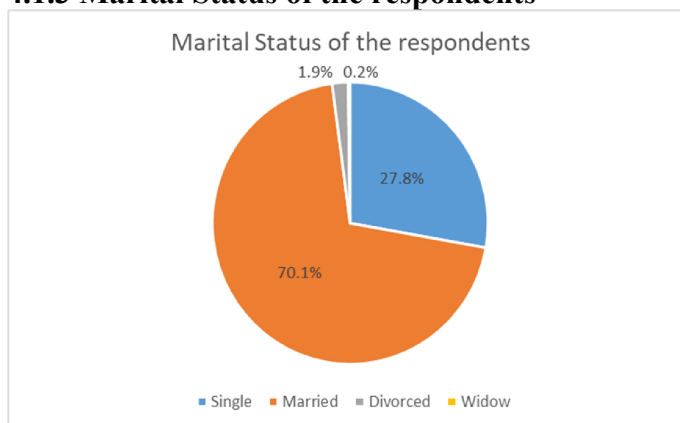


Figure 4 Marital status of the respondents

Figure 4 shows the marital status of the respondents, most of the respondents are married, which is 70.1%; the single respondents is 27.8%; the divorced respondents and widow respondents are 1.9% and 0.2%.

4.1.4 The number of kids of the respondents

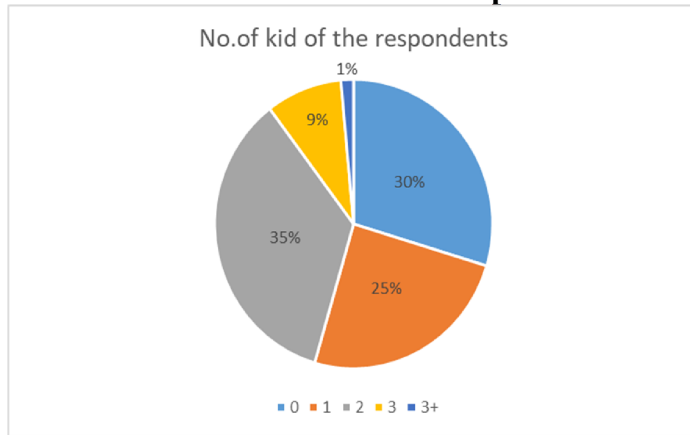


Figure 5 The number of kids of the respondents

Figure 5 shows the numbers of kids that the respondents have. Most of the respondents have 2 kids, which is 35%. The percentage of the respondents that have no kid and 1 kid is 25% and 30% respectively. The total percentage of the respondents who have 3 or more kids is 10%.

4.1.5 Education level of the respondents

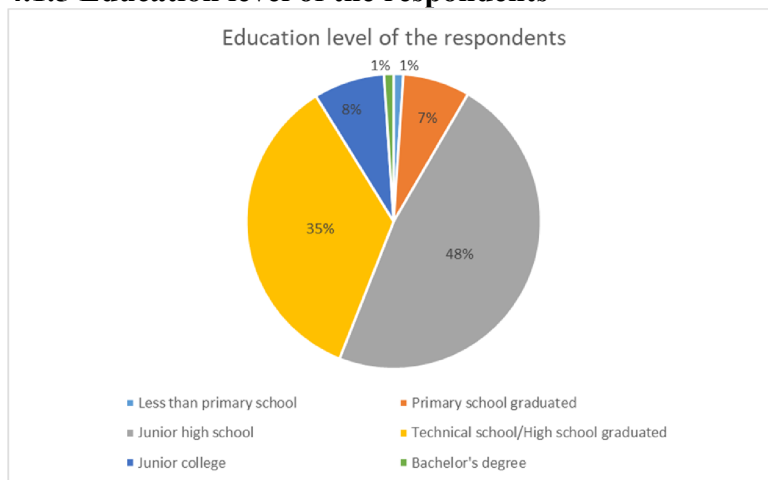


Figure 6 Education level of the respondents

Figure 6 shows the education level of the respondents. From the figure, it shows that most of the respondents have completed junior high school, which is 48%. Also, it shows that 35% of the respondents have finished technical school or high school. 8% of the respondents had completed, 7% of the respondents are graduated from primary school and 1% of the respondents' education level is less than primary school. However, only 1% in total of the respondents have finished a bachelor's degree and postgraduate or above.

4.1.6 Interval and ratio variable

In chapter 2, the researcher has clearly explained the basic formation of the employee engagement. In order to measure the factors that will affect the employee engagement, the researcher has categorised the different factors into different area that formed the employee engagement. The researcher would analysis how different factors would be the consideration for the different generation as in the following table:

Table 1 - Basic formation of employee engagement

Basic formation of employee engagement		Represent to
E1	"I am proud to work for the company"	Sense of pride
E2	"I would recommend the company as a great place to work"	Security
E3	"I rarely think about looking for a job at another company"	Sense of
E4	"I will see myself still working at the company in two year"	Loyalty
E5	"The company motivates me to go beyond what I would in a similar role elsewhere"	Sense of identity

Table 2 - Questions related to the basic formation elements

Independent variable	E1	Training and career development	Q19
		Compensation	
Independent variable	E2	Work environment	Q19
		Organisation policies	
		Work-life balance	
Independent variable	E3	Team and co-worker	Q19
		Workplace well-being	
Dependent variable	E4		Q20
Independent variable	E5	Leadership	Q19
		Communication	

Table 3 - Descriptive statistics of different factors

Factors	N	Minimum	Maximum	Mean	Std. Deviation
Q18.1 Work environment	475	1	9	3.78	2.436
Q18.2 Leadership	475	1	9	4.62	2.259
Q18.3 Team and co-worker	475	1	9	4.55	1.954
Q18.4 Training and career development	475	1	9	5.62	2.216
Q18.5 Compensation	475	1	9	2.27	2.060
Q18.6 Organization policies	475	1	9	6.42	2.199
Q18.7 Workplace well-being	475	1	9	6.04	2.275
Q18.8 Communication	475	1	9	5.57	2.173
Q18.9 Work life balance	475	1	9	6.13	2.640
Valid N (listwise)	475				

The above table shows the most important factors that are chosen by the respondents. 1 represents the most important and 9 represents the least important, therefore the top 3 factors are compensation, work environment, and team and co-worker.

Table 4 – Descriptive statistics of the satisfactory level of different factors

Factors	N	Minimum	Maximum	Mean	Std. Deviation
Q19.1 Work environment	475	1	5	3.06	1.163
Q19.2 Leadership	475	1	5	3.47	1.110
Q19.3 Team and co-worker	475	1	5	3.55	1.112
Q19.4 Training and career development	475	1	5	3.22	1.159
Q19.5 Compensation	475	1	5	3.09	1.199
Q19.6 Organization policies	475	1	5	3.31	1.158
Q19.7 Workplace well-being	475	1	5	3.30	1.226
Q19.8 Communication	475	1	5	3.40	1.236
Q19.9 Work life balance	475	1	5	3.28	1.218
Valid N (listwise)	475				

Based on the above table, it shows the respondents satisfactory level to different factors, the respondents are satisfied with all the 9 factors in their current workplace.

Table 5 – Descriptive statistics of Employee engagement

Employee engagement	N	Minimum	Maximum	Mean	Std. Deviation
Q20 Engagement level	475	1	5	3.09	1.452
Valid N (listwise)	475				

Based on the above table, it shows most of the respondents are satisfied with their current workplace and would like to work for at least 2 years.

4.1.7 Cross-tabulation

The cross-tabulation is a useful indicator for analysing the relationship between multiple variables in quantitative research. It can conduct the analysis between one variable to another among the specific group of the respondents, and the results can be presented in a table or chart for relationship exploration.

In the following parts, the researchers would determine the ranking of different factors that is important to the different age groups. Number 1 to 3 means this factor is important to them when the respondents are practicing their employee engagement; Number 4-6 means that this factor is moderately important to them; Number 7-9 means that this factor is relatively least important to them.

4.1.7.1 Factors related to Sense of pride

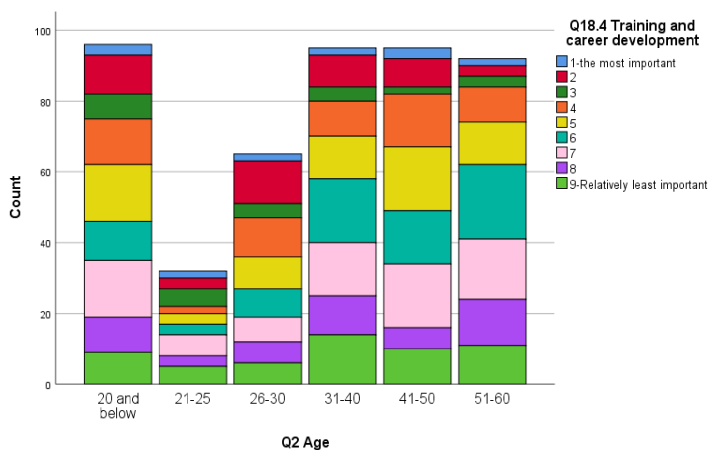


Figure 8 Training and career development

Based on the above figure, it shows the relationship between the different age groups and the important level of training and career development. This figure shows that the respondents from the age range 31-40 and 51-60 are not really concern about the training and career development which are currently providing in their workplace. The remaining age groups are moderately concerned about this factor in their workplace. Therefore, from the above figure, the researcher

could assume that training and career development is a factor that might affect employee engagement for all the age groups except the age range 31-40 and 51-60.

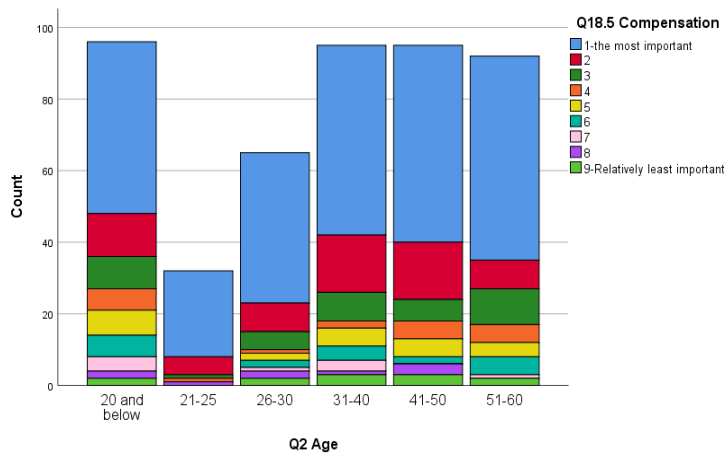


Figure 9 Compensation

Based on the above figure, it shows the relationship between the different age groups and the important level of compensation. This figure shows that the respondents from all age groups consider the compensation package as a very important factors to them for their engagement level for their workplace. Therefore, the researcher could assume that compensation is an important factor that would affect the employee engagement for the all the age group.

4.1.7.2 Factors related to Security

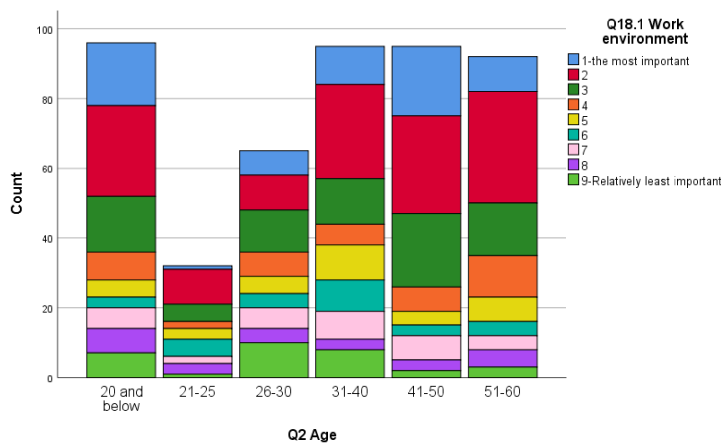


Figure 10 Working environment

Based on the above figure, it shows the relationship between the different age groups and the important level of working environment. This figure shows that the respondents from all age groups consider the working environment as a very important factors to them for their engagement level for their workplace. Therefore, the researcher could assume that working environment is an important factor that would affect the employee engagement for the all the age group.

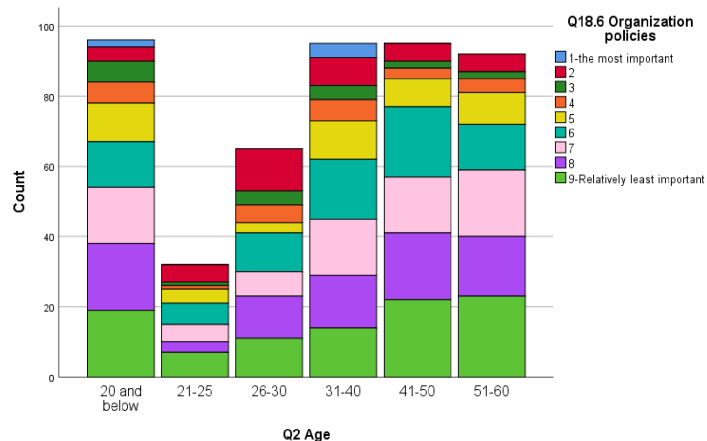


Figure 11 Organisation policies

Based on the above figure, it shows the relationship between the different age groups and the important level of organisation policies. This figure shows that the respondents from all age range considered organisation policies as a relatively least important factors to them for their engagement level for their workplace. Therefore, the researcher could assume that organisation policies is not an important factor that would affect the employee engagement for the all the age group.

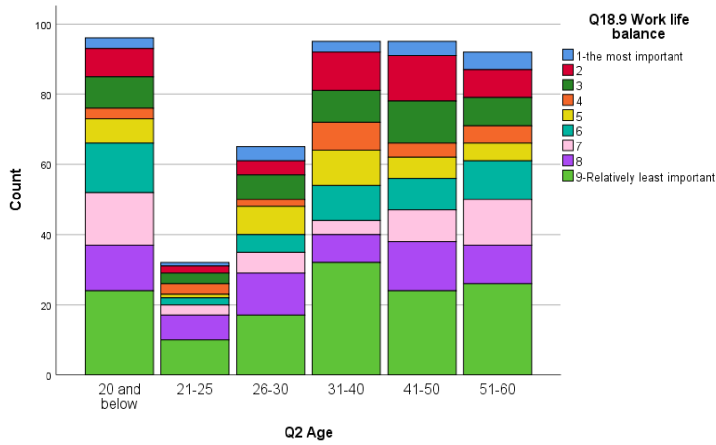


Figure 12 Work-life balance

Based on the above figure, it shows the relationship between the different age groups and the important level of work-life balance. This figure shows that the respondents from all age groups consider the work-life balance as a relatively least important factors to them for their engagement level for their workplace. Therefore, the researcher could assume that organisation policies is not an important factor that would affect the employee engagement for the all the age group.

4.1.7.3 Factors related to Sense of belonging

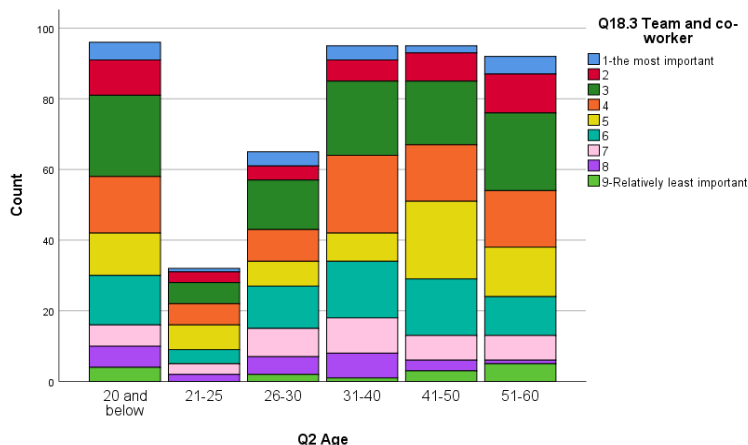


Figure 13 Team and co-worker

Based on the above figure, it shows the relationship between the different age groups and the important level of team and co-worker. This figure shows that the respondents from all age groups

considered team and co-worker as a moderately important factor when they are practising their employee engagement. Therefore, the researcher could assume that team and co-worker is a moderately important factor that might affect the employee engagement for all remaining age group.

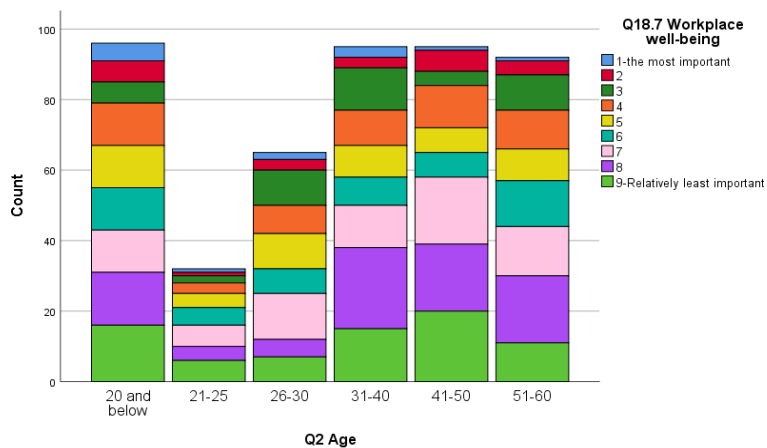


Figure 14 Workplace well-being

Based on the above figure, it shows the relationship between the different age groups and the important level of workplace well-being. This figure shows that the respondents from age groups from all age groups considered this factor as a relatively least important factor to them. Therefore, the researcher could assume that workplace well-being is a relatively least important factor that might affect the employee engagement for all age group.

4.1.7.4 Factor related to Loyalty

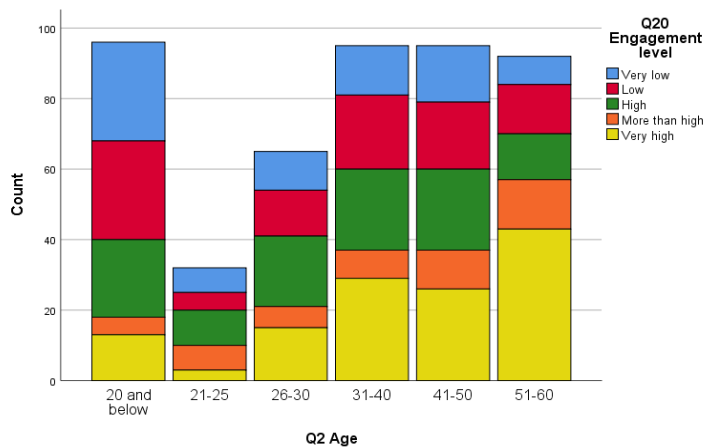


Figure 15 Engagement level

Based on the above table, it shows the respondents' willingness of the time to work in their current workplace, the willingness of the time to work in the same workplace means that the respondents' loyalty to their company, the longer they are willing to work, the higher loyalty of the respondents to their company, in adverse, the shorter they willing to work, the lower loyalty of the respondents to their company. In this study, the researcher has divided the level of loyalty into five levels: 1 is very low which is "3-6 months"; 2 is low which is "6-12 months"; 3 is high which is "12-24 months"; 4 is very high which is "24-36 months"; and 5 is more than expectation which is "more than 36 months". The loyalty level of the employee can represent their employee engagement, as a standard, the benchmark would be 24 months, which is 2 years. This table shows that all the respondents from different age range except the age group of below 20 in this study would work more than 2 years in their current workplace, which is representing their loyalty to their company is high and more than expectation, therefore, their employee engagement to the company is high.

4.1.7.5 Factors related to Sense of identity

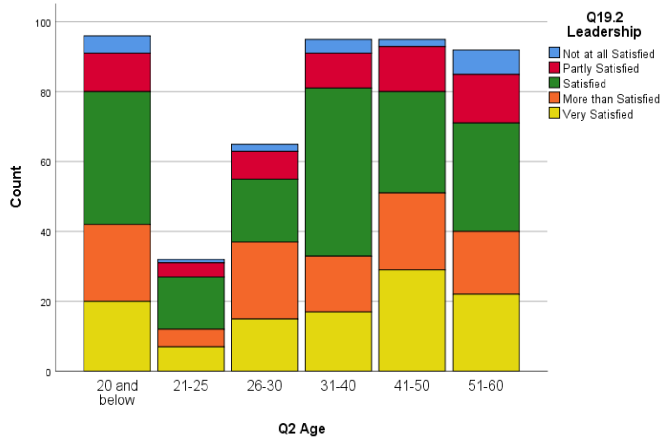


Figure 16 Leadership

Based on the above figure, it shows the relationship between the different age groups and the important level of leadership. This figure shows that the respondents from all age groups except the respondents from the age group 21-30 considered the leadership as the most important factor to them for their engagement level for their workplace, while the remaining age groups considered this factor as a moderately important factor to them. Therefore, the researcher could assume that leadership is an important factor to age range from all age groups except the respondents from the age group 21-30 that would affect the employee engagement of them and a moderately important factor that might affect the employee engagement for the remaining age group.

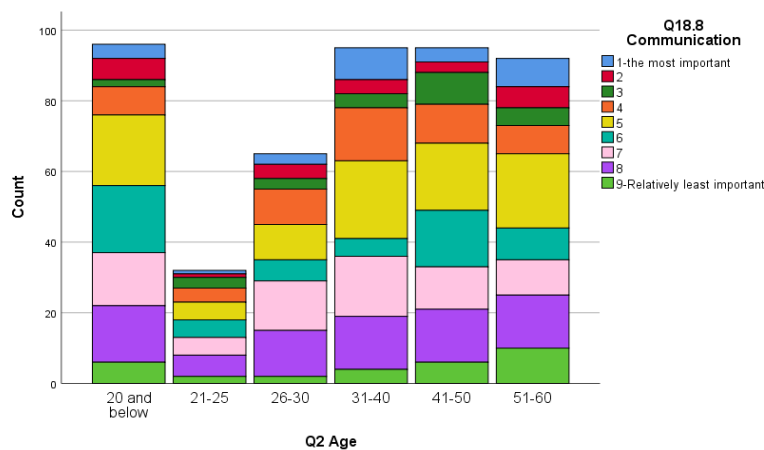


Figure 17 Communication

Based on the above figure, it shows the relationship between the different age groups and the important level of communication. This figure shows that the respondents from age groups from below 20, 31-40, 41-50 and 51-60 considered the communication as a moderately important factor to them for their engagement level for their workplace, while the remaining age groups considered this factor as a relatively least important factor to them. Therefore, the researcher could assume that communication is a moderately factor to age range from below 20, 31-40, 41-50 and 51-60 that would affect the employee engagement of them, and a relatively least important factor that might affect the employee engagement for the remaining age group.

By analysing the data, the researcher figured out that different age groups or generation would be affected by different factor when they are contributing their employee engagement to their workplace, the following table has demonstrated this finding:

Table 6 – Top 3 important factors to different generation

Age group	Top 3 factors that affect their employee engagement		
Below 20	Compensation	Working environment	Leadership
21-30	Compensation	Working environment	Team and co-worker
31-40	Compensation	Working environment	Leadership
41-50	Compensation	Working environment	Leadership
51-60	Compensation	Working environment	Team and co-worker

Based on the above table, the researcher found that different generation would be affected by different factors due to their demographic backgrounds and consideration. In the following part, the researcher would explain more briefly how the different factors would affect the respondents' employee engagement to their workplace among the different age groups.

4.1.7.6 Respondents' satisfaction

Based on the analysis of the data collected in the previous part, the researcher has figured out that what are the most important factors that would affect the employee engagement of different age groups, in the following section, the researcher would analysis how the respondents' satisfaction would affect their engagement level to their workplace.

(A) Age range that below 20

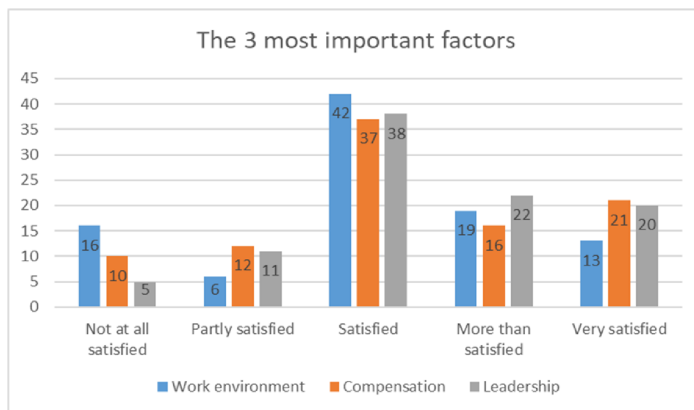


Figure 18 Satisfactory level of the top 3 important factors- Below 20

The three most important factors to this age group are compensation, working environment and leadership. Based on the above figures, 80.7% of the respondents are satisfied with their compensation, working environment and leadership condition in their current company.

(B) Age range that between 21 to 30

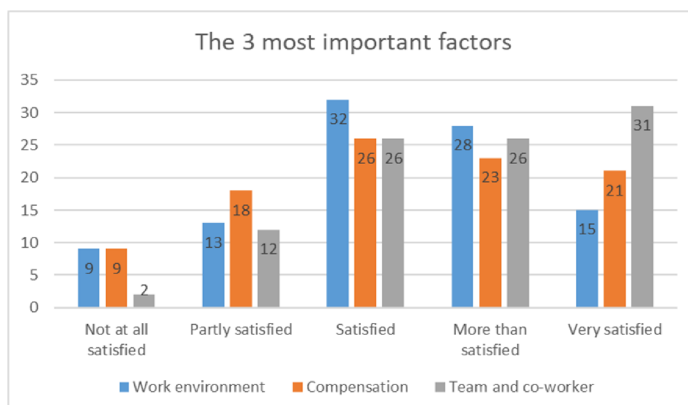


Figure 19 Satisfactory level of the top 3 important factors- 21 to 30

The three most important factors to this age group are compensation, working environment and team and co-worker. Based on the above figures, 77.8% of the respondents are satisfied with their compensation and working environment condition in their current workplace, and 85.2% of the respondents are satisfied with their team and co-worker relationship. Only 23.4% of the respondents considered to leave the company within 6 months, and 51.9% of the respondents would continue their job with their current company for more than two years. As a result, higher satisfactory with the factors that this age group concerned, the longer they are willing to stay in their company, and it means their employee engagement to their workplace would be higher. Therefore, these figures and data show that the factors have a relationship with the employee engagement.

(C) Age range that between 31 to 40

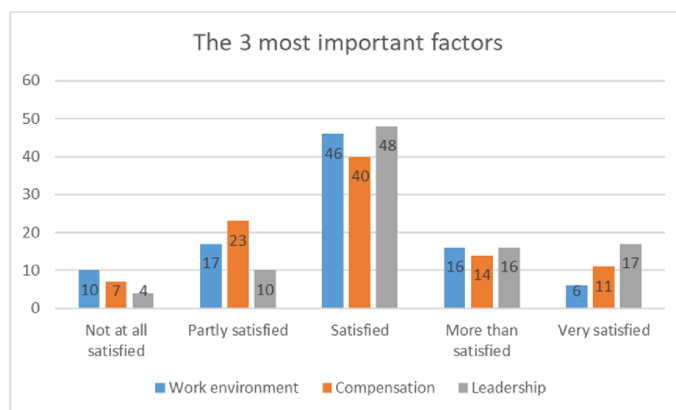


Figure 20 Satisfactory level of the top 3 important factors- 31 to 40

The three most important factors to this age group are compensation, working environment, team and co-worker and leadership. Based on the above figures, 65.6% of the respondents are satisfied with their compensation, 68.2% of them are satisfied with their working environment and 81% of the respondents are satisfied with their leadership and team and co-worker relationship. Only 17.5% of the respondents considered to leave the company within 6 months, and 60.5% of the respondents would continue their job with their current company for more than two years. As a result, higher satisfactory with the factors that this age group concerned, the longer they are willing to stay in

their company, and it means their employee engagement to their workplace would be higher. Therefore, these figures and data show that the factors have a relationship with the employee engagement.

(D) Age range that between 41 to 50

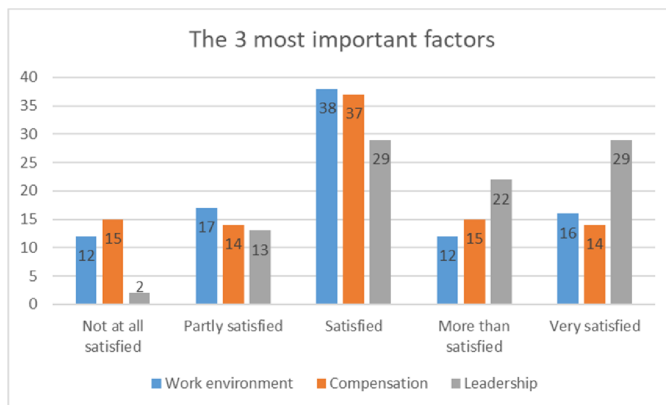


Figure 21 Satisfactory level of the top 3 important factors - 41 to 50

The three most important factors to this age group are compensation, working environment and team and co-worker. Based on the above figures, 70% of the respondents are satisfied with their compensation, 78.3% of them are satisfied with their working environment and 85% of the respondents are satisfied with their team and co-worker relationship. Only 17.5% of the respondents considered to leave the company within 6 months, and 64.2% of the respondents would continue their job with their current company for more than two years. As a result, higher satisfactory with the factors that this age group concerned, the longer they are willing to stay in their company, and it means their employee engagement to their workplace would be higher. Therefore, these figures and data show that the factors have a relationship with the employee engagement.

(E) Age range that between 51 to 60

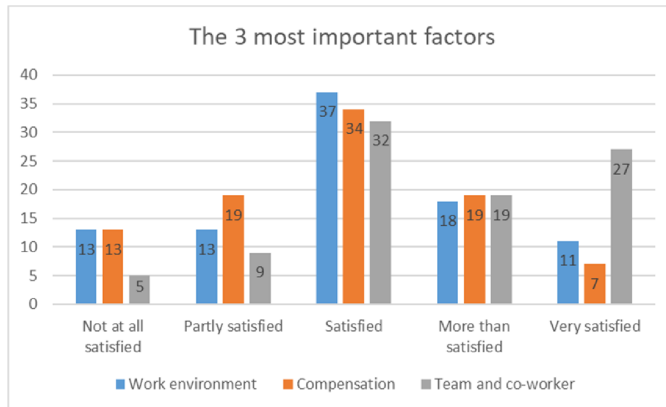


Figure 22 Satisfactory level of the top 3 important factors - 51 to 60

Since there is only one respondent from age group 61-65, therefore, the researcher would be analysed the age group 51-60 and 61-65 together. The three most important factors to this age group are compensation, working environment and leadership. Based on the above figures, 70% of the respondents are satisfied with their compensation, 78.3% of them are satisfied with their working environment and 85% of the respondents are satisfied with their team and co-worker relationship. Only 17.5% of the respondents considered to leave the company within 6 months, and 64.2% of the respondents would continue their job with their current company for more than two years. As a result, higher satisfactory with the factors that this age group concerned, the longer they are willing to stay in their company, and it means their employee engagement to their workplace would be higher. Therefore, these figures and data show that the factors have a relationship with the employee engagement.

4.2 Inferential Statistics

4.2.1 Reliability Analysis

The reliability test is an effective measurement to analysis the internal consistency of the designed questions and the reliability of the scale when the Likert questions were conducted in the questionnaire. Cronbach's Alpha is an indicator of the reliability, it ranges from 0 to 1 and the

acceptable range of the coefficient alpha is between 0.6-0.95 (Hulin, Netemeyer, and Cudeck, 2001). The Cronbach's Alpha of the 9 questions is resulted of 0.943, which has indicated within the acceptable range of the internal consistency value.

Table 7 - Reliability analysis of Question 19.1-19.9

Reliability Statistics	
Cronbach's Alpha	N of Items
0.943	9

Satisfaction level of different factors	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q19.1 Work environment	26.60	63.375	0.669	0.943
Q19.2 Leadership	26.19	62.730	0.748	0.938
Q19.3 Team and co-worker	26.12	63.056	0.727	0.940
Q19.4 Training and career development	26.45	60.931	0.820	0.934
Q19.5 Compensation	26.58	61.270	0.768	0.937
Q19.6 Organization policies	26.36	61.023	0.816	0.935
Q19.7 Workplace well-being	26.36	59.885	0.829	0.934
Q19.8 Communication	26.27	59.774	0.828	0.934
Q19.9 Work life balance	26.39	60.238	0.815	0.935

4.2.2 Correlation test

Correlation is a binary test to determine the strength and direction relationship between two variables. Pearson correlation was used to determine the evidence of a significant linear relationship between two interval variables, as well as the strength and direction of the linear relationship. The intensity value of the correlation coefficient, the measured R value varies from -1 to +1. Positive one means that the positive relationship between the two variables is very strong. In contrast, negative 1 indicates a completely weak relationship, Table 8 has shown the correlation level of different ranges of coefficient interval. Significance values are very important and should be equal to or less than 0.05 before starting to determine significance linearity.

Table 8 – Correlation coefficient interpretation level

Coefficient Interval	Correlation
0.00 – 0.199	Very Weak
0.20 – 0.399	Weak
0.40 – 0.599	Medium
0.60 – 0.799	Strong
0.80 – 1.000	Very Strong

Source: Napitupulu et al.,(2018). *Analysis of Student Satisfaction Toward Quality of Service Facility. Journal of Physics: Conference Series*, 954, p.012019.

The tables below are the correlation test results for the satisfaction level of different factors to employee engagement level in different age group.

Table 9 – Correlation level of different factors among different age groups

Age groups	Correlation level	Factors
21-30	Weak	Work environment, Leadership, Team and co-worker, Training and career development, Compensation
	Medium	Organisation policies, Workplace well-being, Communication, Work life balance
31-40	Weak	Work environment, Leadership, Team and co-worker, Compensation, Organisation policies, Workplace well-being, Communication, Work life balance
51-60	Weak	Work environment, Team and co-worker, Training and career development, Organisation policies, Workplace well-being, Work life balance

Table 9 indicates the correlation level of different factors among different age groups to their employee engagement. For further explanations and processes, Table 10 to Table 14 would have a detailed statistic

Table 10 – Correlation of different factors and engagement level (Below 20)

Correlations		
		Q20 Engagement level
Q19.1 Work environment	Pearson Correlation	-0.040
	Sig. (2-tailed)	0.699
	N	96
Q19.2 Leadership	Pearson Correlation	0.105
	Sig. (2-tailed)	0.308
	N	96
Q19.3 Team and co-worker	Pearson Correlation	0.026
	Sig. (2-tailed)	0.805
	N	96
Q19.4 Training and career development	Pearson Correlation	0.072
	Sig. (2-tailed)	0.486
	N	96
Q19.5 Compensation	Pearson Correlation	0.105
	Sig. (2-tailed)	0.309
	N	96
Q19.6 Organization policies	Pearson Correlation	-0.034
	Sig. (2-tailed)	0.743
	N	96
Q19.7 Workplace well-being	Pearson Correlation	0.130
	Sig. (2-tailed)	0.207
	N	96
Q19.8 Communication	Pearson Correlation	0.135
	Sig. (2-tailed)	0.190
	N	96
Q19.9 Work life balance	Pearson Correlation	0.102
	Sig. (2-tailed)	0.322
** . Correlation is significant at the 0.01 level (2-tailed).		

Based on the table above, the result shows that in the correlation analysis, the 9 different factors might not have a significant relation to the employee engagement of the respondents.

Table 11 - Correlation of different factors and engagement level (21 to 30)

Correlations		
		Q20 Engagement level
Q19.1 Work environment	Pearson Correlation	.328**
	Sig. (2-tailed)	0.001
	N	97
Q19.2 Leadership	Pearson Correlation	.315**
	Sig. (2-tailed)	0.002
	N	97
Q19.3 Team and co-worker	Pearson Correlation	.320**
	Sig. (2-tailed)	0.001
	N	97
Q19.4 Training and career development	Pearson Correlation	.288**
	Sig. (2-tailed)	0.004
	N	97
Q19.5 Compensation	Pearson Correlation	.260**
	Sig. (2-tailed)	0.010
	N	97
Q19.6 Organization policies	Pearson Correlation	.436**
	Sig. (2-tailed)	0.000
	N	97
Q19.7 Workplace well-being	Pearson Correlation	.407**
	Sig. (2-tailed)	0.000
	N	97
Q19.8 Communication	Pearson Correlation	.429**
	Sig. (2-tailed)	0.000
	N	97
Q19.9 Work life balance	Pearson Correlation	.415**
	Sig. (2-tailed)	0.000
	N	97
**. Correlation is significant at the 0.01 level (2-tailed).		

Based on the table above, the result shows that in the correlation analysis, the 9 different factors have a significant relation to the employee engagement of the respondents, and all the results show there has a positive relationship between all the factors to the employee engagement. Work environment, leadership, team and co-worker, training and career development and compensation have a weak correlation with the employee engagement; Organisation policies, workplace well-being, communication and work life balance have a medium correlation.

Table 12 - Correlation of different factors and engagement level (31 to 40)

Correlations		
		Q20 Engagement level
Q19.1 Work environment	Pearson Correlation	.244*
	Sig. (2-tailed)	0.017
	N	95
Q19.2 Leadership	Pearson Correlation	.252*
	Sig. (2-tailed)	0.014
	N	95
Q19.3 Team and co-worker	Pearson Correlation	.268**
	Sig. (2-tailed)	0.009
	N	95
Q19.4 Training and career development	Pearson Correlation	0.201
	Sig. (2-tailed)	0.051
	N	95
Q19.5 Compensation	Pearson Correlation	.205*
	Sig. (2-tailed)	0.046
	N	95
Q19.6 Organization policies	Pearson Correlation	.222*
	Sig. (2-tailed)	0.030
	N	95
Q19.7 Workplace well-being	Pearson Correlation	.281**
	Sig. (2-tailed)	0.006
	N	95
Q19.8 Communication	Pearson Correlation	.347**
	Sig. (2-tailed)	0.001
	N	95
Q19.9 Work life balance	Pearson Correlation	.310**
	Sig. (2-tailed)	0.002
	N	95
**. Correlation is significant at the 0.01 level (2-tailed).		
*. Correlation is significant at the 0.05 level (2-tailed).		

Based on the table above, the result shows that in the correlation analysis, the factors included work environment, leadership, team and co-worker, compensation, organization policies, workplace well-being, communication and work life balance have a significant relation to the employee engagement of the respondents, and all the results of these 8 factors show there has a positive relationship between all the factors to the employee engagement with a medium correlation level.

Table 13 - Correlation of different factors and engagement level (41 to 50)

Correlations		
		Q20 Engagement level
Q19.1 Work environment	Pearson Correlation	0.004
	Sig. (2-tailed)	0.971
	N	95
Q19.2 Leadership	Pearson Correlation	0.060
	Sig. (2-tailed)	0.566
	N	95
Q19.3 Team and co-worker	Pearson Correlation	0.094
	Sig. (2-tailed)	0.367
	N	95
Q19.4 Training and career development	Pearson Correlation	-0.069
	Sig. (2-tailed)	0.509
	N	95
Q19.5 Compensation	Pearson Correlation	0.084
	Sig. (2-tailed)	0.420
	N	95
Q19.6 Organization policies	Pearson Correlation	0.064
	Sig. (2-tailed)	0.537
	N	95
Q19.7 Workplace well-being	Pearson Correlation	0.053
	Sig. (2-tailed)	0.607
	N	95
Q19.8 Communication	Pearson Correlation	-0.068
	Sig. (2-tailed)	0.515
	N	95
Q19.9 Work life balance	Pearson Correlation	0.058
	Sig. (2-tailed)	0.577
	N	95

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

Based on the table above, the result shows that in the correlation analysis, all the 9 different factors did not have a significant relation to the employee engagement of the respondents.

Table 14 - Correlation of different factors and engagement level (51 to 60)

Correlations		
		Q20 Engagement level
Q19.1 Work environment	Pearson Correlation	.260*
	Sig. (2-tailed)	0.012
	N	92
Q19.2 Leadership	Pearson Correlation	0.181
	Sig. (2-tailed)	0.085
	N	92
Q19.3 Team and co-worker	Pearson Correlation	.274**
	Sig. (2-tailed)	0.008
	N	92
Q19.4 Training and career development	Pearson Correlation	.220*
	Sig. (2-tailed)	0.035
	N	92
Q19.5 Compensation	Pearson Correlation	0.202
	Sig. (2-tailed)	0.054
	N	92
Q19.6 Organization policies	Pearson Correlation	.288**
	Sig. (2-tailed)	0.005
	N	92
Q19.7 Workplace well-being	Pearson Correlation	.251*
	Sig. (2-tailed)	0.016
	N	92
Q19.8 Communication	Pearson Correlation	0.144
	Sig. (2-tailed)	0.171
	N	92
Q19.9 Work life balance	Pearson Correlation	.205*
	Sig. (2-tailed)	0.050
	N	92
**. Correlation is significant at the 0.01 level (2-tailed).		
*. Correlation is significant at the 0.05 level (2-tailed).		

Based on the table above, the result shows that in the correlation analysis, the factors included work environment, team and co-worker, training and career development, organization policies, workplace well-being, and work life balance have a significant relation to the employee

engagement of the respondents, and all the results of these 6 factors show there has a positive relationship between all the factors to the employee engagement with a weak correlation level.

4.2.3 Regression Analysis

Regression analysis can be used to determine trends in the data to make predictions. It is an advanced tool to study the significant relationship between dependent variables and multi-independent variables and the influence strength. Through model summary, variance analysis and coefficient analysis, combined with the graph display equation, the influence of different measurement variables on the scale is analysed.

To test this research question by determining the relationship between each different factors between employee engagement of different generation as well as hypotheses 1 through 9. Regression analysis was used to test the relationship and strength among variables.

The researcher would conduct the regression analysis for the different age group separately in order to figure out which factor(s) would be the reason to affect the respondents' employee engagement. Table 15 below shown the final results of the regression test among different age groups and section 4.2.3.1 to 4.2.3.5 have demonstrated the processes of getting the final results.

Table 15 – Different factors effects on the age groups

AGE GROUPS	POSITIVE EFFECT	NEGATIVE EFFECT
BELOW 20	Leadership, Compensation	Work environment, Organisation policies
21-30	Organisation policies	-
31-40	Communication	-
41-50	-	-
51-60	Organisation policies	-

Based on Table 15, it indicated the factors which have positive and negative effect among different age group to their employee engagement to the workplaces.

4.2.3.1 Age group below 20

Table 16 - Regression Analysis of the Employee Engagement (Below 20: First round)

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Q19.9 Work life balance, Q19.1 Work environment, Q19.3 Team and co-worker, Q19.6 Organization policies, Q19.7 Workplace well-being, Q19.2 Leadership, Q19.8 Communication, Q19.5 Compensation, Q19.4 Training and career development ^b		Enter

a. Dependent Variable: Q20 Engagement level

b. All requested variables entered.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.365 ^a	0.133	0.042	1.300

a. Predictors: (Constant), Q19.9 Work life balance, Q19.1 Work environment, Q19.3 Team and co-worker, Q19.6 Organization policies, Q19.7 Workplace well-being, Q19.2 Leadership, Q19.8 Communication, Q19.5 Compensation, Q19.4 Training and career development

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.332	9	2.481	1.468	.173 ^b
	Residual	145.408	86	1.691		
	Total	167.740	95			

a. Dependent Variable: Q20 Engagement level

b. Predictors: (Constant), Q19.9 Work life balance, Q19.1 Work environment, Q19.3 Team and co-worker, Q19.6 Organization policies, Q19.7 Workplace well-being, Q19.2 Leadership, Q19.8 Communication, Q19.5 Compensation, Q19.4 Training and career development

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.438	0.504		4.834	0.000		
	Q19.1 Work enviroment	-0.465	0.193	-0.426	-2.414	0.018	0.324	3.089
	Q19.2 Leadership	0.485	0.284	0.403	1.710	0.091	0.182	5.505
	Q19.3 Team and co-worker	-0.328	0.237	-0.274	-1.383	0.170	0.257	3.885
	Q19.4 Training and career development	-0.084	0.293	-0.075	-0.286	0.776	0.147	6.809
	Q19.5 Compensation	0.553	0.259	0.514	2.136	0.036	0.174	5.741
	Q19.6 Organization policies	-0.318	0.216	-0.275	-1.474	0.144	0.289	3.460
	Q19.7 Workplace well-being	0.009	0.200	0.009	0.043	0.966	0.257	3.896
	Q19.8 Communication	0.303	0.242	0.280	1.248	0.215	0.200	5.007
	Q19.9 Work life balance	-0.166	0.258	-0.157	-0.643	0.522	0.170	5.891

a. Dependent Variable: Q20 Engagement level

After series of re-run, all the following independents variable of employee engagement were not significant with higher than 0.05. The table of the adjusted R square was 0.042 which means the variability in the employee engagement that are representing was 4.2%. The final significate value was 0.173 that meant the result was not statistically significant.

Table 17 - Regression Analysis of the Employee Engagement (Below 20: Final round)

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Q19.6 Organization policies, Q19.1 Work enviroment, Q19.2 Leadership, Q19.5 Compensation ^b		Enter

a. Dependent Variable: Q20 Engagement level

b. All requested variables entered.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.329 ^a	0.108	0.069	1.282
a. Predictors: (Constant), Q19.6 Organization policies, Q19.1 Work enviroment, Q19.2 Leadership, Q19.5 Compensation				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.184	4	4.546	2.766	.032 ^b
	Residual	149.555	91	1.643		
	Total	167.740	95			
a. Dependent Variable: Q20 Engagement level						
b. Predictors: (Constant), Q19.6 Organization policies, Q19.1 Work environment, Q19.2 Leadership, Q19.5 Compensation						

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.245	0.452		4.970	0.000		
	Q19.1 Work environment	-0.421	0.179	-0.385	-2.347	0.021	0.364	2.749
	Q19.2 Leadership	0.438	0.202	0.364	2.167	0.033	0.348	2.873
	Q19.5 Compensation	0.436	0.189	0.405	2.308	0.023	0.318	3.148
	Q19.6 Organization policies	-0.419	0.188	-0.362	-2.230	0.028	0.371	2.692
a. Dependent Variable: Q20 Engagement level								

At the final round of regression test, the researcher has taken out all the independent variables that with a significant value higher than 0.05, and the significant value in the final result is 0.032. Also, the VIF were all below than 4, which means there was no significant multicollinearity in the regression analysis. The standardized coefficient for leadership is 0.364, according to the research done by Ravikumar (2013), the standardized coefficient of leadership and employee engagement is 0.215, by comparing the results of these two researches, in this study, the leadership has a high standard. For the compensation, the standardized coefficient is 0.405, According to the research done by Othman et al in 2019 (Othman et al., 2019), the standardized coefficient of compensation and employee engagement is 0.290, by comparing the results of these two researches, in this study, the compensation has a high standard. Therefore, work environment and leadership had a positive effect on the employee engagement, and work environment organization policies had a negative effect on the employee engagement.

4.2.3.2 Age group of 21-30

Table 18 - Regression Analysis of the Employee Engagement (21 to 30: First round)

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Q19.9 Work life balance, Q19.1 Work enviroment, Q19.3 Team and co-worker, Q19.5 Compensation, Q19.4 Training and career development, Q19.2 Leadership, Q19.7 Workplace well-being, Q19.6 Organization policies, Q19.8 Communication ^b		Enter
a. Dependent Variable: Q20 Engagement level			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.546 ^a	0.299	0.226	1.187
a. Predictors: (Constant), Q19.9 Work life balance, Q19.1 Work enviroment, Q19.3 Team and co-worker, Q19.5 Compensation, Q19.4 Training and career development, Q19.2 Leadership, Q19.7 Workplace well-being, Q19.6 Organization policies, Q19.8 Communication				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	52.181	9	5.798	4.116	.000 ^b
	Residual	122.562	87	1.409		
	Total	174.742	96			
a. Dependent Variable: Q20 Engagement level						
b. Predictors: (Constant), Q19.9 Work life balance, Q19.1 Work enviroment, Q19.3 Team and co-worker, Q19.5 Compensation, Q19.4 Training and career development, Q19.2 Leadership, Q19.7 Workplace well-being, Q19.6 Organization policies, Q19.8 Communication						

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.539	0.493		1.092	0.278		
	Q19.1 Work environment	0.298	0.176	0.256	1.694	0.094	0.352	2.839
	Q19.2 Leadership	-0.043	0.205	-0.034	-0.208	0.836	0.306	3.271
	Q19.3 Team and co-worker	0.129	0.175	0.106	0.739	0.462	0.395	2.531
	Q19.4 Training and career development	-0.440	0.208	-0.365	-2.115	0.037	0.271	3.696
	Q19.5 Compensation	-0.364	0.164	-0.340	-2.219	0.029	0.344	2.910
	Q19.6 Organization policies	0.528	0.226	0.435	2.339	0.022	0.234	4.281
	Q19.7 Workplace well-being	0.155	0.223	0.130	0.698	0.487	0.232	4.301
	Q19.8 Communication	0.277	0.218	0.247	1.266	0.209	0.212	4.723
	Q19.9 Work life balance	0.108	0.204	0.089	0.528	0.599	0.287	3.490
a. Dependent Variable: Q20 Engagement level								

After series of re-run, all the following independents variable of employee engagement were not significant with higher than 0.05. The table of the adjusted R square was 0.226 which means the variability in the employee engagement that are representing was 22.6%. The final significate value was 0.000 that meant the result was highly statistically significant.

Table 19 - Regression Analysis of the Employee Engagement (21 to 30: Final round)

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Q19.6 Organization policies ^b		Enter
a. Dependent Variable: Q20 Engagement level			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.436 ^a	0.190	0.181	1.221
a. Predictors: (Constant), Q19.6 Organization policies				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.188	1	33.188	22.273	.000 ^b
	Residual	141.554	95	1.490		
	Total	174.742	96			
a. Dependent Variable: Q20 Engagement level						
b. Predictors: (Constant), Q19.6 Organization policies						

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.080	0.415		2.604	0.011		
	Q19.6 Organization policies	0.530	0.112	0.436	4.719	0.000	1.000	1.000
a. Dependent Variable: Q20 Engagement level								

At the final round of regression test, the researcher has taken out all the independent variables that with a significance value higher than 0.05, and the significance value in the final result is 0.000. The standardized coefficient is 0.436, according to the research done by Othman et al. (2019), the standardized coefficient of organisation policies and employee engagement is -0.109, by comparing the results if these two researches, organisation policies has a very high standard. Also, the VIF was 1, which means there was no significant multicollinearity in the regression analysis. Therefore, organization policies had a positive effect on the employee engagement.

4.2.3.3 Age group of 31-40

Table 20 - Regression Analysis of the Employee Engagement (31 to 40: First round)

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Q19.9 Work life balance, Q19.3 Team and co-worker, Q19.1 Work enviroment, Q19.4 Training and career development, Q19.2 Leadership, Q19.5 Compensation, Q19.8 Communication, Q19.7 Workplace well-being, Q19.6 Organization policies ^b		Enter
a. Dependent Variable: Q20 Engagement level			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.413 ^a	0.170	0.082	1.390
a. Predictors: (Constant), Q19.9 Work life balance, Q19.3 Team and co-worker, Q19.1 Work enviroment, Q19.4 Training and career development, Q19.2 Leadership, Q19.5 Compensation, Q19.8 Communication, Q19.7 Workplace well-being, Q19.6 Organization policies				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.708	9	3.745	1.938	.057 ^b
	Residual	164.250	85	1.932		
	Total	197.958	94			
a. Dependent Variable: Q20 Engagement level						
b. Predictors: (Constant), Q19.9 Work life balance, Q19.3 Team and co-worker, Q19.1 Work enviroment, Q19.4 Training and career development, Q19.2 Leadership, Q19.5 Compensation, Q19.8 Communication, Q19.7 Workplace well-being, Q19.6 Organization policies						

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.345	0.578		2.324	0.022		
	Q19.1 Work environment	0.179	0.197	0.125	0.907	0.367	0.517	1.935
	Q19.2 Leadership	0.061	0.212	0.043	0.288	0.774	0.432	2.314
	Q19.3 Team and co-worker	0.181	0.204	0.132	0.888	0.377	0.446	2.245
	Q19.4 Training and career development	-0.082	0.235	-0.057	-0.350	0.727	0.371	2.698
	Q19.5 Compensation	-0.035	0.212	-0.026	-0.164	0.870	0.395	2.534
	Q19.6 Organization policies	-0.423	0.288	-0.316	-1.472	0.145	0.212	4.726
	Q19.7 Workplace well-being	-0.174	0.250	-0.132	-0.698	0.487	0.271	3.687
	Q19.8 Communication	0.522	0.241	0.405	2.162	0.033	0.279	3.589
	Q19.9 Work life balance	0.327	0.268	0.250	1.221	0.225	0.233	4.285
a. Dependent Variable: Q20 Engagement level								

After series of re-run, all the following independents variable of employee engagement were not significant with higher than 0.05. The table of the adjusted R square was 0.082 which means the variability in the employee engagement that are representing was 8.2%. The final significate value was 0.057 that meant the result was not statistically significant.

Table 21 - Regression Analysis of the Employee Engagement (31 to 40: Final round)

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Q19.8 Communication ^b		Enter
a. Dependent Variable: Q20 Engagement level			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.347 ^a	0.120	0.111	1.368
a. Predictors: (Constant), Q19.8 Communication				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.805	1	23.805	12.712	.001 ^b
	Residual	174.153	93	1.873		
	Total	197.958	94			
a. Dependent Variable: Q20 Engagement level						
b. Predictors: (Constant), Q19.8 Communication						

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.688	0.441		3.826	0.000		
	Q19.8 Communication	0.447	0.125	0.347	3.565	0.001	1.000	1.000
a. Dependent Variable: Q20 Engagement level								

At the final round of regression test, the researcher has taken out all the independent variables that with a significant value higher than 0.05, and the significant value in the final result is 0.001. According to the research done by Krishnan & Wesley (2013), the standardized coefficient of communication and employee engagement is 0.842, by comparing the results if these two researches, in this study, the leadership has a moderate standard. Also, the VIF was 1, which means there was no significant multicollinearity in the regression analysis. Therefore, communication had a positive effect on the employee engagement.

4.2.3.4 Age group of 41-50

Table 22 - Regression Analysis of the Employee Engagement (41 to 50: First round)

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Q19.9 Work life balance, Q19.2 Leadership, Q19.1 Work enviroment, Q19.5 Compensation, Q19.4 Training and career development, Q19.3 Team and co-worker, Q19.8 Communication, Q19.6 Organization policies, Q19.7 Workplace well-being ^b		Enter
a. Dependent Variable: Q20 Engagement level			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.350 ^a	0.122	0.029	1.424
a. Predictors: (Constant), Q19.9 Work life balance, Q19.2 Leadership, Q19.1 Work enviroment, Q19.5 Compensation, Q19.4 Training and career development, Q19.3 Team and co-worker, Q19.8 Communication, Q19.6 Organization policies, Q19.7 Workplace well-being				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.016	9	2.668	1.315	.241 ^b
	Residual	172.468	85	2.029		
	Total	196.484	94			
a. Dependent Variable: Q20 Engagement level						
b. Predictors: (Constant), Q19.9 Work life balance, Q19.2 Leadership, Q19.1 Work enviroment, Q19.5 Compensation, Q19.4 Training and career development, Q19.3 Team and co-worker, Q19.8 Communication, Q19.6 Organization policies, Q19.7 Workplace well-being						

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.744	0.564		4.865	0.000		
	Q19.1 Work environment	0.040	0.200	0.034	0.200	0.842	0.359	2.787
	Q19.2 Leadership	0.116	0.214	0.090	0.544	0.588	0.379	2.637
	Q19.3 Team and co-worker	0.344	0.254	0.263	1.355	0.179	0.274	3.645
	Q19.4 Training and career development	-0.380	0.225	-0.310	-1.686	0.095	0.305	3.281
	Q19.5 Compensation	0.139	0.211	0.120	0.659	0.511	0.313	3.192
	Q19.6 Organization policies	0.179	0.258	0.149	0.693	0.490	0.224	4.460
	Q19.7 Workplace well-being	0.265	0.252	0.246	1.051	0.296	0.189	5.294
	Q19.8 Communication	-0.615	0.237	-0.545	-2.596	0.011	0.234	4.274
	Q19.9 Work life balance	0.024	0.200	0.022	0.119	0.906	0.311	3.212
a. Dependent Variable: Q20 Engagement level								

After series of re-run, all the following independents variable of employee engagement were not significant with higher than 0.05. The table of the adjusted R square was 0.029 which means the variability in the employee engagement that are representing was 2.9%. The final significate value was 0.241 that meant the result was not statistically significant.

Table 23 - Regression Analysis of the Employee Engagement (41 to 50: Final round)

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Q19.8 Communication, Q19.3 Team and co-worker ^b		Enter
a. Dependent Variable: Q20 Engagement level			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.238 ^a	0.057	0.036	1.419
a. Predictors: (Constant), Q19.8 Communication, Q19.3 Team and co-worker				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.165	2	5.582	2.771	.068 ^b
	Residual	185.319	92	2.014		
	Total	196.484	94			
a. Dependent Variable: Q20 Engagement level						
b. Predictors: (Constant), Q19.8 Communication, Q19.3 Team and co-worker						

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.814	0.477		5.902	0.000		
	Q19.3 Team and co-worker	0.469	0.208	0.358	2.257	0.026	0.407	2.459
	Q19.8 Communication	-0.388	0.179	-0.344	-2.165	0.033	0.407	2.459
a. Dependent Variable: Q20 Engagement level								

At the final round of regression test, the researcher has taken out all the independent variables that with a significant value higher than 0.05, and the significant value in the final result is 0.068. Based on the result in the correlation test and the regression test, the researcher determined that the 9 factors at the age range from 41-50 had no significant relationship on the employee engagement.

4.2.3.5 Age group of 51-60

Table 24 - Regression Analysis of the Employee Engagement (51 to 60: First round)

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Q19.9 Work life balance, Q19.3 Team and co-worker, Q19.1 Work enviroment, Q19.5 Compensation, Q19.2 Leadership, Q19.6 Oganization policies, Q19.8 Communication, Q19.7 Workplace well-being, Q19.4 Training and career development ^b		Enter
a. Dependent Variable: Q20 Engagement level			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.402 ^a	0.161	0.069	1.352
a. Predictors: (Constant), Q19.9 Work life balance, Q19.3 Team and co-worker, Q19.1 Work enviroment, Q19.5 Compensation, Q19.2 Leadership, Q19.6 Oganization policies, Q19.8 Communication, Q19.7 Workplace well-being, Q19.4 Training and career development				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.848	9	3.205	1.753	.090 ^b
	Residual	149.892	82	1.828		
	Total	178.739	91			
a. Dependent Variable: Q20 Engagement level						
b. Predictors: (Constant), Q19.9 Work life balance, Q19.3 Team and co-worker, Q19.1 Work enviroment, Q19.5 Compensation, Q19.2 Leadership, Q19.6 Oganization policies, Q19.8 Communication, Q19.7 Workplace well-being, Q19.4 Training and career development						

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.023	0.546		3.704	0.000		
	Q19.1 Work environment	0.259	0.161	0.218	1.604	0.112	0.554	1.806
	Q19.2 Leadership	-0.078	0.200	-0.068	-0.390	0.697	0.336	2.974
	Q19.3 Team and co-worker	0.291	0.195	0.243	1.495	0.139	0.387	2.586
	Q19.4 Training and career development	-0.019	0.227	-0.018	-0.085	0.932	0.234	4.282
	Q19.5 Compensation	0.000	0.195	0.000	-0.002	0.999	0.412	2.427
	Q19.6 Organization policies	0.340	0.212	0.295	1.602	0.113	0.302	3.313
	Q19.7 Workplace well-being	0.066	0.234	0.056	0.280	0.780	0.255	3.923
	Q19.8 Communication	-0.308	0.219	-0.291	-1.405	0.164	0.239	4.179
	Q19.9 Work life balance	-0.016	0.202	-0.014	-0.079	0.937	0.315	3.178
a. Dependent Variable: Q20 Engagement level								

After series of re-run, all the following independents variable of employee engagement were not significant with higher than 0.05. The table of the adjusted R square was 0.161 which means the variability in the employee engagement that are representing was 16.1%. The final significate value was 0.090 that meant the result was not statistically significant.

Table 25 - Regression Analysis of the Employee Engagement (51 to 60: Final round)

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Q19.6 Organization policies ^b		Enter
a. Dependent Variable: Q20 Engagement level			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.288 ^a	0.083	0.072	1.350
a. Predictors: (Constant), Q19.6 Organization policies				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.775	1	14.775	8.110	.005 ^b
	Residual	163.964	90	1.822		
	Total	178.739	91			
a. Dependent Variable: Q20 Engagement level						
b. Predictors: (Constant), Q19.6 Organization policies						

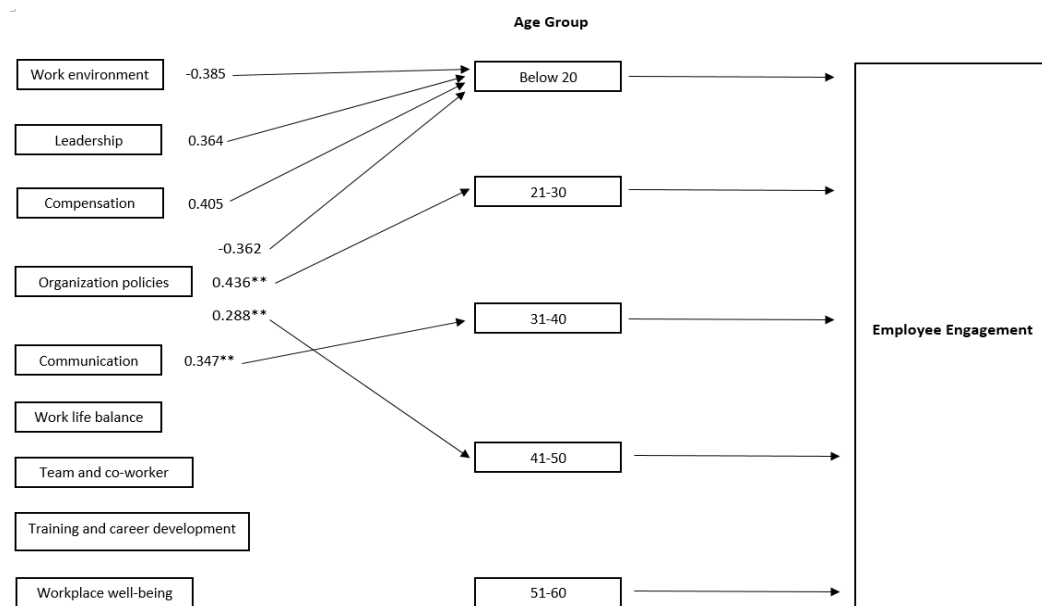
Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.713	0.394		6.884	0.000		
	Q19.6 Organization policies	0.331	0.116	0.288	2.848	0.005	1.000	1.000
a. Dependent Variable: Q20 Engagement level								

At the final round of regression test, the researcher has taken out all the independent variables that with a significance value higher than 0.05, and the significance value in the final result is 0.005. The standardized coefficient is 0.288, according to the research done by Othman et al. (2019), the standardized coefficient of organisation policies and employee engagement is -0.109, by comparing the results if these two researches, organisation policies has a very high standard. Also, the VIF was 1, which means there was no significant multicollinearity in the regression analysis. Therefore, organization policies had a positive effect on the employee engagement.

Table 26 – Comparison of the standardized coefficients

Factors	Standardized coefficient in this research	Standardized coefficient in other researches	Significant level
Compensation	0.405	0.29	High
Leadership	0.364	0.215	High
Organisation policies			
a) Age range 21-30	0.43	-0.109	Very high
b) Age range 51-60	0.288	-0.109	Very high
Communication	0.347	0.842	Moderate

Based on the above table, the researcher has compared the standardized coefficients in this research with the other researches, in order to get a better understanding of the result in this study.

**Figure 23 – Result of the research model****Table 27 – Results of the hypothesizes**

Hypothesis	Result
1 Working environment has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China	Support
2 Leadership has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China	Support
3 Team and co-worker has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China	Not Support
4 Training and career development has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China	Not Support
5 Compensation has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China	Support
6 Organizational policies has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China	Support
7 Workplace well-being has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China	Not Support
8 Communication has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China	Support
9 Work life balance has a significant relationship/ effect of different generations on their employee engagement in the manufacturing industry in South China	Not Support

4.3 Section conclusion

In this section, the researcher presented a summary of results after the collection of data through the designed questionnaire by using descriptive and inferential statistics. The data had been processed and the relationships between the independent variable and the employee engagement are examined. The final result showed that working environment, leadership, compensation, organisational policies and communication have a significant impact on the employee engagement among different age group in the manufacturing industry in South China, and Table 27 has indicated the hypothesis test results. Based on the results above, the researcher would continue for further discussion and recommendation in the following chapter.

Chapter 5 – Conclusions and Recommendations

In this chapter, the researcher would review and summarize literatures and analyses of the entire study that discussed in the above chapters, the results and findings would be used for the discussion of the conclusion and recommendation for this study.

5.1 Discussion

5.1.1 Demographics

The respondents in this study are mainly female, which is 51%, slightly higher than male, and the distribution among the generation groups is even, 70.1% of the respondents are married and 70% have child or children. The education level of the respondents that have completed junior high school, which is 48%. The data collected indicated that most of the respondents in this study are less educated, married and have child or children in the manufacturing industry in South China.

5.1.2 Descriptive statistics of the different factors

For the descriptive statistic, it found that the top four factors that ranked by the respondents from different generations which they thought are important to them, the most important factor is compensation and it followed by work environment, team and co-worker and leadership. The recognition towards employee's contribution and thus rewards disbursed are both indispensable antecedents of employee engagement (Saks & Rotman, 2006). The means of the satisfactory level of all the factors by all the respondents to their current workplace were all above 3 out of 5, which meant all the respondents were satisfied with their current workplace situation.

The results found that different generation had different preference when they were contributing their employee engagement into their workplace. All of the generation are focus on the

compensation and work environment, while the age range below 20, 31-40 and 41-50 were focus on leadership and the age group 21-30 and 51-60 were focused on team and co-worker. For the compensation, from the data collected, the researchers found that 70% of the respondents have kids, which meant the compensation were important to the respondents since they have the economic needs and pressure because of their family and kids, when the company has a good salary package, the employee engagement of the employees would be higher. For the work environment, the researcher found that all the respondents in this study were considered it was also an important factor to them to contribute their engagement to their workplace, since Deci & Ryan (1987) had suggested that a supportive working environment is one which takes employees' needs and feelings into consideration, provides positive feedback and encourages them to actively raise their concerns in order to help develop new skills and solve work-related issues.

5.1.3 Inferential statistics of the satisfactory of different factors

For the inferential statistics, the reliability analysis has shown that the question was acceptable with a result of 0.943, it was lied between the range of 0.6 to 0.95, and no questions had to be removed from the questionnaire. The correlation test of the different factors toward to employee engagement in different age groups found that for age group below 20 and 41-50 were not having a significant relationship between the different factors and employee engagement. For age group 21-30, all factors were having a positive significant relationship; For age group 31-40, all factors except training and career development, were all having a positive significant relationship. For age group 51-60, except compensation, leadership and communication, all the remaining factors were having a positive significant relationship.

Table 28 – Different factors effects on the age groups

AGE GROUPS	POSITIVE EFFECT	NEGATIVE EFFECT
BELOW 20	Leadership, Compensation	Work environment, Organisation policies
21-30	Organisation policies	-
31-40	Communication	-
41-50	-	-
51-60	Organisation policies	-

For the regression test, the results indicated that work environment, leadership, compensation, organization policies and communication have different impact on the employee engagement in different age group. Based on the above table, the researcher has the following conclusions for different age groups:

For the age group below 20, work environment and organization policies were having a negative effect on employee engagement, while leadership and compensation were having a positive effect on employee engagement in this age group. The results showed that leadership and compensation had a great impact for this age group and their performances of employee engagement would be affected by these two factor in long-term, while work environment and organisation had a negative effect on their employee engagement, which means these two factors would have little effect on their engagement level. The reason for this age group to focus on their compensation is due to the increasing inflation rate, according to South China Morning Post (Mullen, 2020), the inflation rate has increased from 2.4 in 2019 to 2.7% in July 2020 due to the COVID-19 influence and the food shortage problem. Therefore, the respondents of this age group were concerned about the compensation due to the unstable economic situation. For the leadership, the reason why the employees in this age group is due to the generation change in the past decades, the employees within this age range are more focusing on effective two-way communication between their team

leaders or their seniors, they are more concerned how the relationship between their bosses and themselves. Therefore, a good leadership would have a great influence of their employee engagement in this age group.

For the age group 21-30 and 51-60, organization policies were having a positive effect on the employee engagement, which has a same result with the research by Woodruffe (2005), he stated that good organisational policies are those best promote flexible working arrangements to help employees in balancing employee's work and home environments, such organisations tend to have employees with greater engagement. The reason why organisation policies are important is the organisation policies can help them to know where to ask for help and they can secure themselves through the rules and regulations that set by the companies which are aligned with the legal laws of the countries. Besides, comprehensive organisation policies could help them to defend their employers if there were somethings unfair or illegal treatment happened. For age group range 21-30 are focused on whether they are having a fair treatment in their workplace, which they are concerned about the problem of fairness; while for age group 51-60, due to their age, the company might use some illegal actions to terminate them without any reason, the organisation policies could protect them when this situation exists.

For the age group 31-40, communication was having a positive effect on the employee engagement, the finding has the same result with the research that done by Bakker & Demerouti (2008), which means an effective communication does have an important influence on the employee engagement among this age group. The reason is since the employees in this age group have already had a number of years of experience in the industry, therefore, they would be more focused on the communication between their bosses and co-workers, and respect would be the main consideration. An effective communication would make them feel they are important to the workplace and create a good atmosphere to the workplace.

5.2 Recommendation

Based on the above findings which indicated that different factors had positive and negative influences among the different generations while they are contributing their engagement into their workplaces. The companies in manufacturing industry in South China should pay more attention and put more effort on these aspects in order to achieve a higher or better employee engagement.

For leadership, the management level staff in the companies in the manufacturing industry in South China should provide more supporting and give more motivation to the employees in order to understand the needs and suggestions. Also, delegation is an important element to provide a better connection between the management level staff and the employees, since this action can make the employee feel that they are being trust by their leaders and their sense of belonging to the workplaces would be increase. Therefore, the leaders should focus more on their teammates and build up the connections with them.

For compensation, a good salary package would definitely increase the employee's engagement to their workplaces, therefore, by comparing the companies' current compensation package and the market average rate, to see what can the companies offer, and design a better remuneration package for the employees.

For organisation policies, the companies should review the companies' organisation polices regularly, by comparing with the government up-to-date rules and regulations, to make sure the company policies are fully covered the benefits and the staff are protected under the policies.

For communication, the annual general meeting should be conducted in order to collect the employee's feedback about their opinion to the company. Also, regular monthly review need to be

conduct to make sure the company itself and the employees are on the same page, and the company could understand more about the needs and feelings of the employees. Besides, some small activities could be hold, to increase the engagement between the two parties, rather just the communication on the company issues, but more personal in a more relaxing way.

5.3 Conclusion

In this study, the research aim and objective had achieved successfully through the analysis the nature of the different generations and employee engagements, indicating the evaluating the effects of different factors on the employee engagement in different generations. The findings have provided a strong evidence on what would be the factors that are affecting the employee engagement among the different generations. According to the results, the researcher understood that different generations would be affected by different factors since the different generations are having different preference and values, and these factors should be put in consideration when the companies in the manufacturing industry in South China are planning to enhance the employee engagement of their employee, these include leadership, compensation, organisation policies and communication. The companies in the manufacturing industry in South China should be more focus on the employee's engagement towards to the companies, and should treat their staff as an asset to their companies, especially under this pandemic and the intense competition of talent, providing a better place and increase the satisfactory level of the employees to the companies could increase the efficiency, productivity and quality of products in both short run and long run. Also, it can help to retain or recruit competitive and productive employees. To conclude, the management should pay attention to the employee's needs and suggestions, in order to provide a better place for them to work and increase their sense of belonging to their workplace; review the satisfactory level of the employees to the workplace, to make adjustment to satisfy the employees with a reasonable and acceptable level.

References

- Allen, T., (2001). *Family-Supportive Work Environments: The Role of Organizational Perceptions*. *Journal of Vocational Behavior*, 58(3), pp.414-435. (Accessed 2nd June 2020)
- Anitha, J. (2014). Determinants of employee engagement and their impact on employee performance. *International Journal of Productivity and Performance Management*, Vol. 63 No. 3, pp. 308-323)
- Arshad, H., & Puteh, F. (2015). Determinants of turnover intention among employees. *Journal of Administrative Science*, 12(2), 1-15.
- Baike.baidu.com (2019). 华南地区 Available at <https://baike.baidu.com/item/华南地区/7596721> (Accessed 5th November 2019).
- Bakker, A.B. and Demerouti, E. (2008), "Towards a model of work engagement", *Career Development International*, Vol. 13 No. 3, pp. 209-223.
- Bhatnagar, J., (2007). *Talent management strategy of employee engagement in Indian ITES employees: key to retention*. *Employee Relations*, 29(6), pp.640-663.
- Blessing White. (2006). Employee Engagement Report 2006 BlessingWhite, Inc. Princeton, New Jersey. Available at: www.blessingwhite.com (Accessed 13th February 2020)
- Bonnie. T (2001). Generation Next. Available at: <https://adage.com/article/news/generation/55731> (Accessed 13th February 2020).
- Bowen, G., 2009. Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 9(2), pp.27-40.
- Chandani, A., Mehta, M., Mall, A. and Khokhar, V. (2016) Employee Engagement: A Review Paper on Factors Affecting Employee Engagement. *Indian Journal of Science and Technology*, 9(15). Available at: https://www.researchgate.net/profile/Mita_Mehta/publication/302915264_Employee_Engagement_A_Review_Paper_on_Factors_Affecting_Employee_Engagement/links/574fbca808ae1880a8228c36.pdf (Accessed 25th June 2020).
- CIPD. (2007) *Annual Report 2006-2007*. Available at: https://www.cipd.co.uk/Images/annual-report_2006-7_tcm18-11763.pdf (Accessed 25th September 2020).
- Cisr.mit.edu, (2017) *Building Business Value with Employee Experience*, Available at https://www.avanade.com/~/_media/asset/thinking/mit-research.pdf (Accessed 5th November 2019).

Conlon, T.J. (2004) 'Career Development Challenges for the 21st Century Workplace: A Review of the Literature', *online submission*. Available at: <https://files.eric.ed.gov/fulltext/ED492367.pdf> (Accessed 5th November 2019).

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78(1), 98–104. <https://doi.org/10.1037/0021-9010.78.1.98>

Coupland, D. (1991). Generation X: tales for an accelerated culture.

Croswell, A., (2020). *20 Simple Employee Engagement Survey Questions You Should Ask*. [online] Culture Amp Blog. Available at: <https://www.cultureamp.com/blog/employee-engagement-survey-questions/> (Accessed 13th May 2020).

Das, K.K. et al. (2014) 'A Literature Review on Compensation Management Practices', *Scholars Journal of Economics, Business and Management*, 1(10), pp. 428-433. Available at: <http://saspjournals.com/wp-content/uploads/2014/11/SJEBM-110428-433.pdf> (Accessed 5th November 2019).

Deci, E.L. and Ryan, R.M. (1987), "The support of autonomy and the control of behaviour", *Journal of Personality and Social Psychology*, Vol. 53 No. 6, pp. 1024-1037.

Dictionary.cambridge.org, (2019) *Cambridge Dictionary* Available at <https://dictionary.cambridge.org/dictionary/english-chinese-traditional/> (Accessed 5th November 2019).

Dobbs, K. (2000, April). Tires Plus takes the training high road. *Training*, 37 (4), 56-63.

Espinoza, C., Ukleja, M., & Rusch, C. (2010). *Managing the Millennials*, Hoboken, NJ: John Wiley & Sons.

Gagné, M. and Deci, E., (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), pp.331-362.

Grawitch, M.J., Gottschalk, M., and Munz, D.C. (2006) The path to a healthy workplace: A critical review linking healthy workplace practices, employee well-being, and organizational improvements, *Consulting Psychology Journal: Practice and Research* 58: 129–147.

Harter, J. K., Schmidt, F. L., Killham, E. A., & Asplund, J. W. (2006). Q12 Meta-Analysis. Gallup. Omaha, NE.

Johnson, M., & Johnson, L. (2010). *Generations, Inc.: From boomers to Linksters - managing the friction between generations at work*. New York, NY: AMACOM.

Jöreskog, K.G. (1993) 'Testing structural equation models', *Sage focus editions*, 154, pp. 294-294.

Kahn, W.A. (1990) 'Psychological conditions of personal engagement and disengagement at work', *Academy of Management Journal*, 33(4), pp. 692-724.
Doi:<https://doi.org/10.2307/256287>

Kerlinger, F. N. (1973). *Foundations of behavioral science*, New York: Holt, Rinehart and Winston.

Kress, N. (2005), "Engaging your employees through the power of communication", *Workspan*, Vol. 48 No. 5, pp. 26-36.

Krishnan, S. and Wesley, J., (2013). *A study on impact of employee communication on employee engagement level*. Available at:

https://www.researchgate.net/profile/Dr_S_Gokula_Krishnan/publication/295812195_A_STUDY_ON_IMPACT_OF_EMPLOYEE_COMMUNICATION_ON_EMPLOYEE_ENGAGEMENT_LEVEL/links/56cd826408ae059e3752baf1.pdf (Accessed 24th August 2020).

Kruse, K. (2012) *What Is Employee Engagement*. Available at:

<https://www.forbes.com/sites/kevinkruse/2012/06/22/employee-engagement-what-and-why/#9a67bc57f372> (Accessed 5th November 2019).

Lapoint, P.A., and Liprie-Spence, A. (2017). Employee Engagement: Generational Differences in The Workforce. *Journal of Organizational Psychology*, Vol. 17(5). Available at:

<https://articlegateway.com/index.php/JOP/article/view/1657/1573> (Accessed 17th July 2020).

Lee, C. et al. (2016) Employee job satisfaction and engagement: Revitalizing a changing workforce. Available at: <https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/Documents/2016-Employee-Job-Satisfaction-and-Engagement-Report.pdf> (Accessed 10th November 2019).

Levinson, C. (2018) *Definition of the Manufacturing Industry*. Available at:

<https://bizfluent.com/facts-6853113-definition-manufacturing-industry.html> (Accessed 5th November 2019).

Locke, E., & Taylor, M. (1990). Stress, coping, and the meaning of work. In A., Nord, W. R (Eds.), *Meanings of Occupational*. Lexington, KY: Lexington Books.

Malhotra, Naresh, (2004), *Marketing Research: An Applied Orientation*, 4th edition, Pearson/Prentice Hall.

Markos, S. and Sridevi, M.S. (2010) 'Employee engagement: The key to improving performance', *International journal of business and management*, 5(12), pp. 89. Available at: <https://pdfs.semanticscholar.org/0ca0/6a76e3f030dc2b58294498300c121fa4b112.pdf> (Accessed 28th October 2019).

Mason, L. and Sardone, M.A. (2019) *Building a Better Employee Experience*. Available at:

https://www.mercer.com/our-thinking/career/voice-on-talent/building-a-better-employee-experience.html?utm_source=twitter&utm_medium=social&utm_campaign=employee-experience&utm_content=NONE&utm_country=tw-merc&sf222044271=1&dysig_tid=b4fe0357c8804b419a483e9376f3d6fa&utm_leadsource=voicestorm&userid=3708&channelid=2787&channeltype=LinkedIn (Accessed 26th October 2019)

May, D.R., Gilson, R.L. and Harter, L.M. (2004) 'The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work', *Journal of Occupational and Organizational Psychology*, 77(1), pp. 11-37. DOI: <https://doi.org/10.1348/096317904322915892>

Memon, S.B. et al. (2018) 'Assessing the work engagement, work practices and work performance in banks', *Journal of Administrative and Business Studies*, 4, pp. 165-184. DOI:10.20474/jabs-4.3.5.

Men, L.,(2012). CEO credibility, perceived organizational reputation, and employee engagement. *Public Relations Review*, 38(1), pp.171-173.

Meng, J., Berger, B., Gower, K. and Heyman, W.,(2012). A Test of Excellent Leadership in Public Relations: Key Qualities, Valuable Sources, and Distinctive Leadership Perceptions. *Journal of Public Relations Research*, 24(1), pp.18-36.

Mercer, (2019) *Global Talent Trends Study: Connectivity in the Human Age 2019*. Available at: <https://www.mercer.us/our-thinking/career/global-talent-hr-trends.html> Accessed 6th August 2020).

Miles, R. H. (2001). Beyond the age of Dilbert: Accelerating corporate transformations by rapidly engaging all employees. *Organizational Dynamics* 29(4), 313-321

Milkovich, G. T., & Newman, J. M. (1996). *Compensation* (5th ed.). Homewood, IL: Irwin. Murtha, T. P., Lenway, S. A., & Bagozzi, R. P. (1998). Global mind-sets and cognitive shift in a complex multinational corporation. *Strategic Management Journal*, 19, 97–114.

Mullen, A., (2020). China Inflation Rose 2.7 Per Cent In July, Driven By Higher Food Costs. *South China Morning Post*. Available at: <https://www.scmp.com/economy/china-economy/article/3096682/china-inflation-rises-27-cent-july-driven-higher-food-costs> (Accessed 6th August 2020).

Napitupulu, D., Rahim, R., Abdullah, D., Setiawan, M., Abdillah, L., Ahmar, A., Simarmata, J., Hidayat, R., Nurdyanto, H. and Pranolo, A., (2018.) Analysis of Student Satisfaction Toward Quality of Service Facility. *Journal of Physics: Conference Series*, 954, p.012019. DOI: 10.1088/1742-6596/954/1/012019 (Accessed 8th June 2020)

Nason, Leslie J. (January 28, 1963). *"Baby Boomers, Grown Up, Storm Ivy-Covered Walls"*. *Daily Press*. Newport, Virginia. Available at: <https://www.newspapers.com/clip/19690752/daily-press/> (Accessed 28th August 2020).

Noah, Y. and Steve, M. (2012) 'Work environment and job attitude among employees in a Nigerian work organization', *Journal of Sustainable Society*, 1(2), pp. 36-43.

O'Neil, B. S., & Arendt, L. A. (2008). Psychological climate and work attitudes: The importance of telling the right story. *Journal of Leadership & Organizational Studies*, 14, 353-370

Othman, R., Rapi, R., Alias, N., Jahya, A. and Loon, K.,(2019). *Factors Affecting Employee Engagement: A Study among Employees in the Malaysian Construction Industry*. *International Journal of Academic Research in Business and Social Sciences*, Available at: https://hrmars.com/hrmars_papers/Factors_Affecting_Employee_Engagement_A_Study_among_Employees_in_the_Malaysian_Construction_Industry.pdf (Accessed 28th August 2020).

Pandita, D. and Bedarkar, M., (2015.) Factors Affecting Employee Performance: A Conceptual Study on the Drivers of Employee Engagement. *Prabandhan: Indian Journal of Management*, 8(7), p.29.

Paradise, A (2008), “Influences engagement”, *ASTD, Training and Development*, Vol. 62 No. 1, pp. 54-59.

Perrin, T. (2003) *The 2003 Towers Perrin talent report: Working today: Understanding what drives employee engagement*. Research Report, Towers Perrin, Stamford, CT.

Pruyne, E. (2011) ‘Corporate investment in employee wellbeing: The emerging strategic imperative’, *Hertfordshire: Ashridge Business School and Nuffield Health*.

Available at:

<https://pdfs.semanticscholar.org/e5fd/2f7e1c6e17331b4c42e77a4a74fb87c6c638.pdf> [Accessed 6 Nov. 2019].

Ramaa, P. (1992). *Generation Gap, a Sociological Study of Inter-generational Conflicts*, Mittal Publications.

Ravikumar, T., (2013). *A study on impact of team work, work culture, leadership and compensation on engegement level of employees in msme in india*. International Journal of Advanced Research in Management and Social Sciences, [online] 2(8), pp.175-185. Available at: https://d1wqtxts1xzle7.cloudfront.net/32573194/15.pdf?1387243795=&response-content-disposition=inline%3B+filename%3DA_STUDY_ON_IMPACT_OF_TEAM_WORK_WORK_CULT.pdf&Expires=1601280375&Signature=RvczrTayX7bxBzqwCwaXx4T9U45SnjGQ6M MOKrJnaHUFhXhU0iS4Z551PYZ15IVxk1yUMV1tzUD7hSUGKDQC3X75pFNygLUPTD6-ICcRJRkm7sc2wwfqEYRunXJivaRl2Pz3D6UiplKGZnwjz0l3VfUbyOfp~60EBL0mbFoeDtz6-N37zSB~-eZYZ9fPzEL-34WYx7MxbJaKNhc67LeNCZnZZHPF3sadb--iOEyR8sxBA~mYbVayBbop4djUNvplvGbrSVupu8Y2U6IYLOJUWfdkJnIObam40NTbC86CjSDqMU1E3GJpcZj5huhYdgwfVj7f1vp9tkZXIX5aRqEzw_&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA (Accessed 26th August 2020).

Reporting.talent20.co.za (2008) *Organizational Policy*. Available at: http://reporting.talent20.co.za/skillsoft/Content/cca/cust_06_a01_bs_enus/output/html/sb/sbcust_06_a01_bs_enus0081127.html (Accessed 5th November 2019).

Robinson D, Perryman S, Hayday S (2004), *The Drivers of Employee Engagement*, Institute for Employment Studies

Saks, A.M. and Rotman, J.L. (2006), “Antecedents and consequences of employee engagement”, *Journal of Managerial Psychology*, Vol. 21 No. 7, pp. 600-619.

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3(1), 71–92. DOI: <http://dx.doi.org/10.1023/A:1015630930326>

Satterfield, J., Faller, K., Crinella, F., Schell, A., Swanson, J. And Homer, L.,(2007). A 30-Year Prospective Follow-up Study of Hyperactive Boys With Conduct Problems. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46(5), pp.601-610.

Schmidt, F.L., K., Hunter, J.E., Rothstein, H.R., Pearlman, K., and McDaniel, M.(1993). Refinements in validity generalization methods: Implication for the situation specify hypothesis. *Journal of Applied Psychology*.78:3-12

Schneider, B., Macey, W.H. and Barbera, K.M. (2009), “*Driving customer satisfaction and financial success through employee engagement*”, *People and Strategy*, Vol. 32 No. 2, pp. 23-27.

Shamir, B., House, R. J., & Arthur, M. B. (1993). The motivational effect of charismatic leadership: A self-concept based theory. *Organization Science*, 4, 577-594. <http://dx.doi.org/10.1287/orsc.4.4.577>

Shrm.org. (2019). 2019 CHALLENGES AND BENEFITS OF GLOBAL TEAMS—AN HR PERSPECTIVE. Available at: <https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/Documents/SHRM%20Globalization%20Partners%20Global%20Teams%20Report.pdf> (Accessed 6th September 2020).

Shuck, B., Reio, T. G., Jr., & Rocco, T. (2011). Employee engagement: An examination of antecedent and outcome variables. *Human Resource Development International*, 14, 427-445. doi:10.1080/13678868.2011.601587

Six, F., & Sorge, A. (2008). Creating a high-trust organization: An exploration into organizational policies that stimulate interpersonal trust building. *Journal of Management Studies*, 45(5), 857-884.

Spreitzer, G. M. (1996). Social structural characteristics of psychological empowerment. *Academy of Management Journal*, 39, 483-504

Stats.gov.cn (2019) 中华人民共和国国内生产总值(GDP) Available at: www.stats.gov.cn (Accessed 28th August 2020).

Stevens, J. P. (2012) *Applied multivariate statistics for the social sciences*. Routledge.

Sturges, J. and Guest, D., (2004). Working to live or living to work? Work/life balance early in the career. *Human Resource Management Journal*, 14(4), pp.5-20. DOI: 10.1111/j.1748-8583.2004.tb00130.x. (Accessed 1st July 2020)

Thompson, L. (2014) *Making the Team: A Guide for Managers*. (5th ed.) Pearson Education. Available at: <https://www.scholars.northwestern.edu/en/publications/making-the-team-a-guide-for-managers-2> (Accessed 2nd July 2012).

Towers Perrin Talent Report (2003), “*Working today: understanding what drives employee engagement*”, Available at: www.towersperrin.com/hrservices/webcache/towers/United_States/publications/Reports/Talent_Report_2003/Talent_2003.pdf (Accessed 2nd July 2012).

Tradingeconomics.com (2020) *China Industrial Production*. Available at: <https://tradingeconomics.com/china/industrial-production> (Accessed 28th August 2020).

Tsao, A. (2016), “*Examining the effects of activity based working on employees' work-life integration, well-being, and productivity*”. Theses and Dissertations. 691. Available at: <https://digitalcommons.pepperdine.edu/etd/691> (Accessed 8th June 2020)

Vandenberghe, C., Tremblay, M. The Role of Pay Satisfaction and Organizational Commitment in Turnover Intentions: A Two-Sample Study. *J Bus Psychol* 22, 275–286 (2008).
<https://doi.org/10.1007/s10869-008-9063-3>

Wagner, S. (2000). Retention: Finders, keepers. *Training & Development*, 54(8), 64–74.

Waters, R.D., Bortree, D.S. and Tindall, N.T.J. (2013), “Can public relations improve the workplace? Measuring the impact of stewardship on the employer-employee relationship”, *Employee Relations*, Vol. 35 No. 6, pp. 613-629

Winston, B. E. and Patterson, K. (2006) ‘An Integrative Definition of Leadership’, *International Journal of Leadership Studies*, Vol. 1 Iss. 2, 2006, pp. 6-66. Available at:
https://www.regent.edu/acad/global/publications/ijls/new/vol1iss2/winston_patterson.doc/winston_patterson.pdf (Accessed 5th November 2019).

Woodruffe, C. (2005), “Employee engagement: the real secret of winning a crucial edge over your rivals”, *The British Journal of Administrative Management*, Vol. 50 No. 1, pp. 28-29.

Appendixes

Appendix A – Questionnaire

Research Questionnaire

This is a brief questionnaire designed to research on **What factor(s) affect employee engagement of different generations in manufacturing industry in South China**. It should take around 2-3 minutes to complete. This questionnaire follows the principle of voluntary participation and can be launched at any time if participants feel any discomfort. Besides, the questionnaire will be filled in anonymously to protect the privacy of respondents. Thank you very much for your participation.

(Please tick or circle the relevant boxes)

- Q1. Gender ☐ Male ☐ Female ☐ Others
- Q2. Age ☐ 20 and below ☐ 21-25 ☐ 26-30 ☐ 31-40
☐ 41-50 ☐ 51-60 ☐ 61-65 ☐ Over 65
- Q3. Marital status ☐ Single ☐ Married ☐ Divorced ☐ Widow ☐ Other
- Q4. No of kids

0	1	2	3	3+
---	---	---	---	----
- Q5. Education
☐ Less than primary school ☐ Primary school graduated
☐ Junior high school ☐ Technical school / High school graduated
☐ Junior college ☐ Bachelor's Degree
☐ Postgraduate and above ☐ Other (please specify): _____
- Q6. Gross monthly income (Include all overtime and allowances)
☐ ¥3,000 or below ☐ ¥3,001-¥4,499 ☐ ¥4,501-¥6,000 ☐ ¥6,001-¥8,000
☐ ¥8,001-¥11,000 ☐ ¥11,001-¥15,000 ☐ ¥15,000-¥18,000 ☐ ¥18,000+
- Q7. Nature of business
☐ Manufacturing (factory operation) ☐ Non-manufacturing
- Q8. Nature of the company
☐ HK Owned ☐ Foreign Owned(not include HK) ☐ Chinese Owned
☐ Joint Venture ☐ State-Owned Enterprise ☐ Others: _____
- Q9. How many years have you been working in different nature companies?

	HK Owned
	Foreign Owned (not include HK)
	Chinese Owned
	Joint Venture
	State-Owned enterprise
	Others: _____

Q10. Which city is your current company located in Greater Bay Areas (11 cities)?

- ☐ Hong Kong ☐ Macau ☐ Guangzhou ☐ Shenzhen
☐ Zhuhai ☐ Foshan ☐ Zhongshan ☐ Dongguan
☐ Huizhou ☐ Jiangmen ☐ Zhaoqing ☐ Other cities

Q11. Is the location that you are currently working in is where you originally from?

- ☐ Yes ☐ No

Q12. How long have you been working in the current company? (in year)

Less 1	1	2	3	4	5	6	7	8	9	10	11-15	16-20	21+
--------	---	---	---	---	---	---	---	---	---	----	-------	-------	-----

Q13. In which department do you work?

- ☐ Account and Finance ☐ Administration ☐ Engineering
☐ Sales and Marketing ☐ Production operation ☐ Purchasing
☐ Research and Development ☐ Repair and maintenance ☐ HR
☐ Quality ☐ Others

Q14. Is your job mainly technical or non-technical?

- ☐ Technical (over 50% of your responsibility)
☐ Non- technical (over 50% of your responsibility)

Q15. How many direct report staffs?

0	1-5	6-10	11-20	21-30	31-50	51-100	100+
---	-----	------	-------	-------	-------	--------	------

Q16. Total working years (* Include working experience in current company)

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16-20	21+
---	---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	-------	-----

Q17. How many companies have you been worked for? (Include current company)

1	2	3	4	5	6	7	8	9	10	10+
---	---	---	---	---	---	---	---	---	----	-----

Q18. Rank the following factors that might affect your employee engagement. (Please rank all from 1 to 9 (1 is the most important, 9 is relatively least important, and cannot duplicate.)

	Work environment
	Leadership
	Team and co-worker
	Training and career development
	Compensation
	Organization policies
	Workplace well-being
	Communication
	Work life balance

Source: Memon, S.B. et al. (2018) *Assessing the work engagement, work practices and work performance in banks*. Journal of Administrative and Business Studies. 4. 165-184. 10.20474/jabs-4.3.5.

Q19. Please circle the best descriptions satisfactory level for the following factors with your current job.(say 1 to 10 (1 is not at all satisfied, 10 is very satisfied)

1	Work environment	1	2	3	4	5	6	7	8	9	10
2	Leadership	1	2	3	4	5	6	7	8	9	10
3	Team and co-worker	1	2	3	4	5	6	7	8	9	10
4	Training and career development	1	2	3	4	5	6	7	8	9	10
5	Compensation	1	2	3	4	5	6	7	8	9	10
6	Organization policies	1	2	3	4	5	6	7	8	9	10
7	Workplace well-being	1	2	3	4	5	6	7	8	9	10
8	Communication	1	2	3	4	5	6	7	8	9	10
9	Work life balance	1	2	3	4	5	6	7	8	9	10

Source: Memon, S.B. et al. (2018) *Assessing the work engagement, work practices and work performance in banks*. *Journal of Administrative and Business Studies*. 4. 165-184. 10.20474/jabs-4.3.5.

Q20. How long will you serve with your present company? (in months)

3	6	12	24	36	36+
---	---	----	----	----	-----

问卷调查

这是一份简短的问卷调查表，旨在研究什么因素影响华南地区制造业不同年龄段的员工敬业度。填写问卷大约需要 2-3 分钟。该问卷遵循自愿参与的原则，如果您感到任何不适，可以随时终止填写。此外，问卷将以匿名方式填写，以保护受访者的隐私。非常感谢您的参与。

(请打钩选择或圈住相关的选项)

- Q1. 性别 ☐男 ☐女 ☐其他
- Q2. 年龄 ☐20 及以下 ☐21-25 ☐26-30 ☐31-40
☐41-50 ☐50-60 ☐61-65 ☐65 以上
- Q3. 婚姻状况 ☐未婚 ☐已婚 ☐离异 ☐丧偶 ☐其他
- Q4. 有多少个孩子
- | | | | | |
|---|---|---|---|----|
| 0 | 1 | 2 | 3 | 3+ |
|---|---|---|---|----|
- Q5. 教育水平
☐小学以下 ☐小学毕业 ☐初中毕业 ☐技术学校/高中毕业
☐专科 ☐本科 ☐研究生及以上学历 ☐其他(请注明):_____
- Q6. 每月总收入(包含所有的加班及补贴)
☐¥3000 及以下 ☐¥3,001- ¥4499 ☐¥4,501- ¥6,000
☐¥6,001- ¥8,000 ☐¥8,001- ¥11,000 ☐¥11,001- ¥15000
☐¥15,000- ¥18000 ☐¥18,000+
- Q7. 您现在工作的公司行业 ☐制造业(工厂工作) ☐非制造业
- Q8. 您现在工作的公司是什么性质的公司?
☐港资 ☐外资(不包含港资) ☐内资
☐合资 ☐国营企业 ☐其他:_____
- Q9. 请填写您在不同性质公司分别工作了多少年
- | | |
|--|-----------|
| | 港资 |
| | 外资(不包含港资) |
| | 内资 |
| | 合资 |
| | 国营企业 |
| | 其他: _____ |
- Q10. 您目前工作的公司位于大湾区哪个城市?
☐香港 ☐澳门 ☐广州 ☐深圳 ☐珠海 ☐佛山
☐中山 ☐东莞 ☐惠州 ☐江门 ☐肇庆 ☐其他城市
- Q11. 您是本地人及所在工作的公司是同一个地区吗? ☐是 ☐否
- Q12. 您在目前的公司工作了多少年?
- | | | | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|----|-------|-------|-------|
| 少于1年 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11-15 | 16-20 | 20年以上 |
|------|---|---|---|---|---|---|---|---|---|----|-------|-------|-------|
- Q13. 您所在的工作部门
☐财务部 ☐行政部 ☐工程部
☐销售营销 ☐生产运营 ☐采购部 ☐研发部
☐维修维护 ☐人事部 ☐品质部 ☐其他部门
- Q14. 您的工作偏向技术性的还是非技术性的?
☐技术性的 (超过您工作范畴的 50%以上)
☐非技术性的 (超过您工作范畴的 50%以上)

Q15. 直接汇报给您的员工人数

0	1-5	6-10	11-20	21-30	31-50	51-100	100+
---	-----	------	-------	-------	-------	--------	------

Q16. 您至今为止共工作了多少年? (包含当前工作公司在内)

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16-20	20+
---	---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	-------	-----

Q17. 您总共在多少家公司工作过? (包含当前在内公司)

1	2	3	4	5	6	7	8	9	10	10+
---	---	---	---	---	---	---	---	---	----	-----

Q18. 请您对以下全部的敬业度的因素进行排名。(从 1 到 9 依次排名 (1 为最重要的, 9 为相对最不重要, 排名次序不能重复))。

	工作环境
	领导能力
	团队和同事
	培训和职业发展
	薪酬待遇
	组织政策
	工作场所的幸福感和
	沟通
	工作与生活的平衡

来源: Memon, S.B. et al. (2018) *Assessing the work engagement, work practices and work performance in banks*. Journal of Administrative and Business Studies. 4. 165-184. 10.20474/jabs-4.3.5.

Q19. 请圈出您现在工作公司在以下各因素的满意度。(从 1 到 10 (1 为很不满意, 10 为很满意))

		很不满意 满意 很满意									
		←—————→									
1	工作环境	1	2	3	4	5	6	7	8	9	10
2	领导能力	1	2	3	4	5	6	7	8	9	10
3	团队和同事	1	2	3	4	5	6	7	8	9	10
4	培训和职业发展	1	2	3	4	5	6	7	8	9	10
5	薪酬待遇	1	2	3	4	5	6	7	8	9	10
6	公司政策	1	2	3	4	5	6	7	8	9	10
7	工作场所的幸福感和	1	2	3	4	5	6	7	8	9	10
8	沟通	1	2	3	4	5	6	7	8	9	10
9	工作与生活的平衡	1	2	3	4	5	6	7	8	9	10

来源: Memon, S.B. et al. (2018) *Assessing the work engagement, work practices and work performance in banks*. Journal of Administrative and Business Studies. 4. 165-184. 10.20474/jabs-4.3.5.

Q20. 您将会在现任公司继续任职多长时间? (以月为单位)

3	6	12	24	36	36+
---	---	----	----	----	-----

Appendix B – Pilot Test

Reliability Statistics	
Cronbach's Alpha	N of Items
0.918	9

	Item-Total Statistics			
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q19.1 Work enviroment	24.85	62.166	0.51	0.923
Q19.2 Leadership	24.45	60.611	0.693	0.91
Q19.3 Team and co-worker	24.29	60.461	0.665	0.912
Q19.4 Training and career development	24.67	58.438	0.812	0.903
Q19.5 Compensation	24.85	59.71	0.692	0.91
Q19.6 Organization policies	24.51	58.909	0.735	0.907
Q19.7 Workplace well-being	24.54	57.485	0.786	0.904
Q19.8 Communication	24.45	57.43	0.763	0.905
Q19.9 Work life balance	24.62	58.21	0.763	0.906

Appendix C – Research Proposal

Appendix PG1



PG1 - FULL RESEARCH PROPOSAL

This form is to be completed by both the student and supervisory team within **THREE** months for full-time students and **SIX** months for part time students, after the commencement of the research degree or Part Two. Return the completed form to the Academic Office pgrresearch@uwtsd.ac.uk.

Student Details

Student Family / Surname:		Kwok			
Student Given / First name:		Man Kam Ken			
Student Number		1812206			
UWTSD Institute		University of Wales Trinity Saint David			
UWTSD Partner Institute (if appropriate)		HKMA			
Start Date	23 rd October 2019				
Mode of Study		Part time ☒		Full time ☐	
PhD by Research	PhD Practice Based	PhD by Published Works	Professional Doctorate (including DBA, DProf, Ed D)	MPhil by Research	MPhil Practice Based
☐	☐	☐	☐	☐	☐
MA by Research	MSc by Research	MRes	MBA		
☐	☐	☐	☒		

Proposed Research

Current Proposed Title (20 / 30 words):
What factor(s) affect employee engagement of different generations in manufacturing industry in South China?
<i>Background & Context (approx. 500 words)</i>
With the development of China's economy, the industry development in the South China areas being rapid and fast, according to the statistic, the China's industrial production (Tradingeconomics.com, 2019) has an increasing percentage from 2009 to 2019. In September 2019, the China's industry production has an increase with 5.8%, compared with 4.4% in August 2019 and the market expectation of 5%, the result in September 2019 has been over the market expectation.



According to stats.gov.cn (2018), China 2018 GDP is 90.03 trillion. Although total South China contributed GDP is 12.246 trillion, ranked third GDP, but Guangdong province contributed 9.727 trillion about 10.8% of total GDP, ranked first province in China. Also the Guangdong province is earliest province which a lot of Hong Kong and Taiwan SMEs started manufacturing business. So we selected South China for this research.

Due to the rapidly development of the South China industry, the demand for talent has increased (Mason and Sardone, 2019), therefore, companies will use different facilities, retaining talents and attracting more talents, produce greater productivity and competitiveness for the company. Globally, unemployment is at its lowest level in nearly a decade. In the past, the company's treatment and support for employees became the main consideration for employees' engagement. However, due to the improvement of the overall level of employees, their requirements for the sense of experience brought by the work increased, and the treatment and support for employees were no longer the main consideration. According to the study, even though companies are offering new and diversified incentives, better technology to improving employees' well-being, still a third of satisfied employers are considering quitting.

Employee engagement (Kruse, 2012) is important to the company's productivity and competitiveness. This is the reason why companies focus on the employee experience, treat the employee as a guest, optimize the company's management procedures and the process of handling things, let employees feel that their work environment keeps pace with the times, and the humanized experience is also one of the factors they consider. According to the study by Blessing White (2006), strong manager-employee relationship (Markos, S. and Sridevi, M.S., 2010) is a crucial ingredient in the employee engagement, and training and career developments are also the importance factors for employee engagement; While the research report by the Society for Human Resource Management (Lee, C. et al., 2016) suggested that the relationship of team and co-workers and the meaningfulness of the job would be the crucial factors of employee engagement. As there are not consistent findings with the employee engagement factors, therefore, this research conducts as to explore further.

The purpose of this research is to explore finding and study the factors that affect employee engagement, whether the company's employee experience can enhance employee engagement, and the considerations of different age groups, and compare the ideas of employees of different ages to how the company brings them experience. The results of the research can help the company develop different employee experience programs for employees of different ages, improve employee engagement, retain and attract talents, and increase productivity and competitiveness for the company.

Literature Review

Definition:

- **South China:** One of big zone in southern China, it includes Guangdong, Guangxi, Hainan, Hong Kong and Macau (Baik.baidu.com (2019)).
- **Manufacturing:** The process of transforming materials or components into finished products that can be sold in the marketplace (Levinson, 2018).
- **Generation:** A stratum who are born within a limited time range and who share not only the same date of birth but also similar sociocultural experiences (Edmunds and Turner, 2002).
- **Employee Engagement:** Employee engagement is the emotional commitment the employee has to the organization and its goals (Kruse, 2012).

7 independent variables:

1. **Work environment:** The composition of three major sub-environments which include the technical Environment (as tools, equipment and technological infrastructure), the human environment (as peers, employee relationship and interactional issue) and the organisational environment (as managerial policies, philosophies and legislation) (Noah and Steve, 2012)
2. **Leadership:** A leader is one or more people who selects, equips, trains, and influences one or more follower(s) who have diverse gifts, abilities, and skills and focuses the follower(s) to the organization's mission and objectives causing the follower(s) to willingly and enthusiastically expend spiritual, emotional, and physical energy in a concerted coordinated effort to achieve the organizational mission and objectives (Winston, 2006)
3. **Team and co-worker**
 - **Team:** A group of people who are interdependent with respect to information, resources, and skills and who seek to combine their efforts to achieve a common goal (Thompson, 2014).
 - **Co-worker:** A person who you work with, especially someone with a similar job or level of responsibility (Dictionary.cambridge.org, 2019).
4. **Training and career development:** Career development theories have focused on the human lifespan, traits, vocational choice, assessment tools, values and self-understanding to guide adults in their career decisions (Conlon, 2004).
5. **Compensation:** All forms of financial returns and tangible benefits that employee receives as part of employment relationship. Compensation as it were being divided into two parts and these are cash compensation which is the direct pay provided by employer for work performed by the employee and fringe compensation which refers to employee benefit programs (Das, 2014).
6. **Organization policies:** A set of guidelines and best practices put in place to protect the company, employees, and customers. Organizational policies may cover employment practices, employee conduct, disciplinary procedures, Internet and e-mail use (Reporting.talent20.co.za, 2008).
7. **Workplace well-being:** Wellbeing is the state of being of an individual that is characterised not only by good health or wellness, but also by comfort, satisfaction with one's work and home life, personal prosperity and some measure of happiness. (Pruyne, 2011)

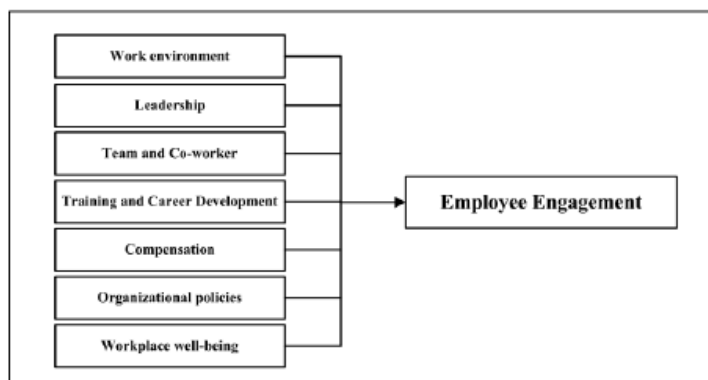


Figure 1 Factors toward employee engagement

Source: Memon, S.B. et al. (2018) *Assessing the work engagement, work practices and work performance in banks*. Journal of Administrative and Business Studies. 4. 165-184. 10.20474/jabs-4.3.5.

Aims and Objectives (approx... 250 – 500 words)

Employee engagement is an important factor in the company's productivity and competitiveness. Employees' sense of responsibility and quality of work are among the important factors that determine the quality of a company's products and services. According to the research that done by Cisar.mit.edu (2017), the potential business impact of the employee experience is also great. The company with better employee experience has four times the average profit profitability of the companies with poor employee experience and the average income is twice, obviously paying attention to the employee's experience can enhance the company's profitability and revenue. By studying the behaviour and concerns of employees, we understand what factors the company's employees are engaged in. Specifically, the study will investigate:

1. The composition of employees' engagement with the company
2. The needs of employees of different ages for employee experience
3. Factors Relationship to employee engagement
 - 3.1 Work environment has significant relationship with employee engagement?
 - 3.2 Leadership has significant relationship with employee engagement?
 - 3.3 Team and co-worker have significant relationship with employee engagement?
 - 3.4 Training and career development have significant relationship with employee engagement?
 - 3.5 Compensation has significant relationship with employee engagement?
 - 3.6 Organization policies has significant relationship with employee engagement?
 - 3.7 Workplace well-being has significant relationship with employee engagement?

The contribution of this research will be based on a systematic analysis of what factors will affect employee engagement. This will constitute a company's way of designing employee experiences for different age groups and increasing their engagement. In order to retain the company's talents in this highly competitive market and improve their engagement.

Proposed plan of work including timetable

Timetable for proposed plan of work

Planned Development	Target Date
Submission of form	11 th November 2019
Literature review and research	15 th December 2019
Design of research methodology	22 th December 2019
Design of the questionnaire	29 th December 2019
Conduct of the survey	16 th February 2020
Data analysis	1 st March 2020
Result and conclusion	21 st March 2020
Completion all chapters for primary review	29 th March 2020
Update and final review	5 th April 2020
Submission of thesis	14 th April 2020

Proposed methodology (approx. 500 words):

In order to better understand what factors affect the engagement of employees of different ages, this study will adopt a two-stage approach. The first phase focuses on theories and materials in the literature, with the aim of generating meaningful project samples for research topics. In the second phase, the quantitative method will be used as the relationship between the data collected in the first phase of the analysis.

In the first stage, the first would summarize the different viewpoints in the literature to propose different assumptions, and to formulate the direction and problem of questionnaire.

In the second phase, the first objective is to verify the literature and research relationships collected during the first phase. At this stage, questionnaire will be used to collect the required data and compare it with the ideas presented in the first phase.

Survey procedure – The sample for this study will consist of employees who were worked or are working in South China manufacturing industry. The data could be collected by questionnaires or face-to-face survey questionnaires, under this circumstance, it is impossible to conduct individual interviews to all the employees due the costs and human resources. Therefore, the main data collection method would be the questionnaires, online questionnaire platform/manual distribute and collect questionnaire would be used in this survey.

Sample size – Although there is no clear and certain standard as to the required sample size in structural equation modelling, an approach based on the number of indicators included in each study was proposed, in which the minimum sample size should be $k(k+1)/2$, where k is the number of indicators (Jöreskog, 1993). Maximum number of indicators to form the largest subscale for this study is expected to be 25, thus, a sample size of 325 will be sufficient according to this criterion. However, an argument by Stevens (2012) suggested that misspecification errors in modelling could be avoided only if a minimum sample size of 400 is adopted. In this study, a fairly prudent sample size will be selected, that is of 500. As Kerlinger (1973) suggested that the average response rate to voluntary survey to be 50%, based on this assumption, it is necessary that approximately 1000 workers to be approached to fulfil the adequate sample size.

Data analysis – In accordance with the objectives of the study, data will be analysed using the Statistical Package for Social Science (SPSS). Frequency of distribution and mean will be utilised as a description for employees' engagement in the companies. Exploratory factor analysis will be adopted to determine fundamental components or factors behind employees' response. SPSS will be undertaken to vindicate those factors, then to justify their relationships.

Introductory bibliography:

Apsc.gov.au (2018) *04 Employee engagement* Available at: <https://www.apsc.gov.au/04-employee-engagement#workplace-drivers-of-employee-engagement> (Accessed 28th October 2019).

Baike.baidu.com (2019) 华南地区 Available at <https://baike.baidu.com/item/华南地区/7596721> (Accessed 5th November 2019).

Cisr.mit.edu, (2017) *Building Business Value with Employee Experience*, Available at <https://www.avanade.com/~media/asset/thinking/mit-research.pdf> (Accessed 5th November 2019).

Clapon, P. (2016) *The Top 3 Employee Engagement Drivers* Available at: <https://gethppy.com/employee-engagement/the-top-3-employee-engagement-drivers> (Accessed 28th October 2019).

Conlon, T.J. (2004) 'Career Development Challenges for the 21st Century Workplace: A Review of the Literature', *online submission*. Available at: <https://files.eric.ed.gov/fulltext/ED492367.pdf> (Accessed 5th November 2019).

Das, K.K. et al. (2014) 'A Literature Review on Compensation Management Practices', *Sch J Econ Bus Manag*, 1(10), pp. 428-433.
Available at: <http://sasjournals.com/wp-content/uploads/2014/11/SJEBM-110428-433.pdf> (Accessed 5th November 2019).



- Dávila, N. and Piña-Ramírez, W. (2014) *What Drives Employee Engagement? It's All About the "I"* Available at: <https://www.td.org/magazines/the-public-manager/what-drives-employee-engagement-its-all-about-the-i> (Accessed 28th October 2019).
- Dictionary.cambridge.org. (2019) *Cambridge Dictionary* Available at <https://dictionary.cambridge.org/dictionary/english-chinese-traditional/> (Accessed 5th November 2019).
- Edmunds, J. and Turner, B. S. (Eds.). (2002) *Generational consciousness, narrative and politics*, Rowman & Littlefield Publishers.
https://books.google.com.au/books?hl=en&lr=&id=qeuxAAAAQBAJ&oi=fnd&pg=PP2&ots=eG5DLjzSX0&sig=H2iL-MVTLPretF5Wj5vi1k5naMI&redir_esc=y#v=onepage&q&f=false
- Gilbert, J. (2011) *The Millennials: A new generation of employees, a new set of engagement policies* Available at: <https://iveybusinessjournal.com/publication/the-millennials-a-new-generation-of-employees-a-new-set-of-engagement-policies/> (Accessed 28th October 2019).
- Glavas, A. (2016) 'Corporate social responsibility and employee engagement: Enabling employees to employ more of their whole selves at work', *Frontiers in psychology*, 7, pp. 796.
 Available at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2016.00796> (Accessed 28th October 2019).
- Jöreskog, K.G. (1993) 'Testing structural equation models', *Sage focus editions*, 154, pp. 294-294.
- Kahn, W.A. (1990) 'Psychological conditions of personal engagement and disengagement at work', *Academy of Management Journal*, 33(4), pp. 692-724. Doi:<https://doi.org/10.2307/256287>
- Kerlinger, F. N. (1973). *Foundations of behavioral science*, New York: Holt, Rinehart and Winston.
- Kruse, K. (2012) *What Is Employee Engagement*. Available at: <https://www.forbes.com/sites/kevinkruse/2012/06/22/employee-engagement-what-and-why/#9a67bc57f372> (Accessed 5th November 2019).
- Kumar, V. and Pansari, A. (2015) 'Measuring the benefits of employee engagement', *MIT Sloan Management Review*, 56(4), pp. 67. Available at: http://ilp.mit.edu/media/news_articles/smr/2015/56404.pdf (Accessed 28th October 2019).
- Lee, C. et al. (2016) *Employee job satisfaction and engagement: Revitalizing a changing workforce*. Available at: <https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/Documents/2016-Employee-Job-Satisfaction-and-Engagement-Report.pdf> (Accessed 10th November 2019).
- Levinson, C. (2018) *Definition of the Manufacturing Industry*. Available at: <https://bizfluent.com/facts-6853113-definition-manufacturing-industry.html> (Accessed 5th November 2019).
- Lowe, G. (2012) 'How employee engagement matters for hospital performance', *Healthcare Quarterly*, 15(2), pp. 29-39. Doi:10.12927/hcq.2012.22915
- Macey, W. H. and Schneider, B. (2008) 'The meaning of employee engagement', *Industrial and organizational Psychology*, 1(1), pp. 3-30.



- Mackay, M.M., Allen, J.A. and Landis, R.S. (2017) 'Investigating the incremental validity of employee engagement in the prediction of employee effectiveness: A meta-analytic path analysis', *Human Resource Management Review*, 27(1), pp. 108-120. Available at: <https://paper-download.com/wp-content/uploads/2017/02/75.pdf> (Accessed 28th October 2019).
- Markos, S. and Sridevi, M.S. (2010) 'Employee engagement: The key to improving performance', *International journal of business and management*, 5(12), pp. 89. Available at: <https://pdfs.semanticscholar.org/0ca0/6a76e3f030dc2b58294498300c121fa4b112.pdf> (Accessed 28th October 2019).
- Mason, L. and Sardone, M.A. (2019) *Building a Better Employee Experience*. Available at: https://www.mercer.com/our-thinking/career/voice-on-talent/building-a-better-employee-experience.html?utm_source=twitter&utm_medium=social&utm_campaign=employee-experience&utm_content=NONE&utm_country=tw-merc&sf222044271=1&dvsig_tid=b4fe0357c8804b419a483e9376f3d6fa&utm_leadsource=voicestorm&userid=3708&channelid=2787&channeltype=LinkedIn (Accessed 26th October 2019)
- May, D.R., Gilson, R.L. and Harter, L.M. (2004) 'The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work', *Journal of occupational and organizational psychology*, 77(1), pp. 11-37. DOI:<https://doi.org/10.1348/096317904322915892>
- Memon, S.B. et al. (2018) 'Assessing the work engagement, work practices and work performance in banks', *Journal of Administrative and Business Studies*, 4, pp. 165-184. DOI:10.20474/jabs-4.3.5. https://www.researchgate.net/publication/328274224_Assessing_the_work_engagement_work_practices_and_work_performance_in_banks
- Nazim, J. et al. (2019). *Employee Engagement in a Multigenerational Workplace*. Est05.esalestrack.com. Available at: https://est05.esalestrack.com/esalestrack/Content/Content.ashx?aid=2181&system_filename=7a1269ec-7767-4d76-8740-cf2667d108a2.pdf (Accessed 28th October 2019).
- Noah, Y. and Steve, M. (2012) 'Work environment and job attitude among employees in a Nigerian work organization', *Journal of Sustainable Society*, 1(2), pp. 36-43.
- Perrin, T. (2003) *The 2003 Towers Perrin talent report: Working today: Understanding what drives employee engagement*. Research Report, Towers Perrin, Stamford, CT.
- Pitt-Catsoupes, M. and Matz-Costa, C. (2008) 'The multi-generational workforce: Workplace flexibility and engagement', *Community, work and Family*, 11(2), pp. 215-229. Available at: <https://www.semanticscholar.org/paper/The-multi-generational-workforce%3A-Workplace-and-Pitt-Catsoupes-Matz-Costa/2ae1ffde12f8a5a2f538dd9845b470e7d3eaa44> (Accessed 28th October 2019).
- Popli, S. and Rizvi, I.A. (2016) 'Drivers of employee engagement: The role of leadership style', *Global Business Review*, 17(4), pp. 965-979. Available at: <https://journals.sagepub.com/doi/abs/10.1177/0972150916645701> (Accessed 28th October 2019).
- Pruyne, E. (2011) 'Corporate investment in employee wellbeing: The emerging strategic imperative', *Hertfordshire: Ashridge Business School and Nuffield Health*. Available at: <https://pdfs.semanticscholar.org/e5fd/2f7e1c6e17331b4c42e77a4a74fb87c6c638.pdf> (Accessed 6th November 2019).



Reporting.talent20.co.za (2008) *Organizational Policy*. Available at:
http://reporting.talent20.co.za/skillsoft/Content/cca/cust_06_a01_bs_enus/output/html/sb/sbcust_06_a01_bs_enus0081127.html (Accessed 5th November 2019).

Rothe, P. et al. (2012) 'Work environment preferences—does age make a difference?', *Facilities*, 30(1/2), pp. 78-95. (Accessed 28th October 2019).

Shuck, B. and Herd, A.M. (2012) 'Employee engagement and leadership: Exploring the convergence of two frameworks and implications for leadership development in HRD', *Human resource development review*, 11(2), pp. 156-181. Available at:
https://www.academia.edu/14196972/Employee_Engagement_and_Leadership_Exploring_the_Convergence_of_Two_Frameworks_and_Implications_for_Leadership_Development_in_HRD (Accessed 28th October 2019).

Stats.gov.cn (2018) 中华人民共和国国内生产总值(GDP) Available at: www.stats.gov.cn (Accessed 28th October 2019).

Stevens, J. P. (2012) *Applied multivariate statistics for the social sciences*. Routledge.

Thompson, L. (2014) *Making the Team: A Guide for Managers*. (5th ed.) Pearson Education.
<https://www.scholars.northwestern.edu/en/publications/making-the-team-a-guide-for-managers-2>

Tradingeconomics.com (2019) *China Industrial Production*. Available at:
<https://tradingeconomics.com/china/industrial-production> (Accessed 28th October 2019).

Winston, B. E. and Patterson, K. (2006) 'An Integrative Definition of Leadership', *International Journal of Leadership Studies*, Vol. 1 Iss. 2, 2006, pp. 6-66.
Available at:
https://www.regent.edu/acad/global/publications/ijls/new/vol1iss2/winston_patterson.doc/winston_patterson.pdf (Accessed 5 Nov. 2019).

Zenger, J. and Folkman, J. (2017) *How Managers Drive Results and Employee Engagement at the Same Time* Available at: <https://hbr.org/2017/06/how-managers-drive-results-and-employee-engagement-at-the-same-time> (Accessed 28th October 2019).

Facilities and resources available for the investigation: please indicate if you expect to need any special resources

- Need to access internet to search related reference information.
- Need to go nearby manufacturing factories located in Dongguan (one of major manufacturing city in Guangdong province) by driving car.
- Always follow the correct protocols when carry out field work or interviews.

**Intellectual Property IP**

It is anticipated that Intellectual Property (IP) will be produced as a result of this research.

Tick ✓

	YES	NO
Is the IP already subject to a separate agreement with a third party (e.g. employer, sponsor or external funder)? If so please provide details below	☐	☒
Is the research dependent upon background IP owned by: If so, please provide details below	UWTSD ☒	A third party ☐
Text box will expand		

Tick ✓

I understand that:	YES	NO
If any party other than the student is likely to be involved in the development of IP a separate IP agreement will be needed and it may be necessary for the student to assign the IP rights to the University.	☒	☐
If there are no third parties involved in the creation of the IP the student is deemed to own the IP, however should the student wish to commercially exploit their IP and require the assistance of the University to do so, they will be required to assign their IP to the University. http://uwtsd.ac.uk/ip https://www.uwtsd.ac.uk/media/uwtsd-website/content-assets/documents/for-business/Intellectual-Property-Policy-Students-Final.pdf	☒	☐

Student Signature

Signature or Print Name:	Kwok Man Kam, Ken	Date: 10th Nov. 2019
--------------------------	-------------------	----------------------------

**Supervisory Team**

Has the student proposed a viable research project that is appropriate for this programme that should be supported by the Institute?

Supported: ☒

Not Supported: ☐

Authorisation

Lead Supervisor/Director of Studies	Signature or Print Name: 	Date:
Institute Representative	Signature or Print Name:	Date:

Appendix D – Ethics Form



PG2 / E1 FORM

APPLICATION FOR ETHICAL APPROVAL

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of **research activity**: "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the "principal researcher".

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity. Please see Checklist for details of process for different categories of application.

SECTION A: About You (Principal Researcher)

Full Name:	Kwok Man Kam Ken		
Tick all boxes which apply:			
Member of staff:	☐	Student:	☒
Honorary research fellow:	☐		
Faculty/School/Centre:	HKMA		
Campus:	University of Wales Trinity Saint David		
E-mail address:	Ken.kwok8@gmail.com		
Contact Telephone Number:	852-98368187		
For students:			
Student Number:	1812206	Undergraduate	☐
Programme of Study:	UWTSD MBA – Nov 2018 Intake	Taught Postgraduate	☒
Director of Studies/Supervisor:	DR. Leo Ho	Research	☐

SECTION B: Approval for Research Activity

Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)		YES	☐	NO	☒
		Date			
If Yes, please indicate source of approval (and date where known):	Research Degrees Committee	☐			
	Faculty Research Committee	☐			
	Other (write in)	☐			

Approval in principle **must** be obtained from the relevant source prior to seeking ethical approval.

SECTION C: External Ethical Guidance Materials

Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines.	
Research Ethics & Integrity Code of Practice 2017-2020	☒
	☐
	☐

SECTION D: External Collaborative Research Activity

Does the research activity involve collaborators outside of the University?	YES	☐	NO	☒
If Yes, please provide the name of the external organisation and name and contact details for the main contact person:				
Institution				
Contact person name				
Contact person e-mail address				

Where research activity is carried out in collaboration with an external organisation

Does this organisation have its own ethics approval system?	YES	☐	NO	☒
If Yes, please attach a copy of any final approval (or interim approval) from the organisation				

SECTION E: Details of Research Activity

Indicative title:	What factor(s) affect employee engagement of different generations in manufacturing industry in South China?		
Proposed start date:	23 rd October 2019	Proposed end date:	17 th April 2020
Purpose of research activity (including aims and objectives) Outline the purpose, aims and objectives of the research activity, including key research questions. Show briefly how existing research has informed the proposed activity and explain what the research activity will add and how it addresses an area of importance. (Maximum 300 words)			
Employee engagement is an important factor in the company's productivity and competitiveness. Employees' sense of responsibility and quality of work are among the important factors that determine the quality of a company's products and services. According to the research that done by Cisar.mit.edu (2017), the potential business impact of the employee experience is also great. The company with better employee experience has four times the average profit profitability of the companies with poor employee experience and the average income is twice, obviously paying attention to the employee's experience can enhance the company's profitability and revenue. By studying the behaviour and concerns of employees, we understand what factors the company's employees are engaged in. Specifically, the study will investigate:			
1. The composition of employees' engagement with the company 2. The needs of employees of different ages for employee experience 3. Factors Relationship to employee engagement 3.1 Work environment has significant relationship with employee engagement? 3.2 Leadership has significant relationship with employee engagement? 3.3 Team and co-worker have significant relationship with employee engagement? 3.4 Training and career development have significant relationship with employee engagement? 3.5 Compensation has significant relationship with employee engagement? 3.6 Organization policies has significant relationship with employee engagement? 3.7 Workplace well-being has significant relationship with employee engagement?			

The contribution of this research will be based on a systematic analysis of what factors will affect employee engagement. This will constitute a company's way of designing employee experiences for different age groups and increasing their engagement. In order to retain the company's talents in this highly competitive market and improve their engagement.

(this box should expand as you type)

Proposed methods

Provide a brief summary of all the methods that **may** be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed. (Maximum 600 words)

In order to better understand what factors affect the engagement of employees of different ages, this study will adopt a two-stage approach. The first phase focuses on theories and materials in the literature, with the aim of generating meaningful project samples for research topics. In the second phase, the quantitative method will be used as the relationship between the data collected in the first phase of the analysis.

In the first stage, the first would summarize the different viewpoints in the literature to propose different assumptions, and to formulate the direction and problem of questionnaire.

In the second phase, the first objective is to verify the literature and research relationships collected during the first phase. At this stage, questionnaire will be used to collect the required data and compare it with the ideas presented in the first phase.

Survey procedure – The sample for this study will consist of employees who were worked or are working in South China manufacturing industry. The data could be collected by questionnaires or face-to-face survey questionnaires, under this circumstance, it is impossible to conduct individual interviews to all the employees due the costs and human resources. Therefore, the main data collection method would be the questionnaires, online questionnaire platform/manual distribute and collect questionnaire would be used in this survey.

Sample size – Although there is no clear and certain standard as to the required sample size in structural equation modelling, an approach based on the number of indicators included in each study was proposed, in which the minimum sample size should be $k(k+1)/2$, where k is the number of indicators (Jöreskog, 1993). Maximum number of indicators to form the largest subscale for this study is expected to be 25, thus, a sample size of 325 will be sufficient according to this criterion. However, an argument by Stevens (2012) suggested that misspecification errors in modelling could be avoided only if a minimum sample size of 400 is adopted. In this study, a fairly prudent sample size will be selected, that is of 500. As Kerlinger (1973) suggested that the average response rate to voluntary survey to be 50%, based on this assumption, it is necessary that approximately 1000 workers to be approached to fulfil the adequate sample size.

Data analysis – In accordance with the objectives of the study, data will be analysed using the Statistical Package for Social Science (SPSS). Frequency of distribution and mean will be utilised as a description for employees' engagement in the companies. Exploratory factor analysis will be adopted to determine fundamental components or factors behind employees' response. SPSS will be undertaken to vindicate those factors, then to justify their relationships.

(this box should expand as you type)

Location of research activity Identify all locations where research activity will take place. South China – Dongguan (this box should expand as you type)
Research activity outside of the UK If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural sensitivities or vulnerabilities of participants. N/A (this box should expand as you type)

SECTION F: Scope of Research Activity

Will the research activity include:	YES	NO
Use of a questionnaire or similar research instrument?	☒	☐
Use of interviews?	☐	☒
Use of diaries?	☐	☒
Participant observation with their knowledge?	☐	☒
Participant observation without their knowledge?	☐	☒
Use of video or audio recording?	☐	☒
Access to personal or confidential information without the participants' specific consent?	☐	☒
Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☒
Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☒
Investigation of participants involved in illegal activities?	☐	☒
Use of procedures that involve deception?	☐	☒
Administration of any substance, agent or placebo?	☐	☒
Working with live vertebrate animals?	☐	☒
Other primary data collection methods, please explain in this box	☐	☒

If NO to every question, then the research activity is (ethically) low risk and **may** be exempt from **some** of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

Who are the intended participants:	YES	NO
Students or staff at the University?	☐	☒
Adults (over the age of 18 and competent to give consent)?	☒	☐
Vulnerable adults?	☐	☒
Children under 18?	☐	☒
Prisoners?	☐	☒
Young offenders?	☐	☒
Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	☒
People engaged in illegal activities?	☐	☒
Others (please identify):	☐	☒

Participant numbers and source

Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?

Approximate 1000 workers form Manufacturing factory in South China.

(this box should expand as you type)

Information for participants:	YES	NO	N/A
Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
Will you tell participants that their participation is voluntary?	☒	☐	☐
Will you obtain written consent for participation?	☐	☒	☐
Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☒	☐	☐
If the research is observational, will you ask participants for their consent to being observed?	☐	☐	☒
Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☒	☐	☐
Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☐	☐	☒

If NO to any of above questions, please give an explanation

I am going to have a cover letter to explain to all the intended participants.

(this box should expand as you type)

Information for participants:	YES	NO	N/A
Will participants be paid?	☐	☒	☐
Is specialist electrical or other equipment to be used with participants?	☐	☒	☐
Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
If YES to any question, please provide full details			
(this box should expand as you type)			

SECTION H: Anticipated Risks

Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them. If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form. Full risk assessment completed and appended? Yes ☐ No ☒			
Risks to participants For example: emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information Anonymous – so no risk (this box should expand as you type)			
If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities No (this box should expand as you type)			
Risks to investigator For example: personal safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest NA (this box should expand as you type)			
University/institutional risks For example: adverse publicity, financial loss, data protection NA (this box should expand as you type)			
Adverse outcomes List measures put in place to limit any adverse effects or outcomes of research activity where appropriate. Include any emergency protocols. NA (this box should expand as you type)			

Disclosure and Barring Service			
If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	YES	NO	N/A
	☐	☐	☒
Has a DBS certificate been obtained?	☐	☐	☒

SECTION I: Feedback, Consent and Confidentiality

Feedback What feedback will be provided to participants, how will this be done and when? Anonymous – so no need (this box should expand as you type)
Informed consent Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded. I am going to have a cover letter to explain to all the intended participants. (this box should expand as you type)
Confidentiality / Anonymity Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case. It is important. Need ensure that it is no one knows. Original questionnaires will not share to supervisor and only the consolidated data from the questionnaires. (this box should expand as you type)

SECTION J: Data Protection and Storage

In completing this section refer to the University's Research Data Management Policy and the extensive resources on the University's Research Data Management web pages (<http://uwtsd.ac.uk/library/research-data-management/>).

	YES	NO
Does the research activity involve personal data (as defined by the Data Protection Act)? "personal data" means data which relate to a living individual who can be identified— (a) from those data, or (b) from those data and other information which is in the possession of, or is likely to come into the possession of, the data controller, and includes any expression of opinion about the individual and any indication of the intentions of the data controller or any other person in respect of the individual.	☐	☒
If YES, provide a description of the data and explain why this data needs to be collected: (this box should expand as you type)		
Does it involve sensitive personal data (as defined by the Data Protection Act)? "Sensitive personal data" means personal data consisting of information as to – (a) the racial or ethnic origin of the data subject, (b) his political opinions, (c) his religious beliefs or other beliefs of a similar nature, (d) whether he is a member of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992), (e) his physical or mental health or condition, (f) his sexual life, (g) the commission or alleged commission by him of any offence, or (h) any proceedings for any offence committed or alleged to have been committed by him, the disposal of such proceedings or the sentence of any court in such proceedings.	☐	☒
If YES, provide a description of the data and explain why this data needs to be collected: (this box should expand as you type)		
Will the research activity involve storing personal data on one of the following:	YES	NO
Manual files (i.e. in paper form)?	☒	☐
University computers?	☐	☒
Private company computers?	☐	☒
Home or other personal computers?	☒	☐
Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☒	☐
"Cloud" storage or websites?	☐	☒
Other – specify:	☐	☒
For all stored data, explain the measures in place to ensure data confidentiality, including details of password protection, encryption and anonymisation: - Collected paper questionnaires will be keep in my office and locked in the file cabinet. - Only myself can access the file cabinet. - Anonymous information from the questionnaires will be convert into useful electronic data and stored in my USB (with encryption) and my laptops (with password protection) for data analysis by myself.		

- All those paper questionnaires to be kept for 6 months (latest at end of year 2020) after complete this research.
- Then all the paper questionnaires will be shredded by the shredder and burned into ash by myself.

(this box should expand as you type)

Will the research activity involve any of the following activities:	YES	NO
Electronic transfer of data in any form?	☐	☒
Sharing of data with others at the University?	☐	☒
Sharing of data with other organisations?	☐	☒
Export of data outside the European Union or importing of data from outside the UK?	☐	☒
Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☐	☒
Publication of data that might allow identification of individuals?	☐	☒
Use of data management system?	☐	☒
Data archiving?	☐	☒

If YES to any question, please provide full details, explaining how this will be conducted in accordance with the Data Protection Act (and/or any international equivalent):

(this box should expand as you type)

List all who will have access to the data generated by the research activity:

Myself - Kwok Man Kam Ken

(this box should expand as you type)

List who will have control of, and act as custodian(s) for, data generated by the research activity:

Myself – Kwok Man Kam Ken

(this box should expand as you type)

Give details of data storage arrangements, including where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.

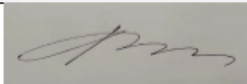
- Collected paper questionnaires will be keep in my office and locked in the file cabinet.
- Only myself can access the file cabinet.
- Anonymous information from the questionnaires will be convert into useful electronic data and stored in my USB (with encryption) and my laptops (with password protection) for data analysis by myself.
- All those paper questionnaires to be kept for 6 months (latest at end of year 2020) after complete this research.
- Then all the paper questionnaires will be shredded by the shredder and burned into ash by myself.

(this box should expand as you type)

SECTION K: Declaration

The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants.

In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's [Research Ethics and Integrity Code of Practice](#)

Signature of applicant:		Date: 10th Nov. 2019
--------------------------------	---	-----------------------------

For students:

Director of Studies/Supervisor:	
Signature:	
Date:	

For staff:

Head of School/Assistant Dean:	
Signature:	
Date:	

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed ALL RELEVANT sections of the form in full.
☐	I confirm that the research activity has received approval in principle
☐	I have attached a copy of final/interim approval from external organisation (where appropriate)
☐	I have attached a full risk assessment (and have NOT completed Section H of this form) (where appropriate)
☒	I understand that it is my responsibility to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice.
☒	I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Head of School.

RESEARCH STUDENTS AND STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name. You will be informed of the outcome of your claim by email; therefore it is important that you check your University and personal email accounts regularly.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

This form is available electronically from the Academic Office web pages:
<http://www.uwtsd.ac.uk/academic-office/>

Application Process

All staff research projects and all research students must submit the Ethical Approval Form to the University Ethics Committee via the Academic Office (pgresearch@uwtsd.ac.uk). Staff research directly in relation to personal study for taught undergraduate or Masters programmes should be submitted via the Faculty procedures explained below.

Taught masters and taught undergraduate research Ethical Approval Forms are considered **within Faculties**. Faculties will provide details of the specific processes for this. Where the Ethical issues within any single ethical application are of particular concern the Faculty will refer these to the University Ethics Committee. Any student activity that involves the collection of primary data needs to undergo Ethical approval, this includes assignment work as well as dissertations.

Notes for guidance in completion of this form

Section A: About You

Please complete all relevant sections

Section B: Approval for research activity

Research proposals must be approved in principle before applying for Ethical Approval. The proposal approval only becomes final when the ethical approval is received.

The process for proposal approval varies according to the individual and programme of study:

- Research students, by application on form PG1 to the Research Degrees Committee
- Taught students by review of research proposal within Faculties (Faculties provide specific details of these processes)
- Staff, by agreement by the Head of School/Assistant Dean

Section C: External Ethical Guidance materials

Many discipline areas are required to operate with the discipline specific codes of research ethics (for example health, psychology, education etc.), any such codes must be listed and you must tick to confirm that you have consulted with these.

Section D: External Collaborative Research Activity

Provide details of the external collaborative partners, where appropriate you might want to submit a copy of the external collaboration agreement with the Ethical Approval Form. If the partner requires the research to be subject to its own internal Ethical approval process then please provide details of that process and a copy of any final (or interim) approvals received from the organisation.

Section E: Details of Research Activity

Remember that the individuals reviewing this Ethical Approval Form may not have seen your research proposal, and also may not be experts in the specific area of your research. The information provided should therefore be jargon free and clearly stated.

Indicative Title: please use the same title as used on the research proposal.

Purpose: the Ethical approval process will want to ensure that the methods you propose are adequate and appropriate to address the research aims and objectives. Excessive additional data collection can be seen as unethical.

Proposed Methods: the Ethical approval process seeks to ensure that you understand the methods that are intended, and that the implementation of those methods will be appropriate and without unnecessary impact on respondents. Please be specific.

Location: this needs to mention geographical location and also local situation (for example, within Local Authority Offices in Cardiff, using a private room but close to other individuals). If you are collecting data within an organisational setting then you need to explain the permissions that you have obtained to do this.

Research Activity outside of the UK: please complete this section in detail, and note any guidance you have received. Also describe your own familiarity (or not) with the location that you will be utilising.

Section F: Scope of Research Activity

Please tick ALL of the research activities that might be undertaken. If any additional types of activity are intended then please add an extra box and describe these.

If you have answered no to all questions in F then sections G and J do not need to be completed. Section H should be considered, and may be completed. Signatures are still required in section K.

Section G: Intended Participants

Please tick all categories that might apply.

Numbers & Source: if you are using a series of different methods or research activities please list numbers for each stage/phase. Be clear about how you will find respondents. Will you use intermediaries, and if so how? How will you ensure compliance with your sampling strategy?

Information for participants: all participants should be appropriately informed about the research, what is expected of them and what will happen to the information that they provide. The Ethical review process does not ask to see this documentation, but requires this to be reviewed and approved by the Director of Studies in the case of research students, the supervisor/module tutor in relation to students on taught programmes and the Head of School/Assistant Dean in relation to staff research.

Section H: Anticipate Risks

All research carries some level of risk. The answers you provide to questions in this section will be reviewed to ensure that you have an appropriate understanding of the type of risks involved and how you can mitigate against these risks. If you have completed a full risk assessment, as required for example for laboratory work, field work, clinical tests, diving operations, or by a collaborative partner, you may append that to this form. In that case, please tick the box indicating this has been provided. You will not then be required to complete Section H.

Risk to participants Think very carefully about how your actions/questions/discussions might affect the people you are involving as participants. You might identify the risk as small but it would still be a risk. Many types of question have the potential to make respondents less content with their life / job; you need to recognise and try to ameliorate any such effects

If these are business owners, time with you may reduce profit.

In some locations physical risk is very real to both participants and yourself, please consider this.

Risk to you, the researcher Think about where you will meet people, if there are any dangers involved in the location. If you are meeting people as individuals think about using a public place. In general do not visit people in their own homes or remote locations. If you are talking to individuals about certain issues think about how their responses might affect you emotionally. What about the risk of collecting insufficient data?

Risk to the University When undertaking your research, you are acting as a member of the University (student or staff). Professionalism is important, so it is important to be well organised and well prepared. Punctuality, clarity etc. are all part of this. What will you do to ensure this? You must ensure you do not harm the good name of the University in any way and do nothing to undermine the reputation of the research it conducts and sponsors. Upholding high standards of conduct and integrity are vital in this regard. You must also conduct the research in such a way to minimise the potential for claims of negligence made against the University, its researchers and any collaborating individual or organisation. In this respect you should always comply with ethical, legal and professional frameworks, obligations and standards as required by statutory and regulatory authorities, as well as the university's Research Integrity and Ethics Code of Practice. Research misconduct in this respect can take many forms, including:

- fabrication: making up results or other outputs (eg, artefacts) and presenting them as if they were real
- falsification: manipulating research processes or changing or omitting data without good cause
- plagiarism: using other people's material without giving proper credit
- failure to meet ethical, legal and professional obligations: for example failure to declare competing interests; misrepresentation of involvement or authorship; misrepresentation of interests; breach of confidentiality; lack of informed consent; misuse of personal data; and abuse of research subjects or material
- improper dealing with allegations of misconduct: failing to address possible infringements such as attempts to cover up misconduct and reprisals against whistle-blowers

Adverse Outcomes. Think carefully about the possibilities, and cover here

Section I: Feedback, Consent and Confidentiality

Feedback to participants: outline your approach. Will interview transcripts be shared with respondents to check accuracy? Will summaries of questionnaire analysis be made available to respondents in some way? Will an overview report be provided? How and when?

Informed consent: Draft letter / e-mail / or heading (or footer) section of questionnaire must be approved by DoS/supervisor (if research student), supervisor/module tutor if taught student, or Head of School / Assistant Dean if a member of staff.

Confidentiality/Anonymity. Explain clearly how you will ensure confidentiality and anonymity.

Section J: Data Protection and Storage

Before completing this section it is necessary to read the University's Research Data Management information. The questions that follow are designed to ensure compliance with the Data Protection Act as well as established research protocols.

Many research activities will involve electronic transfer of data and use of data management systems in the summarisation and analysis of data. You will need to explain these in relation to compliance with the Data Protection Act.

Think carefully about who will have access to your data, this will include supervisors and examiners. Also that a thesis will be made available via the University library and the British Library system. If you are seeking an access bar for a period of time after completion then mention it here. If you will provide a copy of your findings, or intend to give a presentation, to a facilitating/ supporting/accessing organisation then explain that in this section. But also think about the general principle of data sharing, as explained in the Research Data Management information.

In terms of storage of data please ensure security, and also mitigate against loss of data.

Section K: Declaration

Ensure the appropriate countersignatures have been provided

Look carefully at the checklist and ensure that you comply with and tick all that are relevant to your research.