World Journal of Advanced Research and Reviews
eISSN: 2581-9615 CODEN (USA): WJARAI
Cross Ref DOI: 10.30574/wjarr
Journal homepage: https://wjarr.com/

(RESEARCH ARTICLE)

Check for updates

# Age and income in affecting household consumption in Denpasar region

I Gusti Ayu Athina Wulandari [1,*] and Ni Made Intan Priliandani [2]

[1] *Department of Economic Development, Faculty of Economic and Business, Warmadewa University, Denpasar, Bali, Indonesia.*
[2] *Department of Accounting, Faculty of Economic and Business, Warmadewa University, Denpasar, Bali, Indonesia.*

World Journal of Advanced Research and Reviews, 2024, 24(03), 3008-3015

Publication history: Received on 16 November 2024; revised on 28 December 2024; accepted on 30 December 2024

Article DOI: https://doi.org/10.30574/wjarr.2024.24.3.4024

## Abstract

Consumption expenditure is one of the indicators used to measure the objective well-being. The average per capita household consumption expenditure in Denpasar City has decreased during Covid-19 until post Covid-19 but remains the highest compared to other districts in Bali Province. The purpose of this study was to analyze age and income in affecting household consumption expenditure in Denpasar City. Primary data obtained from respondents used in this study. Based on the results of the analysis using multiple linear regression analysis techniques, it was found that age had a positive but insignificant effect, while income had a positive and significant effect on household consumption expenditure in Denpasar City. This study confirms Modigliani`s Life Cycle Theory and Engel Curve that used in this study to build the research model. The implication of this study is the income used to increase household consumption expenditure is fixed income. For Balinese Hindu families, rahinan and menyama braya are mandatory consumption expenditures in addition to primary needs that must be met.

**Keywords:** Age; Income; Consumption; Household; Denpasar

## 1. Introduction

Consumption expenditure is a very important aspect in economy [1]. As one of the main components of aggregate expenditure, consumption expenditure is an important indicatore for the government, business people, and economic analysts in evaluating the economic health. Consumption reflects the level of welfare and social life of a society, and has a significant impact on overall economic growth [2]. In the macroeconomic concept, consumption expenditure can be distinguished as household consumption expenditure and government expenditure. Household consumption is the expenditure on goods and services by resident households for the purpose of final consumption. A household is defined as an individual or group of individuals who live together in a residential building, pool some or all of their income and wealth, and consume goods and services collectively, primarily food and housing [3]. Household consumption often receives special attention because it is the largest contributor to national income [4]. As an analogy, Bank Indonesia noted that in 2023 in the first to fourth quarters, Indonesia`s economic growth was still supported by household consumption [5]. Bali is one of the provinces in Indonesia that has an average economic growth exceeding the average national economic growth each year except when the pandemic Covid-19 hit the economy.

Based on the data from Bali Central Bureau of Statistics, the average per capita consumption expenditure of Denpasar City and Bali Province has a decreasing trend from 2020 to 2022. However, the average per capita consumption expenditure of Denpasar City from year to year is always above the average per capita consumption expenditure of Bali Province. This decline is indicated to be caused by the Pandemic Covid-19 which result in the Implementation of Community Activity Restrictions (PKKM). Bali, which is mostly supported by the tourism sector, has become moribund and many of the workers have been laid off. Household consumption expenditure is classified into two categories: food and non-food consumption expenditure. Recent data shows that despite the decline, the average per capita consumption

* Corresponding author: IGAA Wulandari

expenditure of Denpasar City is at the top of the list compared to other districts in Bali Province, followed by Badung Regency and Gianyar Regency. This indicates that as the capital of the province, the people of Denpasar City have a higher complexity of needs. In addition, as the capital of Bali Province, Denpasar City has a more developed economic sector, infrastructure development and more equitable accessibility so that more jobs are available where these conditions have a domino effect on increasing community spending.

Many research have been conducted along this topic. Research consistently shows that age significantly influences household consumption patterns. On the other hand, the difference approaches and theories used, provide different result. Davies (1981) [6] , examined uncertain life span, consumption, and saving in retirement, where the result was that intertemporal substitution in consumption is small enough to suppress consumption with age due to uncertain life span, which can explain most of the decumulative deprivation of the elderly. Fareed & Riggs (1982) [7] , examined old and young differences in consumer spending patterns. The findings show that, for consumer units headed by older (65+) and younger (<65) persons, the marginal and average propensity to spend relative to after-tax income are almost the same when estimated with the mean values of their respective characteristics, such as after-tax income and family size. Fernández-Villaverde & Krueger, (2007) [8] examined Consumption over the Life Cycle: Facts from Consumer Expenditure Survey Data. They found that consumption expenditure on non-durable and durable goods showed significant spikes over the life cycle, with changes in family size accounting for only half of these spikes. The other half of the spending spike cannot be explained by a complete life-cycle model of the market. Households do not immediately build up their desired stock of durables and continue to increase spending on durables until quite late in the life cycle. In Germany, Stöver (2012) [9] examined the effect of age on consumption. The findings are that the age structure of the population significantly affects aggregate consumption. Germany's aging population changes its consumption behavior due to different habits, needs, and income changes, thus affecting aggregate final demand. The average propensity to consume is lowest for middle-aged people and highest for the very young and very old, which has an impact on spending on consumption in relation to income. Afriana (2018) [10] has examined variables that can affect household consumption in Jakarta, namely home ownership status, age of the head of the family and the number of children in the family. Data processing in this study used multiple analysis. The results of this study indicate that home ownership status and the number of children have an influence on the consumption attitude of a household in Jakarta. Chen (2022) [11] took the topic of the impact of population aging on population consumption. The results showed that age structure plays an important role in China's per capita consumption and the current situation in China is that an aging population will hinder population consumption. Chen & Zhao (2022) [12] examined the effect of Chinese population aging on household consumption - based on data from the Chinese family panel study. The results show that population aging boosts the basic living consumption expenditure of most households and inhibits the enjoyment or development consumption expenditure of most households.

Income is found to be the most determining factor in household consumption [1] [13]. In Indonesia, quite a number of researchers have analyzed the relationship between income and household consumption expenditure. Vidiawan and Tisnawati (2015)[14] shows that simultaneously income, number of family members and education have a significant effect on the consumption patterns of the poor. Illahi, et al (2019) [4] found that income has a significant positive effect, while the deposit interest rate and education have a significant negative effect on household consumption expenditure in Indonesia. Atmaja, et al, (2022) [15] examined the effect of income on household consumption expenditure patterns state that income has a positive effect on household consumption expenditure. On the other hand, Handayani & Sulistiyono (2023) [16] shows that income and the number of family members have a positive and significant effect, while education has no effect on the consumption expenditure of poor households in Banyuwangi Regency. Soleh, et al (2023) [17] examined the analysis of the effect of per capita income and inflation on household consumption expenditure state that per capita income has a significant effect while inflation has no significant effect on household consumption expenditure. Across country, research consistently shows a positive relationship between household income and consumption expenditure. Higher income levels are associated with increased consumption and improved consumption structure ([18]. Durguner et al. (2007) [19] found that households experiencing income increases of over 50% had significantly higher consumption changes compared to those facing income decreases of over 50%. Working hours and income positively affect household consumption expenditure [20]. Peer effects also play a role, with higher average income in a reference group associated with greater household expenditure [18]. Demographic factors such as household size, age, and education level influence consumption patterns . However, Siman et al. (2020) [20] found that the number of household members did not affect consumption expenditure.

## 2. Research Methods

This study was conducted in Denpasar City by taking the population of Denpasar City residents aged 20-64 years, which based on data on the projected population of Denpasar City in 2023 released by the Central Bureau of Statistics amounted to 486,000 people. The number of samples was determined using the Slovin formula [21]. The data collection

methods used are observation, documentation studies, and questionnaires to obtain primary data analyzed in the research model. The type of data used in this study is quantitative data sourced from direct / primary respondents. This study uses quantitative data analysis techniques, namely multiple linear regression analysis. Multiple linear regression analysis is performed when research or statistical analysis requires understanding the relationship between one dependent variable and two or more independent variables [22]. Multiple linear regression is useful for understanding the extent to which independent variables contribute to variation in the dependent variable [23].

## 3. Results

### 3.1. Descriptive Statistic

**Table 1** Statistic Descriptive

| | **Mean** | **Std. Deviation** | **N** |
|---|---|---|---|
| Y | 6 | 0,29494 | 100 |
| X1 | 39,57 | 10,86581 | 100 |
| X2 | 6,6543 | 3,1084 | 100 |

Source: Primary Data, 2024

Based on Table 1, the household consumption expenditure variable (Y) has a mean value of 6.4033, meaning that the average consumption expenditure of the people of Denpasar City is 6.4033 million rupiah per month. Furthermore, the age variable (X1) has a mean value of 39.5700 which means that the average age of respondents is 39.57 years. The income variable (X2) has a mean value of 6.6543 which means that the average income of respondents is 6.6543 million rupiah.

Table 1 also shows the standard deviation value of each variable. The standard deviation value of the variable household consumption expenditure in Denpasar City, age, and income is smaller than the mean value. This indicates that the data variation is not wide and is getting closer/accurate to the mean which also means that the mean value is a good representation of the overall data.

### 3.2. Classical Assumptions Test

*3.2.1. Normality Test*

**Table 2** Normality Test

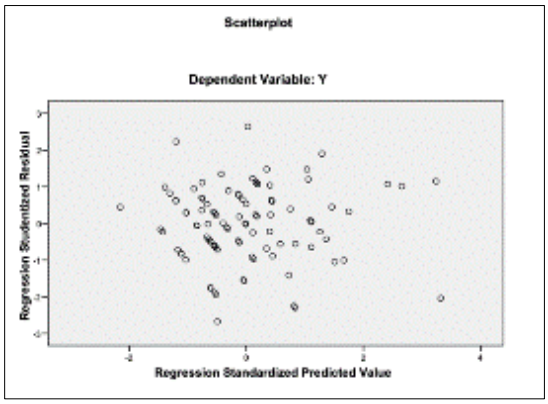
| | | **Unstandardized Residual** |
|---|---|---|
| N | | 100 |
| Normal Parameters a,b | Mean | 0,0000000 |
| | Std. Deviation | 0,13892712 |
| Most Extreme | Absolute | 0,053 |
| Differences | Positive | 0,049 |
| | Negative | -0,053 |
| Kolmogorov-Smirnov Z | | 0,528 |
| Asymp.sig. (2-tailed) | | 0,943 |

Source: Primary Data, 2024

The Kolmogorov-Smirnov test is one way to test whether the data used is normally distributed or not. The basis for decision making used is if the significance value> 0.05 then the data is normally distributed, otherwise if the significance value <0.05 then the data is not normally distributed. Based on Table 2, the value of Asymp. Sig. (2-tailed) is 0.943> 0.05, so it can be concluded that the data in this study are normally distributed.

*3.2.2. Heteroscedasticity Test*

Based on Figure 1, it can be seen that the points spread above, below, and around 0 and the distribution of points does not form a pattern. So it can be concluded that there are no symptoms of heteroscedasticity in this research model.




Source: SPSS Analysis, 2024

**Figure 1** Scattterplot

*3.2.3. Autocorelation Test*

**Table 3** Autocorellation Test

| | **Unstandardized Residual** |
|---|---|
| Test Value a | 0,00643 |
| Cases<Test Value | 50 |
| Cases>=Test Value | 50 |
| Total cases | 100 |
| Number of Runs | 49 |
| Z | -0,402 |
| Asymp. Sig. (2-tailed) | 0,688 |

Source: SPSS Analysis, 2024

The Run Test is one of the tests used to see whether there are symptoms of autocorrelation in the research model or not. The basis for decision making is if the value of Asymp. Sig. (2-tailed) > 0.05 then there are no autocorrelation symptoms. Conversely, if the value of Asymp. Sig. (2-tailed) <0.05 then there are symptoms of autocorrelation. Based on Table 3, the Asymp. Sig. (2-tailed) is 0.688> 0.05, so it can be concluded that there are no autocorrelation symptoms in the research model.

*3.2.4. Multicolinearity Test*

**Table 4** Multicollinearity Test

| | **Unstandardized Coefficients** | | **Standardized Coefficients** | **t** | **Sig.** | **Collinerity Statistic** | |
|---|---|---|---|---|---|---|---|
| Model | B | Std. Error | Beta | | | Tolerance | VIF |
| 1(Constant) | 0,807 | 0,305 | | 2,872 | 0,005 | | |
| X1 | 0,001 | 0,001 | 0,043 | 0,858 | 0,393 | 0,905 | 1,105 |
| X2 | 0,823 | 0,048 | 0,868 | 17,267 | 0,000 | 0,905 | 1,105 |

Source: SPSS Analysis, 2024

Based on Table 4, it can be seen that the VIF and Tolerance values for the age (X1) and income (X2) variables are 0.905 for the Tolerance value and 1.105 for the VIF value, respectively, so it can be interpreted that there are no multicollinearity symptoms in this research model.

*3.2.5. t-Test*

**Y = 0.043X1 + 0.868 X2**

The coefficient of the age variable (X1) is 0.043, this means that if the respondent's age increases by 1 year and income does not change, then household consumption expenditure in Denpasar City will increase by 0.043 million rupiah. The coefficient of the income variable (X2) is 0.868, which means that if income increases by 1 million rupiah, then household consumption expenditure in Denpasar City increases by 0.868 million rupiah, assuming the respondent is still at the same age. The t test was conducted with the aim of knowing the effect of age (X1) and income (X2) partially on household consumption expenditure in Denpasar City (Y). decision making is done by looking at the significance value in the Coefficients table. In this study the confidence level used is 95% and the significance level is 5% (0.05) so that the basis for decision making is if the significance value of the t test <0.05 then H0 is rejected and Ha is accepted. This means that there is a significant influence between the independent variable on the dependent variable. Conversely, if the significance value of the t test> 0.05 then H0 is accepted and Ha is rejected. This means that there is an influence but not significant between the independent variable and the dependent variable.

**Table 5** t-Test

| | **Unstandardized Coefficients** | | **Standardized Coefficients** | **t** | **Sig.** |
|---|---|---|---|---|---|
| **Model** | **B** | **Std. Error** | **Beta** | | |
| 1(Constant) | 0,807 | 0,305 | | 2,872 | 0,005 |
| X1 | 0,001 | 0,001 | 0,043 | 0,858 | 0,393 |
| X2 | 0,823 | 0,048 | 0,868 | 17,267 | 0,000 |

Source: SPSS Analysis, 2024

## 4. Discussion

Age (X1) has a significance value of 0.393> 0.05. This means that age has a positive but insignificant effect on household consumption expenditure in Denpasar City. Based on the age of the respondents used in this study, namely young adulthood (20-44 years) and middle adulthood (45-64 years), household consumption expenditure has different priorities according to their age level. This research inline with Gourinchas & Parker (2002) [24] who found consumer behavior changes strikingly over the lifecycle. Franco Modigliani's Life Cycle Theory explains that individuals tend to plan consumption over their life cycle by taking into account their income over time. Respondents in this study divided into the first stage (young age) for young adults and the second stage / productive stage (middle age) for middle adults. Each stage in the life cycle has a different consumption pattern, which does not mean that when entering the middle age stage, individuals will reduce consumption (in the context of consumption value) but instead switch to consumption according to priorities in each life cycle. Based on the results of the study, it was found that respondents who are in young adulthood (young age) in the range of 20-26 years, their consumption patterns tend to be tertiary needs, fulfillment of desires and fulfillment of hobbies for personal enjoyment such as traveling, lifestyle, buying action figures, hanging out, skincare and makeup, in addition to primary needs and religious ceremonies (in Balinese Hindu families). For respondents who are in young adulthood above 26 years - 44 years show a more complex consumption pattern. In this phase, respondents tend to reduce consumption based on desire because they have begun to focus on obligations for children's education and health. In addition, there is consumption for the purchase of assets, namely houses, cars, because at this stage they ventured to take out mortgage installments because they felt there would be career improvements in the future. Aigner-Walder & Döring (2012) [25] found that as populations age, there is an expected increase in private saving rates and a shift in consumption patterns, with greater emphasis on housing, food, and health-related expenses, while transportation expenditures decrease.

Different consumption expenditure patterns are also found among respondents in the middle age category. Entering the age phase of 45-64 years, respondents have consumption patterns that lean towards consumption for old age/retirement welfare. This research provide the same results as Chen & Zao (2022) [12] reveal on their research that Population aging tends to promote basic living expenditures while inhibiting discretionary spending. From the answers

of respondents in the age range of 45-50 years, consumption is still at the stage of children's education, housing installments, and liquid assets. In the age range above 50 years, some respondents focus on health and the welfare of their old age, this can be seen from respondents' answers about ownership of health insurance. The results of this study confirms several research with the same topic across country. Bodier (1999) [26] conduct research with French population as the object, state that Household consumption changes with age, with a growing share of leisure consumption after retirement. Beffy & Montfort (2003)[27] found that population aging affects household consumption and portfolio choices, with older households leaning towards more liquid assets. Although many researches confirms the results of this study, but another Studies across different regions, including Central and Eastern Europe, Serbia, and Austria, have found a strong negative relationship between the proportion of elderly population and overall household consumption levels [25] [28] [29].

Based on the results of statistical analysis and respondents' answers, the results of this study show differences in the characteristics of household consumption expenditure in Denpasar City related to young adulthood and middle adulthood. Consumption tendencies in these age phases depend on family size, expectations of future careers, life experiences, needs, wants, and professions.

Income (X2) has a significance value of 0.000 <0.05. This means that income has a positive and significant effect on household consumption expenditure in Denpasar City. These results indicate that changes in household consumption expenditure in Denpasar City are linear with changes in income. An increase in income provides an opportunity for individuals to access complex needs (especially the fulfillment of tertiary needs) and desires, resulting in an increase in consumption expenditure. What needs to be underlined is that the question asked to respondents regarding income is their regular income, not transient income. Thus, the results of this study also provide the result that the income used to increase household consumption expenditure in Denpasar City is consistently fixed income. This confirmed by research by Hall & Mishkin (1980) [30] who state that consumption responds much more strongly to permanent than to transitory movements of income. Transient income is not the subject of study in this study so that further / more in-depth research needs to be done regarding the effect of transient income on household consumption expenditure.

The results of this study also confirm other research in the same topic. Research consistently shows a positive relationship between household income and consumption expenditure. Higher income levels are associated with increased consumption and improved consumption structure [18]. Durguner et al. (2007)[19] found that households experiencing income increases of over 50% had significantly higher consumption changes compared to those facing income decreases of over 50%. Working hours and income positively affect household consumption expenditure [20]. Peer effects also play a role, with higher average income in a reference group associated with greater household expenditure [18]. Khan (2014) [31] also state that household consumption is affected by current income, family size, education, social status, and relative income compared to others.

This study confirms the Engel Curve theory that the higher the household income, the lower the proportion of income spent on basic goods and services. Conversely, the proportion of income that can be invested or spent on more luxurious non-staple goods and services increases. While the percentage of expenditure on basic necessities such as food may fall, the absolute amount of money spent on food may increase. On the other hand, respondents who are in early young adulthood are indicated to have impulsive/irrational shopping behavior. Some respondents in this age range answered shopping and traveling as things that encourage consumption expenditure other than their needs. Respondents at this age are quickly influenced by advertising promotions, friends' posts, and influencer posts so they feel they have to follow the current trend (demonstration effect). Some respondents who shop online, shopping, even answered that they did not save and chose to spend their income on consumption to fulfill their needs and desires. This indicates their confidence in the consistency of the income received. Another thing is the pay later facility that makes it easier for respondents to be able to reach products that were previously not affordable to them. Based on the results of this study from the results of statistical analysis and in the field, there is conformity regarding the significant effect of income on household consumption expenditure in Denpasar City. The consumption behavior of young adult and middle adult households of the majority of respondents indicates confidence in their long-term income, which means that their current consumption is not only carried out based on the amount of their current income but also based on their expectations of the income that will be received in the future. This is confirmed by Carroll (1994) [32] who found that Current consumption depends on expected lifetime income, but future income uncertainty reduces willingness to consume out of uncertain future income.

## 5. Conclusion

Age has a positive but insignificant effect on household consumption expenditure in Denpasar City. This shows that changes in household consumption expenditure in Denpasar City are not always linear with increasing age. Based on

the age of respondents used in this study, namely young adults (20-44 years) and middle adults (45-64 years), household consumption expenditure has different priorities according to their age level.

Income has a positive and significant effect on household consumption expenditure in Denpasar City. Significant influence in this case means that the relationship between income and consumption expenditure is elastic, if there is a slight change in income, consumption expenditure will immediately change. This result shows that changes in household consumption expenditure in Denpasar City are linear with changes in income. the results of this study also provide results that the income used to increase household consumption expenditure in Denpasar City which is consistent is fixed income. Temporary income is not the subject of study in this study so that further/more in-depth research is needed regarding the effects of transient income on household consumption expenditure.

## Compliance with ethical standards

### *Disclosure of Conflict of interest*

No conflict of interest to be disclosed.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

## References

[1] Hone, Z., & Marisennayya, S. (2019). Determinants of Household Consumption Expenditure in Debremarkos Town, Amhara Region, Ethiopia. *American Academic Scientific Research Journal for Engineering, Technology, and Sciences*, *62*(1), 124-144

[2] Abdi, F., Habibah, G. A., & Fitri, M. (2016). Analysis of the Effect of Inflation and Income on Community Consumption in Telanaipura District, Jambi City. *Indonesian Journal of Islamic Economics and Business*, *1*(1), 83-100.

[3] Badan Pusat Statistik Provinsi Bali [Internet]. Cited 2024 March 2. Available from https://bali.bps.go.id/id .

[4] Illahi, N., Adry, M. R., & Triani, M. (2019). Analyze the determinants of household consumption expenditure in Indonesia. *Jurnal Ecogen*, *1*(3), 549-556.

[5] Bank Indonesia [Internet]. Cited 2024 March 2. Available from www.bi.go.id .

[6] Davies, J. B. (1981). Uncertain lifetime, consumption, and dissaving in retirement. *Journal of political Economy*, *89*(3), 561-577.

[7] Fareed, A. E., & Riggs, G. D. (1982). Old-young differences in consumer expenditure patterns. *Journal of Consumer Affairs*, *16*(1), 152-160

[8] Fernández-Villaverde, J., & Krueger, D. (2007). Consumption over the life cycle: Facts from consumer expenditure survey data. *The Review of Economics and Statistics*, *89*(3), 552-565.

[9] Stöver, B. (2012). *The influence of age on consumption* (No. 3808). EcoMod.

[10] Afriana, W. (2018). Analysis of Household Consumption Case Study: Renters and Homeowners in DKI Jakarta. *Jurnal Ilmiah Ekonomi Bisnis*, *22*(3).

[11] Chen, Z. (2022). The Impact of Population Aging on Residents' Consumption: The case of China.

[12] Chen, L., & Zhao, X. (2022). Influence of China's Population Aging on Household Consumption–Based on the Data from China Family Panel Studies. *Journal of Advanced Computational Intelligence and Intelligent Informatics*, *26*(4), 631-638.

[13] Browning, M., Bourguignon, F., Chiappori, P. A., & Lechene, V. (1994). Income and outcomes: A structural model of intrahousehold allocation. *Journal of political Economy*, *102*(6), 1067-1096.

[14] Vidiawan, E., & Tisnawati, N. M. (2015). Analysis of the effect of income, number of family members and education on the total consumption of poor households in Batu Kandik Village, Nusa Penida Sub-district, Klungkung Regency. *E-Jurnal EP Unud*, *4*(4), 243-257.

[15] Atmaja, A. R., Devi, S., Atmaja, H. K., & Lubis, I. (2022). Income on Household Consumption Expenditure Patterns in Sibolga City in 2022 (Implication of Keynes Consumption Function). *Eqien-Jurnal Ekonomi dan Bisnis*, *11*(02), 1-13.

[16] Handayani, S., & Yulistiyono, H. (2023). The Effect of Income, Number of Family Members and Education on the Consumption of Poor Households in Banyuwangi Regency. *Neo-Bis*, *12*(1), 32-47.

[17] Soleh, A., Daniel, P. A., Said, M., & Agustina, K. (2023). Analysis of the Effect of Per Capita Income and Inflation on Household Consumption Expenditure in Jambi Province. *J-MAS (Jurnal Manajemen dan Sains)*, *8*(2), 1980-1986

[18] Yue, P., Yu, L., Zhou, J., & Zhou, H. (2023). Peer effects of income in consumption. *Economic research-Ekonomska istraživanja*, *36*(3).

[19] Durguner, S., Ellinger, P. N., & Arends-Kuenning, M. (2007). Effects of changes in income on changes in consumption: an empirical investigation for Illinois farm households.

[20] Siman, S., Tawakal, M. A., Risamasu, P. I. M., & Kadir, R. (2020). Effect of household size, working hours, health and income on consumption expenditure of poor household. *Enfermería Clínica*, *30*, 512-515.

[21] Suryabrata, B.A., M.A., Ed.S., Ph.D., Drs. Sumadi. (2010). *Metodologi Penelitian.* Jakarta: Raja Grafindo Persada

[22] Krzywinski, M., & Altman, N. (2015). Multiple linear regression: when multiple variables are associated with a response, the interpretation of a prediction equation is seldom simple. *Nature methods*, *12*(12), 1103-1105.

[23] Aiken, L. S., West, S. G., & Pitts, S. C. (2003). Multiple linear regression. *Handbook of psychology*, 481-507.

[24] Gourinchas, P. O., & Parker, J. A. (2002). Consumption over the life cycle. *Econometrica*, *70*(1), 47-89.

[25] Aigner-Walder, B., & Döring, T. (2012). The effects of population ageing on private consumption—A simulation for Austria based on household data up to 2050. *Eurasian Economic Review*, *2*, 63-80.

[26] Bodier, M. (1999). Age and generation effects on consumption levels and structures. *Économie et statistique*, *324*(1), 163-180.

[27] Beffy, P. O., & Montfort, B. (2003). Household wealth, allocation dynamics and consumption behavior. *Document de travail INSEE G*, *2003*.

[28] Michnevič, K. (2016). The effects of ageing on household consumption in Central and Eastern Europe. *Journal of international scientific publications: economy & business*, *10*, 273-287.

[29] Radivojević, B., & Vasić, P. (2012). Household age structure and consumption in Serbia. *Economic annals*, *57*(195), 79-101.

[30] Hall, R. E., & Mishkin, F. S. (1980). The sensitivity of consumption to transitory income: estimates from panel data on households.

[31] Khan, H. (2014). An empirical investigation of consumption function under relative income hypothesis: Evidence from farm households in northern Pakistan. *International Journal of Economic Sciences*, *3*(2), 43.

[32] Carroll, C. D. (1994). How does future income affect current consumption?. *The Quarterly Journal of Economics*, *109*(1), 111-147.