DEMOGRAPHIC DETERMINANTS OF EMPLOYMENT AMONG OLDER POPULATION: THE CASE OF MALAYSIA

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ABSTRAK

Malaysia dijangka sebagai negara menua menjelang 2030 berikutan kadar kesuburan dan kadar kematian yang semakin menurun serta infrastruktur kesihatan yang bertambah baik. Peningkatan nisbah kebergantungan umur tua dan kadar penyertaan tenaga buruh yang rendah dalam kalangan penduduk lebih tua adalah trend utama yang mengundang kepada keprihatinan dari segi sosioekonomi di negara ini. Kajian ini bertujuan menyediakan profil sosiodemografi guna tenaga umur tua dan mengenal pasti faktor yang mempengaruhi penduduk umur tua untuk bekerja. Data tahunan Survei Tenaga Buruh (2011-2015) yang dilaksanakan oleh Jabatan Perangkaan Malaysia digunakan untuk menganalisis statistik deskriptif dan inferens guna tenaga umur tua, manakala transisi demografi digambarkan menggunakan anggaran penduduk berasaskan Banci Penduduk dan Perumahan 2010. Binary Logistic Regression digunakan bagi mengenal pasti faktor signifikan yang mempengaruhi penduduk umur tua untuk bekerja. Kajian ini mendapati bahawa umur, jantina, strata, etnik dan taraf perkahwinan merupakan faktor signifikan yang mempengaruhi penglibatan penduduk umur tua dalam guna tenaga. Oleh itu, perubahan demografi perlu diambil kira dalam mengkaji semula dan memperkukuh dasar pasaran buruh nasional. Di samping itu, analisis yang menyeluruh diperlukan bagi memastikan polisi yang digubal mencapai golongan sasaran.

Kata kunci: Penuaan penduduk, Survei Tenaga Buruh, Guna tenaga umur tua

ABSTRACT

Malaysia is expected to become an ageing nation by 2030 due to gradual reduction in fertility and mortality rates along with improvement in health infrastructure. The increase in old age dependency ratio and low labour force participation rate of older population are key trends that post socioeconomic concern in the country. The aims of this study were to profile the socio-demographic characteristics of older workforce and to identify the associated factors of employment among older population in Malaysia. Data of annual Labour Force Survey (2011-2015) conducted by Department of Statistics, Malaysia was utilised to analyse the descriptive and inferential statistics while the demographic transitions was illustrated using population estimates based on the 2010 Population and Housing Census. Binary logistic regression was applied to identify the factors associated with employment among older population in Malaysia. The findings revealed that age, sex, strata, ethnic and marital status are the significant factors of employment among older

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population in Malaysia. Thus, demographic changes should be accounted for while reviewing and strengthening national labour market policies and thorough analysis is required to ensure the outlined policies are target-specific.

Keywords: Ageing population, Labour Force Survey, Malaysia, Older employment

1. INTRODUCTION

Population ageing is a universal phenomenon experienced by developed countries and has become a reason for concern in developing countries. The gradual increase of life expectancy, the decrease in fertility rate and mortality rate coupled with improvement in health facilities are among the key factors that resulted in the rising share of old aged population in a particular country. The changes in the age structure of population come with a set of opportunities and challenges. From a positive viewpoint, higher proportion of older population indicates progress in healthcare infrastructure and advancement in medical sciences. However, one of the social implications of population ageing is the increase in the ratio of elderly to youth. As a nation aged, the size of the working age population will gradually lessen, assuming that the retirement age remained constant.

According to the United Nations Department of Social Affairs [UNDESA] (2017) the growth rate of people aged 60 and over is 30 per cent per year. This group made up 13 per cent of the global population, which amounted to an estimated 962 million population. In Europe, 25 per cent of the population is those aged 60 and over. UNDESA (2017) projected that all regions of the world except Africa will have nearly a quarter or more of their populations at ages 60 and over by 2050, which would total up to 2.1 billion.

In terms of workforce, United Nations (2002) revealed that the elderly aged between 50 and 64 years in developed countries is expected to make up 32 per cent of the workforce in 2050, as compared to 25 per cent in 2000 (UNDESA, 2001). In 2005, the Organization for Economic Development (OECD) found that the potential labour force would shrink by 10 per cent from 2020 to 2050 (Kooij, de Lange, Jansen and Dikkers, 2008).

There were 4.8 million Canadian population aged over 65 years, accounting for 14.1 per cent of the population in 2010, as compared to 8 per cent in 1971. Based on projections, this group will account for more than one-fifth of the population by 2026, and will exceed one quarter of Canadian population by 2056 (Milan, 2011). Like other developed countries, Australia's population is also ageing. The proportion of population aged 65 years and over in the country was 13.3 per cent in 2009 and later increased to 14.3 per cent in 2012. In 2016, one out of seven of Australian population were 65 years and over, adding up to around 3.5 million persons and representing 15 per cent of the population (Australian Bureau of Statistics [ABS], 2017). Meanwhile, in Singapore, there were 8.8 per cent of citizens aged 65 years and over in 2005 and this rose to 13.1 per cent in 2015 (Ministry of Manpower [MOM], Singapore, 2015).

The Department of Statistics, Malaysia [DOSM] (2016) projected that the population in Malaysia would grow from 18.6 million in 2010 to 41.5 million in 2040. It is also projected that male's life expectancy within the same period would improve from 71.9 to 78.0 while female's would increase from 76.6 to 83.0 (DOSM, 2016). Population aged 65, which stood at 5.0 per cent in 2010 is projected to rise to 14.5 per cent in 2040 while the proportion of population aged 65 and over within the same period is predicted to escalate from 5.0 per cent to 14.5 per cent (DOSM, 2016). DOSM (2016) perceived that the regressive shape of Malaysia's population pyramid would maintain until 2040 as a reflection of low birth and mortality rates for adult population and increasing share of elderly population. Accordingly, the dependency ratio is expected to increase from 47.8 per cent in 2010 to 49.5 per cent in 2040 (DOSM, 2016).

According to DOSM (2018), there were 2.4 million population aged 60 and over in 2011, accounting to 8.1 per cent of the total population in Malaysia. An increase of almost one percentage point was registered where 9.0 per cent or 2.8 million persons were in this age group in 2015 (DOSM, 2018). Based on National Older Persons Policy, which defined ageing population as those aged 60 and over, Malaysia would experience ageing population by 2030. This demographic transition will influence the nation's socioeconomic development as well as supply and demand of workforce in the labour market. The retirement for both public and private employees is 60 years old and compulsory retirement age for public service was set at 60 and mandatory minimum retirement age (Minimum Retirement Age Act 2012). As such, the current labour market set up is not made to offer employment prospect for those beyond that age limit. From the Labour Force Survey (LFS) conducted by DOSM, it is found that the share of employed persons aged 60 and over made up 5.0 per cent of the total employed persons in 2015, a marginal increase of 0.5 percentage point as compared to 4.5 per cent in 2011. With the demographic transition experienced by Malaysia and the subsequent rise in the share of older population, there is every need to identify traits that might allow employment and opportunity to generate income among this group.

Thus, this study was undertaken to assess and describe the sociodemographic characteristics of older employed persons in Malaysia. In addition, this study attempt to identify sociodemographic factors that contribute significantly to employability of older population. It is hoped that the findings of this study will be of assistance to policy makers in the design as well as implementation of the most effective and appropriate development policies and programmes to ensure fair and decent working opportunity among older population in Malaysia.

2. LITERATURE REVIEW

Sin Yin, Yue Fang, Aminah and Nithyaroobini (2010) found that there is a relationship between workforce participation and sociodemographic factors namely age, gender, marital status, educational level and stratum. McDonald (2011) believed that employment of older workers was determined among others by location, sex and marital status. Another study by Luckanicova, Ondrusekova and Resovsky (2012) discovered that age, region, education and work experience have a significant impact on employability.

A study by Kooij et al (2008) indicated that most age-related factors negatively affect the motivation to keep working for older people. In contrast, McDonald (2011) stated delay in child bearing among Australian translated into financial responsibility of child rearing at older age, which subsequently attributed to the extended participation in employment.

Sobieszczyk, Knodel and Chayovan (2003) while studying sources of income by sex found that female older population ordinarily received transfers from adult children while male generally reported employment as source of income. This finding was also corroborated by Masud, Haron, Hamid and Zainaludin (2006). Meanwhile, McDonald (2011) identified a rather large age difference between husbands and wives as one of the reasons that older Australian females stayed employed as a mean to generate income.

A study by European Foundation for the Improvement of Living and Working Conditions (2012) found that the bigger shares of older workers in European Union (EU) member countries were in the agriculture sector and the public sector (education, health and public administration) compared to those in the younger age cohort. Meanwhile, ABS (2017) believed that the occupation they were involved in might be one of the factors influencing the choice of older population to remain in employment. Older workers were more likely to be engaged as managers or professionals (ABS, 2017). In addition, McDonald (2011) also reported that older Australian population are more likely to be own account workers as compared to being employees.

3. METHODOLOGY

Data Source

The study utilised data of the LFS conducted by DOSM. The profile of the demographic and socioeconomic characteristics of older employed persons used data of LFS for the years 2011 to 2015. Meanwhile, binary logistic regression model to identify the factors that influenced employability of older population was based on LFS 2015 data. LFS was conducted through household approach to produce national and states estimates of labour force, employment and unemployment. The survey adopted a stratified two stage sampling design. The first stage unit of sample selection is the enumeration blocks (EBs) consisting of 80 to 120 living quarters (LQs), while the second stage unit was the LQs within the EBs. All persons in the selected LQs were canvassed. The detailed methods of LFS are available in the LFS Report (DOSM, 2017). The sample units were systematically drawn with equal probability of being selected at every stage of selection. The response rates of the annual LFS were more than 85 per cent for all the years involved. Analyses were based on the household members aged 60 and over in the LFS data sets. The total sample of household members aged 15 and over and 60 and over, that is the numbers of unweighted samples of these groups are presented in Table 3.1. For the year 2015, the number of household members aged 60 and over in the LFS data set was 39,804, which amounted up to almost 2.8 million populations. Additionally, the statistics on demographic transition of the population was obtained from the population projections based on the 2010 Population and Housing Census.

Table 3.1: Number of household members by selected age group, LFS 2011-2015

Year	Age group	
	15 & over	60 & over
2011	285,154	36,708
2012	282,706	39,442
2013	285,442	41,250
2014	270,976	40,411
2015	266,356	39,804

Source: LFS, DOSM

Data Description

There were altogether ten variables involved in the study which were either obtained directly from the LFS micro data sets or derived from the variables in the data sets, namely (1) Age, (2) Sex, (3) Strata, (4) Marital Status, (5) Ethnic Group, (6) Labour Force Summary, (7) Sector, (8) Occupation, (9) Employment Status and (10) Labour Force Status. Table 3.2 provides the description of these variables.

Table 3.2: Descriptions of the variables in the samples

No.	Variable	Name	Description	Type of Variable
1.	Age	age	Age of individuals in selected household. Enumerators validated the age of which a household members are eligible to answer the questions on labour force status that is 15 years and over. 60 years old and over	Continuous
2.	Sex	sex	Sex of individuals in selected household. 1 – Male 2 – Female	Categorical
3.	Strata	Strata	Geographical location of selected households 1 – Urban 2 – Rural	Categorical
4.	Marital status	marital	Marital status of individuals in selected households 1 – Never married 2 – Married 3 – Widowed/Divorced 4 – Separated	Categorical
5.	Ethnic group	ethnic	Ethnicity of individuals in selected households 1 – Bumiputera 2 – Chinese 3 – Indians 4 – Others	Categorical
6.	Labour force summary	rin	The identified status of individuals in the working age group in selected households 1 – Employed 2 – Unemployed 3 – Outside labour force	Categorical
7.	Sector	sector	Sector in which employed individuals worked 1 – Agriculture 2 – Industry 3 – Services If labour force summary is coded ‘2’ or ‘3., then this variable is assigned the value of ‘0’.	
8.	Occupation	occ	Occupation in which employed individuals worked. 1 – Manager 2 – Professional 3 – Technician and associate professionals 4 – Clerical support worker 5 – Service and sales worker 6 – Skilled agricultural, forestry and fishery worker 7 – Craft and related trades worker 8 – Plant and machine operators and assemblers 9 – Elementary occupations If labour force summary is coded ‘2’ or ‘3., then this variable is assigned the value of ‘0’.	Categorical
9.	Employment Status	emp_status	Described the status of employment of employed individuals 1 – Employer 2 – Employee 3 – Own account worker 4 – Unpaid family worker If labour force summary is coded ‘2’ or ‘3., then this variable is assigned the value of ‘0’.	Categorical
10.	Labour force status	grp_rin	Individuals within the working age were regrouped into 1 – Employed 0 – Not Employed	Binary

Labour force refers to population in the working age group of 15 and over who are either employed or unemployed. Labour force participation rate (LFPR) is the ratio of labour force to the working age population expressed in terms of percentage. LFPR was one of the indicators to determine share of working age population in the labour market. Those not classified as employed or unemployed were identified as outside labour force. This category consists of homemakers, students, retirees, disabled persons and those who are not interested in working. For the purpose of this study, those who were unemployed and outside labour force were regrouped into the category of non-employed.

An employed person was further classified into categories of occupation, sector and employment status. Employment status consists of employer, employee, own account worker and unpaid family worker. Employer operates a business, a plantation or other trade and employs one or more workers to help him/her. Meanwhile, own account worker operates his/her own farm, business or trade without employing any paid workers in a continuous basis. Another status of employment was unpaid family worker, a person who works without pay or wages on a farm, business or trade operated by another member of the family.

Data Analysis

Several descriptive data analysis techniques were utilised to identify the trend of labour force aged 60 and over, to profile the demographic characteristics of older populations identified as employed and non-employed followed by the socioeconomic characteristics of those who were employed. Next, binary logistic regression analysis was applied to determine the relationship between categorical dependent variable, which was the labour force status of older population and independent variables comprising of demographic characteristics namely age, sex, strata, marital status and ethnicity. Preliminary bivariate association analyses were conducted to assess the association of labour force status of older population and the selected sociodemographic characteristics. All independent variables that are significantly associated with older employment at p-value <0.25 were selected as the factors in binary logistic regression. Adjusted Wald test was used to evaluate the contribution of each independent variable in the binary logistic model. A diagnostic testing for goodness of fit was conducted to ensure the appropriateness of the logistic regression model for all selected parameters in evaluating the labour force status of older population. Any relevant interactions between the independent variables were assessed, as they may affect the model in terms of multicollinearity. The final model would include all the predictors significantly associated with older employment at the p-value < 0.05.

4. RESULT

Labour force aged 60 and over

Table 4.1 indicates the labour force statistics for those aged 60 and over from 2011 to 2015. The labour force aged 60 and over reached 718,200 in 2015, growing at the rate of 5.4 per cent per annum from the 579,500 registered in 2011. The participation rate of the labour force within the same period rose 0.8 percentage point to 25.7

per cent. Accordingly, the number of employed persons grew 6.0 per cent annually from 564,800 (2011) to 716,700 (2015).

Table 4.1: Labour force, employed and LFPR, 60 & over, Malaysia, 2011-2015

Year	('000)		(%)
	Labour Force	Employed	LFPR
2011	579.5	564.8	24.9
2012	648.4	637.5	26.7
2013	716.1	707.3	28.1
2014	706.7	705.0	26.5
2015	718.2	716.7	25.7

Source: LFS, DOSM

Socioeconomic profile of older employed persons

The socioeconomic characteristics of employed persons were described based on the distribution of employed persons aged 60 and over across sector, occupation and employment as in Table 4.2. It was found that the shares of employed persons aged 60 and over by sector in services sector and agriculture sector were about the same. Employed persons in the services sector ranged from 42 per cent to 46 per cent within 2011 and 2015. Meanwhile, older employed persons in the agriculture sector during similar period went up and down from 44.3 per cent to 38.9 per cent.

Table 4.2: Employed persons aged 60 & over by sector, Malaysia, 2011-2015

Sector	(%)				
	2011	2012	2013	2014	2015
Total	100.0	100.1	100.0	100.0	100.0
Agriculture	44.3	41.1	41.4	42.9	38.9
Industry	13.6	14.3	14.9	14.2	15.1
Services	42.1	44.7	43.7	42.9	46.0

Source: LFS, DOSM

Table 4.3 reported the distribution of older employed persons by occupation. In line with the findings in Table 4.2 about employed persons by sector, the largest proportion of employed persons aged 60 and over was employed in the occupation category of "Skilled agricultural, forestry and fishery workers". However, the share fluctuated between 38 per cent and 33 per cent during the period of 2011 to 2015. The second largest portion of older employed persons worked in the category of "Service and sales workers". Those employed in this segment went up 2.9 percentage points to 25.0 per cent in 2015.

Table 4.3: Employed persons aged 60 & over by occupation, Malaysia, 2011-2015

Occupation	(%)				
	2011	2012	2013	2014	2015
Total	100.0	100.0	100.0	100.0	100.0
Managers	7.8	6.6	7.0	6.1	8.1
Professionals	3.6	3.3	3.1	3.1	3.7
Technicians and associate professionals	3.8	3.6	3.6	3.7	4.0
Clerical support workers	1.6	1.4	1.3	1.7	1.9
Service and sales workers	22.1	21.9	22.1	24.4	25.0
Skilled agricultural, forestry and fishery workers	38.5	39.1	39.5	36.2	33.0
Craft and related trades workers	7.8	8.8	7.4	8.8	9.0
Plant and machine-operators and assemblers	6.7	6.5	6.2	7.0	6.5
Elementary occupations	8.1	8.8	9.8	9.0	8.8

Source: LFS, DOSM

The distribution of older employed persons by status in employment is displayed in Table 4.4. It is found that the majority of those aged 60 and over were employed as own account worker. This category made up more than 55 per cent of the total older employed persons during the period of 2011 to 2015. This was followed by the employee category, which represented more than 26.0 per cent of the total older employment throughout the five-year period.

Table 4.4: Employed persons aged 60 & over by status in employment, Malaysia, 2011-2015

Status in employment	(%)				
	2011	2012	2013	2014	2015
Total	100.0	100.0	100.0	100.0	100.0
Employer	6.9	8.0	8.5	8.2	7.5
Employee	26.0	28.3	28.0	26.5	26.7
Own Account worker	59.3	55.6	55.8	57.2	57.6
Unpaid family worker	7.8	8.1	7.7	8.1	8.2

Source: LFS, DOSM

Demographic profile of older population

The distribution of demographic characteristics of employed and non-employed older population that is those aged 60 and over for the year 2015, is as displayed in Table 4.5. It was discovered that about one fifth or 26.2 per cent of older population was employed while the rest was either unemployed or outside labour force. In terms of sex, 39.3 per cent males was employed while females accounted for only 14.3 per cent of those who were employed. In terms of geography, 22.0 per cent of those in the urban area were employed as opposed to 77.8 per cent non-employed. Rural

area on the other hand registered higher share of employed among the older population that is 32.8 per cent.

A total of 32.2 per cent of married population were employed. Those who were never married as well as divorced registered the share of 32.2 per cent and 31.8 per cent employed persons respectively. In contrast, among widowed population aged 60 and over, only 12.6 per cent were employed while 87.4 per cent were non-employed. The share of non-Bumiputera who was employed was higher at 40.5 per cent compared to 27.5 per cent of employed older Bumiputera.

Table 4.5: Employed and non-employed aged 60 & over by demographic characteristics, Malaysia, 2015

Sociodemographic characteristics	Employed	Non-Employed	Total
Total	26.2	73.8	100.0
Sex			
Male	39.3	60.7	100.0
Female	14.3	85.7	100.0
Strata			
Urban	22.2	77.8	100.0
Rural	32.8	67.2	100.0
Marital Status			
Never Married	31.3	68.7	100.0
Married	32.2	67.8	100.0
Widowed	12.6	87.4	100.0
Divorced	31.8	68.2	100.0
Ethnic Group			
Bumiputera	27.5	72.5	100.0
Non-Bumiputera	40.5	59.5	100.0
Chinese	24.0	76.0	100.0
Indians	20.9	79.1	100.0
Others	40.5	59.5	100.0

Source: LFS, DOSM

Determinants of Employment among Older Population

The results of binary logistic regression analysis of the factors that influenced the employment of older population are shown in Table 4.6. To assess the significance of the factors in the binary logistic regression model, it is hypothesised that each of the factor contributes significantly to this model when the other factors are held constant. When the rejection criterion of the null hypothesis is set at $\alpha = 0.05$, there are eight significant factors out of the nine factors in the model. The predictors with p-values of Chi-Square Statistics less than α are Age, Female, Rural, Chinese, Indians, Others and Widowed. One year increase in age decreased the odds of employment of older population by 11.8 per cent. Males displayed 4.1 times higher odds of being employed compared to females. In terms of geography, older population in rural areas exhibited 2.1 times higher odds off being employed compared to those in urban areas. Looking at ethnicity, other ethnics displayed the highest odds of being employed compared to Bumiputera that is 1.8 times. Being Chinese increased the odds of being employed by 1.1 times while being Indians decreased the odds of employment by 0.8 times. As far as marital status was

concerned, widowers' odds of being employed lessen by 29.4 per cent in comparison to those who were never married.

Table 4.6: Factors associated with employment of older population, 2015

Sociodemographic characteristics	Univariate analysis			Binary logistic regression		
	Crude odd ratio	95% Confidence Interval	p-value	Adjusted odd ratio	95% Confidence Interval	p-value
Age	0.889	0.885−0.893	<0.005	0.882	0.880−0.890	<0.005
Sex						
Male	3.891	3.710−4.090	<0.005	4.088	3.870−4.320	<0.005
Female	**1.000**	–	–	–	–	–
Strata						
Urban	**1.000**	–	–	–	–	–
Rural	1.711	1.640-1.790	<0.005	2.072	1.960−2.190	<0.005
Ethnicity						
Bumiputera	**1.000**	–	–	–	–	–
Chinese	0.829	0.790−0.870	<0.005	1.090	1.030−1.160	0.004
Indians	0.695	0.630−0.770	<0.005	0.769	0.690−0.860	<0.005
Others	1.793	1.520−2.110	<0.005	1.846	1.540−2.220	<0.005
Marital status						
Never married	**1.000**	–	–	–	–	–
Married	1.039	0.910−1.180	0.560	0.922	0.800−1.060	0.256
Widowed	0.316	0.280−0.360	<0.005	0.706	0.610−0.820	<0.005
Divorced	1.022	0.810−1.290	0.852	1.178	0.920−1.510	0.200

Source: LFS, DOSM

5. DISCUSSION

Malaysia has witnessed a steady growth of population in the older age cohorts. The share of the older population namely those aged 60 and over displayed increasing trend since the last fifteen years partly due to the rise of life expectancy at birth for both males and females. On the contrary, the share of those between the age of 0 to 14 demonstrated a decreasing trend because of the decline in fertility rate. This phenomenon is expected to cause a shrink in labour supply, consequently leading to a shortage of the country's workforce.

From the perspective of labour supply, the LFPR of those aged 60 and over registered less than 30 per cent throughout 2011 to 2015. The rates were observed to be fluctuating up and down with the highest figure recorded in 2013 at 28.1 per cent. In terms of number, the labour force aged 60 and over has been on the rising trend parallel with the rise of population in that category. Almost all of the labour force was employed. However, there still existed small percentages that were unemployed within the period of 2011 to 2015. LFPR of below 30 per cent interpreted into another 70 per cent or more of the older population being outside the labour force, often due to retirement but might also be owing to other factors such as family responsibilities and not interested to work.

It was found that older workforce were mostly involved in agriculture sector as well as services sector. This finding was consistent with the findings for Australia and the EU member countries. With respect to the occupation category, the largest share of older employed persons was in the middle skill occupation category, namely as skilled agricultural and forestry workers, which goes in tandem with the distribution of employed persons across sector. This finding contradicted the Australians' experience where older workers were more involved as managers and professionals (ABS, 2017). As far as status in employment goes, nearly half of employed persons aged 60 and over were own account workers. Similar findings were observed for Australia and EU member countries. This shows that older population throughout 2011 to 2015 tend to be involved in sectors and occupations that offers more flexibility and less skills. Often, older population would prefer shorter working hours as a mean of income to supplement social safety net. Thus, it can be assumed that the involvement of this age group in agriculture sector was mainly due to the shorter working hours and seasonal nature of this sector.

This study found that there was a significant association between employment of older population and the predictors namely age, sex, strata, ethnicity and marital status. This confirmed the findings of Sin Yin et al (2010), McDonald (2011) and Luckanicova et al (2012). In 2015, the determinants of employment among those aged 60 and over were age, being male, of Chinese ethnic or Other ethnics, being widowed and living in rural area.

The odds of being employed displayed an inverse relationship with age. A year increase in age would decline the chance of being employed by 0.8 times. Although the situation has changed significantly where older population enjoy a higher quality of life due to improved health services and breakthrough in medical science, health can still deteriorate with age and hinder physical and mental ability. Hence, initiatives should be undertaken to ensure employment opportunity for older population that account for less physical jobs and shorter working hours. Additionally, training programmes should be taken to reskill or upskill older population to ensure they are well-prepared for any changes in job functions and roles.

Males have 4.1 times the chance of being employed than females. Participation rate has always been higher for males compared to females for all age cohorts and seems to be increasing when age is included in the equation. This could be owing to traditional role of females in nurturing and taking care of the other family members while males are regarded as the breadwinner. In this sense, human capital development policies and initiatives should strive to increase female participation across all age cohorts. This can be done by improving the facilities around the workplace to make it more female-friendly and to allow flexible working hours. More importantly, females should be given equal chances as their males' counterpart to climb up the ladder to decision-making roles. This would increase the odds of employment among females and consequently encourage older female population to be employed as well.

Being of Chinese ethnicity increase the odds of employment 1.0 time compared to Bumiputera. On the other hand, Other ethnics has 1.8 times the chance to be employed. This means that certain ethnics tend to have higher odds to be in employment as compared to the others. With regards to this development, it is

important to further explore the characteristics as well as the determinants of employment among all the ethnics. Along the same line, human resource development agencies should monitor any sign of discrimination with respect to ethnic in the exercise of hires and separations. Having said that, Chinese tend to live longer and enjoy better health than other ethnics. This could be one of the reasons that this group has higher odds of being employed than Bumiputera.

In terms of marital status, widowed older population have 0.7 times less chance to be employed as compared to those who are single. Among the reasons for this is those who are single cannot depend to anybody to take care of their social well-being. On the contrary, those who are widowed might be receiving income transfers from their adult children or might be provided for through social safety nets prior to the imminent departure of their spouses. However, further study should be conducted to properly identify the characteristics of widowed individuals to better provide just work opportunity for this group.

In terms of geography, living in rural area increased the odds of employment among older population by 2.1 times compared to living in urban area. This finding could be attributed by the tendency of older population to settle down at a more rural location as compared to urban locations. Thus, it is obvious that this group would find be involved in work activities in the rural areas. As such, it is important that certain jobs that could be done with flexibility of locations be offered to rural older population to allow this group the chance to generate a living as well as filling up their free time. Conversely, segments of jobs in the urban areas that is suitable for older population could also be identified in order to increase the odds of older urban population to be employed.

Limitation

This article only utilised data sourced from the LFS. Therefore, it is recommended that further study should be done by considering other sources of data and other variables to be able to draw a more comprehensive conclusion and recommendation on the involvement of older population in the labour market.

6. CONCLUSION AND RECCOMENDATION

An ageing population means an ageing workforce. In fact, the proportion of older population in employment in Malaysia is relatively low. Based on the findings from this study, there are several key points to be considered in policy planning and implementation. Since the elderly population will keep on increasing in the future, labour market should provide sufficient and suitable work opportunities for older population, taking into account higher proportion of elderly women in the future workforce.

The findings also shows that majority of the older workers are in agricultural sector, under the category of own-account worker. Thus, some kind of incentives should be provided to older workers so they will consider continue working as they get older; such as flexible work arrangements, extended retirement age, training as well as a

comprehensive welfare fund in terms of allocation for health and long-term care expenditures.

Any programme to attract older workers to re-enter or remain in the labour market should be planned and implemented properly based on appropriate target group and specific sociodemographic characteristics. Different characteristics require different approach. All parties including the government, private sector, as well as NGOs and CSR organisations have their own role to boost participation of older population in the labour market.

The findings from this article is hoped to provide evidence for policymakers in the planning and implementation of strategic human resource development policy and programme. Since Malaysia is moving towards an ageing population in the near future, the programmes and policies should benefit the older population and ultimately increase the social and economic well-being of the country.

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Declaration of Conflicting Interest

The authors declared no potential conflicts of interest with respect to the article, authorship, and/or publication of this article. This article is based on author(s) opinion and do not necessarily represent the opinion of DOSM.

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