The Characteristics of Elder Workers in Indonesia

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ABSTRACT

In 2020 Indonesia is in a transitional period towards an aging population, a condition where the percentage of the population aged 60 years and over reaches more than 10 percent. Facing this condition, the Indonesian government should immediately preparing various development policies that are responsive to population conditions in Indonesia, especially those related to the aging population so they can become a potential for the emergence of a second demographic bonus, by maintaining the condition of the elderly population healthy and productive.

The purpose of this research is to analyze the characteristics of the employment of the elderly in Indonesia and determining factors the elderly to work, using SUSENAS (National Socioeconomic Survey) data for 2020 as well as secondary data to support the analysis for the 2010-2022 period. The analytical tools applied are descriptive statistics and econometrics.

The majority of elderly workers in Indonesia are men, married, head of household, work more in the informal sector, work an average of 34.23 hours per week, have health complaints, have low education, do not have social security and have debt. Policies that are friendly to the elderly are needed so that the elderly can continue to participate and contribute to regional and national development

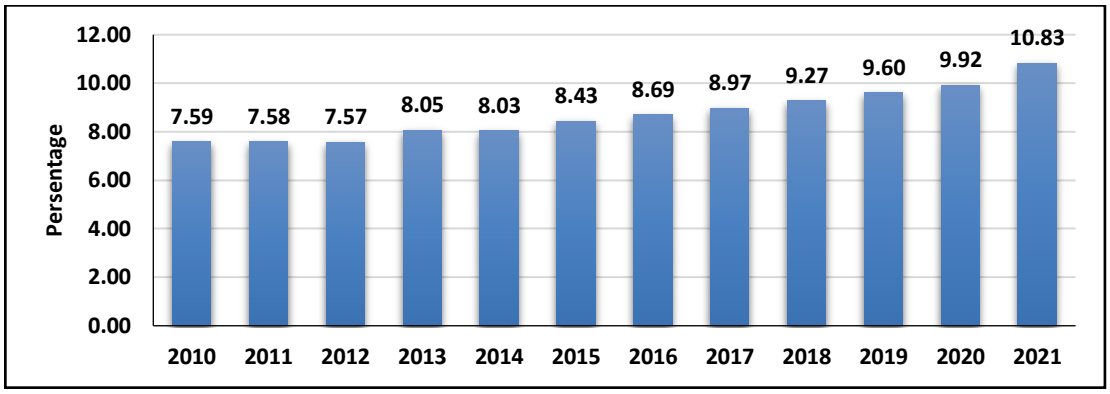
Keywords: Aging Population, Elder Employment, economic and social.

JEL Clasification: J01, J11, J14,J22.

INTRODUCTION

One of the impacts of the success of development in the health sector is that the elderly population continues to increase both in terms of number and proportion. The increase in the number of elderly people occurs globally so that population aging has become an important issue in the world today. In developing countries, this issue has not been discussed as much as in developed countries. However, this does not mean that it is not important to receive immediate attention, because this issue is closely related to various social, economic and political issues in a country. Several countries in Asia such as Japan, South Korea and Singapore are examples of countries that have a high percentage of elderly people. In Japan the elderly population has reached more than 30% of the total population, in South Korea 7% and in Singapore 9%. According to the World Heath Organization (WHO), by 2030 it is estimated that 1 in 6 of the world's population will be elderly. Meanwhile, in Indonesia, the population aged 60 years and over is expected to increase from 1.4 billion in 2020 to 2.1 billion in 2050 (BPS, 2022).

Table 1 Percentage of Indonesia's Elderly Population 2010-2021



Source: BPS, Statistics on the Elderly Population, 2022

Since 2021, Indonesia has entered an aging population structure where around 1 in 10 residents are elderly. In Figure 1 above, it can be seen that the percentage of the elderly population has reached more than 10% in 2021. The percentage of elderly people has increased by at least 3% for more than a decade (2010-2021) to 10.83% in 2021. Improvements in the health sector, access to education, employment, quality of life, and various other socio-economic aspects have influenced the decline in death rates and increase in life expectancy (UHH) from 69.81 years in 2010 to 71.57 years in 2021. This figure describes at least every resident born in In 2021, it is expected that life expectancy will be 71 – 72 years (BPS, 2022).

According to Hernayah (2015), the aging population phenomenon could be a second demographic bonus, when the proportion of elderly people increases but is still productive and can contribute to the country's economy. The difference between the first and second demographic bonus periods is that during the first demographic bonus the main development role was carried out by the productive age population. Meanwhile, during the second demographic bonus period, this role was played by the non-productive age population, namely the elderly population. However, the elderly can become a development challenge when they are not productive because they will become part of the vulnerable population.

In this study, the characteristics of the elderly population in Indonesia will be analyzed using data from the Indonesian National Socio-Economic Survey (SUSENAS) in 2020. Meanwhile, research variables include demographic, economic and social aspects.

METHODOLOGY

To analyze the influence of demographic, economic and social aspects on the supply of working hours for the elderly, the basic theories used are time allocation theory (Becker, 1965) and labor supply theory from the micro-economic dimension. By using the logit approach, the research model is:

$$\text{Prob}\,(yi = 1 | Xi) = \left(\frac{\exp Xi'\beta}{1 + \exp Xi'\beta} \right) = \Delta Xi'\beta i$$

Where:

Y = Working status of the elderly

Xi = Demographic, economic and social conditions

Demographic variables observed in this study include variables: Age, Gender, Number of Household

Members, Location of Residence, Marital Status, Status as Head of Household. Economic and social variables are Education Level; ownership of Health Insurance, ownership of Old Age Security, existence of Debt, and Internet access.

The dependent variable in this study is working status, measured using a dummy; 0= not working and 1= working. The independent variables and their measurements are listed in the table below:

Table 2. Indipendent Variables And Their Measurements

X1	Elderly Age	1 = Age < 70 years; 0 = Age ≥ 70 years
X2	Marital status	1 = Married; 0 = Other
X3	Number of Household Members	1 = number of family members < 4; 0 = number of family members ≥ 4
X4	Head of Household Status	1 = as head of household; 0 = no head of household
X5	Household Location	1= Urban Household; 0= Rural Household
X6	Education	1= Education ≥ junior high school; 0= Education < junior high school
X7	Ownership of Health Insurance	1= have; 0 = Does not have
X8	Ownership of Old Age Security	1= have; 0 = Does not have
X9	Existence of Debt	1= have; 0 = Does not have
X10	Access to the Internet	1= have; 0 = Does not have
X11	Sex	1 =Male; 0 = Female

DISCUSSION

In Law no. 13 of 1998 concerning the Welfare of the Elderly states that an elderly person is a person or individual aged 60 years and over. The same concept is contained in the 2016 Regulation of the Minister of Health of the Republic of Indonesia. Meanwhile, Presidential Regulation Number 88 of 2021 concerning the National Strategy for Aging states that someone who has reached the age of 60 years and above is called an elderly person.

According to WHO, elderly people can be divided into four types, namely: (1) the middle age group is the age group 45 – 59 years, (2) the elderly group is the age group 60 – 74 years, (3) The old elderly group are the age group 75 – 90 years, and (4) the very old age group is the population group over 90 years of age. According to the Indonesian Ministry of Health, there are three categories of criteria for elderly people, namely: (1) Early elderly group. are residents aged 55 – 64 years, a category of population who are just entering old age; (2) The elderly group is residents aged 65 years and over; and (3) The elderly group at high risk, is the elderly group aged more than 70 years who experience health problems.

Demographically, the working age population group is people aged 15 years and over, and the upper age limit for workers is determined by the business field they are engaged in, in the formal sector the maximum is usually up to 65 years of age. Population who are not of working age are aged 0-14 years and aged 65 years and over.

According to BPS, the definition of work is a person or individual who carries out economic activities to obtain or help obtain income or profit, with a minimum working hour of 1 hour (uninterrupted) in the past week. Included in this category are unpaid workers who help in a business or economic activity. Meanwhile, in the view of economics, work is an economic activity carried out to produce goods and services to meet one's needs and at the same time obtain income or profit.

Labor is a production factor that plays an important role in the economic activities of a region. One indicator that can be used to measure the level of labor contribution to the economy is labor productivity. There are two important dimensions for measuring labor productivity, the first is related to effectiveness, this dimension refers to achieving maximum performance (related to quality, quantity and time). The second

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dimension refers to effectiveness. This dimension is related to efforts to compare input with its actual use. (Sedarmayanti, 2001)

Even though people aged 65 years and over are not in the labor force, according to Heryanah (2015) the aging population phenomenon will have the potential for the emergence of a second demographic bonus if the increase in the number of elderly people in a country or region is accompanied by the productive role of the elderly so that they can become contributor to improving the economy of a country or region.

An important difference between the first and second demographic bonus periods can be seen from the main role in encouraging economic improvement or driving economic growth. Where during the first demographic bonus period the main role of driving economic growth in development was carried out by the productive age population, while during the second demographic bonus period, that role was taken over by the non-productive age population, namely the elderly population who were still carrying out productive activities, so they still had income and savings that can be used as a source of investment in the economy.

According to Becker (1965) every person or individual has time to allocate to work activities or other activities. It is assumed that the total time (T) owned by each individual is the same, namely 24 hours, each individual will use their time for activities to maximize income and leisure. Each individual in the household will use the available time in a way; (a) use time in the labor market to earn income by engaging in productive activities; (b) utilizing time to carry out production activities in the household, namely by combining certain goods obtained through market time with household production time; next (c) the time used to consume goods and services or also known as consumption time.

The decision to work according to Ehrenberg & Robert S (2012) is an individual's time allocation arrangement for work and leisure activities. The allocation of time for work or free time is influenced by the following factors;

1. *Opportunity cost*; someone who allocates time to work will have the remaining time not to work, where the price of free time will be influenced by the level of wages received. If income increases while the opportunity cost of free time is held constant, then the individu will choose to enjoy more free time.
2. *The level of welfare*, this can be seen from the amount of savings in financial institutions, financial investments and other physical assets. If someone who works has sufficient savings that can be used, then the person concerned will tend to choose to increase the use of free time compared to working time.
3. Availability of options; The available choices are usually determined by someone and do not occur in a short time. The availability of choices in the use of time will influence a person's choice to spend more time working or relaxing more. Conditions for the availability of choices are also influenced by the economic conditions of a country or region.

There are a number of socio-economic factors that influence the elderly population's decision to work, including health conditions (Kwon, Park, Lee, & Cho, 2016); social security ownership, debt ownership, number of hours worked, education (Adhikari, Soonthorndhada, & Haseen, 2011) and type or business sector (Vodopivec & Arunatilake, 2011). According to Wirakartakusumah (1996), there are many reasons why the elderly population works, including physically and mentally the elderly are still able and strong to work, economic demands, and self-actualization or emotions among the community. Sigit (1988) states that economic reasons are the main reason why an elderly person works, where if they work they can still fulfill their needs to support themselves, in fact there are quite a few elderly people who still support their families, such as their children who live with them, because they are classified as poor families. (Affandi, 2009).

The relatively high economic needs of the elderly in Indonesia are likely caused by limited socio-economic

security for the elderly population. Where old age security, such as pension money, is only available to those who work in the formal sector, while the majority of informal sector workers do not have an old age security program.

The increase in the composition of the middle-aged population (50–64 years) has caused a slowdown in economic growth in Indonesia. In an effort to achieve the second phase of the demographic bonus, it is hoped that this study will be a consideration for policy makers to formulate policies and strategies to increase the role of the elderly population in improving the economy both within the family or household and in the community, as well as local and national economies. .

FINDING

The number of samples obtained according to the criteria from the SUSENAS 2020, we found 110,805 sample; consisting of 57,852 women and 52,953 men. Description of the characteristics of the elderly based on the observed variables is shown in the following table

Table 3 The Characteristics of The Elderly Based on Gender

Variable	Categori	Female		Male	
		Number	%	Number	%
Working status	Working	20,248	18%	35,826	32%
	Not working	37,604	34%	17,127	15%
Age	<70 Year	34,592	31%	34,485	31%
	>=70 tahunYear	23,260	21%	18,468	17%
Marital status	Married	23,134	21%	42,999	39%
	Others	34,718	31%	9,954	9%
Number of Household Members	< 4 persons	31,986	29%	29,106	26%
	>= 4 persons	25,866	23%	23,847	22%
Head of Household Status	Head of household	21,025	19%	48,028	43%
	Not head of household	26,827	24%	4,925	4%
Household Location	Urban	23,894	22%	21,445	19%
	Rural	33,958	31%	31,508	28%
Education	>= Junior High School	30,302	27%	30,244	27%
	< Junior High School	27,550	25%	22,709	20%
Ownership of Health Insurance	Have	43,563	39%	40,445	37%
	Do not have	14,289	13%	12,508	11%
Ownership of Old Age Security	Have	4,081	4%	3,840	3%
	Do not have	53,771	49%	49,113	44%
Existence of Debt	Have	9,755	9%	9,438	9%
	Do not have	48,097	43%	43,515	39%
Access to the Internet	Have	3,722	3%	5,743	5%
	Do not have	54,130	49%	47,210	43%

Source: Data processing results

From the table above, it appears that the number and percentage of working elderly is higher among elderly

men than women, according to tradition in Indonesia, elderly men occupy higher positions as heads of households than elderly women; more elderly people live in rural areas than urban areas.

Furthermore, 39% of elderly women in Indonesia have health insurance coverage, while 37% of elderly men. For old age insurance, very few people have it, this indicates that very few elderly people have pension funds, this is also the case with the existence of debt, this condition cannot be separated from the absence of collateral which will be used as collateral for debt. Both elderly men and women still have very limited access to the internet, as a result they have limited access to the various information that currently uses internet media.

The estimation results from the research model shown that all observed variables have a significant influence on the probability of elderly people working. From the age variable, it appears that elderly people aged under 70 years have a 1.07 greater chance of working than people aged over 70 years. This condition cannot be separated from aspects of the physical condition and health of the elderly, with increasing age there are health risks and physical weakening. also increased

Table 4 Regression Results of Determining Factors for Working Elderly

Y	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
X1	1.068.849	0.0149419	71.53	0	1.039.564	1.098.135
X2	0.7771503	0.0169669	45.8	0	0.7438957	0.8104049
X3	0.227954	0.014765	15.44	0	0.1990153	0.2568928
X4	1.202.656	0.0192166	62.58	0	1.164.992	1.240.319
X5	-0.6407153	0.0146624	-43.7	0	-0.669453	-0.6119775
X6	-0.1549369	0.0142342	-10.88	0	-0.1828353	-0.1270385
X7	-0.2304241	0.0165048	-13.96	0	-0.262773	-0.1980752
X8	-0.9780703	0.0296121	-33.03	0	-1.036.109	-0.9200317
X9	0.2175999	0.0191344	11.37	0	0.1800973	0.2551025
X10	-0.3067884	0.0260205	-11.79	0	-0.3577877	-0.2557892
X11	0.5799437	0.0193898	29.91	0	0.5419403	0.6179471
_cons	-1.688.813	0.0231748	-72.87	0	-1.734.235	-1.643.391

Summary Statistics	
Number of obs	110,805
LR chi^2	29468.08
Prob > chi^2	0.000
Pseudo R^2	0.1919

Source: Data processing results

Afandi (2009) found that the majority of workers are elderly in Indonesia have health complaints (54.1%).

Female elderly workers tend to be healthier than men. This condition is similar in Thailan where there are more than half of the elderly population who have relatively low physical health status (Loichinger & Pothisiri, 2018).

The variable marital status has a significant effect where elderly people who are married have a tendency to work 0.8 times greater than elderly people who have other statuses. The variable "Married" is the same as the status "Head of Household" which is caused by economic encouragement in starting a family so that elderly people who are married have a greater tendency to work. According to Sumarsono (2015), the status of married elderly people to continue working is based on the condition of their role in the family. Elderly people have been responsible from the start as breadwinners in the family will tend to continue working in old age.

Elderly men are 0.5 times more likely to work than elderly women. This is in line with research by Utami & Rustariyuni (2016) which states that elderly men tend to have greater opportunities to work because their physical conditions are more supportive than elderly women. Elderly men also tend to be more able to work for longer durations. From these demographic variables, it can be seen that in terms of demographic profile, elderly men who are married and have the status of Head of Household are elderly who have a greater tendency to work.

The variables of ownership of health insurance and old age have a significant effect with the beta coefficient value being negative. This indicates that the opportunity for elderly people who do not have health and old age insurance to work is greater than elderly people who do. In other words, elderly people without health and old age insurance tend to work. This finding is in line with research by Nur & Oktora (2020) which states that having health and old age security will provide a sense of security about the future so that elderly people tend to choose not to work and enjoy old age by doing enjoyable activities

Based on the estimation results, it was found that the beta coefficient of the Internet variable was negative. This indicates that The chances of elderly people continuing to work if they have access to the internet are lower than elderly people who never access the internet. This trend indicates that the availability of access to the internet can stimulate the elderly population to continue to have productive activities. Xiaobing & Meng (2022) confirmed that elderly residents who frequently access the internet tend to be actively involved in activities in society. The internet is a medium that can be used to obtain various things kinds of information so that the elderly population can use it as a tool to develop and motivate themselves. Internet use can increase the ability and motivation of the elderly, the internet also offers a variety of solution services that can facilitate physical activities. This convenience can then provide an alternative solution for the elderly to remain productive even though they do not work outside the home. In old age they may have physical limitations to carry out activities outside the home.

CONCLUSION

As a developing country, the majority of elderly workers in Indonesia in 2020 individually have relatively low socio-economic characteristics, do not have old age security, but also do not have a debt burden. There are more elderly workers in Indonesia than women. The more older the elderly, the less opportunity they have to continue working. Many elderly workers are still married and be the head of the household.

This research has several limitations, including not capturing the role of conditional cash transfers and non-labor income as external factors in the elderly's decision to work. Apart from that, the use of Susenas 2020 data as a database has not been able to capture the maximum factors that determine whether elderly people work, because the impact of the Covid-19 pandemic has not yet fully recovered. For this reason, it is hoped that future research can use comparative data before and after the Covid-19 pandemic, or not just look at one

point in time.

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