A MALAYSIAN STUDY ON THE ANTECEDENTS OF

MANAGERS' INTENTION TO HIRE OLDER WORKERS:

AN EXTENDED MODEL OF

THE THEORY OF PLANNED BEHAVIOUR


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By

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# DEDICATION

To my late mother,

"As I move through every chapter of my life,

I am greatly inspired by your resilience and perseverance.

I am eternally grateful and blessed to have been gifted a mother such as you.

I love you."

**ABSTRACT**

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**AN EXTENDED MODEL OF**
**THE THEORY OF PLANNED BEHAVIOUR**

**Lau Say Min Claudia**

In view of Malaysia's aspiration to become a developed nation in the very near future, one of the issues currently confronting all trades is the labour shortage where most job vacancies are filled by foreign workers. At the same time and never before, the nation now also faces a phenomenon where a growing portion of its older population are experiencing a decline in their employment participation rate. The utilisation of skilful and experienced older workers to substitute foreign workers require the willingness of business organizations to hire these workers for the overall improvement of the nation's economic situation. The present study targeted respondents who are the managers responsible for hiring workers for their organizations. Being the gate-keepers for recruitment, it is imperative to study their intention to hire older workers.

Therefore, the main purpose of the present study is to predict the relationship of managers' attitudes, subjective norm, perceived behavioural control and past experience with their intention to hire older workers. The Theory of Planned Behaviour was being identified and was extended to include the variables of past experience and the age of respondents as the moderator on the relationships between attitude and hiring intention. Cross-sectional data were

collected from hiring managers from business organizations via personal administered surveys ($n$=468). The data were first tested for reliability and validity and which was found to fully satisfy the minimum required threshold. Model and hypotheses were tested using structural equation modelling (PLS). The research model accounted for a moderate portion of the variance in overall hiring intention ($R_2$=0.377) and future hiring intention ($R_2$=0.392). The findings suggested that: (1) all items were significantly related to the predictive components of attitude, subjective norm and perceived behavioural control; (2) predictive components (attitude, subjective norm, perceived behavioural control and past experience) were related to overall hiring intention; (3) predictors attitude, subjective norm and perceived behavioural control were related to future hiring intention whereas the past experience predictor has no relation to managers' future hiring intention; (4) age has moderating effects on the relationships between attitude and overall hiring intentions, but there was no moderating effect on the relationship between attitude and future hiring intention. The results of this study served as an additional fuel to combat the nation's acute labour shortage by the hiring of able and willing older workers. The empirical result also has important implications for human resource strategists in business organisations, academic researchers and public policy makers interested in the hiring of older workers.

# ACKNOWLEDGEMENT

**APPROVAL SHEET**


This thesis entitled "**A MALAYSIAN STUDY ON THE ANTECEDENTS OF MANAGERS' INTENTION TO HIRE OLDER WORKERS: AN EXTENDED MODEL OF THE THEORY OF PLANNED BEHAVIOUR**" is prepared by Lau Say Min Claudia and submitted as partial fulfillment of the requirements for the degree of Doctor of Philosophy at Universiti Tunku Abdul Rahman.


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**SUBMISSION OF THESIS**

It is hereby certified that **Lau Say Min Claudia** (ID No: **11ABD06188**) has completed this thesis entitled "A MALAYSIAN STUDY ON THE ANTECEDENTS OF MANAGERS' INTENTION TO HIRE OLDER WORKERS: AN EXTENDED MODEL OF THE THEORY OF PLANNED BEHAVIOUR" under the supervision of Prof. Dr Choong Chee Keong from the Department of Economics, Faculty of Business and Finance, and Dr Wong Kee Luen from the Department of Finance, Faculty of Business and Finance.

I understand that the University will upload softcopy of my thesis in pdf format into UTAR Institutional Repository, which may be made accessible to UTAR community and public.

Yours truly,

_____
Lau Say Min Claudia

# DECLARATION

I <u>Lau Say Min Claudia</u> hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UTAR or other institutions.

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(LAU SAY MIN CLAUDIA)
Date: <u>26 June, 2019</u>

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| | |
|---|---|
| α | Alpha |
| AARP | American Association of Retired Persons |
| ADA | Americans with Disabilities Act |
| ADEA | Age Discrimination in Employment Act |
| Admin | Administration |
| AS | Age Stereotypes |
| ATT | Attitude |
| AVE | Average Variance Extracted |
| Bartlett's Test | Barlett's Test of Sphericity |
| BI | Behavioural Intention |
| β | Beta |
| CAGR | Compound Annual Growth Rate |
| CB | Covariance Based |
| CEO | Chief Executive Officer |
| CFI | Comparative Fit Index |
| CFA | Confirmatory Factor Analysis |
| DOSM | Department of Statistics, Malaysia |
| e.g. | Example |
| ETP | Economic Transformation Programme |
| FMM | Federation of Malaysia Manufacturers |
| FINT | Future Intention |
| *GoF* | Goodness-of-fit |
| H | Hypothesis/Hypotheses |
| HR | Human Resource |

| | |
|---|---|
| i.e. | That is |
| ICT | Information and Communication Technology |
| ILO | International Labour Organization |
| INT | Intention |
| JCTIM | Japanese Chamber of Trade and Industry Malaysia |
| LGL | Legislation |
| LIFO | Last In First Out |
| LFSR | Labour Force Survey Report |
| KMO | Kaiser-Meyer-Olkin |
| MAH | Malaysian Association of Hotels |
| MEF | Malaysian Employers' Federation |
| MICCI | Malaysian International Chambers of Commerce & Industry |
| MLFSR | Malaysia Labour Force Survey Reports |
| MP | Malaysia Plan |
| MRAA, 2012 | Minimum Retirement Age Act, 2012 |
| MS | Management Support |
| MSIC (2008) | Malaysia Standard Industrial Classification (2008) |
| MTMA | Malaysian Textiles Manufacturer Association |
| MTUC | Malaysian Trades Union Congress |
| NKEAs | National Key Economic Areas |
| OECD | Organization for Economic Cooperation and Development |
| OINT | Overall Intention |
| PATIM | Population Ageing Trends in Malaysia |
| PBC | Perceived Behavioural Control |

| | |
|---|---|
| PE | Past Experience |
| PLS3 | Smart Partial Least Squares 3 |
| PS | Peers' Support |
| SD | Standard Deviation |
| SE | Standard Error |
| SEM | Structural Equation Modelling |
| SMEs | Small and Medium Enterprises |
| SN | Subjective Norm |
| SoSS | The Social-oriented Self Scale |
| SPSS | Statistical Package for the Social Sciences |
| Std. μ | Standardized Mean |
| TPB | Theory of Planned Behaviour |
| TRA | Theory of Reasoned Action |
| UTAR | Universiti Tunku Abdul Rahman |
| VIF | Variance Inflation Factor |

# GLOSSARY OF TERMS

| | |
|---|---|
| Able older workers | It refers to physically and mentally healthy individuals aged 50 and above who possesses relevant work experience, with high productivity ability and are willing to continue employment or seek job employment (Bandiera, Barankay & Rasul, 2007). |
| Age Groups | Age group 1 refers to managers' age between 30 and below; Age group 2 refers to age from 31 to 40; Age group 3 refers to age from 41 to 50; Age group 4 refers to age 51 and above. |
| Age Stereotypes | It refers to managers' belief when hiring older workers which either bring positive consequences such as trainability, quality output, reduce turnover rate, non-resistance co-operating workforce, lesser cost to their organizations or otherwise. |
| Attitude | It is defined as the extent to which an individual regards a set of behavior as favourable or otherwise; if it is favourable to him; his attitude will influence his intention towards that performance (Ajzen, 1991). |
| Behavioural Intention | Managers' intention to hire older workers. |
| Bootstrapping | The PLS-SEM calculation used to assess empirical t-values for significance levels (Hair et al., 2014). |
| Construct | A variable that is not directly measured (Hair et al., 2014). |
| Cross-loadings | The calculations used to measure discriminant validity of the indicators (Hair et al., 2014). |
| Effect Size ($f^2$) | The calculation used to evaluate whether a specific exogenous construct has an impact on the endogenous construct in a research model (Hair et al., 2014). |
| Endogenous Constructs | Dependent variables (Hair et al., 2014). |

| | |
|---|---|
| Exogenous Constructs | Independent variables (Hair et al., 2014). |
| Future Intention | Intention to hire older workers within twelve months from the time responding managers participated in the survey. |
| Indicator Loading | The calculation used to determine reliability of indicators (Hair et al., 2014). |
| Intention | An intention is a reflection of a person's willingness and ability to engage in a specific behaviour, and how hard he is willing to try and the amount of effort put forth (Ajzen, 1991). |
| Latent Variable | A variable that is not easily observed. |
| Management | In a workplace refers to the company and its management team which includes the chief executive office, senior manager, human resource manager. |
| Manager | Collective term for respondents aged 18 and above with at least secondary school education, involved in the hiring of employees or hiring decision makers from either human resource, administration, production, marketing or other various departments. |
| Measurement Model (Outer Model) | The model that specified the relationships among instrument items (exogenous latent variable) and their corresponding constructs (Hair et al., 2014). |
| Measurement Model Assessment | The assessment of the reliability and validity of the constructs (Hair et al., 2014). |
| Normative beliefs | Refer to an individual's perception on the likelihood of someone important to him would approve of his behaviour (Ajzen & Madden, 1986). |
| Older Workers | A group of non-managerial workers or active job seekers aged 50 and above, the group included both Malaysian male and female of all races in the country. |

| | |
|---|---|
| Outlier | Any data that lies outside the normal range of data is an outlier (Zikmund, Babin, Carr & Griffin, 2010). |
| Overall Intention | A person's willingness and readiness to engage in a specific behavior (hiring older workers) predicted by his attitude, subjective norm, perceived behavioural control. If his intention is high, he is willing to try and put in effort in his behaviour (Ajzen, 1985). |
| Partial Least Squares (PLS) | A variance based SEM technique that used least squares estimation to maximize explanation of variance of the dependent constructs in a structural equation model (Henseler, Ringle, & Sinkovics, 2009). |
| Past Experience | An experience in which an individual has previously been engaged in which is stored in memory (Sommer, 2011). |
| Path Coefficients | The arrows or paths representing the hypothesized relationships between the constructs (Hair et al., 2014). |
| Peers' Support | It is the extent to which a manager perceived his colleagues' beliefs on his likely behaviour is a benefit to the company; a strong belief lead to strong motivation to hire older workers (McKinlay & Cowan, 2003). |
| Perceived Behavioural Control | The degree of perceived ease or difficulty over performing a behaviour (Ajzen, 1985). |
| PLS Algorithm | The calculation runs in order to obtain model estimation (Hair et al., 2014). |
| Sizes of the Path Coefficients | The PLS calculation used to determine the relevance of the relationships between indicators and constructs (Hair et al., 2014). |
| SmartPLS | A PLS path modelling software developed by Ringle, Wende and Becker (2015). |
| Standardized Coefficient of Determination ($R^2$) | The calculation used to evaluate the predictive accuracy of the structural model. |

| | |
|---|---|
| Structural Equation Modeling (SEM) | It is the second generation statistical modeling methodology that combines the use of latent variables to represent the concept of theory and data from measures to explain variances (Hair et al., 2014). |
| Structural Model (Inner Model) | The relationships between constructs (Hair et al., 2014). |
| Structural Model Assessment | The determination of the variance explanation of the endogenous constructs, effect sizes and predictive relevance (Hair et al., 2014). |
| Structural Path | The relationship among latent variables. |
| Subjective Norm | A person's perception of the social pressure on him to comply in a specific behaviour. If he perceives the pressure is strong, he is willing to engage on that particular behaviour (Ajzen, 1985). |
| Tenure in employment | Refer to the length of a worker's employment in an organization. |
| The 9 locations | Refers to the survey locations comprise of Perak, Pulau Pinang, Kedah, Perlis, Negeri Sembilan, Melaka, Johor, Selangor and Kuala Lumpur (Wilayah Persekutuan). |
| Total Effects | The PLS calculation used to evaluate how strongly each of the exogenous constructs ultimately influenced the endogenous constructs. |

**CHAPTER 1**

**INTRODUCTION**

## 1.1    Introduction

The original aspiration under Wawasan Malaysia was to become a developed nation by the year 2020. However, this has now been replaced by National Transformation 2050 or commonly known as TN50 (Zainal Abidin, 2016). One of the realistic issues that confronted the realization of an aspired developed and high income nation was the shortage of labour and talents. In Malaysia, the gradual increase in the ageing population against a declining total population growth, and a rise in the 15-year-old and above age groups, indicated a continual ageing population growth is to be expected in the coming years. Demographic ageing brought with it a shortage in labour supply, higher expenses on government spending such as in medication and medical services, amenities and other welfare services. At the same time, due to retired workers either having no income or an income that is insufficient to qualify for taxation, affected the overall well-being of the economy.

As part of the solution to labour shortage, Malaysia needs older workers to increase their participation in the labour force and to extend their working lives. Since the older population has emerged as an important market segment due to the fact that they are much healthier, better educated and lived longer compared to their predecessors, this led to the Government to increase the retirement age from 55 to 60 for the private sector by implementing the

Minimum Retirement Age Act (MRAA) 2012 which took effect on July 1, 2013. Whilst Unions welcomed this move (Borneo Post online, 2012), employers generally preferred to continue with the 55 years' retirement age, as this gave employers the flexibility to extend employment contracts with retired workers where necessary. The question as to whether the nation's labour shortage be solved with the implementation of the MRAA 2012 was very much dependent on hiring managers in business organizations who played a crucial role in recruitment and selection of their workforce. As demographic changes created an older workforce, and age-related issues which concerned older workers' employment, these could only be overcome with employers' understanding of older workers' positive workplace attributes. This valuable older human resource could only be of great utilization with the willingness of employers to hire them. However, if managers possessed low intention towards the hiring of older workers, this could seriously prevent them from actually hiring these workers.

Generally, the knowledge on what factors affected managers' intentions to hire older workers, so as to build up their additional manpower pool to ease the labour shortage problem was still very much lacking at the moment. With that, this study attempted to predict managers' hiring intention of older workers based on the theory of planned behaviour (TPB) (Ajzan, 1985; 1991). The present study research model used intention based human behaviour with the original variables of attitude (ATT), subjective norm (SN), perceived behavioural control (PBC) from TPB, and extended it to include a new variable – past experience (PE) as an investigative determinant of intention (INT) to

hire older workers. Furthermore, the age of managers was designed as a moderator on the relationship between managers' attitude towards older workers and their intention to hire these older workers.

This research investigated the relationships between managers' attitudes towards older workers, subjective norm and perceived behavioural control towards hiring older workers, and managers' past experiences with older workers; all of which in turn influenced their intention to hire older workers. The results obtained greatly helped to improve awareness, reduced potential problem areas, and increased managers' intention to hire older workers. The present study was on managers' hiring intention of older workers. Therefore, the targeted respondents including hiring managers from 11 industries located in Johor, Kedah, Kuala Lumpur, Melaka, Negeri Sembilan, Perak, Perlis, Pulau Pinang and Selangor in West Malaysia. The older workers referred to were Malaysian non-managerial employees aged 50 and above, either males or females, and still in employment or active job seekers.

## 1.2 Research Background

In 2015, Malaysia's total population was 31.2 million, and it reached 31.7 million in 2016 (Malaysia Current Population Estimates, 2014-2016). As per Population Ageing Trends in Malaysia (PATIM) (2005), from years 2000 to 2020, the 60 to 74 age group was expected to expand steadily, and it continued the momentum to 8% in 2020. Likewise, this pattern was duplicated in the 75+ age group. It further provided that the 0-14 years' group had declined from 24.9% in 2015 to 24.5% in 2016 due to low fertility levels, while for those

aged 15-64 years old; the number increased by 0.2%, and stood at 69.5% in 2016. As for population aged 65 years and above, it increased by 0.2% from 2015 to 6% in 2016.  The increased older population and reduced younger age group had seriously affected the pool of human resources in the country. In terms of future demographic development, Malaysia's older population is expected to reach 3.4 million in 2020; and by 2035, 15% of its population will be aged 60 and above; which brings Malaysia into the ageing nation category (Tenth Malaysia Plan [MP], 2011-2015).

In the Eleventh MP (2016-2020), the expected 1.5 million new jobs by 2020 focused on transforming labour intensive to knowledge based innovative activities, created a high demand for skilled labour. In Malaysia, all industries generally experienced some levels of labour shortage. This labour force participation rate was reduced from 62.9% in 2009 to 62.7% in 2010 (Malaysia Labour Force Survey Reports [MLFSR], 2010). In 2014, the total labour force which included both local and foreign labour was at 14.1 million persons, and in 2015, it grew only slightly to 14.5 million persons at 67.9% (MLFSR, 2014; 2015).  However, during the same period, the local labour force in the 35-44 years and 45-54 years age groups declined (MLFSR, 2016). Many vacancies were filled by foreign labour, and that foreign labour had expanded tremendously over the years. From the data provided by Dewan Rakyat, there were 2.07 million legal workers in the country as at 31 December, 2015 (Malaymail online, 2015).

The labour shortage problem was compounded by Malaysian youths delaying their labour force participation due to their own unreadiness. One of the main causes cited was the decline in Malaysian students' academic performance ('Trends in International Mathematics and Science Study' as cited in Tenth MP). Simultaneously, the labour participation rate for older workers also shrunk, mainly due to older workers either not being able to find employment, retirement, poor health or for other reasons. Hence they were outside the labour force (MLFSR, 2014 & 2015).

Taking cognisance of the increased older population and its impacts on the national economy, the government took several actions to help ease the serious labour shortage. Hence, programmes such as learning skills in information and communication technology (ICT) were introduced to ensure that older persons remained active and productive. The government's endeavour to keep its workforce longer at the workplace was seen from its effort to encourage employers to give older workers employment opportunities (Ninth & Tenth MP, 2006-2015). The government's effort was implemented through the Human Resources Ministry, which allowed employers to claim a 100% tax rebate on costs to retrain their older workers. Another effort was the action on 1 Oct, 2010 to improve employment terms and conditions for the 6.5 million educated and skilful latent workers, which therein included older workers who intended to become part-time workers (Employment Act, 1955).

## 1.3 Research Problems and Statement

Firstly, against the background of acute labour shortage, ageing population, and the low labour force participation of older workers, one potential labour source expected to ease the labour problem should be the skilful, experience and able older workers. However, employers generally preferred not to keep workers above 55 year-olds in their organizations for want of flexibility and cost reduction (Malaysian Employers' Federation [MEF], 2012; Mustafa Kamal, 2012), reflecting employers' general negative reaction towards the enactment of MRAA, 2012. At the same time, there were some 80,000 workers retiring yearly from the private sector (Oh, 2010), and this retirement trend was expected to continue for the next few decades.

As this labour shortage persisted, employers are expected to continue to fill these vacancies with foreign labour. Foreign labour was recorded at 1.8 million in 2010 and rose to 2.1 million at the end of 2015 (World Bank, 2015). In 2016, Bank Negara's report confirmed an increased reliance on foreign workers in the labour-intensive sectors (King, 2017); indicating that the local workforce participation rate had reduced. This effectively suggested that future jobs are likely to be filled by foreign labour instead of utilizing local older workers. Reliance on foreign labour may be cost effective for the short-run, but in the longer-term, deteriorating quality and productivity are the result of jobs taken up by either untrained or poorly trained foreign workers. The low cost unskilled labour also delayed employers' moves and plans to invest on mechanization. Thus, a short term solution eventually diminished the nation's global competitiveness and impacted its national wealth. The long term goal

should be to utilize available internal talents effectively which should include the re-participation of an experienced older workforce. As such, the Eleventh MP (2016-2020) made a deliberated point of the gradual reduction on the reliance on foreign labour and to limit the percentage of foreign labour in a company to no more than 15%. Hence, the above justified this present study on the hiring intention of managers in business organizations.

Secondly, in an earlier survey on Malaysian employers, 55% of respondents thought they were fully aware of the impact of demographic changes on their businesses, and that 50% of the respondents did not think the demographic changes actually reduced labour supply. This survey reflected employers' limited awareness of an ageing workforce and its impact on their business operations (Watson Wyatt Worldwide, 2006). Additionally, not all employees perceived MRAA 2012 beneficial in the long run. This was seen from the study of Tung and Comeau (2012) on 230 employed individuals across various states in Malaysia. Although 86% of respondents agreed to the increment of retirement age to improve national productivity and reduce reliance on foreign workers, there were still 14% who were skeptical on the government's move, which they thought was to reduce job opportunities for younger persons, lower productivity and increased costs. Likewise, in Jobstreet.com (2011), 28% of respondents thought that the increase in retirement age was to reduce employment opportunities among graduates. From the general reactions of employers and the previous studies, the understanding of the benefits of hiring older workers was little; employers deemed short term cost-saving to be the

upmost concern, even to the extent of allowing low skilled foreign labour which posed slow progression to high technological transformation.

At the moment, Malaysia does not have laws on anti-age discrimination or equal employment opportunity except the MRAA, 2012 and the Persons with Disabilities Act, 2008 which provided incentives to disabled workers and helped them in job placements (Furuoka, Lim, Pazim & Mahmud, 2011). The MRAA 2012 aimed at raising the retirement age for want of diversity at workplace and to prolong the work-life of older workers. MEF and other employers did not welcome such implementation and claimed cost being one of the main factors. After considering employers' general dissatisfaction with MRAA's implementation, it is worth the effort to investigate whether with such an Act in place, older workers will still face age discrimination in their search for employment, and whether managers involved in hiring workers have the intention to explore the possibility of utilizing older workers as an additional labour source to ease their labour shortage.

Thirdly, from a theoretical perspective, currently most local past studies on older persons were mainly on challenges and issues (eg. Tengku Abdul Hamid, 2015) on social security, health, community care and social services, policies and long-term care of older persons (eg. Ong, 2002), on employment issues (eg. Chan & Masud, 2007), on older consumers' behaviours and on-line purchase (eg. Lim, Yap & Lee, 2011), on financial aspects and utilization of employees' provident funds (eg. Chan, Paim, Masud & Hamid, 2010) and on retirement age policy (Tung & Comeau, 2012).

On the other hand, in foreign developed countries with established high retirement age and well-regulated employment policies, studies were mainly on workplace discrimination (eg. Cheung, Kam & Ngan, 2010; Fisher, Truxillo, Finkelstein & Wallace, 2017), on age stereotypes (eg. Karpinska, Henkens & Schippers, 2013), and on the influences of age on evaluative workplace outcomes (eg. Bal, Reiss, Rudolph & Baltes, 2011; Wanberg, Kanfer, Hamann, & Zhang, 2016). One of the examples on managers' intention to hire was from a Taiwanese's study on the intention to hire older workers aged 60 and above that applied the theory of reasoned action (TRA), personal experience and Chinese cultural values were the two additional variables (Lu, Kao & Hsieh, 2011). Another example was from Fraser, Ajzen, Johnson, Herbert & Chan (2011), where the authors applied TPB to predict managers' intention to hire qualified workers with disabilities. The study was conducted on 92 respondents, who were members of a Rotary club and human resource specialists of the Chamber of Commerce in Seattle, US. Further examples, also on employers' intention to hire qualified workers with disabilities was from Ang, Ramayah and Amin (2015) from Sarawak, East Malaysia.

Besides the original 3 antecedents (attitude, subjective norm and perceived behavioural control), this study has included past experience as a major determinant of intentions. The study of past experience is imperative to review an individual's past behaviour, for this is the specific knowledge as to his intentional behaviour. Previous studies have found that past experience is a good predictor of behavioural intention. It has a positive causal relationship with intention, and that a positive past experience has higher and stronger

behavioural intention (Mohmed, Azizan, & Zalisham Jali, 2013; Wang & Ritchie, 2012). Such that, a positive past experience enhances a positive intention. This is important in the study of managers' intention to hire older workers. The empirical study of this new antecedent statistically contributes to the theoretical advancement in the field of hiring of older workers.

Another inclusion is the age of managers as the moderator between attitude and managers' intention to hire older workers. Generally, the age of an individual has an important effect on his behaviour (Liébana-Cabanillas, Sánchez-Fernández, & Muñoz-Leiva, 2014). In fact, research has shown that managers of different age groups have different profiles in their leadership styles in managing their subordinates; in that, managers of an older age group are better able to successfully resolve issues in their lives and so as to have a greater sense of meaning and satisfaction than managers of a younger age group. In addition, they also consulted more widely and favoured more participation (Ang & O, 2012). Studies also suggest that younger respondents were not in favour of older workers, but the older cohort preferred older workers (Rupp, Vodanovich & Crede, 2006).

From previous studies, it was difficult to find one consensus conclusion or defences deliberated on the moderating effect of age; there were mixed results, such as in Ang and O (2012), there was an effect, whereas in others like Brothers, Miche, Wahl and Diehl (2017), Mohd Isa and Wong (2015) and Muhamad Hanapiyah, Daud and Wan Abdullah (2018), there were moderating effects.

It can be seen that despite the Government's efforts to enact MRAA 2012, and encourage employment of older workers, it is still prevalent in business organizations that employers still preferred foreign workers over and above older workers. Needless to say, such preferences affects the careers of older workers in terms of job opportunities, promotions and performance evaluations. As stated in Naegele, Tavernier, and Hess (2018), even in advanced countries with comprehensive laws and regulations to protect the employment of older workforce, older workers still faced rejection in seeking employment.

In the Malaysia situation, one important highlight is the decreasing number of older workforce participation, even with the increased retirement age in MRAA, 2012, indicated a need to consider the age of managers as a moderator on their attitudes toward older workers and their intention to hire these older workers. This is because the age of managers revealed their attitude towards older workers, therefore, using their age as a moderator in the study enable the findings of the moderating effect on the relationship of attitude and hiring intention.

Based on the above identified distinctions, this suggests that irrespective of local or foreign studies, the intention of managers to hire older workers was rare. Furthermore, to the best of my knowledge, at this time of writing, there was no such similar or related study being conducted in Malaysia on the hiring of older workers and which examined the relationship of attitude, subjective norm, perceived behavioural control and past experience on managers' hiring

intention on older workers, and the moderating effect of managers' age on the relationship between attitude and hiring.

There is a general lack of awareness among employers and employees on the ageing population, the impact on labour shortages and the nation's overall economic well-being. This posed significant gaps in understanding the attributes of older workers and the impending direction of future workforce diversification trends. Therefore, it is crucial to investigate whether the identified antecedents are related to the managers' hiring intention of older workers, as it impacts not just older workers' work lives, but also organizational performance and the economy and society as a whole; hence, the justification of this present study on the intention of managers to hire non-executive level older workers aged 50 and above. The gap is filled by drawing on 55 structured questionnaires collected from 468 hiring managers of 11 industries from 9 locations.

As such, this current study is said to be novel, and it contributes to the field of recruitment and selection of older workers in human resource management. Finally, it helps bring an awareness to business managers and public policy makers for future enhancement of policies and practices, particularly concerning the employment of older workers.

Furthermore, this present study is expected to add knowledge to research studies in Malaysia on the ageing workforce and their employment prospects.

The findings of this study also provide a foundation for future researchers to further investigate the viability of TPB and managers' hiring intention.

## 1.4 Scope of Study

In this present study, the targeted respondents were business owners, supervisory or executive level staff, and professionals in business organizations who were the actual hiring authority, or were the hiring decision makers, or the project heads who selected team members for their projects. These targeted respondents were either from human resource, administration, production, marketing or some other departments within their own organizations. They were aged 18 and above with at least a secondary school education. For standardization purposes, they were all being collectively addressed as managers.

Survey locations were concentrated in Peninsular Malaysia. Peninsular Malaysia is one of the two physical components of Malaysia. From the perspective of infrastructure planning, Sabah, Sarawak and Peninsular Malaysia do not constitute a single entity. The west coast of Peninsular Malaysia is more developed and more densely populated than other parts of Peninsular Malaysia (such as East Coast) and Sabah and Sarawak (Naidu, 2008). Most of the infrastructure investments were located in the West Coast and in meeting the demand from modern economic sectors, facilities were expanded and upgraded continuously. The survey locations of this study were targeted at the West Coast of Peninsular Malaysia in the states of Perak, Pulau Pinang, Kedah, Perlis, Negeri Sembilan, Melaka, Johor, Selangor and Wilayah

Persekutuan of Kuala Lumpur (Kuala Lumpur) (hereinafter collectively referred to as "the 9 locations"). The reasons for such identification was due to high labour force participation rate and the high population density in these locations as compared to other states (MLFSR, 2010; Naidu, 2008). Survey organizations were targeted at various different types of industry classified according to the Malaysia Standard Industrial Classification, 2008 (MSIC, 2008).

## 1.5    Research Objectives

One of the ways to counter a shrinking labour force is to substitute it with older workers. Skilful and able older workers are needed to remain in the workforce longer to help boost productivity, to reduce government spending and dependency on foreign labour (Saieed, 2016). However, managers' negative attitude in their decisions to either recruit or retain older workers, with poor support from management and peers, lack of resources and adverse past experience greatly reduced managers' hiring intention.

Therefore, the research objectives included are to predict managers' intention to hire older workers, to examine the 3 predictive determinants in the original TPB and a new determinant of past experience and their relationships in the extended TPB model. Other objectives included the examination of the moderating impact of managers' age on their attitude and intention to hire older workers. It was noted that even when managers' intention to hire was established. However, there were instances when their immediate intention was not possible. Therefore, for practical reasons, the outcomes of the dependent

variable of managers' intention to hire older workers was divided into an overall intention and a future intention, where a future intention referred to managers' intention within 12 months from the time of their participation in the survey.

Specifically, this research intended:

- To investigate whether age stereotypes, management support, peers' support and control beliefs are related to attitude towards older workers, subjective norm and perceived behavioural control.

- To examine the relationship of each of the determinant variables of attitude, subjective norm and perceived behavioural control on managers' intention to hire older workers.

- To apply an extended theory of planned behaviour with past experience to test its relationship with managers' intention to hire older workers.

- To test the impact of managers' age on the relationships between managers' attitude and their intention to hire older workers.

## 1.6    Research Questions

This research followed an exploratory quantitative method research design, and it involved the collection of data from managers from various types of industry. The foundation of the study model was the TPB. From the research objectives set, key variables were identified, literature was studied, and various recommended future research directions from previous studies were considered. Accordingly, 4 research questions were developed to examine the

relationships of the determinant variables in TPB and managers' intention to hire older workers. Therefore, the questions addressed were:

General Questions

Q1:    Whether age stereotypes, management support, peers' support and control beliefs are related to attitude towards older workers, subjective norm and perceived behavioural control respectively?

Q2:    Whether attitude towards older workers, subjective norm and perceived behavioural control are related to managers' intention to hire older workers?

Q3:    Whether an addition of a past experience variable to the identified variables within the Theory of Planned Behaviour model is related to managers' intention to hire older workers?

Q4:    Whether the age of managers has any impact on the relationship between their attitude towards older workers and intention to hire them?

Specific Questions

Q1    (1a): Whether age stereotype is related to managers' attitude towards older workers?

       (1b): Whether management support is related to subjective norm?

       (1c): Whether peers' support is related to subjective norm?

       (1d): Whether control belief is related to perceived behavioural control?

Q2    (2a): Whether attitude towards older workers is related to managers' overall intention to hire older workers?

(2b): Whether attitude towards older workers is related to managers' future intention to hire older workers?

(2c): Whether subjective norm is related to managers' overall intention to hire older workers?

(2d): Whether subjective norm is related to managers' future intention to hire older workers?

(2e): Whether perceived behavioural control is related to managers' overall intention to hire older workers?

(2f): Whether perceived behavioural control is related to managers' future intention to hire older workers?

Q3     (3a): Whether past experience is related to managers' overall intention to hire older workers?

(3b): Whether past experience is related to managers' future intention to hire older workers?

Q4     (4a): Whether managers' age has any impact on the relationship between their attitude towards older workers and overall hiring intention?

(4b): Whether managers' age has any impact on the relationship between their attitude towards older workers and future hiring intention?

## 1.7     Significance of the Study

This research is deemed timely in Malaysia for several reasons; these are the shortage of skilled labour; the increased percentage of the older population, the implemented MRAA 2012, and the lack of extensive research and literature on

the employment of older workers in the country. This is also an appropriate time for managers to review a crucial matter as to whether managers' age has any moderating impact on managers' attitude and their hiring intention.

For the benefits of future research, this study endeavours to provide additional variables such as past experience and the moderating variable of age to the existing TPB theoretical model to explain hiring intention, to add value to the body of knowledge of Malaysian research literature on the ageing workforce.

This research further benefits various business organizations as it provides a better understanding on the effects of the determinants of attitude, subjective norm, perceived behavioural control and past experience related to managers' hiring intention of older workers. More specifically, the study's results brought about awareness to organizations on the benefits of a diversified workforce. The understanding of the above, significantly helped private business decision makers to strategize their current employment policies and practices.

Public policy makers can enhance business organizations' recruitment and retention policies of an older workforce through the enactment of legislation. All the above listed benefits could ultimately and greatly relieve the government of financial burdens due to unemployed older workers.

**1.8    Chapter Structure**

There are 5 chapters as outlined below:

Chapter 1:    An introductory chapter that provided various research areas such as the background, problems, questions, significance and the objectives to be achieved.

Chapter 2:    Provided an overview of environmental factors on demographic changes in Malaysia. A review on relevant theoretical theories and literature on an ageing workforce, the various predictive variables and their outcomes. This chapter also presented an investigative conceptual framework, previous research effort on the definition of older workers. Hypotheses development were included.

Chapter 3:    Discussed the usage of a conceptual framework to investigate managers' hiring intention. Explanation was provided on the employment of the research design, the methodology, the assessment and measurement of the studied variables. In addition, the choice of methodology was highlighted, followed with an explanation of the data collection process.

Chapter 4:    Reported the main findings on descriptive and inferential data analysis, structural equation modeling on the predictable variables of the extended TPB model, and the moderating effects on hiring intention. Furthermore, all hypotheses developed earlier were tested and analyzed accordingly.

Chapter 5:    Presented a critical discussion of the findings. The discussion was framed around the research questions and hypotheses. Discussions were provided on the confirmed study, challenged and addressed to previous

researches on older workers and managers' intention to hire older workers. Finally, suggestions on theoretical, policy and practical implication of the study, limitation and possible fruitful future research directions completed the chapter.

## 1.9 Chapter Summary

As Malaysia progresses into an ageing nation, future employment of workers is expected to be encounter a tricky situation, where in some organizations older workers outnumber younger ones. The enlargement of a labour gap compels employers to continue reliance on unskilled and cheap foreign workers at the expense of reducing the nation's global competitiveness. Employers in high-tech businesses constantly demanding local yet limited skilled workers are likely to escalate their recruitment costs. Therefore, understanding the factors which influenced managers' intention to hire skilled and capable older workers is important both to business organizations and the nation's economic wellbeing. With an extended TPB with past experience and moderating variable of age to serve as a foundation to the conceptual model for this study, it provided an effective way to predict managers' intention to hire older workers. It also provided a comprehensive way to maximise the predictive outcomes. A detailed research conceptual model and related hypotheses are presented in the following literature review.

# CHAPTER 2

# LITERATURE REVIEW

## 2.1    Introduction

This chapter reviews the literatures relevant to the development of the research

model of hiring intention, and provides details to support hypotheses that were

offered. The reviews and discussions are arranged by subjects. The first part is

an overview of environmental factors on the demographic structural changes,

life expectancy and fertility rate, labour force participation issues and the

enactment of MRAA, 2012. It is followed by an overview of literature

pertaining to various aspects of older workers, the relevant variables, decisions

and effects on older workforce employment practices. A study on past

theoretical model includes a brief historical development of the TPB, and the

variables within the said theory. In addition, past relevant studies on hiring

intention are reviewed. Lastly, a conceptual framework for managers' hiring

intention and hypotheses are developed accordingly.

## 2.2    Overview of Environmental Factors

### 2.2.1    Demographic Structural Changes and Consequences

Ageing populations and older workforces are a worldwide phenomenon. On

the global scenario, in 1950, those aged 60 and above numbered 202 million; in

2013, the number reached 841 million, and this figure is expected to continue

to expand to 2 billion come 2050 (World Population Ageing, 2013). Further,

more persons aged 60 or more will outnumber children by the year 2040

(World Population Prospects, 2013). Reports also forecasted that, by the year 2025, 58% of the world's older population will come from Asia; and that Japan and Singapore will top the list by having their populations ageing at a fast pace. In 2010, more than half of Japan's population was already aged 45 years and above. Hence come 2050, Japan's ageing population is expected to grow at a rapid and faster speed than any other developed country (World Population Ageing).

On the local scene, Malaysia's total population in 2006 was 26.6 million, and the total population increased at a slow rate of 1.5% to 30.7 million (in 2014), 31.2 million (in 2015), and 31.7 million in 2016. However, as seen from Table 2.1, the gradual increase on median age, old age dependency ratio, old age index and life expectancy indicated an upward trend from 1970 to 2020. Additionally, its median age of 23.6 years in 2000 is expected to increase to 27.1 years come 2020; indicating that Malaysia is expected to gradually experience an age structure transitionally towards an ageing population (MLFSR, 2011; 2016).

**Table 2.1: Malaysia Demographic Indicators from 1970 to 2020**

| Indicators | 1970 | 1980 | 1991 | 2000 | 2010 | 2020 |
|---|---|---|---|---|---|---|
| Median age | 17.4 | 19.6 | 21.9 | 23.6 | 25.2 | 27.1 |
| Dependency ratio | 100.4 | 82.6 | 74.0 | 64.3 | 64.2 | 67.3 |
| **Old age dependency** | 10.5 | 10.4 | 10.2 | 10.0 | 12.1 | **16.5** |
| **Old age index** | 11.7 | 14.3 | 16.0 | 18.5 | 23.2 | **32.5** |
| Life expectancy: | | | | | | |
| Male | 61.6* | 66.4* | 69.2 | 70.2 | 72.6** | 74.2** |
| Female | 65.6* | 70.5* | 73.4 | 75.0 | 77.5** | 79.1** |

Distributions of major age groups were impacted by the low fertility rate since 1970. From Table 2.2 below, the most significant decline was on the 0-14 age group; at 44.9% in 1970 and it is forecasted to decline to 30.4% in 2020. According to the Population Distribution and Basic Demographic Characteristic Report 2010, the decline of this 0-14 age group was in fact faster than forecasted, because in 2010, it was already reported at 33.3%, and in 2011, it went further down to 27.6% (MLFSR, 2006, 2011); indicating the difficulty to keep in line with the forecasted 30.4% in 2020.

**Table 2.2: Percentage Distribution of Population by Major Age Groups in Malaysia from 1970 to 2020**

| Age group | 1970 (%) | 1980 (%) | 1991 (%) | 2000 (%) | 2020 (%) |
|---|---|---|---|---|---|
| 0-14 | 44.9 | 39.6 | 36.7 | 33.5 | 30.4 |
| 15-59 | 49.9 | 54.8 | 57.5 | 60.2 | 59.8 |
| 60-74 | 4.4 | 4.6 | 4.6 | 5.0 | 8.0 |
| 75+ | 0.8 | 1.0 | 1.2 | 1.3 | 2.0 |

From Table 2.2, the age group of 15 to 59 increased from 49.9% in 1970 to 60.2% in 2000, but it is seen declining to 59.8% in 2020. This slight decline could be explained as the age group of 0-14 experienced a continuous steady decline over the years due to a low fertility rate. Therefore, it can be seen that during the twenty years from 2000 to 2020, this decreasing 0-14 age group subsequently reduced the population that moved into the 15–59 category. Hence, the labour force participation rate was proportionally reduced. Another sign of ageing is seen from the steady expansion of the 60-74 age groups to 8% in 2020, and likewise, the 75+ age group also expanded (MLFSR, 2011, 2006).

The above ageing trend basically transformed a former bell-shape population pyramid in 2010 to a dome-shape in 2050. In other words, even a young country like Malaysia is ageing fast. It thus placed a larger burden for support on the working age population since the critical effect of ageing population accompanied with economic and financial adversity. As Malaysia experienced population ageing at a fast pace, its ageing population was projected at 15% by 2035 (Tenth MP, 2011; 2015). Malaysia life expectancy at birth by sex (Years) medium variant 1950-2050 is provided in Appendix 1.1.

### 2.2.2 Labour Force Participation and Related Issues

In Malaysia, all industries generally experienced labour shortages. In 2011, the working population aged between 15 and 64 was at 67.3% (MLFSR, 2011). As per Table 2.3, the labour force participation rate was 67.0% (in 2013); 67.6% (in 2014) and 67.9% (in 2015) respectively (MLFSR, 2017). These rates showed no significance expansion of the labour force participation over the stated years.

**Table: 2.3: Principal Statistic of Labour Force
for years 2013-2015**

| Indicator | | 2013 | 2014 | 2015 |
|---|---|---|---|---|
| Labour force | (‘000) | 13,634.6 | 14,263.6 | 14,518.0 |
| Employed | (‘000) | 13,210.0 | 13,852.6 | 14,067.7 |
| Unemployed | (‘000) | 424.6 | 411.1 | 450.3 |
| Outside labour force | (‘000) | 6,700.8 | 6,821.0 | 6,869.9 |
| Labour force participation rate | (%) | 67.0 | 67.6 | 67.9 |
| Unemployment rate | (%) | 3.1 | 2.9 | 3.1 |

Labour shortage situation was compounded when 1.5 million new jobs were created between the years 2016 and 2020 (Eleventh MP).

The labour gap expanded due to a low fertility rate and a reduced younger workforce and when a younger generation delayed their entrance into the workforce it added difficulties to the existing labour shortage problems. The youth between the ages of 25 and 29 who had completed their tertiary education, preferred to continue to pursue full-time education, numbered 338,800 in 2001, but in 2008, the number rose to 571,000 (MLFSR, 2006; Tenth MP). This scenario was further reflected through the increased unemployment rate of the 15-40 aged youth population from 10.5% in 2001 to 10.9% in 2008. Further, in 2009, the same youth population between the ages of 15 and 40 was 11.9 million, equivalent to 41.5% of the total population, but only 7.1 million was employed. Another reason which led Malaysian youth to delay their labour force participation was their unreadiness for the labour market. An international survey by Trends in International Mathematics and Science Study indicated the decline of Malaysian students' performance, stating that in 2003, only 5% and 7% failed in their science and mathematics subjects, but in 2007, around 20% failed to meet the minimum benchmark for both these two subjects (Tenth MP). The high number of unemployed youth was highlighted, that in 2014, of a population of 6.7 million, 44.8% either attended schools or prepared for further studies. This gradual increase in unemployed youth, at the same time, added to the critical labour shortage and left employers with limited choices to fill their job vacancies (MLFSR, 2015).

The labour shortage situation became aggravated with some 80,000 private

sector workers retiring yearly (Oh, 2010).

Recruitment problems continued to surface while organizations were

compelled to fill their vacancies with foreign workers. As reported by Dewan

Rakyat in the Malaysian Parliament on 18 March, 2015, there were 2.07

million legally registered foreign workers at the end of 31 December, 2014,

and this number excluded the estimated 2.2 million illegal and undocumented

foreign workers (Chu, 2015). This alarming number suggested the heavy

reliance of employers on foreign workers mainly due to acute local labour

shortages. On the other hand, the increased ageing population did not reflect

increased employment opportunities for older persons, as the older workers'

labour force participation rate was noticeably low.

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**Table 2.4: Labour Force Participation Rate
by Age Groups (2013 & 2014)**

| Age<br>Year | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 |
|---|---|---|---|---|---|
| 2013 | 49.1% | 96.8% | 97.7% | 95.4% | 69.5% |
| 2014 | 48.7% | 96.8% | 97.7% | 94.9% | 67.6% |

Table 2.4 above compares the labour force participation rate within each age

group for the years 2013 and 2014. For the age groups 15-24, 45-54 and 55-64,

the rate had decreased as a result of lesser youths' entry into the labour market,

and within the same period, older cohorts left the employment market. As for

the 25-34 and 35-44 age groups, they remained at status quo. This indicated

that even with MRAA implemented in 2013, it did not seem to help raise the labour participation rate for the 55 – 64 aged group reduced from 69.5% in 2013 to 67.6% in 2014 (MLFSR, 2014). From the above provided data a gradual reduced labour force can be seen once workers passed the age of 55.

## 2.3     The Older Workers

In defining an 'older worker', it is necessary to consider when a person becomes 'old' and what constitutes an 'older person'? Roebuck (1979) commented on the difficulty to define old age as it was not easy to know exactly when a person grew old even if a person satisfied two conditions of 'growing old', i.e. appearance of being old and unable to support or to care for themselves. Alternately, some might look old, but can still support or care for themselves. Likewise, others might look young, but are already unable to support or care for themselves. Furthermore, the process of looking old and supporting or caring for oneself was not the same for all persons, as each individual ageing process took place at different paces. Due to a lack of understanding on exactly when old age takes place, hence the arbitrary use of pension age or retirement age as synonymous to signify old age was merely for convenience purposes.

To Turner (1989), ageing was both a social and physiological phenomenon. In this sense, questions were raised as to when exactly can a worker be considered an 'old worker'? What were the factors used to demarcate a distinction between an ordinary worker and an 'old worker'? In response, references to one of the earliest studies on the topic of older workers revealed that older

workers were those who were 45 years of age and older (Tuckman & Lorge, 1952). A later study by Ashbaugh and Fay (1987) found that in defining 'old age', various arbitrary methods were used to set the threshold age. Generally, a worker's age was important for human resource planning and management and it was a qualifying factor in retirement and eligibility for pension schemes. Ashbaugh and Fay then analysed the issue of ageing through a review of 105 studies on human resource management literature between the years 1970 and 1985. From these 105 studies, they found that a majority used age 45, 50, 55 and 60 years of age to define 'old age'. The average age used as onset was 53.4.

**Table 2.5: The Onset of Old Age**

| Age | No. of studies | Age | No. of studies | Age | No. of studies |
|------|------|------|------|------|------|
| 30 | 1 | 47 | 2 | 58 | 3 |
| 35 | 2 | 49 | 1 | 59 | 1 |
| 38 | 1 | 50 | 12 | 60 | 17 |
| 40 | 4 | 52 | 1 | 61 | 2 |
| 41 | 1 | **55** | **30** | 62 | 2 |
| 44 | 1 | 56 | 1 | 64 | 1 |
| 45 | 13 | 57 | 2 | 65 | 7 |
| Total: 105 studies | | | | | |
| Average age used as onset: 53.4 | | | | | |

From Table 2.5, there is actually no one common determinant to define 'old' in a worker. Majority used chronological age of '55' as a threshold arbitrarily as this number '55' was typically the earliest age at which early retirement was taken. It was also because in most statistical data reports, it was common to use a figure that ended with number '5' or '0'. Therefore, after reviewing 105 studies, it was concluded that the use of chronological age was based on a decremented theory of ageing, which held that it was inevitable that progressive physical and mental declined with age (Ashbaugh & Fay, 1987).

Even after the definition of 'old age' was concluded, the next question was who can be defined as an 'older worker'? In view of an active workforce which always pointed towards the age range of 16 to 65; Ng and Feldman (2008) used the mid-point of 40 and above to define older workers. In addition, issues in age discrimination at the workplace and the hiring and performance evaluation on older workers reported in studies usually started at the age of 40. It was interesting to note that Forte and Hasvick (1999) had two sides of the coin as they thought this question had to consider who were the parties and the purposes of their questioning. From the legal aspect, an older worker was a person eligible for retirement benefits, such as eligibility to receive discounts at restaurants (Age Discrimination in Employment Act 'ADEA' 1967). Researchers like Bird and Fisher (1986) defined an old worker as an individual aged 50 and above. To Shore and Bleicken (1991), older workers were someone between 40 and 65 years of age, whereas in Taylor and Walker's study (1994), 12% of employers considered a person being too old for employment once he passed the age of 40. More often than not, an employee once aged more than 45 years is considered an older worker (Staudinger, 2015).

In 1994, the American Association of Retired Persons (AARP) defined older workers as workers aged 50 and older. Hassell and Perrewe (1995) advanced three good reasons to settle at 50 years of age as old worker. Their first reason was to be in line with the cut-off age identified by the work in America Institute and the National Advisory Committee on the future of older workers in America. Next reason was the huge number of age discrimination lawsuits

filed by workers aged between 50 and 59, and their last reason was to follow AARP's qualification for membership at the age of 50. Although these 3 reasons were American based, later researchers like Taylor and Walker (1998), Chiu, Chan, Snape and Redman (2001), Armstrong-Stassen and Templer (2005) adopted the reasoning of Hassell and Perrewe as someone aged 50 and above in their studies.

Chui et al. (2001) and Salah and Habtoor, (2015) concluded that older workers referred to age 50 since a person once aged 50 and above, the chances for him to seek employment became lower. This age 50 was supported by Vansteenkiste, Deschacht and Sels (2015). In Vansteenkiste et al.'s study, 40% of job seekers aged between 18 and 49 were reemployed within a period of 3 months as opposed to only 28% of those aged 50 and over. Thus, this suggested that a younger age group had 40% more chances of being employed than the older job seekers. In Taiwan, workers aged 50 and above increasingly faced difficulties in securing employment and re-employment (Lu & Kao, 2010). Kluge and Krings (2008) also supported that older employees were those persons aged 50 and above. In the case of Shacklock, Brunetto and Nelson (2009), the age of 50 was identified as the age close to workers' decision making on whether they should retire or continue to work. The researchers further cited USA Center for Aging and Work, Boston, as the center also regarded those aged 50 and above as older workers. On the contrary, Lu, Kao and Hsieh (2011) referred older workers as those aged 60 and above.

In a MDS Project by World Health Organization (2002), the definition on age for older South Africans was their calendar age, which is taken to assume biological age. One point to note, however, is these two ages were not necessarily synonymous. Since there was a lack of standard definition of 'old age', and that the pension benefits eligibility age varied throughout the world, different countries determined the eligibility age for pension benefits differently. The MDS project was left with no further choice but to finally decide that the age of 50 years and above be used to define an older person.

As pointed out by Walman and Avolio (1986), chronological age may be taken as a convenient mean by employers to estimate their workers' performance potential, but this cannot be conclusive because individuals varied in their job performance at various ages. As such, to use chronological age could lead to mistakes in employment decision-making. Nevertheless, over the years, employers' attitudes to the use of chronological age in their hiring decision remained. This can be seen in recruitment advertisements, especially in developing nations such as Malaysia where no age discrimination laws were in existence. As time progressed, even if age restriction clauses in job advertisements were substantially reduced, this did not totally eradicate age discrimination (Taylor & Walker, 1994). As employers still discriminated job seekers on their age through the use of employment application forms where applicants were required to furnish their ages and birth dates; these immediately provided employers with easy identification of the applicants' ages during selection process. Employers may not realise that such discriminatory action could cost their organizations litigation and could tarnish

their corporate reputation and images (Kethley & Terpstra, 2005), especially so in countries with established anti-discrimination laws. In ensuring fairness to older job applicants in the selection process, the court was more prepared to accept giving valid tests, rather than to accept the use of age as a selection criterion (Arthur, Fuentes & Doverspike, 1990).

In most Organization for Economic Cooperation and Development (OECD) countries, labour force participation of older workers referred to age 55 and above. However, Malaysian policy makers adopted the 1982's United Nation World Assembly's definition of 'old age' to be individuals aged 60 years and over (PATIM, 2005). Prior to MRAA 2012, the retirement age was 55, which effectively meant that Malaysian workers retired even before they reached their old age. In addition, Malaysian's statistics indicate that the labour participation rate for those aged 50 and above, reduced substantially (MLFSR, 2014). It appears now that setting a statutory retirement age at chronological age boundaries to serve as a mandatory condition for leaving the labour market is needed. Although seen as a form of institutional discrimination, in a developing nation such as Malaysia, it is a necessary evil to protect older workers from being discriminated due to their age to continue working prior to them really becoming too old (Stypińska & Nikander, 2018).

After considering the various justifications advanced in early studies, it was appropriate to define an older worker as aged 50 and over for the purpose of this present research. Since most previous researches often referred to older people or workers, as a group, following that tradition, older workers in this

present study did not refer to any specific individual; instead, older workers referred to a group of workers currently under non-managerial employment status or active job seekers aged 50 and above, and which included both Malaysian males and females of all ethnicities in the country.

## 2.4    Overview of Social Psychological Attitude-Behaviour Theories

An introduction on the development of Fishbein's Attitude Model, Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB) were necessary as these three theories argued that an individual's behaviour can be predicted from his intention to perform the desired behaviour, and that his intention was affected by various factors.  A brief description of each of these models followed.

### 2.4.1   Fishbein's Attitude Model

In 1961, Dulany published a theory of propositional control where attitude was said to be made of affection, cognition and conative components, and that attitude was a major determinant of behaviour (Dulany, 1961). In 1967, Fishbein based on Dulany's theory of propositional control, proposed a theory of behavioural prediction wherein he questioned such an assumption on attitude as a major determinant of behaviour. He argued on a limited set of variables that functioned as primary determinants of behaviour and restrictive form due to a set of exogenous variables.

Fishbein's attitude model (Fishbein, 1967), reproduced in Appendix 2.1, explained an individual's attitude towards objects and actions; when an individual believed that a certain consequence would take place as a result of his particular behaviour, and that after he evaluated the consequences of that particular behaviour, he would build up his attitude and modify them in accordance to his beliefs and evaluations (Ryan & Bonfield, 1975). The Fishbein's attitude model presumed that an individual's feeling towards an object, concept or idea worked on two functions, which firstly, were his personal beliefs about the characteristics or attributes of such an object, concept or idea. Secondly, it was his evaluation of those characteristics or attributes of the object, concept or idea (Fishbein; Ryan & Bonfield). As pointed out by Tuncalp and Sheth (1975), attitudes in Fishbein's model referred to an individual's mental state of his feeling towards an object, concept or idea which subsequently influenced his behaviour towards that object, concept or idea.

Ryan and Bonfield's meta-analysis (1975) of 12 studies in the U.S. had shown that besides being useful for prediction of intentions and behaviour; Fishbein's model was also capable to explain any variance in its prediction. Ryan and Bonfield suggested that Fishbein's model was very suitable in social psychological research, which was in line with the increased popularity in the study of consumer behaviour.

### 2.4.2    The Theory of Reasoned Action

In 1969, Ajzen and Fishbein jointly developed The Theory of Reasoned Action (TRA) an extension of the earlier Fishbein's Model (Fishbein, 1973). The TRA model included norm beliefs and normative beliefs. TRA was an expectancy value model built on the premise that humans were rationale and motivated to perform certain behaviours, and that an individual's behaviour can be predicted accurately from his behavioural intention to perform such behaviour. TRA also assumed that where an individual was required to make any decisions, he rationalised and utilized the available information. Hence, TRA was concerned with rational, volitional and systematic behaviour, which effectively meant that the individual had control over his behaviour (Fishbein & Ajzen, 1975). However, the authors later dropped personal norms from the model, as further research showed that it was an alternate measure of intention (Ajzen & Fishbein, 1973). The two components of behavioural intention were his attitude and subjective norm. This TRA model was schematically presented by the authors in 1975, whereby behaviour was excluded (Fishbein & Ajzen).

The TRA model attracted criticism; one from Songer-Nocks (1976), where the researcher suggested that as intention was the immediate determinant of behaviour, then behaviour can also be predicted and explained by applying the same model. Fishbein and Ajzen, (1976; 584) responded to Songer-Nocks' critique: "we have repeatedly pointed out that the intention-behaviour relation must be studied in its own right since a variety of factors can influence the strength of the obtained relationship between a measure of intention and a measure of behaviour."   Fishbein and Ajzen further explained that TRA's

prediction of behaviour was limited to those behaviours under volitional control rather than all kinds of behaviours. However, volitional control behaviours should not be viewed as a limitation in itself in order that such behaviour could be included. Volitional control behaviours were further divided into volitional and nonvolitional control behaviours. Subsequently, Bentler and Speckart (1979) proclaimed that Fishbein and Ajzen had jointly developed a theoretical model on attitude–behaviour relations.

In 1980, Ajzen and Fishbein, in attempting to estimate the discrepancy between attitudes and behaviour, incorporated 'behaviour' into the 'Fishbein's Model". Attitude and subjective norm had both been identified as important antecedents of intention, and that intention in turn predicted behaviour. A subjective norm of which the person perceived how those persons important to him think whether he should or should not perform a particular behaviour (Ajzen & Fishbein). Since TRA was an expectancy value model used to predict and understand human behaviour, TRA claimed that a person's behaviour was determined by his intention to carry out such behaviour, and that this intention was a function of his attitude towards that behaviour. Before an individual performs an act, he first makes use of available information, and considers the possible outcomes likely to result in him whether to do or not to do that specific act and then he decides to perform that act. In this sense, the major part in forming an attitude was the intention (Ajzen & Fishbein). The researchers further argued that a person's attitude and his evaluation of the attitude towards an object were the same. The extension of this argument was that the evaluation of attitude by using a bi-polar evaluation method, which although

regarded as rather simple, but, it captured all essential parts (Ajzen & Fishbein). The procedure used to measure constructs other than behaviour was developed by Osgood and his colleagues (Osgood, Suci & Tannenbaum, 1957) on the semantic differential scale to measure attitudes in contemporary research; the scale measurement was later proved to be a popular theory.

As TRA achieved success, Ajzen and Fishbein (1980) claimed that it was due to TRA's ability to classify a vast range of variables into only 3 major categories and which imposed some structures into attitude's research. However, Liska (1984) did not seem to be in agreement to that argument; instead the author pointed out the distinction of these 3 categories as fairly artificial since the requirement of skills in a behavior was not consistent, as it could vary from very few to too many. Since TRA was related to voluntary behaviour, in reality, there were times where problems still surfaced as often due to the fact that behaviour need not be fully voluntary and also not subjected to control. In addition, there were other variables that affected the ultimate performance of a particular behaviour. In a TRA framework, external variables were made up from demographics, attitude towards targets (e.g. people, objects and institutions) and personality traits. According to the expectancy-value model, an individual believed that a positive outcome came with positive attitudes (Albarracin, Johnson, Fishbein & Muellereile, 2001). TRA model is attached in Appendix 2.2.

Ryan and Bonfield (1975) distinguished Fishbein's attitude model from TRA and stated that TRA was more suitable for marketing research in examining purchasing behaviour as TRA has small associations with attitude. Accordingly, TRA was best applied in situations where an individual had full volitional control over his own behaviour. To overcome the limitations and problems posed by TRA, in 1985, TRA was further expanded by added perceived behavioural control variable into the model. The new theory was now known as the Theory of Planned Behaviour (TPB) (Azjen, 1985).

### 2.4.3   Theory of Planned Behaviour

TPB is an improved version of TRA. The shortcomings in TRA where humans did not always have full control over certain situations, were addressed in TPB. This was done through adding a variable of perceived behavioural control which influenced both intention and behaviours (Ajzen & Fishbein, 1980). An individual's intention to perform an act was driven by his motivation to perform, and his intention in turn influenced his behaviour.  In other words, the greater the intention is, the greater the likelihood that the individual would perform the desired act (Ajzen, 1991). However, the goal of applying TPB should not be limited to merely predicting behaviour. Rather, TPB should be used to understand behaviour in-depth and bring out the importance of attitude, subjective norm and perceived behavioural control as antecedents of behaviour (Azjen, 1985). In general, the early version of the TPB did not provide a clear distinction between affective and cognitive responses to behaviour. Subsequent studies found that it was useful to distinguish between affective beliefs and

those of a more cognitive and instrumental kind (Ajzen & Driver, 1991, 1992; Lowe, Eves & Carroll, 2002).

TPB posits that the 3 components (a) attitude towards the behaviour (b) subjective norm and (c) perceived behavioural control affect an individual's intention, which in turn influenced him to perform certain behaviour. In 2005, Ajzen and Fishbein discussed both TRA and TPB models and concluded that the only difference between these two theories was that TPB included perceived behavioural control. The improvement found in TPB was the addition of control belief which affected perceived behavioural control, and that perceived behavioural control was a determinant of behavioural intention. In addition to control belief, manager also subjected himself to internal and external interference. The perceived behavioural control took into account the non-volitional control which was the actual possession of opportunities and resources to perform the desired behaviour (Ajzen, 1985). Perceived behavioural control referred to a person's belief or perception as to how easy or difficult it is for him to perform an intended behaviour (Ajzen & Madden, 1986). Such perceptions included the availability of resources which could affect the desired behaviour, and also how successfully that behaviour could be performed. Recognition was given to the importance of background factors (eg. personality, mood, emotions, education, age, gender and past experience) in further understanding of what determines behaviour.

In TPB (Ajzen & Fishbein, 2005), three main determinants of intentions were hypothesized; (1) The attitude toward the behaviour influenced intention of engaging in the behaviour, (2) The intention whether to engage in the behaviour was influenced by subjective norms, and (3) Intention to engage in the behaviour depends on how difficult or easy to perform that behaviour. In other words, attitude, subjective norm and perceived behaviour control can affect intention, but with varying degrees of influence. The TPB model is reproduced in Appendix 2.3 for easy reference.

## 2.5    Application of an Extended Theory of Planned Behaviour

The 3 sets of theories reviewed above can assist to explain intention. As in Fishbein's attitude model, Newman (1974) researched 108 nursing home employees to predict their absenteeism behaviour and voluntary resignation within a 2 months' period from the time of survey. Test results indicated a significant correlation between behavioural intention and absenteeism (0.10, $R=.70$, $p<.01$) and resignation (0.39, $R=.45$, $p<.01$) respectively. The result suggested that Fishbein's model was relatively more effective to predict voluntary resignation. Additionally, it indicated the effectiveness of the model to predict behavioural intention. The study also confirmed that Fishbein's model was very suitable to predict behavioural intention.

TRA was applied in Lu et al. (2011) to examine whether managers' negative attitude towards older people could be a barrier to their intention to employ workers aged 60 and above. The findings confirmed that the predictors of personal experience, attitude, and subjective norm had positive relationship to

managers' intention to hire older workers. Therefore, the positive attitude towards older people was related to stronger intention to hire older workers, stronger perceived subjective norm was related to a stronger intentions to hire older workers, and lastly, a more positive personal experience with older people was related to a stronger intention to hire older workers. The study concluded that TRA was a relevant and a suitable theory to predict managers' intention to hire older workers.

TPB has an added antecedent of perceived behavioural control to intention that helped to explain a behaviour which was not under a manager's total volitional control (Ajzen, 1991). Over the years, there have been numerous studies that applied the TPB model to examine the 3 mentioned antecedents (attitude, subjective norm and perceived behavioural control) on behaviours. Hence TPB model's ability to predict intention has been tested repeatedly in various activities. TPB provided a reasonably good fit to the studied data and it was found to be a better theory than TRA even in predicting unethical behaviour (Chang, 1998).

The study conducted by Fraser et al. (2011) had proven the usefulness of TPB to predict intention, and it provided greater understanding on respondents' behavioral intent. The study used TPB to predict employers' intention to hire qualified workers with disabilities from a centralized vocational rehabilitation service within 6 months from the date of the survey as part of the managers' hiring pool recruitment activity. Three components (attitude, subjective norm and perceived behavioural control) were applied. It was predicted that if the

attitudes of hiring managers were favourable towards the hiring, if parties important to the hiring managers, supported and approved the hiring behavior, and if hiring managers perceived that they had the abilities to control the behaviour; their intention to hire qualified workers with disabilities would be strong. The model accounted for a success rate of 67% of the variance in relation to the hiring intention. A greater contribution for the prediction came from subjective norms component with a β coefficient of 0.48, and significance at the $p<0.01$ level. As for attitude, the β weights was 0.24 and perceived behavioural control was 0.22, both were significant at the $p<0.05$ level. As can be seen, of the 3 components, subjective norm was found to be of greatest importance to the intention prediction. It was also found that persons such as the owners of the businesses, management staff, hiring managers, human resource (HR) personnel and peers constituted the major influencers towards the hiring behaviour at $p<0.01$ level, whereas influence from government was at $p<0.05$ level. This study concluded that TPB was one of the best-supported social psychological theories in predicting human behaviour.

A local study by Ang et al. (2015) was on the employment of persons with disabilities in East Malaysia. This study also proved the usefulness of TPB in predicting beheviourial intention. The study applied a modified TPB model with attitude as a mediator to subjective norm and perceived behavioural control. In the study model, subjective norm and perceived behavioural control were the determinants of intention to hire Malaysians with disabilities. Attitude mediated both the impact of subjective norm and perceived behavioural control on the hiring intention. The modified model reflected the flexibility of the

original TPB model where the predictor of attitude to intention can be modified to serve as a mediator to other predictors in the original model; indicating that TPB was versatile in its usage and application to test behavioural intention.

The above discussion showed that TRA & TPB models were useful as the basis of research to predict human behaviors in a variety of fields. Although TPB has grown out of TRA, TPB was more popular among researches to predict intention in different areas of study. In fact, both TRA and TPB theories remained very relevant in predicting intention.

In this present study, it is very reasonable to apply TPB to explain managers' intention to hire older workers due to TPB having been proven a more superior theory over TRA especially when it concerned a not fully volitional control behaviour, such as time, financial constraints, availability of resources, the hierarchy and authority level of an individual's position in his organization; all of which affect his hiring intention. Therefore, managers' intention to hire is predicted by the 3 original determinants (attitude, subjective norm and perceived behavioural control), and these 3 indicators of hiring intention can further be understood with positive/negative age stereotypes and its consequences, the important reference of management support and peers' support at the workplace on whether managers should or should not hire older workers, and the control belief of availability of opportunity and resources created as a result of the MRAA 2012. In addition to these original determinants, this present study endeavoured to extend the TPB to include the additional predictor of past experience to explain managers' hiring intention

and a moderator of managers' age into the model. In the following section, each determinant and belief based constructs are explained in detail.

## 2.6    Behavioural Intention

Behavioural intention was defined as a measure of relationships between an individual and some actions, and how hard he was willing to perform the actions, and that behavioral intention was an individual's decision or commitment to perform a given behaviour. When an intention to perform a particular act was high, the likelihood of such actions was equally high (Ajzen & Fishbein, 1980; Fishbein & Ajzen 1975).

It was recognized that a high intention resulted in high likelihood of that action been performed. However, the intention to perform a particular behaviour was not absolute, but rather can be transformed in view of the situation where emergence of new information, sense of control or due to other unexpected factors. Nevertheless, various external factors could influence attitude, subjective norm and perceived behavioural control in the prediction of behavioural intention at different levels (Ajzen & Fishbein, 1980: Ajzen, 1985).

As advanced by Park and Yang (2012) the influence by various factors need not be equal at all time because within these determinants, there can be conflict among them in influencing the behavioural intentions. To some extent, even if the intention was high, some actions were dependent on the availability of resources such as time, money, skills, or opportunity. In any event, the relative

weights of attitude towards behavior, subjective norm and perceived behavioural control should measure the behavioural intention.

The TPB presumed that an individual's intention to perform certain behaviour has an impact on his behaviour, and that the behavioural intention was an individual's motivation to perform such behaviour; in that sense, intention can be converted into behaviour (Ajzen & Fishbein, 1980). Therefore, it was appropriate to assume that intentions predict individual's actual behaviour (Fichten et al., 2014). Behavioural intention was also used to understand the actual behaviour in areas such as entrepreneurial intentions (e.g. Obschonka, Silbereisen, & Schmitt-Rodermund, 2010); on exercise intentions (e.g. Yap & Sabaruddin, 2008); on intention to quit smoking (e.g. Soulakova, Li & Crokett, 2017), on intention to quit alcohol (e.g. Paswan, Gai, & Jeon, 2015); on online purchase intention (e.g. Lim et al., 2011); on intention to select driving speed (e.g. Paris & Broucke, 2008); on hiring intention (e.g. Ang et al., 2015; Fraser et al., 2011; Lu et al., 2010); on workers' retention (Salah, & Habtoor, 2015; on crisis planning intention (e.g. Wang & Ritchie, 2012); on fertility intention (e.g. Dommermutha, Klobas & Lappegard, 2011); and on retiring intention (e.g. Gaillard & Desmette, 2010).

In TPB, a person's intention played a prominent role, and intention was regarded as a sufficiently immediate cause to his behaviour. Hence, attitude, subjective norm and perceived behavioural control were predictive functions of behavioural intention, and behavioural intention in turn predicted an overt behaviour (Ajzen & Fishbein, 1980). There were two types of impactful and

influencing factors that affected an individual's intention: The first was internal factors such as individual's differences, possessed information, skills, abilities, emotion, education or positions in organizations. However, it was not always possible for an individual to handle all his beliefs at the same time. Ajzen and Fishbein referred salient beliefs as a small number of perhaps 5 to 9 beliefs which an individual was able to handle at any given time. The second was the external factors such as time, financial opportunity and the dependence of others (Ajzen, 1985).

In Ajzen (1991), intention to behave in a certain way is goals intention. There were researchers (e.g. Bagozzi, 1992; Eagly & Chaiken, 1993) who criticized TPB model for failure to explain sufficiently how behavioural intention can really be transformed into actual behaviour, and also, people may not necessarily have performed the act in accordance to their intentions. As such, there was an intention-behaviour gap that need to be closed. In addition, for intention, the antecedents in intention made the intention easier to be understood than the antecedents of behaviour. From a different perspective, behaviour intention has long been recognized as an important mediator in the relationship between behaviour and other factors, such as attitude, subjective norm, and perceived behavioural control (Ajzen).

In this present study, intention refers to a measure of relationships between responding managers and their willingness to perform the actions of hiring older workers. The scope of this study is limited to behavioural intention and not the actual behaviour. For all intent and purpose, behavioural intention is

divided into two parts, i.e. the overall intention to hire older workers, and the future intention to hire older workers. Future intention to hire referred to the period within 12 months from the day responding managers participated in the survey. The division is deemed necessary as managers who have positive intentions to hire older workers may not have the resources or means to immediately hire older workers. Nonetheless, they still possess that overall intention. On the other hand, some managers who identified hiring older workers as their first priority may actually hire older worker at the very instant when and where opportunity avails.

## 2.7    Determinant of Behavioural Intention

### 2.7.1   Attitude

An attitude was an index of the degree to which a person liked or disliked an object, where "object" was used in the generic sense and it referred to any aspect of the individual's world. A person's overall attitude was determined by his beliefs about that attitude object (Ajzen & Fishbein, 2000). Accordingly, attitude was defined as the extent to which an individual regarded a set of behaviour as favourable or otherwise (Ajzen, 1991). If an individual's regard to perform a certain behaviour is favourable to him, and that the greater the favour is to him, his attitude influences his intention, he has a great intention towards that particular performance. In other words, the key to which an individual favoured or disfavoured a certain entity is actually due to his attitudes (Olson & Zanna, 1993).

Chui et al. (2001) found that managers' discriminatory attitude was related to their negative age stereotypes on older workers. In Hansen, Jensen and Solgaard (2004) on online grocery purchasing intention, among other variables, consumers' attitude was found to be the most important predictor of intention. Furthermore, there was a strong relationship between attitude and intention. In other studies, respondents' positive attitude towards older people was found to be strongly related to intention to hire older worker (Hsieh, 1996; Lu et al., 2011).

Although age is not indicative of personal work-related traits, past research as have confirmed that it is a significant factor in influencing managers' attitudes towards older workers. Research indicated that negative attitudes have significance on the low hiring intention. These hiring managers usually rated older workers lower as opposed to rating younger workers (Ng & Feldman, 2013; Karpinska et al., 2013). Managers' judgments on age-related characteristics without taking into account older workers' actual knowledge, skills, and abilities, often created a barrier that prevented these workers' mobility within the labour market (Earl, Taylor, & McLoughlin, 2017).

With the implementation of MRAA 2012 and various course of actions promoted by the Government to encourage employment of older workers, the relevant public policy makers are seen to have shifted to become more positive toward older workers. However, the question remains as to whether this positive attitude also shifted onto hiring managers, and they can promote their

action through having positive intention to hire older workers for their organizations?

In this present study, managers who are the gate-keepers of their organizations, when it came to hire older workers, formed an attitude towards the hiring, and this formed attitude influenced their behavioral intention to hire these workers. Basically, the influence from attitude on behavioural intention depends on how important they believed was their hiring behavior.

### 2.7.2   Subjective Norm

A subjective norm referred to an individual's intention to perform a certain behavior if he perceived that people important to him were to think that he should or should not perform the behavior in question (Ajzen, 1991). A similar definition was also provided by Chang (1998). Subjective norm was determined by an individual's normative belief which basically made up of two constructs, i.e. the referent behavioural expectations and motivation to comply. An individual is likely to perform a certain behaviour if he believed that those who are important to him support his intended behaviour (Ajzan). In that sense, subjective norm is a social injunctive norm because it concerns a person's perceived social pressures from someone important to, and that on their approval; he performed the particular task (White, Smith, Terry, Greenslade & McKimmie, 2009).

In a workplace, subjective norm was supported in cases where the employees' responsiveness to their management and peers' reactions or opinions, and as such, employees were found likely to behave in the direction of these reactions or opinions (Rousseau & Tijoriwala, 1999). Therefore, subjective norm was a form of beliefs where an individual believed in certain groups of people who were important to him. This individual performed a behaviour, or abstained from such behaviour in accordance to what this important group thought of his behaviour. The expectation of such important or closed persons often added pressure onto the desired behaviour, hence, high subjective norm often resulted in high willingness of the person to perform the desired action (Vansteenkiste et al., 2015). Subjective norm took into consideration the individual's motivation to comply with the expectation of the important group of people. In Lu et al. (2011), subjective norm was found to be strongly related to managers' intention to hire older workers. In addition, subjective norm was supported in online grocery purchasing with high influence on customers' behavioural intention (Lim et al., 2011).

In this present study, a manager's belief on those persons important to him supported him to perform a certain behaviour, and he was motivated to perform. Hence, he was expected to have the intention to perform such behaviour.

### 2.7.3    Perceived Behavioural Control

Ajzen (1991) defined perceived behavioural control as the extent to which an individual believed the difficulty or easiness for him to perform a certain behaviour; where the individual tended to have higher intention to carry out the action when he perceived the performance was an easy one. As such, behaviour could be in a positive (subjective norm) form and be evaluated as favourable (attitude) or unfavourable and being negative did not necessarily reduce its attractiveness (Trafimow & Fishbein, 1994). Taylor and Todd (1995) defined perceived behavioural control as the individual control beliefs weighted by the perceived facilitation in him either to facilitate or inhibit behaviour. Therefore, perceived behavioural control was an individual's degree of control that he has over his performance of the behaviour itself (Ajzen, 2002b). Thus, having high intention, positive attitude and strong supports from management and peers were not enough for an individual to perform a required behaviour,  as the performance still relied on the availability of resources; such as time, money, manpower, or opportunities. Hence, if an individual knew that he is not going to have the resources or opportunity, he is unlikely to have high intention to perform the required behavior. It is further explained that if the perceived behavioural control is realistic, this perception could be used as a substitute for actual control (Ajzen, 1991).

Additionally, Ajzen compared perceived behavioural control with Bandura's concept of perceived self-efficacy (Bandura, 1997). In Bandura, when an individual is faced with an obstacle, his self-efficacy determined the time to be taken and the coping to be employed. A doubt on this self-efficacy rendered

him to reduce or give up his effort. On the other hand, in TPB, a behaviour can be deliberated and planned. TPB was not only classified a behaviour as volitional or non-volitional. For volitional, it included behaviour in imperfect control situation. In Chang (1998), the study found that perceived behavioural control was the most effective predictor when it was compared to attitude in TPB.

In the present study, perceived behavioural control referred to the managers' self-assessment of their own abilities to perform a set of behaviour related to the hiring of older workers in their organizations. Self-assessment considered all perceived positive and negative factors, including the availability of resources.

### 2.7.4   Past Experience

Past experience is not an original variable in TRA and TPB (Ajzen, 1991). However, Ajzen did not dispute the role which past experience could play in predicting behavioural intention and future behaviour. Other additional variables welcomed included demographic variables such as age, gender, occupation, education, religions, past behaviour, ethnicity and financial risk (e.g. Laditka, Fischer, Laditka & Segal, 2004). Additionally, past behaviour perhaps was by far the most widely used variable by researchers in TPB. The experience from such behaviour was defined as specific knowledge about the behaviour in question, which was stored in memory (Sommer, 2011). Ajzen described the experience as an importance source of information about behavioural control.

According to the Intergroup Contact Theory, more contact experienced among individuals reduced conflict between them. It also meant that a higher quality of past experience between individuals' influenced their positive attitudes, which in turn enhanced behavioural intention (Amir, 1976). As such, there were researchers who included past experience as an extra weight and they had proven that this predictor was a powerful predictor of behavioural intention and future behaviour (e.g. Ajzen, 2002; Lu et al., 2011; Oh & Hsu, 2001). From Oh and Hsu, a study on gamblers in the last 12 months preceding being surveyed, found that past experience was not a nonvolitional antecedent of perceived behavioural control; rather, it was an antecedent of behavioural intentions because behavioural intention was a direct function of past experience. Therefore, a person's gambling behaviour was directed by his intention to gamble and his choice to such behaviour. From this analogy, a person who experienced favourable work relations with older workers, he developed a positive attitude towards older workers, and that his intention to hire older workers is high, and where possible, he prefers to hire older workers. Likewise, an unfavourable past experience reduces his intention to hire older workers.

The past experience study was supported by Lee, Hoerr, Weatherspoon and Schiffman (2007) where they found that students whose previous experience with older adults were comfortable, usually had positive attitudes working with this age group. In addition, students' previous experience was strongly associated with their attitudes, and it influenced their preference to work with older adults. Experience in interaction with older persons often began as early as in childhood, where stereotypes were formed, and where it started by them

describing older people from physical characteristics to social stereotypes. Thus, positive attitudes could be developed from positive constant contact, understanding of older persons and the natural ageing process which all beings go through (Meshel & McGlynn, 2004).

In Hassell and Perrewe (1995), although frequency of contact found no impact on behavioural belief, it did moderate negatively between age and belief, due to a manager's frequent contact with older workers which reduced negative beliefs, and at the same time increased his positive age stereotypes on older workers. According to Bysheim and Nyrud (2009), one of the most important measures for actual behavioural control was an individual's previous experience, as this was the link between him and his future intention to perform an act. In Emmitt and Yeomans (2008), for an architect to select materials for building purpose, it was a pre-condition that he either processed that particular experience or had acquired that knowledge. Likewise, in Bysheim and Nyrud's study, past experience in working with various types of building materials was a statistically significant aspect ($p<0.05$) that influenced architects' intention towards the use of wood as a structural material in building. In addition, the result shows that with a standardized beta-value of 0.2 ($t=3.346$), experience scored the highest explanatory power amongst the other independent variables.

There were several studies that supported the inclusion of past behavioural experience as a predictor of behavioural intention (Kidwell & Jewell, 2008; Lu et al., 2010, 2011) and that the results indicated that the inclusion had significantly improved the behavioural intention and future intention. These

studies' results found that past experience had a positive relationship towards behavioural intention. In Lu et al. (2010, 2011), past experience was the most effective predictor of managers' intention to hire older workers. Furthermore, managers who had positive experience in their social contact with their family, workplace and community; their intention to hire older workers were higher than those with negative experience.

Past experiences through interaction were considered useful for marketing research in segmentation of their targeted population, and that past experience did influence consumers' purchasing behaviour in view of experience was heavily relied upon before the actual behaviour (Kidwell & Jewell, 2008), and such past behaviour was supportive of previous study where it was found to be consistently a strong predictor of behavioural intention (Kidwell & Jewell, 2003). In Kidwell and Jewell (2008), 186 college students aged between 18 and 26 years were surveyed on the moderating effects of their past behaviour on acquisition of their credit card behaviour. The researchers concluded that students' past experience was important in their decision making, and as such predicted their behavioural intention. Hence, it was their past experience which they relied heavily on whenever they made any decision.

Therefore, past experience is included in this present study as a direct predictor. This is blessed by Ajzen (1991) who welcomed this inclusion of predictors if researchers believed that after considering the original variables, the inclusion is able to capture a significance of variance in intention. Hence,

past experience includes managers' interaction with older persons or workers in their families, community and workplace respectively.

### 2.7.5   The Moderating Role of Managers' Age

Respondents' age is a demographic variable. Their age provides some information on the knowledge and experience towards the subject matter. Chiu et al. (2001) revealed that the respondents from the different age groups basically responded differently with regard to their attitudes towards older workers. This finding did not differ from Hassell and Perrewe (1995) where the results also indicated that older workers generally held positive attitudes towards older workers. In addition, younger workers were seen to be moving towards that positive trend.

Traditionally, it was common in organizations that older employees supervised younger employees; however, such patterns have changed in recent times due to various reasons, mainly due to the need to increase organizational overall performance and to enhance human resource merit-based reward systems. Hence, younger workers were promoted to managerial positions, and they in turn supervised older subordinates (Kunze & Menges, 2016).

To confirm age really matters amongst younger and older workers in their attitudes toward other workers. In another study by Laditka et al. (2004) 534 respondents were divided into 3 age-groups; i.e. younger age group (aged 20-34), middle age group (aged 35-59), and older age group (aged 60 and above). These 3 groups were asked to rate 2 targeted age groups (aged 75-85) and

(aged 21-39). The findings showed that the older age group respondents (aged 60 and above) rated another older targeted group (aged 75-85) better than respondents from the young and middle age groups, and this effectively indicated that older persons, both males and females, generally had more positive attitudes towards their own cohorts. As for the respondents of the young-age group, their rating on targeted older groups (aged 75-85) was higher than respondents from the middle age group. The middle age group's attitude towards older persons was found to be the least favourable. Laditka et al. concluded that older respondents had a more positive view on older persons as compared with respondents of young and middle age groups. The study found that age influenced the in-group relationships, where older respondents favoured their own cohorts. This was supported by Heyma, Werff, Nauta & Sloten, (2014) that older managers were more ready to hire older workers. From a positive side, such managers could probably increase older workforce labour participation.

Additionally, Kite, Stockdale, Whitley and Johnson (2005) concluded that persons of all age groups held different attitudes towards older people, some were negative, positive or a mixture in some cases, and that younger people tended to be more negative than other age groups. In addition, younger persons were being rated more favourable than older people. Nevertheless, the overall findings revealed the attitude trends of younger persons gradually moved from negative to positive attitudes towards older people. The crucial point from Munnell, Sass and Soto (2006) was that those aged 55 or above, tended to give positive view on the productivity of workers of the same age group as

themselves, whereas respondents aged 55 and below held negative views toward older workers of 55 years old and above. On the contrary, in Lu et al. (2010), there was no difference between age groups of respondents as far as attitudes was concerned, as these respondents generally had negative attitudes towards older people, including the unwillingness to take up employment involved in providing services to older people (Lu & Kao, 2010).

Baker, Al-Gahtani and Hubona, (2007) applied TPB to survey 1,088 knowledge workers from 56 private and public sector organizations in Saudi Arabia on the effects of gender, age and level of education on their intention to use IT technology. The researchers divided all respondents into 5 categories according to age groups where group (1) less than 20 years; (2) 20-30 years; (3) 31-40 years; (4) 41-50 years; and (5) over 50 years. The results show that of the 3 moderators, gender and age were found to be non-significant of the influences of attitudes, subjective norms and perceived behavioural control. However, level of education had a negative moderating effect on the 3 variables.

In Bal, De Lange, Jansen and Van Der Velde (2008), a meta-analysis was conducted on 60 studies that used age as a moderator between contract breach and trust, job satisfaction and organizational commitment, the results indicated that younger workers had a stronger relationship between contract breach and trust and organizational commitment than older workers. However, older workers were found to have a stronger relationship between contract breach and job satisfaction.

In Baron and Kenny (1986: 1174, 1178) a moderator was described as either a qualitative or a quantitative variable that "affects the direction and/or strength of a relation between an independent or predictor variable and a dependent or criterion variable." Thus, a moderator variable has the ability to create an impact on the dependent variable by specifying the direction or a level of strength.

From the above studies, there was a disparity in defining age groups for young, middle and old age, and that also suggested the differences of age groups' attitudes towards older people. Moreover, literature that applied age as a moderator on the relationship between attitudes and behavioural intention was spare. As the effect on age found in past studies varied, the age of respondents was crucial to moderate respondents' intention to hire older workers.

In this study, age is a moderator between managers' attitude and their hiring intention. As age is a sensitive topic to certain respondents, age category is preferred. Managers' age is divided into 4 categories. Group 1 referred to those aged 30 and below, Group 2 to those from above 30 to 40, Group 3 above 40 to 50, and Group 4 for those 51 years and above.

**2.8     Beliefs Based Measures of the Theory of Planned Behaviour**

**2.8.1    Age Stereotypes on Older Workers**

Behavioural beliefs refer to the stereotypical belief associated with a category that is used to justify behaviour toward the target, based on the target's age (Allport, 1935). Therefore, belief is a person's knowledge or information about an object, and that the strength of such belief varied according to his attitude towards the object (Fishbein & Azjen, 1975). In all organizations, managers manage their workforce with the ultimate goal of achieving desirable performance generally beneficial to both employees and the organizations. The literature surveyed shown one consistent phenomena that was the positive behavioural belief on older workers for being loyal to their employers, had low absenteeism and low turnover. In addition, they had substantial work experiences, reliable, good interpersonal skills, and conscientiousness, effectiveness in work and seriousness in thought before action. A study by Hassell and Perrewe (1995) found positive stereotypes on older workers for their lower absenteeism rates, fewer serious accidents, higher work quality and production, less grouchiness and not resistant to change. On the whole, they were better workers compared to younger workers. In addition, extensive theoretical and empirical research pointed towards the many advantages that were attractive to employers; some examples being loyalty, reliability, conscientiousness, productivity, maturity, dedication, low turnover, and hard-working (Ranzijn, 1999). The above results supported earlier studies by Kirchner and Dunnette (1954), Bird and Fisher (1986), Rhodes (1983), Lazarus and Lauer (1985) and Vincent (1995). All these implied that if older workers were given sufficient time to carry out their given tasks, they had the capacity

to deliver jobs of high standard and quality. According to Warr (1993), older workers' work related experiences and skills enhanced their performance, but for tasks that required physical strength, older workers seemed at a disadvantage. Abrams, Swift & Drury (2016) tested the role of stereotypes among older adults without providing information about the actual age of the older adults to the hiring managers. The results clearly showed that managers preferred to hire candidates with young profiles. Voss, Bodner, & Rothermund. (2018) opined that there is no surprise on the existence of such relations after judging from past related studies on the relationship between age stereotypes and old age discrimination. Hence, despite the findings from previous studies that managers were in favour of older workers and generally held positive age stereotypes of them, Truxillo, Fraccaroli, Yaldiz & Zaniboni (2017) argued that mere positive stereotypes need not necessarily translate into positive outcomes when it comes to older workers seeking reemployment, as very often, they still faced age discrimination and took longer reemployment times than their younger counterparts.

There was a concern that when managers, being the superiors, appraised their subordinates, held non-work-related attitudes which resulted in either positive or negative evaluations. Managers with age stereotypes (AS) were likely to influence their own attitude toward human resource practices and decisions in areas of selection, retention, training and promotion. Managers' negative age stereotypes often affected their attitudes towards older workers, thus resulting in age discrimination and unfavourable employment practices (Chiu et al., 2001). The study by Posthuma and Campion (2009) on older workers, the

stereotypes on low productivity, resistance to change, less able to learn, shorter tenure and costlier to be employed often resulted from evaluators' perception on workers' age. Moreover, managers awarded low evaluation on job applicants and their existing workers thus reducing their promotion and training opportunities. Managers also evaluated older workers' job performance lower than other staff, and when it was time to lay-off workers, older workers were seldom being retained; instead, became the target of layoffs.

London and Bassman (1989) stated that older workers did not learn or were not trainable was merely a common belief and that could not hold true, for there were various arguments suggested that older workers' ability or inability to learn and be trained had nothing to do with their age. The study further showed that there was a negative relationship between older workers' job performance and their age.

The majority of employers agreed that older workers were difficult to train and that few of them were willing to be trained (Gray & McGregor, 2003). This was supported by Kluge and Krings (2008) where the results revealed that 53.3% of respondents believed that older workers were more difficult to be trained than younger workers. In line with the above, a study by Chiu et al. (2001), revealed that although the UK respondents were in favour of training older workers, but at the same time, they supported hiring younger persons equally qualified as the older workers.

The following researchers argued that trainability was not affected by age since a learning-averse young worker was likely to become a learning-averse older worker and learn less as opposed to one who was open to experience, and was willing to involve himself in training and he would eventually learn more (Barrick & Mount, 1991). In other words, older employees can learn extremely well; but the training techniques devises were usually tuned towards younger learners and often inappropriate for older ages (Sterns & Doverspike, 1989; Warr, 1993). The argument on older workers' inability to learn new technology and the minimal use of the computer placed them at a disadvantaged position. At the same time, employers generally perceived older workers as weak in accepting technological changes, and hence they had no interest to learn new things (Taylor & Walker, 1994). But then again, stereotypes of older workers' unwillingness to learn, and make use of new technology found no supporting evidence, as there was no evidence that older workers forgot what they had learned faster than younger workers. Only a few employers really modified their training methodology to meet the needs of their older workforce (Armstrong-Stassen & Templer, 2005; Bushko & Raynor, 1999). Sterns and Doverspike (1989) argued that the point was not that the older workers were difficult to be trained, but rather actually employers did not want to invest in older workers because of the poor returns on their training investment especially when older workers retired. However, employers disagreed that they used the 'age' of workers as a deciding factor to provide training to their older workers, which contradicted earlier studies where respondents admitted that they used 'age' as a discriminator to provide training, promotion, termination

and recruitment of older workers (Arrowsmith & McGoldrick, 1997; Glover & Branine, 1997).

One of employers' common stereotypes was that any training provided to improve the performance efficiency was futile and a waste of funds, since older workers soon retired (Pickersgill, Briggs, O'Keefe & Gillezeau, 1996). In a meta-analytic reviewed by Kubeck, Delp, Haslett and McDaniel (1996), they analysed the relationship between age and outcomes from a job-related training on both old and young workers and arrived at a conclusion that justified employers' stereotype perception on older workers as these workers were found to be at a disadvantage because they took longer periods of times to complete the training assignments and programmes. However, the review by Kubeck et al. could not be taken as conclusive because the researchers pointed out that the original studies itself was incomplete.

Indeed, negative stereotypes toward older adults are wide spread over diverse areas of society (Lev, Wurm & Ayalon, 2018), so much so that managers generally believed that old age accompanied with low job performance and ultimately resulted in lower organizational performance as a whole, even though there was no evidence to substantiate such claims (McEvoy & Cascio, 1989). Auer and Fortuny (2000) stated that employee's age and their level of job performance had always been a point of debate as to whether there exists any relationship between the two. As such, the researchers reiterated that even though employers generally believed that older workers were costlier to be hired because of higher remuneration and fringe benefits, there was no reason

to believe that all these could not be compensated with their know-how and performance. In 2 meta-analysis studies by Waldman and Avolio (1986) and McEvoy and Cascio, they confirmed that workers' age had no relationship with their performance. In fact, workers' performance increased as they aged. Studies show that the correlations between age and performance were close to zero and also age and job performance generally were unrelated, i.e. older workers were no lesser effective than younger workers in their performance, and they did not present any problems related to their performance, and intelligence. As such all these negative comments on older workers did not justify supervisors' discrimination of workers based on age (Bennington & Tharenou, 1996; Lev et al., 2018; McEvoy & Cascio, 1989; Warr, 1994). Further, older workers were regarded to have reasonably good prospects to extend their working careers, as they were more productive than younger workers (Munnell, Sass & Soto, 2006). Moreover, as recommended by Posthuma and Campion (2009), older workers can be more productive if managers were to design tasks with cognitive complexity that increased older workers' cognitive functioning. A recent meta-analysis by Ng and Feldman (2013), confirmed that older workers' job performance and their level of innovation was no lesser than younger workers. However, when older workers were negatively stereotyped at their workplace, they were likely to opt for early retirement. Therefore, any association of old age with poor performance was inappropriate.

Apart from the above studies, several other researches also rebutted the perception that old age led to low job performance. In fact, their studies found that performance levels rose with ageing. Encel (1988) referred to a 10-year study on older workers conducted by Cambridge University noted that old age may have its disadvantages, but with accumulative experience, older workers were committed to quality, as they had the ability to handle situations with high accuracy and reliable performance. As Rosen and Jerdee (1989) put it; it was in a very rare case that performance levels declined with age. Therefore, it was concluded that the effect of ageing on performance and productivity remained an elusive question, i.e., unresolved in theory and empirically (Guest & Shacklock, 2005).

Tenure in employment referred to the length of a worker's employment in an organization, and that age and employment tenure were found to be co-related as older workers were less likely to change their employers compared to younger workers (Ng & Feldman, 2010).   Older workers aged 50 and more were likely to stay for more than 3 years with their organizations than their younger counterparts (Spiezia, 2002). A lesser turnover by older workers effectively saved the overall recruitment and training cost compared with a higher turnover by younger workers (McNaught & Barth, 1992). Despite these favourable findings on older workers, generally employers still held negative stereotypes on older workers that they would not stay long in their employment, and to employers, their investment was made poor when older workers retired. Hence employers were unwilling to invest in older workers (Wooden, Heuvel, Cully & Curtain, 2001). In Taylor and Walker's study

(1994) on whether older workers were making time till their retirement, 13% of employers were unsure, 24% agreed, but 59% disagreed. In fact, the risk that employees leave their organization in any form was the same for all levels of jobs and of all age groups, and there was no guarantee that younger workers actually remained in organizations longer than older workers.

Employees' resistance to change was expressed in both active and passive forms, and it often led to low organizational morale and productivity, increased staff turnover (Dervitsiotis, 1998). In Gibson, Zerbe and Franken (1992), older workers being unwilling to take instructions from their younger supervisors. Moreover, respondents to the studies were unlikely to recommend older workers for promotion, training or for transfer to jobs involving creativity or was more demanding. Instead, they were more likely to recommend older workers for dismissal. This was supported by Weiss and Maurer (2004) as the study found that even though both older and younger workers had similar opportunities for promotion, training, and hiring, older workers were more likely to resist changes. Similarly, in Lee et al. (2007) where students surveyed also expressed their unwillingness to work with older workers and older workers' resistance to changes and stubbornness. On the other hand, Hassell and Perrewe (1995) found older workers not resistant to change.

Employers commonly believed that older workers were costly to be employed due to their seniority in tenure which earned them higher salaries and remuneration, and greater fringe benefits, but they contributed lesser to their organisations as they were due for retirement soon. Various researches had

shown that older job applicants expected higher salaries than younger workers. In that sense, older workers were more expensive to be hired, and employers had to spend higher training costs on them. As a result, employers generally preferred to hire younger employees because younger workers were willing to work for lesser pay (Bennington & Tharenou, 1996). Even in the case of employing workers with disabilities, employers were concerned with accommodation costs above other matters (U.S Department of Labor, 2010). As in Gavenlock, Gale and Foley (1995), it was concluded that the incidence of injury rates rose sharply with workers aged 50 and above, and that the average cost per occurrence also increased with age. Similarly, a study by Hassell and Perrewe (1995) found a positive relationship on age and costs.

In Goodridge (2000) and Munnell et al. (2006), employers recognised that older workers were not likely to job-hop and was a benefit that saved companies' recruitment costs. However, there were employers who did not believe that costs could be compensated with older workers' know-how and performance despite the evidences that suggested that the benefits outweighed costs because older workers generally helped their employers save money in recruitment and training, reduced absenteeism and work injuries (Brooke, 2003).

Generally Malaysian employers did not welcome MRAA, 2012 and they cited higher costs as the main reason eventhough this was not concrete and difficult to establish. In actual fact, the Employee Provident Fund Act 1991 reduced the contribution rates for both employers and employees aged 55 and above, which

created 50% savings on employer's contribution for older workers. Another cost-saving for employers was the rate of social security insurance contribution for workers after the age of 55, for which the employers contribution rate was reduced substantially (Employees' Social Security Act 1969). The Ninth, Tenth and Eleventh MPs endeavoured to encourage employment of older workers by allowing employers to claim a 100% rebate on training costs of their older workers. The above were favourable terms to employers to encourage employment of older workers.

In this study, age stereotypes refer to managers' belief in their hiring of older workers for their organizations and which either brought positive consequences such as trainability, quality output, reduced turnover rate, non-resistant co-operating workforce, lesser costs, or otherwise.

### 2.8.2 Management Support and Peers' Support

Normative belief refers to an individual's perception on the likelihood of someone important to him, such as his parent, spouse, children, his board of directors, his superior or his co-workers would approve of his behavior (Ajzen & Madden, 1986). Therefore, when the individual perceived that these important persons expected him to perform in a certain way, he has the motivation to perform such behavior.

Normative belief is divided into two types of normative influence, namely, peers and management supports. Peers support is defined as the extent to which an individual perceived his colleagues' beliefs on his likely behaviour beneficial to the company, and in such a situation, peers' support provides an important referent group to him because a strong belief increases his motivation to perform (McKinlay & Cowan, 2003).

Likewise, in a workplace, management and peers supports are important to a manager in his decision-making. As such, when a manager perceives his management and peer extend to him their support, the greater and higher is his intention to perform that particular task. As per Salah and Habtoor (2015), the study found that the normative belief significantly influenced the intention of managers' to retain older employees in their organizations ($\beta$=.336, p<.05).

Therefore, subjective norm was a measurement of the individual's perceived social pressure from people of important references of whether he should or should not perform a particular act. When he perceived that the support from these references are positive, he has a higher motivation and intention to comply or to perform that behaviour in question. In this sense, subjective norms help in the prediction of intention that this social influence from management and peers create a certain degree of pressure on managers that direct managers to perform that particular task.

Therefore, in this study of managers' intention to hire older workers, managers' perception of the support from management and peers provide them with the approval, to the extent that the greater their perception, the higher is the likelihood that they should hire older workers.

### 2.8.3   Control Belief

Control belief concerns the perceived power of whether to facilitate the performance of a certain task. Control belief is about the presence or absence of factors or resources that facilitate or impede performance of the behaviour and perceived power of these factors or resources (Ajzen, 1985). In other words, if there are more favourable factors, resources, capabilities or opportunities that an individual believes that he possesses, and that he also perceives that there are minimal inhabitants present, then he has power to perform a particular behaviour.

Retirement is defined as a complete cessation of job from workplace and that a new phase of life begins (Tung & Cameau, 2012). In the local environment, considering the low fertility rate, unfilled job vacancies and the availability of experienced, skilled and abled older workforce, one of the possible options to help relieve the government's financial burden on unemployed older persons and to increase the government's tax revenue from those older workers for at least another 5 years of taxable income from age 55 to 60 were to provide employment to these workers. Business associations such as Malaysian Association of Hotels (MAH), Malaysian Textiles Manufacturer Association (MTMA), Federation of Malaysia Manufacturers (FMM), Malaysian

International Chambers of Commerce & Industry (MICCI), and Japanese Chamber of Trade and Industry Malaysia (JCTIM) for their want of flexibility in the re-employment of their retired workers at age 55, it is clear that these business associations did not want a minimum retirement age at 60. Employers from these associations had cited that a higher retirement age would increase their operating costs which would eventually reduce the nation's competitiveness. All these showed that the employers' ultimate concern lay with the high salaries paid to older workers and the expected high medical bills associated with old age (Tamboo, 2012). There were evidences from research which suggested that employers generally preferred older employees to go on early retirement instead of work till their minimum retirement age, thus indicating that employers did not favour the idea of hiring older workers (Karpinska et al., 2013). Likewise, Salah and Habtoor (2015) supported Karpinska et al. and actually control belief did not significantly influence managers' intention to retain older employees in their organizations ($\beta$=-.012, p>.05).

Therefore, when a manager is faced with compelling choices with older workers, his preferred decision would be to retain an existing one than to hire a new person. As such, managerial non-support of an older workforce is therefore a factor that influenced older workers' premature and involuntary retirement, and a discouragement to the hiring of older workers.

On the other hand, unions such as Malaysian Trades Union Congress (MTUC) expressed their approval to the MRAA 2012 and opined that it should be implemented immediately (Tamboo, 2012). Additionally, there were 72% of job seekers (aged between 18 and 41) surveyed who supported the retirement age to be 60; nonetheless, there were 28% (aged between 18 and 35) who disagreed with the increase in retirement age, as they feared these lesser effective older workers would result in fewer job-openings available to graduates (Jobstreet.com, 2011).

In this present study, control belief referred to managers' perceived control over the resources, capability or opportunities derived from MRAA 2012 that the managers believed they possess in order to hire older workers.

## 2.9    Individual-level Demographic and Organisational Characteristics

Individual characteristics is replicated from Bird and Fisher (1986). It consists of gender, age, number of years in the present job position, job title, and education attainment. These variables are generally important influences on responding managers as these are able to influence their attitude, subjective norm and perceived behavioural control on their hiring intention. On gender, studies indicated a mixture of positive and negative age stereotypes between the genders and there were actually no conclusive results as to which gender held more positive age stereotypes as compared to the other gender (Chiu et al., 2001). Earlier studies suggested that there was no significant correlation on managers' positions in the company and their negative beliefs on older workers. However, managers with more years of service usually had positive

stereotypes on older workers than managers with lesser years of service. Likewise, there were mixed results on respondents' educational level and their age stereotypes. Respondents who had completed a higher level of education were likely to answer the questionnaires differently from respondents with a lower level of education (Chui et al.; Hassell & Perrewe, 1995).

Another area was that, respondents who attended age awareness programs tended to have a better understanding on older persons when it came to dealing with them (Amoako-Gyampah & Salam, 2004; Chiu et al., 2001). However, in Fraser et al. (2011), just less than half of the respondents had actually gone through the relevant training.

The reviewed variables on demographic characteristics are likely to affect the way respondents answered their questions. Therefore, in this study, managers were asked their gender, age, education attainment, respective job positions in the organizations, years of service, and whether they had attended any age awareness or related programs.

On the organizational characteristics, these are adapted from Chiu et al. (2001). In this study, several variables on organizational characteristics were taken into consideration. These were the type of industry, the type of company; total workforce, turnover rate of workers aged 50 and above in the preceding 12 months, at the time of the survey. These variables were necessary factors and which were expected to provide additional information which influenced managers towards their hiring of older workers.

On the types of company, respondents were asked to select from 11 types of industries provided in accordance to the MSIC, 2018. On the size of company, as at 31 December, 2015, there were a total 1,160,064 companies and 5,998,331 types of businesses registered with the Companies Commission Malaysia, and the number increased to 1,203,319 companies and 6,375,051 types of businesses as at 31 December, 2016 (Suruhanjaya Syarikat Malaysia, 2017). The breakdown is attached in Appendix 2.4. The size of a company was expected to influence managers' attitude towards older workers, as in Lucas (1995), which stated that smaller companies had greater negative stereotypes on older workers. However, in Fraser et al. (2011), it shows that in larger size company, manager's intention to hire qualified workers with disabilities had the least negative control beliefs while smaller-size companies generally had more, and that the medium size companies came in between the two sizes. In Fraser et al., respondents were asked the existing number of disabled workers and the turnover rate in their companies in the last 12 months' period preceding the survey. That information provided a good understanding on the companies' workforce structure.

In this present study, the 3 questions listed as nos. 5, 6 and 7 are adapted from Fraser et al. (2011). Respondents were further asked to state whether their companies faced any labour shortage (question no. 48), after which, from a set of 6 recruitment strategies, they had to rank the order of priorities which their organizations took to overcome the labour shortage problems.

## 2.10 Development of a Conceptual Framework

Based on Ajzen's (1985) TPB Model, the present study aims to investigate managers' intention to hire older workers. The TPB theory is widely used successfully in various past studies to test intention and intention links behaviours, as in examples Lu et al. (2011), Fraser et al. (2011) and Ang et al. (2015) where the researchers had successfully tested the intentions of managers to hire workers (old or with disabilities). From the reviewed literature, TPB is selected for this study as it is best suited to explain behaviour and this is even more so when behaviour involved non-volitional control. Ajzen suggested that in predicting a person's intention and his behavioural intention, the 3 independent variables, namely, attitude, subjective norm and perceived behavioural control were useful measurements. Following the above, this study on managers' intention to hire older workers is determined to use TPB as the foundation for investigation. Accordingly, managers' intention is predicted to apply the above stated 3 determinants, which are the attitude towards older workers, subjective norm and perceived behavioural control on hiring intention. Hence, a hiring intention conceptual model is developed.

As one of the objectives in this study is to develop an extended framework of TPB; managers' past experience and their age are included into the original model. This inclusion is done based on the suggestion by Ajzen and Fishbein (1991) where the researchers stated that the inclusion of additional variables were relevant if these new predictors were able to increase the predictivity of the study. As such, for the purpose of this present study, and from literature reviewed, two additional variables were deemed necessary to be included into

the original model. One is the managers' past experience through their interaction with older persons in their families, communities and workplace environments. The other is the managers' own age which are used to moderate between managers' attitude toward hiring older workers and their overall and future intentions to hire them. The present study aims at predicting managers' intention to hire older workers only and not their actual behaviour in hiring older workers. Following the above reasoning, Figure 2.1 shows the developed conceptual model.
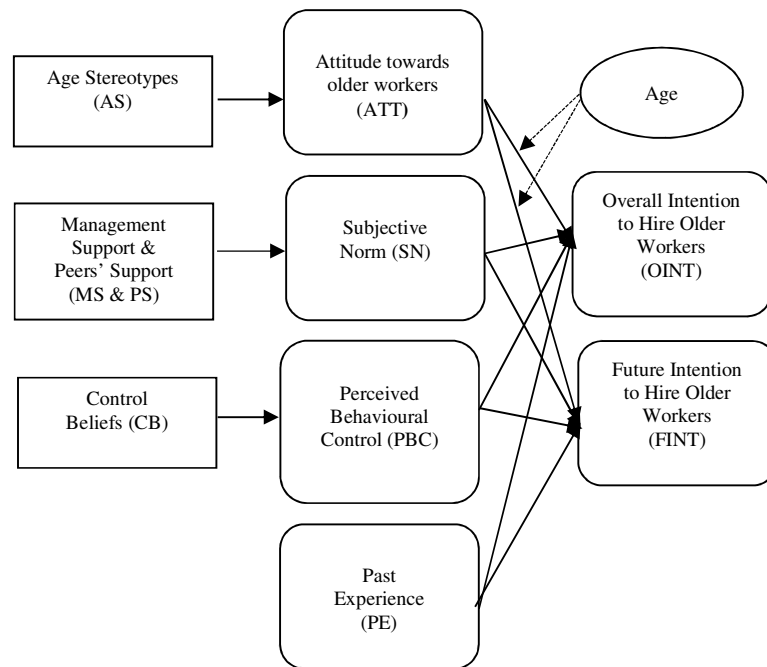


**Figure 2.1: Conceptual Research Model of an Extended
Theory of Planned Behaviour**

**2.11    Development of Hypotheses**

From reviewed demographics and literature, in order to test the antecedent components of intention and to establish their relationships, it is reasonable to apply TPB in the study and hypothesize managers' intention to hire older workers. This study does not include the prediction of managers' actual hiring behavior on older workers. Behavioural intention is separated into 2 sections; the overall intention to hire older workers (OINT) and the future intention to hire older workers (FINT).

**2.11.1  The Relationships of Age Stereotype and Attitude**

A previous study stated that employers believed that workers' incapacity increased with age, and that empirical results confirmed that since a worker exceeded 40 years of age, he was too old for employment (Taylor & Walker, 1994). Such results were supported since many workers of over 55 years of age were denied employment opportunity (Lim, 2003; Truxillo, Fraccaroli, Yaldiz, Zaniboni, 2017). Over the years, employers' attitudes in using chronological age in hiring decisions without realizing that such constituted discriminatory attitude towards job seekers (Taylor and Walker), especially so in developing nations such as Malaysia, where there is no legislation on age discrimination and equal employment opportunity.

Hiring managers' age stereotypes often affected their attitudes towards older workers which resulted in decisions not to hire older workers, as they further claimed that older workers were not trainable, produced poor quality work, incurred high employment costs, job hops and too fixed in their mind sets

(Chiu et al., 2001; Karpinska et al., 2013; Posthuma & Campion, 2009). Gray and McGregor (2003) agreed that it was difficult to train older workers and that very few of them were willing to be trained. Likewise, in Hassel and Perrewe (1995) and Kluge and Krings (2008), respondents themselves also believed that older workers were more difficult to be trained than younger workers. Weiss and Maurer (2004) supported these previous studies that older workers were more resistant to change and less flexible compared to younger workers. Employers further claimed lesser costs to hire younger workers, because they were willing to work for lesser pay and that employers did not believe that costs could be compensated with older workers' know-how and performance (Brooke, 2003). Even Malaysian employers cited higher employment costs for older workers as the main reason (MEF, 2012; Mustafa Kamal, 2012).

On the contrary, some research actually found positive age stereotypes (Laditka et al., 2004; Posthuma & Campion, 2009) that were in agreement with the studies by Hassell and Perrewe (1995), Munnell et al. (2006) and Ng and Feldman (2013) where more than 50% of respondents held positive beliefs on older workers. In fact, older workers were found to be more productive and less likely to change their employers as compared to younger workers.

Therefore, age stereotype is applied to test the relationship with managers' attitude towards older workers. Hence, a manager who has some positive beliefs on older workers' contribution to high job performance, lower employment costs, not resistant to change, have high learning ability, and do

not job hop, then this manager is likely to have a positive attitude towards older workers. Based on the above, the following hypothesis is proposed:

H1a: There is a relationship between age stereotypes and managers' attitude towards older workers.

### 2.11.2  The Relationships of Attitude and Behavioural Intention

Attitude towards a behaviour is on a varying degree of favourable or unfavourable evaluation of a particular behaviour. The assumption in TPB is that an individual's attitude has a direct effect on his behaviour. Therefore, when the individual evaluated a certain act which resulted in a positive or negative outcome; he formed an attitude towards that particular action. When the outcome was positive, his attitude led his intention to perform that particular act. However, when the outcome was negative, his attitude towards his intention to perform was prohibitory (Ajzen, 1991). From the various extensive studies on causal relationships between attitude and behavioural intention indicated that attitude is the best predictor of a behavioural intention as in Lu et al., (2011) where it was found that managers' positive attitudes toward older people were related to their stronger intention to hire older workers. Attitude was therefore, a good predictor of intention, and thus a positive relationship between affective and instrumental attitude and hiring intention was expected by measuring an individual's attitude towards a certain behavioural intention.

In this present study, attitude is defined to include favourable and unfavourable consequences of managers in their hiring of older workers. The following hypotheses were formulated:

H2a: There is a relationship between attitude and managers' overall intention to hire older workers.

H2b: There is a relationship between attitude and managers' future intention to hire older workers.

### 2.11.3 The Relationships of Management Support, Peers' Support and Subjective Norm

In a workplace, employees are responsive to their management and peers' reactions or opinions as regard to their actions, and that they are likely to behave in that particular direction (Rousseau & Tijoriwala, 1999). Managers' perception of their management's support is through various actions undertaken by their companies, such as in the dissemination of relevant information on the importance of a diversified workforce; company's plan to provide age awareness programs to supervisory level staff who managed older workers; or through companies' policies that discouraged discriminatory words or actions against older workers. Peers' support provides an important referent group to a hiring manager because a strong belief motivates the manager strongly on his intention to perform an act (McKinlay & Cowan, 2003).

Management and peers' support were important to a manager in his decision-making. As such, if a manager perceived that his management and peers extended to him their support, this greater support would in turn give him higher intention to perform that particular task. These support are important

encouraging factors for older workers' continuation in employment and an approval to managers to recruit new older workers (Karpinska et al., 2013).

In this present study, the management's support for hiring older workers is defined as the extent of managers' perception of their companies' superiors and employment policies that believed in hiring older workers who benefitted their companies. For peers' support, it is defined as the extent to which a manager perceived his colleagues' beliefs to hire older workers is a benefit to the company, and which includes the individual manager's perception on the support and approval provided by his peers to him to hire older workers. Accordingly, the following hypotheses were developed:

> H1b: There is a relationship between management support and subjective norm.

> H1c: There is a relationship between peers' support and subjective norm.

### 2.11.4 The Relationships of Subjective Norm and Behavioural Intention

Subjective norm is defined as a person's perception that most people who were important to him thought he should or should not perform the behaviour in question (Ajzen, 1991). The expectation of such important persons close to him often added pressure to the desired behavior; hence, high subjective norm often resulted in the individual's high willingness to perform the desired action (Vansteenkiste et al., 2015). In Lu et al. (2011), subjective norm was found to be related strongly to managers' intention to hire older workers. Therefore, subjective norm is a measurement of the individual's perceived social pressure

from people of important references as to whether he should or should not perform a particular act. A perception of positive support from these reference groups gave an individual high motivation and intention to comply or to perform that behaviour in question. In this sense, subjective norm helps in the prediction of intention due to this social influence from management and peers which have already created a certain degree of pressure on managers that directed the managers to hire older workers. TPB presumed that subjective norm predicted a person's intention to certain performances. In addition, several studies had results that indicated a positive relationship between subjective norm components and intentional behaviour. However, this is not conclusive, as there were some which showed negative relationships (eg. Rhodes, Blanchard & Matheson, 2006).

Therefore, in this present study, subjective norm is defined to include a hiring manager's perception that the important reference groups that he valued, believed that he ought to hire older workers or otherwise. The hypotheses predict that a manager who perceived these important reference groups are in agreement to his performance to hire older workers, he then acted accordingly. For the purpose of this study, the following hypotheses were formulated:

> H2c: There is a relationship between subjective norm and managers' overall intention to hire older workers.
>
> H2d: There is a relationship between subjective norm and managers' future intention to hire older workers.

### 2.11.5 The Relationships of Control Belief and Perceived Behavioural Control

Control belief is the antecedent of perceived behavioural control and it concerns the perceived power of an individual whether to facilitate the performance of a certain task. Control belief is about the presence of factors that facilitate or impede performance of the behaviour and perceived power of these factors (Ajzen, 1985).

Employers generally objected to the implementation of MRAA 2012 and they preferred older workers to take early retirement (Tamboo, 2012). The general cold reception from employers on the implementation of MRAA 2012 and the want of a retirement age status quo reflected very low on the intention of employers to hire older workers. Effectively, early retirement means the experience and skills of older workers have gone into wastage (Tung & Comeau, 2012). In actual fact, MRAA did not compel workers to work till their $60^{th}$ year of age; workers were free to opt for early retirement on mutual agreement. Instead, MRAA was basically to prevent employees being forced into retirement prior to their $60^{th}$ years of age. As provided in Section 5(2), violation of the Act attracts a penalty of Ringgit Malaysia ten thousand. In cases where labour shortages persisted, employers were allowed to set a retirement age higher than the statutory 60 years; therefore, MRAA should not be viewed as a constraint to employers' flexibility to retire their older workers, but rather to help ease labour shortage issues (Tamboo).

It becomes necessary to investigate whether managers perceived their control in hiring older workers as a mere compliance to MRAA 2012 or as a good source of human capital to fill the vacancies and at the same time benefits from the incentives provided by the government.  Hence, in this present study, control belief is defined as a manager's belief on the extent of difficulty or easiness to hire older workers, and at the same time complying with the MRAA, 2012. Based on the above, the following hypothesis was formulated:

> H1d: There is a relationship between control beliefs and perceived behavioural control.

### 2.11.6 The Relationship of Perceived Behavioral Control and Behavioural Intention

Prior researches confirmed that perceived behavioural control is related to behavioural intention, and that the correlation is significant (Armitage & Conner, 2001). In a household recycling study by White et al. (2009), perceived behavioural control was one of the significant predictors of behavioural intentions, where it was stated that respondents perceived that with their high level of control, their intention to engage in the project was high. As pointed out by Fraser et al. (2011), even though perceived behavioural control contributed significantly to the prediction of managers' intention to hire workers with disabilities, nonetheless, a lack of commitment by senior management themselves to hire such workers resulted in a negative effect on their managers' hiring intention.  On the contrary, there were other researches that found an inconsistent relationship of perceived behavioural control and intention (eg. Chai & Pavlou, 2004; George, 2004).

In the present study, perceived behavioural control is defined as the perception of managers on how easy or difficult for them on the availability of resources to intend the hiring of older workers for their companies. Based on the above, the hypotheses were formulated as below:

H2e: There is a relationship between perceived behavioural control and managers' overall intention to hire older workers.

H2f: There is a relationship between perceived behavioural control and managers' future intention to hire older workers.

### 2.11.7 The Relationship of Past Experience and Behavioural Intention

Previous researchers included past experience in TPB to give extra weight to prove its powerful effect as a predictor of behavioural intention (e.g. Ajzen, 2002; Lu et al., 2011). In Oh and Hsu (2001), persons who had gambled in the last 12 months preceding the survey found that past experience was an antecedent of behavioural intentions because behavioural intention was a direct function of past experience. Likewise, Lee et al. (2007) found that students with positive previous experience with older adults, usually held positive attitudes working with them. In that sense, an individual's past positive or negative relationship with older persons linked him to his future intention to perform an act. Bysheim and Nyrud (2009) also supported that the greatest explanatory power was the respondents' past experience.

Lu et al. (2010, 2011) supported the inclusion of past behavioural experience as a predictor of behavioural intention, and the results indicated that the inclusion had significantly improved the behavioural intention and future intention. The

above studies' confirmed that past experience had positive relationship towards behavioural intention and that past experience was the most effective predictor of managers' intention to hire older workers. Therefore, it was suggested that positive past experience with older workers would lead to positive attitudes towards older workers, and that influenced the managers' intention to hire older workers. On the other hand, an unfavourable past experience led to negative intention to hire older workers. Kidwell and Jewell (2008) surveyed the moderating effects of students' past behaviour on acquisition of their credit card behaviour concluded that students' past experience was important in predicting their behavioural intention, and that students relied heavily on their past experience to make decisions.

Past experience turned out to be the best predictor of managers' intention to hire older workers (Lu et al., 2011). As such, managers' past experience in social context with older workers (i.e. in family, community and at the workplace) is included into the present study. Questions on managers' past experience in their interaction with older workers or older persons included wordings such as comfortable, easy, and very good. The following hypotheses were formulated:

> H3a: There is a relationship between past experience and managers' overall intention to hire older workers.

> H3b: There is a relationship between past experience and managers' future intention to hire older workers.

### 2.11.8 The Moderating Effect of Age on the Relationship between Attitude and Intention to Hire Older Workers

Previous study (Munnell et al., 2006) supported Chiu et al. (2001) and Hassell and Perrewe (1995) in that it confirmed that older workers generally held positive beliefs on their own cohorts, and that younger workers had more negativity against older workers. In Laditka et al. (2004), it was concluded that older respondents, irrespective of gender, had a more positive view on older persons as compared to young and middle-age groups. However, in Lu et al. (2010) and Lu and Kao (2010), there were no differences between age and attitudes towards older people since it was already reflected in the respondents' general unwillingness to work in positions that required them to serve older people. From the above, there were the differences of younger and older-age groups' and their attitudes towards older people. Study from Kite et al. (2005) concluded that persons of all age groups held different attitudes towards older people, there were negative, positive or a mixture in some cases, and that younger people tended to be more negative than other age groups. In Hassell and Perrewe and Chui et al., the respondents' age was significant in their attitudes towards older workers.

There were several studies that used age as a moderator, such as Baker et al. (2007); Bal et al. (2008); Laditka et al. (2004). In particular, Bal et al.'s study on a meta-analysis of 60 studies that applied age as a moderator between an exogenous variable and endogenous variable was observed. In Bakar et al. the result actually confirmed it, and that age was non-significant to the influences of attitudes, subjective norms and perceived behavioural control. According to Dawson (2014), the interaction effect in moderation should be hypothesized in

advance, irrespective of whether the moderator actually increases or decreases the association between two variables.

Since literature that applied age as a moderator on the relationship between attitudes and behavioural intention was spare, the effect on the age of respondents has become crucial to moderate respondents' intention in hiring older workers. As such, this present study is determined to test the moderating effect of managers' age on their attitude towards older workers and their overall and future intention to hire older workers. Following Dawson (2014) that moderation be hypothesized in advance, the following hypotheses are formulated:

H4a: Managers' age has an impact on the relationship between attitude towards older workers and overall hiring intention.

H4b: Managers' age has an impact on the relationship between attitude towards older workers and future hiring intention.

## 2.12 Summary of Hypotheses

In order to provide answers to the research questions and to achieve the objectives stated, the hypotheses were established in the process. Figure 2.2 is the developed conceptual model showing all the hypothesized relationships.
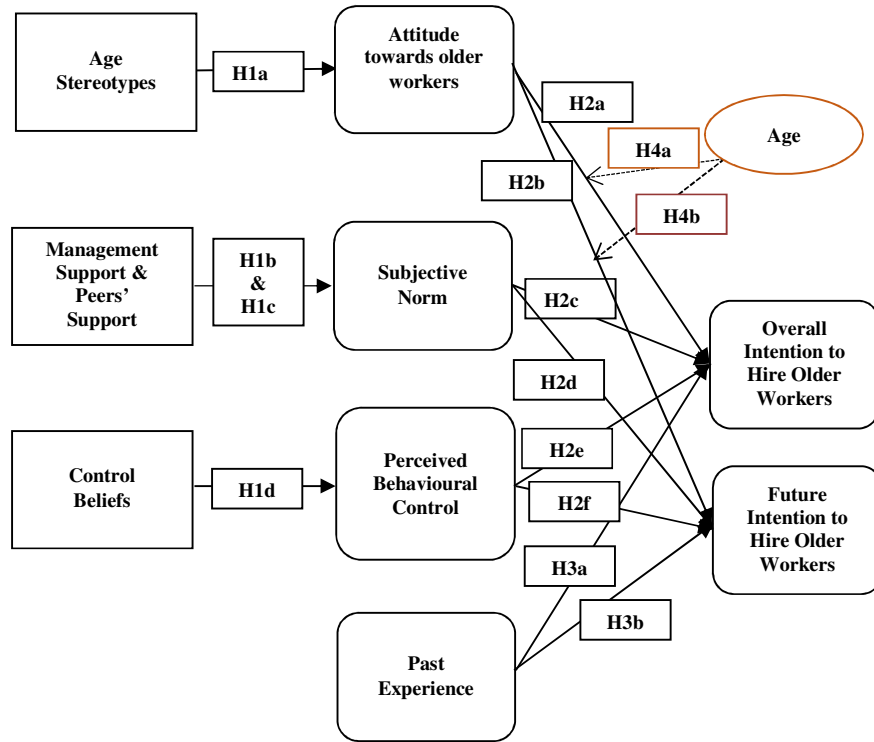
**Figure 2.2: Conceptual Research Model Showing the Hypothesized Relationships**

Table 2.6 below provides the summary of hypotheses and the correspondence survey questionnaires for easy reference.

**Table 2.6: Summary of Study Hypotheses and Corresponding Questionnaire Items**

| No. | Hypotheses | Questionnaire Items |
|---|---|---|
| H1a | There is a relationship between age stereotypes and managers' attitude towards older workers. | 8, 9, 10, 11 & 12 |
| H1b | There is a relationship between management support and subjective norm. | 31, 32, 33 & 34 |
| H1c | There is a relationship between peers' support and subjective norm. | 39 & 40 |
| H1d | There is a relationship between control beliefs and perceived behavioural control. | 28, 29 & 30 |
| H2a | There is a relationship between attitude and managers' overall intention to hire older workers. | 44, 45, 46 & 47 35, 36, 37 & 38 |
| H2b | There is a relationship between attitude and managers' future intention to hire older workers. | 44, 45, 46 & 47 41, 42 & 43 |
| H2c | There is a relationship between subjective norm and managers' overall intention to hire older workers. | 18, 19, 20, 21 & 22 35, 36, 37 & 38 |
| H2d | There is a relationship between subjective norm and managers' future intention to hire older workers. | 18, 19, 20, 21 & 22 41, 42 & 43 |
| H2e | There is a relationship between perceived behavioural control and managers' overall intention to hire older workers. | 23, 24, 25, 26 & 27 35, 36, 37 & 38 |
| H2f | There is a relationship between perceived behavioural control and managers' future intention to hire older workers. | 23, 24, 25, 26 & 27 41, 42 & 43 |
| H3a | There is a relationship between past experience and managers' overall intention to hire older workers. | 13, 14, 15, 16 & 17 35, 36, 37 & 38 |
| H3b | There is a relationship between past experience and managers' future intention to hire older workers. | 13, 14, 15, 16 & 17 41, 42 & 43 |
| H4a | Managers' age has an impact on the relationship between attitude towards older workers and overall hiring intention. | 53 35, 36, 37 & 38 |
| H4b | Managers' age has an impact on the relationship between attitude towards older workers and future hiring intention. | 53 41, 42 & 43 |

## 2.13    Chapter Summary

This chapter has provided overviews of the Malaysian demographic situation with significant changes in the composition of its workforce. It also provided literature reviews on age stereotypes normally experienced by older workers at their workplaces and other variables such as responding managers' attitudes towards older workers, their perceived support from their management and peers towards the hiring of older workers.  Additionally, a detailed discussion on Fishbein's Attitude Model, TRA and TPB which included the historical development of such, and the relevant literatures related to this present study.

The Literature reviewed offered a vast amount of knowledge and formed the foundation that led to the development of research questions, conceptual framework, and hypotheses. The proposed framework had added one determinant (past experience) and a moderating variable (managers' age) to the original variables within TPB model. Research questions, hypotheses and questionnaire mapping were all done systematically and comprehensively for easy identification and linkage to the 4 research questions.

It is now time to embark on a search for a solution to investigate managers' intention to hire older workers. Chapter 3 discusses the research methodology used in this study.

# CHAPTER 3

# RESEARCH METHODOLOGY

## 3.1    Introduction

This chapter includes a description of the study designed to achieve the objectives of a conceptual model, which was to test the paths between beliefs and intention determinant variables of attitude (ATT), subjective norm (SN), and perceived behavioural control (PBC); further tests on the paths between the determinants attitude (ATT), subjective norm (SN), perceived behavioural control (PBC), past experience (PE) and behavioural intention (BI), and the last test being the moderating effects of age on the relationships between the predictor variable attitude (ATT) and hiring intention (BI).

The first part of the chapter describes the research paradigm, methodology and information that justified the identified design and processes. The next part is on the survey procedure, questionnaires development, measurement of variables, mapping of questions to hypotheses, and data analyses methods used to answer the research questions. The research process was adopted from Zikmund, Babin, Carr & Griffin (2010) which provided a general scientific pattern and path clarity in conducting a research, and also allowed decision-making at each stage (Appendix 3.1).

## 3.2 The Research Process

The research process in the present study was a confirmatory or justificatory process; also known as a discovery process. This research process, borrowed from Zikmund et al. (2010), outlined a framework to design and conduct a research. This study commenced with research objectives, research questions, research problem and hypotheses development. The objective of this study was to investigate managers' intention to hire older workers. Therefore, the research questions basically guided this study towards seeking the specific information to meet the objectives.
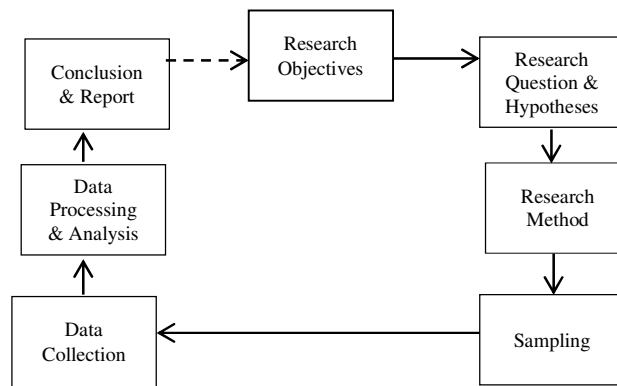


**Figure 3.1: Research Process**

As in Figure 3.1, throughout the research stages, due to time perspective, there often existed overlapping situations where an earlier stage could not be completed on time before a later stage commenced. Nevertheless, each of these stages were linked as indicated in dark arrows. Every stage had the capacity to influence the other stage; for example, the research objectives of managers' hiring intention affected the sampling selection, such as to identify respondents who met the criteria, and subsequently affected the data collection process. Likewise, since managers were usually preoccupied with their duties, time was

precious to them, the number of questionnaires set could exceed a certain number and wordings were kept short and simple.

This study made use of exploratory techniques to collect data by way of personal administration of the survey questionnaire. On the questionnaire, a content validity test was conducted by 5 experts invited to provide feedback for further improvement. Thereafter, a pilot test was carried out by distributing 30 questionnaires to working adults from academia and business with management backgrounds.

The research method utilized in this study was deemed sufficient and appropriate to answer the 4 research questions.

## 3.3 Research Paradigms

The concept of paradigms is widely used in recent years by business and social researchers. The concept is based on their differing values as to how research should be conducted and what results should be accomplished (Cavana, Delahaye & Sekaran, 2001). Kuhn (1962) was the first to define a paradigm as a convenient model integrated with concepts, variables and problems with methodological approaches and tools shared by a community of scientists in finding solutions. Subsequently, there were various definitions on the term 'paradigm' found in literature. A few examples are briefly outlined below.

As in Terre Blanche and Durrheim (1999), a research paradigm was an all-encompassing system of interrelated practice and thinking that defined the nature of enquiry described as 3 paradigms: i.e., the positivist, the interpretive and the constructionist. These paradigms then guided the 3 dimensions of ontology, epistemology and methodology where ontology specified the nature of the reality to be studied, and epistemology referred to the nature of the relationship between the researcher and what can be known. This is basically referred to as objectivistic and constructivist worldview. As for methodology, it referred to the practical ways of finding out what a researcher believed that can be known. Likewise, Gephart (1999) also classified research paradigms into 3 philosophically distinct categories, termed as positivism, interpretivism and critical postmodernism.

Rossman and Rollis (2003, 36-37) characterized paradigm as the 'worldview' or 'shared understandings of reality' to mean 'complete complex ways of seeing and sets of assumptions about the world and actions within.' Rossman and Rollis further identified 4 different paradigms; i.e., the critical humanism, critical realism, positivism and interpretivism. Each paradigm was with its own set of assumptions on the nature of social science and nature of society. The two (2) primary paradigms were positivism and interpretivism. Positivism was associated with quantitative research which primarily relied on quantitative data to test hypothesis for objective results or even to the extent of predicting future happenings. Henning, Van Rensburg and Smit (2004) elaborated on positivistic researchers' adoption of scientific methods and knowledge objectively to enhance precision of parameters and the relationships among

them. Therefore, positivism was concerned with uncovering truth by way of empirical means.

On the other hand, interpretivism was closely related to constructivism. Interpretivism was associated with qualitative research where researchers used words they obtained from interviewees, and from there they addressed essential features of shared meaning as an input data to understand the interviewees' perspectives and for social change, whereas constructivism extended this concern with knowledge as produced and interpreted. In this way, researchers have the benefits of the environment to observe, investigate and understand the learning process (Rossman & Rollis, 2003).

The following section describes these paradigms so that the current research can be aptly placed into its theoretical context.

### 3.3.1   Contrasting Quantitative and Qualitative Methodologies

From the various research methodology literatures reviewed, and in line with the above stated paradigms, the salient features of quantitative and qualitative methodologies are outlined in Table 3.1 (Zikmund et al., 2010).

**Table 3.1: The Main Features of Quantitative &
Qualitative Methodology Paradigm**

| Quantitative (Positivistic) Paradigm | Qualitative (Constructivist) Paradigm |
|---|---|
| Applies scientific principles by using large (statistical) samples which either directly or indirectly to produce quantitative data in numerical form. | Applies understanding principles by using small (theoretical) samples which aim to produce qualitative data from exploring, observing, listening and interpreting. |
| Data is highly specific and precise. A commitment score on a quantitative scale are classified as objectivity. | Data is rich and descriptive. Concerned with generating theories. |
| Researcher values objectivity uses prediction and is concerned with hypothesis testing. | Researcher values inter-subjectivity and the results are researcher-dependent.

Interview format is unstructured and free-form, hence, make traditional hypotheses testing difficult. |
| Can claim generation from sample to population. | Can claim transferability, from context to similar context. |
| Reliability is high while validity is low. | Reliability is low while validity is high. |
| The location is artificial. | The location is natural. |

In each of these methodologies, there were advantages and disadvantages (Babbie, 2010). In a quantitative method, time, costs and the volume of respondents were considered as the prime advantages. Face to face interviews took a longer time and was costlier to be conducted, especially for students with limited financial resources and time frames to complete their theses. Therefore, making use of email for online surveys on self-administered questionnaire was faster, cheaper and which reached a big group of respondents, meant a larger representation of the general population. Moreover, the survey can be conducted by one person without having to engage in additional manpower. Further, interviewer bias could also be eliminated. Another advantage was, at times respondents may be reluctant to answer

controversial questions or become cautious and sensitive in face-to-face interviews, but they were more than willing to provide responses to an anonymous self-administered questionnaire. Another point was that since the questionnaires were structured, the measurement was objective and accurate. However, the response rate for online survey or ordinary mail service was always far below expectations (Babbie, 2010).

On the contrary, a qualitative method often needed more than one interviewer in order to save time. The number of interviewees was preferred to be kept at a minimum. The advantages in a qualitative method were far more than a self-administered questionnaire survey in a quantitative method could accomplish; while a face-to-face interview gave interviewers an opportunity to observe the demeanours of the interviewees and their surrounding environment, which, together provided additional information crucial to the survey. This was especially true for complicated or urgent matters that needed detailed elaboration (Babbie, 2010).

Another difference between quantitative and qualitative research were the data collection method, analysis of data and presentation. A quantitative research made use of questionnaires, surveys and experiments to gather data. A sample of subjects were selected to measure variables; data was revised and tabulated in numbers, and subsequently data was characterised by the use of statistical analysis such as correlations, relative frequencies, or differences between means; the relationships between the variables were highlighted and expressed. The focus was to a large extent on the testing of theory. Qualitative research,

on the other hand, employed an inductive data analysis to provide, and to present data as descriptive narration with interpretive words. No hypothesis was required to begin researching (Lincoln & Guba, 1985).

### 3.3.2 Justification on the Choice of Paradigm

The present research was set on a positivism paradigm, and a quantitative approach. The study was explanatory in nature since it involved deriving at hypotheses from available theories and to test those hypotheses. The research purpose was to establish relationships between the several identified measured variables from literature reviewed, formulated hypotheses and research procedures prior to commencing the research. The research method was by way of personally-administered questionnaire survey.

The study was of a deductive and confirmatory approach. The foundation of the model was the TPB. The quantitative study involved the collection of data from the responses given by the respondents to the 55 items in the questionnaire via personal administration. Respondents came from the identified 9 locations in Peninsular Malaysia. Data collection was not easy considering the time, distance, manpower and financial factors. Although e-mail or slow mail might be seen as a more convenient mode to achieve the data collection objectives, these methods were not preferred after considering non-response bias as there were substantial differences between respondents who responded and those who did not respond since a large number of respondents tend not to respond, and that posed a difficulty in the generalisation process of

the population (Armstrong & Overton, 1977). In addition, those who did not respond required more often than not, several reminders.

## 3.4 Exogenous Variables – Indirect Measurement

The variables and predictors were derived from literature reviewed. Some questions were adopted and adapted from previous studies (e.g. Fraser et al., 2011; Lu et al., 2011), there were several other questions specifically developed for the study, based on the recommendations by Ajzen (2002b). In the survey instrument, respondents assessed and rate each of the items in each question on a 7-point Likert scale which ranged from strongly disagree (1) to strongly agree (7). Where applicable, the sources of constructs were acknowledged accordingly. A set of the questionnaire is attached in Appendix 3.2.

### 3.4.1 Age Stereotypes

From the literature reviewed, the following questions were adapted and adopted from Chui et al. (2001) for measuring age stereotypes towards managers' attitude in hiring older workers. The measurement asked respondents to rate the strength of their beliefs on old age stereotypes on each of the statement on a 7-point Likert scale.

According to Sekaran and Bougie (2016), it is advisable to mix some negatively worded questions and place them in between positively-worded questions, in order to avoid the tendency of respondents conveniently picking up points at one side of the questionnaires without giving much thought to the

wordings in the questions. There were 3 deliberately reversed questions (nos. 8, 10 and 12) to check the respondents' tendency to mechanically pick up the score. The responses from these reversed questions are coded reversely during the data processing stage so as to be in the same direction as those positively-worded questions. In the survey instrument, these 5 questions are listed as Nos. 8, 9, 10, 11 and 12. (Table 3.2).

**Table 3.2: Age Stereotypes Scale Items**

| Q.no | Original Scale Items | Modified Items | Reference |
|------|----------------------|----------------|-----------|
| 8 | Older workers resist change and are too set in their ways. | Older workers do not resist change. | Adapted from Chiu et al. (2001) |
| 9 | Older workers can learn new skills as easily as other employees. | | Adopted from Chiu et al. (2001) |
| 10 | Older employees increase production costs. | Older workers do not increase production costs. | Adapted from Chiu et al. (2001) |
| 11 | Older employees usually turn out work of higher quality. | | Adopted from Chiu et al. (2001) |
| 12 | Older employees are most loyal to the company | Older workers are not likely to job-hop. | Adapted from Chiu et al. (2001) |

### 3.4.2   Management Support and Peers' Support

Two relevant referent groups or individuals deemed important to managers in their workplace; were the management and peer groups. The 5 questions were adapted from the examples by Ajzen (2002b), Lu et al. (2011) and Fraser et al. (2011) respectively while 2 other questions were specifically developed for the study. Question nos. 33 and 40 were adapted from Lu et al. (2011). In attempting to assess the support from these two groups, respondents were asked to rate the strength of influence these reference groups had on their

intention to hire older workers. Each of the questions required respondents to provide their ratings on a 7-point Likert scale. In the survey instrument, these 5 questions were listed under nos. 31, 32, 33, 34, 39 and 40. (Table 3.3).

**Table 3.3: Management Support and Peers' Support Scale Items**

| Q.no | Original Scale Items | Modified Items | Reference |
|---|---|---|---|
| **Management Support** | | | |
| 31 | The top management of my company approves my hiring of older workers. | | Developed for the study. |
| 32 | My company's human resource manager approves my hiring of older workers. | | Developed for the study. |
| 33 | Do you perceive that your organization encourages the employment of older workers? | I perceive that my company encourages the employment of older workers. | Adapted from Lu et al. (2011) |
| 34 | Senior manager is not committed to hiring workers with disabilities. | My company's senior management is committed to hire older workers. | Adapted from Fraser et al. (2011) |
| **Peers' Support** | | | |
| 39 | My classmates think that I should attend the meeting of this class on a regular basis. Extremely likely: [1-----7] Extremely unlikely. | My colleagues think that I should hire older workers. | Adapted from Ajzen (2002b) |
| 40 | Do you perceive that your organization encourages the employment of older workers? | I think my colleagues encourage the employment of older workers. | Adapted from Lu et al. (2011) |

### 3.4.3 Control Belief

In the current study, MRAA 2012 is used as a foundation to form the legislative related variables. MRAA 2012 was identified mainly because of the local environment and events related thereto. These variables were measured

by asking respondents to rate whether their agreements to hire older workers were encouraged by MRAA 2012. MRAA 2012 is a local legislation aimed to regulate the minimum retirement age for employees from the private sector. To the best of my knowledge, thus far, there were no relevant questionnaire related to MRAA 2012 that was available. In this sense, 2 questions were fully developed and 1 question was adapted from Fraser et al. (2011). Respondents were required to rate them on a 7-point Likert scale. These questions were nos. 28, 29 and 30. (Table 3.4)

**Table 3.4: Control Beliefs Scale Items**

| Q.no | Original Scale Items | Modified Items | Reference |
|------|----------------------|----------------|-----------|
| 28 | My intention to hire older workers is encouraged by the Minimum Retirement Age Act 2012. | | Developed for the study. |
| 29 | I hire older workers to avoid committing offences under the Minimum Retirement Age Act 2012. | | Developed for the study. |
| 30 | Our company can receive tax credits or incentives for hiring workers with disabilities. | My company can receive incentives from the Ministry of Human Resources for sending older workers for training. | Adapted from Fraser et al. (2011) |

## 3.5    Exogenous Variables – Direct Measurement

The predictor variables and hiring intention were assessed by asking respondents to rate each of the items on a 7-point Likert scale which ranged from strongly disagree (1) to strongly agree (7) or extremely unlikely (1) to extremely likely (7) as the case may be. Where applicable, the sources of constructs were acknowledged accordingly.

### 3.5.1 Attitude

In this study, attitude referred to managers' general attitude towards older workers. A set of 4 semantic differential scales was developed based on the recommendations from Ajzen (2002b). An example provided was: My exercising for at least 20 mins, three times per week for the next three months would be bad [1-----7] good. Following the guideline on bipolar adjectives provided, semantic differential scales were developed and used to assess managers' attitudes towards their hiring intention. These questions were developed to suit the conditions of the present study. Each of these 4 scales appeared after the following statement:" I think the activity of hiring older workers is: …………" The bipolar adjectives of the semantic differential scales contained separable components beneficial----harmful; useful----useless; wise-----foolish; and valuable----worthless. These 4 questions were listed in the survey instrument as nos. 44, 45, 46 and 47. (Table 3.5).

**Table 3.5: Attitude Scale Items**

| Q.no | Original Scale Items | Modified Items | Reference |
|------|----------------------|----------------|-----------|
| 44 | My exercising for at least 20 mins, three times per week for the next three months would be: Bad [1-----7] Good. | I think the activity of hiring older workers is: Beneficial [1-----7] Harmful. | Adapted from Ajzen (2002b) |
| 45 | My exercising for at least 20 mins, three times per week for the next three months would be: Bad [1-----7] Good. | I think the activity of hiring older workers is: Useful [1----7] Useless. | Adapted from Ajzen (2002b) |
| 46 | My exercising for at least 20 mins, three times per week for the next three months would be: Bad [1-----7] Good. | I think the activity of hiring older workers is: Wise [1-----7] Foolish. | Adapted from Ajzen (2002b) |
| 47 | My exercising for at least 20 mins, three times per week for the next three months would be: Bad [1-----7] Good. | I think the activity of hiring older workers is: Valuable [1-----7] Worthless. | Adapted from Ajzen (2002b) |

### 3.5.2 Subjective Norm

Five questions were adapted from Ajzen (2002b). In the present study, subjective norm referred to those persons important to the respondents, and their approval of the respondents' appropriate behaviour on hiring older workers. The important referent individuals in the workplace included the company's chief executive officer (CEO), human resource managers and colleagues. These 5 questions were listed as per nos. 18, 19, 20, 21 and 22. (Table 3.6).

**Table 3.6: Subjective Norm Scale Items**

| Q.no | Original Scale Items | Modified Items | Reference |
|------|---------------------|----------------|-----------|
| 18 | Most people whose opinions I value would approve of my attending the meetings of this class on a regularly basis: Strongly disagree----- Strongly agree. | People who are important to me would think that I should hire older workers. | Adapted from Ajzen (2002b) |
| 19 | Most people who are important to me think that: [I should -----I should not] attend the meeting of this class on a regularly basis. | Most people who are important to me think it is okay for me to hire older workers. | Adapted from Ajzen (2002b) |
| 20 | Most people whose opinion I value would approve of my attending the meeting of this class on a regular basis: strongly disagree----- strongly agree. | Most people who are important to me support that I hire older workers. | Adapted from Ajzen (2002b) |
| 21 | The instructor of this course thinks that I shall attend the class meeting on a regular basis: Extremely likely-----Extremely unlikely. | Most people who are important to me understand that I hire older workers. | Adapted from Ajzen (2002b) |
| 22 | My close friend thinks that I should attend the meetings of this class on a regular basis: Extremely unlikely-----Extremely likely. | Most people who are important to me agree with me about hiring older workers. | Adapted from Ajzen (2002b) |

### 3.5.3 Perceived Behavioural Control

In evaluating the strength of managers' perceived capability in hiring older workers, items such as whether the managers have entire controlling power, resources and knowledge to perform the act. From the samples provided in Ajzen (2002b), 5 questions were adapted. On perceived behavioural control power, respondents were asked to rate their abilities or resources possessed on a 7-point Likert scale. These 5 questions were nos. 23, 24, 25, 26 and 27. (Table 3.7).

**Table 3.7: Perceived Behavioural Control Scale Items**

| Q.no | Original Scale Items | Modified Items | Reference |
|---|---|---|---|
| 23 | I am confident that I can exercise for at least 20 mins, three times per week for the next three months: True [1-----7] False. | I am capable of hiring older workers. | Adapted from Ajzen (2002b) |
| 24 | Whether or not I attend the meetings of this class on a regular basis is completely up to me: Strongly disagree [1-----7] Strongly agree. | Hiring older workers is entirely within my control. | Adapted from Ajzen (2002b) |
| 25 | For me to attend the meetings of this class on a regular basis is extremely difficult [1-----7] extremely easy. | I have the resources to hire older workers. | Adapted from Ajzen (2002b) |
| 26 | For me to attend the meetings of this class on a regular basis is extremely difficult [1-----7] extremely easy. | I have the knowledge to hire workers. | Adapted from Ajzen (2002b) |
| 27 | I will make an effort to attend the meetings of this class on a regular basis: I definitely will [1-----7] I definitely will not. | I have the ability to hire older workers. | Adapted from Ajzen (2002b) |

### 3.5.4 Past Experience

The study from Lu et al. (2011) found a relation between a strong intention to hire older workers and respondents' past experience with older people, i.e. in the respondents' interactions, the better the experience, the greater was their intention to hire older workers. In the present study, past experience referred to either positive or negative experiences which the respondents experienced through interactions with older workers in social contexts. Three questions were adopted from Lu et al., while the other two were adapted from the same study. In the questionnaire, respondents were asked about their interactions with older workers at their workplaces; with older persons in their families and in their community. Words used were 'good, comfortable, or easy' on a 7-point Likert scale. The 5 questions were indicated in nos. 13, 14, 15, 16 and 17. (Table 3.8).

**Table 3.8: Past Experience Scale Items**

| Q.no | Original Scale Items | Modified Items | Reference |
|------|---------------------|----------------|-----------|
| 13 | My interaction with older persons in my family is very good. | | Lu et al. (2011) (Adoption) |
| 14 | My interaction with older persons in my community is very good. | | Lu et al. (2011) (Adoption) |
| 15 | My interaction with older workers at my workplace is very good. | | Lu et al. (2011) (Adoption) |
| 16 | My interaction with older persons in my family is very good. | My interaction with older people is comfortable. | Lu et al. (2011) (Adaption) |
| 17 | My interaction with older persons in my community is very good. | My interaction with older person is easy. | Lu et al. (2011) (Adaption) |

### 3.6 Endogenous Variable – Intention

In TRA and TPB literatures, researchers often investigated respondents own behavioural intention. Behavioural intention (BI) referred to managers' willingness to hire older workers or workers with disabilities (Ang et al., 2015; Fraser et al., 2011; Lu et al., 2011). In the present study, intention to hire was divided into 2 parts – an overall intention to hire and a future intention to hire. This division was deemed necessary after considering a number of situations where, at times respondents might have the intention to hire, but could not, due to various reasons such as no immediate vacancy, restricted hiring authority, limited resources available, or due to some other limitations which rendered some respondents' intention to hire unable to be fulfilled within a certain timeframe. As mentioned earlier, it referred to the 12 months' period from the day they participated in the survey. However, since respondents already had the hiring intention, they were likely to hire older workers at a later available opportunity.

### 3.6.1 Overall Intention

Respondents were asked to rate their agreement or disagreement with their overall intention to hire older workers. The statements were on a 7-point Likert scale. Four questions were developed specifically for the study. These 4 questions also formulated to assess each of the predictors of the extended TPB with intention; namely attitude, subjective norm, perceived behavioural control and past experience. These questions were nos. 35, 36, 37 and 38. (Table 3.9).

**Table 3.9: Overall Intention Scale Items**

| Q.no | Original Scale Items | Modified Items | Reference |
|------|---------------------|----------------|-----------|
| 35 | I have the intention to hire older workers because I have a positive attitude toward older workers. | | Developed for the study. |
| 36 | I have the intention to hire older workers because I have a good past experience with older workers. | | Developed for the study. |
| 37 | I have the intention to hire older workers because I have strong support from my management and peers. | | Developed for the study. |
| 38 | I have the intention to hire older workers because The Minimum Retirement Age Act 2012 has motivated me to do so. | | Developed for the study. |

### 3.6.2   Future Intention

Three questions were adapted from Lu et al. (2011) by including a 12 months' period into each of the questions. Since Lu et al.'s study had validated their scale and reported high Cronbach's Alphas in the context of hiring older workers, in this present study, respondents were asked on their intention to prioritize the hiring of older workers in the next 12 months from the time of survey. They were to rate their likelihood or unlikelihood according to the statements on a 7-point Likert scale. These 3 questions were listed as no: 41, 42 and 43. (Table 3.10).

**Table 3.10: Future Intention Scale Items**

| Q.no | Original Scale Items | Modified Items | Reference |
|------|---------------------|----------------|-----------|
| 41 | Will you prioritize an older worker as your team member? | I will prioritize an older worker as my team member in the next 12 months. | Lu et al. (2011). |
| 42 | If other things being equal, will you prioritize an older worker for hiring? | If other things being equal, I will prioritize an older worker for hiring in the next 12 months. | Lu et al. (2011). |
| 43 | Even though he / she is not the best available person, will you still prioritize an older worker for hiring? | Even though an older worker is not the best available person, I will still prioritize him / her for hiring in the next 12 months. | Lu et al. (2011). |

Table 3.11 below is a summary of all constructs, questions for each construct and an acknowledgment to their sources of origin. The age of respondents is included.

**Table 3.11: Number of Scale Items and Sources for Each Construct**

| Constructs | No. of Items | Sources |
|------------|--------------|---------|
| ATT | 4 | Adapted from Ajzen (2002b); |
| AS | 5 | Adapted/adopted from Chiu et al. (2001). |
| SN | 5 | Adapted from Ajzen (2002b) |
| PS | 2 | Adapted from Ajzen (2002b); Lu et al. (2011) |
| MS | 4 | Developed for the study; adapted from Lu et al. (2011); Fraser et al. (2011) |
| PBC | 5 | Adapted from Ajzen (2002b) |
| CB | 3 | Developed for the study; Adapted from Fraser et al. (2011) |
| PE | 5 | Adapted/adopted from Lu et al. (2011) |
| OINT | 4 | Developed for the study |
| FINT | 3 | Adapted from Lu et al. (2011) |
| AGE | 1 | Adapted from Chui et al. (2001) |

## 3.7    The Moderating Variable – Age

In this study, age is a moderator between responding managers' attitude and their hiring intention. Managers' age is divided into 4 categories. Group A referred to those aged 30 and below; group B from 31 to 40; group C from 41 to 50 and group D 51 and above. One question was listed under Section (c), no. 53. The measurement required respondents to select the age group most appropriate to them.

## 3.8    Demographic Variables

Demographic variables play a critical role in potentially influencing the dependent variables.

## 3.8.1    Individual-level Demographic

In the present study, variables on demographic characteristics of individuals are respondents' gender, age, education attainment, job position, years of service, and whether respondents had attended any age awareness or related programs (Bird & Fisher, 1986; Chiu et al., 2001).

Respondents' job positions and tenure of service in their organizations were likely to influence them to respond to questions differently; therefore they were asked on these 2 areas accordingly. Respondents who had attended age awareness programs tended to have a better understanding on older persons, and that awareness helped them to deal with older workers effectively (Chiu et al., 2001). However, as pointed out by Fraser et al. (2011), it was not common for respondents to attend such programs since in their studies, just less than

half of the respondents surveyed had actually gone through such relevant training. Looking back at Malaysia's local environment, the actual number of participants who had actually attended such age awareness related programs was not known. Therefore, respondents were asked to indicate their attendance in age awareness related training programs.

**Table 3.12: Survey Item for Individual-level Variables**

|  | Question No. | Item | Reference |
|---|---|---|---|
| Gender | 54 | [    ] Male<br>[    ] Female | Chiu et al. 2001; Hassell & Perrewe, 1995. |
| Job Position | 50 | [    ] Director/Partner/Sole Proprietor<br>[    ] Chief Executive Officer/General Manager<br>[    ] Production/Operation Manager<br>[    ] Corporate Affairs/Legal Manager<br>[    ] Finance/Accounts Manager<br>[    ] Human Resource/Administration Manager<br>[    ] Sale/Marketing Manager<br>[    ] Project Manager/ Supervisor<br>[    ] Others | Bird & Fisher, 1986. |
| Year of Service | 51 | [    ] Below 1 year<br>[    ] 1 to 5 years<br>[    ] Above 5 to 10 years<br>[    ] Above 10 to 15 years<br>[    ] Above 15 to 20 years<br>[    ] Above 20 years | Bird & Fisher, 1986. |
| Education | 52 | [    ] Secondary school<br>[    ] Certificate/Diploma<br>[    ] Bachelor degree<br>[    ] Master degree<br>[    ] Doctorate degree<br>[    ] Professional qualification | Bird & Fisher, 1986. |
| Training | 55 | [    ] Yes<br>[    ] No | Chui et al. 2001; Fraser et al. 2011. |

### 3.8.2    Organizational Characteristics

Organizational characteristics was adapted from, examples, Malaysia Standard Industrial Classification (MSIC) (2008), Lu et al. (2011) and Saleh and Ndubisi (2006). This study took into consideration several variables on organizational characteristics. These were: the type of industry, the type of company; total workforce; turnover rate of workers aged 50 and above in the preceding 12 months at time of survey. These variables were necessary factors that provided additional information related to the respondents on older workers. The 3 questions asked were stated in nos. 5, 6 and 7. Additionally, respondents were to state whether their companies faced labour shortage (question no. 48), thereafter they were required to rank from a list of 6 strategies the order of priorities which their organizations took to overcome the labour shortages.

Table 3.13 below presents a summary of the survey items on organizational demographic under section A of the survey questionnaire. A set of questionnaire is provided in Appendix 3.2.

**Table 3.13: Survey Item for Organizational Variables**

| | Question No. | Item | Reference |
|---|---|---|---|
| Type of industry | 1 | [ ] Accommodation and food service activities<br>[ ] Administration and support service activities<br>[ ] Agricultural, forestry and fishing<br>[ ] Construction<br>[ ] Education<br>[ ] Financial and insurance/takaful activities<br>[ ] Human health and social work activities<br>[ ] Manufacturing<br>[ ] Professional, scientific and technical activities<br>[ ] Transport and storage<br>[ ] Wholesale and retail trade; repair of vehicles and household goods<br>[ ] Others (Please specify) | Malaysia Standard Industrial Classification (MSIC) 2008 |
| Type of company | 2 | [ ] Local      [ ] Multinational<br>[ ] Others | Tenth MP |
| Total Workforce | 3 | [ ] 5 and below  [ ] 6 to 10<br>[ ] 11 to 15     [ ] 16 to 20<br>[ ] 21 to 25     [ ] 26 to 30<br>[ ] 31 to 35     [ ] 36 to 40<br>[ ] 41 to 45     [ ] 46 to 50<br>[ ] 51 to 55     [ ] 56 and above | Fraser et al. (2011) |
| Location | 4 | [ ] Johor          [ ] Kedah<br>[ ] Kuala Lumpur  [ ] Melaka<br>[ ] Negeri Sembilan[ ] Perak<br>[ ] Perlis          [ ] Pulau Pinang<br>[ ] Selangor | Saleh & Ndubisi (2006) |
| Older workers in the company | 5 | [ ] None      [ ] 1 to 5<br>[ ] 6 to 10    [ ] 11 to 15<br>[ ] 16 to 20   [ ] 21 and above | Lu et al. (2011) |
| Recruitment of older workers | 6 | [ ] None      [ ] 1 to 5<br>[ ] 6 to 10    [ ] 11 to 15<br>[ ] 16 to 20   [ ] 21 and above | Lu et al. (2011) |
| Termination of older workers | 7 | [ ] None      [ ] 1 to 5<br>[ ] 6 to 10    [ ] 11 to 15<br>[ ] 16 to 20   [ ] 21 and above | Lu et al. (2011) |
| Labour shortage | 48 | [ ] Yes      [ ] No | Eleventh MP |
| Six problem-overcoming strategies | 49 | [ ] To use foreign workers;<br>[ ] To use part-time workers;<br>[ ] To use older workers;<br>[ ] To shift our company to a place with plenty of labour supply;<br>[ ] To attract potential workers by offering higher salaries;<br>[ ] To substitute labour with technology | Watson Wyatt (2006) |

**3.9     Measurement Scale**

According to Zikmund et al. (2010), a scale is a tool or mechanism by which individuals are distinguished as to how they differed from one another on the variables of interest in a research study. In other words, a scale is a continuous spectrum or series of categories. The purpose of scaling is to represent, usually quantitatively, an item's, a person's, or an event's place in the spectrum.

A nominal scale is a quantitative categorization according to un-ordered distinctions. It is the simplest type of scale. The numbers or letter assigned to objects served as labels identification or classification that allowed the researchers to assign subjects to a certain category or group such as gender (Zikmund et al., 2010). Furthermore, Zikmund et al. stated that an ordinal scale enables researchers to determine if the object has more or less characteristics than other objects, where it allows entities to be placed into groups that were in order but did not indicate equal distance between the rankings, and that the value was expressed in an order, in numerals and not numeric. Another type of ordinal scale is the rank order scale where respondents are asked to rank the order, in terms of their preference on a set of objects or attributes. As the scale measures only the relative importance of each object or attribute relative to the other objects or attributes, the preference shows only the order of importance, and not exactly the degree of the importance. As in question no. 49, respondents ranked in order of priority all the 6 problem-overcoming strategies available in accordance with their organizations' preferences.

A Likert scale is used to measure attitude, intention or importance, or other concepts in business research (Zikmund et al., 2010), and is designed to allow respondents to indicate how strongly they agree or disagree with the statements. Constructed statements ranged from very negative to very positive toward attitudinal objects (Zikmund et al.). Among researchers that used Likert scales in the areas of older workers, workplace discrimination, age stereotypes and intention to hire, were Chiu et al. (2001) used 5-point, while Lu et al. (2011) and Fraser et al. (2011) used 7-points. The use of 5-point or 7-point basically depends on how precise the researchers want it to be, and also the educational level of the targeted respondents (Hair, Money, Samouel & Babin, 2003). Likert scales were supposed to be treated as ordinal scales. However, it was customary in business research to treat Likert scales as interval scales, and that empirical evidence shows that the points on interval scale were treated as equal magnitude (Hair et al., 2003, Zikmund et al., 2010). In the present study, the Likert scale was treated as an interval scale.

Another type is the semantic differential which is a series of attitude scales. Semantic differential scale had found its popularity in business applications and the scale had been treated as interval scale despite criticism that data have only ordinal properties since the numerical scores are arbitrary (Zikmund et al., 2010). Respondents are asked to select from a series of 7-point bipolar rating scales ranging from negative to positive as in question nos. 44, 45, 46 and 47. Example: I think the activity of hiring older workers is beneficial……..harmful. The scale intervals (1…..7) are interpreted from left to right as (1) extremely beneficial, (2) very beneficial, (3) slightly beneficial, (4)

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both beneficial and harmful, (5) slightly harmful, (6) very harmful, (7) extremely harmful.

In the present research, nominal scales, ordinal scales, Likert scales and semantic differential scales are used and they are based on recommendations by the above mentioned researchers. Examples of each measurement scale are presented in Table 3.14 below.

**Table 3.14: Examples of Measurement Scales Employed
in the Survey Instrument**

| Scales | Question No. | Item |
|---|---|---|
| Nominal Scales | 54 | [   ] Male ;          [   ] Female |
| Ordinal Scales | 53 | Age of manager:<br><br>[   ] 30 and below ;   [   ] 31 to 40<br>[   ] 41 to 50;          [   ] 51 and above |
| | 49 | [   ] To use foreign workers<br>[   ] To use part-time workers<br>[   ] To use older workers<br>[   ] To shift our company to a place with plenty of labour supply<br>[   ] To attract potential workers by offering higher salaries<br>[   ] To substitute labour with technology |
| Likert Scales | 23 | I am capable of hiring older workers:<br><br>[   ] 1=Strongly disagree;<br>[   ] 2=Somewhat disagree  ;<br>[   ] 3=Disagree;<br>[   ] 4=Neutral;<br>[   ] 5=Agree;<br>[   ] 6=Somewhat agree;<br>[   ] 7=Strongly agree |
| Semantic differential Scales | 44 | I think the activity of hiring older workers is:<br><br>Beneficial..[1]..[2]..[3]..[4]..[5]..[6]..[7]..Harmful. |

### 3.10    Questionnaire Development

This research instrument was a combination of existing measurement which had already been validated and its reliability assessed in previous studies, that either applied TRA or TPB (e.g. Ang et al., 2015; Fraser et al., 2011; Lu et al., 2010), with several new questions developed specifically for the study.

There were 3 sections in the survey questionnaire format which consisted of 6 pages and 55 questions. The front page contained a brief introduction of the study and a general invitation to participants. From page 2 to page 6, Section A had 7 questions on general information related to respondents' organizations. Section B contained the original variables in the TPB model plus the additional variable of past experience. The measurement items of hypothetical constructs were either adopted or adapted from several literatures reviewed as earlier discussed, with a few specifically developed questions. There were 42 questions related to all the said constructs. Respondents were asked to complete the questionnaires using a 7-point Likert scale ranging from 1 to 7, the lowest number representing strongly disagree/extremely unlikely to strongly agree/extremely likely. There were 4 reversed questions on a 7-point bipolar scale, from lowest number starting with positive words leading to a highest number with negative words. There was a nominal question requiring a yes or no response. In addition, there was also a strategical question with '1' being the highest level choice of strategy and '6' being the lowest level choice. The last section was C with 6 questions on the respondent's profile mainly for the determination of respondents' characteristics, on job positions and

employment duration, educational attainment, age, gender, and their attendance at an age awareness related training program.

### 3.11    Instrument Validation

The purpose of validating the measurement instrument was to ensure that the instrument was comprehensively designed; whether respondents understood the questions, and what was needed for further improvement (Hunt, Sparkman & Wilcox, 1982). The instrument validity was to confirm 4 important validation criteria, namely, content validity, convergent validity, discriminant validity and internal consistency reliability.

### 3.11.1  Content Validity

Content validity is defined as the degree and extent of coverage over the domain of interest, and the relevancy of the measurement instruments and representative of the targeted construct (Zikmund et al., 2010).

In ensuring the overall construct validity for the measurement instrument, I distributed 5 sets of questionnaires to 5 expert personnel for their expert opinion on the subject matters, and on the clarity and accuracy of the survey items. Among the 5 experts, an academician, 3 managers in business organizations and 1 company director. All 5 of them were experts with adequate knowledge, prior experience and were involved in the recruitment at all levels. These experts had provided valuable input for further improvement of the questionnaire. The recommendations for improvement is presented in Appendix 3.3.

### 3.11.2 Convergent and Discriminant Validity

As per definition by Kline (2011), validity is the score measurement of what a scale is supposed to measure, and not to measure what the scale is not supposed to measure. Construct validity concerns with the researchers' belief of the score measure of the hypothetical constructs indirectly through an observed score. The present research model was a reflective measurement model, where construct validity was essential to the perceived overall validity of the test. Reflective measurement model's validity assessment focused on convergent validity and discriminant validity.

The difference between convergent validity and discriminant validity was that, convergent validity referred to the degree to which two measures of constructs that theoretically should be related were in fact related. Correlation coefficients were used to estimate convergent validity. Evidence of convergent validity was the high correlations between the test scores. On the other hand, discriminant validity is to test whether concepts or measurements that were supposed to be unrelated were, in fact unrelated (Campbell & Fiske, 1959). If discriminant validity was evident, the relationship between the measurements from different constructs should be very low.

### 3.11.3 Reliability

The most commonly reported reliability is the Cronbach's coefficient alpha ($\alpha$) with theoretical range (0-1.00). In Zikmund et al. (2010), reliability was defined as an internal consistency indicator. It was possible to use past test scores to predict close to 80% on subsequent tests; otherwise the test was not

reliable. Therefore, where the internal consistency reliability was low, the total score could not be the best unit of analysis for the measure, because there were heterogeneous items in existence (Kline, 2011). In Hair, Hult, Ringle and Sarstedt (2014), the acceptable value should be at least 0.60.

From various past studies, even though there was no one standard on how high or low coefficients of scores should be in order to be considered reliable, there were some guidelines available on the minimum value, which was ideally at 0.60. The summary of score reliability coefficient guidelines is provided in Table 3.15.

**Table 3.15: Score Reliability Coefficients Guidelines**

| Range (0-1.00) | Guidelines | Sources |
|---|---|---|
| .90 | Excellent | Kline (2011) |
| .80 | Very good | |
| .70 | Adequate | |
| .70 | Good | Hair et al. (2014) |
| .60 | Acceptable | |
| .80 to .95 | Very good | Zikmund et al. (2010) |
| .70 | Good | |
| .60 | Fair | |
| Below .60 | Poor | |

As suggested by Ringle, Wende, and Will (2005), all the analyses for reliability used the SmartPLS software package.

### 3.11.4  Goodness-of-Fit Assessment

In PLS, Goodness-of-fit (*GoF*) is used to judge the overall fit of the model (Tenenhaus & Vinzi, 2005) which is the geometric mean of the average communality (outer measurement model) and the average $R^2$ of endogenous latent variables, representing an index for validating the PLS model globally.

Looking for a compromise between the performance of the measurement and the structural model respectively. *GoF* is normed between 0 and 1, where a higher value represents better path model estimations.

As pointed out by Vinzi, Trinchera and Amato (2010), in PLS path modelling, there is no overall fit index for goodness of fit, but the *GoF* index which is a global criterion of goodness of fit proposed by Tenenhaus and Vinzi (2005) and for the model performance in both the measurement and the structural model, it can be used. Even Hair et al. (2014) mentioned the non-availability of a global goodness of fit in PLS; nonetheless, researchers are advised to use either bootstrapping or blindfolding techniques to test validity and reliability.

Three parts of the model required validation, i.e., the measurement model, structural model and the overall model. The different fit indexes are the communality index, the redundancy index and the *GoF* index. Since no threshold value for relative *GoF* was provided, a rule of thumb =0.90 or higher indicates a preferred model.

*GoF* index is obtained as the geometric mean of the *average communality* index and the average $R^2$ value:

$$GoF = \sqrt{\overline{Com} \times \overline{R^2}}$$

Where the average $R^2$ value is obtained as:

$$\overline{R^2} = \frac{1}{J} R^2 \left( \hat{\varepsilon}_j . \hat{\varepsilon}_{q::\varepsilon_{q \to \varepsilon j}} \right)$$

For a reflective measurement model, as in this present study, the *GoF* index was conceptually appropriate as it was partly based on average communality.

However, the expectation should be higher communalities but with a lower $R^2$.

To assess *GoF*, the index was normed between 0 and 1, where higher value represents better path model estimation and thus, better explaining power. As per Vinzi et al. (2010), path coefficients ranged between 0.20-0.30 along with measures that explained 50% or more variance is acceptable. By running the PLS bootstrapping on the dataset, the path coefficients and the *GoF* values were obtained. Global validation of PLS models' used cut-off values as *GoF* (small)=0.10, *GoF* medium=0.25, and *GoF* (large)=0.36 (Wetzels, Odekerken-Schroder & Van Oppen, 2009).

Although there are various different recommended cut-off values from different researchers, there is basically no one common agreement between these suggestions. Also, in PLS, there is no one single *GoF* criterion available (Hair et al., 2014). Since this research is applying the PLS approach, it is decided to follow the *GoF* value as stated in Wetzel et al. (2009).

Hair et al. (2014) recommended the use of bootstrapping to test the reliability and validity, the significance of outer weights, outer loadings and path coefficients. To commence the tests, PLS basically relies on a nonparametric bootstrap procedure whereby a large number of subsamples are drawn from the original samples, but with replacements. This means that chances of an observation for a certain subsample may or may not be selected at all; if at all been selected, it need not stop at one (Davison & Hinkley, 1997; Efron & Tibshirani, 1986). As a rule of thumb, Hair et al., suggested the bootstrap

samples to be 5,000 in order to ensure that the significance testing system results are not systematically biased.

### 3.11.5  Assessment of Effect Size

Effect size measures the strength of a phenomenon, and the effect could be effect-correlation between 2 variables, the regression coefficient and the mean difference. The effect size is to compliment statistical hypotheses testing. The types of effect size test can be performed using *t*-Test, *F*-Test and ANOVA. Larger absolute value indicates a stronger effect.

### 3.12    Pilot Test

A pilot test was conducted after complying with the recommendations for amendment and improvement from the 5 expert reviewers. Although several questions were adopted and adapted from earlier researchers (e.g. Ajzen, 2002b; Fraser et al., 2011; Hassell & Perrewe, 1995; Lu et al., 2011) to ensure high validity and accuracy of the questionnaires, due to additional questions being developed for this study, and the characteristics from respondents' demographic, organizational and situational circumstances were different from those journals reviewed, a pilot test was conducted with a view to further improve the reliability and confidence level of this study. The questionnaires were distributed to 30 individuals from business organizations in Kuala Lumpur. The number of 30 was a minimum recommendation for a preliminary survey and it was a sufficient representation from an interested population (Johanson & Brooks, 2010)

From all the returned questionnaires, there was no missing data. SPSS tools were used to compute the Cronbach alpha values of the constructs. The results are presented in Tables 3.17 and 3.18 respectively. In fact, of all α values, OINT had the lowest α value of 0.700. This was due to the fact that the questions were all developed specifically for the local environment and these questions had not been tested in any survey prior to the current study. Alpha values for all the constructs were acceptable since they all passed the threshold point of 0.70 for conducting the research (Hair et al., 2003). The summarised result in Table 3.16 indicated good reliability.

**Table 3.16: Reliability Test for Pilot Test**

| PILOT TEST (Case Processing 30) | | | | |
|---|---|---|---|---|
| CONSTRUCTS | No. of item | Cronbach's Alpha | Item if deleted | Improved Cronbach's Alpha |
| AS | 5 | 0.744 | No. 4 | 0.783 |
| PE | 5 | 0.916 | NR* | 0.916 |
| SN | 5 | 0.728 | No. 2 | 0.746 |
| PBC | 5 | 0.824 | No. 2 | 0.834 |
| CB | 3 | 0.790 | No. 1 | 0.838 |
| MS | 4 | 0.891 | No. 4 | 0.909 |
| OINT | 4 | 0.700 | No. 4 | 0.799 |
| PS | 2 | 0.766 | NR* | 0.766 |
| FINT | 3 | 0.908 | NR* | 0.908 |
| ATT | 4 | 0.951 | NR* | 0.951 |

*Note: NR* = No Recommendation*

Table 3.17 below includes the mean value, mean range, standard deviation and the standard deviation range for each measurement item.

**Table 3.17: Mean and Std. Deviation for Pilot Test**

| PILOT TEST<br>(Case Processing 30) | | | | |
|---|---|---|---|---|
| **CONSTRUCTS** | **Mean** | **Mean Range** | **Std. deviation** | **Std. Deviation Range** |
| AS | 22.03 | 3.87 – 5.00 | 5.156 | 1.241 – 1.640 |
| PE | 23.37 | 4.13 – 4.97 | 6.703 | 1.135 – 1.788 |
| SN | 20.37 | 3.63 – 4.67 | 3.189 | 0.791 – 0.999 |
| PBC | 21.87 | 3.90 – 4.67 | 2.657 | 0.450 – 1.048 |
| CB | 12.57 | 3.70 – 4.50 | 2.788 | 1.075 – 1.725 |
| MS | 17.83 | 4.33 – 4.57 | 3.333 | 0.774 – 1.155 |
| OINT | 16.93 | 3.87 – 4.63 | 3.269 | 1.066 – 1.202 |
| PS | 7.27 | 3.57 – 3.70 | 1.048 | 0.504 – 0.651 |
| FINT | 11.57 | 3.63 – 4.17 | 2.873 | 0.999 – 1.104 |
| ATT | 13.80 | 3.43 – 3.47 | 4.649 | 1.137 – 1.432 |

## 3.13 Data Analytical Technique

Structural equation models (SEM) analysis is a statistical technique that allows simultaneous testing and estimating causal relationships among multiple independent and dependent constructs based on statistical data and qualitative causal assumptions (Gefen, Straub & Boudreau, 2000). SEM describes the relationships between several latent variables. One important aspect of SEM is the support it provides to unobservable and cannot-be-directly-measured latent variables. SEM has the ability to cope with such latent variables, as in this present study, managers' attitude, subjective norm, perceived behavioural control, past experience and their hiring intention.

There are 2 types of SEM analysis, i.e. the covariance based SEM (CB-SEM) and the variance based Partial Least Square (PLS). The 2 types of SEM analytical techniques are distinguished in the following section.

### 3.13.1 Contrasting CB-SEM and PLS

CB-SEM is often used to test and confirm hypotheses in a research model and for theory testing (Henseler, Ringle & Sinkovics, 2009). It is a covariance-based approach which attempts to minimize the differences between the sample covariance and those predicted by the theoretical model by using a maximum likelihood (ML) function that reproduces the covariance matrix of all observed measures during the parameter estimate process (Chin & Newsted, 1999). CB-SEM requires a large sample size of suggested 20 times free parameters (Kline, 2010). With a small sample size, it does not perform well and at times yield non-unique solutions (Fornell, 1982). Additionally, CB-SEM basically works with reflective indicators or structures which compel researchers to source for alternative software should their studies have formative or both reflective and formative structures (Chin & Newsted).

On the other hand, PLS is a component-based approach for estimation purposes (Lohmoller 1989) and it has the ability to handle both reflective and formative structures. It places minimal restrictions on measurement scales, sample size, and residual distributions. It has the ability to use the smallest necessary number of latent variables to estimate path loading parameters (Chin et al., 2003).

Generally, PLS is a predictive application modeling (Chin 1998b; Chin & Newsted 1999, Henseler et al., 2009) which can be used for theory development, theory confirmation, and to suggest the existence of relationships or otherwise, and for further testing (Chin 1998a). Additionally, PLS makes

fewer demands on sample size than other methods; it also does not require normal-distribution input data (Henseler et al.; Urbach & Ahlemann, 2010). The limitation in PLS' usage is the lack of established global goodness-of-fit (*GoF*) criteria (Henseler et al.).

Even though both CB-SEM and PLS have their specific advantages and disadvantages, they are not mutually exclusive as researchers still can apply both these approaches in their studies should certain pre-conditions exist.

Currently, there are several PLS path modelling software tools available. These are LVPLS (Lohmöller 1989), PLS-Graph (Chin, 2010), PLS-GUI (Li, 2005), SmartPLS (Ringle et al., 2015), SPAD PLS Path Modeling (SPAD 2009), and VisualPLS (Fu, 2006).

Table 3.18 summarizes the characteristics of the CB-SEM and PLS approach.

**Table 3.18: Summary of CB-SEM and PLS Approach**

| Criteria | CB-SEM | PLS |
|---|---|---|
| **Objective** | Parameter-oriented | Prediction-oriented |
| **Approach** | Covariance-based | Variance-based |
| **Assumption** | Typically, multivariate normal distribution and independent observations (parametric) | Predictor specification (nonparametric) No needs normal distribution |
| **Parameter estimates** | Consistent | Consistent as indicators and sample size increase (i.e., consistency at large) |
| **Latent variable scores** | Indeterminate | Explicitly estimated |
| **Epistemic relationship between a latent variable and its measures** | Typically, only with reflective indicators. | Can be modelled in either formative or reflective mode or both. |
| **Implications** | Optimal for parameter accuracy | Optimal for prediction accuracy |
| **Model complexity** | Small to moderate complexity (e.g., less than 100 indicators) | Large complexity (e.g., 100 constructs and 1,000 indicators) |
| **Sample size** | Ideally based on power analysis of specific model—minimal recommendation ranges from 200 to 800. | Power analysis based on the portion of the model with the largest number of predictors. Minimal recommendation ranges from 30 to 100 cases. |
| **Type of optimization** | Globally iterative | Locally iterative |
| **Significance tests** | Available | Only by means of simulations; restricted validity |
| **Applications** | Theory testing or theory confirmation | Theory confirmation or theory development |
| **Availability of global Goodness of Fit (*GoF*) metrics** | Established *GoF* metrics available | Pending development. |

Note: Adapted from Chin, 1998b; Chin & Newsted, 1999;
Chin et al. 2003; Henseler et al. 2009.

### 3.13.2 Justification on the choice of PLS Approach

I decided to apply a component-based SEM technique, as SEM analysis has the ability to handle complicated relationships among multiple independent and dependent variables simultaneously (Anderson & Gerbing, 1988). Moreover, by estimating measurement and structural model simultaneously, SEM allows relationships among constructs to be automatically corrected for measurement errors (Anderson & Gerbing).

The choice of PLS approach in my research is deemed the most appropriate to conduct data analysis than the CB-SEM due to several considerations. PLS has ability to account for measurement errors of latent constructs and to examine the significance of structural model simultaneously. It is "distribution-free" as there is no assumption regarding the distributional form of measured variables (Chin, 1998b). Since the purpose of this study is to predict managers' intention which is more important than parameter estimation, the prediction oriented PLS is more suitable than the parameter oriented CB-SEM.

According to Henseler et al. (2009), the PLS approach is more suitable than CB-SEM to investigate the estimation of relationships between the constructs (e.g. attitude, subjective norm, perceived behavioural control, past experience and intention to hire older workers) in the structural model which can only be measured through a set of indicators in applying some algorithms and software programs. In this sense, PLS does not assume multivariate normality and it takes into account the measurement error when analysing the structural model.

Hence, a large set of relationships among constructs and sub-constructs are examined.

PLS places minimal demands in terms of sample size and it works well with a relatively small sample size with the '10 times' rule. However, it did not reject my sample size of 468 which was above the minimal sample size requirement and that it generated all the latent variables for all the cases in the data set without having independent observations (Chin, 1998b; Chin & Newsted, 1999).

The quality of this present study model with 40 indicators to explain the latent variables can be improved as per concept of consistency at large, whereby a larger number of indicators can better explain a latent variance (Chin, 1998b). Furthermore, PLS can be used for theory confirmation or theory development. In theory development, PLS is used to develop propositions by exploring the relationships between variables.

In recent years, besides formative constructs in research models, the use of PLS had been expanded to the analysis of moderating, mediating effects and conducting multi-group analysis (Hair et al., 2014). Also, PLS had gained popularity and been successfully used in data analysis in various research areas, such as in information systems (Armstrong, Brooks & Riemenschneider, 2015), internet marketing (Mohd Isa & Wong, 2015), e-waste recycling behaviour (Kumar, 2019), entrepreneurial intention (Farooq, Radovic-Markovic, 2017), airline services (Farooq, Salam, Fayolle, Jaafar & Ayupp,

2018), hospitality and tourism (Usakli & Kucukergin, 2018), marketing (Albers 2010; Henseler et al., 2009), strategic management (Hulland, 1999), crisis planning (Wang & Ritchie , 2012) and mobile learning (Yeap, Ramayah & Soto-Acosta, 2016).

In this respect, it is justified that the variance-based PLS approach was most suitable for the present study.

### 3.13.3 Data Analysis

The PLS approach is adopted to perform the structural equation modelling by testing the measurement model and the structural model. In that sense, the software package SmartPLS, version 3 (Ringle et al., 2015) was used to perform the data analysis. It was appropriate for estimating complex cause-effect relationship models with latent variables; as in this study, the latent variables being attitude, subjective norm, perceived behavioural control, past experience and overall and future intentions. PLS is more oriented towards maximizing the amount of variance explained (prediction) of the endogenous latent constructs (DV) rather than statistical accuracy of the estimates (Chin, 1998b). Chin (1998a) stated that PLS can be applied in confirming theory or developing theory by exploring relationships between variables.

Before the analysis, the data was examined to meet the assumptions of multivariate normality and the acceptable levels of skewness and kurtosis. Since the study was mainly based on Likert scale, non-normality of skewness of data was not an issue; as such, analysis from SPSS mainly focused on kurtosis.

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As required in conducting a PLS, it was essential to examine and establish the reliability and validity of the latent variables. In performing the PLS analysis, a two-stage approach was adopted. The first approach was the building and testing of a measurement model, followed by the second, the building and testing of a structural model (Hair et al., 2014).

At the measurement model stage, analysis was conducted by specifying the causal relationships between the indicators and the underlying theoretical constructs. The measurement model is tested for reliability and validity, convergent and discriminant validity which was to examine confirmatory factors analysis. The measurement model was used to represent relationships between the indicators and the latent variables, and to estimate the latent variables as a weighted sum of its manifest variables. A measurement model showed the relations between latent variables and their indicators by specifying the correspondence of each indicator with the latent variables. In the present study, the indicators were age stereotypes, management support and peers' support, and control beliefs. In this case, the measurement model served to create a structural model, which included the paths that represented the hypothesized relationships between the studied constructs.

The structural model represented the relationships between the latent variables and to estimate the latent variables by means of simple or multiple linear regressions between the latent variables estimated by the measurement model. Following this, the paths or causal relationships between the underlying exogenous and endogenous constructs were specified. Exogenous constructs

were the attitude, subjective norm, perceived behavioural control and past experience, whereas endogenous constructs were the overall intention and future intention. Respondents' age was the moderator between attitude and overall intention and future intention. The rule of thumb for reflective measurement model and structural model from Hair, Ringle and Sarstedt (2011), where the analysis and results related to these two stages were discussed next.

The proposed structural model was analyzed for hypotheses test and justification.

To confirm the factor structure extracted in exploratory factor analysis, an overall model fit was carried out to check how well the parameters estimated were able to match the sample covariance. As pointed out by Chin (2010), goodness of fit even have occurred in situations where the $R^2$ and/or loadings were low. As such, to better predict the model, and to follow this goodness of fit, an effect size was taken into consideration.

A moderator variable of respondents' age, an unobserved heterogeneity independent variable interacted with the predictor variable attitude (ATT) in such a way as to have an impact on the level of the dependent variables overall intention (OINT) and future intention (FINT). It is assumed that the categorical moderator affected the study model's relationship, and had significant differences from the effect, of which it either strengthened or weakened the

relationships between the predictor (ATT) and the dependent variables (OINT & FINT).

### 3.14    Sample Selection and Sample Size Determination

The primary objective of this study was to produce generalizable empirical evidence concerning managers' intention to hire older workers from different industries. Therefore, these covered various types of industry, sizes of company and several locations. The focused population was any individual employed by or a representative of a business organization, aged 18 and above and was either involved in hiring workers, a hiring decision maker or in a supervisory level in a project team.

### 3.14.1  Sample Selection

In this present study, there was no prior name list available for managers responsible for hiring workers for their organizations. They came from 11 industries and 9 locations, and that their actual number could not be determined or calculated. Hence, non-probability sampling was the best way to obtain respondents' information. Since this study was exploratory in nature, as per Zikmund et al., (2010), convenient sampling was found to be an acceptable approach in the selection of subjects for survey research. This preference was based on the following justifications.

Firstly, no information for the sampling was available, no prior list of managers involved in the hiring of workers and their job positions, no list of companies or types of business and their locations where these managers could be found

and contacted. Practically there was no way to gather the lists of targeted respondents to work out a probability sampling. Secondly, it was less costly and faster to achieve the sample size compared to probability sampling where a list of the population is required. One important point with convenience sampling was that the facilitation team need to be careful not to repeat the same survey on the same company.

However, as convenience sampling techniques have often faced criticisms of samples being unreliable and being non-representative of the target population. When designing this present study, I have taken careful action to reduce the anticipated biasness in convenience sampling by ensuring that the invited respondents were all selected randomly and that for each business organization visited, only one manager who either has authority, and is involved in hiring workers, or are the hiring decision makers, be in supervisory levels or head of the project team. This category of personnel is often small in any given organization. It is quite impossible to find a large number of this category of personnel from a single organization to participate in the same survey. Therefore, the respondent list is limited to one personnel per organization. This reduced the risk of over-representation or under representation within an organization. Furthermore, this limitation of 1 respondent per organisation would reduce a situation where in a given organization; certain persons are willing while others are unwilling to participate. So, if the one targeted respondent rejects participation, his organization would not be approached again for a different potential respondent.

### 3.14.2 Sample Using Managers

This study used managers as the subject group to collect survey data. This group was entirely suitable as a target population mainly because this study focused on managers' intention to hire older workers in any business organization. Managers referred to staff in managerial levels in organizations that were directly involved in the hiring of workers, have the hiring authority, or are decision makers, supervisors or project team leaders. These individuals normally held positions such as human resource managers/executives, divisional managers, administration managers, project managers or business owners with the selection power to choose their workforce. In Fraser et al., (2011), the study found that the above category were the major influencers in hiring behavior. Another point was that the identified 9 survey locations were large enough to enable the search for such category of individuals. These individuals were collectively classified as managers for consistency purposes and that they were deemed appropriate samples for this study.

In the present study, responding managers were those as defined above. Such a category of personnel was often in small numbers in any given organization and it was not difficult to limit to one such personnel per organization. Hence, this reduced the risk of over or under representation within an organization.

### 3.14.3  Sample Size Determination

In order to the statistical power of this study, an accurate determination of the sample size is deemed necessary prior to conducting the survey. On the appropriateness of a sample size, Hair et al. (2010) stated that it should be preferably more than 100 for processing. Barclay, Higgins and Thompson (1995) stated that a "10 times'' rule can be applicable if the sample size is equal to or larger than the index of the number of formative indicators in the structural model. If so, then this rule of thumb has achieved the minimum sample size requirement. Effectively, if the minimum sample size of the "10 times" rule in PLS is adhered to, then it is sufficient to conduct a research. As in the present research model, there were 4 independent latent variables (ATT, SN, PBC & PE) and 2 dependent latent variables (OINT & FINT). There were between 4 and 5 indicators per construct and at the same time, the reliability alpha values for all latent constructs passed the threshold of 0.7. The rule of thumb can be applied to this research, hence, a minimum sample size of 40 (4x10) was considered sufficient.

Another sample size determination was a popularly used statistical analysis tool widely known as G*Power 3.1 (Faul, Erdfelder, Buchner & Lang, 2009). A power analysis was based on 8 predictors and a desired statistical power of 80% indicated that 71 respondents were needed to reliably detect medium size (0.15) effects. Even if the desired statistical power was increased to 95%, the required sample size was 102, to reliably detect a medium size (0.15) effects. Table 3.19 provides the G*Power analysis result of both minimum required

sample size, suggesting that 102 was sufficient to reliably detect a medium size

effect with a statistical power of 95%.

**Table 3.19: G*Power 3.1 Power Analysis Statistics**
**for Sample Size**

| Input | | Output | |
|---|---|---|---|
| Effect size f²(V) | =0.15 | Noncentrality parameter λ | =21.300000 |
| α err prob | =0.05 | Critical F | =1.717293 |
| Power (1-β err prob) | =0.80 | Numerator df | =16.000000 |
| Number of groups | =2 | Denominator df | =138 |
| Number of predictors | =8 | Total sample size | =71 |
| Response variables | =2 | Actual power | =0.804324 |
| | | | |
| Effect size f²(V) | =0.15 | Noncentrality parameter λ | =30.600000 |
| α err prob | =0.05 | Critical F | =1.694297 |
| Power (1-β err prob) | =0.95 | Numerator df | =16.000000 |
| Number of groups | =2 | Denominator df | =200 |
| Number of predictors | =8 | Total sample size | =102 |
| Response variables | =2 | Actual power | =0.952003 |

Although PLS has the advantage of handling a small sample size, according to

Goodhue, Lewis & Thompson (2006, p.10), PLS is neither a "magic bullet for

achieving adequate statistical power at small sample sizes" and that small

sample size should not be treated as a justification to adopt the PLS approach.

Further, Marcoulides and Saunders (2006) have commented that it was a

mistaken belief by many researchers that PLS was used when and where their

sample sizes were small. Marcoulides and Saunders endeavoured to point out

the importance of having an adequate sample size. Even Hui and Wold (1982)

stated that a larger sample size was desired for the improvement in PLS

estimates and that as sample sizes increased, the average absolute error rates

diminished.  Similarly, Chin and Newsted (1999) also advised that low-valued

structural path coefficients could not be detected unless and until a much larger

sample size is achieved. Westland (2010) has also commented on researchers'

biasness in choosing sample sizes which were significantly too small merely to comply with the minimal recommended numbers.

As PLS gained popularity over recent years, there were several studies that used PLS to validate the constructs, whose sample sizes were seen larger than the minimum number recommended by the 10 times rule. Table 3.20 is a summary list showing examples of researches that applied PLS as data analysis technique with big sample sizes.

**Table 3.20: Summary of Past Researches with Big Sample Sizes**

| Area of Study | Author's Name | Sample Size |
|---|---|---|
| Customers' Satisfaction | Ali, Dey & Filieri, 2015 | 498 |
| | Farooq et al., 2018 | 460 |
| Internet Marketing | Mohd Isa & Wong, 2015 | 295 |
| Behavioural Intention | Kumar, 2019 | 205 |
| | Swar, Hameed & Reychav, 2017 | 380 |
| | Ang et al., 2015 | 200 |
| | Farooq & Radovic-Markovic, 2017 | 381 |
| Tourism | Seow et al., 2016 | 380 |
| | Usakli & Kucukergin, 2018 | 206 |
| Crisis Planning | Wang & Ritchie, 2012 | 386 |
| Mobile Learning | Yeap et al., 2016 | 900 |
| Organizational Ethical Climates | Nedkovski, Guerci, De Battisti & Siletti, 2017 | 6,000 |
| Health Care | McColl-Kennedy, Hogan, Witell & Snyder, 2017 | 1,151 |
| Mobile Apps Usage | Fong, Lam & Law, 2017 | 457 |
| Consumer Behaviour | Chen, Huang & Davison, 2017 | 307 |
| | Bravo, Cordts, Schulze & Spiller, 2013 | 13,074 |
| | Sharma & Jha, 2017 | 526 |

To further justify the sample size in this present study, as provided by DOSM (2015), the total persons employed in various managerial position in 2015, was 718,500. However, there is no information on whether these managers are

involved in hiring workers or which industry they belonged to. The breakdown
by states is provided in Table 3.21.

**Table 3.21: Number of Managers Employed by States in 2015**

| States | Number in '000 | States | Number in '000 |
|---|---|---|---|
| WP K Lumpur | 80.6 | Selangor | 300.0 |
| WP Labuan | 1.4 | N Sembilan | 20.7 |
| WP P Jaya | 3.2 | Pahang | 17.9 |
| Johor | 58.6 | Pulau Pinang | 41.0 |
| Kedah | 23.4 | Perak | 37.3 |
| Kelantan | 12.1 | Perlis | 2.6 |
| Trengganu | 11.6 | Sabah | 53.1 |
| Sarawak | 39.6 | Melaka | 15.4 |

Source: Adapted from DOSM, 2015, Time Series.

To achieve a sample size from a population of 718,500, based on the
recommendations by Sekaran and Bougie (2016), for a given population of
75,000 to below 1,000,000, a sample of 382 is considered representative and
sufficient at 95% confidence level.

Additionally, the rule of thumb by Roscoe (1975) stated that a sample size of
more than 30 and less than 500 are appropriate for most researches. The
present targeted population is managers of both genders from 9 locations, 11
industries, and categorised into 4 age groups. They were all of differing job
positions, educational backgrounds and tenure of employment. The more
heterogeneous the population, it is expected that more observations are needed
to reach an acceptable sampling error level.

Based on the above, it was decided not to upset the credibility of the research findings by strictly adhering to the minimum sample size recommended by the "10 times" rule (Hair et al.,) and by G*Power. The number of 468 respondents in this present study had far exceeded the minimum sample size required. Hence, this number should be large enough to capture the largest casual relationships in the structural model (Chin, Marcolin & Newsted, 2003). Furthermore, the sample size of 468 had also fulfilled the population requirement for it to be representative (Sekaran & Bougie, 2016).

### 3.14.4 Survey Location and Industry

In order to have generalizability of findings, this study was cross sectional, covered more than 11 industries from accommodation and foods services to wholesale and retail trade, repair of vehicles and household goods. The 9 locations for survey were Johor, Kedah, Kuala Lumpur, Melaka, Negeri Sembilan, Perak, Perlis, Pulau Pinang and Selangor; all in West Malaysia. The selected states satisfied at least 2 points for consideration; they were either with high or moderate population, and whose businesses were more concentrated than East Malaysia. Furthermore, these states also had a reasonably high population density and a high percentage of persons in the employable age groups, i.e. 15 to 64 years old (Saleh & Ndubisi, 2006). A further reason was due to the high older people distribution pattern; Selangor had the highest number of older persons, followed by Perak, Perlis, Pulau Pinang and Melaka (Tengku Abdul Hamid, 2015).

In these 9 locations, this study surveyed various types of industry. The definition on the type of industry was classified according to the 'Malaysia Standard Industrial Classification (MSIC) 2008" published by the Department of Statistics. Hence, the types of industry were: accommodation and food service activities, administration and support service activities, agricultural, forestry and fishing, construction, education, financial and insurance/takaful activities, human health and social work activities, manufacturing, professional, scientific and technical activities, transportation and storage, wholesale and retail trade; repair of vehicles and household goods, and other types of industries.

## 3.15    The Survey Method

The survey method in this study is for explanatory purpose where respondents were targeted from individual male or female persons in business organisations holding positions in managerial levels (including executive /supervisory) and responsible or involve in hiring employees in their organizations. This group of individuals were collectively identified as managers for the purpose of this study. The unit of analysis was the intention of managers to hire older workers. Older workers referred to either males or females aged 50 years and above in non-managerial positions and currently employed in business organizations or job seekers.

A personally-administered survey questionnaire was distributed to targetted respondents at their workplaces. Personal adminsitration was preferred for its shorter response times as the completed questionnaires were usually collected

on the same day. The questionnaire was in English language and printed on A-4 size paper. The development of the questionnaire was previously discussed.

### 3.15.1  Data Collection Procedure

Three trained facilitators and I formed 2 groups with 2 persons in a team to visit the 9 locations according to a time schedule. The teams visited places which included industrial areas where substantial numbers of business organizations were situated. We first obtained permission to speak to the relevant personnel and explained the purpose of the survey. Respondents who accepted the invitations to participate were given time to complete the questionnaire. All the completed questionnaire were checked on the spot to avoid any missing data.

### 3.15.2  Data Collection Time Period

Data collection was conducted only once and completed a period of 9 months between March, 2015 and November, 2015.  This period was identified to avoid periods where business organizations and managers were busy preparing for Christmas and Chinese New Year productions and sales; and to increase the opportunity to be allowed to meet with the potential respondents, and thereby increase the rate of data collection.

### 3.15.3  Facilitators of Research Instrument

Three UTAR undergraduates were recruited as facilitators. They were selected due to their own requirements to conduct their final year projects, and the facilitator positions provided them with a basic understanding of data

collection. They learnt to plan a time schedule and experienced the actual data collection process. They practised their skills in a practical environment to solicit co-operation for participating, which better prepared them for their own projects. In addition, the location of their home town was another main consideration, as they were familiar with their own locations, and this eased their accommodation issues. A half-day participatory training was conducted on the research survey, basic communication skills with participants, and techniques on recording companies' names and locations (to avoid repetition). The top priority was their safety and security. A budgeted allowance of RM2,000 was allocated to each of the 3 facilitators.

## 3.16   Data Processing

All collected questionnaires were checked for missing data to ensure completion. There was no missing data from the returned questionnaires. This process was given due attention from the time the questionnaires were distributed and collected from respondents personally. While collecting, all completed forms were screened through for any unanswered parts. As and when such occurred, the respondents were approached to complete the missing areas. This reduced any instances of missing data right from the beginning.

Once the 9 months' period was over and the sample size had exceeded the minimum number, the data collection process was stopped. Before a data file was created in IBM software package (SPSS) version 21, there were a few steps that I had taken to ensure the data collected were reasonably good and of an assumed quality for further analysis. Firstly, I checked for any blank

responses. As this checking process had also been done during the data collection stage, there were no blank responses which meant no missing data. Secondly, all the questionnaires were arranged according to regions and industries.

Post coding which specified all the variables in the study in their respective columns and their possible values was then developed. This codebook was facilitated and applied to all raw data whereby all completed questionnaires were assigned with a numerical number; such as 'Male' was assigned with '0', 'Female' with '1'. Missing data was assigned with '99'. Majority of the questions in Section B used Likert Scale which allowed respondents to indicate to what extent they agreed or disagreed with a particular statement. For each of the Likert Scale's questions, there were 7 responses for selection. Numerical code was assigned to each of the Likert scale in each question where the values ranged from Strong Disagree/Extremely Unlikely=1, Somewhat Disagree/Somewhat Unlikely=2, Disagree/Unlikely=3, Neutral=4, Agree/Likely=5, Somewhat Agree/Somewhat Likely=6, and Strongly Disagree/Extremely Likely=7.

All data was entered manually according to their code numbers. At every stage, there was checking and verification for errors. They were screened to ensure correctness in the entry; checked for wrongly keyed-in data and corrections were made on the spot. On the part of missing data due to human error during the data entry process, all data was screened and any missing or out-of-range

data were corrected immediately. All these activities basically reduced and ruled out any discrepancy in its conversion; thus ensuring accuracy of the data.

The CSV file format of the data set was uploaded to the Smart Partial Least Squares-Structural Equation Modelling (SmartPLS 3) (Ringle et al., 2015) for PLS path modelling and analysis. SmartPLS3 is a SEM technique that simultaneously represented the theoretical relationship among latent variables (the structural paths) and the relationships between latent variables and their indicators (the measurement model) (Hair et al., 2014). Based on the conceptual framework developed in Chapter 2, the model comprised an outer model with 4 constructs and respective indicators, and an inner model with 4 constructs, 1 moderator and 2 dependent variables. The scale-items for the constructs were modelled with reflective indicators.

### 3.17    Assumptions

### 3.17.1  Theoretical and Conceptual Assumptions

This study relied on the theoretical assumptions that TPB was a viable theory for predicting behavioural intention in the hiring of older workers and that the predictors continued to influence the dependent variables (Ang et al., 2015). On the conceptual assumptions, it was assumed that the original predictors attitude, subjective norm and perceived behavioural control of TPB and the additional predictor of past experience continued to influence the behavioural intention in hiring (overall and future) of older workers. It was further assumed that the age of the respondents moderated between attitude toward older

workers and the overall hiring intention and future hiring intention of older workers.

### 3.17.2  Methodological Assumptions

It was first assumed that all the respondents to the survey were of supervisory, executive or managerial levels that performed the actual hiring duties, had the hiring authority or they were the hiring decision-makers in business organisations, be aged 18 and above, and represented their organizations in the survey. The respondents were all collectively referred to as 'managers'. The next assumption was that they had all responded to the survey questionnaire fairly, and to the best of their ability and knowledge.

### 3.17.3  PLS Assumptions

There were 2 main assumptions in choosing PLS for the present study. The first was on the sample sizes. A large sample size was normally required to provide sufficient statistical power and precise estimates using SEM. However, different researchers have their own ways to determine an adequate sample size; as such, there was no one consensus method as to what constituted an adequate sample size (Westland, 2010). Some researchers proposed that the guidelines for determination should be based on simulation studies or professional experience (Bentler & Chou, 1987; Chou & Bentler, 1995), while others preferred sample sizes calculated on mathematical formulas (Westland). In Hair (2010), a minimum of 100; whereas in Boomsma and Hoogland (2001), a minimum of 200 was required in order to ensure maximum likelihood estimation in SEM could be computed. Quintana and Maxwell (1999) opined

that sample size determination should include the number of observations per parameter and the number of observations per degree of freedom. Bollen (1989) stated that a ratio of 3 to 5 participants for every parameter estimated in the model, and for that, in Hu and Bentler (1995), a minimum of 5 participants per parameter sufficed.

Minimum sample relied largely on the types of study and researchers' preference. In PLS, the robustness of estimation and statistical power made it possible with a small sample size. Nevertheless, the collected sample size of 468 in the study was above the minimum requirement; and this constituted a good sample size and was considered representative (Sekaran & Bougie, 2016).

Another assumption was the simple and easy ways to conduct the test since there were only two stages, the measurement stage and the structural stage (Hair et al., 2014).

## 3.18    Ethical Consideration

Universiti Tunku Abdul Rahman (UTAR) in its research ethics and code of conducts (POL-IPSR-R&D-004, 2011) outlined the requirements of its students on their responsiveness and accountability in conducting research activities. First and foremost, all the respondents participated voluntarily and of professional interest as there was no budget whatsoever in cash or in kind, irrespective of the value to be alloted as a form of incentive to respondents for their participation. Respondents' consent was obtained before their

participation and that they have absolute rights to refuse at any time during their participation.

Respondents were given the understanding that their privacy was protected and anonymity was maintained at all times since questionnaires did not pose any disturbing questions and no identification of personal information was collected. Additionally, the minimum age for participation was 18 years of age which satisfied the age of majority in Malaysian law.

Data collected was analysed without unethical manipulations or distortion. Data security was maintained by storing and only be disposed after 7 years from the date of survey.

### 3.19    Anticipated Limitation

The chosen industries may not be sufficient to represent all managers' intention to hire older workers as there were still other industries that had not been surveyed. These industries were information and communication which hired 214,200 employees; real estate 712,000; electricity, gas, steam and air conditioning supply 61,700 and mining and quarrying 104, 400 (MLFSR, Time Series Data, 2015).

The present study did not distinguish older workers in terms of their genders and all male and female older workers were collectively known as 'older workers'. There was also no distinction on job classification or ethnicity of these older workers. Gender of older workers may have differing impacts on

the results of the study, as there were studies in the past which discovered that male and female workers received different treatments by their managers (Stamarski & Son Hing, 2015). This limitation could be removed by clearly identifying the gender of older workers so as to further understand the extent to which workers of different genders could influence managers' intention to hire them.

Another anticipated limitation was that there are 13 states and 3 Wilayah Persekutuan in Malaysia. This present study only covered 8 states plus 1 Wilayah Persekutuan (9 locations). It was not known whether managers from the remaining states such as Kelantan, Trengganu, Pahang, Sabah and Sarawak and the 2 Wilayah Persekutuan (Labuan and Putrajaya) were affected and influenced by the same factors when they hired older workers.

### 3.20    Chapter Summary

This chapter discussed the brief plan and process on research paradigm and the preferred research method. Other areas discussed were research design, questionnaire development, sample size, survey locations and data collection. The research methodology on quantitative techniques were addressed and discussed. Also discussed were the preparation and procedures used for screening the data, including checking and coding of data prior to conducting analysis. Wherever possible, research questions were adopted, adapted or developed with care to suit the local environment. In the next chapter, analysis of result, hypotheses testing and meeting of research questions formed the major component of the discussion.

# CHAPTER 4

# ANALYSES AND RESULTS

## 4.1 Introduction

The previous chapter detailed the research methodology that was adopted to test the proposed conceptual model, and to answer the research questions of the study. The sections below discuss the response rate, and describe the sample characteristics, and followed by sections on results of the data analysis and tests on hypothesized relationships.

A two-stage structural model used in analysing the data is discussed and explained. The structural model of the hypotheses with the final results is presented accordingly. SPSS (Version 21) and SmartPLS3 were used to assist in descriptive and inferential analysis and the test results and reports are also presented accordingly.

## 4.2 Data Analysis: An Overview

To ensure minimal violation of underlying assumptions, data was first screened by conducting descriptive statistics using SPSS (Zikmund et al., 2010). SPSS was used to compute the means, frequencies, standard deviations of demographical variables and to test common method bias.

To perform the PLS analysis, the two-stage approach was adopted (Chin & Newsted, 1999; Urbach & Ahlemann, 2010). First, tests were conducted on construct reliability, validity, goodness of fit, examination of multivariate normality and the acceptable levels of skewness and kurtosis. Thereafter, a structural model was tested on the relationships among the constructs. The final test was the assessment of the moderating effect of age on the relationships between attitude and managers' overall intention and future hiring intentions. Figure 4.1 shows the two-stage approach of the study model and the relationships between the constructs. Finally, the results were interpreted, compared with past research, compiled and presented accordingly.
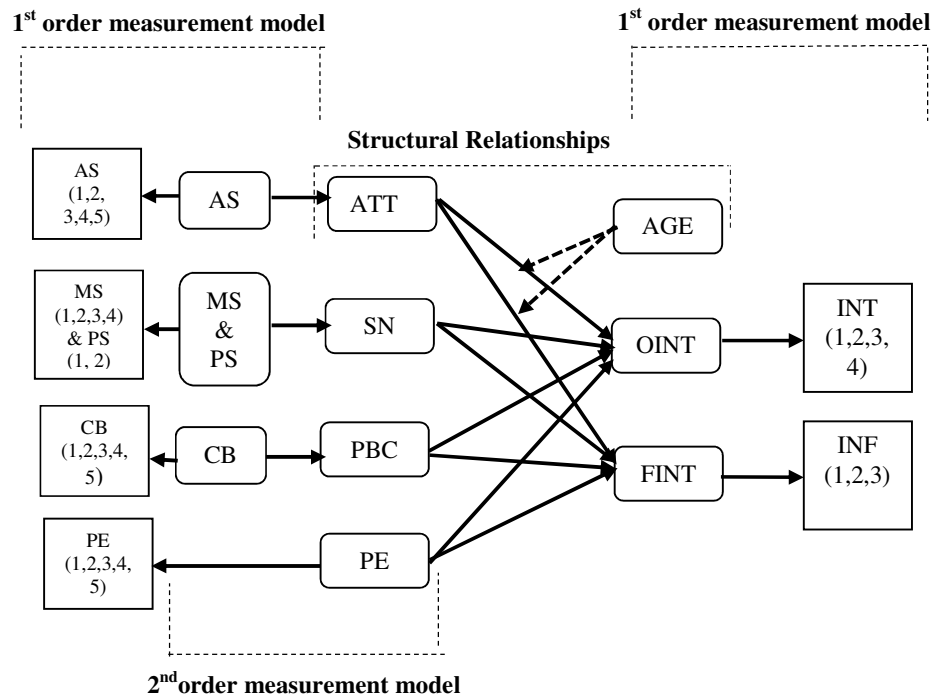


*Note: PE is in 1st order measurement, and is also in structural relationship.*

**Figure 4.1: PLS Path Model**

**4.3    Outliers**

To diagnose the distribution of the variables, regression was used to check for outliers. For a sample size of 200 or larger, a small deviation from normal can be significant, but not substantive (Hair, Black, Babin & Anderson, 2010), and according to the most conservative approach, it was advisable to remove the outliers, especially if there were some missing data, but as per Hair et al. (2010), the researcher has the discretion whether to remove the outliers or to retain them.

The current sample size was 468 with no missing data. There were 3 cases of outliers (no. 11, 317 & 319 – referred to as 1st set) being identified. Prior to the identification of these 3 outliers, the $R^2$ was 0.436, and adjusted $R^2$ was 0.431. After these 3 outliers were removed, the $R^2$ was 0.468, adjusted $R^2$ was 0.463 (Appendix 4.1). However, at this time another 3 new outliers (case nos. 333, 338, 356 – referred to as 2nd set) emerged. The difference between the original $R^2$ and adjusted $R^2$ and after removal the 2nd set of outliers were 0.032 and 0.032 in both situations, and that this 3.2% was less than 5%, and according to Zikmund et al. (2010), this did not result in non-normality data and the statistics were not distorted. All the detailed information generated from SPSS is attached in Appendix 4.1.

In fact, at every regression case wise diagnostics, outliers surfaced, as when the 2nd set was removed, more outliers had appeared. If every outlier were to be removed as recommended, this would result in analysing a lesser sample size than the actual size of 468. From the values clustered around the straight lines

in both, before and after removal of the 1<sup>st</sup> set of outliers, the assessment of these probability plots indicated no severe deviation from normality. Since the sample size was large with 468 respondents, the influence from outliers was minimal. Moreover, to consider the slippery slope by removing the recommended outliers, it was not easy to justify when to stop removing the outliers, since after every regression, more outliers surfaced. Lastly, outliers did not really exist in Likert-scales since any answer at the extreme of 1 or 7 could not be said to be representative of outlier behaviour. As per Hair et al. (2010), researchers have the discretion to decide. Therefore, a decision was made to retain the 3 outliers from the initial process.

## 4.4    Assessment of the Normality

Even though PLS makes no assumptions on data distribution, nevertheless Hair et al. (2014) recommended two measurements of distributions (skewness and kurtosis) to assess the extent of data deviation from normality which can avoid any significant test being affected in a *t*-test. Hair et al. further recommended Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity (Bartlett's Test) to test data normality. But since the research questions were mainly based on 7-points Likert scale, skewness was not an issue, hence, the main focus was on kurtosis. This discussion follows as below.

### 4.4.1   Kurtosis

For kurtosis, each of the 4 independent constructs was assessed by the application of the formula:

$$Z_{kurtosis} = \frac{k - o}{SE_{skekurtosis}}$$

As per Field (2009), Z-value should be as close to zero as possible or within the range of -1.96 to +1.96. However, in view of different sample sizes, z-value's threshold significance varied. In such a situation, an absolute value greater than 1.96 was significant @ p<.05; above 2.58 was significant @ p<.01, and above 3.29, its significance was @ p<.001. In addition, positive values of kurtosis indicated a pointy and heavy-tailed distribution, which also, indicated that the further the value was from zero, the data was not normally distributed. Field further warned that the sample size may affect the significance level, where a sample size of more than 200 was considered as large, and that the 1.96 criterion could be increased to 2.58 instead. Above 2.58, no criterion should be set; instead the visual shape of the distribution and the kurtosis values be considered rather than focus on the significance. Table 4.1 presents kurtosis and z-values for the independent variables that were studied.

**Table 4.1: Summary of Kurtosis and Z-values**

|  |  | ATT | S N | PBC | P E |
|---|---|---|---|---|---|
| N | Valid | 468 | 468 | 468 | 468 |
|  | Missing | 0 | 0 | 0 | 0 |
| Kurtosis | | .118 | 1.093 | 1.245 | .327 |
| Std. Error of Kurtosis | | .225 | .225 | .225 | .225 |
| Z-Value | | 0.52 | 4.85 | 5.53 | 1.45 |

For attitude (ATT), the z-value was 0.52 and for past experience (PE), the z-value was 1.45. Both z-values were within the -1.96 to +1.96 range of significance @ p<.05, and that indicated normal distribution of data. Both histograms (Appendix 4.2) had the approximate shape of a normal curve, and did not deviate substantially to make a difference in the analysis. Hence, this

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signified a positive normal distribution; suggesting that ATT and PE were within acceptable univariate normality.

For subjective norm (SN), the z-value was 4.85; and for perceived behavioural control (PBC), the z-value was 5.53. For these 2 constructs, both z-values were far more than the +1.96 threshold. However, a sample size of 468 was possible to give rise to a standard error (SE) whenever there was a small deviation from normality. The SE histogram (Appendix 4.2) has the approximate shape of a normal curve and this signified a positive normal distribution. Even though kurtosis was above the 3.29 threshold and significance @ p<.001, the normal curve line in the histogram did not deviate substantially to make a difference in the analysis. Since the data was not expected to have a perfect normal distribution, it was important to look at the curve for normal distribution instead of just relying on z-value calculation alone (Field, 2009). Hence, it suggested that both SN and PBC were within acceptable univariate normality.

### 4.4.2   KMO and Bartlett's Test

The KMO statistic obtained from SPSS calculation ranged from 0 to 1. From Table 4.2 below, the KMO value is .860. Accordingly, the value was within the range of meritorious as stated in Hinton (2004) that KMO value over 0.6 is acceptable. Otherwise, the factor analysis would not account for much of the variability in the data. KMO value of .860 was high. A value of 0.8 and above signified the adequacy of the sampling size of 468 for factor analysis.

**Table 4.2: KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .860 |
|---|---|---|
| | Approx. Chi-Square | 6115.198 |
| Bartlett's Test of Sphericity | df | 171 |
| | Sig. | .000 |

Bartlett's test was used to test sphericity by examining correlation matrix. From Table 4.2 above, the *df*=171. The significance at p<.05 confidence level indicated that the variables do relate to one another, yet the correlations is enough to run a meaningful factor analysis, and is worthy of investigation in this research. The total variance is explained and a scree plot is provided in Appendix 4.3.

## 4.5    Response Rate

To ensure that the sample is representative of the population, the data is gathered from managers of 11 industries in the 9 locations in West Malaysia. A total of 600 sets of questionnaires were distributed to the managers. All the distributions were between March, 2015 and November, 2015. In total, there was a response rate of 78%. The breakdown of responses from individual states were: Johor (10.7%), Kedah (10.7%), Melaka (10.9%), Negeri Sembilan (10.7%), Perak (11.3%), Perlis (8.1%), Pulau Pinang (10.9%), Selangor (11.8%), and Kuala Lumpur (15%).

### 4.5.1 Non-Response Bias

Only 6 companies in Kuala Lumpur and 7 companies in Selangor, returned the questionnaires late after several reminders due to unavailability of their responding managers. 22% of the companies did not respond to the survey at all despite several follow-ups. As the data was collected between a nine-month's period, from March 2015 to November 2015 throughout the 9 locations, it was necessary to check for any significant difference between these early and late collections (Armstrong & Overton, 1977). Basically, the data was divided into two main groups, those collected at the beginning of the period (March, 2015), and the final group (November, 2015). For companies which responded after the reminders; they were considered late respondents. In such situations, the two groups (March and November) were compared, based on the company's location, type of industry, workforce size, number of older workers in employment, manager's age range, position, educational attainment and whether they had attended age awareness training programs. A further comparison was on the principal constructs, such as attitude, subjective norm, perceived behavioural control, past experience and intention to hire older workers.

The *t*-test was applied and it revealed no significance difference between these early (March) and late (November) groups. Hence, it indicated that time of response was not a significant problem, and that a non-response bias was not a concern in this present study.

**4.6     Common Method Bias**

As the questionnaires were collected from 468 respondents who individually completed both the predictor and criterion variables (Jakobsen & Jensen, 2015; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), and in view of the self-reporting nature in the data collection, there could exist a potential common method bias on inflation of relationship. In order to minimize common method bias, it was necessary to test for any same source bias from the data. The minimization was done through careful study and Harman's single factor test (Conway & Lance, 2010).

A Harman's single factor test was used to evaluate the amount of biasness inherent in the variance proportion distribution of items (Yeap et al., 2016). This was done by first entering all the principal constructs as shown in Table 4.3 in SPSS. The assumption was that if any substantial amount of common method variance was present, then a factor analysis of all the 40 items would result in a single factor account for the majority of the covariance in the independent and dependent variables.

**Table 4.3: Common Method Bias Test**
**Total Variance Explained**

| Factor | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 10.661 | 26.654 | 26.654 | 10.015 | 25.037 | 25.037 |
| 2 | 4.197 | 10.493 | 37.147 | | | |
| 3 | 2.991 | 7.478 | 44.625 | | | |
| 4 | 2.289 | 5.723 | 50.349 | | | |
| 5 | 2.128 | 5.320 | 55.669 | | | |
| 6 | 1.889 | 4.724 | 60.393 | | | |
| 7 | 1.647 | 4.118 | 64.511 | | | |
| 8 | 1.306 | 3.266 | 67.777 | | | |
| 9 | 1.228 | 3.070 | 70.848 | | | |
| 10 | 1.000 | 2.501 | 73.348 | | | |
| 11 | .912 | 2.279 | 75.627 | | | |
| 12 | .778 | 1.945 | 77.572 | | | |
| 13 | .674 | 1.685 | 79.257 | | | |
| 14 | .646 | 1.616 | 80.872 | | | |
| 15 | .567 | 1.417 | 82.289 | | | |
| 16 | .524 | 1.310 | 83.599 | | | |
| 17 | .489 | 1.222 | 84.821 | | | |
| 18 | .478 | 1.194 | 86.015 | | | |
| 19 | .458 | 1.146 | 87.161 | | | |
| 20 | .398 | .995 | 88.155 | | | |
| 21 | .383 | .958 | 89.114 | | | |
| 22 | .345 | .863 | 89.977 | | | |
| 23 | .333 | .832 | 90.808 | | | |
| 24 | .320 | .800 | 91.608 | | | |
| 25 | .309 | .773 | 92.382 | | | |
| 26 | .302 | .754 | 93.136 | | | |
| 27 | .285 | .714 | 93.850 | | | |
| 28 | .276 | .690 | 94.539 | | | |
| 29 | .267 | .667 | 95.207 | | | |
| 30 | .249 | .622 | 95.829 | | | |
| 31 | .236 | .589 | 96.417 | | | |
| 32 | .209 | .522 | 96.939 | | | |
| 33 | .196 | .491 | 97.430 | | | |
| 34 | .182 | .455 | 97.885 | | | |
| 35 | .159 | .399 | 98.284 | | | |
| 36 | .156 | .390 | 98.674 | | | |
| 37 | .143 | .359 | 99.033 | | | |
| 38 | .141 | .353 | 99.386 | | | |
| 39 | .132 | .329 | 99.715 | | | |
| 40 | .114 | .285 | 100.000 | | | |

Extraction Method: Principal Axis Factoring.

As in Table 4.3, an unrotated factor analysis of all the 40 items yielded 25.037% on factor no. 1. In this case, factor no. 1 had the largest variance of 25.037% which means that this largest variance is explained by an individual factor (no.1). As this factor could explain 25.037% of the variances, this

concluded that since no one single factor emerged more than 50%, it indicated

that there was no significant threat of common method variance present in this

study (Podsakoff & Organ, 1986; Podsakoff et al., 2003).

## 4.7    Descriptive Analysis – Samples Characteristics

For a descriptive data analysis, the data file was uploaded to SPSS. Descriptive

statistics were performed on the quantitative data. Table 4.4 shows the

differences in the respondents' demographics; gender, age groups, educational

qualifications, positions, length of services and attendance in training

programs.

**Table 4.4 Profile of Respondents**

| Demographic Variables | Description | Frequency (N=468) | Percentage (%) |
|---|---|---|---|
| Gender | Female | 189 | 40.4 |
| | Male | 279 | 59.6 |
| Age | 30 and below | 93 | 19.9 |
| | 31 to 40 | 173 | 37.0 |
| | 41 to 50 | 135 | 28.8 |
| | 51 and above | 67 | 14.3 |
| Education Level | Secondary School | 89 | 19.0 |
| | Certificate/Diploma | 166 | 35.5 |
| | Bachelor degree | 131 | 28.0 |
| | Master degree | 24 | 5.1 |
| | Doctorate degree | 6 | 1.3 |
| | Professional qualification | 52 | 11.1 |
| Position | Director/Partner/Sole Proprietor | 112 | 23.9 |
| | CEO/General Manager | 32 | 6.8 |
| | Production/Operation Manager | 102 | 21.8 |
| | Corporate Affairs/Legal Manager | 10 | 2.1 |
| | Finance/Accounts Manager | 46 | 9.8 |
| | HR Admin Manager | 125 | 26.7 |
| | Sales Marketing Manager | 19 | 4.1 |
| | Project Manager Supervisor | 21 | 4.5 |
| | Others | 1 | .2 |
| Year of service in the company | Below 1 year | 26 | 5.6 |
| | 1 to 5 years | 150 | 32.1 |
| | 6 to 10 years | 128 | 27.4 |
| | 11 to 15 years | 67 | 14.3 |
| | 16 to 20 years | 46 | 9.8 |
| | 21years  and above s | 51 | 10.9 |
| Training program | No | 431 | 92.1 |
| | Yes | 37 | 7.9 |

*Note: N = 468 for all items*

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On the respondents' gender, of the 468 respondents, 189 were female (40.4%) and 279 (59.6%) were male.

The age groups of the respondents were divided into 4 categories ranging from 30 years and below (19.9%), 31 to 40 (37%), 41 to 50 (28.8%) and the last group was 51 and above 5 (14.3%). The largest number of respondents came from the age group between 31 to 50 years' category.

With regards to respondents' educational levels, 19% had completed their secondary school level education, 35.5% attained their certificate or diploma level education, 28% held bachelor degrees, 5.1% had master degrees while 1.3% had a doctoral degree. It must be noted too that 11.1% of the respondents held professional qualification.

There were 9 categories of job titles; the highest number of job holders being human resource or administration managers at 26.7%, company director/business partners/sole proprietors ranked second place at 23.9%, followed by production/operating managers at 21.8%, and finance/accounts managers at 9.8%. The balance of 17.7% came from mixed positions such as CEO/general manager, corporate affairs/legal managers, sales/marketing managers, project managers/supervisors and others.

The highest number of years of service were those with 1 to 5 years (32.1%) category, followed by 6 to 10 years (27.45%), 21 years and above (10.9%), followed by the group who worked 16 to 20 years (9.8%), and the lowest

(5.6%) were managers who worked for less than 1 year. This indicated that respondents generally worked in their positions between 1 to 15 years.

Out of the 468 respondents, only a mere 7.9% (37) had in some point in their service, attended training programs, while a large number (92.1%) reported as never having done so. Previous studies stated that the understanding of older persons and the natural ageing process influenced a person's attitude towards older persons positively and that this individual was more likely to work with older persons (Meshel & McGlynn, 2004).

## 4.8    Descriptive Analysis – Organization's Characteristics

### 4.8.1    Company's Type, Industry and Location

As can be seen from Table 4.5 on the profile of companies, 93.6% of organizations came from local companies, whereas only 6.4% were from multinational companies. From the 9 locations being surveyed, on the types of industry, the wholesale/retail trade and repair of vehicles/household goods have the highest number of respondents at 124 (26.5%), the next highest category being from the accommodation/food service activities at 62 (13.2%), followed by manufacturing at 56 (12%), the fourth highest was financial and insurance/Takaful activities at 54 (11.5%),  education at the fifth highest position at 41 (8.8%), while transport and storage category  claimed the $6^{th}$ position with 33 (7.1%)  respondents,  followed by human health and social work activities at 29 (6.2%), $8^{th}$ position went to construction at 27 (5.8%). Among the lowest were administration and support service activities,

agricultural, forestry/fishing, professional, and scientific/technical activities, which shared a total of 42 (8.9%).

**Table 4.5: Profile of Companies**

| Demographic Variables | Description | Frequency (N=468) | Percentage (%) |
|---|---|---|---|
| **Type of Industry** | Accommodation & Foods Service activities | 62 | 13.2 |
| | Administration and Support Service | 10 | 2.1 |
| | Agricultural, Forestry & Fishing | 18 | 3.8 |
| | Construction | 27 | 5.8 |
| | Education | 41 | 8.8 |
| | Financial & Insurance/Takaful Services | 54 | 11.5 |
| | Human Health and Social Work Activities | 29 | 6.2 |
| | Manufacturing | 56 | 12.0 |
| | Professional, scientific and technical activities | 14 | 3.0 |
| | Transport & Storage | 33 | 7.1 |
| | Wholesale & Retail trade/Repair of vehicles & household goods | 124 | 26.5 |
| **Type of Company** | Local | 438 | 93.9 |
| | Multinational | 30 | 6.4 |
| **Total Workforce** | Between 5 and below | 47 | 10.0 |
| | From 6 to 10 | 70 | 15.0 |
| | From 11 to 15 | 49 | 10.5 |
| | From 16 to 20 | 50 | 10.7 |
| | From 21 to 25 | 36 | 7.7 |
| | From 26 to 30 | 24 | 5.1 |
| | From 31 to 35 | 17 | 3.6 |
| | From 36 to 40 | 27 | 5.8 |
| | From 41 to 45 | 10 | 2.1 |
| | From 46 to 50 | 19 | 4.1 |
| | From 51 to 55 | 9 | 1.9 |
| | From 56 and above | 110 | 23.5 |
| **Location of Company** | Johor | 50 | 10.7 |
| | Kedah | 50 | 10.7 |
| | Kuala Lumpur | 70 | 15.0 |
| | Melaka | 51 | 10.9 |
| | Negeri Sembilan | 50 | 10.7 |
| | Perak | 53 | 11.3 |
| | Perlis | 38 | 8.1 |
| | Pulau Pinang | 51 | 10.9 |
| | Selangor | 55 | 11.8 |

*Note: N = 468 for all items*

To ensure that the sample was representative of the population, the survey questionnaires were distributed to managers who were involved in hiring workers for their organizations, or they were the decision makers in hiring

matters. They came from 11 industries in West Malaysia. As these managers were from the industries, and the total number was 468, this population already exceeded the minimum number of 382 to be representative (Sekaran & Bougie, 2016). A total of 600 sets of questionnaires were distributed in Johor, Kedah, Melaka, Negeri Sembilan, Perak, Perlis, Pulau Pinang, Selangor and Kuala Lumpur between the months of March, 2015 and November, 2015. There was a response rate of 78%. The breakdown of responses from individual state were as per Table 4.5, accounted for were Johor (10.7%); Kedah (10.7%); Kuala Lumpur (15%); Melaka (10.9%); Negeri Sembilan (10.7%); Perak (11.3%); Perlis (8.1%); Pulau Pinang (10.9%), and Selangor (11.8%).

### 4.8.2    Total Workforce and Recruitment of Older Workers

From Table 4.5, 23.5% of companies hired more than 56 employees in their respective organizations. The next highest were those which hired between 6 and 10 employees and they accounted for 15%, from 16 to 20 employees were 10.7%, from 11 to 15 employees were 10.5%, those which hired 5 employees and below were 10%, hired 21 to 25 employees were 7.7%, and the balance 22.6% were made up of companies which employed between 26 and 55 employees.

In Table 4.6 on the existing older workforce, 27.8% of companies did not have any older workers. On the other hand, 40.4% of companies had between 1 and 5 older workers, 14.1% had between 6 and 10 older workers which 9.2% reported that they had 21 or more older workers in their companies, and that the balance 8.5% had between 11 and 20 older workers.

**Table 4.6: Older Workforce & Recruitment**

| Demographic Variables | Description | Frequency (N=468) | Percentage (%) |
|---|---|---|---|
| **Current Older Workers** | None | 130 | 27.8 |
| | From 1 to 5 | 189 | 40.4 |
| | From 6 to 10 | 66 | 14.1 |
| | From 11 to 15 | 22 | 4.7 |
| | From 16 to 20 | 18 | 3.8 |
| | From 21 and above | 43 | 9.2 |
| **Older workers recruited in the last 12 months** | None | 297 | 63.5 |
| | From 1 to 5 | 138 | 29.5 |
| | From 6 to 10 | 20 | 4.3 |
| | From 11 to 15 | 4 | .9 |
| | From 16 to 20 | 3 | .6 |
| | From 21 and above | 6 | 1.3 |
| **Older workers who left in the last 12 months** | None | 298 | 63.7 |
| | From 1 to 5 | 142 | 30.3 |
| | From 6 to 10 | 17 | 3.6 |
| | From 11 to 15 | 4 | .9 |
| | From 16 to 20 | 2 | .4 |
| | From 21 and above | 5 | 1.1 |
| **Difficulties in recruiting suitable Malaysian workers** | No | 202 | 43.2 |
| | Yes | 266 | 56.8 |

*Note: N = 468 for all items*

On the recruitment of older workers in the last 12 months prior to the date of survey, 63.5% did not recruit any older workers, 29.5% recruited between 1 and 5 older workers, 4.3% recruited between 6 and 10, while the balance of 2.8% recruited more than 11 older workers in each of their respective companies.

On older workers who left employment for whatsoever reason in the last 12 months prior to the date of survey, 63.7% responded that they had none, this corresponded to 63.5% of companies reported earlier that they did not recruit any older workers. In the same period, companies that had between 1 and 5 older workers who left was 30.3%, between 6 and 10 were 3.6%, and the balance 2.4% had more than 11 older workers who left employment from their respective company.

### 4.8.3 Recruitment Difficulties

From Table 4.6, 56.8% (*N*=266) of companies experienced difficulties in recruiting suitable Malaysian workers who met their needs requirement in the last 12 months, prior to the date of survey, whereas 43.2% (*N*=202) did not have such difficulties. This suggested that to a large extent, labour shortage was a problem.

### 4.8.4 Companies' Choices of Recruitment Strategies

On companies' choice of strategies to overcome their recruitment difficulties, managers were given 6 choices of strategies to rank their preferences in term of priorities. From Table 4.7 below, 129 (27.6%) respondents' first choice was to consider part-time workers, thus placing this strategy as high priority. 127 (27.1%) preferred to offer potential workers with increased wages, and placed this strategy as the second most preferred strategy. The third choice was to use foreign workers, a choice among 105 companies (22.4%). In fourth place was 61 (13.0%) companies that chose to replace human activities with technology. 39 companies (8.3%) were willing to use older workers to ease recruitment difficulty and only 7 companies (1.5%) identified shifting their business operations to other places with an abundant labour supply.

**Table 4.7: Companies' Choices of Recruitment Strategies**

| Choice | Descriptions | Frequency (N=468) | Percentage (%) | Ranking |
|---|---|---|---|---|
| 1 | To use foreign workers | 105 | 22.4 | 3 |
| 2 | To use part-time workers | 129 | 27.6 | 1 |
| 3 | To use older workers | 39 | 8.3 | 5 |
| 4 | To shift our company to a place with plenty of labour supply | 7 | 1.5 | 6 |
| 5 | To attract potential workers by offering higher salaries | 127 | 27.1 | 2 |
| 6 | To substitute labour with technology | 61 | 13.0 | 4 |

The choices indicated the companies' willingness to use part-time workers since this group of workers can be dispensed with easily as compared with full-time workers, and that to offer higher salaries could be effective in attracting potential workers who meet employers' requirements. Shifting businesses elsewhere involved more costs if the labour shortage was only temporary. Hence, most organizations preferred to remain at status quo; which made this the least preferred choice. At the same time, the option to use older workers was not a preferred choice of strategy either; hence, is rank in 5th position.

## 4.9    Confirmatory Factor Analysis

### 4.9.1   Introduction

Firstly, in the specifications of the measurement model, there are 2 orders for components that required examination where the standardized path coefficient represents the strength of the relationship between the constructs (Hair et al., 2014). In the measurement model, in the 1st order are the components AS (5 indicators), MS (4 indicators), PS (2 indicators), CB (3 indicators), PE (5 indicators) and OINT (4 indicators) and FINT (3 indicators). At the 2nd order,

the components are ATT (4 indicators), SN (5 indicators) and PBC (5 indicators). In confirming each measurement model, some items in the scales may become redundant, and as such, the measurement model needs to be re-specified by removing these redundant items (Kline, 2011) to obtain parsimonious unidimensional constructs (Anderson & Gerbing, 1988).

Kline (2011) recommended that indicators specified to measure a proposed underlying factor should, firstly, have relatively high-standardized loadings on that factor. On the effect size, this is a minimum of 0.50 or greater (Hair et al., 2014). Second, the estimated correlations between the factors should not be greater than 0.85 (Kline) to avoid any overlapping between the two factors, and that the items are not measuring two different factors. These two considerations are made in conjunction with the overall goodness-of-fit to suggest acceptance of the variables in the model. On the *t*-statistical significance, as recommended by Field (2009), 1.96 is significant @p<0.05, above 2.58 is significant @p<0.01, and above 3.29 is significant @p<0.001. As suggested by Ringle et al. (2005), all PLS algorithms in this study used 300 as the maximum number of iterations.

The followings discussions explain the first-order measurement constructs (AS, PS, MS, CB, PE, OINT and FINT) and the second-order (ATT, SN, and PBC) respectively. In addition, the correlation between the latent variables and indicators (loading) are calculated.

### 4.9.2   Age Stereotypes (AS)

There are 5 questionnaire items in Age Stereotypes as per Table 4.8.1. The absolute standardized loadings for these 5 indicators ranged from 0.519 to 0.810. The 2 items with loadings below 0.6 are AS3 & AS5 which according to Hair et al. (2014) is unacceptable and should be removed from further analysis. However, the low loadings for items AS3 and AS5 could be explained that within its respective group of predictors, the standard deviation (SD) were very high at AS3 (0.103) and AS5 (0.115). As such, 2 items were retained for further analysis. AS1 and AS2 are relatively high standardized loadings and this indicated high significance (Kline, 2011).

The lowest *t*-statistics is AS5 at 4.518, and the other 4 are all above 3.29 statistical significance level and therefore significant @p<.001 (Field, 2009), this shows that all 5 items are sufficient to explain the age stereotypes items in the CFA model.

**Table 4.8:1 AS Items and their Descriptions**

| Item Label | Original Item | Factor Loadings | Mean | Std. Deviation | *t*-Value |
|---|---|---|---|---|---|
| AS1 | Older workers do not resist change. | 0.740 | 0.723 | 0.083 | 8.884 |
| AS2 | Older workers can learn new skills as easily as other employees. | 0.810 | 0.798 | 0.065 | 12.506 |
| AS3 | Older workers do not increase production costs. | 0.564 | 0.549 | 0.103 | 5.471 |
| AS4 | Older workers usually turn out work of higher quality. | 0.607 | 0.595 | 0.117 | 5.182 |
| AS5 | Older workers are not likely to job-hop. | 0.519 | 0.508 | 0.115 | 4.518 |

For all the age stereotypes (AS) items, the average communality mean was 0.432, the *GoF* above the threshold of 0.36 large fit which this satisfied the global validation for PLS model (Wetzels, Odekerken-Schroder & Van Oppen, 2009) indicated better explaining power in this path model estimation.

### 4.9.3 Management Support (MS)

There are 4 questionnaire items in Management Support (MS) where the absolute standardized loadings for the 4 indicators ranged from 0.745 to 0.910. Although MS4 has the lowest loading at 0.745, all the 4 loadings were above the 0.70 threshold. MS1, MS2 and MS3 were of relatively high standardized loadings and this indicated high significance (Hair et al., 2014; Kline, 2011). The low loading for item MS4 was due to the SD which had the highest (0.117) within its respective group of predictors.

The *t*-statistics (Table 4.8.2) for all items were above the 3.29 threshold and therefore significant @ p<.001 (Field, 2009). The *t*-value of 22.475 for MS4 was the lowest among all the 4 items; however, all the 4 loadings were above the 0.6 threshold, and no item was removed. In this case, all the 4 Items in the final CFA model were sufficient to explain the model.

**Table 4.8.2: MS Items and their Descriptions**

| Item Label | Original Item | Factor Loadings | Mean | Std. Deviation | *t*-Value |
|---|---|---|---|---|---|
| MS1 | The top management of my company approves my hiring of older workers. | 0.860 | 0.860 | 0.017 | 49.896 |
| MS2 | My company's human resource manager approves my hiring of older workers. | 0.910 | 0.909 | 0.009 | 97.903 |
| MS3 | I perceive that my company encourages employment of older workers. | 0.855 | 0.854 | 0.021 | 41.078 |
| MS4 | My company's senior management is committed to hire older workers. | 0.745 | 0.742 | 0.033 | 22.475 |

The average communality mean was 0.713, and the *GoF* above the threshold of 0.36 large fit. Therefore, it satisfied the global validation for the PLS model to represent good path model estimation and thus sufficient to explain power (Wetzels et al., 2009).

### 4.9.4. Peers Support (PS)

The 2 questionnaire items in PS are PS1 and PS2. The absolute standardized loadings for the indicators are 0.958 and 0.951 respectively. Since these loadings were above 0.7 thresholds, they were maintained for further analysis (Hair et al., 2014).

The *t*-statistics (Table 4.8.3) for PS1 was 155.669; for PS2 was 122.765, both were above the 3.29 threshold, and was significant @p<.0001 (Field, 2009).

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**Table 4.8.3: PS Items and their Descriptions**

| Item Label | Original Item | Factor Loadings | Mean | Std. Deviation | *t*-Value |
|---|---|---|---|---|---|
| PS1 | My colleagues think that I should hire older workers. | 0.958 | 0.958 | 0.006 | 168.609 |
| PS2 | I think my colleagues encourage employment of older workers. | 0.951 | 0.951 | 0.007 | 128.289 |

The average communality mean was 0.911, and the *GoF* above the threshold of 0.36 large fit, which indicated that this is a good path model estimation that satisfied the global validation for the PLS model in explaining power (Wetzels et al., 2009).

### 4.9.5   Control Beliefs (CB)

There were 3 questionnaire items on CB. From Table 4.8.4, the absolute standardized loadings for the 3 indicators were all above the 0.7 thresholds, ranging from 0.796 to 0.915 (Hair et al., 2014).

The *t*-statistics (Table 4.8.4) for all 3 CB items were above the 2.58 threshold, and was significant @p<.05 (Field, 2009). This showed that all items sufficiently explained the model.

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**Table 4.8.4: CB Items and their Descriptions**

| Item Label | Original Item | Factor Loadings | Mean | Std. Deviation | *t*-Value |
|---|---|---|---|---|---|
| CB1 | My intention to hire older workers shall be encouraged with the implementation of The Minimum Retirement Age Act 2012. | 0.915 | 0.864 | 0.292 | 3.129 |
| CB2 | I hire older workers to avoid committing offences under The Minimum Retirement Age Act 2012. | 0.873 | 0.825 | 0.276 | 3.159 |
| CB3 | My company can receive incentives from The Ministry of Human Resources whenever my company sends older workers for training. | 0.796 | 0.752 | 0.247 | 3.225 |

The average communality mean was 0.745, the *GoF* above the threshold of 0.36 large fit (Wetzels et al., 2009) which indicated that this was good path model estimation.

### 4.9.6 Past Experience (PE)

Under PE, there were 5 questionnaire items. The indicators absolute standardized loadings ranged from 0.531 to 0.898. Item PE5 had the lowest loading at 0.531. Items PE1, PE2, PE3 and PE4 all had high standardized loadings above 0.7 thresholds, which indicated their excellent accepted value (Hair et al., 2014) and high significance (Kline, 2011). Since PE5 had the loading below 0.6, it was deemed unacceptable and should be removed from further analysis. However, the low loading for item PE5 could be explained that within its respective group of predictors, its SD was very high at 0.094. After PE5 was removed, the new loadings for PE1 (0.847) and PE2 (0.908) showed no improvement on their loadings, whereas for PE3 (from 0.845 to

0.859) and PE4 (from 0.784 to 0.792) it showed a slight improvement in both cases.

The $t$ statistics (Table 4.8.5) for all 5 items were above 3.29; therefore significant @p<.001 (Field, 2009). This showed that all 5 items were sufficient to explain the model. Since PE5 was also above 3.29, and by removing PE5, it did not significantly improve the loadings for the other items (New loadings: PE1=0.837; PE2=0.902; PE3=0.858; PE4=0.802), PE5 was therefore retained in the final CFA model.

**Table 4.8.5: PE Items and their Descriptions**

| Item Label | Original Item | Factor Loadings | Mean | Std. Deviation | $t$-Value |
|---|---|---|---|---|---|
| PE1 | My interaction with older persons in my family is very good. | 0.836 | 0.834 | 0.030 | 27.993 |
| PE2 | My interaction with older persons in my community is very good. | 0.898 | 0.897 | 0.016 | 56.453 |
| PE3 | My interaction with older workers at my workplace is very good. | 0.834 | 0.831 | 0.028 | 29.935 |
| PE4 | My interaction with older persons is comfortable. | 0.794 | 0.789 | 0.056 | 14.178 |
| PE5 | My interaction with older persons is easy. | 0.531 | 0.530 | 0.070 | 7.584 |

The average communality mean was 0.623, and the *GoF* above the threshold of 0.36 large fit which indicated that this was a good path model estimation that satisfied the global validation for PLS model in explaining power (Wetzels et al., 2009).

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### 4.9.7    Overall Intention (OINT)

There were 4 questionnaire items in OINT where the absolute standardized loadings ranged between 0.708 and 0.829. All four loadings were above 0.7 (Hair et al., 2014), indicating that all items were of relatively high standardized loadings and high significance (Kline, 2011).

The $t$ statistics (Table 4.8.6) for all 4 items were above 3.29; therefore significant @p<.001 (Field, 2009). This showed that these 4 items were sufficient to explain the model.

**Table 4.8.6: OINT Items and their Descriptions**

| Item Label | Original Item | Factor Loadings | Mean | Std. Deviation | $t$-Value |
|---|---|---|---|---|---|
| INT1 | I have the intention to hire older workers because I have a positive attitude towards older workers. | 0.829 | 0.828 | 0.019 | 43.350 |
| INT2 | I have the intention to hire older workers because I have a good past experience with older workers. | 0.811 | 0.812 | 0.020 | 41.556 |
| INT3 | I have the intention to hire older workers because I have strong support from my management and peers. | 0.816 | 0.817 | 0.022 | 37.619 |
| INT4 | I have the intention to hire older workers because The Minimum Retirement Age Act 2012 has motivated me to do so. | 0.708 | 0.708 | 0.039 | 18.356 |

The average communality mean was 0.628 and the *GoF* was above the threshold of 0.36 large fit (Wetzels et al., 2009) which indicated that this was better path model estimation.

### 4.9.8   Intention in the Future (FINT)

There were 3 questionnaire items in FINT whose absolute standardized loadings were all above 0.70 (Hair et al., 2014) with the lowest at 0.914 and which indicated that these items were relatively high standardized loadings and therefore of high significance (Kline, 2011).

The *t* statistics (Table 4.8.7) for all 3 items were above 3.29, therefore significant @p<.001 (Field, 2009). This showed that the 3 items could well explain the model.

**Table 4.8.7: FINT Items and their Descriptions**

| Item Label | Original Item | Factor Loadings | Mean | Std. Deviation | *t*-Value |
|---|---|---|---|---|---|
| INF1 | I will prioritize an older worker as my team member in the next 12 months. | 0.947 | 0.946 | 0.006 | 168.444 |
| INF2 | If other things being equal, I will prioritize an older worker for hiring in the next 12 months. | 0.914 | 0.914 | 0.009 | 101.631 |
| INF3 | Even though an older worker is not the best available person, I will still prioritize him / her for hiring in the next 12 months. | 0.917 | 0.917 | 0.013 | 69.269 |

The average communality mean was 0.857 and the *GoF* above the threshold of 0.36 large fit that satisfied the global validation for PLS model in representing good path model estimation and thus good explaining power (Wetzels et al., 2009).

### 4.9.9 Attitude (ATT)

In ATT, there were 4 questionnaire items whose absolute standardized loadings ranged from 0.900 to 0.926. All the values were above the 0.7 threshold (Hair et al., 2014) and of relatively high standardized loadings, which also indicated their high significance (Kline, 2011).

The $t$ statistics (Table 4.8.8) for all 4 items were above 3.29, therefore significant @p<.001 (Field, 2009). This showed that they were sufficient to explain the model.

**Table 4.8.8: ATT Items and their Descriptions**

| Item Label | Original Item | Factor Loadings | Mean | Std. Deviation | $t$-Value |
|---|---|---|---|---|---|
| A1 | I think the activity of hiring older workers is: Beneficial 1..2..3..4..5..6..7..Harmful. | 0.911 | 0.910 | 0.010 | 91.588 |
| A2 | I think the activity of hiring older workers is: Useful 1..2..3..4..5..6..7..Useless. | 0.926 | 0.925 | 0.008 | 111.349 |
| A3 | I think the activity of hiring older workers is: Wise 1..2..3..4..5..6..7..Foolish. | 0.900 | 0.899 | 0.013 | 71.114 |
| A4 | I think the activity of hiring older workers is: Valuable 1..2..3..4..5..6..7..Worthless. | 0.909 | 0.908 | 0.011 | 86.061 |

The average communality mean was 0.830, and the *GoF* was above the threshold of 0.36 large fit which indicated that this was a better path model estimation that satisfied the global validation for PLS model, and explained the power (Wetzels et al., 2009).

### 4.9.10  Subjective Norm (SN)

There are 5 questionnaire items in SN, and the absolute standardized loadings for the indicators ranged from 0.783 to 0.905 with SN1 being the lowest. Since it was still above the 0.7 threshold (Hair et al., 2014), it indicated that all 5 items were of relatively high standardized loadings and high significance (Kline, 2011).

The $t$-statistics (Table 4.8.9) for all 5 items were above 3.29; therefore significant @p<.001 (Field, 2009) which showed that they were sufficient to explain the model.

**Table 4.8.9: SN Items and their Descriptions**

| Item Label | Original Item | Factor Loadings | Mean | Std. Deviation | $t$-Value |
|---|---|---|---|---|---|
| SN1 | People who are important to me would think that I should hire older workers. | 0.783 | 0.781 | 0.027 | 28.483 |
| SN2 | Most people who are important to me think it is okay for me to hire older workers. | 0.847 | 0.847 | 0.021 | 40.732 |
| SN3 | Most people who are important to me support that I hire older workers. | 0.891 | 0.891 | 0.012 | 73.716 |
| SN4 | Most people who are important to me understand that I hire older workers. | 0.905 | 0.905 | 0.011 | 82.790 |
| SN5 | Most people who are important to me agree with me about hiring older workers. | 0.849 | 0.850 | 0.016 | 53.327 |

The average communality mean was 0.733 with the *GoF* above the threshold of 0.36 large fit and therefore, satisfied the global validation for the PLS model. The high values could be said to represent a good path model estimation and thus had sufficient explaining power (Wetzels et al., 2009).

### 4.9.11 Perceived Behavioural Control (PBC)

There are 5 questionnaire items in PBC, the absolute standardized loadings for these indicators ranged from 0.638 to 0.899. There were 2 items with low loadings at PBC1 (0.638) and PBC2 (0.652). However, they were above the 0.6 threshold, which indicated acceptability (Hair et al., 2014), and therefore retained for further analysis. The other 3 items were above the 0.7 level indicating relatively high standardized loadings and high significance (Kline, 2011).

The *t*-statistics (Table 4.8.10) for PBC1 (3.101) and PBC2 (3.186) were above 1.96, therefore was significant @$p<.05$, whereas the other three items which all above 3.29, were therefore significant @$p<.001$ (Field, 2009). In this case, all 5 items were retained for further analysis.

**Table 4.8.10: PBC Items and their Descriptions**

| Item Label | Original Item | Factor Loadings | Mean | Std. Deviation | *t*-Value |
|---|---|---|---|---|---|
| PBC1 | I am capable of hiring older workers. | 0.638 | 0.599 | 0.203 | 3.145 |
| PBC2 | Hiring older workers is entirely within my control. | 0.652 | 0.611 | 0.201 | 3.239 |
| PBC3 | I have the resources to hire older workers. | 0.729 | 0.686 | 0.196 | 3.724 |
| PBC4 | I have the knowledge to hire older workers. | 0.899 | 0.881 | 0.091 | 9.907 |
| PBC5 | I have the ability to hire older workers. | 0.757 | 0.716 | 0.184 | 4.115 |

The average communality mean was 0.549 and the *GoF* was above the threshold of 0.36 large fit that satisfied the global validation for PLS model, indicating that it was good path model estimation and explaining power (Wetzels et al., 2009).

## 4.10 Factor Loadings

For a reflective measurement model, there was a need to examine the estimates for the relationships between the reflective latent variables and their indicators by considering their loadings. An initial factor loading by way of SmartPLS3 was conducted to examine indicator's reliability. The reliability of individual indicators was obtained by squaring the loading. Generally, each indicator's absolute standardized loading should be higher than 0.70. Indicators that exhibited loadings of 0.40 and lower should, however, always be eliminated from reflective scales, and loading from 0.40 to 0.6 be removed from further analysis if the removal led to higher composite reliability; whereas from 0.6 to 0.7 it was considered acceptable and be retained (Hair et al., 2014). The

average variance extracted (AVE) value recommended a threshold value of 0.50. Figure 4.2 and Table 4.9 show the loadings of all indicators.
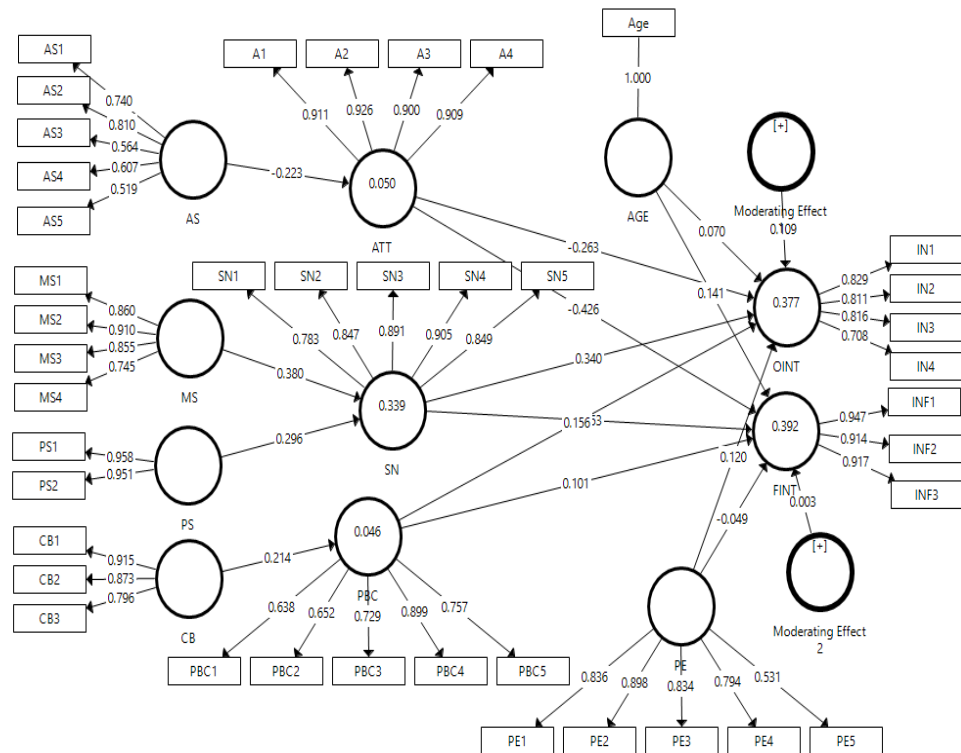


**Figure 4.2: Path Model Showing All Indicators Loading**

**Table 4.9: Outer Factor Loadings Results**

| | AS | ATT | CB | FINT | OINT | MS | PBC | PE | PS | SN |
|---|---|---|---|---|---|---|---|---|---|---|
| **A1** | 0.000 | **0.911** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **A2** | 0.000 | **0.926** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **A3** | 0.000 | **0.900** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **A4** | 0.000 | **0.909** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **AS1** | **0.740** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **AS2** | **0.810** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **AS3** | **0.564** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **AS4** | **0.607** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **AS5** | **0.519** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **CB1** | 0.000 | 0.000 | **0.915** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **CB2** | 0.000 | 0.000 | **0.873** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **CB3** | 0.000 | 0.000 | **0.796** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **IN1** | 0.000 | 0.000 | 0.000 | 0.000 | **0.829** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **IN2** | 0.000 | 0.000 | 0.000 | 0.000 | **0.811** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **IN3** | 0.000 | 0.000 | 0.000 | 0.000 | **0.816** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **IN4** | 0.000 | 0.000 | 0.000 | 0.000 | **0.708** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **INF1** | 0.000 | 0.000 | 0.000 | **0.947** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **INF2** | 0.000 | 0.000 | 0.000 | **0.914** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **INF3** | 0.000 | 0.000 | 0.000 | **0.917** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **MS1** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.860** | 0.000 | 0.000 | 0.000 | 0.000 |
| **MS2** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.910** | 0.000 | 0.000 | 0.000 | 0.000 |
| **MS3** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.855** | 0.000 | 0.000 | 0.000 | 0.000 |
| **MS4** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.745** | 0.000 | 0.000 | 0.000 | 0.000 |
| **PBC1** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.638** | 0.000 | 0.000 | 0.000 |
| **PBC2** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.652** | 0.000 | 0.000 | 0.000 |
| **PBC3** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.729** | 0.000 | 0.000 | 0.000 |
| **PBC4** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.899** | 0.000 | 0.000 | 0.000 |
| **PBC5** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.757** | 0.000 | 0.000 | 0.000 |
| **PE1** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.836** | 0.000 | 0.000 |
| **PE2** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.898** | 0.000 | 0.000 |
| **PE3** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.834** | 0.000 | 0.000 |
| **PE4** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.794** | 0.000 | 0.000 |
| **PE5** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.531** | 0.000 | 0.000 |
| **PS1** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.958** | 0.000 |
| **PS2** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.951** | 0.000 |
| **SN1** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.783** |
| **SN2** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.847** |
| **SN3** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.891** |
| **SN4** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.905** |
| **SN5** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | **0.849** |

In ATT, loadings for all the 4 items were above 0.9 level. In PE, there were 5 items; 3 items were above 0.8 level, 1 was above 0.7, except for PE5 where the loading was 0.531. PE5 was not removed due to PE's composite reliability which was recorded at 0.889 (Table 4.9). Therefore, a decision was made to retain PE5 for further analysis (Hair et al., 2014). For PBC, of the 5 items, 2 were at 0.6 level, 2 at 0.7 level, and PBC4 above 0.8 level. For SN, of all the 5

items, 1 was above 0.9, 3 above 0.8, and the lowest was SN1 at 0.7 level. For OINT, the 3 items' loadings were above 0.8 level, except IN4 at 0.7 level. As for FINT, all 3 items' loadings were above 0.9 levels. All items for MS were high with 1 item above 0.9, 2 items at 0.8 and MS4 being the lowest at 0.7 level. All 3 items of CB were high with each falling within the 0.70, 0.8 and 0.9 levels respectively. AS had 2 items above 0.7 level, 1 above 0.6 while 2 items (AS3 and AS5) were between 0.50 and 0.60 levels; There was no necessity to remove the 2 said items since the composite reliability for AS had achieved the 0.70 threshold; therefore a decision was made for the retention (Hair et al.).

The maximum number of iterations of PLS algorithm was set at 5,000, however, the algorithm stopped at iteration no. 7 which meant that the abort criterion was met, and as such it was not necessary to go up to 5,000 iterations.

### 4.11    Internal Consistency Reliability

Internal consistency for individual items' reliability ensures that the items accurately measure the respective constructs by determining the item's loading to their respective constructs. This was generally done with the traditional criterion of Cronbach's alpha (Hair et al., 2014). However, due to the limitations of Cronbach's alpha in the population, Hair et al. had advised the application of composite reliability. Both tests are discussed accordingly.

### 4.11.1  Cronbach's Alpha

Cronbach's alpha values for each of the measurements should be greater than 0.70 to achieve internal consistency and that 0.60 was still acceptable (Hair et al., 2014). From Table 4.10 below, all values (except age stereotypes at 0.672) were much higher than the recommended 0.70. Variables of attitude, peers' support, subjective norm and future intention were above 0.90. Variables of management support, control belief, perceived behavioral control, past experience and overall intention were above 0.80. As for age stereotypes, it was at 0.672, however, this value was acceptable (Hair et al.). All the Cronbach's alpha values indicated high internal consistency of the measurement instrument for the study.

As in the above results, Cronbach's alpha actually assumed that all the indicators had equal outer loadings on the constructs. Furthermore, it was sensitive to the number of items in the scale, which often led to the underestimation of the internal consistency reliability.

### 4.11.2  Composite Reliability

In view of the limitation in Cronbach's alpha, composite reliability was applied for its ability to take into account the different outer loadings of the indicators variables. There was no assumption that all indicators were equally reliable, and it prioritized indicators according to their reliability during model estimation (Hair et al., 2014).  Construct reliability assessment routinely focused on composite reliability as an estimate of a construct's internal consistency. Composite reliability values of 0.60 to 0.70 in exploratory

research and values from 0.70 to 0.90 in more advanced stages of research were regarded as satisfactory (Nunnally & Bernstein, 1994). Hair et al. (2014) also stated that composite reliability should be higher than 0.70, nevertheless, in exploratory research, 0.60 to 0.70 was considered acceptable. Therefore, any value below 0.60 indicated a lack of reliability.

**Table 4.10: Internal Consistency Reliability Statistics**

| Constructs | Cronbach' Alpha | Composite Reliability |
|---|---|---|
| Age Stereotypes | 0.672 | 0.787 |
| Attitude | 0.932 | 0.951 |
| Management Support | 0.865 | 0.908 |
| Peers Support | 0.903 | 0.954 |
| Control Belief | 0.834 | 0.897 |
| Perceived Behavioral Control | 0.881 | 0.857 |
| Subjective Norm | 0.908 | 0.932 |
| Past Experience | 0.842 | 0.889 |
| Overall Intention | 0.804 | 0.871 |
| Future Intention | 0.917 | 0.947 |

From Table 4.10, the group of constructs with values above 0.9 level were attitude, management support, peers' support, subjective norm and future intention. Those values above the 0.8 level were control beliefs, perceived behavioral control, past experience and overall intention. The lowest level was age stereotypes at 0.787. In any event, the composite reliability for all the values were above the 0.70 threshold point (Hair et al., 2014), which indicated that the latent constructs were all acceptable and demonstrated a high level of internal consistency reliability among them.

Although complete reliance on Cronbach's alpha for internal consistency reliability in PLS was not recommended due to its limitation (Bagozzi & Yi, 1988; Hair et al.), but from both sets of tested values for internal consistency reliability, there were not many differences between them. Therefore, it was concluded that all values were of high level of reliability level.

## 4.12   Convergent Validity

To check the convergent validity, an average variance extracted (AVE) value on all latent variables was examined. From Table 4.11 below, the highest value was PS (0.911), and the lowest value was AS (0.432).

### Table 4.11: Outer Model's Validity

| Constructs | Convergent Validity (AVE) | Square root of AVE | Discriminant Validity? |
|---|---|---|---|
| AS | 0.432 | 0.657 | Yes* |
| ATT | 0.830 | 0.911 | Yes |
| CB | 0.745 | 0.863 | Yes |
| FINT | 0.857 | 0.926 | Yes |
| MS | 0.713 | 0.844 | Yes |
| OINT | 0.628 | 0.792 | Yes |
| PBC | 0.549 | 0.741 | Yes |
| PE | 0.623 | 0.789 | Yes |
| PS | 0.911 | 0.955 | Yes |
| SN | 0.733 | 0.856 | Yes |

*Note*: *Further tests conducted shown support for the measure's validity.*

As a general rule, an AVE value of minimum 0.50 was acceptable (Bagozzi & Yi, 1988). From Table 4.11, all values except AS, were within the acceptable level. As such, the variables highly correlated and this indicated a sufficient degree of convergence validity, meaning that the latent variable in the study explained more than half of its indicators' variance. There was a strong convergent validity since all the factor loadings were in excess of 0.50

minimum AVE value for each construct. In the case of AS, it fell slightly below the 0.50 threshold, but the sufficiency of 0.50 threshold loadings also depended on the sample size of the study. In all fairness, further tests such as discriminant validity and assessment of collinearity were carried out to ascertain the validity on AS.

For the time being, the results provided here for all other loadings were evidence of distinctive, unidimensional scales of constructs from each other. In any event, since the sample size for the current study was 468, the sufficiency of sample size was not an issue, and that internal convergent validity was satisfied.

## 4.13    Discriminant Validity

Referring to Table 4.11 above, the square roots of AVE for all latent constructs were calculated using the formula $\sqrt{x} = r$.  All the square root values were then transferred to Table 4.12 and placed diagonally in bold. The square root values were used to establish discriminant validity (Fornell & Larcker, 1981). The latent variable correlations values for all latent variables were reproduced from the PLS3 report and placed diagonally on the left corner.

**Table 4.12: Fornell-Larcker Criterion Analaysis**
**for Checking Discriminant Validity**

|  | AS | ATT | CB | FINT | MS | OINT | PBC | PE | PS | SN |
|------|------|------|------|------|------|------|------|------|------|------|
| AS | **0.657** | | | | | | | | | |
| ATT | -0.223 | **0.911** | | | | | | | | |
| CB | 0.211 | -0.196 | **0.863** | | | | | | | |
| FINT | 0.225 | -0.526 | 0.367 | **0.926** | | | | | | |
| MS | 0.225 | -0.367 | 0.311 | 0.463 | **0.844** | | | | | |
| OINT | 0.260 | -0.422 | 0.585 | 0.519 | 0.577 | **0.792** | | | | |
| PBC | 0.090 | -0.077 | 0.214 | 0.232 | 0.299 | 0.308 | **0.741** | | | |
| PE | 0.146 | -0.233 | 0.073 | 0.121 | 0.220 | 0.271 | 0.216 | **0.789** | | |
| PS | 0.153 | -0.382 | 0.421 | 0.496 | 0.475 | 0.546 | 0.265 | 0.154 | **0.955** | |
| SN | 0.130 | -0.306 | 0.353 | 0.434 | 0.521 | 0.485 | 0.299 | 0.149 | 0.477 | **0.856** |

From Table 4.12, the square root values of the latent variables were the largest among all the vertical correlations values in each of their respective columns. In that way, all square root values for other latent variables were AS (0.657), ATT (0.911), CB (0.863), FINT (0.926), MS (0.844), OINT (0.792), PBC (0.741), PE (0.789), PS (0.955), and SN (0.856). For each of these values, individually they constituted the greatest value vertically and horizontally within their own comparison groups, e.g. FINT's square root value was the largest among all vertical and horizontal correlations values. Importantly, none of the square root values was above the value of 1. In this situation, the square root values for all these latent variables indicated that discriminant validity was well established between all the constructs.

## 4.14 Assessment of Collinearity

In assessing the significance level of collinearity, each set of the predictor constructs for each subpart of the structural model was examined. This approach involved testing the multicollinearity among the indicators by way of regression. To detect multicollinearity, the collinearity statistics or variance inflation factor (VIF) for the inner and outer models were examined in

SmartPLS 3. In view of AS fall in value to below the 0.50 minimum AVE in the earlier convergent validity test, this collinearity assessment had provided evidence to support AS; it confirmed that the validity of AS was not an issue. The VIF value for predictor constructs, the minimum tolerance value had to be above 0.20 and that the VIF value must not be 5.00 and above as otherwise there could exits a potential collinearity problem (Hair et al., 2014).

**Table 4.13: Result of Inner VIF Values**

|        | ATT   | FINT  | OINT  | PBC   | SN    |
|--------|-------|-------|-------|-------|-------|
| **AS**  | 1.000 |       |       |       |       |
| **ATT** |       | 1.179 | 1.179 |       |       |
| **CB**  |       |       |       | 1.000 |       |
| **MS**  |       |       |       |       | 1.292 |
| **PBC** |       | 1.190 | 1.190 |       |       |
| **PE**  |       | 1.105 | 1.105 |       |       |
| **PS**  |       |       |       |       | 1.292 |
| **SN**  |       | 1.227 | 1.227 |       |       |

**Table 4.14 Collinearity Statistics (VIF) – Outer VIF Values**

|      | VIF   |      | VIF   |
|------|-------|------|-------|
| A1   | 3.676 | MS2  | 3.250 |
| A2   | 4.327 | MS3  | 2.143 |
| A3   | 3.057 | MS4  | 1.660 |
| A4   | 3.413 | PBC1 | 2.607 |
| AS1  | 1.552 | PBC2 | 2.936 |
| AS2  | 1.814 | PBC3 | 3.632 |
| AS3  | 1.303 | PBC4 | 1.269 |
| AS4  | 1.521 | PBC5 | 3.689 |
| AS5  | 1.446 | PE1  | 2.821 |
| CB1  | 2.108 | PE2  | 3.419 |
| CB2  | 1.943 | PE3  | 1.920 |
| CB3  | 1.814 | PE4  | 1.983 |
| IN1  | 1.856 | PE5  | 1.201 |
| IN2  | 1.584 | PS1  | 3.091 |
| IN3  | 1.748 | PS2  | 3.091 |
| IN4  | 1.460 | SN1  | 1.995 |
| INF1 | 4.238 | SN2  | 2.596 |
| INF2 | 2.921 | SN3  | 3.253 |
| INF3 | 3.256 | SN4  | 3.721 |
| MS1  | 2.641 | SN5  | 2.378 |

Table 4.13 and Table 4.14 present the evaluation of collinearity among constructs, Table 4.13 on inner VIF values and Table 4.14 on outer VIF values. From the 2 tables, all VIF values were above 0.20 and below the 5.00 threshold. This suggested that both tolerance and VIF values had no potential collinearity problem, and there was no biasness among the constructs. As such multicollinearity was not an issue in the present study.

## 4.15    Cross Loading

Cross loadings values on every construct were used to support discriminant validity and internal consistency. In cross loadings, an indicator's loading on a construct had to be higher when compared to all of its cross loadings among other constructs. Detail of all cross loadings for all constructs is presented in Appendix 4.4. For indicators A1 (0.911), A2 (0.926), A3 (0.900), and AS4 (0.909), these were of the highest values for the loading with construct AS, whereas for all cross loadings with other constructs, e.g. A1 on AS (-0.190), MS: (-0.312), the same went on for all indicators and all cross loadings with other constructs. The cross loadings had provided further evidence to support discriminant validity for construct AS.

## 4.16    Evaluation of the Structural Model

### 4.16.1  Introduction

The structural model basically measured relationship between constructs. This was first done by examining the structural model constructs for collinearity to remove biasness among the predictor constructs, then following through by assessing the path coefficient size obtained from PLS algorithm. The path

coefficients were indicated by arrows pointing from one construct to another, and that represented the hypothesized relationships between the constructs. From the path coefficients obtained, it was then able to determine the significance of these values, whether the hypotheses were substantially and empirically supported. Additionally, the relative sizes of the significance path relationships were used to determine the relative importance of the exogenous variables ATT, SN, PBC and PE as predictors of the endogenous variables OINT and FINT. According to Hair et al. (2014), the ultimate significance of a coefficient was reliance on the standard error obtained from a bootstrapping test.

### 4.16.2  Variance Explained, Effect Sizes and Predictive Relevance

According to Hair et al. (2014), the primary evaluation criteria for the structural model were the measured value of $R^2$ and the level and significance of the path coefficients. The prediction-oriented goal of PLS approach was to explain the endogenous latent variables' variance, therefore, the key target constructs' level of $R^2$ should be high. In the assessment of $R^2$ value, the value has to be high enough to achieve a minimum level of explanatory power (Urbach & Ahlemann, 2010); where this minimum $R^2$ level was deemed adequate for the variance to explain a particular endogenous construct. According to Hair et al, the rule of thumb applied to the acceptability of $R^2$ of 0.25 was weak; 0.50 as moderate, and 0.75 as substantial. However, it is important not to be over reliant on $R^2$ which at times can be problematic since a model's quality assessment should be based on its ability to predict the endogenous constructs.

$R^2$ for FINT (0.392), OINT (0.377) and SN (0.339) were considered moderate, whereas ATT (0.050) and PBC (0.046) were weak. This effectively meant that the 4 latent variables (ATT, SN, PBC and PE), had substantially explained 39.2% of the variance in FINT, 37.7% in OINT, and 33.9% in SN. Based on the results, future intention to hire (FINT), overall intention to hire (OINT) and subjective norm (SN) demonstrated a moderate predictive accuracy. Table 4.15 presents the list of $R^2$ values for the endogenous variables.

**Table 4.15: List of Results of $R^2$**

| ENDOGENOUS VARIABLES | $R^2$ Square |
|---|---|
| ATT | 0.050 |
| FINT | 0.392 |
| OINT | 0.377 |
| PBC | 0.046 |
| SN | 0.339 |

Since the study was to predict managers' hiring intention and as it was always hard to predict human's intention, this made it difficult for the $R^2$ value to be very high.

The $f^2$ effect size measured the impact of a specific independent variable (exogenous construct) on a dependent variable (endogenous construct). The rule of thumb for effect size of $f^2$ of the exogenous latent variable in predicting the endogenous constructs was applied in the present study, these were 0.02 as small; 0.15 as medium; and 0.35 as large effect (Hair et al., 2014). Table 4.16 presents a summary of the $f^2$ effect sizes.

**Table 4.16: Effect Size $f^2$**

|  | ATT | FINT | OINT | PBC | SN |
|---|---|---|---|---|---|
| **AS** | 0.052 |  |  |  |  |
| **ATT** |  | 0.253 | 0.094 |  |  |
| **CB** |  |  |  | 0.048 |  |
| **MS** |  |  |  |  | 0.169 |
| **PBC** |  | 0.014 | 0.033 |  |  |
| **PE** |  | 0.004 | 0.021 |  |  |
| **PS** |  |  |  |  | 0.103 |
| **SN** |  | 0.086 | 0.151 |  |  |

Following the $f^2$ rule of thumb for effect size; ATT (0.253) had a moderate predictive impact on FINT, while PBC (0.014), PE (0.004) and SN (0.086) had small predictive impacts on FINT. In addition, SN (0.151) had a moderate predictive impact on OINT, while ATT (0.094), PBC (0.033) and PE (0.021) had small predictive impacts on OINT.

## 4.17    Total Effects Significance

The total effects calculation evaluated how strongly each of the 4 constructs (ATT, SN, PBC and PE) ultimately influenced the 2 dependent variables (OINT & FINT). Table 4.17 presents the summarized results of the significance testing of the total effects.

**Table 4.17: Significance Testing of the Total Effects**

|  | ATT | FINT | OINT | PBC | SN |
|---|---|---|---|---|---|
| **AS** | -0.223 | 0.095 | 0.059 | 0.000 | 0.000 |
| **ATT** | 0.000 | **-0.426** | **-0.263** | 0.000 | 0.000 |
| **CB** | 0.000 | 0.022 | 0.033 | 0.214 | 0.000 |
| **MS** | 0.000 | 0.096 | 0.129 | 0.000 | 0.380 |
| **PBC** | 0.000 | **0.101** | **0.156** | 0.000 | 0.000 |
| **PE** | 0.000 | **-0.049** | **0.120** | 0.000 | 0.000 |
| **PS** | 0.000 | 0.075 | 0.101 | 0.000 | 0.296 |
| **SN** | 0.000 | **0.253** | **0.340** | 0.000 | 0.000 |

On the effect on FINT, ATT (-0.426) had the strongest effect, next were PBC (0.101) and SN (0.253) which had moderate effect, followed by PE (-0.049) as small effect. On OINT, SN (0.340) had the strongest effect, whereas ATT (-0.263), PBC (0.156) and PE (0.120) were of moderate effect. The total effect assessment corresponded with the evaluation of the path coefficients where ATT and SN had strong predictive effects on OINT and FINT respectively.

## 4.18 The Structural Model Relationships

As per Figure 4.3, the structural model represents the paths, path relationships and hypotheses between the latent variables.
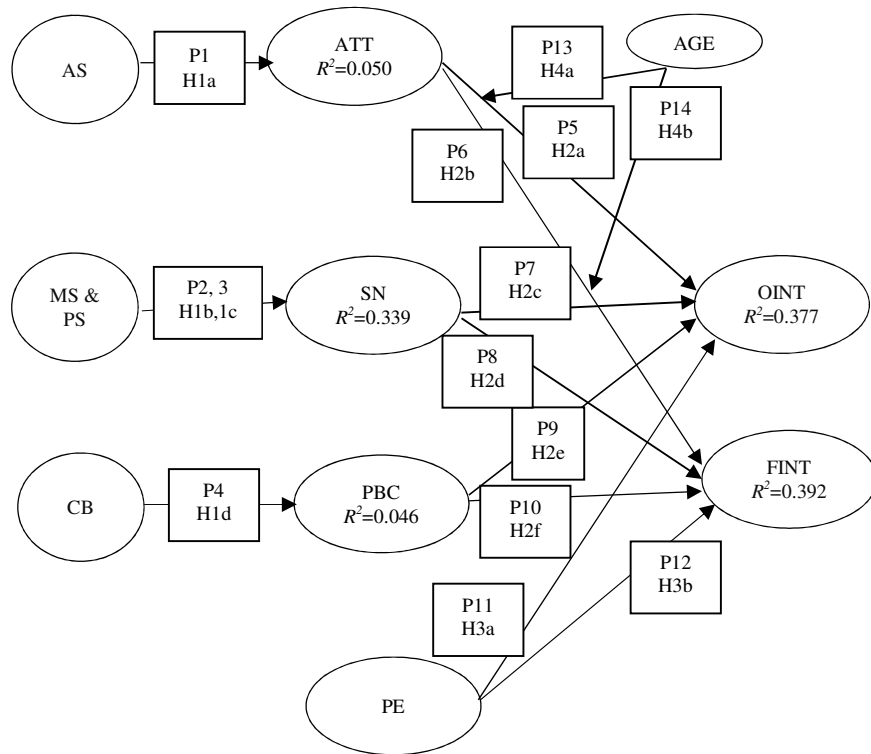


**Figure 4.3: Structural Model Presenting Path Relations and Hypotheses**

The significance of the path coefficients of the inner model was tested. Firstly, a PLS algorithm was performed to obtain the sizes of the path coefficients (the relevance of the relationships). Subsequently, bootstrapping option followed to generate the *t*-statistics for the path coefficients. A path coefficient was a standardized regression coefficient of *β* weight (Bryman & Cramer, 1990).

The set-up structural equations were:

$$OINT = \beta 1 ATT + \beta 2 SN + \beta 3 PBC + \beta 4 PE + e1$$

$$FINT = \beta 11 ATT + \beta 12 SN + \beta 13 PBC + \beta 14 PE + e2$$

According to Chin (1998b), path coefficients ranged below -0.2 or between 0.20–0.30 along with measures that explained 50% or more variance was acceptable. However, to Lohmoller (1989), path coefficients which ranged greater than 0.1 was acceptable. Following the rule of thumb in Hair et al. (2014), for an observation size above 1,000, then the standardized value of 0.20 and above was significant, and from 0.10 to 0.20 was considered acceptable, but any value below 0.10 was insignificant and therefore not acceptable. The path coefficients and the coefficients significance were used for hypotheses testing. Table 4.18 presents a summary of the structural model path coefficients.

**Table 4.18: A Summary of the Structural Model Path Coefficients**

|        | AS | ATT    | CB | FINT   | MS | OINT   | PBC   | PE | PS | SN    |
|--------|----|--------|----|--------|----|--------|-------|----|----|-------|
| AS     |    | -0.223 |    |        |    |        |       |    |    |       |
| ATT    |    |        |    | -0.426 |    | -0.263 |       |    |    |       |
| CB     |    |        |    |        |    |        | 0.214 |    |    |       |
| FINT   |    |        |    |        |    |        |       |    |    |       |
| MS     |    |        |    |        |    |        |       |    |    | 0.380 |
| OINT   |    |        |    |        |    |        |       |    |    |       |
| PBC    |    |        |    | 0.101  |    | 0.156  |       |    |    |       |
| PE     |    |        |    | -0.049 |    | 0.120  |       |    |    |       |
| PS     |    |        |    |        |    |        |       |    |    | 0.296 |
| SN     |    |        |    | 0.253  |    | 0.340  |       |    |    |       |

Based on the sizes, the results showed that AS had a negative effect (-0.223) on ATT. The effect on SN from MS (0.380) was stronger than SN from PS (0.296). MS on SN was significant and had a strong relationship (Chin, 1998b; Hair et al., 2014). The path coefficients values of AS, CB and PS fell within the range of 0.20 to 0.30 of significance and the relationship was moderate. On the exogenous constructs (ATT, SN, PBC and PE) predicting the endogenous constructs of OINT and FINT, the strongest effect came from ATT on FINT (-0.426), followed by SN on OINT (0.340), these two values indicated strong relationships and significance. Moderate relationships came from ATT on OINT (-0.263), and SN on FINT (0.253); and the acceptable level were PBC on FINT (0.101), PBC on OINT (0.156), and PE on OINT (0.120) which indicated weak relationships. As for PE on FINT (-0.049), it suggested no relationship and that the effect was the least.

A *T*-Test was used to test the significance of coefficient of the paths in hypotheses testing and the critical *t*-value for significance level was obtained by dividing path coefficient by std. error. As per Hair et al. (2014), the formula was: $t = \frac{P_{13}}{se^*_{P_{13}}}$

To achieve a significance level, the critical *t*-statistics has to be either 1.65@p<.10, 1.96@p<.05, or 2.58@p<.01 (Hair et al.). Bootstrapping was used to assess the empirical *t*-values for significance levels of 0.01, 0.05 and 0.10 (Hair et al.). Once the empirical values were obtained, a one-tailed test was calculated to test the hypotheses. Table 4.19 presents the *t*-value path coefficient significance. Figure 4.4 presents the *t*-values from Bootstrapping and path relationships.

**Table 4.19: *t*-value (Path Coefficient Significance)**

| Path | Original Sample | Standard Error | *t*- Value |
|---|---|---|---|
| AS -> ATT | -0.223 | 0.047 | 4.722 |
| ATT -> FINT | -0.426 | 0.044 | 9.730 |
| ATT -> OINT | -0.263 | 0.048 | 5.494 |
| CB -> PBC | 0.214 | 0.094 | 2.283 |
| MS -> SN | 0.380 | 0.056 | 6.793 |
| PBC -> FINT | 0.101 | 0.059 | 1.721 |
| PBC -> OINT | 0.156 | 0.047 | 3.301 |
| PE -> FINT | -0.049 | 0.044 | 1.116 |
| PE -> OINT | 0.120 | 0.044 | 2.734 |
| PS -> SN | 0.296 | 0.061 | 4.890 |
| SN -> FINT | 0.253 | 0.051 | 4.975 |
| SN -> OINT | 0.340 | 0.058 | 5.849 |
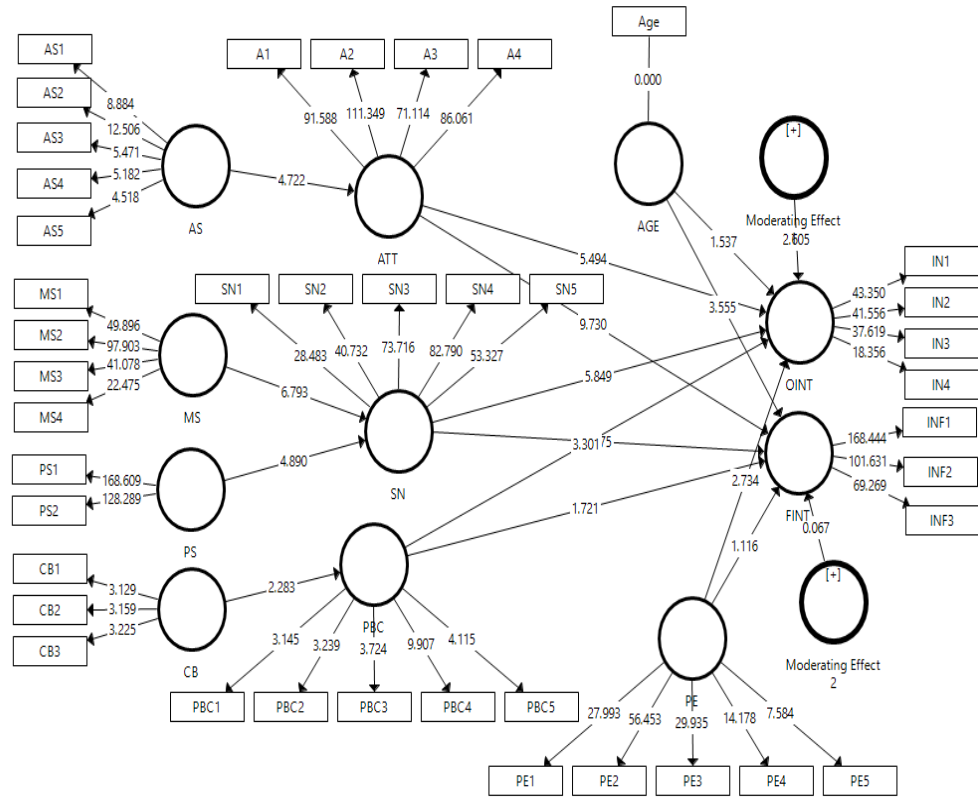
**Figure 4.4: Research Model on *t*-values from Bootstrapping**

## 4.19    Testing Hypotheses for Research Question 1

From the 4 outer model paths, each hypothesis in Research Question no. 1 was
tested accordingly. The summarised results from Path 1 to Path 4 are presented
in Table 4.20. All 4 alternate hypotheses were found to be supportive.

**Table 4.20: Summary of Significance Testing Result of the
Structural Model Path Coefficients for Outer Model (RQ1)**

| Path | Path Description | | | Path coefficient β value | *t* Value | P Values | Significant Levels |
|------|------|------|------|------|------|------|------|
| P1 | AS | → | ATT | -0.223 | 4.722 | 0.000 | Yes*** |
| P2 | MS | → | SN | 0.380 | 6.793 | 0.000 | Yes*** |
| P3 | PS | → | SN | 0.296 | 4.890 | 0.000 | Yes*** |
| P4 | CB | → | PBC | 0.214 | 2.283 | 0.023 | Yes** |

Note: *1.65=p<0.10, **1.96=p<0.05, ***2.58=p<0.01.

### 4.19.1 Path P1: AS→ATT

> H1a: There is a relationship between age stereotypes and managers' attitude toward older workers.

The β value of path coefficient for AS to ATT (-0.223) was above the -0.20 threshold and that the relationship was moderate (Chin, 1998b). Therefore, this value was accepted and was statistically significant.

For a negative path coefficient, AS effects negatively to ATT, such that when ATT increased by 1 standard deviation (SD), AS decreased 0.223 in SD. A negative path coefficient was interpreted in the same way as positive standardized regression coefficients. In terms of effect size, path P1 had the 3$^{rd}$ position among all the four β values. The std. error μ=0.047, as such, the empirical $t$-value =-0.223/0.047=4.722. This was larger than the theoretical value of 2.58, and therefore the relation between AS and ATT was significant @p<.01 confidence level (Hair et al., 2014). Hence, there was significance evidence that AS had a negative relationship with ATT. H1a was supported.

### 4.19.2 Path P2: MS→SN

> H1b: There is a relationship between management's support and subjective norm.

The β value for the path coefficient from MS to SN was 0.380. As this was above the 0.30 threshold and the relationship was strong, the value was accepted and statistically significant (Chin, 1998b). This P2 path had the highest position in terms of effect size among all four β values on path relations for research question no.1. The std. error μ=0.056, as such the empirical $t$-value

=0.380/0.056=6.793. As this was larger than the theoretical value of 2.58, the relationship between MS and SN was significant @p<.01 confidence level (Hair et al., 2014). Hence, there was significant evidence that MS had a positive relationship with SN. H1b was supported.

### 4.19.3 Path P3: PS → SN

H1c:    There is a relationship between peers' support and subjective norm.

The β value for path coefficient from PS to SN =0.296. As this value was above the 0.20 threshold; therefore, the β value was accepted and was statistically significant (Chin, 1998b). The relationship was moderate. Among all the four β values on path relations in research question no. 1, path P3 had the 2$^{nd}$ greatest effect size. The std. μ=0.061, as such the empirical *t*-value =0.296/0.061=4.890 was larger than the theoretical value of 2.58. Therefore the relation between PS and SN was significant @p<.01 confidence level (Hair et al., 2014). Hence, there was significant evidence that PS had a positive relationship with SN. H1c was supported.

### 4.19.4 Path P4: CB→PBC

H1d:    There is a relationship between control beliefs and perceived behavioural control.

The β value for path coefficient from CB to PBC=0.214, and this value was above the 0.20 threshold. It was accepted and statistically significant (Chin, 1998b). There was a moderate relationship. The std. μ=0.094, as such the empirical *t*-value =0.214/0.094=2.283 which was larger than the theoretical

value of 1.96; therefore the relation between CB and PBC was significant @p<.05 confidence level (Hair et al., 2014). Among all the four β values on path relations in research question no. 1, path P4 had the lowest effect size. However, this was still significant evidence that CB had a positive relationship with PBC. H1d was supported.

## 4.20 Testing Hypotheses for Research Questions 2

From the 6 inner model paths, each hypothesis in Research Question no. 2 was tested accordingly and the summarised results for Path 5 to Path 10 and their significance levels were presented in Table 4.21. All 6 alternate hypotheses were found to be supportive.

**Table 4.21: Summary of Significance Testing Result
of the Structural Model Path Coefficients
for Inner Model (RQ2)**

| Path | Path Description | | | Path coefficient β value | *t* Value | P Values | Significant Levels |
|------|------|------|------|------|------|------|------|
| P5 | ATT | → | OINT | -0.263 | 5.494 | 0.000 | Yes*** |
| P6 | ATT | → | FINT | -0.426 | 9.730 | 0.000 | Yes*** |
| P7 | SN | → | OINT | 0.340 | 5.849 | 0.000 | Yes*** |
| P8 | SN | → | FINT | 0.253 | 4.975 | 0.000 | Yes*** |
| P9 | PBC | → | OINT | 0.156 | 3.301 | 0.001 | Yes*** |
| P10 | PBC | → | FINT | 0.101 | 1.721 | 0.086 | Yes* |

Note: NS=not significant, *p<.10, **p<.05, ***p<.01

### 4.20.1 Path P5: ATT→OINT

H2a: There is a relationship between attitude and managers' overall intention to hire older workers.

On the β value for hypothesized path relations between ATT and OINT, the β value (-0.263) was above the -0.20 threshold. The relationship was moderate. For a negative path coefficient, ATT effected negatively to OINT such that

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when ATT increased 1 SD, OINT decreased 0.263 in SD. A negative path coefficient was interpreted in the same way as a positive standardized regression coefficient. Among all the six β values, ATT had the 3$^{rd}$ position in terms of effect size. The std. error μ=0.048, as such the empirical *t*-value =- 0.263 /0.048=5.494 was larger than the theoretical value of 2.58; therefore the relation between ATT and OINT was significant @p<.01 confidence level (Hair et al., 2014). Hence, there was significant evidence that ATT had a negative relationship with OINT. H2a was supported.

### 4.20.2  Path P6: ATT→FINT

H2b:  There is a relationship between attitude and managers' future intention to hire older workers.

On the β value for hypothesized path relations between ATT and FINT, the β value (-0.426) was above the -0.30 threshold (Chin, 1998b) indicating a strong relationship. Among all the six β values on path relations for research question no. 2, this path had the strongest position in terms of effect size. A negative path coefficient was interpreted in the same way as a positive standardized regression coefficient. For a negative path coefficient, ATT effects negatively to FINT when ATT increased by 1 SD, FINT decreased 0.426 SD.

The std. error μ=-0.426, the empirical *t*-value =-0.426/0.044=9.730 which was larger than the theoretical value of 2.58; therefore the relationship between ATT and FINT was significant @p<.01 confidence level (Hair et al., 2014). Hence, there was significant evidence that ATT had a negative relationship with FINT. H2b was supported.

### 4.20.3 Path P7: SN → OINT

H2c: There is a relationship between subjective norm and managers' overall intention to hire older workers.

On the hypothesized path relations between SN and OINT, the path coefficient β value =0.340 which was above the 0.30 threshold indicating a strong relationship. Hence it was accepted and statistically significant (Chin, 1998b). Among all the six β values on path relations for research question no. 2, this path P7 had the 2<sup>nd</sup> position in terms of effect size.

The std. $\mu$=0.058, and the empirical *t*-value =0.340/0.058=5.849 was larger than the theoretical value of 2.58, therefore the relationship between SN and OINT was significant @p<.01 confidence level (Hair et al., 2014). Hence, there was significant evidence that SN had a positive relationship with OINT. H2c was supported.

### 4.20.4 Path P8: SN→FINT

H2d: There is a relationship between subjective norm and managers' future intention to hire older workers.

On the hypothesized path relations between SN and FINT, the path coefficient β value =0.253 was above the 0.20 threshold; it indicated a moderate relationship, hence it was accepted was and statistically significant (Chin, 1998b). Among all the six β values on path relations, SN had the 4<sup>th</sup> position in terms of effect size. The std. $\mu$=0.051, and the empirical *t*-value =0.253/0.051=4.975 was larger than the theoretical value of 2.58; therefore the relationship between SN and FINT was significant @p<.01 confidence level

(Hair et al., 2014). Hence, there was significant evidence that SN had a positive relationship with FINT. H2d was supported.

### 4.20.5 Path P9: PBC→OINT

H2e: There is a relationship between perceived behavioural control and managers' overall intention to hire older workers.

The β value for hypothesized path relations between PBC and OINT=0.156 which was below the 0.20 threshold (Chin, 1998b). Among all the six β values, PBC→OINT had the $2^{nd}$ lowest position in terms of effect size. This low β value was due to low correlations for PBC1=0.638; PBC2=0.652; PBC3=0.729; PBC4=0.899 and PBC5=0.757, this resulted in a weak relationship. However, this value was accepted (Hair et al., 2014; Lohmoller, 1989) albeit may not be significant due to its observed size that was below 1,000. The std. μ=0.047, and the empirical *t*-value =0.156/0.047=3.301 was larger than the theoretical value of 2.58; therefore the relationship between PBC and OINT was significant @p<.01 confidence level (Hair et al., 2014). Hence, there was significant evidence that PBC had a positive relationship with OINT. H2e was supported.

### 4.20.6 Path P10: PBC→FINT

H2f: There is a relationship between perceived behavioural control and managers' future intention to hire older workers.

The β value for hypothesized path coefficient for path P10=0.101 which was below the 0.20 threshold. As per Chin (1998b), it was statistically insignificant. However, it was at the acceptable level in Hair et al. (2014) and Lohmoller

(1989); even though the value was above the 0.10 threshold, it still indicated a weak relationship. Among all the six β values, this path had the lowest position in terms of effect size, which suggested that PBC did not either directly predict FINT or actually had a weak prediction. The std. $\mu$=0.059, and the empirical $t$-value =0.101/0.059=1.721, it indicated that the $t$-value was above the theoretical value of 1.65; therefore the relationship between PBC and FINT was significant @$p$<.10 confidence level (Hair et al.). Hence, there was significant evidence that PBC had a positive relationship with FINT. H2f was supported.

## 4.21 Testing Hypotheses for Research Question 3

Two hypotheses in Research Question no. 3 were tested accordingly and the summary of results for Paths 11 and 12 and their significance levels were presented in Table 4.22. From the 2 hypotheses, H3a was supported while H3b was not supportive of the hypothesis.

**Table 4.22: Summary of Significance Testing Result
of the Structural Model Path Coefficients
for Inner Model (RQ3)**

| Path | Path Description | | | Path coefficient β value | $t$ Value | P Value | Significant Levels |
|------|------|------|------|------|------|------|------|
| P11 | PE | → | OINT | 0.120 | 2.734 | 0.006 | Yes*** |
| P12 | PE | → | FINT | -0.049 | 1.116 | 0.265 | NS |

*Note: NS=not significant, \*p<.10, \*\*p<.05, \*\*\*p<.01*

### 4.21.1 Path P11: PE→OINT

H3a:   There is a relationship between past experience and managers' overall intention to hire older workers.

On the relationship between PE and OINT, β =0.120, which was below the 0.20 threshold; the low β value was due to low correlations for individual indicators at PE1=0.836; PE2=0.898; PE3=0.834; PE4=0.794 and PE5=0.531. Therefore, this β value was unacceptable and statistically insignificant (Chin, 1998b), the low β value indicated that the relationship was weak. In addition, Path P11 was also weak in terms of effect size. However, this 0.120 was accepted since the value was above the 0.10 threshold (Hair et al., 2014; Lohmoller, 1989).

The std. error μ=0.044, and the empirical t-value =0.120/0.044=2.734 indicating that the relationship between PE and OINT was still significant at a level of 1% confidence level as the *t*-value was larger than the theoretical value of 2.58 (Hair et al., 2014), Hence, it was concluded that there was a significant relationship between PE and OINT. As such, H3a was supported.

### 4.21.2 Path P12: PE→FINT

H3b:   There is a relationship between past experience and managers' future intention to hire older workers.

The path coefficient β value for PE to FINT was -0.049, which was below the -0.20 threshold. As such, it was unacceptable and statistically insignificant (Hair et al., 2014; Lohmoller, 1989). From the findings, the β value indicated a weak effect size, and that PE did not directly predict FINT. For a negative path

coefficient, this indicated that PE effects negatively to FINT where when FINT increased 1 SD, PE decreased 0.049 in SD. A negative path coefficient was interpreted in the same way as of a positive standardized regression coefficient.

Although the β value of PE1=0.836, PE2=0.898, PE3=0.834, and PE=0.794 were all above the 0.70 level, PE5 was at 0.531. The std. error $\mu$=0.044, the $t$-value=1.116, and this failed to meet the minimum threshold of 1.65; therefore, it was insignificant (Hair et al., 2014). The low $t$-value was due to individual indicators where PE1=27.993, PE2=56.453, PE3=29.935, PE4=14.178 and PE5=7.584, especially the low PE5, which rendered the mean $t$-value to fall below the critical acceptable threshold. Another reason was that the 3 questions (PE1, PE2 and PE3) were adopted from Lu et al. (2011) which were tested earlier. Hence, in this current study, they received higher values, but for PE4 and PE5, these were adapted for the study and they had never been tested except during the pilot test. Moreover, PE was an additional predictor added to the original TPB model, and as such had not been tested often. Such being the case, the null hypothesis of no relationship in the population (r = 0) could not be rejected.

### 4.22    Testing Hypotheses for Research Question 4

Two hypotheses were tested accordingly. The summarised results of age as a moderator on the relationships ATT→OINT and ATT→FINT (Paths 13 and 14) and their significance levels were presented in Table 4.23. From the 2 hypotheses, path coefficients and the effect of interaction moderator (age) were discussed.

**Table 4.23: Summary of Significance Testing Result
of the Structural Model Path Coefficients
for Inner Model (RQ4)**

| Path | Path Description | | | Path coefficient β value | *t* Value | P Value | Significant Levels |
|------|------|------|------|------|------|------|------|
| P13 | AGE | → | ATT/OINT | 0.109 | 2.605 | 0.009 | Yes*** |
| P14 | AGE | → | ATT/FINT | 0.003 | 0.067 | 0.947 | NS |

*Note: NS=not significant, *p<.10, **p<.05, ***p<.01*

### 4.22.1  Path P13: Testing the Moderating Effect of Age on ATT →OINT

H4a: Managers' age has an impact on the relationship between attitude toward older workers and overall hiring intention.

On the hypothesized path relations of age as a moderator on the relationship between ATT and OINT, the path coefficient β=0.109, t-value=2.605 and p value=0.009. These values were significant @ p<0.01 level (Hair et al., 2014; Lohmoller, 1989). H4a was supported.
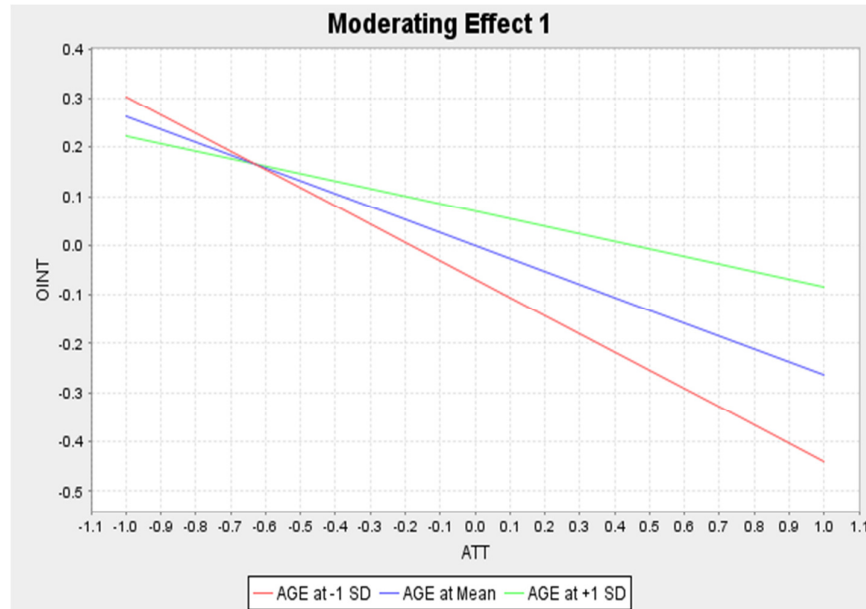


**Figure 4.5: Moderating Effect of Age on the ATT and OINT**

The path coefficient β=0.109 indicated a positive relationship. From Figure 4.5, all the 3 sets of lines began from above the mean (0.107) and gradually moved down to below the mean. With the red line being the lowest, the blue line was in the middle indicated a regular effect of age on attitude (ATT) and overall intention (OINT). The green line was the highest closest to the mean @+1 SD active coping. Therefore, on the interaction term ATT*AGE, it has a positive effect on OINT, t-value =2.605, P value=0.009, it was significant @0.01 confidence level.

The path relation of Age to OINT was 0.070, and the effect size of moderating effect from F Square 0.019. As this value was below 0.10, it indicated that the size was very small and rendered it not meaningful. The F square of 0.019 was also in line with the small path value of 0.070.

Therefore, it was concluded that there existed a positive moderating effect of age on the relationship between ATT and OINT although the effect size was small. H4a was supported.

### 4.22.2  Path P14: Testing the Moderating Effect of Age on ATT →FINT

H4b:  Managers' age has an impact on the relationship between attitude toward older workers and future hiring intention.

On the hypothesized path relations of age on path between ATT and FINT, the path coefficient β=0.003. This value was below the 0.20 threshold; making it unacceptable and statistically insignificant (Chin, 1998b). T value =0.067,

p=0.947, both these values were also insignificant and as such H4b was not supported.
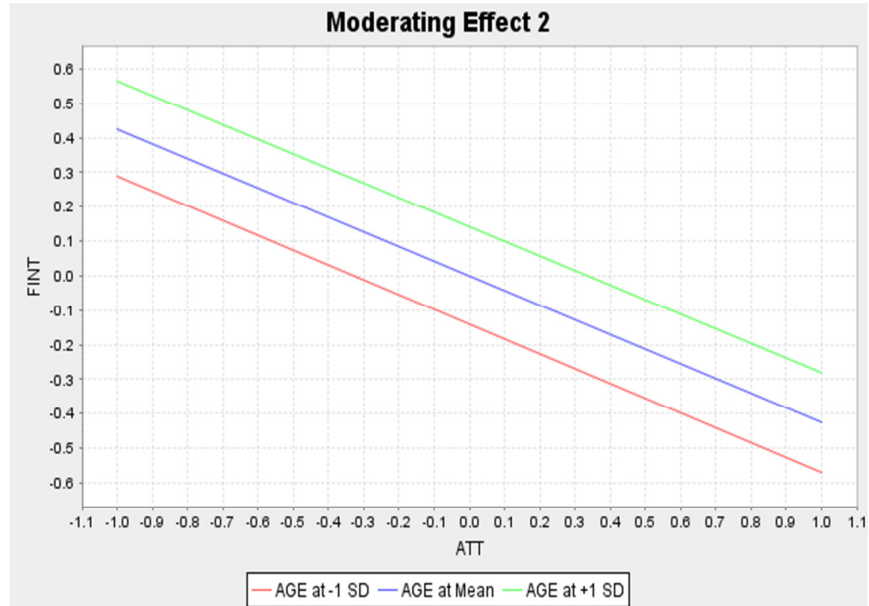


**Figure 4.6: Moderating Effect of Age on the ATT and FINT**

In the moderating effect, the path coefficient β=0.003, t value=0.067 and p value =0.947 indicating that there was a positive relationship, but was insignificant. In Figure 4.6, all 3 sets of lines began from above the mean and gradually moved down to below the mean, the red line being the lowest, blue line in the middle, whereas the green line was the highest and closest to the mean @+1 SD active coping. The blue line indicated the regular effect of age on ATT and FINT. Therefore, on the interaction term ATT*AGE, it had a positive effect on FINT. However, the positive slope at low values of the moderator gradually moved towards a negative slope at high values. Therefore, the moderating effect was insignificant.

F Square of path relation of Age to FINT was 0.030. The moderating effect at 0.000 was below 0.10 indicating no moderating effects. The 0.000 was also in line with the small path value of 0.141. Therefore, although there was evidence of a positive significant relationship of Age on paths between Age and FINT; there was no moderating effect of age on the relationship between ATT and FINT. This confirmed that H4b was not supported.

## 4.23  Summary of Hypotheses Testing

In total, 14 hypothesized relationships were tested and the results found support for 12 hypotheses (H1a, H1b, H1c, H1d, H2a, H2b, H2c, H2d, H2e, H2f, H3a and H4a), with 2 hypotheses not being supported (H3b, H4b). Table 4.22 presents the overall test results for the structural model for both outer and inner models. Implications of these hypothesized results are discussed in Chapter 5.

**Table 4.24: Structural Model: Summary of Test Results**

| Path | Path Descriptions | | | Hypothesis | B Value | $t$ Value | P Value | Significant Levels |
|------|------|------|------|------|------|------|------|------|
| | | | | **Outer Model** | | | | |
| P1 | AS | → | ATT | H1a | -0.223 | 4.722 | 0.000 | Yes*** |
| P2 | MS | → | SN | H1b | 0.380 | 6.793 | 0.000 | Yes*** |
| P3 | PS | → | SN | H1c | 0.296 | 4.890 | 0.000 | Yes*** |
| P4 | CB | → | PBC | H1d | 0.214 | 2.283 | 0.023 | Yes** |
| | | | | **Inner Model** | | | | |
| P5 | ATT | → | OINT | H2a | -0.263 | 5.494 | 0.000 | Yes*** |
| P6 | ATT | → | FINT | H2b | -0.426 | 9.730 | 0.000 | Yes*** |
| P7 | SN | → | OINT | H2c | 0.340 | 5.849 | 0.000 | Yes*** |
| P8 | SN | → | FINT | H2d | 0.253 | 4.975 | 0.000 | Yes*** |
| P9 | PBC | → | OINT | H2e | 0.156 | 3.301 | 0.001 | Yes*** |
| P10 | PBC | → | FINT | H2f | 0.101 | 1.721 | 0.086 | Yes* |
| P11 | PE | → | OINT | H3a | 0.120 | 2.734 | 0.006 | Yes*** |
| P12 | PE | → | FINT | H3b | -0.049 | 1.116 | 0.265 | NS |
| P13 | AGE | → | ATT/OINT | H4a | 0.109 | 2.605 | 0.009 | Yes*** |
| P14 | AGE | → | ATT/FINT | H4b | 0.003 | 0.067 | 0.947 | NS |

*Note: NS=not significant, \*p<.10, \*\*p<.05, \*\*\*p<.01*

## 4.24    Chapter Summary

This chapter analysed and explained the test results among multiple variables; these including the interrelationships of attitude, subjective norm, perceived behaviroual control and past experience in relation to managers' overall and future hiring intention with age as a moderator. As per PLS application, the data was tested in two phases. The first phase, utilising SPSS tools, began on preliminary data analysis, outliers, normality, and demographic descriptive analysis.

For the second phase, in stage 1, PLS3 was utilised to conduct factor loadings and analysis, reliability and validity. This was followed by stage 2 where the assessment of collinerity and coefficient of determination were discussed. An initial testing on hypotheses in accordance with the research questions were carried out. All hypotheses were tested and the results obtained were explained in detail. Moderating effects of age on paths between attitude and overall intention, and between attitude and future intention were analysed.

In the following chapter, a detail discussion on research questions, tested hypotheses, research objectives, current research limitation, future research recommendations and implications are presented accordingly.

# CHAPTER 5

## DISCUSSION, IMPLICATION AND CONCLUSION

### 5.1    Introduction

This chapter is divided into 6 sections and is intended mainly to provide a general discussion, inter alia, findings, research implications, and future research direction. In this research, quantitative data was collected from 11 industries from the 9 locations via personal administration. To make sense of the 468 sets of data collected, an extended TPB model was employed to guide the hypotheses created from literature reviewed and previous research findings. The potential relationships between the identified variables were organised accordingly. From the analysed results, managers seemed to be positive towards hiring older workers, which seen from the positive relationships of the antecedents of intention to hire, with the exception of attitude, where a negative relationship was observed. In any event, all hypotheses were found to be supportive of managers' overall hiring intention, except for 2 hypotheses in the future hiring intention. The following sections provide further overall discussions of this study.

### 5.2    An Overview of the Doctoral Research

In this study, TPB was recognised as one of the most appropriate theories in investigating human intention, and the number of past literatures that have successfully tested the TPB theory was substantial. Most of the literature reviewed were from foreign countries, although there have been some local

studies on older people and workers. However, these studies were generally on national policies, social security, health, community care, and customer behaviour (e.g. Lim et al., 2011), on financial aspects of EPF's fund utilization (e.g. Chan et al., 2010), and retirement age policy (e.g. Lai & Comeau, 2012). In addition, there were also studies on employment issues concerning older persons (e.g. Chan & Masud, 2007) and on the areas of challenges and issues of older people (e.g. Tengku Abdul Hamid, 2015). In recent years, studies have expanded the original TPB in a variety of ways and have applied it in areas such as intention to hire qualified workers with disabilities by Ang et al. (2015) and Fraser et al. (2011), purchasing intention by Moon, Ryu and Lee (2012), turnover intention by Cho and Lewis (2012) and intention to quit smoking (Soulakova et al., 2017), just to name a few.

However, thus far, there has been no known study that investigated into managers' hiring intention of older workers with the incorporation of several salient points from the MRAA 2012 as part of the study's variables.

The 4 objectives of this research were: (1) to investigate whether age stereotypes, management support, peers' support and control belief are related to attitude towards older workers, subjective norm and perceived behavioural control; (2) to examine the relationship of each of the determinant variables of attitude, subjective norm and perceived behavioural control on managers' intention to hire older workers; (3) to apply an extended theory of planned behaviour with past experience to test its relationship with managers' intention to hire older workers, and (4) to test the impact of managers' age on the

relationships between managers' attitude and their intention to hire older workers. From these 4 objectives, a conceptual model was developed, based on an extended TPB. Three determinants (attitude, subjective norm and perceived behavioural control) from the original theory were used as the antecedents of intention, and an additional determinant (past experience) was identified as the new antecedent of intention. In addition, age was posited to moderate the relationships between attitude and intention. Finally, the outcome of intention was separated into 2 parts, the overall intention of managers to hire older workers, and the future hiring intention. The future hiring intention referred to managers' intention to hire older workers within a 12 months' period beginning from the time managers participated in the present survey.

From the data analysed, this study has contributed to the exploration of managers' overall and future intention to hire older workers for their organizations. The analysis suggested that basically, managers have strong overall hiring intention, where all the 4 hypotheses between the constructs to predictors were supported. On the antecedents of hiring intention, all 6 hypotheses were supported. On the outcome of past experience on overall intention, it was supported. However, future hiring intention was not supported. As for the moderating effect of age, there was an interactive moderation on overall intention to hire; but, not in the case of future hiring intention.

The conceptual model was developed and used as the research framework to test all the 14 hypotheses; that have been derived from the 4 general questions and 14 specific questions. The general questions were:

Q1: Whether age stereotypes, management support, peers' support and control beliefs are related to attitude towards older workers, subjective norm and perceived behavioural control respectively?

Q2: Whether attitude towards older workers, subjective norm and perceived behavioural control are related to managers' intention to hire older workers?

Q3: Whether an addition of a past experience variable to the identified variables within the Theory of Planned Behaviour model is related to managers' intention to hire older workers?

Q4: Whether the age of managers has any impact on the relationship between their attitude toward older workers and intention to hire them?

The summary of hypotheses testing results is presented in Table 5.1.

## 5.3    Discussion of the Findings

Table 5.1 outlines the summary of the 4 research questions, the 14 sets of hypotheses and related results for systematic discussion. From the data collected, there were 468 responding managers who were categorised into 4 main age groups: Age 30 and below (Age group 1); from 31 to 40 (Age group 2); from 41 to 50 (Age group 3); and age 51 and above (Age group 4).

**Table 5.1: Summary of Results of Hypotheses Testing and Corresponding Research Questions**

| No. | Research Questions and Hypotheses | P value | Result |
|---|---|---|---|
| **Research Question Q1: Whether age stereotypes, management support, peers' support and control beliefs are related to attitude towards older workers, subjective norm and perceived behavioural control respectively?** | | | |
| H1a | There is a relationship between age stereotypes and managers' attitude towards older workers. | 0.000 | Supported |
| H1b | There is a relationship between management support and subjective norm. | 0.000 | Supported |
| H1c | There is a relationship between peers' support and subjective norm. | 0.000 | Supported |
| H1d | There is a relationship between control beliefs and perceived behavioural control. | 0.023 | Supported |
| **Research Question Q2: Whether attitude towards older workers, subjective norm and perceived behavioural control are related to managers' intention to hire older workers?** | | | |
| H2a | There is a relationship between attitude and managers' overall intention to hire older workers. | 0.000 | Supported |
| H2b | There is a relationship between attitude and managers' future intention to hire older workers. | 0.000 | Supported |
| H2c | There is a relationship between subjective norm and managers' overall intention to hire older workers. | 0.000 | Supported |
| H2d | There is a relationship between subjective norm and managers' future intention to hire older workers. | 0.000 | Supported |
| H2e | There is a relationship between perceived behavioural control and managers' overall intention to hire older workers. | 0.001 | Supported |
| H2f | There is a relationship between perceived behavioural control and managers' future intention to hire older workers. | 0.086 | Supported |
| **Research Question Q3: Whether an addition of a past experience variable to the identified variables within the Theory of Planned Behaviour model is related to managers' intention to hire older workers?** | | | |
| H3a | There is a relationship between past experience and managers' overall intention to hire older workers. | 0.006 | Supported |
| H3b | There is a relationship between past experience and managers' future intention to hire older workers. | 0.265 | Not Supported |
| **Research Question Q4: Whether the age of managers has any impact on the relationship between their attitude towards older workers and intention to hire them?** | | | |
| H4a | Managers' age has an impact on the relationship between attitude towards older workers and overall hiring intention. | 0.009 | Supported |
| H4b | Managers' age has an impact on the relationship between attitude towards older workers and future hiring intention. | 0.947 | Not Supported |

### 5.3.1 Outcomes of Research Question 1

4 hypotheses were formulated to test the relationships of age stereotypes, management support, peers' support and control belief on the predictors of attitude, subjective norm and perceived behavioural control respectively. The following discusses the 4 supported hypotheses. In view of the supported hypotheses, it is concluded that Research Question 1 has been answered. In addition, research objective 1 which was intended to investigate the relationships between age stereotypes, management support, peer's support and control beliefs with attitude towards older workers, subjective norm and perceived behavioural control, were met accordingly. Table 5.2 presents a brief result on all the 4 hypotheses.

**Table 5.2: Hypotheses and Summary of Results**
**for Research Question 1**

| No. | Hypotheses | Result |
|-----|------------|--------|
| H1a | There is a relationship between age stereotypes and managers' attitude towards older workers. | Supported |
| H1b | There is a relationship between management support and subjective norm. | Supported |
| H1c | There is a relationship between peers' support and subjective norm. | Supported |
| H1d | There is a relationship between control beliefs and perceived behavioural control. | Supported |

### 5.3.1.1 H1a: AS→ATT

The indirect measurement of H1a on age stereotypes and attitude was found related at $p<.01$ level. On item AS1, age groups with a substantial number of respondents are discussed as below. 357 managers from Age group 2 generally

agreed that older workers do not resist change. For item AS2, 342 managers from Age groups 2 and 3 agreed that older workers have the ability to learn new skills as easily as other employees. For item AS3, 427 managers also from Age group 2 and 3 agreed that older workers do not increase production costs. 382 managers from Age groups 2 and 3 generally agreed with item AS4 that older workers turn out quality work. On item AS5, there were 446 managers from Age groups 2, 3 and 4 who agreed that older workers were unlikely to job-hop. The results further showed that managers' age groups 1, 2 and 3 generally held positive age stereotypes on older workers. Overall, the number of positive responses was actually overwhelming.

A relationship was established between age stereotypes and attitude. However, as per Hair et al. (2014), the relationship was a weak one ($R^2$=0.05). Attitude was formed based on age stereotypes ($\beta$=-0.223; $t$=4.722); this negative relationship was the result of the managers' overwhelming agreement to all the 5 questions (change resistance, learning ability, production cost, quality output and job-hop). This overwhelming response also explained the values of Cronbach's alpha (0.672), composite reliability (0.787) and AVE (0.432) which were the lowest among all the values in the research model. The standardized factor loadings showed unidimensional evidence which ranged from 0.519 to 0.810, and these loadings met the minimum criterion of 0.40 (Hair et al., 2014).

This present study established that attitude comprised the behavioural belief which was the age stereotypes. H1a was supportive of TPB on age stereotypes which were related to one's attitude (Ajzen, 1991). H1a further supported earlier literature reviewed (Auer & Fortuny, 2000; Chiu et al., 2001; Hassell & Perrewe, 1995; Huang, 2007; Kluge & Krings, 2008) in that, older workers' job performance was related to managers' attitude towards them. In addition, older workers' employment tenure was related to managers' attitude such that negative age stereotypes influenced managers' unwillingness to hire older workers (Gavenlock, Gale & Foley, 1995; Hassell & Perrewe, 1995). However, this present result of older workers not resistant to change can be distinguished from Lee et al. (2007) and Munnell et al. (2006).

H1a and the above discussion answered the specific question Q1(1a) which asked whether age stereotype was related to managers' attitude towards older workers.

### 5.3.1.2 H1b: MS→SN

H1b was supported and was significant at p<.01 level. A relationship was established between management support and subjective norm. This establishment of relationship also answered the specific question Q1(1b) on whether management support is related to subjective norm.

For all 4 questions answered by the 468 managers, age groups with substantial number of respondents are discussed as below. For item MS1, 247 managers from Age groups 2 and 3 agreed that their top management approved their

hiring of older workers. For item MS2 on approval from HR managers, there were 256 managers from Age groups 2 and 3 who agreed to the statement, but there were 99 managers from Age groups 1 and 2 who disagreed. For item MS3, 115 managers from Age groups 1 and 2 disagreed that their companies encouraged them to hire older workers, and many from Age groups 2 and 3 remained neutral. Nevertheless, a total of 199 managers from all the 4 age groups agreed that their companies encouraged them to hire older workers. On the last item MS4, there were 360 managers from all 4 age groups who agreed that their companies' senior management was committed to hire older workers.

Subjective norm was partially formed based on management support ($\beta$=0.380; $t$=6.793). The values of Cronbach's alpha (0.865), composite reliability (0.908) and AVE (0.713) were all above the acceptable levels recommended by Bagozzi and Yi (1988) and Fornell and Larcker (1981). The standardized factor loadings showed unidimensional evidence ranging from 0.745 to 0.910, and these loadings met the minimum criterion of 0.40 (Hair et al., 2014).

### 5.3.1.3 H1c: PS→SN

H1c was supported and the significance was at p<.01 level. A relationship was established between peers' support and subjective norm. The establishment of relationship answered the specific question Q1(1c) whether peers' support is related to subjective norm.

There were 2 questions which were answered by the 468 managers. For item PS1, 180 managers from Age groups 1, 2 and 3 disagreed that their colleagues think they should hire older workers; and that 179 managers from Age groups 2 and 3 stayed neutral. However, a total of 189 managers from all the 4 Age groups agreed that their colleagues think they should hire older workers. On item PS2, there were 174 managers from Age groups 2 and 3 who disagreed that their colleagues encouraged them to hire older workers, and 172 from Age groups 2 and 3 picked neutrality. Nonetheless, there were 122 managers from all the 4 age groups agreed on colleagues' encouragement.

Subjective norm was partly formed based on peers' support ($\beta$=0.296; $t$=4.890). For the variables of subjective norm, the values of Cronbach's alpha (0.903), composite reliability (0.954) and AVE (0.911) were among the highest in the study model. The standardized factor loadings showed unidimensional evidence ranging from 0.951 to 0.958, and these loadings were above the threshold value (Hair et al., 2014).

Collectively, for H1b and H1c, relationships were established between H1b on management support and subjective norm; and H1c on peers' support and subjective norm. Hence both H1b and H1c were supported. For the items in H1b (MS) and H1c (PS), generally, the numbers of respondents to the above respective questions were evenly distributed. The relationship between management and subjective norm and peer's support and subjective norm was moderate ($R^2$=0.339) as per Hair et al. (2014).

**5.3.1.4 H1d: CB→PBC**

H1d was supported and significant @p<.10 level. A relationship was established between control belief and perceived behavioural control. The establishment of relationship answered the specific question Q1(1d) on whether control belief is related to perceived behavioural control.

Of the 3 questions answered by the 468 managers, the age groups with substantial number of respondents are explained as below. For item CB1, there were 151 managers from Age groups 1, 2 and 3 disagreed that their hiring of older workers was encouraged by the MRAA 2012; however, 128 managers from the same age group stayed neutral. On the other hand, 189 managers from Age groups 2, 3 and 4 agreed to the encouragement by MRAA 2012. For item CB2 on offences avoidance, 175 managers from Age groups 1, 2 and 3 disagreed, and 130 managers from Age groups 2 and 3 preferred to stay neutral. However, there were 163 managers from Age groups 2 and 3 who stated their agreement to the statement. On item CB3, there was an overwhelming response from 214 managers of Age groups 1, 2 and 3 who disagreed to the incentive entitlement, but 124 managers from Age groups 2, 3 and 4 agreed to the statement.

Since the 3 questions on MRAA 2012 were specifically developed based on the local Malaysian environment, these questions were not previously tested. Generally, managers from younger age groups such as Age groups 1 and 2 were more towards disagreeing whereas older age groups tended to agree to all the 3 questions. Question CB3 reflected the lack of awareness on companies'

entitlement to claim incentives from the Ministry of HR on older workers training.

Perceived behavioural control was formed based on control belief ($\beta$=0.214; $t$=2.283; $p$<.05). For the variables for perceived behavioural control, the values of Cronbach's alpha (0.834), composite reliability (0.897) and AVE (0.745), were all above the acceptable levels recommended by Bagozzi and Yi (1988) and Fornell and Larcker (1981). The standardized factor loadings showed unidimensional evidence ranging from 0.796 to 0.915, and these loadings were way above the minimum criterion of 0.40 (Hair et al., 2014). A relationship was established between control belief and perceived behavioural control; however, it was a weak relation ($R^2$=0.046).

### 5.3.2   Outcomes of Research Question 2

For research question 2, 6 hypotheses were formulated and tested accordingly. The outcome of attitude, subjective norm, perceived behavioural control on overall intention and future intention to hire are discussed as follow. The first part of discussion commences with overall intention to hire and future intention to hire, and which were then followed by the 3 stated predictors. From the hypotheses tested in Chapter 4, attitude, subjective norm and perceived behavioural control were related to managers' overall intention and future intention to hire older workers. As all the 6 hypotheses were supported, it was concluded that Research Question 2 was answered.  Furthermore, research objective 2 which was intended to examine the relationships of each of the determinant variables of attitude, subjective norm and perceived behavioural

control on managers' intention to hire older workers were met. To clarify matters, for managers' intention in the research question and objective, it included both overall intention and future intention, and they all met the objective as well. Table 5.3 presents a brief summary result of all 6 hypotheses.

**Table 5.3: Hypotheses and Summary of Results
for Research Question 2**

| No. | Hypotheses | Result |
|-----|------------|--------|
| H2a | There is a relationship between attitude and managers' overall intention to hire older workers. | Supported |
| H2b | There is a relationship between attitude and managers' future intention to hire older workers. | Supported |
| H2c | There is a relationship between subjective norm and managers' overall intention to hire older workers. | Supported |
| H2d | There is a relationship between subjective norm and managers' future intention to hire older workers. | Supported |
| H2e | There is a relationship between perceived behavioural control and managers' overall intention to hire older workers. | Supported |
| H2f | There is a relationship between perceived behavioural control and managers' future intention to hire older workers. | Supported |

### 5.3.2.1 Overall Intention to Hire

For managers' overall intention to hire, a total of 4 questions were developed specifically for the study. On OINT1, on positive attitude to hire older workers, 252 managers from all the 4 age groups indicated their intention to hire older workers because they had positive attitudes towards older workers. On OINT2, 254 managers from Age groups 2, 3 and 4 agreed that their intention to hire older workers was due to their good past experience with older workers. On

OINT3, a total of 220 managers from Age groups 2 and 3 agreed that they had the intention to hire older workers due to strong support from their management and peers. On OINT4, 155 managers from all Age groups disagreed that their intention to hire older workers was motivated by the MRAA 2012. However, a total of 164 managers from all the 4 age groups agreed on the motivation. Basically, there was a substantial and overwhelming agreement from managers on all the 4 questions.

On the variables for overall intention to hire, the values of Cronbach's alpha (0.804), composite reliability (0.871) and AVE (0.628), were all above the acceptable levels (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). The standardized factor loadings showed unidimensional evidence ranging from 0.708 to 0.829, and these loadings were way above the minimum criterion of 0.40 (Hair et al., 2014). The relationship between attitude, subjective norm, perceived behavioural control (in research question no. 2) and past experience (in research question on. 3) and overall intention to hire was moderate at $R^2$=0.377.

### 5.3.2.2 Future Intention to Hire

For the future intention to hire, respondents were presented with 3 questions. For FINT1, on prioritizing older workers as team members within 12 months from the date of survey, 213 managers from Age groups 1, 2 and 3 indicated their unlikeliness to prioritize older workers, and that 115 managers from Age groups 2 and 3 stayed neutral. However, 140 managers from Age groups 2, 3 and 4 were likely to prioritise older workers. As for FINT2 on prioritized hiring

within 12 months; 189 managers from Age groups 1, 2 and 3 were unlikely to do so, and 105 from Age groups 2 and 3 chose to be neutral; but a mixed age-group 174 managers selected the likelihood to prioritize older workers. On FINT3, managers to prioritize older workers, even if these older workers may not be the best, again there were 230 managers from Age groups 1, 2 and 3 who were unlikely to do so, and 109 managers from Age groups 2 and 3 stayed neutral. A balance of 129 from Age groups 2, 3 and 4 responded with the likelihood to do so.

For the variables on the future intention to hire, the values of Cronbach's alpha (0.917), composite reliability (0.947) and AVE (0.857) were all above the acceptable levels (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). The standardized factor loadings shown unidimensional evidence ranging from 0.914 to 0.947, and these loadings were way above the minimum criterion of 0.40 (Hair et al., 2014). The relationships between attitude, subjective norm, perceived behavioural control (in research question no.2) and past experience (in research question no. 3) and future intention to hire was a moderate one at $R^2$=0.392.

### 5.3.2.3 H2a: ATT→OINT and H2b: ATT→FINT

For the predictor of attitude towards older workers, 4 questions were adapted from Ajzen (2002b) with a 7-point scale on a positive/negative continuum (Allport, 1935; Chui et al., 2001; Lu et al., 2011). Each question was answered by all 468 managers. Age groups with a substantial number of respondents are discussed as follow. For item ATT1, responses on the benefits of hiring

activity, from scales 1 to 4, 380 respondents from Age groups 2 and 3, selected the positive end of the continuum. For item ATT2 on the usefulness of hiring activity, 375 managers from all 4 age groups selected the usefulness of hiring activity. For ATT3 on whether the hiring activity was wise, an overwhelming 390 managers from all 4 age groups indicated the hiring of older workers' activity was wise. On ATT4, also an overwhelming 382 managers, mainly from Age group 2, 3 and 4 selected a positive continuum indicating that the hiring of older workers was a valuable activity. The responses from managers suggested that the majority of managers, especially from younger age groups were showing their positive attitudes towards the hiring activity of older workers and that younger age group managers were also moving towards the positive side.

For the variables of attitude, the values of Cronbach's alpha (0.932), composite reliability (0.951) and AVE (0.830) were all high and accepted. The standardized factor loadings showed unidimensional evidence ranging from 0.900 to 0.926, and likewise, these loadings were also high.

On H2a on attitude and overall intention to hire older workers, H2a was supported and significant at p<.01 level. Overall intention to hire was formed based on attitude ($\beta$=-0.263; $t$=5.494). A relationship was established between attitude and overall intention to hire.

On H2b on attitude and future intention to hire, this was supported and significant. Future intention to hire was formed based on attitude ($\beta$=-0.426; $t$=9.730; $p<.01$). A relationship was established between attitude and future intention to hire.

From the above, hypotheses H2a (attitude on overall intention) and 2Hb (attitude on future intention) were supported. The establishment of these relationships in H2a and H2b, also signified that the specific question Q2(2a) and (2b) on whether attitude towards older workers is related to managers' overall intention/future intention to hire older workers were answered.

Intention to hire was supportive of Fraser et al. (2011) and Lu et al. (2011), where a great contribution for the prediction of intention came from attitude. In this present study, managers from older-age groups had more positive attitude towards older workers, as opposed to managers from young-age group, and the influence of such positivity on the intention to hire supported earlier studies (e.g. Armitage & Connor, 2001; Chiu et al., 2001; Fraser et al., 2011; Hassell & Perrewe, 1995; Lu et al., 2011). In that sense, managers were more likely to hire or retain older workers in their organizations. Additionally, older managers' positive attitudes also supported the in-group's biased behaviour, where a high percentage of them responded positively towards the hiring of older workers. Furthermore, H2a and H2b supported Karpinska et al. (2013) that managers' discriminatory attitudes towards older workers affected their hiring decision.

**5.3.2.4 H2c: SN→OINT and H2d: SN→FINT**

For H2c on the relationship between subjective norm and overall intention to hire older workers, 5 questions were presented. In SN1 on people who are important to the responding managers, think these managers should hire older workers. 156 managers from Age groups 1, 2 and 3 indicated their disagreement, and 167 managers from Age groups 1, 2 and 3 selected to be neutral. As for the balance of 145 managers from Age groups 2 and 3, they selected to agree. On SN2, 220 managers from Age groups 2 and 3 agreed to hire older workers, but there were 105 managers from Age groups 1, 2 and 3 who disagreed while a very high number from Age group 2 stayed neutral. On SN3 on support from important people to hire older workers, 128 managers from Age groups 1, 2 and 3 disagreed. 160 managers from Age groups 2 and 3 remained neutral while 180 managers from Age groups 2, 3 and 4 agreed with the statement. On the understanding from important people to hire older workers in question SN4, an overwhelming 210 managers from Age groups 2 and 3 agreed with the statement. Lastly, on SN5, 186 respondents from Age groups 2 and 3 chose to be neutral, and from the same age groups, 185 managers agreed with the statement.

For the variables in subjective norm, the values of Cronbach's alpha (0.908), composite reliability (0.932) and AVE (0.733), were all high and accepted. The standardized factor loadings shown unidimensional evidence ranging from 0.783 to 0.905, and these loadings were way above the minimum criterion of 0.40 (Hair et al., 2014).

On H2c on subjective norm and overall intention to hire older workers, H2c was supported and significant at p<.01 level. A relationship was established between subjective norm and overall intention to hire. Overall intention to hire was formed based on subjective norm ($\beta$=0.340; $t$=5.849; $p$<.01). The establishment of the relationship in H2c signified that the specific question Q2(2c) on whether subjective norm is related to managers' overall intention to hire older workers was answered.

On H2d on subjective norm and future intention to hire older workers, this was supported and significant. Future intention to hire was formed, based on subjective norm ($\beta$=0.253; $t$=4.975; $p$<.01). A relationship was established between subjective norm and future intention to hire. The establishment of the relationship in H2d had also answered the specific question Q2(2d) whether subjective norm is related to managers' future intention to hire older workers.

In both H2c and H2d, subjective norm was found to have relationships to managers' overall intention and future intention to hire older workers. The results were supportive of Ang et al. (2015), Fraser et al. (2011), and Lu et al. (2011) respectively where subjective norm was a great contributor to intention. Further, H2c and H2d confirmed Karpinska et al. (2013) that managers' decision was guided by their normative perceptions, except that if there were job opportunities available in the organizations and more information on older workers were made available to hiring managers.

**5.3.2.5 H2e: PBC→ OINT and H2f: PBC→ FINT**

For H2e on perceived behavioural control and overall intention to hire older workers, 5 questions were presented to the managers. In PBC1 on perceived capability, there was an overwhelming response from 336 managers who came from all the 4 age groups; they agreed that they were capable of hiring older workers. On PBC2, 297 managers also from all the 4 age groups agreed that they had full control to hire older workers. On PBC3, 315 managers, mainly from Age groups 2 and 3 who agreed that they had the resources to hire older workers. For PBC4, 283 managers, mainly from Age groups 2, 3 and 4, agreed that they had the knowledge to hire older workers while 114 managers from Age groups 1, 2 and 3 selected to be neutrals. The balance of 71 managers from Age groups 1 and 2 disagreed with the statement. On the ability to hire older workers as stated in PBC5, an overwhelming agreement came from 312 managers who mainly belonged to Age groups 1, 2 and 3.

For the variables of perceived behavioural control, the values of Cronbach's alpha (0.881), composite reliability (0.857) and AVE (0.549), were all above the acceptable levels as recommended by Bagozzi and Yi (1988) and Fornell and Larcker (1981). The standardized factor loadings showed unidimensional evidence ranging from 0.638 to 0.899 and these loadings were high and accepted (Hair et al., 2014). H2e was supported and significant at p<.01 level. A relationship was established between perceived behavioural control and overall intention to hire. The support found in H2e also indicated that the specific question Q2(2e) whether perceived behavioural control is related to managers' overall intention to hire older workers, was answered. Overall

intention to hire was formed based on perceived behavioural control ($\beta$=0.156; $t$=3.301; $p$<.01).

H2e was supportive of Ajzen (1991) and Fraser et al. (2011) that perceived behavioural control was a significant contributor to intention and it further improved TPB significantly. H2e additionally confirmed Chang's study (1998) that the availability of resources in perceived behavioural control was important to overall hiring intention.

For H2f, on the relationship between perceived behavioural control and future intention to hire, this was supported. Future intention to hire was formed based on perceived behavioural control ($\beta$=0.101; $t$=1.721; $p$<.10). Hence, the relationship between perceived behavioural control and future intention to hire was established. The establishment of the relationship in H2f also signified that the specific question Q2(2f) on whether perceived behavioural control is related to managers' future intention to hire older workers, was answered. Additionally, the relationship of perceived behavioural control and intention in H2e and H2f also supported Armitage and Conner (2001) where a meta-review of 185 studies on TPB models confirmed that perceived behavioural control strongly influenced behavioural intention.

Both relationships on H2e and H2f were established as the managers generally perceived that they have the abilities, hiring authority and resources to perform the activity of hiring older workers.

The results in research question no.2 lend support to Ajzen's TPB, whereby it suggested that the application of TPB as a foundation for the present study was useful in predicting managers' intention to hire older workers. In fact, among the 3 original major predictor variables (attitude, subjective norm and perceived behavioural control) in TPB, subjective norm most influenced managers' intention to hire older workers ($R^2$=0.339), subjective norm and overall intention ($\beta$=0.340) and subjective norm and future intention ($\beta$=0.253), taking into account the management support ($\beta$=0.380) and peers' support ($\beta$=0.296). Thus, it can be assumed that the hiring of older workers in business organizations required the support of management and peers since these parties are needed to interact with older workers in their daily functions.

### 5.3.3 Outcomes of Research Question 3

This study proposed and tested an extended TPB (Ajzen, 1985). In this study, TPB was extended by first adding past experience as a direct effect on managers' hiring intention. Next, the moderator of age was added (Discussed in research question no.4). Past experience was expected to add more predictive power for managers in hiring intention, as it acted in parallel with attitude, subjective norm and perceived behavioural control as determinate of intention. Of the 2 hypotheses, H3a on overall intention was supported, whereas H3b on future intention was not. Therefore, it was concluded that Research Question 3 was partially answered. Similarly, the research objective 3 which intended the application of an extended TPB with past experience to test its relationship with managers' intention to hire older workers was also partially met. The hypotheses and summary of results is presented in Table 5.4.

**Table 5.4: Hypotheses and Summary of Results
for Research Question 3**

| No. | Hypotheses | Result |
|-----|------------|--------|
| H3a | There is a relationship between past experience and managers' overall intention to hire older workers. | Supported |
| H3b | There is a relationship between past experience and managers' future intention to hire older workers. | Not supported |

For past experience (PE1) on managers' interaction with older persons in family situation, an overwhelming positive response was collected from 380 out of 468 managers, mainly from Age groups 1, 2 and 3. On PE2, 358 managers, mainly from Age groups 2 and 3, agreed that their interaction with older people in their community was good. Likewise in PE3, 320 managers agreed that their interaction with older workers was good, and these managers were from all the 4 age groups. As to the comfortableness with older persons in PE4, there was an overwhelming agreement from 366 managers, mainly from Age groups 1, 2 and 3. For PE5, there were 450 managers from all the 4 age groups in agreement of having no difficulty in their interaction with older persons.

For the variable of past experience, the values of Cronbach's alpha (0.842), composite reliability (0.889) and AVE (0.623), were all above the acceptable levels (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). The standardized factor loadings showed unidimensional evidence ranging from 0.531 to 0.898, and these loadings were above the minimum criterion of 0.40 (Hair et al., 2014).

For H3a on past experience and overall intention to hire older workers, H3a was supported and significant at p<.01 level. A relationship was established between past experience and overall intention to hire. Overall intention to hire was formed based on past experience ($\beta$=0.120; $t$=2.734; $p$=.006).

H3a was significant and supportive of the argument of Meshel and McGlynn (2004) that an individual's positive constant contact, understanding of older persons and the natural ageing process influenced positive intention. The strong positive responses from managers and their overall hiring intention confirmed Lu et al. (2010, 2011) that more quality contact enhanced positive behavioural intention.

H3a also confirmed Bysheim and Nyrud (2009)'s study where experience scored high explanatory power. From the present test results, past experience has a significant relationship on managers' overall intention and that the more positive past experiences managers had with older people; the more it built a strong relationship with their intention to hire older workers. In that sense, past experience was a strong predictor beyond the traditional constructs in TRA and TPB. This was supportive of Lu et al. (2011) and Kidwell and Jewell (2003; 2008) which explained that a manager who had positive past experience dealt or worked with older people, was likely to be more aware of the attributes of older workers than someone with negative past experience.

The inclusion of past experience had added significant explanatory power on the prediction of overall hiring intention. Based on these experiences, managers who had developed a good understanding on older workers could utilize this good understanding to manage older workers. From the test results, there was no indication of in-group biasness detected as the overwhelming responses on agreement to the 5 questions came from managers in all 4 age groups.

With regards to H3b on past experience and future intention to hire older workers, H3b was not supported ($\beta$=-0.049; $t$=1.116; $p$=0.265). The non-relationship between managers' past experience and their future intention explained that generally managers have good experience with older persons in their community and family, or at workplace. This positive experience suggested their overall intention to hire older workers was supported as in H3a; however, the supported H3a was not translated into their future intention to hire older workers as in H3b. Future intention referred to the 12 months period from the date of the survey. For a short term hiring strategy, managers were more prepared to adopt other strategies to fill vacancies. As seen in question no.49 where respondents were given 6 choices to rank their organizations' recruitment strategies, the choice no.1 was to hire part-time workers, followed by to offer higher wages, to utilize foreign labour and substitute with technology. To hire older workers was ranked no.5. Only 8.3% of managers indicated this older workers strategy to be their first preference. In conclusion, hiring of older workers was not the top strategy to address labour shortage. As such, in the short run, with other manpower recruitment strategies available, hiring of older workers was not managers' future intention.

### 5.3.4   Outcomes of Research Question 4

In this study, responding managers' age was used to test the moderating effect on the relationships between attitude and intention to hire older workers. Age was taken as a single item. The following discussion on the moderating effect of age on H4a and H4b was on the overall moderating effect. Table 5.5 presents hypotheses H4a and H4b and test results. H4a was supported but H4b was not. In view of such results, it was concluded that Research Question no.4 was partially answered. Similarly, the research objective no.4 which intended to test the impact of managers' age on the relationship between managers' attitude and their intention to hire older workers was also partially met.

**Table 5.5: Hypotheses and Summary of Results**
**for Research Question 4**

| No. | Hypotheses | Result |
|-----|-----------|--------|
| H4a | Managers' age has an impact on the relationship between attitude towards older workers and overall hiring intention. | Supported |
| H4b | Managers' age has an impact on the relationship between attitude towards older workers and future hiring intention. | Not Supported |

In Hypotheses H4a, the values ($\beta$=0.109, $t$=2.605; p=0.009; p<.01) indicated that managers' attitude and their overall intention to hire older workers was moderated by their own age. The moderating effect confirmed Bal et al. (2008) where age was found to have a moderating effect on exogenous and endogenous variables.

However, the effect size was very small ($f^2$ =0.019) because managers from the younger and middle age groups (1, 2 & 3) had already responded positively in their attitude toward older workers. In addition, their overall intention to hire older workers was high. As this young and middle age groups had also responded positively to their future hiring intention; the moderating effect could not be substantive.

Additionally, the number of older managers aged 51 and above only made up 14.3% (67 respondents). The 4 Age groups were classified as: Age group 1 (93 respondents), Age group 2 (173 respondents), Age group 3 (135 respondents) and Age group 4 (67 respondents). The in-group age bias was not noticed. Moreover, managers from the younger-age group (mainly below age 50) made up the substantial pool of the 468 respondents, and that indicated their positive attitude towards older workers. Simultaneously, their hiring intention was equally high. Therefore, this present study on the in-group biasness was distinguished from Chiu et al. (2001), Hassell and Perrewe (1995) and Laditka et al. (2004). Based on the result in H4a, it signified that the specific question Q4(4a) on whether managers' age has any impact on the relationship between their attitude toward older workers and overall hiring intention, was answered. However, research objective no.4, intended to test the impact of managers' age on the relationship between managers' attitude and their overall intention to hire older workers could only be partially met in view of non-supportive of H4b.

The result in H4b was not significant, the result failed to support the hypothesis that age has a moderating effect on the relationship between managers' attitude and their future hiring intention ($\beta$=0.003; $t$=0.067; $p$=0.947). This finding indicated that age did not play any interactive role in influencing managers' attitude and their future hiring intention to hire older workers. Such a result suggested that the specific question Q4(4b) on whether managers' age has any impact on the relationship between their attitude toward older workers and future hiring intention, was not answered. Furthermore, this finding supported Lu and Kao (2010) on no difference between the age groups of respondents as far as attitude was concerned, however, there was a distinction here, in Lu's study. The respondents generally had negative attitude towards older people, to the extent of not even willing to take up employment that involved servicing older people. As per in-group age biasness where older respondents held a more positive view on older persons as compared to respondents of young and middle age groups, it was not an issue in this present study since substantial young and middle age managers already showed positive attitude towards older workers. Therefore, the in-group age biasness was distinct from Chiu et al. (2001), Hassell and Perrewe (1995) and Laditka et al. (2004).

The above results suggested that young and middle age managers were in fact moving towards the trend of employing older workers, and this was consistent with studies by Chiu et al. (2001), Crockeet and Hummert (1987) and Kite et al. (2005) where older participants were in more favour of hiring workers of their own cohort. Additionally, younger respondents were also moving towards these positive trends. As such, this present finding is distinct from Lu et al.

(2011), which found younger respondents had lower intention to hire older workers compared to older respondents and this was largely due to respondents' negative attitudes and limited hiring intention.

As from previous studies, it was expected that in the present study, managers' age had an interactive moderation effect on the relationship between attitude and hiring intention. However, the results from the present study only partially corroborated the expectation as there was no support of age on the moderating effect on the path between attitude and future intention. Moreover, on the path between attitude and overall intention, even though age had a moderating effect, it was a weak one.

### 5.3.5   Summary of the Study Outcomes

In the search for a better understanding of whether attitude, subjective norm, perceived behavioural control and past experience are related to managers' intention to hire older workers in Malaysia, this thesis attempted to uncover this lesser studied field of older workers in the workplace. To begin with, older workers were referred to as employees or job seekers aged 50 and above in non-managerial positions. The term older workers is often associated with negative connotations of being weak, poor performance, lesser learning ability, resistant to change, job hop and higher recruitment costs, and they were ready for labour exist (Lu et al. 2011; Hassell & Perrewe, 1995).

As older workers were defined as aged 50 and above in non-managerial positions; in such a situation, physical strength is one consideration in managers' hiring intention. Moreover, only 8.3% of managers were willing to set to hiring of older workers as their first strategical choice to address labour shortage in their organizations. In addition, 92.1% of respondents had not attended any programs or training related to older workers; as such, their understanding of circumstances on ageing population and management skills of older workers could be limited.

This study was exploratory in nature and a quantitative data collection was conducted via a personal administration, and in accordance with the positivist philosophy. Data was collected from 468 managers (M=59.6%; F=40.4%) with hiring authority in 11 industries from 9 locations. There was a response rate of 78%. The age of responding managers was divided into 4 groups, i.e. from age 30 and below (Age group 1); from 31 to 40 (Age group 2); 41 to 50 (Age group 3) and aged 51 and above (Age group 4). On education attainment, 82.5% of managers had received education at secondary school level up to bachelor degrees. Managers mainly held positions in HR/Administration (26.7%), Director/partner/sole proprietor (23.9%), production/operation (21.8%). Data set was analysed by using SPSS version 21 and SmartPLS3. The predictive model explained 37.7% of the variance in managers' overall intention and 39.2% of the variance in future intention. On the employment tenure of these managers, 59.5% of them had less than 10 years of service while 14.3% had between 10 to 15 years. As previous studies (Chui et al., 2001; Hassell &

Perrewe, 1995) found no significant correlation on respondents' education level on age discrimination, this study did not focus on these factors.

The descriptive data indicated that 93.9% of managers were from local companies. 26.5% came from wholesale and retail trade/repairs of vehicle and household goods, 13.2% from accommodation and food service activities, 12% from manufacturing and 11.5% from financial and insurance/takaful services. On the total labour force on workers of all ages, 46.2% of the companies employed not more than 20 workers, and 23.5% employed 56 or more workers. The rest of the companies had between 21 to 55 workers. On the employment of older workers, during the 12 months' period preceding this survey, 82.3% of the companies had less than 10 older workers in their companies. Out of this 82.3%, a total of 93% companies recruited not more than 5 older workers. As for the number of older workers who left their employment in the last 12 months prior to the survey, 94% of companies stated that not more than 5 older workers who had left employment.

This study offers an insight into whether labour shortage in business organizations could be overcome with managers' intention to hire older workers to fill the labour gap. This study found that although 56.8% of business organizations were faced with labour shortages, as short term solutions, managers preferred to resort to other strategies, such as paying higher wages to attract suitable workers, and hiring foreign labour instead of hiring older workers (ranked 5th position out of the 6 strategies). This indicates

that hiring of older workers was not a preferred choice, at least from the 12 months' surveyed period.

The empirical result suggested one important point, i.e. TPB was an appropriate model to predict managers' intention to hire older workers (Ajzen, 1991; Chang, 1998). The research findings corroborated with Ang et al. (2015), Auer and Furtuny (2000), Hassel and Perrewe (1995), Kluge and Krings (2008) and Huang (2007) in that attitudes, subjective norm and perceived behavioural control were strong predictors in TPB. Furthermore, the present findings were in line with and supported Ang et al. Lu et al. (2011) and Fraser et al. (2011) in that attitude and perceived behavioural control were significant contributors to the prediction of hiring. Additionally, subjective norm in this present study also supported Lu et al. where it was found to be of greatest importance to the prediction of intention.

This research model has successfully extended TPB with an added variable of past experience and age as a moderator which helped to better explain managers' hiring intention.

Past experience had also supported Lu et al. (2011) in that it was a strong predictor. This study's model basically reinforced that attitude, subjective norm, perceived behavioural control and past experience had relationships with managers' hiring intention of older workers.

Result of this study indicated that most significant factors associated with hiring intention were basically managers' attitude, subjective norm, perceived behavioural control and past experience. These 4 factors were supportive and related to managers' intention, especially in their overall intention to hire older workers. The extended TPB model suggested that it was valuable to study managers' intention. Specifically; this study confirmed that attitude derived from age stereotypes beliefs on older workers, and that subjective norm was derived from management support and peers' support. Management support was the most significant influence on subjective norm compared to peers' support. The empirical findings supported several earlier studies as discussed above in that the relevant of the 4 predictors (attitude, subjective norm, perceived behavioural control and past experience) had values that were above the recommended values, thus confirming that these predictors were not merely factors of intention only. On the other hand, there were contradictory views on older workers; as in Lu et al. (2010), as even students who had surveyed indicated their unwillingness to work with older workers.

The study also tested the moderating effect of age on the relationships between attitude and overall intention, and attitude and future intention. Age on the relationship of attitude and overall intention had a moderating effect, with the exception of age on attitude and future intention which found no moderating effect. This study concluded that TPB was one of the best-supported social psychological theories in predicting human intention.

**5.4    Implication of the Research and Significance Contribution**

This research is timely for several reasons, such as the shortage of skilled labour, the enlarged proportion of the older population, the implemented MRAA 2012, and the less extensive research and literature on the employment of older workers in the country. This is also an appropriate time for managers to review a crucial matter as to whether workers' age should precede their skills and experiences during and throughout their hiring processes.

In view of demographical changes and ageing populations in many parts of the world, the study on older workers should have captured the attention and interest of academia. Publications focused on the issues, problems, employment, stereotypes and discrimination involving older workers have been substantial in the West. However, to the best of my knowledge, no attempts have yet been made at investigating the intention of managers to hire older workers in the country, especially with the incorporation of MRAA 2012 into the study.   Therefore, from the empirical result of this study, the present research is expected to enrich the body of knowledge, to contribute to scholarly literature, and to enable business organizations decision-makers and public policy makers in the formulation of policies concerning older workers.

**5.4.1   Theoretical Implication and Contribution**

As research on the employment of older workers and managers' intention to hire them is lacking in Malaysia; from the findings of this study, the theoretical implications are as follows. Firstly, the TPB on intention is expanded and tested. The overall quantitative findings add value to the knowledge of

Malaysian research literature on the ageing workforce. The answers to the research questions from the quantitative evidence provide a real meaning in terms of the hiring of older workers and the future utilization of the ageing workforce.

Secondly, this study provides an even stronger basis for the hiring intention by tying it more directly with the TPB. It is clear, based on the investigation of the empirical data, where of a total 14 hypotheses, 12 were found to be supportive. Further, out of the 12 directional relationships hypotheses, 11 had confirmed the relationships between the 4 predictors and the hiring intention. In this study, hiring intention is divided into 2 parts; the overall hiring intention and future hiring intention. In both circumstances, 37.7% of overall intention and 39.2% of future intention were explained by the 4 predictors.

Thirdly, it was the understanding of age as a moderator on the relationships between attitude and overall intention, and attitude and future hiring intentions. The moderating effect of age suggested that intention to hire can be moderated by the age of managers in business organizations. From literatures reviewed thus far, age as a moderator on hiring intention of older workers has not been evident in local literatures.

The present study's theoretical contribution and theory development are threefold. First, this is in extending the TPB model to provide a multi-component construct model in understanding the various determinants of the hiring intention of older workers. The extended model can be used as a starting

point for future research on the issues on or related to the employment of older workers and its impact on Malaysian employment practices. Therefore, this present study has not only added to knowledge, but it also provides a new avenue of research surrounding the hiring intention in the local scene.

Fourthly, the integration of managers' past experience as an additional determinant to predict hiring intention. This study calls for attention not only limited to the psychological factors of age stereotypes, management and peers' support, attitude, subjective norm, control belief and perceived behavioural control, but is extended to include past experience. From the empirical result, past experience was found to influence managers' overall intention to hire older workers. In that sense, the inclusion of past experience has confirmed the role it played in TPB to predict intention (Ajzan, 1991; Ladtika et al., 2004) and the extra weight to predict behavioural intention. However, the relation of past experience and future hiring intention is not supported; suggesting that there is a need to extend inquiry into whether the influence of positive past experience with older workers is affected by the 6 manpower recruitment strategical choices which rendered the future hiring intention non-supportive.

Lastly, on the incorporation of managers' age to test the moderating effect on the relationships between attitude and overall intention, and attitude and future intention. The effect of managers' age on attitude and intention may be correlated with other variables such as managers' job positions, length of employment in their organizations, and the manpower strategical choices. However, as one of the main focuses on this study was the moderation of age,

there was no further hypothesis on the effect of the several variables mentioned earlier. One important point to note is that, age only moderated the relationships between attitude and overall intention in a weak manner, and there was no effect on attitude and future intention. This indicated that the general positive attitude of responding managers of all the 4 age groups already led to high hiring intention, and as such the interactive moderation became low. One way is that the interactive effects of those above-mentioned variables should be theorised further.

Nevertheless, in view of the little research on age as a moderator on hiring of older workers, this present result is deemed helpful to contribute to future study.

Hence, the overall contribution to the expanding body of knowledge on managers' intention to hire older workers by applying the extended TPB and that the 14 hypotheses were tested, have shown that the intention to hire was dependent on attitude, subjective norm, perceived behavioural control and past experience, and that age has the moderating effect on the relationship between attitude and intention.

### 5.4.2   Managerial Implication and Contribution

This research demonstrates that the 4 predictors of TPB played important roles in predicting managers' hiring intention despite traditional human resource management policies that were of lesser encouragement to older workers to remain in employment (Karpinska et al., 2013; Tamboo, 2012; Truxillo et al.,

2017). In Malaysia, employment and training of older workers has not been a popular subject for discussion in many human resource management literatures. Employers perceived older workers to be of high costs, hence, preference is to hire low unskilled foreign labour on low wages; and which could be detrimental to the nation's long term overall economic growth. The reasoning here is, unskilled foreign labour should merely be hired to substitute unskilled local labour only, as those who could contribute to the long term growth of the country should be educated and are highly-skilled foreign labour (Cheong, 2017). Employers are not the only group that resented MRAA 2012; even the younger generation held that unpleasantness towards it. This implication is not unfounded; as in previous studies; the younger generation feared competition from older workers, and they were unwilling to accept raising the retirement age from 55 to 60 (eg. Jobstreet.com, 2011; Teoh, 2011; Tung & Comeau, 2012, Voss et al., 2018). Hence, it is understandable that managers in business organizations generally are in favour of hiring foreign labour for cost reduction and profits maximisation. Managers also perceived that by increasing the hiring of older workers to fill the labour gap, there could be expected management challenges for themselves. Among them are the experiences and skills which managers are expected to be equipped with, such as management of a diversified workforce where the group of older workers is one of the main factors, and in implementing and managing policies and practices, recruitment and training. From the empirical results, although there were positive relationships between attitude, subjective norm, perceived behavioural control and past experience and managers' hiring intention, these do not diminish the problem of overcoming age discrimination, negative

attitude of managers, non-supportive management and peers, and adverse past experiences. All these are still potential areas within business organizations, which if left unattended, would not only affect managers' hiring intention of older workers, but would certainly face the ageing issues of the organizations' current workforce, as all these would render the management of a diversified workforce even more difficult.

Given the ageing population and the issues related to future labour shortages, including the trend toward personal-elected early retirement; there is a clear inference for management to develop new policies and practices aimed specifically to increase the employment of older workers. As pointed by Rudolph, Toomey and Baltes (2017), to increase the employment of older workers would require the management to consider designing and implementing good age management practices that value the role of experience, knowledge, skills and abilities,  and reduce the deleterious impact of ageing stereotypes in hiring and placement decisions. In addition, an age-managed selection system on equal access to jobs for employees of all ages, including older employees could eliminate any direct age-based discrimination. Given the increasing ageing population and unfilled job vacancies, this inevitably has created the urgency to maintain a diversified workforce. As there are challenges to business organizations and managers, it is crucial for them to establish human resource practices that promote age diversity on how their organisations can attract and retain an age-diverse workforce; however, it is common for business organizations to first dislike, but then subsequently rely heavily on government's legislations and policies. Radford, Chapman,

Bainbridge and Halvorsen (2018) advised that organisations need to take proactive responsibility for their own policies regarding attraction and retention of both young and older workers. Such should include a holistic approach on suitable job descriptions (Perera, 2016).

The implications for business organizations management are that, firstly, management should urgently acquire a better understanding and practice on the successful implementation of MRAA, 2012; at the same time, to increase their labour participation rates of older workers wherever possible. Secondly, managers need to be attentive to their organizational climate in relation to an older workforce, and formulate human resource policies, such as age awareness policies. This is urgently needed since this present study had already revealed that only 7.9% of managers had attended age-awareness related programs taking into account and that the majority of managers from the below 30 age-group had responded negatively to the predictors of attitude, subjective norm, perceived behavioural control and past experience. This part of the present finding confirmed most previous studies that managers held negative attitudes towards older workers (e.g. Earl et al., 2017; Lu et al., 2010; 2011). In order to improve the understanding and awareness of the ageing trends and utilization of older workers, management needs to recognize the importance and benefits of a diversified workforce in order to take steps to understand factors which influence their managers' intention to hire older workers. Management will need to consider a holistic approach to change managers' intentional behaviour with programs designed to drive changes in the managers' beliefs system and

their general attitude towards older workers. With a larger degree of managers'

intention, the more likelihood of hiring can be expected.

Management also need to consider that, at the moment, there is no statute on

age discrimination and equal employment in Malaysia. On the hiring intention,

as managers already indicated high intention (37.7% and 39.2%), the bias

against older workers may be reduced, with management giving support to the

implementation of appropriate policies and practices to balance the age

composition in their organizations. Another way is to design jobs for older

workers which capitalize on their skills and work experiences, a fool-proof

performance appraisal system and a non-age based dismissal procedure. To

make sense, managers should rate older workers' job performance objectively,

and in accordance to a well-structured appraisal system.

Further implication for management is to better prepare managers to minimize

organizations' liabilities with future potential age-bias lawsuits in view of

changing times (Doron, Numhauser-Henning, Spanier, Georgantzi, &

Mantovani, 2018). In that sense, decision-makers in business organizations

could reassess their recruitment process and the language (words and phrases)

on age factors used in their advertisements to ensure objectivity, political

correctness, professionalism and fairness in their selection process, in order to

increase the use of more effective and skilful interview techniques and

psychological tests. In addition, to eliminate age restrictions in their

employment training entitlement policy, they should include training styles,

approaches and designs which are suitable to employees of all ages with special attention to older workers.

From the findings, it was discovered that managers generally have the intention to hire older workers, but they did not think they have the resources, time or authority to carry out the tasks in the near future. Likewise, managers' past experience also had no relation to their future intention to hire older workers. This suggests that it is a good option for business organizations to have anti-age discrimination policies in place and encourage the employment of able and capable older workers to replace foreign workers. The policy and practices should receive support from senior management and these should be made known to employees of all levels.

The above implications for management of business organizations are indeed significant. Consideration must be given to the management to address the older workforce in their organizations, and to formulate human resource strategies and policies targeted for effective recruitment and retention of older workers. There is one important matter which requires further consideration, i.e. in most business organizations; it is common to see that those who formulate and implement organizations' policies on employees' welfare, recruitment, and hiring decisions are more often than not, the middle-age group managers. If these middle-age managers hold negative stereotype and attitudes on older workers, and have no intention to hire them, then the business organizations will likely resort to the other strategies such as recruiting part-time workers, offering higher wages, or continue hiring foreign workers, but

not older workers. A point to share; the demographic changes and ageing society have created a large pool of readily available older workforce that must not be ignored. This is not a peculiar phenomenon in Malaysia, but a worldwide issue.

The significant contribution from this study is the importance of knowing the 4 predictors' relationships to managers' hiring intention. From a business organization's perspective, this knowledge gives organizations opportunities to support managers' intention and lead to accomplishing the organization's goals with vacancies be filled up by able and willing older workers. Support from management to managers must be given especially as evidenced from the overwhelming positive responses from managers on their hiring intention. More so, responding managers had indicated the lack of support from their management and peers, and lack of resources which had resulted in their inability to connect to their hiring intention.

At the heart of this study, an extended TPB model is the assertion that predictors (attitude, subjective norm, perceived behavioural control and past experience) have significant relationships with hiring intention. These relationships still require organizations' and managements' continual support to help realize managers' hiring intention. Otherwise it would render such intention ineffective and would not transform into actual hiring behavior.

### 5.4.3   Public Policy Implication and Contribution

From the literature reviewed and the empirical results obtained, traces of negative attitude toward older workers were found existent among non-supportive management and peers as perceived by responding managers. They perceived the lack of resources which greatly reduced their intention to hire older workers. In addition, managers lacked awareness on the salient content of MRAA 2012, issues concerning the gradual ageing population and productivity in the country. All the above hampered managers' hiring intention and these were not in line with the government's effort to fill job vacancies with a latent workforce which included older workers, in their efforts to reduce reliance on foreign labour, as laid down in the Eleventh Malaysian plan. The above discussion points towards several public policy areas which the nation's public policy makers should address.

The empirical result of this present research implicate policy makers to urgently review immigration policies to prohibit the entry of illegal labour, and to restrict business organizations from hiring unskilled illegal labour. Policy makers responsible for national productivity, human resource development, migration issues, inland revenue and financial planning, social security system and health care are not only required to consider and plan for the ageing population, they have to ensure that employers in general are willing to hire older workers so that government could relieve itself from the heavy financial burden in having to take care of unemployed older persons. In view of new jobs being created under the Tenth and Eleventh Malaysian Plans, changes in

family structure and for older persons' self-sufficiency, older workers need to continue employment (Lu & Kao, 2010; Lu, Kao & Chen, 2006; Saieed, 2016).

There is evidence from the empirical results that a substantial number of managers have the overall intention to hire older workers. Hypothesis (H12) on past experience and future intention was not supported. That means managers' past experience was not related to future hiring intention. Moreover, to hire older workers only ranked $5^{th}$ position in the manpower strategic choice, indicating that job applicants aged 50 and above will still face great challenges to secure employment. Therefore, it is recommended that public policy makers create an age-diverse steering-type committee on older workers. This committee's members should include business organizations' hiring decision makers and employees, preferably with a mix of ages and across industries. This could ensure holistic views and input from all those concerned, are considered and, hence increase the awareness of both young and old workers on ageing trends and issues related thereto. Such actions would also improve managers' attitudes towards older workers in the workplace. The above is inevitable since the current young workers will eventually face these old age issues. The steering committee should also design a better set of objective, recruitment policies and practices based on merit (not on age), and be implemented throughout all industries in the country. As suggested by Fisher, Truxillo, Finkestein & Wallace (2017), public policy and law makers should pay more attention to age issues by keeping adverse impacts related to age in mind, in enhancing strategic human resource management practice.

Another area to note is that 92.1% of the respondents admitted never attending age-awareness training or related programs. The awareness programs basically provide managers with a better understanding on older persons' attributes, and by having effective dealings with older workers, ultimately lead to overall improvement on working relationships between parties. In the present study, this low number of managers who attended training programs was in line with Fraser et al. (2011) where less than half of the respondents received relevant training. A substantial raise on workers' retirement age from 55 to 60 as in MRAA 2012 cannot be assumed that organizations prepared their supervisory level staff on effective management of their older workers. Relevant authorities can consider formulating age awareness programs through educational, promotional activities for public or to enact anti-age discrimination statute for business organizations.

Questions on age stereotypes were adapted from foreign literatures and tested in countries where retiring age is already high as opposed to Malaysia where age 60 was only implemented in 2013. To many organizations, the management were still at the adapting stage when the present survey was conducted. This to a large extent, presented a certain degree of pressure on the respondents especially when faced with questions were on the MRAA 2012. A substantial number of the respondents lacked awareness on the benefits their companies were entitled to, from the Human Resource Ministry regarding the training of their older workers. Furthermore, many of the respondents also stated that they hired older workers merely to avoid infringing the MRAA

2012. This clearly shows that creating awareness by the government on the MRAA 2012 to employers is crucial.

Another area worth considering would be the promotion of positive attitudes towards older persons through interaction and intergenerational contact. As societal and family structural evolve, the accompanied changes reduce interaction between younger persons and their older generation. Public policy makers are recommended to find ways to disseminate challenges associated with ageing workforce to organizations and to promote joint activities between the generations via educational programs. Another publicity program is on age stereotypes and ageism campaigns which aims to reduce negative attitudes towards older persons.

## 5.5    Research Limitation and Future Research Directions

Although this study provides some interesting insights into factors that influenced managers' hiring intention; however, in view of the exploratory nature of this study, there are some theoretical and methodological limitations. From the empirical results and discussions, several possible ways for future development are provided hereunder. Firstly, this study was a cross sectional quantitative survey carried out to measure managers with hiring authority on their intention. At times, merely having the intention to hire, need not necessarily translate into actual hiring behaviour. However, this present study did not measure respondents' actual hiring behaviour due to the complexity associated with the collection of data within organizations and the difficulty of preserving anonymity. Due to the limited amount of longitudinal research on

managers' actual hiring behaviour in academic study, wherever possible, a longitudinal research to study the specific hiring intention into actual hiring behaviour would be most recommended. Therefore, future research should be longitudinal and measure managers' behaviour by gaining access to organizations' data on managers' hiring behaviour. Ideally, results should be computed for the overall sample and for each and every individual company for comparative study.

Secondly, this study surveyed hiring managers, but not the older workers. The respondents were mainly managers with hiring authority, recruitment policy-makers or those involved in the hiring decision. In this situation, the workers' perceptions on hiring were ignored. Thus, the hiring intention may have been over-generalised. One generalization is the 9 locations of study on the whole of Malaysia, which actually has 13 states. The east coastal regions of Peninsular Malaysia and East Malaysia were not included in the study. As such, this study could be replicated to test the validity of the findings to those omitted locations.

Thirdly, since male and female workers played different roles in business organizations, and in view of their different skills and abilities, the gender issue of older workers and the intentions of managers to hire which particular gender and the skill levels of older workers were not researched. Future study should research into whether managers' intention to hire older workers are affected by older workers' gender, educational attainment, health, skill levels and types of jobs of older workers (e.g. technical or administration). In the present study,

older workers were referred to as workers in non-managerial positions. However, future research could look into the hiring of workers at supervisory levels and higher positions to test for any difference on managers' hiring intention.

Fourthly, future research should consider a qualitative method, where an in-depth data obtained could supplement the findings of this research. Likewise, a mixed method to investigate the antecedents of attitude, subjective norm and perceived behavioural control and intention where this method could provide a stronger research method, and a stronger reliability and validity results could be expected.

Lastly, this study is by far one that investigated the relationships of attitude, subjective norm, perceived behavioural control and past experience with managers' hiring intention, and the moderating impact of age on attitude and intention to hire. Future research should investigate whether age also moderate the relationships of subjective norm, perceived behavioural control and past experience and managers' hiring intention.

## 5.6    Conclusion

This study has presented a well-organized and systematic analysis on the investigation of the antecedents and outcomes of managers' hiring intention from the 9 states and 11 industries in West Malaysia. Results suggested that TPB was an appropriate theory to predict hiring intention, and the choice of applying TPB over TRA was a solid theoretical basis as TPB took into

accounts the resources and opportunities in predicting hiring intention. Prior studies on TPB in foreign countries were mainly on intention; for example, intention to continue working (Shacklock et al., 2009), intention to donate organs (Hyde & White, 2009), meeting participation intentions (Park & Yang, 2012), or hiring intentions by Lu et al., (2011) and Fraser et al. (2011). Studies on the local environment, some examples were on workers' intention to continue employment (Chan et al., 2010), retirement policy (Tung & Comeau, 2012) and older consumers' behaviour (Lim et al., 2011). However, so far, none could be found on the hiring of older workers.

This study's empirical results and the application of the extended TPB model were well supported by data, and the results further confirmed the relationships of the antecedents and the hiring intention, except that of the 14 hypotheses, only 2 were found to be not supported.

This study is the first to apply the extended TPB on managers' intention to hire older workers, and have tested managers' awareness on the salient parts in MRAA 2012, related to contravention and prosecution, and employers' entitlement in incentives for their older workers' training. Hence, this study has both theoretical and practical importance. Besides applying the original constructs from TPB, an additional construct of past experience and the use of age as a moderator were introduced and tested. The test confirmed that past experience indeed had a relationship with managers' hiring intention, and as for age, there was an interactive impact on the relationship between attitude and overall intention which brought a small effect size of F square 0.019 on the

overall intention, and that no moderating effect from attitude to future intention to hire was recorded. The data reported may be further taken to encourage managers to eliminate any negative attitude, subjective norm and perceived behavioural control on workers due to their ages. The extended TPB explicated a better understanding of managers' intention to hire older workers.

This study is deemed timely in response to the need to investigate managers' hiring intention of older workers in view of the implementation of MRAA 2012 and the critical labour shortage in the country. The present study has the potential to make a considerable contribution in Malaysian literature on older workers and managers' hiring intention in business organizations and among public policy makers to the determinants such as attitude, subjective norm, perceived behavioural control and past experience in the expanded TPB that influenced manager's intention to hire older workers. Nevertheless, the empirical results can be further enhanced by examining the gender of older workers, health status, and their academic and skill levels on managers' hiring intention.  Further research is recommended to replicate and clarify these results, as well as to examine the impact of other related factors on older workers and hiring managers. As the population continues to age, and the baby boomer generation continues to retire early, labour is expected to persistently run short. Hence, business organizations will be compelled to develop new policies and practices aimed specifically to increase the employment of older workers.

Being a developing nation, the government of Malaysia took cognizance of the labour force issues and the increasing number of experienced older workers progressively leaving the labour force, due to the emphasis placed on the importance of human capital development. Such being the case, business organizations will be able to contribute to help in the fast realization of the government's aspiration of a high income nation. One way is through the organizations' recruitment and retention of their human talents including skilled and experienced older workforce for faster economic growth. Therefore, labour input is crucial, and re-participation of the older workforce especially those with skills and experiences can contribute significantly to the economic growth.

Therefore, this current research has in a way bridged the literature gaps in the prediction of hiring older workers. It is hoped that the findings in this study will-inform all parties concerned to provide supporting policies and practices to older workers to improve their employment prospects, without forgetting the fact that all younger workers today will eventually become older workers too.

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**Malaysia Life Expectancy at Birth
by Sex (Years) Medium Variant 1950-2050**

| Period | Both sexes combined | Male | Female |
|---|---|---|---|
| 1950-1955 | 48.5 | 47.0 | 50.0 |
| 1955-1960 | 52.1 | 50.6 | 53.7 |
| 1960-1965 | 55.7 | 54.2 | 57.4 |
| 1965-1970 | 59.4 | 57.8 | 61.0 |
| 1970-1975 | 63.0 | 61.4 | 64.7 |
| 1975-1980 | 65.3 | 63.5 | 67.1 |
| 1980-1985 | 68.0 | 66.0 | 70.0 |
| 1985-1990 | 69.5 | 67.5 | 71.6 |
| 1990-1995 | 70.7 | 68.7 | 73.1 |
| 1995-2000 | 71.9 | 69.6 | 74.5 |
| 2000-2005 | 73.0 | 70.8 | 75.5 |
| 2005-2010 | 74.2 | 72.0 | 76.7 |
| 2010-2015 | 75.2 | 72.9 | 77.6 |
| 2015-2020 | 76.0 | 73.8 | 78.5 |
| 2020-2025 | 76.8 | 74.5 | 79.3 |
| 2025-2030 | 77.5 | 75.3 | 80.0 |
| 2030-2035 | 78.2 | 75.9 | 80.6 |
| 2035-2040 | 78.9 | 76.6 | 81.3 |
| 2040-2045 | 79.5 | 77.2 | 81.9 |
| 2045-2050 | 80.1 | 77.8 | 82.4 |

Source: Population Division of the Department of Economic and
Social Affairs of the United Nations Secretariat,
World Population Prospects: The 2006 Revision.

## Fishbein's Attitude Model

```
┌────────────────────┐      ┌────────────────────┐
│ Beliefs that behavior│      │ Evaluation of the  │
│ A leads to known    │      │ consequences of the│
│ consequences        │      │ behavior           │
└────────────────────┘      └────────────────────┘
            └──────────┐    ┌──────────┘
                  ┌────────────────┐
                  │ Attitude toward │
                  │ behavior A      │
                  └────────────────┘
                          │
                  ┌────────────────┐
                  │ Intentions to engage│
                  │ in behavior A   │
                  └────────────────┘
                          │
                  ┌────────────────┐
                  │   Behavior A    │
                  └────────────────┘
```
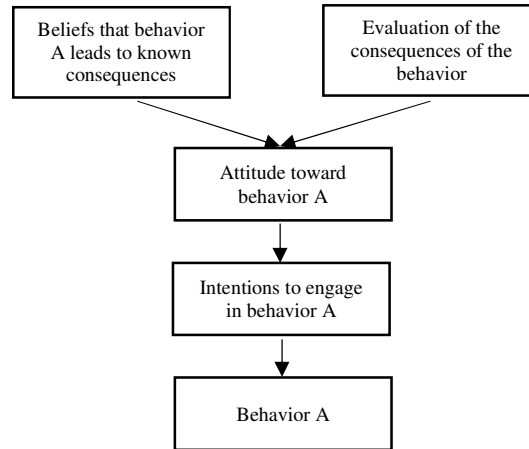
Source: Fishbein, M. (1967).
*A consideration of beliefs and their role in attitude measurement.*
NEW York: Wiley.

**The Theory of Reasoned Action Model**
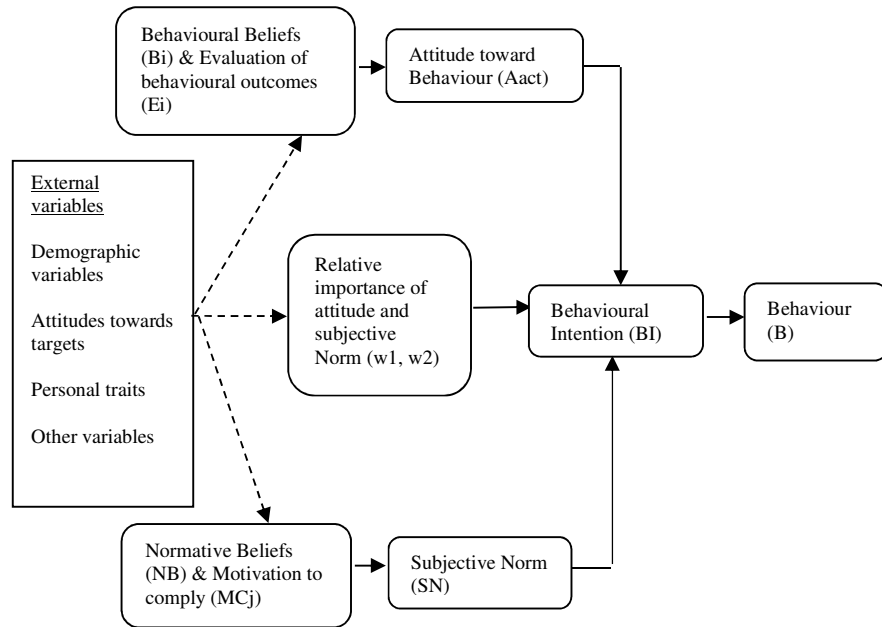
**The Theory of Planned Behavior Model**
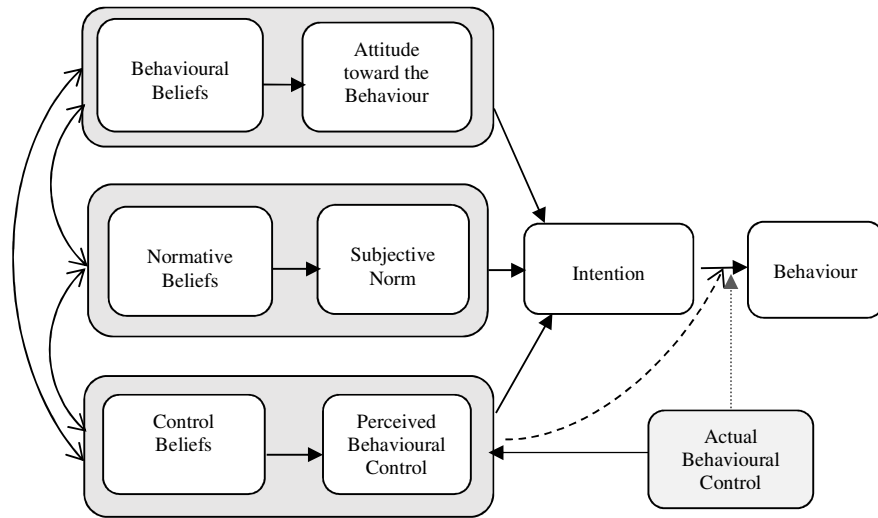


Source: Ajzen, I. (1985).

# APPENDIX 2.4

## Company & Business Statistics for Years 2016 & 2017

## Number of Registered Companies and Businesses

| | Local Companies | Foreign Companies | Total Companies | Total Business |
|---|---|---|---|---|
| Until 31 December 2015 | 1,155,384 | 4,680 | 1,160.064 | 5,998,331 |
| 2016 | | | | |
| January | 3,532 | 6 | 3,538 | 32,477 |
| February | 3,073 | 0 | 3,073 | 31,501 |
| March | 4,408 | 5 | 4,413 | 38,808 |
| April | 3,913 | 3 | 3,916 | 34,958 |
| May | 3,864 | 5 | 3,869 | 33,101 |
| June | 3,751 | 3 | 3,754 | 26,174 |
| July | 2,972 | 7 | 2,979 | 25,045 |
| August | 3,837 | 2 | 3,839 | 35,390 |
| September | 3,410 | 5 | 3,415 | 30,110 |
| October | 3,613 | 2 | 3,615 | 30,194 |
| November | 3,599 | 5 | 3,604 | 29,785 |
| December | 3,236 | 4 | 3,240 | 29,177 |
| Total | 43,208 | 47 | 43,255 | 376,720 |

Source: Suruhanjaya Syarikat Malaysia. (2017)

| | Local Companies | Foreign Companies | Total Companies | Total Business | Total Limited Liability Partnership |
|---|---|---|---|---|---|
| Until 31 December 2016 | 1,198,592 | 4,727 | 1,203,319 | 6,375,051 | 10,059 |
| 2017 | | | | | |
| Jan | 3,743 | 4 | 3,747 | 33,057 | 330 |
| Feb | 2,135 | 0 | 2,135 | 39,275 | 277 |
| Mac | 4,985 | 5 | 4,990 | 44,649 | 362 |
| Apr | 4,083 | 4 | 4,087 | 39,111 | 235 |
| May | 4,228 | 1 | 4,229 | 35,679 | 216 |
| Jun | 3,764 | 2 | 3,766 | 22,227 | 314 |
| Jul | 3,883 | 3 | 3,886 | 35,063 | 332 |
| Aug | 4,435 | 5 | 4,440 | 37,629 | 368 |
| Sept | 3,666 | 2 | 3,668 | 38,642 | 274 |
| Oct | 4,597 | 3 | 4,600 | 66,967 | 508 |
| Nov | 4,527 | 8 | 4,535 | 50,469 | 603 |
| Dec | 3,785 | 3 | 3,788 | 41,261 | 386 |
| Total | 47,831 | 40 | 47,871 | 484,029 | 4,132 |

Source: Suruhanjaya Syarikat Malaysia. (2017)
Note: Total limited liability partnership was added in 2017

**Business Research Process Model from Zikmund, Babin, Carr & Griffin (2010)**



| | |
|---|---|
| Define research objectives | Sampling — Selection of sample design |
| Selection of exploratory research | Probability sampling — Nonprobability sampling |
| Secondary (historical) data — Previous research | Data gathering — Collection of data (fieldwork) |
| Experience survey — Case study | Data processing and analysis — Editing and coding data |
| Problem definition (statement of research objectives) | Data processing and analysis |
| Selection of basic research method | Drawing conclusion and preparing report — Interpretation of findings |
| Survey (Interview, questionnaire) — Experiment (Laboratory, field) | Report |
| Observation — Secondary data study | |

Note: Diamond-shaped boxes indicate stages in the research process in which a choice of one or more techniques must be made. The dotted line indicates an alternative path that skips exploratory research.

Source: Zikmund, Babin, Carr & Griffin. (2010).

**TITLE OF RESEARCH:**
<u>**MANAGERS' INTENTION TO HIRE OLDER WORKERS**</u>

Dear Participants,

I have the great honour to invite you to participate in the above research study.

I am a post graduate degree (Ph.D) student from Universiti Tunku Abdul Rahman, Faculty of Business and Finance (Kampar Campus). Currently, I am conducting the above research on Malaysian managers' intention to hire older workers in their companies. The study involves a survey questionnaire that covers attitudes, beliefs, control, past experience and intention relevant to managers and older workers. Older workers in this research refers to Malaysian employees or job applicants or persons aged 50 and above, and in non-managerial positions.

Your kind participation in this survey is very important for the purpose of academic research and development. Your sincere response will contribute greatly to improving the development of older workers' labour participation in the country. At all times, your response will be kept completely confidential and anonymous. The report of the study may be submitted for publication, but no individual participants or companies will be identified.

This survey will take about 10 to 15 minutes to complete. Completion of the questionnaire indicates your willingness to participate in this survey.

If you have any question on this study, please feel free to contact any of the following persons from Universities Tunku Abdul Rahman, Faculty of Business and Finance (Kampar Campus):

- Claudia Lau, Phone No. 012-2135393; email:lausm@utar.edu.my.
- Prof Dr. Choong Chee Keong, Dean, Phone No. 05-4688888 ext 1034; email:choongck@utar.edu.my.
- Dr. Wong Kee Luen, Asst Professor, Phone No. 05-4688888 ext 4302; email:wongkl@utar.edu.my.

I greatly appreciate your time and contribution in completing this questionnaire.

Thank you very much.

Yours truly,
**Claudia Lau**
Post Graduate Degree (Ph.D) Student

*Note: This research is sponsored by UTAR Research Fund.*

## Section A: Company Profile
**Please tick ( √ ) on the box that is most relevant to your Company's profile:**

1. **Type of Industry**

| Accommodation and food service activities | | Administration and support service activities | | Agricultural, forestry and fishing | |
|---|---|---|---|---|---|
| Construction | | Education | | Financial and insurance / takaful activities | |
| Human health and social work activities | | Manufacturing | | Professional, scientific and technical activities | |
| Transport and storage | | Wholesale and retail trade; repair of vehicles and household goods | | Others (Please specify) | |

2. **Type of Company:**

| Local | | Multinational | | Others | |
|---|---|---|---|---|---|

3. **Total workforce (Malaysian and other nationality) in your company:**

| 5 and below | | 6 to 10 | | 11 to 15 | |
|---|---|---|---|---|---|
| 16 to 20 | | 21 to 25 | | 26 to 30 | |
| 31 to 35 | | 36 to 40 | | 41 to 45 | |
| 46 to 50 | | 51 to 55 | | 56 and above | |

4. **Your company's location:**

| Johor | | Kedah | | Kuala Lumpur | |
|---|---|---|---|---|---|
| Melaka | | Negeri Sembilan | | Perak | |
| Perlis | | Pulau Pinang | | Selangor | |

5. **Current number of Malaysian workers aged 50 and above in your company:**

| None | | 1 to 5 | | 6 to 10 | |
|---|---|---|---|---|---|
| 11 to 15 | | 16 to 20 | | 21 and above | |

6. **Number of Malaysian workers aged 50 and above recruited into your company in the last 12 months:**

| None | | 1 to 5 | | 6 to 10 | |
|---|---|---|---|---|---|
| 11 to 15 | | 16  to 20 | | 21 and above | |

7. **Number of Malaysian workers aged 50 and above who left your employment (for whatsoever reasons) in the last 12 months:**

| None | | 1 to 5 | | 6 to 10 | |
|---|---|---|---|---|---|
| 11 to 15 | | 16 to 20 | | 21 and above | |

## SECTION B: QUESTIONNAIRES

Please reach each statement carefully. **Circle** (O) the responses that best tells how you feel about each statement.
In ALL cases, **OLDER WORKERS refer to Malaysian male or female employees or job applicants aged 50 and above, and in non-managerial positions.**

**1= Strongly disagree; 2= Somewhat disagree; 3= Disagree; 4= Neutral; 5= Agree; 6= Somewhat agree; 7= Strongly agree.**

| | Measurement Constructs | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | Older workers do not resist change. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9 | Older workers can learn new skills as easily as other employees. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10 | Older workers do not increase production costs. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11 | Older workers usually turn out work of higher quality. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12 | Older workers are not likely to job-hop. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13 | My interaction with older persons in my family is very good. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14 | My interaction with older persons in my community is very good. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15 | My interaction with older workers at my workplace is very good. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16 | My interaction with older persons is comfortable. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17 | My interaction with older persons is easy. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18 | People who are important to me would think that I should hire older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19 | Most people who are important to me think it is okay for me to hire older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20 | Most people who are important to me support that I hire older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21 | Most people who are important to me understand that I hire | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | older workers. | | | | | | | |
| 22 | Most people who are important to me agree with me about hiring older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23 | I am capable of hiring older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24 | Hiring older workers is entirely within my control. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25 | I have the resources to hire older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26 | I have the knowledge to hire older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27 | I have the ability to hire older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28 | My intention to hire older workers is encouraged by the Minimum Retirement Age Act 2012. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29 | I hire older workers to avoid committing offences under the Minimum Retirement Age Act 2012. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30 | My company can receive incentives from the Ministry of Human Resources for sending older workers for training. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 31 | The top management of my company approves my hiring of older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32 | My company's human resource manager approves my hiring of older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 33 | I perceive that my company encourages employment of older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 34 | My company's senior management is committed to hire older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 35 | I have the intention to hire older workers because I have a positive attitude towards older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 36 | I have the intention to hire older workers because I have a good past experience with older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| 37 | I have the intention to hire older workers because I have strong support from my management and peers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|---|---|---|---|---|---|---|---|
| 38 | I have the intention to hire older workers because the Minimum Retirement Age Act 2012 has motivated me to do so. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 39 | My colleagues think that I should hire older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 40 | I think my colleagues encourage employment of older workers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**1= Extremely unlikely; 2= Somewhat unlikely; 3= Unlikely; 4= Neutral; 5= Likely; 6= Somewhat likely; 7= Extremely likely.**

| 41 | I will prioritize an older worker as my team member in the next 12 months. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|---|---|---|---|---|---|---|---|
| 42 | If other things being equal, I will prioritize an older worker for hiring in the next 12 months. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 43 | Even though an older worker is not the best available person, I will still prioritize him / her for hiring in the next 12 months. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Please rate your attitude toward hiring older workers by indicating your level of agreement with the following statements.**

| 44 | I think the activity of hiring older workers is: <br> Beneficial…….1…..….2…….….3……..4…..….5….….6……7..…..Harmful. |
|----|---|
| 45 | I think the activity of hiring older workers is: <br> Useful…..……..1…….2…....3…….4……..5…..….6…....7…....Useless. |
| 46 | I think the activity of hiring older workers is: <br> Wise………..…1……..2……….3..…….4…..….5…..….6……7……Foolish. |
| 47 | I think the activity of hiring older workers is: <br> Valuable……..1………2…..….3……..4………5…..….6……7…..Worthless. |

**Please tick ( √ ) the answer most relevant to your company:**

**48.** Do your company experienced difficulties in recruiting suitable Malaysian workers (irrespective of age) meeting your needs in the last 12 months?

Yes ☐         No ☐

**49.** Rank the following six strategies in overcoming labour shortages **in term of priorities**. Please rank the first strategy your company would implement as 1, the next one as 2, and so on, until you have ranked each of them:

| To use foreign workers | | To use part-time workers | |
|---|---|---|---|
| To use older workers | | To shift our company to a place with plenty of labour supply | |
| To attract potential workers by offering higher salaries | | To substitute labour with technology | |

## SECTION C: RESPONDENT'S PROFILE

**Please tick ( √ ) on the box where the answer is most relevant to you:**

**50.** **Your position in the Company**:

| Director / Partner / Sole Proprietor | | Chief Executive Officer / General Manager | | Production / Operation Manager | |
|---|---|---|---|---|---|
| Corporate Affairs / Legal Manager | | Finance / Accounts Manager | | Human Resource / Administration Manager | |
| Sales / Marketing Manager | | Project Manager / Supervisor | | Others | |

**51.** **Years of service in your current position:**

| Below 1 year | | 1 to 5 years | | 6 to 10 years | |
|---|---|---|---|---|---|
| 11 to 15 years | | 16 to 20 years | | 21 years and above | |

**52.** **Highest educational qualification completed:**

| Secondary school | | Certificate / Diploma | | Bachelor degree | |
|---|---|---|---|---|---|
| Master degree | | Doctorate degree | | Professional qualification | |

**53.** **Your age:**

| 30 and Below | | 31 to 40 | | 41 to 50 | | 51 and Above | |
|---|---|---|---|---|---|---|---|

**54.** **Gender:**         Male ☐     Female ☐

**55.** Have you ever attended any 'age awareness' or related training program in order that you can better understand older workers?

Yes ☐         No ☐

*Thank you very much for your time and contribution*
*in completing this questionnaire.*

# APPENDIX 3.3

## Content Validity from Experts

| Q No. | R.1 | R.2 | R.3 | R.4 | R.5 | Comment | Changes Made |
|---|---|---|---|---|---|---|---|
| 1 | √ | X | √ | X | X | Insufficient category | To add in: Administration & Support Services; Human Health & Social Works Activities |
| 2 | √ | √ | √ | √ | √ | No Comment | - |
| 3 | √ | X | √ | √ | X | Clarify workers' nationality | To add in: Malaysian & other nationality |
| 4 | √ | √ | √ | √ | √ | No Comment | - |
| 5 | √ | X | √ | √ | X | Clarify workers' nationality | To add in: Malaysian |
| 6 | √ | X | √ | √ | X | Clarify workers' nationality | To add in: Malaysian |
| 7 | √ | X | √ | √ | X | Clarify workers' nationality | To add in: Malaysian |
| 8 | √ | √ | √ | √ | √ | Change to positive wordings | To change to: Older workers do not resist change. |
| 9 | √ | √ | √ | √ | √ | No Comment | - |
| 10 | X | √ | X | √ | √ | Change to positive wordings | To change to: Older workers do not increase production costs. |
| 11 | X | √ | X | √ | √ | No Comment | - |
| 12 | √ | √ | √ | √ | √ | No Comment | - |
| 13 | √ | √ | √ | √ | √ | No Comment | - |
| 14 | √ | √ | √ | √ | √ | No Comment | - |
| 15 | √ | √ | √ | √ | √ | No Comment | - |
| 16 | √ | √ | √ | √ | √ | No Comment | - |
| 17 | X | √ | X | √ | √ | Change to positive wordings | To change to: My interaction with older persons is easy. |
| 18 | √ | √ | √ | √ | √ | No Comment | - |
| 19 | √ | √ | √ | √ | √ | No Comment | - |
| 20 | √ | √ | √ | √ | √ | No Comment | - |
| 21 | √ | √ | √ | √ | √ | No Comment | - |
| 22 | √ | √ | √ | √ | √ | No Comment | - |
| 23 | √ | √ | √ | √ | √ | No Comment | - |
| 24 | √ | √ | √ | √ | √ | No Comment | - |
| 25 | √ | √ | √ | √ | √ | No Comment | - |
| 26 | √ | √ | √ | √ | √ | No Comment | - |
| 27 | √ | √ | √ | √ | √ | No Comment | - |
| 28 | √ | √ | √ | √ | √ | No Comment | - |
| 29 | √ | √ | √ | √ | √ | No Comment | - |
| 30 | √ | √ | √ | √ | √ | No Comment | - |

| R | | | | | | | |
|---|---|---|---|---|---|---|---|
| 31 | √ | √ | √ | √ | √ | No Comment | - |
| 32 | √ | √ | √ | √ | √ | No Comment | - |
| 33 | √ | √ | √ | √ | √ | No Comment | - |
| 34 | X | √ | X | √ | √ | Change to positive wordings | To change to: My company's senior management is committed to hire older workers. |
| 35 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 36 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 37 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 38 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 39 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 40 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 41 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 42 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 43 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 44 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 45 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 46 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 47 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 48 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 49 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 50 | √ | X | √ | X | X | Insufficient category | To add in: 1. Director/Partner/ Sole Proprietor; 2. Chief Executive Officer/General Manager; 3. Sales/Marketing Manager; 4. Project Manager/ Supervisor; |
| 51 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 52 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 53 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 54 | √ | √ | √ | √ | √ | No Comment | No Comment |
| 55 | √ | √ | √ | √ | √ | No Comment | No Comment |

**Note: R = Reviewer**

# APPENDIX 4.1

## FIRST & SECOND SET OF OUTLIERS

### First Set of Outliers Identified – Case nos. 11, 317 & 319

## Regression

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | ATT, PBC, SN, PE[b] | . | Enter |

a. Dependent Variable: INT

b. All requested variables entered.

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .660[a] | .436 | .431 | .67049 |

a. Predictors: (Constant), ATT, PBC, SN, PE

b. Dependent Variable: INT

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 160.988 | 4 | 40.247 | 89.525 | .000[b] |
| | Residual | 208.146 | 463 | .450 | | |
| | Total | 369.134 | 467 | | | |

a. Dependent Variable: INT

b. Predictors: (Constant), ATT, PBC, SN, PE

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 3.157 | .291 | | 10.859 | .000 | | |
| | PE | .036 | .039 | .035 | .928 | .354 | .861 | 1.161 |
| | SN | .347 | .034 | .379 | 10.209 | .000 | .885 | 1.130 |
| | PBC | .068 | .034 | .073 | 1.977 | .049 | .889 | 1.125 |
| | ATT | -.310 | .028 | -.409 | -10.922 | .000 | .870 | 1.150 |

a. Dependent Variable: INT

## Collinearity Diagnostics[a]

| Model | Dimension | Eigenvalue | Condition Index | Variance Proportions | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | (Constant) | PE | SN | PBC | ATT |
| 1 | 1 | 4.818 | 1.000 | .00 | .00 | .00 | .00 | .00 |
| | 2 | .111 | 6.582 | .00 | .01 | .07 | .01 | .59 |
| | 3 | .038 | 11.247 | .00 | .08 | .67 | .25 | .06 |
| | 4 | .024 | 14.215 | .02 | .44 | .04 | .71 | .01 |
| | 5 | .009 | 23.557 | .98 | .47 | .21 | .03 | .34 |

a. Dependent Variable: INT

## Casewise Diagnostics[a]

| Case Number | Std. Residual | INT | Predicted Value | Residual |
|---|---|---|---|---|
| 11 | 3.390 | 4.71 | 2.4411 | 2.27321 |
| 317 | -4.168 | 1.86 | 4.6515 | -2.79435 |
| 319 | -3.014 | 1.71 | 3.7352 | -2.02089 |

a. Dependent Variable: INT

## Residuals Statistics[a]

| | Minimum | Maximum | Mean | Std. Deviation | N |
|---|---|---|---|---|---|
| Predicted Value | 2.0959 | 5.8822 | 4.0259 | .58713 | 468 |
| Std. Predicted Value | -3.287 | 3.162 | .000 | 1.000 | 468 |
| Standard Error of Predicted Value | .032 | .152 | .065 | .025 | 468 |
| Adjusted Predicted Value | 2.1272 | 5.8830 | 4.0268 | .58746 | 468 |
| Residual | -2.79435 | 2.27321 | .00000 | .66761 | 468 |
| Std. Residual | -4.168 | 3.390 | .000 | .996 | 468 |
| Stud. Residual | -4.185 | 3.471 | -.001 | 1.003 | 468 |
| Deleted Residual | -2.81707 | 2.38317 | -.00085 | .67805 | 468 |
| Stud. Deleted Residual | -4.261 | 3.514 | -.001 | 1.007 | 468 |
| Mahal. Distance | .044 | 23.087 | 3.991 | 4.198 | 468 |
| Cook's Distance | .000 | .117 | .003 | .009 | 468 |
| Centered Leverage Value | .000 | .049 | .009 | .009 | 468 |

a. Dependent Variable: INT
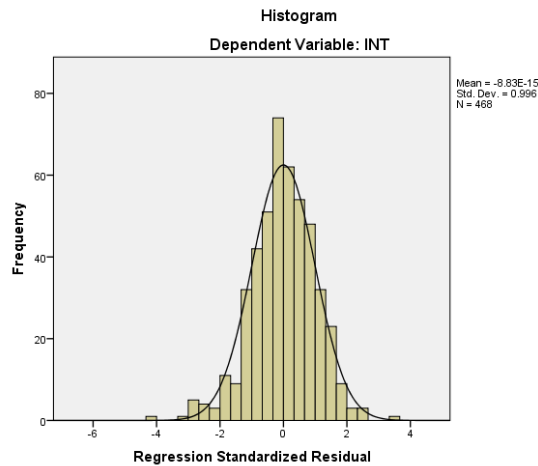
## Charts



Histogram

Dependent Variable: INT

Mean = -8.83E-15
Std. Dev. = 0.996
N = 468

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: INT



Scatterplot

Dependent Variable: INT



Partial Regression Plot

Dependent Variable: INT

Partial Regression Plot
Dependent Variable: INT



Partial Regression Plot
Dependent Variable: INT
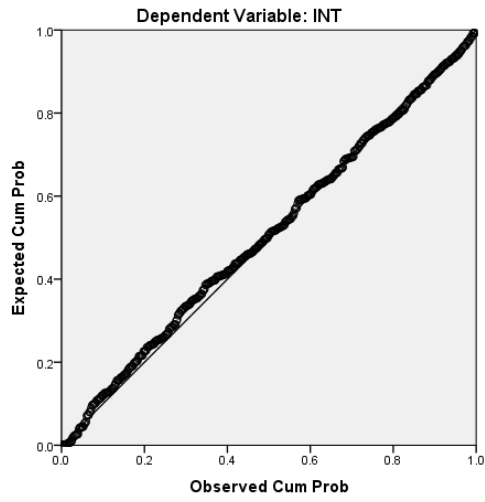


Partial Regression Plot
Dependent Variable: INT
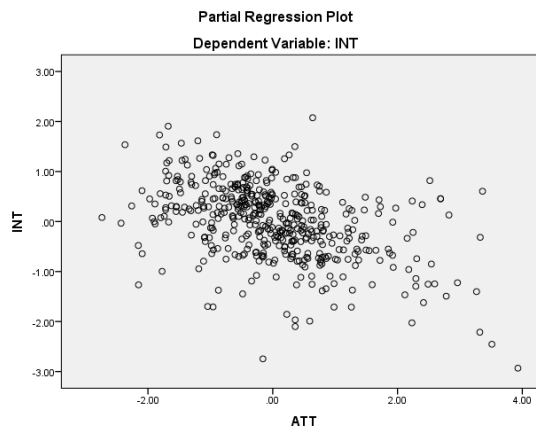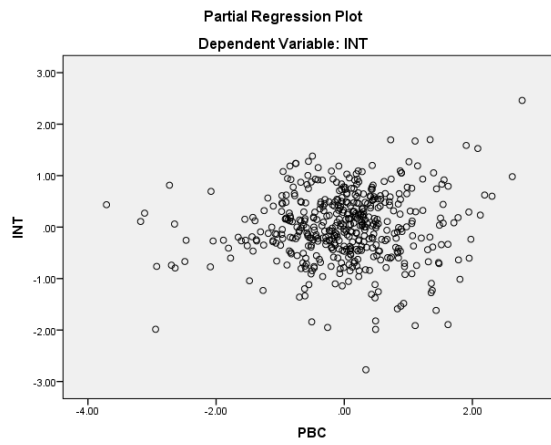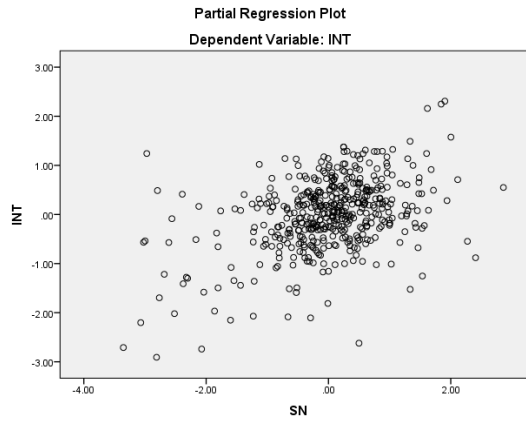
## Second Set of Outliers Identified – Case nos. 333, 338 & 356

**Regression**

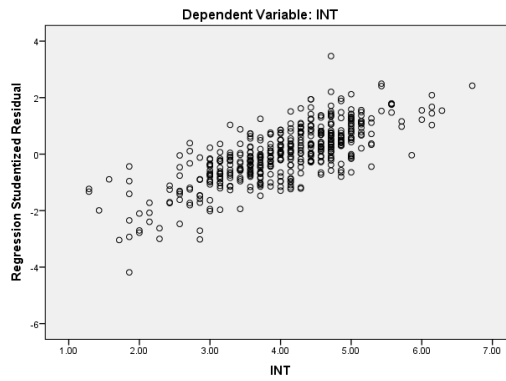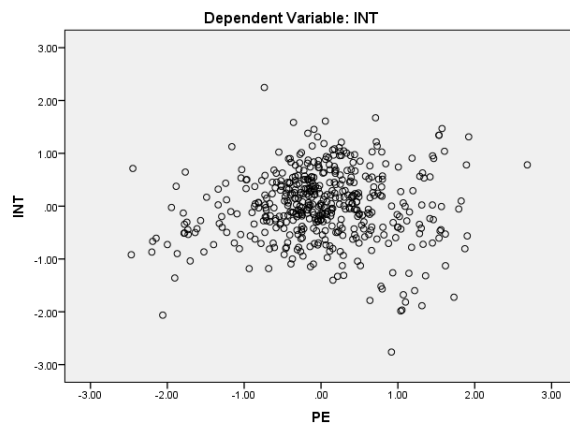**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|-------|-------------------|-------------------|--------|
| 1 | ATT, PBC, SN, PE[b] | . | Enter |

a. Dependent Variable: INT
b. All requested variables entered.

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-----|----------|-------------------|----------------------------|
| 1 | .684[a] | .468 | .463 | .64399 |

a. Predictors: (Constant), ATT, PBC, SN, PE
b. Dependent Variable: INT

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|--|----------------|-----|-------------|-----|------|
| 1 | Regression | 167.808 | 4 | 41.952 | 101.156 | .000[b] |
| | Residual | 190.774 | 460 | .415 | | |
| | Total | 358.582 | 464 | | | |

a. Dependent Variable: INT
b. Predictors: (Constant), ATT, PBC, SN, PE

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|-------|--|------|-----------|------|------|------|-----------|------|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 3.089 | .280 | | 11.043 | .000 | | |
| | PE | .058 | .037 | .056 | 1.539 | .125 | .863 | 1.159 |
| | SN | .358 | .033 | .390 | 10.766 | .000 | .882 | 1.134 |
| | PBC | .056 | .033 | .061 | 1.677 | .094 | .882 | 1.134 |
| | ATT | -.317 | .027 | -.423 | -11.623 | .000 | .874 | 1.144 |

a. Dependent Variable: INT

**Collinearity Diagnostics[a]**

| Model | Dimension | Eigenvalue | Condition Index | Variance Proportions | | | | |
|-------|-----------|------------|-----------------|------------|-----|-----|-----|-----|
| | | | | (Constant) | PE | SN | PBC | ATT |
| 1 | 1 | 4.820 | 1.000 | .00 | .00 | .00 | .00 | .00 |
| | 2 | .111 | 6.602 | .00 | .01 | .07 | .01 | .60 |
| | 3 | .037 | 11.446 | .00 | .09 | .69 | .25 | .06 |
| | 4 | .024 | 14.227 | .02 | .43 | .03 | .72 | .01 |
| | 5 | .009 | 23.532 | .98 | .47 | .21 | .02 | .33 |

a. Dependent Variable: INT

**Casewise Diagnostics[a]**

| Case Number | Std. Residual | INT | Predicted Value | Residual |
|-------------|---------------|------|-----------------|----------|
| 333 | -3.041 | 1.86 | 3.8156 | -1.95850 |
| 338 | -3.035 | 2.29 | 4.2402 | -1.95444 |
| 356 | -3.165 | 2.86 | 4.8956 | -2.03844 |

a. Dependent Variable: INT

**Residuals Statistics<sup>a</sup>**

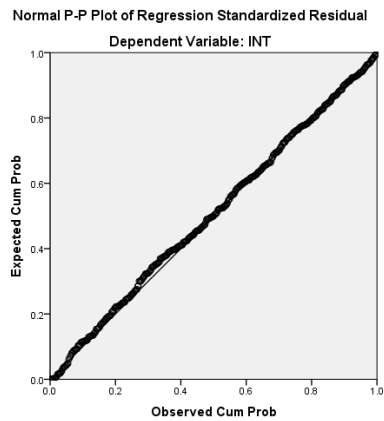| | Minimum | Maximum | Mean | Std. Deviation | N |
|---|---|---|---|---|---|
| Predicted Value | 2.0008 | 5.9715 | 4.0341 | .60138 | 465 |
| Std. Predicted Value | -3.381 | 3.222 | .000 | 1.000 | 465 |
| Standard Error of Predicted Value | .030 | .148 | .062 | .024 | 465 |
| Adjusted Predicted Value | 2.0294 | 5.9751 | 4.0351 | .60131 | 465 |
| Residual | -2.03844 | 1.64632 | .00000 | .64121 | 465 |
| Std. Residual | -3.165 | 2.556 | .000 | .996 | 465 |
| Stud. Residual | -3.199 | 2.595 | -.001 | 1.003 | 465 |
| Deleted Residual | -2.08170 | 1.69677 | -.00103 | .65100 | 465 |
| Stud. Deleted Residual | -3.231 | 2.612 | -.001 | 1.006 | 465 |
| Mahal. Distance | .040 | 23.379 | 3.991 | 4.201 | 465 |
| Cook's Distance | .000 | .077 | .003 | .008 | 465 |
| Centered Leverage Value | .000 | .050 | .009 | .009 | 465 |

a. Dependent Variable: INT

## Charts



Histogram
Dependent Variable: INT

Mean = -8.43E-15
Std. Dev. = 0.996
N = 465



Normal P-P Plot of Regression Standardized Residual
Dependent Variable: INT

Scatterplot
Dependent Variable: INT



Partial Regression Plot
Dependent Variable: INT



Partial Regression Plot
Dependent Variable: INT

Partial Regression Plot
Dependent Variable: INT



Partial Regression Plot
Dependent Variable: INT
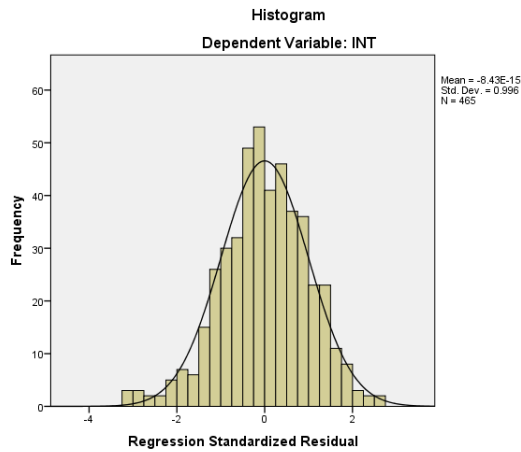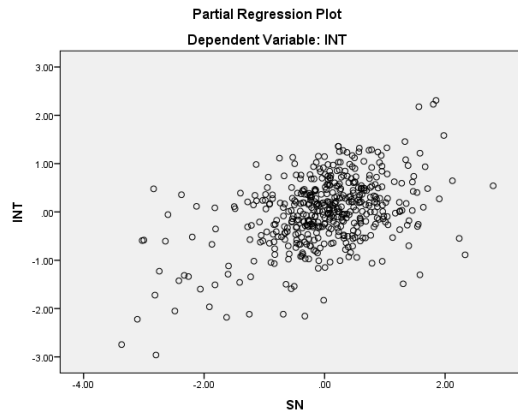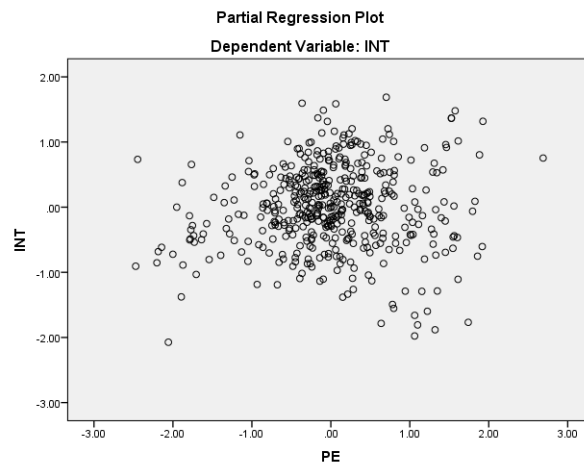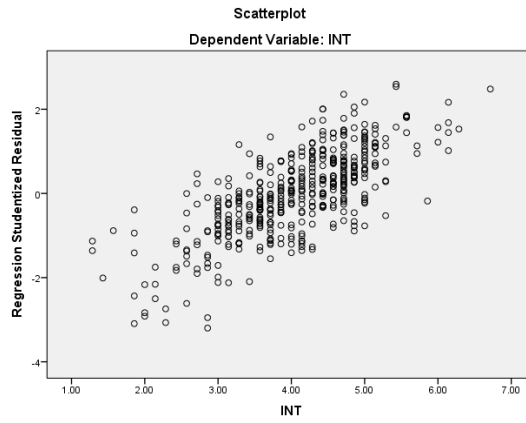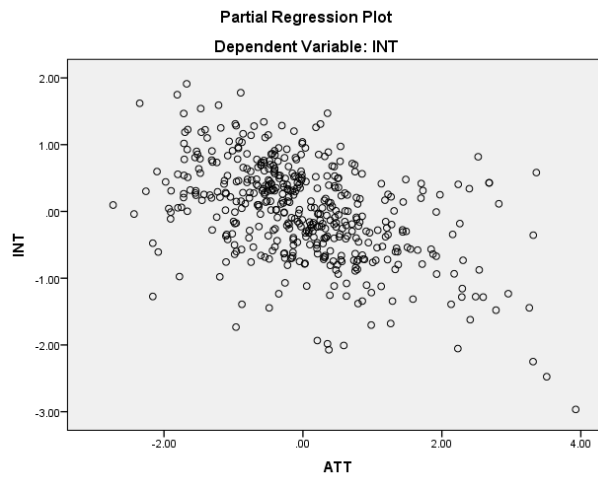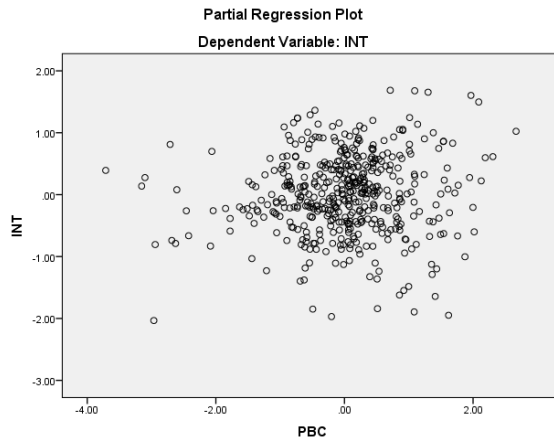
# Kurtosis

**Statistics**

|  |  | PE | SN | PBC | ATT |
|---|---|---|---|---|---|
| N | Valid | 468 | 468 | 468 | 468 |
|  | Missing | 0 | 0 | 0 | 0 |
| Kurtosis |  | .327 | 1.093 | 1.245 | .118 |
| Std. Error of Kurtosis |  | .225 | .225 | .225 | .225 |



PE

Mean = 5.13
Std. Dev. = .86
N = 468



SN

Mean = 4.16
Std. Dev. = .97
N = 468

**PBC**

Mean = 4.75
Std. Dev. = .963
N = 468



**ATT**

Mean = 3.50
Std. Dev. = 1.174
N = 468
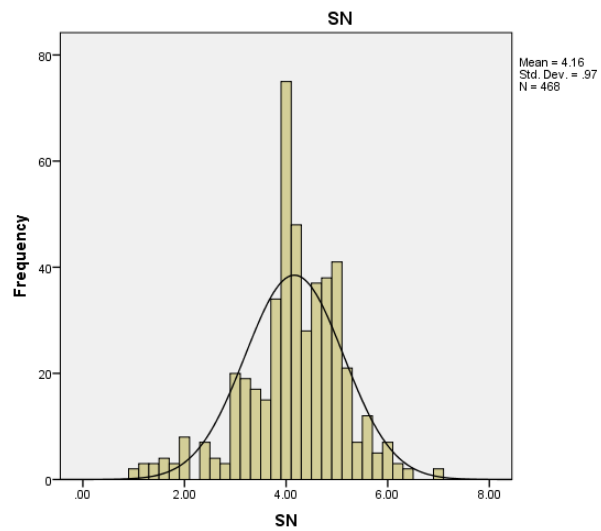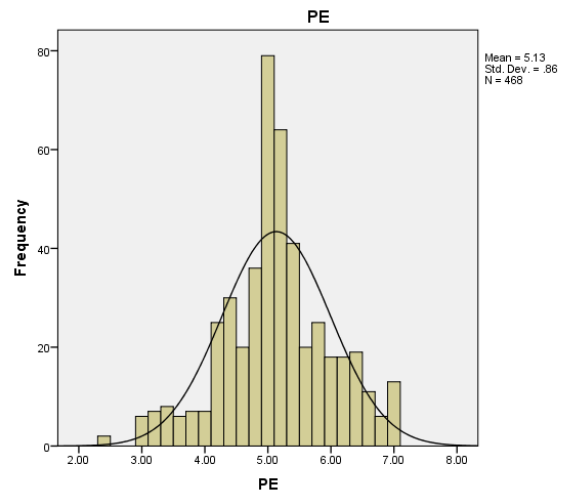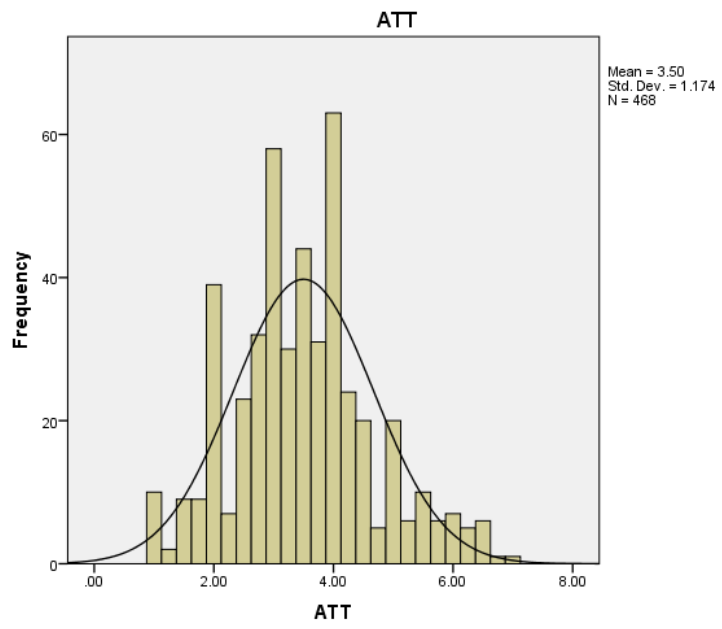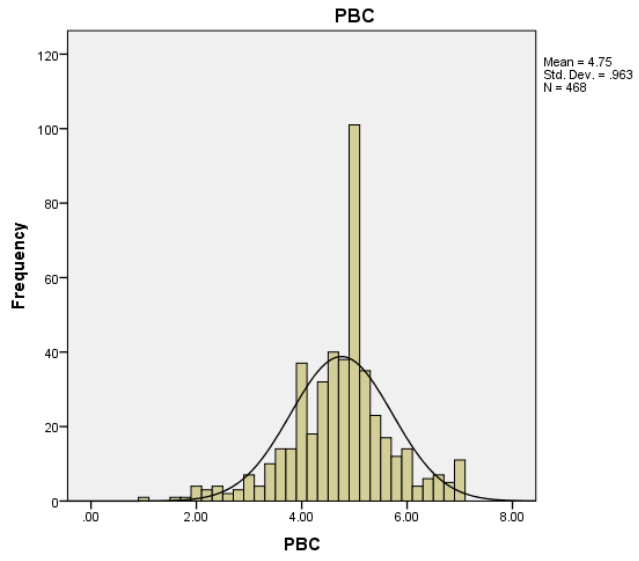
# APPENDIX 4.3

## KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .860 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 6115.198 |
| | df | 171 |
| | Sig. | .000 |

**Total Variance Explained**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| 1 | 5.439 | 28.627 | 28.627 | 5.439 | 28.627 | 28.627 | 3.832 | 20.170 | 20.170 |
| 2 | 3.666 | 19.295 | 47.923 | 3.666 | 19.295 | 47.923 | 3.450 | 18.156 | 38.326 |
| 3 | 2.713 | 14.278 | 62.201 | 2.713 | 14.278 | 62.201 | 3.307 | 17.405 | 55.731 |
| 4 | 1.999 | 10.522 | 72.723 | 1.999 | 10.522 | 72.723 | 3.229 | 16.992 | 72.723 |
| 5 | .829 | 4.361 | 77.084 | | | | | | |
| 6 | .674 | 3.548 | 80.632 | | | | | | |
| 7 | .483 | 2.542 | 83.174 | | | | | | |
| 8 | .469 | 2.469 | 85.643 | | | | | | |
| 9 | .396 | 2.086 | 87.729 | | | | | | |
| 10 | .344 | 1.811 | 89.540 | | | | | | |
| 11 | .308 | 1.620 | 91.160 | | | | | | |
| 12 | .288 | 1.515 | 92.675 | | | | | | |
| 13 | .286 | 1.507 | 94.182 | | | | | | |
| 14 | .233 | 1.226 | 95.408 | | | | | | |
| 15 | .218 | 1.147 | 96.555 | | | | | | |
| 16 | .187 | .984 | 97.539 | | | | | | |
| 17 | .176 | .927 | 98.466 | | | | | | |
| 18 | .153 | .805 | 99.271 | | | | | | |
| 19 | .138 | .729 | 100.000 | | | | | | |

Note: 1=Total; 2=% of Variance; 3= Cumulative %
Extraction Method: Principal Component Analysis.
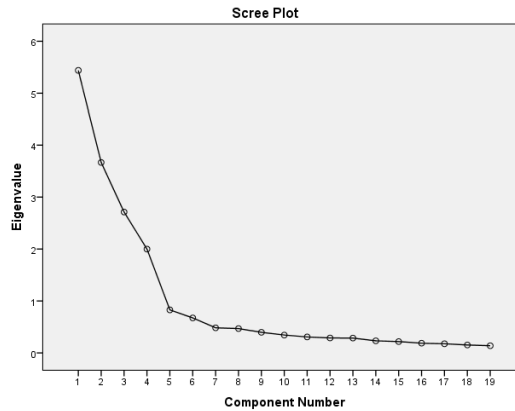
## Descriptive Statistics & Communalities

|  | Mean | Std. Deviation | Analysis N | Initial | Extraction |
|---|---|---|---|---|---|
| PE1 | 5.22 | 1.110 | 468 | 1.000 | .743 |
| PE2 | 5.11 | 1.099 | 468 | 1.000 | .808 |
| PE3 | 4.87 | 1.306 | 468 | 1.000 | .640 |
| PE4 | 5.06 | 1.096 | 468 | 1.000 | .695 |
| PE5 | 5.40 | .792 | 468 | 1.000 | .276 |
| SN1 | 3.95 | 1.151 | 468 | 1.000 | .616 |
| SN2 | 4.26 | 1.153 | 468 | 1.000 | .722 |
| SN3 | 4.11 | 1.144 | 468 | 1.000 | .793 |
| SN4 | 4.27 | 1.123 | 468 | 1.000 | .816 |
| SN5 | 4.21 | 1.096 | 468 | 1.000 | .705 |
| PBC1 | 4.91 | 1.064 | 468 | 1.000 | .746 |
| PBC2 | 4.75 | 1.259 | 468 | 1.000 | .781 |
| PBC3 | 4.76 | 1.200 | 468 | 1.000 | .831 |
| PBC4 | 4.56 | 1.222 | 468 | 1.000 | .483 |
| PBC5 | 4.79 | 1.112 | 468 | 1.000 | .839 |
| A1 | 3.46 | 1.312 | 468 | 1.000 | .834 |
| A2 | 3.47 | 1.332 | 468 | 1.000 | .861 |
| A3 | 3.53 | 1.232 | 468 | 1.000 | .808 |
| A4 | 3.53 | 1.274 | 468 | 1.000 | .820 |

Extraction Method: Principal Component Analysis

## Component Matrix[a] & Rotated Component Matrix[a]

|  | Component Matrix[a] | | | | Rotated Component Matrix[a] | | | |
|---|---|---|---|---|---|---|---|---|
|  | C 1 | C2 | C3 | C4 | C1 | C2 | C3 | C4 |
| PE1 | .480 | .435 | -.353 | .446 | -.027 | .130 | -.053 | .850 |
| PE2 | .580 | .438 | -.346 | .399 | .021 | .202 | -.121 | .867 |
| PE3 | .577 | .319 | -.223 | .395 | .149 | .174 | -.093 | .761 |
| PE4 | .465 | .328 | -.326 | .515 | .055 | .031 | -.035 | .831 |
| PE5 | .342 | .207 | -.237 | .245 | .023 | .069 | -.105 | .509 |
| SN1 | .517 | -.459 | .344 | .143 | .772 | -.007 | -.144 | .005 |
| SN2 | .557 | -.449 | .433 | .151 | .842 | .047 | -.103 | -.004 |
| SN3 | .615 | -.429 | .413 | .244 | .880 | .032 | -.088 | .101 |
| SN4 | .654 | -.430 | .399 | .210 | .885 | .060 | -.133 | .104 |
| SN5 | .602 | -.427 | .365 | .165 | .822 | .048 | -.150 | .066 |
| PBC1 | .494 | .631 | .193 | -.259 | -.006 | .824 | -.025 | .258 |
| PBC2 | .430 | .610 | .298 | -.367 | -.002 | .878 | .005 | .104 |
| PBC3 | .510 | .609 | .286 | -.344 | .044 | .895 | -.029 | .162 |
| PBC4 | .432 | .083 | .492 | -.220 | .423 | .542 | -.001 | -.104 |
| PBC5 | .495 | .646 | .269 | -.321 | .013 | .895 | -.007 | .193 |
| A1 | -.610 | .355 | .481 | .324 | -.179 | -.014 | .884 | -.141 |
| A2 | -.590 | .360 | .499 | .367 | -.148 | -.016 | .910 | -.109 |
| A3 | -.551 | .353 | .484 | .382 | -.126 | -.016 | .887 | -.076 |
| A4 | -.564 | .351 | .501 | .357 | -.129 | -.004 | .890 | -.107 |

| Extraction Method: Principal Component Analysis. |
| a. 4 components extracted. |

C=Component

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

**Component Transformation Matrix**

| Component | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1 | .579 | .437 | -.489 | .485 |
| 2 | -.522 | .642 | .372 | .420 |
| 3 | .564 | .387 | .597 | -.420 |
| 4 | .273 | -.497 | .516 | .642 |

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

## Cross Loadings Values for the Indicators in the Model

| | AS | ATT | CB | FINT | MS | OINT | PBC | PE | PS | SN |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| A1 | -0.1900 | **0.9105** | -0.1524 | -0.4631 | -0.3121 | -0.3853 | -0.0496 | -0.2399 | -0.3424 | -0.3162 |
| A2 | -0.2052 | **0.9257** | -0.1448 | -0.4736 | -0.3132 | -0.3505 | -0.0648 | -0.2154 | -0.3499 | -0.2835 |
| A3 | -0.2008 | **0.8998** | -0.2266 | -0.4643 | -0.3318 | -0.4249 | -0.0730 | -0.1850 | -0.3585 | -0.2577 |
| A4 | -0.2163 | **0.9086** | 0.1863 | -0.5123 | -0.3793 | -0.3724 | -0.0913 | -0.2086 | -0.3414 | -0.2586 |
| AS1 | **0.7398** | -0.1820 | 0.1480 | 0.1204 | 0.0952 | 0.1281 | 0.0211 | 0.0608 | 0.0834 | 0.0100 |
| AS2 | **0.8100** | -0.1856 | 0.1841 | 0.1999 | 0.1894 | 0.1863 | 0.0024 | 0.0957 | 0.1173 | 0.1596 |
| AS3 | **0.5641** | -0.0750 | 0.0905 | 0.0533 | 0.0136 | 0.0213 | 0.0529 | 0.1197 | -0.0133 | 0.0186 |
| AS4 | **0.6071** | -0.1342 | 0.1730 | 0.2149 | 0.2424 | 0.3065 | 0.1441 | 0.0747 | 0.1871 | 0.1249 |
| AS5 | **0.5188** | -0.1155 | 0.0689 | 0.1195 | 0.1675 | 0.1823 | 0.1265 | 0.1771 | 0.0911 | 0.0992 |
| CB1 | 0.2383 | -0.2075 | **0.9151** | 0.3353 | 0.2764 | 0.5385 | 0.2268 | 0.1120 | 0.3754 | 0.3095 |
| CB2 | 0.1662 | -0.1198 | **0.8729** | 0.2889 | 0.2700 | 0.5211 | 0.1838 | -0.0009 | 0.3509 | 0.3113 |
| CB3 | 0.1093 | -0.1813 | **0.7966** | 0.3438 | 0.2680 | 0.4518 | 0.1157 | 0.0713 | 0.3801 | 0.3010 |
| IN1 | 0.1859 | -0.3625 | 0.4157 | 0.4234 | 0.3986 | **0.8309** | 0.2162 | 0.2648 | 0.4224 | 0.3437 |
| IN2 | 0.2165 | -0.3827 | 0.3754 | 0.4457 | 0.5331 | **0.8063** | 0.2662 | 0.3364 | 0.4495 | 0.4263 |
| IN3 | 0.2386 | -0.3189 | 0.4364 | 0.3928 | 0.5341 | **0.8164** | 0.2817 | 0.1575 | 0.4343 | 0.4355 |
| IN4 | 0.1770 | -0.2529 | 0.7171 | 0.3801 | 0.3214 | **0.7121** | 0.2015 | 0.0460 | 0.4303 | 0.3151 |
| INF1 | 0.1938 | -0.4904 | 0.3757 | **0.9466** | 0.4305 | 0.4754 | 0.2060 | 0.0994 | 0.4900 | 0.4177 |
| INF2 | 0.2305 | -0.5037 | 0.3180 | **0.9138** | 0.4662 | 0.5006 | 0.2398 | 0.1583 | 0.4483 | 0.3978 |
| INF3 | 0.2015 | -0.4641 | 0.3249 | **0.9166** | 0.3878 | 0.4642 | 0.1994 | 0.0762 | 0.4385 | 0.3881 |
| MS1 | 0.2179 | -0.2873 | 0.3028 | 0.4011 | **0.8599** | 0.6020 | 0.2844 | 0.2273 | 0.4042 | 0.4542 |
| MS2 | 0.1835 | -0.3269 | 0.2653 | 0.3749 | **0.9095** | 0.5011 | 0.3347 | 0.2306 | 0.4120 | 0.4858 |
| MS3 | 0.1722 | -0.3082 | 0.2739 | 0.4282 | **0.8551** | 0.4757 | 0.2349 | 0.1717 | 0.4793 | 0.4566 |
| MS4 | 0.1910 | -0.3293 | 0.2015 | 0.3640 | **0.7448** | 0.3389 | 0.1279 | 0.0935 | 0.2925 | 0.3486 |
| PBC1 | 0.0101 | -0.0627 | 0.0296 | 0.0172 | 0.0784 | 0.1414 | **0.6370** | 0.3774 | 0.0579 | 0.0675 |
| PBC2 | -0.0018 | -0.0186 | -0.0238 | 0.0011 | 0.0879 | 0.1040 | **0.6514** | 0.2404 | 0.0327 | 0.0581 |
| PBC3 | -0.0012 | -0.0656 | 0.0072 | 0.0188 | 0.1390 | 0.1128 | **0.7277** | 0.3150 | 0.0894 | 0.1024 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **PBC4** | 0.1199 | -0.0719 | 0.2918 | 0.3136 | 0.3397 | 0.3430 | **0.9001** | 0.0574 | 0.3246 | 0.3727 |
| **PBC5** | 0.0286 | -0.0434 | 0.0402 | 0.0498 | 0.1493 | 0.1375 | **0.7560** | 0.3355 | 0.0929 | 0.0685 |
| **PE1** | 0.0922 | -0.1526 | -0.0271 | 0.0684 | 0.1434 | 0.1819 | 0.1406 | **0.8360** | 0.0656 | 0.0513 |
| **PE2** | 0.1695 | -0.2258 | 0.0530 | 0.1128 | 0.1949 | 0.2478 | 0.2157 | **0.8983** | 0.1213 | 0.1069 |
| **PE3** | 0.1007 | -0.2082 | 0.1362 | 0.1481 | 0.2282 | 0.2699 | 0.2292 | **0.8343** | 0.2229 | 0.2025 |
| **PE4** | 0.1048 | -0.1486 | 0.0637 | 0.0839 | 0.1512 | 0.1469 | 0.1041 | **0.7936** | 0.1134 | 0.1070 |
| **PE5** | 0.0982 | -0.1555 | 0.0158 | 0.0198 | 0.1103 | 0.1704 | 0.0993 | **0.5308** | 0.0166 | 0.0746 |
| **PS1** | 0.1706 | -0.3816 | 0.4177 | 0.4722 | 0.4686 | 0.5288 | 0.2477 | 0.1542 | **0.9580** | 0.4716 |
| **PS2** | 0.1190 | -0.3466 | 0.3844 | 0.4753 | 0.4377 | 0.5126 | 0.2591 | 0.1392 | **0.9510** | 0.4374 |
| **SN1** | 0.1511 | -0.2576 | 0.3097 | 0.3386 | 0.3483 | 0.3724 | 0.1800 | 0.0731 | 0.3821 | **0.7832** |
| **SN2** | 0.0909 | -0.2343 | 0.2573 | 0.3444 | 0.3861 | 0.3738 | 0.2317 | 0.0695 | 0.3382 | **0.8469** |
| **SN3** | 0.1033 | -0.2421 | 0.3052 | 0.3679 | 0.4629 | 0.4168 | 0.2712 | 0.1598 | 0.4502 | **0.8907** |
| **SN4** | 0.1246 | -0.2861 | 0.3059 | 0.4000 | 0.5043 | 0.4594 | 0.2994 | 0.1794 | 0.4306 | **0.9053** |
| **SN5** | 0.0918 | -0.2842 | 0.3278 | 0.3979 | 0.5038 | 0.4404 | 0.2832 | 0.1367 | 0.4281 | **0.8490** |