

Projecting the Future Ageing Population in Post-2045: The Today's Millennials Perspectives

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Abstract

Indonesian elderly population in 2045 is projected to be 275% compared to 2015, in which elderly population are embedded with vulnerability and dependence as natural traits. Meanwhile, most of the elderly post-2045, millennials as the primary candidate, are predicted to have better capabilities than the nowadays elderly. Most literature, including lesson learned from countries that experience ageing population, mainly discusses ageing from past or present phenomena. There are still missing links in considering the younger generation as the primary candidates for the ageing population in the future. Thus, how does millennials' competitiveness as the primary candidate generation of the ageing population post-2045, and how far is the feasibility of social security for the elderly population, particularly regarding system and reliability. This research uses explanatory sequential mixed methods, in which quantitative attains initial results and then qualitative stage builds on these results. This study follows the framework of sociology of the future and sociology of generation. The challenge in 2045 is not about the demographic shift, but it presents the complexity of a new society in future. Considering the competitiveness of millennials, Indonesia may experience the second phase of the demographic bonus since the elderly post-2045 can contribute economically. Meanwhile, most current social assistance for the elderly is unreliable regarding the targeting and distribution system. Besides, the rapid growth of an ageing population is disproportionate to the slow growth of beneficiary coverage and pension contribution schemes. Some practical ways can be introduced and implemented in the short term, particularly regarding some issues: retirement age, dependency ratio framework, job field for elderly, the digital productivity, non-state welfare provision, and pension funds for informal workers.

Keywords:

millennial; elderly; 2045; generation; figure; welfare provision; pension

Introduction

The year 2045 for Indonesia has significant meanings. First, Indonesia achieved one century of independence. It is essential to look up how far Indonesia's developed. Besides, 2045 has important notions for planners and policymakers to build new long-term national planning (RPJPN 2025-2045 and 2045-2065). Therefore, discussing the ageing population in 2045 is an essential issue to prepare some ageing society policies.

The Indonesian population is projected to rise from 255,5 million in 2015 to 318,7 million in 2045 (table 1). The elderly will increase from 22,99 million in 2015 to 63,31 million in 2045. The increase of elderly people in 2045 is 275% compared to 2015. When Indonesia celebrates one century of independence, the elderly will occupy the largest demographics (Soelistianingsih, 2017).

Table 1.
Indonesia Population Projection 2015-2045

	2015	2020	2025	2033	2035	2040	2045
Total Population (million)	255.59	269.61	282.46	294.35	305.21	313.16	318.96
Population 0-14 year (million)	66.42	66.07	65.73	65.81	66.95	66.73	65.98
Population 15-59 year (million)	166.18	174.82	181.28	185.71	187.86	189.17	189.66
Population 60+ year (million)	22.99	28.72	35.45	42.83	50.40	57.26	63.31
Growth trend (%)		1.07	0.94	0.81	0.68	0.54	0.41

Source: processed from (Bappenas; BPS, 2018, pp. 27-53)

The elderly population in post-2045, which is millennials as the primary candidate, is predicted to have better capabilities than nowadays elderly, particularly regarding life expectancy and education level. In 2045, elderly people are projected to have a life expectancy of 75,47 years, which is better than life expectancy in 2020 at 71,47 years (Bappenas; BPS, 2018, pp. 17-53). The opportunity for the elderly to have much time (lifespan) after retiring in the future is greater than now.

Besides, based on the positive trend of HDI and MYS (mean years of school) in several last years, elderly people in 2045 are predicted to have high-level education. There was a steady rise in the MYS from 7.46 years in 2010 to 8.48 years in 2020 (BPS 2010-2020). Moreover, the government heavily invests in the education sector before 2045, mainly to achieve the golden generation in 2045 (Kemendikbud, 2017; Triyono, 2018; Sari, 2014). The education level during that period is expected to be promising, so elderly people who live in the future predicted to be people with excellent education levels.

The increasing population aged 15-64 years provides an opportunity for Indonesia to reap the benefits of the demographic bonus (Bappenas, 2019, p. 22). This bonus happens since the productive population (15-64 years old) is more than the unproductive population (below from 15 years old and over 65 years old). However, this bonus will be not last forever. From figure 3, Indonesia's Dependency Ratio is projected to rise from 45,5% in 2020 to 53,4% in 2045. On the other hand, as the productive population nowadays, millennials will transform into unproductive populations when they enter age 65. Though, the regeneration of high-quality

people cannot be achieved in a short time, indeed for similar quality. Meanwhile, the retirement term usually applies to formal employment but not informal jobs. In Indonesia, many elderlies are still active in their work despite their 60s.

Growing elder is inevitable for everyone, including millennials. Meanwhile, vulnerability and dependence are natural traits that are less beneficial when someone gets elderly (Wijayanti, 2018, p. 7). These disadvantages arise because most elderly do not have sufficient capacity to engage in the workforce. Most elderly retire and become unproductive labour, whereas their living needs must still be fulfilled. Thus, pension funds are critical for providing retirement income so the elderly can still meet their minimum standard of living (OECD, 2018, p. 10). Moreover, the elderly living in poor, neglected, and displaced circumstances are the most vulnerable. Thus, the role of welfare provision is urgently needed.

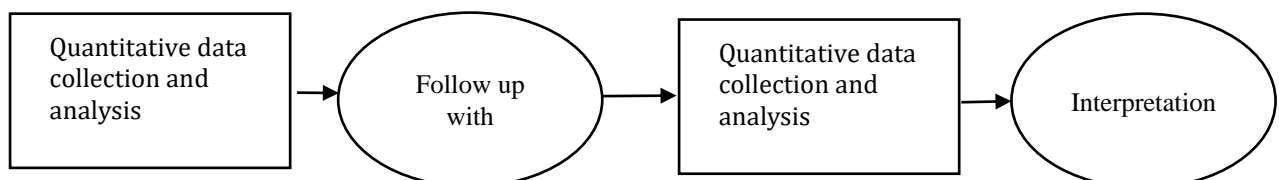
Discussing the upcoming millennial ageing society in 2045 is an essential issue for policymakers. This research aims to explore society's baseline in the future (2045), with both millennials and social securities as the primary research subject. Thus, the research question are 1) *how does millennials' competitiveness as the primary candidate generation of the ageing population post-2045? And 2) how far is the feasibility of social security for the elderly population, particularly regarding system and reliability.*

Methods

This study uses explanatory sequential mixed methods to obtain in-depth and holistic findings. Quantitative stage is carried out first, and then the results are established to explain further qualitative stage (Creswell & Creswell, 2018, p. 304). Quantitative attains initial results, and then the qualitative stage shapes on these results (Ivankoya, et al., 2006, p. 5).

Figure 1.

Design of Explanatory Sequential



Source: Subedi, 2016, p. 573

Quantitative provides general understandings, whereas qualitative describes statistical results by discovering the subjective view in more depth (ibid, 5). Qualitative data

helps deliver deeper understandings into quantitative data (Creswell & Creswell 2018, 304-305). For Creswell & Creswell (2018), the follow-up process is a strong point of the explanatory sequential design. It sincerely presents how the interaction variables are acted upon at the qualitative stage. However, advantages are usually given to quantitative phase because they are first used and often reveal the main features, whereas qualitative elements follow only the first step (Ivankova et al. 2006, 9).

Discussion

Challenges Of 2045

The world population in 2045 is estimated to reach around 9,45 billion people, an increase of 2,1 billion people from 2015. The total population of Indonesia, which ranks fourth largest in the world in 2015, will drop to fifth in 2045 (Bappenas, 2019, pp. 6-7). In line with Bell (1999) argument, projection policy scenario is more suitable than projection based on trend, because it made with the intention of desired images and intervention. From the projection results, Indonesia's population growth from 2015 to 2045 is 0,74%, namely about 318,9 million in 2045. The increase mainly occurred in the productive age group (15-64 years) by 19% and the elderly population (aged 65+ years) by 310,2%, while the child population (0-14 years) will decrease by 0,7% compared to 2015 (Bappenas, 2019, 21).

In 2045, Indonesia's life expectancy and the fertility rate is projected to rise gradually. The trend of life expectancy from 1967 to 2015 was increased from 45,70 to 70,8. In line with that, life expectancy is projected to grow from 70,78 in 2015 to 75,47 in 2045 (BPS, 2021, p. 15). Bappenas projects that towards 2045 (2019), people have the awareness and behaviours that support a healthy lifestyle. Malnutrition is no longer a public health problem. Access to quality health services has been provided equally, and the disease prevention and control system has been steadily supported. Indeed, technological developments in health and genetic engineering also increase life expectancy (ibid, 16).

Meanwhile, the fertility rate (TFR) will decrease from 2,3 in 2015 to 2,1 until 2045 (Bappenas; BPS 2018, 11). Future fertility rate is calculated based on trend 1971-2015. With the family planning program, the TFR decreased quite dramatically from 5,6 in 1971 to 2,8 in 1995 and then reached 2,3 in 2015. Besides, age-specific fertility rates (ASFR) have declined in all age groups, and peak fertility rates tend to shift to older age groups (ibid, 12). The increasing life expectancy and decreasing fertility rate have led to a surge in the elderly (Sitohang, 2018).

In 2015, the world's population aged 60 years or older reached around 901 million people (12%) and grew around 3,3% per year (Bappenas, 2019, 8). Indonesia began to enter population

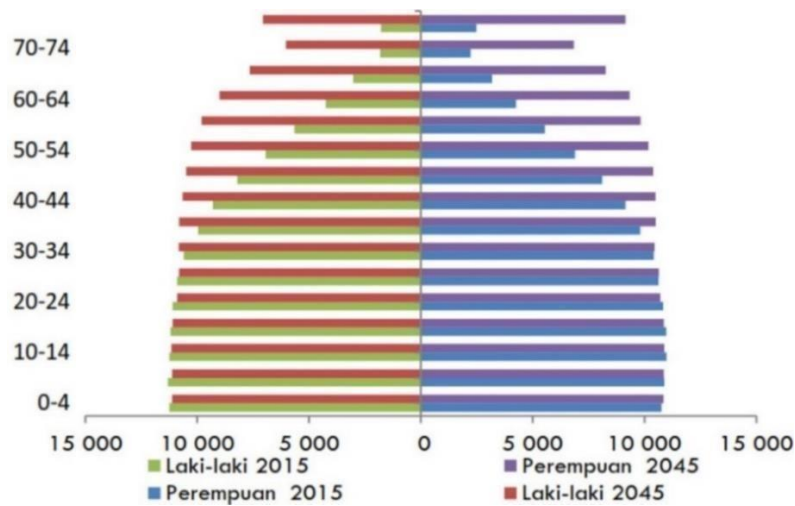
ageing for the first time by 2020, a decade later than the world, entering a period of population ageing in the 2010s (Sari, 2019). In 2045, the increased Indonesian elderly population (aged 60+ years) is 275,4% compared to 2015. The population aged 60+ years is predicted to increase from 9,0% (23,0 million) of the people in 2015 to 19,9% (63,3 million) of the people in 2045 (Bappenas; BPS, 2018, p. 31). In 2045, 1 of 5 people is elderly above 60 years old. The United Nations predicts that 25% of Indonesia's population (around 74 million) will be elderly citizens in 2050 (Kompas, 2018). In 2050, Indonesia is estimated to be in the top five as the country with the largest number of elderly people globally (Sari, 2019).

According to Law 13/1998 regarding elderly welfare, the elderly population is aged 60 years and over. Elderly people are categorized as potential if they are still economically and socially productive and usually aged 60-64 (productive labour). Otherwise, the elderly group is not a potential category if they are economically dependent and traditionally aged 65+ (unproductive labour).

Meanwhile, the population aged 65+ increased rapidly from 14.503,0 thousand in 2015 to 44.986,8 thousand in 2045. The increase of elderly people aged 65+ in 2045 is 310,2% compared to 2015. Thus, an unproductive proportion will become huge and significantly increase the dependency ratio and indicate the end story of the demographic bonus.

The demographic bonus has been enjoyed since 2012 where the population dependency ratio is below 50% (Haryanto, 2015). The peak of this demographic bonus still requires prerequisites to provide job opportunities for most of this workforce to avoid high unemployment rates (BKKBN, 2017). The high proportion of the productive age population becomes development capital (Bappenas 2019, 20). Meanwhile, 2045 has passed the window of opportunity era, where the peak point of the demographic bonus will be in 2022 (Bappenas, 2019, p. 6). The population in the window of opportunity era, which was in its golden age, experienced a shift to a non-productive period, giving rise to a new phenomenon, the generation of the ageing population (Sari, 2019).

Figure 2.
Population Pyramid 2015 and 2045



Source: Bappenas; BPS 2018, 31

Moreover, the proportion of elderly people aged 65+ years as unproductive workers will drastically change the shape of the population pyramid in 2045 compared to 2015. The increasing elderly population will provide fiscal and political pressures, among others, on improving the health system and expanding social protection (Bappenas 2019, 8).

By 2045, the labour force participation rate (LFPR) is expected to increase to around 78%, with female participation rising to 65%. Open Unemployment Rate (OUR) is projected to decrease from 6,2% in 2015 to 3-4% in 2045.

Table 2.
Labour Force Structure, 2015 and 2045

Component	2015	2045	Delta
LFPR	65.8%	78.0%	12.2%
LFPR Male	82.7%	90.0%	7.3%
LFPR Female	48.9%	65.0%	16.1%
Labour force (million people)	122.4%	197.2%	74.8%
OUR	6.2%	3-4.0%	2.2-3.2%
Labour force with Senior High School Over	39.3%	90.0%	50.7%
Labour Force in Agriculture Sector	32.9%	13.0%	-19.9%

Source: processed from Bappenas 2019, 44

The proportion of the workforce with high school education and above has increased to around 90%. Meanwhile, the share of labour in the agricultural sector fell to 13%. In line with

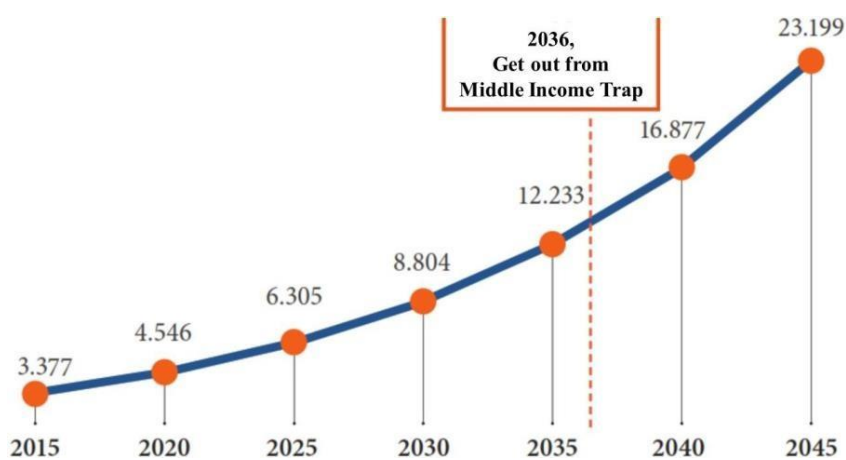
that, the agriculture sector experienced a significant decline from 13,2% in 2015 to 7,3% in 2045. Otherwise, the role of the service sector in the economy increased from 44,7%in 2015 to 61,6% in 2045. An increase also occurred in the manufacturing industry, from 20,8%in 2015 to 26,0% in 2045.

The industry nowadays relies on electricity-based labour and mass production. Industries in the future will be dominated by intelligent factories that implement an integration system of computing, networks, and physical processes, namely the cyber-physical system or the internet of things (Bappenas 2019, 62). The internet of things or automation and the application of technology-based cyber systems and connectivity massively enables more advanced and efficient economic cooperation, especially towards seamless economic cooperation in 2036-2045 (ibid 61).

Middle-class growth is faster than other groups. There will be at least 52 million economically secure Indonesians, or one Indonesian out of every five people in 2020 (World Bank, 2020). High and inclusive economic growth will increase the proportion of the middle-income class from 18,8% (45 million people) in 2010 to 69,9% (223 million people) in 2045 (Bappenas 2019, 50).

The middle class has been the main driver of economic growth as the consumption of this group grew by 12% annually since 2002 and now represents almost half of all household consumption in Indonesia (World Bank, 2020). Expanding the size of the middle-class population is critical to unlocking Indonesia's development potential and propelling the country to high-income status (ibid).

Figure 3.
Indonesia GDP per Capita, 2015-2045



Source: Bappenas 2019, 50

Indonesia is expected to move out of the middle-income trap in 2036 and become a high-income country with around USD 13,045 GDP per capita. Then it will continue to increase to USD 23,199 in 2045.

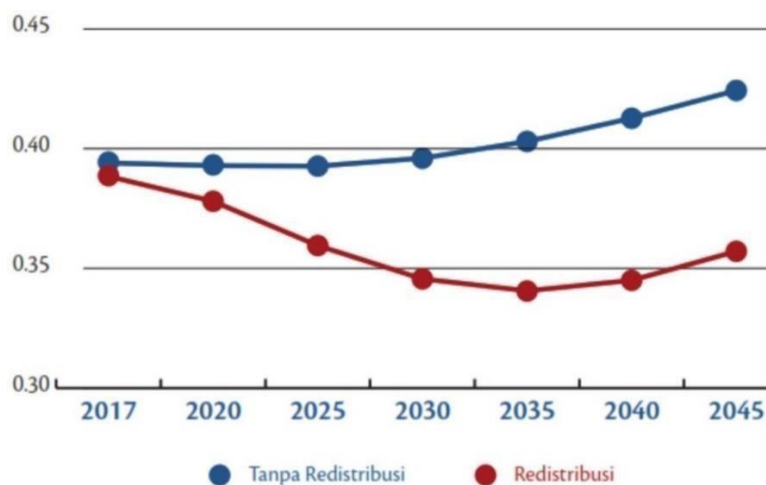
Over the past two decades, most poor and vulnerable people have moved out of poverty and about 115 million people come to the middle class (World Bank, 2020). However, currently, at least 50% of Indonesian families fall into the lower-middle-class category who live above the poverty line (Permana & Fadly, 2021). About two-thirds of middle-class candidates work in the informal sector, in which their income is not as stable as the middle class (ibid).

BPS report that in 2020, 131,03 million people were working, consisting of 74,04 million people (56,5%) working in the informal sector (Izzati, 2021). Informal workers, who are people with uncertain incomes and no social security, significantly contribute to the magnitude of income inequality between groups (Gini Ratio) (Bappenas 2019, 100). One major cause of inequality is the high number of vulnerable workers, consisting of part-time and underemployed workers, who are quite large at around 35,6 million or almost 29% in 2018 (ibid). Indeed, informal workers make up 40% of the lowest income group (Bappenas 2019, 100), so they are closely related to vulnerable workers.

Gini ratio Indonesia is projected to gradually increase in 2045 if there is no significant change of retribution policies. On the other hand, if economic growth is encouraged to happen to all income groups, the Gini coefficient can be reduced to a range of 0,34 by 2034.

Figure 4.

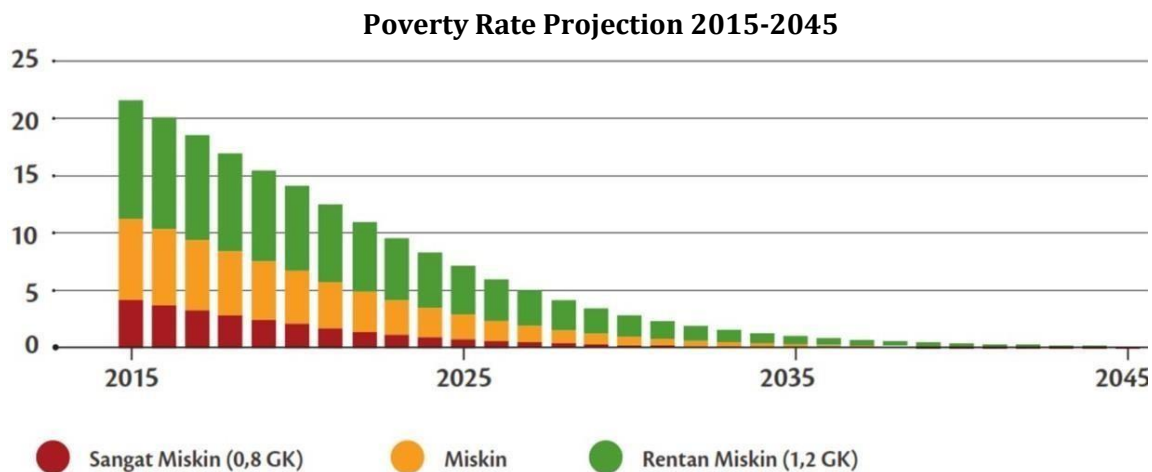
Gini Ratio Projection, 2017-2045



Source: Bappenas 2019, 101

If we can productively alleviate poor people, Indonesia will reach zero extreme poverty by 2030 (figure 4). Following Bell (1999) view regarding sociology of future, the purpose of making future scenario is to identify the human values that will contribute to a sustainable life for all people living now and in the future. By encouraging equitable growth for all expenditure groups, extreme poverty will no longer be found in Indonesia in 2040. Hence, in 2045, Indonesia's poverty rate is predicted to be 0,02%, or around 63 thousand people still live below the poverty line.

Figure 5.



Source: Bappenas 2019, 102

Elderly Post-2045 are Today's Millennials

Indonesia has been starting to experience an ageing population due to increasing life expectancy and declining fertility rates. In 2045, elderly population will increase dramatically 275,4% compared to 2015. Following Adkin's (2009) view, discussing future is not rely on dependent future, but future is already in the present and already exists. The question is not who is elderly post-2045, but who will be elderly post 2045. In 2045, most of the elderly of productive age (60-64 years) and non-productive period (65+ years) are people born in the 1980s-2000s, which are millennials.

Who are Millennials?

Neil Home and William Strauss (2000) coined the term millennium in 1987 based on observations of children born in 1982 who entered preschool and referred this group to the new millennium by the time they graduated high school in 2000. Google trends 2004-2015 show almost no interest in the term millennial in early 2005. However, the topic of millennials increased rapidly around 2013 and skyrocketed in the following years (Sharf, 2015). Generation

Y is a more technical term for the millennial generation because they succeeded Generation X and preceded Generation Z (Barr, 2021). Millennials are also known as Gen. Me, Gen. We, or Echo Boomers (Kasasa, 2021).

Despite having no specific rules, identifying generations tend to use life span as a formula (Dimock, 2019, p. 3). The precise start date for millennial birth years is debatable (Barr, 2021). Indeed, the end year is still being determined, and the start varies a year or two depending on whom people ask (Sharf, 2015). Therefore, based on the generation theory of Mannheim, which is a span of 20-year (Putra 2016, 124), millennials technically can be described as the group of people born between around 1980 and 2000 (BPS, 2018, p. 17)

Table 3.
Generation Based on Year Born

Source	Label						
Tapscott (1998)			Baby Boom Gen. (1946-1964)	Gen X (1965-1975)	Digital Gen. (1976-2000)		
Howe & Strauss (2000)		Silent Gen. (1925-1943)	Baby Gen. (1943-1960)	13 th Gen. (1961-1981)	Millennial Gen. (1982-2000)		
Zemke et al (2000)		Veterans (1922-1943)	Baby Boomers (1943-1960)	Gen-Xers (1960-1980)	Nexters (1980-1999)		
Lancaster & Stillman (2002)	Traditionalist (1900-1945)		Baby Boomers (1946-1964)	Gen. X (1965-1980)	Gen. Y (1981-2000)		
Martin & Tulgan (2002)		Silent Gen. (1925-1942)	Baby Boomers (1946-1964)	Gen. X (1965-1977)	Millennial (1978-2000)		
Oblinger & Oblinger (2005)	Matures (<1946)		Baby Boomers (1947-1964)	Gen. Xers (1965-1979)	Gen-Y/Net Gen. (1981-1995)	Post Millennials (1995-present)	
NCF (2012)	GI Gen. (1901-1924)	Silent Gen. (1925-1946)	Baby Boom Gen. (1946-1964)	X Gen. (1965-1979)	Millennial Gen. (1980-1999)	Z Gen. (2000-present)	
Bencsik, Csikos, & Jubez (2016)		Veteran Gen. (1925-1946)	Baby Boom Gen. (1946-1960)	X Gen. (1960-1980)	Y Gen. (1980-1995)	Z Gen. (1995-2010)	Alfa Gen. (2010-present)
Frey (2018)	Pre-Boomer (<1945)		Baby Boomer (1946-1964)	Gen. X (1965-1980)	Millennial Gen. (1981-1997)	Gen. Z (1997-2012)	Post Gen. Z (2013-present)
Dimmock (2019)		Silent Gen. (1928-1946)	Baby Boomer (1946-1964)	Gen. X (1965-1980)	Millennial Gen. (1981-1997)	Gen. Z/Post Millennials (1997-2012)	

Stafford & Griffis (2008), Berkup (2014), Ali & Purwandi (2017), BPS (2018), Barr (2020), Goldman Sachs (2021)					Millennial Gen. (1980-2000)		
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Source: processed from Putra 2016, 125; BPS 2018, 15-17; Barr, 2021; Dimock 2019, 2-3; Frey 2018, 6; IDN, 2020; Goldman Sachs, 2021

Table 4.
Distinguish Keys Among Generations

Factors	Baby Boomers	X Gen.	Y Gen.
View	Communal; unified thinking, too idealistic to make positive changes in the world	Self-centered; closed; medium-term; recognizing diversity	Egotistical; short term; respects difference; pragmatist; prefers to cooperate than take orders; belief in moral and social values
Attitude	Patience; soft skills, respect for traditions hierarchy, hard work, optimist, exaggerated, modesty, passivity	Hard work, openness, less respect for traditions-hierarchy, independence, curiosity, sceptics, rule-abiding, materialistic, need to prove themselves	Flexibility, mobility, no respect for tradition-hierarchy, creativity, success orientation, freedom of information, realist, desire for independence, narcissist, interest for newforms of knowledge, inverse socialization
Aim	Solid existence	Multi-environment, secure position	Rivalry for leader position
Relationship	First and foremost, personal	Personal and virtual network	Principally virtual, network
IT	Self-instruction and incomplete	Uses with confidence	Part of its everyday life
Working/Self Actualization	<ul style="list-style-type: none"> • Conscious carrier • Hard workers who want personal appreciation • Believes in change and self-development 	<ul style="list-style-type: none"> • Rapid promotion • Balance work and life • Being informal • Self-reliant own • Practical • Have fun at work 	<ul style="list-style-type: none"> • Immediate, focus on achievement, self-confidence • Home office and part time work • Not only to receive salary but also pursue dreams • Not pursue job satisfaction, but developed in the job • Do not want annual reviews, but ongoing conversation

- Not improving weakness, but developing strengths
- Work is not just working, but work is part of their life
- Do not want bosses who are easy bossy and controlling
- Tend to be fleas at work
- Flexible work time and more me-time

Source: processed from Bencsik & Machova, 2016; Lancaster & Stillman 2002 (cited in Putra 2016, 128); Galllup 2016 (cited in BPS 2018, 20); Main, 2017

Millennials were raised in a time of rapid change, giving them a very different set of priorities and expectations from previous generations (Goldman Sachs, 2021). New social structures demand new modes of action and expression as catalysts for new social movements that recognize themselves as drivers of generational change in culture (Woodman 2017, 21). New generation styles are formed by consolidating new phases of experience, developing new impulses that can be distinguished, and starting a new centre of configuration (Mannheim 1952, 308). Millennials challenge a long list of common assumptions about what postmodern youth should be (Home & Strauss, 2000, p. 10). Different generations have different views on the same topic (Dimock 2019, 2).

Millennials are unlike other generations in that they are more numerous, affluent, better educated, and more ethnically diverse (ibid, 9). Mannheim (1952) illustrates each person inhabiting a generational location based on the division of the year of birth, where they share similar experiences, values, and life goals. Generation location of millennial different from previous generation. Meanwhile, generational locations shape the mode of action, expression, and feelings of those who grow up in them (Woodman, 2017, p. 21). Hence, compared to others, millennials are a generation who wants to be fast, easy to change jobs in a short time, creative, dynamic, technology literate, close to social media (BPS, 2018, p. 19). Lyons added (2004 cited in Putra 2016, 129) that millennials are more open to political and economic views and have more attention to wealth. They are also open-minded and more inclusive toward unique gender differences and minorities, confident, self-expressive, liberal, upbeat, and receptive to new ideas and ways of living (Main, 2017).

Social Engagement

Millennials tend to be less civic and politically involved, more focused on materialistic values, and less concerned about helping the larger community than previous generations. Millennials have a greater interest in extrinsic values such as money, fame, and image than intrinsic values such as self-acceptance, group affiliation and community (Main, 2017). As Generation-Me, millennials emphasize themselves than previous generations (ibid). In addition, the millennial generation is reluctant to buy things such as cars, music, luxury goods, and even houses. Instead, millennials are turning to a new set of services that provide access to products without the burden of ownership, known as the sharing economy (Goldman Sachs, 2021).

Compared to previous generations, millennials may have less interest in having life partners (Main, 2017). In 2017, around 43.46% of the millennial generation were not married, meaning four people were still single out of 10 millennials (SUSENAS BPS, 2017; KemPPA, 2018).

The age range of the millennials is currently the productive age and the peak age of reproduction. However, problems are not limited to mature age, which is still the cause of this generation delaying marriage. There is still a high percentage of the millennial generation who are not married because the proportion of those still in school is still high (BPS 2018, 30).

Approximately 55% of Indonesian millennials lived in the urban area in 2017. This number follows the pattern of the Indonesian population in general, which has begun to shift from rural communities to urban communities. This change has implications for culture, social values, behaviour, and mindset changes. There are three main characteristics of the urban millennials, which are: 1) confidence meaning that they dare to express opinions and do not hesitate to debate in public; 2) creative meaning that they usually think outside the box, are rich in ideas, and can communicate ideas, and 3) connected meaning that they are good at socializing in the communities they follow and active in social media (BPS 2018, 23).

Education and Health

Compared to previous generations, millennials, as the leading actor of the demographic bonus, are expected to have a good education, health, and work (BPS 2018, 32).

Table 5.
Education and Health Level among Generations in 2017

Components	Baby Boomers- Veteran Gen (a)	X Gen	Millennial Gen	Delta	
MYS (year)	4.95	8.07	10.04	5.09	1.97
Literacy Rate (%)	80.91	96.44	99.39	18.48	2.95
Morbidities/Sickness Rate (%)	25.55	14.21	8.63	-16.92	-5.58
Median Illness Duration (MID) (day)	8.3	5.96	4.74	-3.56	-1.22

Source: processed from SUSENAS BPS 2017; KemPPA 2018, 27

Table 5 highlights that millennials' morbidities rate and MID are the lowest than others. Meanwhile, millennials' MYS and literacy rates are the highest of previous generations. Millennials' education level tends to be higher than the previous generation (SUSENAS BPS 2017; KemPPA 2018). In 2017, Millennial's MYS was 10,4, which is higher than Generation X (8,7) and Baby- Boomer, and Veteran Generation (4,95). Millennials have also achieved gender equality in the field of education.

MYS between boys and girls was almost the same. Meanwhile, for the X and Baby Boom-Veteran generations, males receive education longer (over one year) than females. In terms of residence area, rural millennials still seem to be constrained in getting an education. The figure below shows that millennials MYS in rural areas is lower than in urban areas. This circumstance happens most likely that they drop out of school due to unfavourable socio- economic conditions (BPS, 2018, p. 38). Indeed, there is an increase in literacy rates from generation to generation. Educational inequality between urban and rural areas still occurs.

Millennial's literacy is also higher (99,39%) than Generation X (96.44%) and Baby-Boomer, and Veteran Generation (80,91%). Besides, the literacy rate of the millennials between men and women is not too far away. Meanwhile, women in Generation X and Generation Baby Boom + Veterans have lower literacy rates than men. However, PISA score 2018 achievements show that Indonesia is in the bottom 10 of the 79 participating countries, with score at 80 points, below the OECD average (Puslitjak, 2021, p. 2). The average reading, math, and science abilities of Indonesian students are 42 points, 52 points, and 37 points below the ASEAN average, respectively (OECD, 2018, p. 1). If literacy issues do not tackle substantially, millennials might not read any opportunity and cannot use any knowledge that they have.

Regarding health level, millennials have lower morbidity (8.3) than Generation X (14.2) and baby boomers and veterans (25.6). This condition is equally applicable in urban and rural areas. However, urban millennials experience lower morbidity (8,3%) than rural millennials

(9,1%) since urban has better health access than rural. Meanwhile, the morbidity rate of the female millennial generation is slightly higher than the male millennial generation (SUSENAS BPS 2017; KemPPA 2018). Nevertheless, the millennial's morbidity rate has slowly shown a declining trend for both male and female millennials in 2015-2017.

The millennial generation has the lowest Median Illness Duration (MID) compared to generation X and the baby boom-veteran generation. MID of the millennial is about five days. In comparison, the X generation is six days, and the baby boom-veteran generation is eight days. In terms of residence area, MID in each generation tends to show no difference between urban and rural areas.

The excellent health level of millennials cannot be separated from millennials who are different from the previous generation. When experiencing symptoms of certain diseases, millennials are used to looking for information first through the internet before consulting health workers; millennials also take advantage of telemedicine (BPS 2018, 47). Likewise, prevention and a healthy lifestyle for the first treatment conditions.

Working

Millennial is one of the main actors in demographic bonus. Based on census data BPS (2021), Indonesia's population reached 270,20 million people. Productive population (aged 15 to 64 years) is 70,19% of population, including millennials (aged 20-39) who contribute about 32,50% of population or 87,81 million people. This proportion was quite the same with the millennials in 2017, 33,75% of the total population or 50,36% of the working-age population (BPS 2018, 7).

The millennial Labour Force Participation Rate (LFPR) in 2017 was recorded at 67,24%, while the rest were still in the school phase, namely in the age range of 16-24 years. LFPR of Generation X is recorded at 78,99%, the highest compared to the millennials and the Baby Boom+ Veteran Generation. This circumstance is because Generation X is in the age range of 38-57 years. This age group has exceeded school age and is at the highest productivity.

LFPR and open unemployment rate (OUR) in rural areas tend to be higher than LFPR in urban areas, whether Millennials, Generation X, and Baby Boom Generation-Veterans (SAKERNAS BPS 2017; KemPPA 2018). This circumstance is related to poverty issues and the level of education. Many rural residents are still classified as poor, so working becomes a demand to survive. In addition, poverty has hampered the population's access to study up to the highest level due to the cost factor. As a result, the low level of education in rural areas creates the perception that work is more important than going to school, which costs a lot of money (BPS

2018, 79). There is a tendency for a higher LFPR followed by a lower school participation rate among millennials aged 16-24 years in 2017 (ibid, 82). According to BPS (2020), 129.3 million workers consist of 40.51% (52.37 million) elementary school graduates, 17.75% (22.95 million) junior high school graduates, 29% (37.49 million) high school graduates or equivalent, and 10% (12.9 million) university graduates.

Millennials' OUR in 2017 reached 9,84%, or in other words, one in ten millennial generations are unemployed, which is the highest among different generations. According to BPS (2018), there are various reasons behind the unemployed millennials who are not looking for work or are not preparing for a business. Around 70,6% of millennials are desperate or unlikely to find a job. 20,7% stated that they had been accepted to work but had not yet started working. 8,7% already have a business but have not started it yet (BPS 2018, 85).

Millennials tend to be fleas at work (Main, 2017). Like in table 4, millennials are dominated by young people with idealistic, dynamic characteristics, like challenges to create freedom in determining job choices and intending on flexible and non-binding jobs. Millennials are not afraid to leave the job they already have and look for a new job that can provide more comfort and benefits (BPS 2018, 83). Indonesian millennials prefer to be unemployed rather than in the informal sector because education is relatively higher than the previous generation, so they hope to get a better job (Deny, 2017). Yose (2017) implies that they tend to be more selective and formal businesses even if they are self-employed.

The number of workers in formal industries has continued to increase in recent years, reaching 55.2 million (42,7%) formal workers compared to 74.1 million (57,3%) informal workers in 2020. Suppose we average this by 35.4% of millennials represent. In that case, they consist of 19,5 million millennial formal workers compared to 26,2 million millennial informal workers (IDN 2020, 74).

The tendency of the millennials to work in the formal sector is greater than the previous generations. In 2017, the millennials working in the formal sector was 54,79%, which is higher than the X generation at 38,57% and the Baby Boom-Veteran generation at 17,85%. Meanwhile, rural millennials who work in the formal sector is only 36,59%, smaller than urban millennials at 69,67%. This condition is caused by the formal sector in Indonesia, especially in rural areas which are not yet well developed.

In terms of job determination, there is a clear difference among the generation. Differences in work types between generations are driven by the mindset and interest of the millennials in the world of work (BPS, 2018, p. 96).

Table 6.
Main Jobs by Generation

Main Jobs	Baby Boomers & Veteran	Gen. X	Millennial
Army & Police	0.04	0.66	0.56
Manager & Professional	4.35	8.79	8.37
Technician & Professional Assistance	0.90	2.90	3.78
Administrative Personnel	0.92	4.10	6.74
Service and Marketing Business Personnel	21.19	23.54	24.61
Skill full Workers in Farming, Forestry, & Fishing	43.57	23.61	16.04
Processing and Craft Workers	10.02	11.64	12.18
Machine Operators and Assemblies	2.75	6.31	8.04
Manual Labourer	16.26	18.45	19.68

Source: Processed from SAKERNAS BPS 2017, KemPPA 2018

Generation X and Generation Baby Boom-Veterans mostly work as skilled workers in agriculture, forestry, and fisheries, 23.61% and 43.57%, respectively. Otherwise, only 16,04% of millennials work in the agricultural sector. For millennials, the results in the agricultural sector are not commensurate with the efforts, and peasant employment is a social status with no bargaining power in society (Sibuea, 2018).

Millennials who work in the trade and industrial business fields slowly increase during 2015-2017 (SAKERNAS BPS 2017; KemPPA 2018). Indeed, millennials are in the highest position working in the manufacturing, trade and industry sectors, followed by Generation X and the Baby Boom- Veteran generation. The percentage of urban millennials who work in trade, services, and industry is higher than in rural areas (BPS 2018, 92). Many trades and industrial activities are still centered in urban areas, so working in this business field is the primary choice for the millennial generation.

Millennials who work in the agricultural business field is slowly shifting to the trade and industry business field (SAKERNAS BPS 2017; KemPPA 2018). The Baby Boom-Veteran generation still dominates the agricultural business field at 52,17% followed by Generation X (30,80%) and the millennials (21,95%) (SAKERNAS BPS 2017; KemPPA 2018). Millennials who work in the agricultural business field is dominated by those who live in rural areas at 42,4%, higher than millennials who work in the agricultural business field and live-in urban areas (5,24%) (SAKERNAS BPS 2017; KemPPA 2018). This circumstance is influenced by the availability of agricultural land, which is still commonly found in rural areas. In contrast, in urban areas, it is constrained.

Besides becoming workers, people can contribute to economic activity as entrepreneurs. The trend of millennials becoming entrepreneurs improved slightly, from 21,51% in 2015 to

24,33% in 2017. Though, entrepreneurship was dominated by the baby boom generation-veterans at 63,47%, followed by the X generation at 43,31% and millennials at 24,33%. The minor role of millennials in entrepreneurship is most likely still lack experience and afraid of risk (BPS 2018, 110).

Entrepreneur millennials living in rural areas reaches 30,04%, while in urban areas, it is only 19.68% (table 7).

Table 7.

Millenials Occupation Status by Residence (%), 2017

Main Job Status	Urban	Rural
Entrepreneur (self-assistance)	13.29	16.02
Entrepreneur assisted by unpaid workers	4.07	12.20
Entrepreneur assisted by paid workers	2.32	1.82
Worker	67.36	34.77
Freelance in agriculture	1.17	6.55
Freelance in non-agriculture	5.15	7.38
Family worker/unpaid	6.66	21.25

Source: processed from SAKERNAS BPS 2017; KemPPA 2018

The high difference in entrepreneurship is due to job opportunities in rural areas being more limited, forcing the millennials to work independently. In contrast, the available job opportunities in urban areas are more numerous and varied (BPS 2018, 114-115). However, millennial entrepreneurs who can create full job opportunities are tiny, urban and rural, namely 2,32% and 1,824%, respectively.

Gender Equality

Gender inequality in the millennials still occurs in labour force participation. In 2017, more than 80% of the male millennials of working-age entered the workforce, while the female millennials were around 50% (BPS 2018, 79). The increasing millennial LFPR during 2015-2017 was automatically followed by the declining OUR. However, this LFPR and OUR rate gap between men and women were not significantly changed during 2015-2017 (BPS 2018, 80). The role and position of women tend to lead to domestic activities, such as taking care of the household. This kind of thinking is still afflicting some millennial women (BPS 2018, 80).

However, the tendency of millennial women to work in the formal sector is almost the same as millennial men, which is 54.34% for women and 55.07% for men in 2017 (ibid, 100). More women than men fill industrial manufacture. According to BPS data (2018), business fields services are dominantly filled by women, such as trade, provision of accommodation and food and drink), education services, and other services. This circumstance happens because women

are more capable of serving their role in service to others. Table 8 shows that the highest proportion of millennial women (32,78%) tended to work as service business personnel and sales personnel in 2017. Meanwhile, the highest ratio of millennial men who work as manual labourers is 23.60%.

Table 8.

Millennial Main Jobs by Gender and Living Place, 2017

Main Jobs	%	City	Rural	Male	Female
Army & Police	0.56	0.84	0.22	0.84	0.10
Manager & Professional	7.37	10.01	6.37	5.41	13.29
Technician & Professional Assistance	3.78	5.54	1.62	4.24	3.01
Administrative Personnel	6.74	9.76	3.04	5.38	9.00
Service and Marketing Business Personnel	24.61	30.56	17.33	19.70	32.78

Source: processed from SAKERNAS BPS 2017; KemPPA 2018

The tendency of millennial men to work as manual labourers is because it carries out routine and simple activities using hand-controlled equipment and sometimes requires physical strength. Meanwhile, millennial women are more likely to work in jobs that rely on knowledge and experience to provide services, such as personal protection services and the sale of goods.

Feasibility of Social Security

Growing old cannot be avoided by anyone, including millennials. Meanwhile, vulnerability and dependence are the natural traits of a person being elderly. Thus, social security is essential for the elderly, particularly regarding welfare provision and pension funds. In line with Adkin's view (2009) that future is not dependent future, but it is present and already exist. Discussing social security for millennial ageing population is not located in post-2045. It lives in present, particularly decision-making regarding pension scheme should be prepare since youth. Besides, sociologists can learn from policy programs, social trends and make contingent predictions about alternative futures, most of which aim at social improvement (Bell1999, 308).

Welfare Provision for Vulnerable Elderly

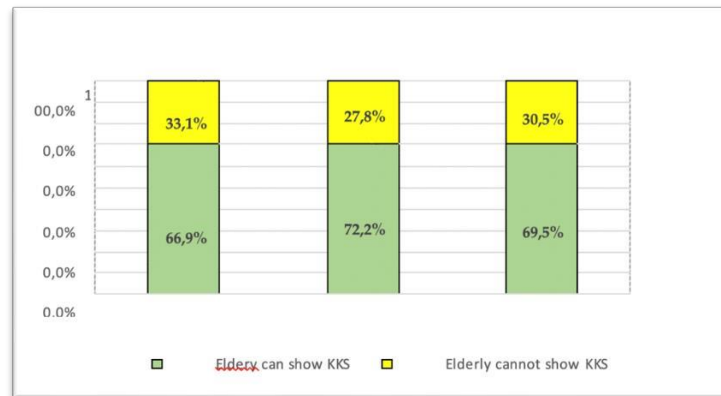
Like the character of ageing, elderly people are prone to health problems, have a higher prevalence of disability, and are vulnerable to poverty (Kacaribu, 2020). In 2020, elderly people reached 9,92% or 26,82 million people, consisting of the elderly in the family (10,7 million) and outside the family (1,9 million), of which there were 12,99 million poor elderly and 6,7 elderlies in bedridden condition (AntaraNews, 2021). As unproductive labour, most vulnerable elderly people depend on families or social assistance to fulfil their wellbeing. Thus, the state must provide welfare provisions for vulnerable elderly.

Elderly Rehabilitation Assistance (ATENSI-LU) is a service program that uses a family, community, and residential-based approach community-based program (Kemosos, 2021). The orientation of the social rehabilitation program is more focused on efforts to build a social service system. In contrast, the social assistance system has concentrated on social security programs and programs for handling the poor (Hikmat, 2020). The beneficiaries of ATENSI-LU decreased from 89,420 elderly in 2019 to 43,330 elderly (Bappenas, 2021, p.528).

The sustainability of the programs is vulnerable to being subject to change. ATENSI-LU is an updated version of the BANLU and ASLUT programs. The political interest will push changes affecting how programs will be delivered and potentially transform into other brands with a similar framework. However, these changes will affect the ineffectiveness of the delivery system, which are already settled. Thus, the government should improve the program design and strengthen its policy and administrative capacity (Ramesh, 2014). Besides, most social assistance programs have great support from the government; for example, most social assistance programs will not be affected by budget cuts (Astuti, 2017). However, most current social assistances cannot guarantee that the targeting systems and distribution work accurately (Hickling, 2008). Indeed, several social programs might overlap with other programs, such as ATENSI-LU and Program Keluarga Harapan (PKH).

PKH is a conditional cash transfer (CCT) program for low-income families (Bappenas, 2017). Although, main focus PKH is poor people, part of PKH also cover the elderly from poor families specifically by maintaining their level of social welfare (Kemensos, 2021). Due to the increasing number of elderly people in 2020, the government has decided to only issue PKH to elderly people over 70 years old (Harnas, 2020). Those who meet the criteria will receive Rp2,4 million/year (Kemensos, 2021). However, the program cannot maximize other elderly residents who are still displaced and disadvantaged. In 2019, the number of elderly households that are registered PKH recipients was 10,81% (BPS 2019, 89). Besides, the proportion of elderly households categorized Kartu Keluarga Sejahtera (KKS) recipients in 2019 is 13,39%, and only 69,5% of this proportion can show KKS (SUSENAS-Elderly Statistic BPS 2019).

Figure 6.
Elderly Households Who Have KKS (%), 2017-2019



Source: Processed from SUSENAS-Elderly Statistic BPS 2019

Overlapping program and miss targeting do not happen in national level, it also might coincide with the regional social programs (Yanuardi, et al., 2017), such as Kartu Lansia Jakarta (KLJ). KJL program fulfil the basic needs of senior citizens of DKI Jakarta (UPS Jakarta, 2020). KLJ's main target is the elderly who do not have a steady income or cannot meet their basic daily needs (JSC, 2018). KLJ also targets elderly people who are chronically ill and psychologically and socially displaced (Tempo, 2021). Those who meet the standards and requirements will receive monthly assistance of Rs 600,000 (JSC, 2018). In 2021, KLJ will be distributed to 78.169 senior citizens (Tempo, 2021). However, no definite system can cover all vulnerable elderly living in big cities, urbanized areas, such as Jakarta. This program only prioritizes the elderly who have a resident card. Most people in urban areas do not have a resident card.

Another issue in social assistance for elderly is the benefit value given to the elderly may not be used to meet the needs of the elderly. The family caretaker could prioritize other family members, such as children or those who work (TNP2K, 2018). Sometimes, elderly people are willing to give the benefits they receive to other families who need more help, such as grandchildren or babies who are still in school. In low-income families, this is not only about priorities but also about compassion and responsibility.

Vulnerability in elderly group cannot be separated with the loneliness issues. In 2019, around 9,38% of elderly living alone consisted of elderly women at 13.39% and elderly men at 4,98%, almost three times that of men who live alone (BPS, 2019, 20). According to TNP2K (2020), many of them are very vulnerable and have not yet/did not receive social support/assistance.

Indeed, female elderly face a higher risk of poverty (Hardy & Hazelrigg, 1993). Thereby, specific attention must be addressed for the elderly who live alone and gain low income

(Burchardt, et al., 2018). Everyone's burden cannot be summarised in one pattern (Milanovic, 1999).

Elderly Social Insurance for The Future

The life expectancy of the Indonesian people is projected to increase to 72,8 years in 2045. Hence, the retirement period for the elderly will be more extended, and pension funds' coverage inclines to be longer. The retirement age is projected to increase from 56 years in 2018 to 65 years in 2043 (OECD, 2019, p. 1). Correspondingly, total pension fund assets per GDP increased by about 2.7% over a decade, 2006-2016 (IOPS, 2011, p. 9; OJK, 2017, p. 5).

However, workers participating in pension funds is tiny and slightly decreased from 5,93% in 2017 to 5,65% in 2020. Meanwhile, workers who did not have pension plans are almost stagnant at around 94% from 2017-2020 (SUSENAS-Elderly Statistic BPS 2019). Thus, the biggest challenge is that the rapid growth of an ageing population is disproportionate to the slow growth in coverage of beneficiaries and contributors to the pension scheme (OECD 2018, 7).

The existing pension fund scheme cannot fully response the need of all retirees to access pension benefits. In Indonesia, the existing pension funds consist of private pension-occupational, public pension, and private pension-personal (IOPS 2011, 2). Only about 27,7% of the workforce, or 32,24 million people, participated in the pension scheme in 2017 (OJK 2017, 5). However, most informal workers did not partake in pension fund schemes (Wijayanti, 2018, 5). BPJS Employment participants in 2020 amounted to 51,75 million people or about 40% of the total working population as of August 2020, in which most of this figure is workers in the formal sector (Izzati, 2021). Meanwhile, 57% of workers are in the informal sector and makeup 40% of the lowest income group in 2018 (Bappenas 2019, 100).

According to WHO (2012), health services are one of the greatest needs and largest consumptions for the elderly. The elderly's psychological health is the essential aspect in supporting the wellbeing and existence of the elderly (Rohmah, et al., 2012, p. 130). For example, loneliness is more crucial to elderly daily life than material needs. Some countries specifically address this issue through time banks. People give time to accompany the elderly, not to feel lonely (Collom, 2008, p. 415). However, about 60% of the elderly in Indonesia have low and unstable incomes, and more than a third of the elderly have not received health insurance services (Kemosos, 2019). Thus, pension funds are essential financial investments for elderly people to meet standard of living, as social security when they are no longer working (Kasri, 2020, p. 312).

Another problem is the threat of poverty in the elderly period. Older people lived in poverty of about 2,5 million in 2014, which is slightly higher than the younger group (Wijayanti 2018, 17). Moreover, some elderly still require income because their role as the backbone of the family has not been replaced. In addition, elderly people also face dependency problems; when they grow old, elderly people incline to be less independent to take care of themselves. On the other hand, the cost of independent elderly care is greater than the average income of the Indonesian people, which is around 3 to 10 million rupiah/month on average (Turana, 2020). Pension funds as a retirement income source and social security are vital. However, according to TNP2K (2018), in 2017, only 3,44% of the elderly received old age security, and only 10,7% of the elderly received pension funds.

Another critical issue is that the elderly awareness concerning pension funds is still low (Kumparan, 2020). It is in line with the national financial literacy rate, which was only 38.03% in 2019 (OJK, 2020). It is related to the elderlies' education level, which is still low. About 33.26% of elderly people did not have graduated from elementary school, 15.53% never attended school, and only 30.88% managed to finish elementary school (Hakim, 2020). As part of financial literacy, pension funds cover all aspects of how people behave in their future, related to financial planning and financial decision making (Stolper & Walter, 2017, p. 2). Although elderly people have awareness and intelligence in financial management, their ability to maintain literacy will decrease with age (Pratomo, 2021). The public needs to be educated about financial matters as early as possible (Nugraha 2018, 84). However, the socialization of pension funds received high resistance, both from most private companies and the public, who still relied on family ties (Brodjonegoro & Simanjuntak, 2002, p. 161).

Reinstate Future Objectives

Critical analysis in this study is elderly in post-2045 as the main topic supported by millennial as a subject baseline and social security as supporting system baseline. From the discussion, there are several key messages. Indonesia has been starting to experience an ageing population as a result of declining fertility rates and increasing life expectancy. Indeed, this circumstance is strengthened by the low marriage rate of millennials nowadays. In 2045, the elderly population will be 275% compared to 2015. Following Adkin's (2009) view, discussing future is not rely on dependent future, but future is already in the present and already exists. The question is not who is elderly post-2045, but who will be elderly post 2045. Most of the elderly of productive age (60-64 years) and non-productive period (65+ years) in 2045 are people born in the 1980s-2000s, which are millennials.

Growing up in an era of rapid change, Millennials have a very different set of priorities and expectations from previous generations (Goldman Sachs, 2021). The new social order calls for new models of action and expression as catalysts for new social movements that recognize themselves as drivers of generational change in culture (Woodman 2017, 21). In addition, the location of the millennial generation is different from the previous generation. In fact, the location of the generation is very essential in shaping the mode of action, expression, and feelings of the people who grow up in it (ibid). Therefore, compared to others, the millennial generation is a generation that wants to fast, easily change jobs in a short time, creative, dynamic, technology literate, and close to social media. As Generation-Me, millennials put more emphasis on themselves and tend to be less civilly and politically involved than previous generations. Millennial generation is one of the leading actors of the current demographic bonus, having a better quality of education and health than the previous generation.

The future industrial transformation is the cyber-physical system or internet of things, especially towards seamless economic cooperation in 2036-2045. In line with that, millennials are seen as a tech-savvy generation and are close to social media. However, millennials tend not to fully use the internet for productive activities or support their business. If the millennial's competitiveness is not appropriately handled, the millennial generation will eventually become a digital consumer class.

In 2045, LFPR is estimated to increase to 78%. Nowadays, millennial TPAK in rural areas is higher than in urban areas. The gap between male and female LFPR is estimated to decrease from 33.8% in 2015 to 35% in 2045. However, the millennial LFPR and open unemployment rate (OUR) between males and females did not change significantly during 2015-2017. By 2045, OUR is predicted to fall by about half compared to 2015. Meanwhile, millennials are likely to be "flies" at work.

Millennials prefer to be unemployed than work in the informal sector. Millennial women's interest in working in the formal sector is almost the same as millennial men. The highest proportion of millennial women works as service businesses and sales personnel. In contrast, the highest ratio of millennial men works as manual labourers. In 2045, agriculture's contribution to GDP and labour force will decline. Nowadays' millennials tend to choose manufacture, trade, and industry over farmers. The trend of millennials becoming entrepreneurs has increased slightly. Although, entrepreneurship is currently still dominated by the baby boom-veteran generation.

By 2045, about 72% of the population will live in cities. The millennial generation nowadays lives in urban areas more than in rural areas. The usage of mobile phones, computers,

and internet access by urban millennials is higher than rural millennials. Millennials who work in trade, services, and industry, live more in urban areas than rural areas. Millennial entrepreneurs in rural areas are higher in number than in urban areas. However, millennial entrepreneurs who can create full employment are still tiny, urban and rural.

Growing old cannot be avoided by anyone, including millennials. Like the character of ageing, elderly people are prone to health problems, have a higher prevalence of disability, and are vulnerable to poverty. Thus, the urgency social security is essential for millennial since they are primary candidate of elderly population post 2045. Indeed, following Adkin (2009) framework, the urgency of social security for millennial does not lie in post-2045, but it starts from present, particularly regarding welfare provision and pension funds. Besides, Bell (1999) contend that learning from policy programs and social trends can lead contingent predictions about alternative futures, most of which aim at social improvement.

As unproductive labour, most vulnerable elderly people depend on families or social assistance to fulfil their wellbeing. Thus, welfare provisions are crucial for them. Most social assistance programs for the elderly receive great support from the government. However, there is no guarantee that the targeting and distribution system will work accurately, like ATENSI- LU, PKH (for elderly), and KJL.

Considering life expectancy has increased significantly until 2045, the retirement period for elderly people and the coverage of pension funds tends to be longer. However, the rapid growth of an ageing population is disproportionate to the slow growth of beneficiary coverage and pension contribution schemes. Besides, more than half of workers are informal workers, and most of them do not follow pension schemes. Moreover, one of the causes of inequality is the number of vulnerable workers, including informal workers.

Another issue is that awareness about pension funds is still low. Although millennial literacy is relatively high, but financial literacy is the opposite. Moreover, the latest Indonesia's PISA score is in the bottom 10 of the 79 participating countries. The average reading, math, and science abilities are below the ASEAN average. If literacy issues are not addressed holistically, millennials might not lose many opportunities and lost direction regarding their ageing planning.

Conclusion

Derived from critical points above, many agendas should be prepared to optimize the baseline of the millennial ageing population post-2045. Some issues involve cross-sectors, and some have already been addressed, such as gender inequality, urbanization, digital culture,

industrial transformation, and labor force. There is no simplified idea to answer the question. Among many better concepts, some practical ways can be introduced and implemented in the short term, particularly regarding five issues: (1) the government should extend the retirement age as well as change the dependency ratio framework; (2) the government and bussiness sector should start to expanding job field for elderly; (3) the productivity of millennials must be enhanced amidst progressif digital civilization, so millennials can still active and productive in their youth and ageing period; (4) society and government should revitalize zakat as one alternative to social security; (5) Lastly, the government should reform pension funds for informal workers.

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