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FACTORS INFLUENCING THE LIVING WAGE IN EAST MALAYSIA

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ABSTRACT

Living wage goes beyond just about affording necessities such as food, clothes, and shelter. It also comprises the ability for people to allow themselves to be involved with society. Many countries all around the world have been implementing the living wage to their people. Nevertheless, in Asian countries, the push to implement the living wage is still low. Thus, this paper aims to identify the factors that influence the living wage for workers who are currently working in East Malaysia. For this study, Anker's model is adopted to develop the framework. The independent variables for this study are the cost of food, cost of housing, and cost of other essential needs (healthcare, transportation, education, and clothing and footwear) meanwhile the dependent variable for this study is living wage for workers.

Furthermore, there are three moderating variables included in the model, which are savings, full-time worker per household, and family size. This paper utilises primary data as the main approach in the data collection, and the data are collected by using an electronic questionnaire survey to the targeted respondent. The targeted respondent for this study is a full-time employee in East Malaysia, and a total of 315 respondents were able to be collected. Analysis of data comprises of two software which is IBM SPSS Statistic version 24 and Smart PLS 3.0. The findings suggested that the cost of food, cost of housing, education, transportation, and clothing and footwear have a significant relationship towards

the living wage. Based on the result found from this study, regulators would be able to improve the salary and wages of the employees by looking at the factors that matter the most to determine the appropriate living wage. Also, this paper can help to act as a reference to working people in achieving the minimum standard of living.

INTRODUCTION

A living wage can be defined as a wage that is sufficient to enable a worker and his or her dependent to have a decent standard of living (National Assembly for Wales Commission, 2015). Besides, a worker should also be able to take part in society and be an active citizen (King & Waldegrave, 2013). Taking part with society means that the employee has a sufficient income to celebrate family or friends occasions such as wedding ceremony, birthdays, and festival celebration (Chong & Khong, 2018). Other than that, the living wage should also allow people to be free from financial stress and push them out of the poverty trap (Living Wage Canada, 2015). Apart from that, an individual is considered to have a good financial position if they can fulfil his or her daily basic needs without resorting to borrowing from financial institutions (Agensi Kaunseling dan Pengurusan Kredit, 2018).

The idea of a living wage has been around since the 1870s during Britain's industrial revolution where employees began to demand higher salaries so that they can buy necessities such as food, shelter, and garments for themselves and their dependent (Wills & Linneker, 2012). The concept of a living wage was established in the 1990s, and several developed countries such as United Kingdom (UK), United States of America (USA), New Zealand (NZ), and Canada started to implement living wage to their people. In the USA, the living wage campaign started in Baltimore city (Holzer, 2008) and by late 1990s, the implementation of living wage spread over 100 cities in the United States (Parker, Arrowsmith, Fells, & Prowse, 2016). The living wage has been one of the essential tools to fight against poverty and income inequalities. However, the idea of a living wage has been more focus in a developed country rather than developing countries (Ford & Gillan, 2017). Despite many nations recognising the importance of the living wage to the people, the fight to implement the living wage in Asian states are still relatively weak (Chong & Khong, 2018).

In Malaysia, many strategies have been introduced to reduce the gap of income between high income and low-income earners such as household living aids which are previously known as Bantuan Rakyat 1 Malaysia (BR1M), and currently known as Bantuan Sara Hidup (BSH), the inequality remains at large across Malaysia (Tey, Lai, Ng, Goh, & Osman, 2019). Furthermore, although the minimum wage has been enforcing in most countries across the globe, it is still hard enough to support a family, especially for those with dependent (Mackenzie & Stanford, 2008). The reason the minimum wage is insufficient is that it does not consider the household living expenses of the whole family (Telkki, 2015).

The central bank of Malaysia (BNM) first introduced the living wage concept in 2016 by using Kuala Lumpur as the sample. Based on the report, it shows that for a single adult living in Kuala Lumpur would at least need to earn RM2,700 each month to have a decent standard of living. Meanwhile, for those married couple without children need to earn for about RM4,500, and those couple with two children need to have earnings of RM6,500 to achieve the minimum standard of living (Chong & Khong, 2018). Hence, the results indicate that for about 27 per cent of people who are living in Kuala Lumpur still have earnings below the living wage estimation. In 2019, based on "Belanjawanku" report by Employee Provident Fund (EPF) and Social Wellbeing Research Centre (SWRC) which has similar interest as BNM's estimation living wage analysis where

they provide a reference budget for Malaysian individuals and family is living specifically in Klang Valley area. The wage level needed to sustain an adequate living standard in Klang Valley are almost similar to the one in Kuala Lumpur. For instance, a single adult who owns a car would require RM2,490 monthly and for those utilising public transportation need to have earnings of RM1,870. Meanwhile, for the couple without children need RM4,420, couples with one child need to have at least RM5,730, and for the couple with two children would need a wage at least RM6,620 every month (Social Wellbeing Research Centre, 2019). Also, for a retired couple living in Klang Valley need approximately RM3,100 to cover their monthly living expenses.

An increasing rate of disparities of income between high paid employees and low paid employees and the decreasing wage has been an issue all over the world (Yao, Parker, Arrowsmith, & Carr, 2017). Apart from that, the rising cost of living especially in the urban area has been one of the reasons people are incapable of affording an adequate living standard (Yao et al., 2017). In Malaysia itself, although it has experienced a 6 per cent growth of income in 2014 to 2016, it is still not enough for those at the bottom household to uplift themselves out of poverty (Chong & Khong, 2018). The 10th Malaysian Plan which is between 2010 to 2015, shows that the number of B40 households is over 2 million households with more than 70 per cent of them are Bumiputera, and the remaining are non-Bumiputera (Shahar, Lau, Puteh, Amara, & Razak, 2019). several factors have contributed to the high cost of living such as a drastic increase of the price of goods and services that did not match with the increase of income, the advancement of technology, changes of consumer preferences, etc. (Mat, Samidi, Harun, Fadzim, & Noor, 2019). Thus, this gives a significant challenge for people, especially for those low- and middle-income group to maintain an adequate living standard.

Furthermore, a report from The Edge Market in 2016 indicate that more than 50 per cent of Malaysians still have income below RM2,000 a month. For example, Kelantan acknowledges as the lowest level of earnings with only RM1,200, followed by Sabah and Sarawak with an income of RM1,240 and RM1,340, respectively. Apart from that, according to Khazanah Research Institute (KRI), those income earners of below RM2,000, they spent more than 90 per cent of their income on household expenses and leaving them with only RM76 by the end of the month (Khazanah Research Institute, 2018b). For these lower-income households to sustain, they tend to rely on borrowing from various lending institutions. As a result of excessive borrowing, 40 per cent of lower-income household in Malaysia has a high debt to service ratio, which left them no room for savings (World Bank, 2019) and this has led to a rising number of bankruptcy cases related to personal loans, vehicle loans, housing loans, credit card default, etcetera.

Moreover, for those Malaysian who felt like their income is not sufficient has decided to take another part-time job or work extra hours to make ends meet, in which left them little time to spend time with their family (World Bank, 2019). Working multiple jobs may also create another extra cost, such as food and transport expenses, as well as childcare expenses (World Bank, 2019). There has not been any estimation of a living wage in East side of Malaysia meanwhile several cities in Peninsular Malaysia has conducted their living wage valuation. Hence, this paper attempts to identify the factors that influence the living wage in East Malaysia (Sabah, Sarawak, and Federal Territory of Labuan) by using Anker methodology as a guideline (Figure 1).

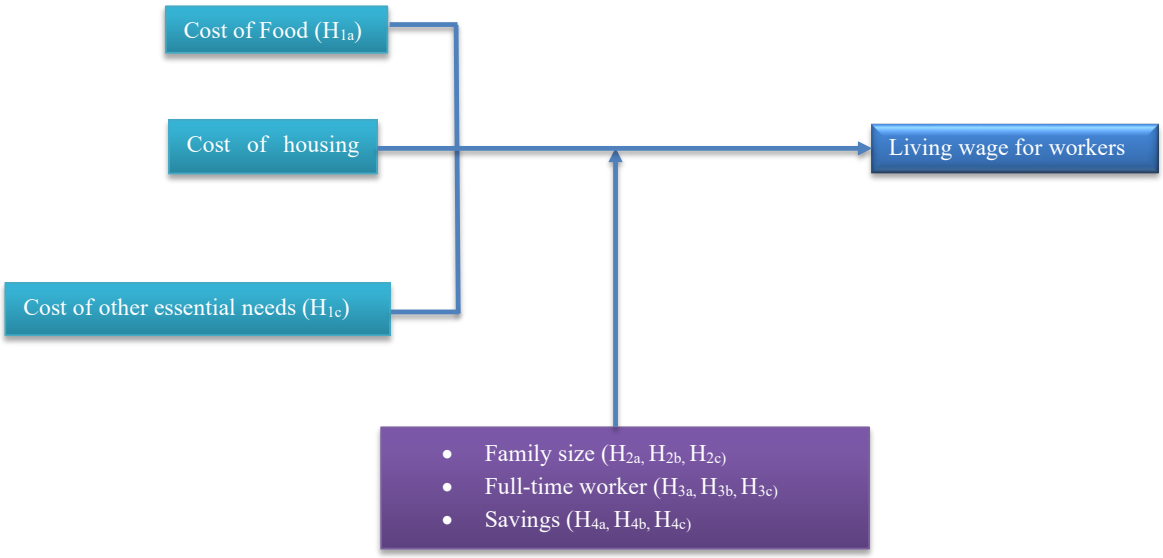

Figure 1 Factors influencing the living wage

LITERATURE REVIEW

Food Expenditure

Food expenditure is one of the main fundamentals in calculating the living wage. Any estimation of living wage across the globe will include food expenditure as one of the elements to set the minimum standard of living. For example, the country such as New Zealand and Canada estimates their food cost every week, and it follows food and nutrition guideline to ensure that families are eating healthy and fit (King & Waldegrave, 2013; Tiessen, 2015). In Kuala Lumpur, Malaysia, the estimation of a living wage was developed by several basic assumptions which comprise food as one of the main expenses in any household. Besides, due to a busy life in the big city, people are assumed to eat out more often rather than eating at home (Chong & Khong, 2018). However, as the family size big, the frequency of eating out drop as it is expensive.

Moreover, a minimum standard of the living guideline was provided by Employee Provident Fund (EPF) in 2019 for those who are living in Klang Valley, Malaysia (Social Wellbeing Research Centre, 2019). In the report, it provides detailed expenses on the necessities such as food, shelter, transportation and several other expenses for each different type of family. In line with the living wage in Kuala Lumpur, the food cost in Klang Valley will increase as they started to have families. Besides that, for those who come from low-income group tend to spend most of their income on necessities, for example, food (Mohd. Bakri, Rambeli, Hashim, Mahdinezhad, & Abdul Jalil, 2017). Other than that, it is notable that in different places, the price of goods and services are different as well. For example, in Sabah and Sarawak, the price of goods and services are higher than Peninsular Malaysia. Based on a report from the edge market on shopping habit in Malaysia, people spent roughly RM469 on average on groceries every month. Nevertheless, due to rapid growth of urbanisation, the lifestyle of Malaysians is changing as more people are eating outside rather than eating at home and this is due to several factors such as working overtime, 24 hours food restaurants, as well as varieties of food available (Ali & Abdullah, 2012). Thus, food is one of the main factors in the living wage.

Housing Expenditure

In the estimation of the living wage, housing is also considered as one of the main components to evaluate the living wage (Living Wage Foundation & ACCA, 2017). An

ideal type of housing has enough rooms to fit all the families. For instance, New Zealand's living wage is set for two adult and two children. Therefore, an appropriate number of rooms to avoid crowding is a house with three bedrooms (King & Waldegrave, 2013). Utility bills such as water and electricity are taken into consideration in calculating the housing expenditure (Anker & Anker, 2017). In Malaysia, Department of Statistic Malaysia (DOSM) reported that housing expenses are the highest household expenditure with a percentage of 24 per cent in the year 2016 (Department of Statistics Malaysia, 2017). The assessment of living wage in Kuala Lumpur had assumed that housing is one of the largest expenditure apart from food and the result from the report shows that a single person living in Kuala Lumpur would be renting a room, meanwhile for a married couple without dependent is renting an apartment with a single room. A married couple with two dependent would rent a three-bedroom apartment (Chong & Khong, 2018). Apart from varying price for goods and services, housing price also varies significantly across states in Malaysia. For example, housing price in Sabah, Pulau Pinang, Kelantan, and Negeri Sembilan is considered as "severely unaffordable" (World Bank, 2019). As Malaysia is moving towards on becoming urbanise country, it has led to an increase in demand for housing especially in the urban area as more and more people are migrating from rural to city area for a better job opportunity. Thus, the house is an essential need in estimating the living wage.

Transportation

Easy access and good transportation structure is an essential aspect of the era of urbanisation (Borhan, Hakimi Ibrahim, Syamsunur & Rahmat, 2019). Transportation allows people to travel from one place to another easily. As Malaysia is moving towards the era of urbanisation, it has led to an increase in demand for transportation, especially in the urban area. Types of transportation that are currently readily available in Malaysia apart from owned vehicles such as buses, taxis, light rapid transit (LRT), rapid mass transit (MRT), and the latest trend e-hailing. However, despite many public transportations that are readily accessible, the majority of Malaysians generally rely on private vehicles to commute from one place to another. Based on a report from the Malaysian Economic Monitor, most Malaysian, including those from the lower-income household, has a car loan. Also, for about 45 per cent to 65 per cent of the respondents from AKPK across all ages has vehicle loan (Agensi Kaunseling dan Pengurusan Kredit, 2018). From the household expenditure survey 2016, it shows that 13.7 per cent of household income is spent on transportation (Department of Statistics Malaysia, 2017). Based from Kuala Lumpur living wage estimation, it is assumed that a single adult mostly will utilise public transportation, in the meantime for married people it is assumed that they have their private vehicles (Chong & Khong, 2018). Apart from that, in line with Kuala Lumpur living wage estimation, for those single adult who is living in Klang Valley are more likely to use public transportation and the mode of transportation changes when people started to have a family (Social Wellbeing Research Centre, 2019). In other developed countries such as New Zealand and the United Kingdom, it seems that for a family with children, they would have their owned vehicles for easier travelling (King & Waldegrave, 2013).

Moreover, in Canada, for couples with two children would have their private vehicle as well as utilising public transportation with the monthly purchase passes (Tiessen, 2015). Nevertheless, the result can be different depending on the place where the people are living. For example, for those who are living in urban areas can have better access to public transportation but for those living in a countryside, the area might need their vehicles to travel to another place (Anker & Anker, 2017).

Healthcare

Healthcare is an essential element in the living wage towards ensuring that people can live healthily and a quality life (Mackenzie & Stanford, 2008). Providing a widespread coverage of healthcare service is one the important goals in achieving world-wide health coverage, however, in developing country it is difficult to get decent access to healthcare (Makmor, Khaled, Ahmad Farid & Nurulhuda, 2018). Despite the vast changing of economic development, Malaysia's healthcare service is still in need of improvement (Makmor et al., 2018). In Malaysia, the public and private sector both provide a healthcare service. The main difference is that the government fully funds public healthcare service; meanwhile, for the private sector provide healthcare service with charges. Nevertheless, though the government covers Malaysia healthcare cost, a small amount of allocation for healthcare is included in the estimation of a living wage in Kuala Lumpur (Chong & Khong, 2018). Besides, the Klang Valley expenditure guide also comprises an essential healthcare cost which can cover some minor illnesses and injuries, dental care, and also basic first aid kit (Social Wellbeing Research Centre, 2019).

Education

Education is beneficial to improve one's skill so that they can stay competitive in the globalised industry (Tiessen, 2015). In Canada, the living wage includes education cost for parents to elevate their skills to get a better position at work (Mackenzie & Stanford, 2008). A minimum amount for education is also included in the Kuala Lumpur living wage even though education services is nearly free by the government (Chong & Khong, 2018). However, despite the increasing number of graduates in Malaysia, the nominal starting salaries for fresh graduates has been sluggish (Murugasu, Hakim & Yau, 2020). For instance, for a diploma holder in Malaysia, the starting salary is RM1,376 in 2018, however, back in 2010, it was RM1,458.

Meanwhile, for those who possessed a master's degree, the starting salary in 2018 is at RM2,707, which 2010 it was at RM2,923. It shows that Malaysia job creation for high skilled workers is still low (Khazanah Research Institute, 2018a). Apart from that, job competition, especially in the urban area of Malaysia, are highly competitive; thus, having a good education is essential (Agensi Kaunseling dan Pengurusan Kredit, 2018). As an example, an individual who had a degree certificate has earnings 3.6 times higher than those without a certificate (Khazanah Research Institute, 2018a). It indicates that an individual's earnings are influenced by their level of education (Abdul Hamid, Ho & Ismail, 2019). Another finding shows that people who are living in urban areas were found to spend more on education rather than its rural counterparts (Toh & Said, 2018). Furthermore, about 50 per cent of those with higher income has a tertiary education as compared to the lower-income group (Abdul Hamid et al., 2019).

Clothing and Footwear

Other than food and housing expenditure, sufficient clothing is also one of the basic needs (Living Wage Foundation & ACCA, 2017). Toronto's living wage consider nine general categories for expenditure, and one of them is clothing and footwear (Mackenzie & Stanford, 2008). Based on Maslow's hierarchy of needs, the first level is psychological needs include food, shelter, and clothing. Even though clothing is not one of the main elements to estimate the living wage, and it is included in the calculation. The results from a study on consumption pattern and income in Malaysia shows that clothing and footwear as one of the necessities apart from food and shelter (Toh & Said, 2018). In addition to the findings, highly educated young people tend to spend more on clothing, and as they started to build a family, the expenses on clothing also increase.

Savings for Emergencies Purposes

Saving is crucial as it acts as a safety net in the case of any unexpected event such as illnesses, as well as ensuring that individual can avoid falling into poverty or to make other expenditures (Anker & Anker, 2013). Savings is also necessary for retirement to maintain individuals from falling into the poverty trap. One of the assumptions on the estimation of a living wage in Kuala Lumpur includes a small allocation for savings to cover any unexpected expenditure (Chong & Khong, 2018). Similar to New Zealand living wage estimation, savings are needed for the retirement purpose or emergencies (King & Waldegrave, 2013). Based on a study by Mackenzie & Stanford (2008), savings are needed for any unanticipated cost, for example, repairing cost, buying new furniture, healthcare bills, and also in the case of unemployment. Thus, savings is beneficial so that individuals do not rely heavily on debt for any unexpected cost. However, the rate of savings in Malaysia is still low when compared to the Organisation for Economic Co-operation Development countries (OECD) (World Bank, 2019). For example, the rate of savings in Malaysia is 1.5 per cent while for the United States it is at 7.8 per cent and Chile is at 9.6 per cent as of 2015.

Furthermore, about 28 per cent of low-income household in Malaysia does not practice savings at all and only for about 11 per cent of them save RM100 or less monthly (Liew, 2013). A research study on the financial well-being of Malaysian public employees also pointed out that their saving level is unsatisfactory (Mokhtar, Husniyah, Sabri, & Talib, 2015). From another study on the financial behaviour of working adult in Malaysia by Credit Counselling and Debt Management [Agensi Kaunseling dan Pengurusan Kredit (AKPK)] shows that for about 18 per cent of Malaysian employee does not practice savings due to several reasons which are high cost of living, insufficient income, as well as a vast amount of debt (Agensi Kaunseling dan Pengurusan Kredit, 2018). Malaysians, who earns less than RM2,000 a month and individual who has dependent is among who saves the least. In contrast, the higher the income of an individual, the more they can save (Agensi Kaunseling dan Pengurusan Kredit, 2018).

Family Size

Different family or individual would have a different cost of living because every household has different family size. The living cost varies depending on the household size as well as the location they are living in. Even for actual consumption of goods and services, the price differs almost 70 per cent depending on where people are living in Malaysia (World Bank, 2019). As expected, the cost is higher in the urbanised area rather than in the rural area. Based on the Malaysian economic monitor 2019, Sabah and Sarawak stand out as having a high cost for goods and services. A standard household size that is currently used to estimate the living wage is two adult and two dependent (Anker & Anker, 2017).

Nevertheless, the number of children in the family depends on the fertility rate of each country. To this date, there is still no consensus on what family size is the right size to estimate the living wage, yet four people in a household are frequently used assumptions (Anker, 2011). In Kuala Lumpur living wage estimation, three different family size is used, which are single adult, a couple without children, and couples with two children (Chong & Khong, 2018). Meanwhile, Klang Valley reference budget also includes several different family sizes such as a couple with no children, couple with one child, couple with two children, as well as a retired couple (Social Wellbeing Research Centre, 2019). In Malaysia, the average household size is 4.1 person in 2016 based on Khazanah Research Institute. In 2019, the average household size in Malaysia remained at four people (Department of Statistics Malaysia, 2019). Nevertheless, household size in rural areas in Malaysia is slightly larger than its urban counterparts with an average of 4.7 people as compared to 3.8 people for the urban area.

Full-Time Worker per Household

There is no general agreement to the number of full-time workers needed per household to achieve the least acceptable living standard. Each country has a different number of workers in a household. For example, a country such as New Zealand uses two working people, whereby one will work full time, and the other one works part-time (King & Waldegrave, 2013). Similarly, in Canada, two working adults are needed to achieve the minimum living standard (Tiessen, 2015). Meanwhile, in the United States and Scotland, they only used one income earners per household to calculate the appropriate living wage (Anker, 2011).

Nonetheless, in Malaysia, the majority of the lower-income group would take on another part-time job or working overtime to ensure they could make ends meet (World Bank, 2019). Based on a report from Khazanah Research Institute, for about 50 per cent of lower-income household only has one income provider which has significant contrast from the middle and high-income household (Abdul Hamid et al., 2019). 59 per cent of middle-income group and approximately 75 per cent of the high-income group have at least more than two income provider in a household in 2014 (Abdul Hamid et al., 2019). The study suggested that the number of income earner per household influence their take-home pay.

The figure above is the conceptual framework that is adopted from previous research by Richard and Martha Anker (2013). Based on the discussion above, the hypothesis for this study is as follows:

H_{1a}: There is a relationship between the cost of food and the living wage for workers.

H_{2b}: There is a relationship between the cost of housing and the living wage for workers.

H_{1c}: There is a relationship between the cost of other essential needs (education, healthcare, transportation, clothing and footwear) and the living wage for workers.

H_{2a}: Family size moderates the relationship between the cost of food and living wage for workers.

H_{2b}: Family size moderates the relationship between the cost of housing and living wage for workers.

H_{2c}: Family size moderates the relationship between the cost of other essential needs and a living wage for workers.

H_{3a}: Full-time worker per household moderates the relationship between the cost of food and living wage for workers.

H_{3b}: Full-time worker per household moderates the relationship between the cost of housing and living wage for workers.

H_{3c}: Full-time worker per household moderates the relationship between the cost of other essential needs and a living wage for workers.

H_{4a}: Saving moderates the relationship between the cost of food and living wage for workers.

H_{4b}: Saving moderates the relationship between the cost of housing and living wage for workers.

H_{4c}: Saving moderates the relationship between the cost of other essential needs and a living wage for workers

METHODOLOGY

A quantitative research approach is used to conduct this study. Quantitative research can be defined as research that attempts to answer the research objectives by using numerical measurement and analysis (, Babin, Carr, & Griffin, 2010). These numerical measurements can be used to transform values into something meaningful. The primary purpose of quantitative research is usually for hypothesis testing, and the data collection approach is through a self-administered online questionnaire (Zikmund et al., 2010). The data collection method for this study is by using primary data. Primary data is the original data that the researcher collected by first-hand. There are many tools in collecting primary data, such

as interviews, observations, and questionnaire. A structured questionnaire is chosen to gather the data for this study. The advantage of using a questionnaire is that it is relatively faster and less time consuming than by doing interviews and observation. Also, using a questionnaire is more practical when the researcher has a large number of respondents and when there is a geographical issue. For this study, the google form was used to administered and distributed the questionnaire. An online questionnaire was chosen as it is a practical tool, especially the COVID-19 outbreak. It is also easier to reach the targeted respondent by sharing the link of the questionnaire to various social media platforms such as WhatsApp, Facebook, email, etc.

This paper focuses on full-time employees working in East Malaysia, namely Sabah, Sarawak, and Federal Territory Labuan. The scope of this study emphasises on full-time workers because of the highest number of bankruptcy cases are among private and public sector employees. The sample size was determined through G. Power 3.1.9.2 software. There were 15 predictors tested for this study. Thus, the minimum sample in order to complete this study is 199 respondents. Overall, the number of respondents collected for this study is 315 respondents.

Once the data collection process is completed, two software is used to analyse data which are Statistical Package for Social Science (SPSS) Version 24 and Smart PLS 3.0. The first part after collecting data is to fill in the data into SPSS. The responses from the respondents were coded and screened for any missing values or outliers. Next, a descriptive and frequency analysis is conducted to get a summary of the respondent's profile. The second part of the analysis is to use Smart PLS 3.0 to seek the relationship between independent variables and dependent variable. A measurement model analysis must be completed to ensure the items are measuring their construct before conducting a structural model. A structural model is conducted to confirm the hypothesis develop for this study.

FINDINGS

The questionnaire for this study was distributed by using google form and data collected from January 2020 to April 2020. Responses from 315 respondents were coded and analysed by using Statistical Package for Social Science (SPSS) version 24 and Smart PLS 3.0. Table 1 shows the profile of the respondents for this research study. Majority of the respondents is in the range of age between 18 – 28 years old, with slightly over 50 per cent, and most of the respondents are female with a total percentage of 65.4 per cent. Apart from that, the demographic analysis also shows that most of the respondents are single with 57.8 per cent as well as having a good education background was for about 120 respondents (38.1 per cent) has achieved their bachelor degree, while 86 respondents (27.3 per cent) has obtained a diploma, while 19.4 per cent has master's degree and 5.7 per cent has PhD. Table 1 also shows the total household income of respondent every month. 33 per cent of the respondents earn between RM1,001 – RM2,000, followed by 16.2 per cent receive income range from RM2,001 – RM3000. The third-highest percentage was RM10,001 and above with a total of 12.7 per cent.

Table 1 Demographic profile

Demographic variable	Categories	Frequency	Percentage (%)	Cumulative Per cent
Age	18 – 28	158	50.2	50.2
	29 – 39	88	27.9	78.1
	40 – 50	41	13.0	91.1
	51 – 61	26	8.3	99.4
	62 and above	2	0.06	100
	Total	**315**	**100**	
Gender	Female	206	65.4	65.4
	Male	109	34.6	100
	Total	**315**	**100**	
State	Sabah	184	58.4	58.4
	Sarawak	110	34.9	93.3
	FT Labuan	21	6.7	100
	Total	**315**	**100**	
Cities	Kota Kinabalu	118	37.5	37.5
	Sandakan	14	4.4	41.9
	Tawau	23	7.3	49.2
	Lahad Datu	8	2.5	51.7
	Penampang	6	1.9	53.6
	Papar	4	1.3	54.9
	Beaufort	2	0.06	55.5
	Kota Belud	1	0.03	55.8
	Tongod	1	0.03	56.1
	Putatan	1	0.03	56.4
	Keningau	1	0.03	56.7
	Kota Marudu	1	0.03	57
	Kuching	58	18.4	75.4
	Sibu	9	2.9	78.3
	Bintulu	3	1.0	79.3
	Miri	23	7.3	86.6
	Sri Aman	1	0.03	86.9
	Mukah	4	1.3	88.2
	Kota Samarahan	12	3.8	92
	Labuan	25	7.9	100
	Total	**315**	**100**	
Religion	Islam	208	66.0	66.0
	Christian	104	33.0	99.0
	Buddha	1	.3	99.4
	Hindu	1	.3	99.7
	Sikh	1	.3	100
	Total	**315**	**100**	
Race	Malay	83	26.3	26.3
	Chinese	13	4.1	30.5
	Bumiputera Sabah	144	45.7	76.2

	Bumiputera Sarawak	68	21.6	97.8
	Bugis	4	1.3	99.0
	Sungai	1	.3	99.4
	Brunei	1	.3	99.7
	Punjabi	1	.3	100
	Total	**315**	**100**	
Level of education	Primary school	1	.3	.3
	Secondary school	28	8.9	9.2
	Matriculation	1	.3	9.5
	Diploma	86	27.3	36.8
	Bachelor's degree	120	38.1	74.9
	Master's degree	61	19.4	94.3
	PhD	18	5.7	100
	Total	**315**	**100**	
Marital status	Single	182	57.8	57.8
	Married	130	41.3	99.0
	Widowed	2	.6	99.7
	Widower	1	.3	100
	Total	**315**	**100**	
Total household income	Less than RM1,000	3	1.0	1.0
	RM1,000 – RM2,000	105	33.3	34.3
	RM2,001 – RM3,000	51	16.2	50.5
	RM3,001 – RM4,000	33	10.5	61.0
	RM4,001 – RM5,000	27	8.6	69.5
	RM5,001 – RM6,000	23	7.3	76.8
	RM6,001 – RM7,000	10	3.2	80.0
	RM7,001 – RM8,000	8	2.5	82.5
	RM8,001 – RM9,000	8	2.5	85.1
	RM9,000 – RM10,000	7	2.2	87.3
	RM10,000 and above	40	12.7	100
	Total	**315**	**100**	

The demographic profile was analysed using SPSS; meanwhile, to examine the path modelling for this study, it was performed by using Smart PLS 3.0. The first step in analysing path modelling is the assessment of reflective measurement model, which comprise of four main criteria which are internal consistency, indicator reliability, convergent validity, as well as discriminant validity. Table 2 shows the result of internal consistency, indicator reliability, and convergent validity. Internal consistency is to measure the reliability of data the same way as Cronbach alpha. Composite reliability (CR) with a value of 0.7 is considered as acceptable. However, a value of CR higher than 0.8 is preferable to have the right internal consistency (Hair, Sarstedt, Ringle & Mena, 2012). In this study, the composite reliability for all items is more than 0.7, which indicates that the items having a good internal consistency and reliability. Next, indicator reliability is ensuring that all items are measuring what it is supposed to measure. The threshold for indicator reliability should be more than 0.708. However, loadings of 0.4 and above are still acceptable provided the value of Average Variance Extracted (AVE) is more than 0.5. The loadings in Table 2 shows that it surpasses

the acceptable value, which suggests that the respective items are measuring what it is supposed to measure. Nonetheless, loadings that do not meet the required threshold were deleted. Furthermore, convergent validity is to measure that a respective item in a construct is related to one another and has a strong relationship, and it can be measure through Average Variance Extracted (AVE). The value of AVE should be at least or more than 0.5 to achieve convergent validity. From Table 2, it can be seen that the value of AVE is more than 0.5, which indicate that convergent validity is completed.

Table 2 Internal consistency indicator reliability and convergent validity

Construct	Items	Loadings	AVE	CR
Clothing and footwear	CAF1	0.674	0.557	0.833
	CAF 2	0.854		
	CAF 3	0.725		
	CAF 4	0.722		
Cost of food	COF 3	0.914	0.789	0.882
	COF 4	0.861		
Cost of housing	COH 2	0.699	0.612	0.824
	COH 3	0.847		
	COH 4	0.793		
Education	EDC 1	0.643	0.529	0.768
	EDC 2	0.663		
	EDC 3	0.856		
Family size	FSZ 1	0.646	0.608	0.819
	FSZ 2	0.934		
	FSZ 3	0.731		
Full-time worker	FTW 2	0.701	0.635	0.774
	FTW 3	0.882		
Healthcare	HTC 1	0.828	0.67	0.89
	HTC 2	0.884		
	HTC 3	0.716		
	HTC 4	0.838		
Living wage	LWG 1	0.87	0.764	0.928
	LWG 2	0.908		
	LWG 3	0.832		
	LWG 4	0.885		
Savings	SVG 1	0.862	0.716	0.883
	SVG 2	0.812		
	SVG3	0.863		
Transportation	TPT 1	0.884	0.661	0.794
	TPT 3	0.735		

To assess the discriminant validity of items, the researcher uses the heterotrait-monotrait ratio of correlation (HTMT) which is a recommendation by (Henseler, Ringle & Sarstedt, 2014). Discriminant validity is to assess a set of items that are not measuring other variables than the one it is supposed to measure. The value of HTMT should be lower than 0.90 to confirm that the indicator has achieved discriminant validity. Based on Table 3, the result shows that the HTMT value for this study is less than 0.90, which can be concluded that discriminant validity is not an issue in this study. Thus, a structural model analysis can be continued.

Table 3 Discriminant Validity Heterotrait-Monotrait Ratio Correlations (HTMT)

	CAF	EDC	FSZ	COF	FTW	HTC	COH	LWG	SVG	TPT
Clothing footwear										
Education	0.379									
Family size	0.253	0.31								
Cost of food	0.383	0.467	0.297							
Full-time worker	0.149	0.371	0.327	0.203						
Healthcare	0.554	0.488	0.393	0.45	0.428					
Housing	0.351	0.474	0.254	0.443	0.292	0.454				
Living wage	0.561	0.498	0.495	0.554	0.339	0.643	0.612			
Savings	0.419	0.309	0.337	0.451	0.317	0.716	0.4	0.628		
Transportation	0.257	0.319	0.267	0.197	0.538	0.449	0.496	0.465	0.33	

To identify the result for hypothesis developed for this study, it was tested using a bootstrapping function. The first hypothesis testing is to measure the direct relationship between the independent variables towards the dependent variable. The coefficient of determination, also known as r-square is at 0.581, which suggest the model is moderately fit. The assessment of path coefficient shown in Table 4 shows that only five relationships are found to have *T*-value greater than 1.96, thus significant at a *p*-value of 0.05. The effect sizes (f^2) for the six relationship shows a small effect except for healthcare which has a value below the minimum the threshold of 0.02 based on (, 1988). Apart from that, Q^2 or predictive relevance is to measure whether the model can be used for a different group of respondents, and a similar result will be obtained. A Q^2 value of more than 0 is said to have good predictive relevance. Based on Table 4, the Q^2 value the living wage is 0.402, indicating that the model has good predictive relevance.

Table 4 Hypothesis testing for direct relationship

Hypothesis	Relationship	*T*-value	*p*-value	R^2	F^2	Q^2	Decision
H_{1a}	Cost of food -> Living wage	**2.481**	**0.013**		**0.024**		**Supported**
H_{1b}	Cost of Housing -> Living wage	**4.483**	**0**		**0.063**		**Supported**
	Clothing footwear -> Living wage	**4.017**	**0**		**0.057**		**Supported**
H_{1c}	Education -> Living wage	**2.458**	**0.014**		**0.023**		**Supported**
	Healthcare -> Living wage	1.441	0.15		0.01		Not supported
	Transportation -> Living wage	**1.987**	**0.047**	**0.581**	**0.013**	**0.402**	**Supported**

A moderator is a variable that can give a different direction or strength towards the relationship between independent variables and dependent variable. A two-stage approach is employed in order to analyse the moderating effect of this study. A two-stage approach is chosen because it is applicable for reflective and formative measures and if the objective of this study is to reveal the significance of the moderating variable as well as to get high statistical power result, a two-stage approach is recommended (Henseler & Chin, 2010). In this study, there are three moderating variables which are family size, full-time worker, and savings. Table 5 shows the result for the second hypothesis testing with the first moderating effect which is a family size in which family size has a significant relationship to one independent variable which is the cost of housing (*T*-value = 2.208, *p*-value = 0.027) with a small effect size of 0.02. As shown in Table 5, the *R*-square is 56.6 per cent which approximately more than half of the variables can explain the dependent variable.

Table 5 Family size as moderating effect

Hypothesis	Relationship	*T*-value	*p*-value	R^2	F^2	Decision
H_{2a}	COF*FSZ -> Living wage	0.629	0.529		0.002	Not supported
H_{2b}	COH*FSZ -> Living wage	**2.208**	**0.027**		**0.02**	**Supported**
	CAF*FSZ -> Living wage	0.767	0.443		0.002	Not supported
H_{2c}	EDU*FSZ -> Living wage	0.129	0.897		0	Not supported
	HTC*FSZ -> Living wage	0.219	0.827	**0.566**	0	Not supported
	TPT*FSZ -> Living wage	0.358	0.72		0.001	Not supported

The second moderating effect tested is a full-time worker. Table 6 shows the result of the moderating effect of full-time workers towards the living wage. Based on the result, a full-time worker has a moderating effect only towards healthcare with a *T*-value of 2.13 and *p*-value of 0.033. The *R*-square is 53.4 per cent, and effect size value for healthcare is 0.02, which indicate a small effect.

Table 6 Full time workers as moderating effect

Hypothesis	Relationship	*T*-value	*p*-value	R^2	F^2	Decision
H_{3a}	COF*FTW -> Living wage	1.187	0.235		0.005	Not supported
H_{3b}	COH*FTW -> Living wage	1.413	0.158		0.006	Not supported
	CAF*FTW -> Living wage	1.95	0.051		0.013	Not supported
H_{3c}	EDU*FTW -> Living wage	1.041	0.298		0.004	Not supported
	HTC*FTW -> Living wage	**2.13**	**0.033**	**0.534**	**0.02**	**Supported**
	TPT*FTW -> Living wage	0.249	0.803		0	Not supported

The third assessment of the moderating variable is for savings. Based on Table 7, it can be seen that savings do not show any moderating effect towards any of the independent variables and dependent variable. Given that there is no relationship of moderator towards the variables, the effect size also shows that there is no effect if the moderator of savings is included. However, the *R*-square is 55.5 per cent indicating that the model is moderately fit.

Table 7 Savings as moderating effect

Hypothesis	Relationship	*T*-value	*p*-value	R^2	F^2	Decision
H_{4a}	COF*SVG -> Living wage	0.805	0.421		0.002	Not supported
H_{4b}	COH*SVG -> Living wage	1.017	0.309		0.003	Not supported
	CAF*SVG -> Living wage	1.172	0.241		0.005	Not supported
H_{4c}	EDU*SVG -> Living wage	0.793	0.428		0.002	Not supported
	HTC*SVG -> Living wage	0.856	0.392	**0.555**	0.003	Not Supported
	TPT*SVG -> Living wage	1.602	0.109		0.013	Not supported

DISCUSSION AND CONCLUSION

The findings on food and housing found to influence the living wage for workers. The result is consistent with the previous research whereby food and housing are an important attribute to estimate the living wage. Also, the findings also in line with the Malaysian household Expenditure survey in 2016, whereby, food and housing are among the top three main expenditure in any household. Apart from that, transportation is one of the important elements included in the estimation of the living wage. As Malaysia is climbing up the ladder to be a developing country, the demand for transportation has increased especially in the urban area as more and more people are moving to the city area to find better job opportunities. Furthermore, based on the household expenditure survey 2016, the

third-highest expenses go to transportation which shows that transportation is a necessary expense for every household.

Next, the findings also found a significant relationship between education and the living wage which indicate that education is one of the essential factors to determine the living wage. The job market in Malaysia is highly competitive. Therefore, it is vital to put some investment in education. In Malaysia, those with higher education level (i.e. diploma, bachelor's degree) earns almost four times higher than for those who have no certificates. Apart from that, there is also a significant relationship between clothing and footwear towards the living wage. The result supported the previous study whereby apart from food and housing, clothing is also one of the essential needs for everyday life (Living Wage Foundation & ACCA, 2017).

Family size shows that there is a moderating effect on the relationship between housing and the living wage. This indicates that family size plays an important role in purchasing a home. To be able to buy a house that is comfortable and fitting for all family members is important to avoid overcrowding. Overcrowding is a situation where there are too many people in a given space which may lead to safety and health issues. Thus, the larger the family size, the bigger space is required. Apart from that, the full-time worker found to have a moderating effect on the relationship between healthcare and the living wage. The findings suggest that getting full-time employment may lead to an improvement in individual healthcare. For example, the higher the income, the more they can allocate for healthcare expenses (Goodman, 2015).

As Malaysia is moving towards being a developed nation, it is important for Malaysia to strive for better and higher productivity growth and to provide more high-income jobs so that the people can achieve a minimum living standard. This paper has achieved its objectives of the study, which is to determine the factors that influence the living wage in East Malaysia. According to the result, cost of food, cost of housing, and cost of other essential needs is an essential element in estimating the living wage. Thus, this research study can help policymaker to develop a new strategy by adopting the model to improve the wage rate in Malaysia so that people can at least achieve a minimum living standard and stay out of the poverty trap. However, the sample size for this study is limited to 315 respondents. Larger sample size and different states and cities can be considered to get a broader view of the difference in living cost across states in Malaysia.

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