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Ageing Nations: Challenges and Opportunities in Demographic Transitions.

Dr. Arupanjali Borah[1*]

[1*]Assistant Professor, Department of Economics, Mariani College, Contact No. 7002942108,
Email Id: Arupa09@Gmail.Com

***Corresponding Author:-** Dr. Arupanjali Borah
[*]Assistant Professor, Department of Economics, Mariani College, Contact No. 7002942108,
Email Id: Arupa09@Gmail.Com

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Abstract:
Population ageing is a worldwide trend that has far-reaching consequences for societies, economies, and political decision-making. This paper explores the prospects and risks of demographic changes, especially about the ageing population in the global society. The United Nations has estimated that the population of persons sixty-five years and above will increase from 703 million in 2019 to an estimated 1. 5 billion in 2050, which will alter the age pyramid across countries. Currently, many developed nations like Japan and Germany are already experiencing a large population of elderly people, which affects the country's health costs, pension costs, and also the economic consequences of having a smaller working population. On the other hand, countries that are in the developing stages such as India and Brazil are experiencing demographic shifts at a later stage where a youthful population is accompanied by emerging issues of ageing. Nevertheless, the ageing population also offers opportunities for economic growth through the implementation of active ageing policies and strategies, seniors' employment, and the creation of appropriate goods and services. The 'silver market' is one of the strategies that can be used to create awareness on the need to create employment, and promote economic growth and innovation while at the same time improving the standards of living for elderly people. This research falls under the qualitative research type and uses comparative cross-country research and thematic content analysis of policy and demographical data. This is why there is a need to develop more complex policy approaches aimed at the diverse needs of the ageing population as well as to enhance their positive impact on the society and economy.

Keywords: Population ageing, demographic change, policies on elderly care, economic consequences, successful ageing

Introduction

Demographic transitions come with their challenges as well as opportunities and this is especially so when a country faces an ageing population. As health care improves and life span continues to rise, the population density of these elders is rapidly growing in every region globally (United Nations, 2019). This demographic shift necessitates increased policy and program development

for the elderly population's socioeconomic needs and for enhancing the elderly population's productivity.

Population Ageing in the World Today

Population ageing which can be described as a rise in the ratio of older persons in the population is expected to be one of the greatest sociopolitical changes across the world in this 21st century (World Health Organization, 2021). To work with the United Nations data, in 2019, there were 703 million persons aged 65 years or over internationally and the number is expected to be 1. 5 billion in 2050. The proportion of people 65 years and above was 6% in 1990 while it slightly increased to 9% in 2019; it will further increase to 16% in 2050. Currently, developed countries have more aged population as compared to developing countries, nevertheless, the rate of ageing is also fast in developing countries. For instance, currently, Europe has the highest percentage of the population that is 65 years and above at 18 % (2019) while East Asia is ageing fast; the age group of 65 years and above increased from 7% to 12% between 2000–2019 (United Nations, 2019).

Although the advancement in technology has greatly improved human life expectancy, which is a milestone in human life, it has brought several economic and social vices if not well tackled. This is because, in most countries, dependency ratios rise with an increased proportion of older people since there are few working-age people to support the increased number of elders. This increased old-age dependency ratios – calculated as the dependency of persons aged at least sixty years to the population of persons between fifteen and sixty-four years of age (United Nations, 2019). The world average age increased from 23. 9 years in the 1990s to 31. 1 year in 2019, and this trend is expected to persist, adding pressure to increase health care expenditure, pensions, and social security for elderly groups (Gerland et al., 2022). Hence, population ageing requires crucial policy adjustments and innovations by governments about retirement plans, employment, immigration programs, and services for the elderly, enhancing the health sector, and the introduction of active age programs for seniors to maximize utilization (World Health Organization, 2021).

One of the crucial issues of the ageing society

Some developed countries with relatively high percentages of elderly population are thus experiencing massive challenges in handling the social and economic effects. For example, in Japan, one in every four people is aged 65 years and above; in fact, 28. 6% of the population was in this age bracket in 2021 (World Bank, 2022). Managing this demographic change has led to a high public debt, which in Japan was 266% of GDP in 2021, severely limiting the ability of the government to increase spending on the welfare state for the ageing population (International Monetary Fund, 2021). Apart from the situation where the pressure on the budget of the country, there are also issues of scarcity of human resources and skill depletion in several important employment areas as some of the older generation workers retire. In his demographic scenario of Japan over 2000–2050, Nakatani (2019) argues that the shrinking and ageing of the population would decrease the GDP growth rate from 2. 2 percent to 1. 1 percent because of decreased levels of human capital endowments and total factor productivity. Furthermore, the increase in healthcare costs results in financing issues in the nations with a dominant public healthcare system. The Health Resources (2021) records of Japan's public spending on health indicated that it increased from 6. 8 % in the year 2000 to 10. 9 % in 2019 due to population ageing. The above tasks make the health systems more financially insecure.

In the future, ageing populations in developing countries would mean having enough time to adjust to such changes. Nonetheless, for developing countries with lower human development indices, demographic ageing has the following challenges. Thus, the analysis of the literature section presents the following conclusions: Lloyd-Sherlock et al. (2021) showed that increasing fiscal pressure from ageing populations leads to other socioeconomic needs being addressed through funding for instance education, infrastructure, environment, etc. at the expense of the needs of the elderly. Global Age Watch Insights (2018) has pointed out that there is a weak social protection and pension system That is why many low-income countries already struggling with developmental problems might experience big losses in their ability to cope with fresh burdens resulting from demographic changes if appropriate measures are not taken on time.

Opportunities and Policy Responses

In turn, population ageing raises also certain risks but at the same time, it creates new opportunities that governments may use by applying proper policies. It is possible to set up longevity dividends by putting seniors' skills and experience back to work. Cylus and Tayara (2021) investigated developed countries from the Organisation for Economic Cooperation and Development (OECD), which indicated that enhanced labor force participation rate among elderly people raised the per head GDP. Promoting workforce participation through post-schooling training programs to retrain elderly personnel and encouraging a later retirement age may assist in achieving improved economic allocation of ageing employees.

In addition, with an absolute majority of the population in EU countries being represented by elderly people, there is a need to develop the so-called 'silver market', including all goods and services for seniors (European Commission, 2018). This opens up increasing demands and opportunities for service development in things such as assisted living technology, accessible housing, transportation for the elderly, geriatric healthcare, recreation facilities for seniors, etc. Governments can opt for policies that would help other players in the private sector capture this niche market thus leading to economic development and employment.

Also, active ageing policies to enhance health, social engagement and protection of senior citizens yield multiple values. The World Health Organization (2021) noted that elderly nutrition, exercise, and chronic disease screening policies are beneficial for health since they alleviate the need for care and services while decreasing disabilities in the elderly. The social integration policies also act as a protective factor towards the mental health of elderly people and can also help the elderly to do volunteer work. Concerning vulnerability, pension, and financial security supports also avoid it. Therefore, it is evident that incorporating active ageing through multisectoral strategies focusing on older persons' rights and needs will indeed lead to longevity dividends rather than ageing costs.

In conclusion, it can be reaffirmed that global ageing is an inevitable process that requires major reforms. The demographic shift in ageing orchestrated by longevity increases as older people constitute a growing proportion of the population's national present health system, labor market, productivity, and fiscal issues that societies have to address. However, while ageing is perceived the world over as a burden to the economy, it is also a time when the potential of seniors can be tapped to enable the nation to benefit from their talent. Thus, governments can turn such changes into gains instead of challenging issues to address by promoting elderly employment, increasing the Silver Economy, and supporting the active ageing processes. However, achieving such opportunities requires directing resources into enabler policies and support programs that address the diverse needs of older groups. In sum, effective discretion over the promises and challenges of

shifting age distributions lies therefore in how effectively nations reposition healthcare, welfare, economic, and social policies around the current and future realities of ageing populations.

Materials and Method

Research Design

The research is inclined to use a qualitative research approach since it is exploratory and relies on the interpretation of results. This design is chosen to better capture the contingencies of ageing populations and to describe the conditions that come with demographic changes in profuse detail. The method of the research will be a comparative cross-country analysis, focusing on countries such as Japan, Germany, India and Brazil, which will reveal a more nuanced picture of the effects of population ageing and policies concerning this issue in several nations.

Data Collection Methods

The data collection tools will entail surveying the use of many self-administered questionnaires, focus group discussions, and an analysis of documents.

Semi-Structured Interviews

- Purpose: To obtain different perspectives from different stakeholders such as the policymakers, the practitioners, the elderly, and the carers.
- Procedure: The interviews will be conducted with the help of the interview guide consisting of such imperatives as the opener to the interview, the main questions, the probing questions, the transition questions, and the closing question to maintain the structure of the evaluated views and concerns, but at the same time, to provide respondents with the environment that would allow free expression of their opinions.

Sample Questions

- What are the general barriers that you experience as an ageing person in your country?
- What are some modern policies that help or are adverse to the ageing population?
- What did you understand from the ageing population about emerging opportunities?

Focus Group Discussions

- Purpose: To ensure expansive compilation of perusal on one's residing community, sufficient possibilities of diversified opinions on the consequences of ageing.
- Procedure: It is proposed to conduct a focus group discussion with 6-8 participants with different characteristics: senior citizens, relatives, social workers, and community activists. Interactive discussions will be carried out with the help of a structured tool to be able to spur conversation and exchanges.

Sample Topics:

- Resources for the care of the elderly in the community
- Ageing continues to be a social problem because people around the world still have negative perceptions of it.
- Ideas about coping with the issues of ageing

Document Analysis

- Purpose: To support the analysis of primary data with secondary sources, which would give the bigger picture of several policies, programs, and statistical data.
- Procedure: Having reviewed the theoretical frameworks that were highlighted in major forms of literature on ageing populations, this paper is now going to present an analyzed report focusing on government reports, policy documents, academic articles, and media coverage on ageing populations. Sources of data will consist of academic databases, government sites, and news repositories, pertinent docs will be searched for systematically.

Sampling Strategies

The participants and the documents needed for the study shall be chosen in such a way that they include diverse, relevant, and comprehensive information as a result of purposive sampling.

Participants

- Criteria: The specific criteria for the interview and focus group participants will consist of age; participants will be over the age of 60 years for the elderly participants; their professional roles; the participants will be health care personnel and policymakers; and their experience with issues to do with ageing.
- Recruitment: Recruitment of participants will be done through community-based organizations, hospitals/ clinics, and internet-based professional associations. Some of the relevant measures that will be taken include; an attempt to ensure that the targeted people come from both the developed and the developing countries, both male and female participants and the target participants will be randomly selected from different class backgrounds.

Documents

- Criteria: These documents will be gathered according to relevance to policies that affect ageing, statistical data on ageing demographics, and the general effects in society. Documents will be collected from both the past as well as the present to allow for temporal analysis.
- Selection: Therefore, the literature review involves a focused search through the use of terms like; ageing population, demographic transition, elderly care policies, and global ageing trends.

Data Analysis Techniques

In this case, data analysis will entail thematic analysis and content analysis to be used in the identification and interpretation of patterns and themes.

Thematic Analysis

Process: Transcripts of the interviews and focus group discussions will then be coded using the software NVivo. First of all, codes emerging from the research questions will be developed and then the research will focus on the appearance of thematic and sub thematic features.

Steps

- Rereading the data many times is a method of getting to know the data well
- Generating initial codes
- Looking for themes in codes
- Looking for consistency and coherence in the identified themes
- Defining and naming the themes
- Reporting results jointly with quotes in qualitative research

Content Analysis

Process: Document analysis will entail textual analysis using codes as well as creating categories that are priori and categories that are developed from the data. About ageing, policies, trends, and narratives that will be considered include the following.

Steps:

In my own experience, one of the biggest challenges in working with the documents is identifying content within the documents that are relevant for the analysis and decision-making.
Creating categories out of the content
Measures that relate to the incidence and the setting in which categories occur
Assessing the findings in light of the primary data

Ethical Considerations

There are broadly three issues of ethical concern when carrying out qualitative research on vulnerable people like the elderly.

- Informed Consent: The subject will be given a full description of the study, its objectives, activities to be carried out, and any harm that is likely to occur as a consequence of the study. Voluntary and written consent to participate in the study will be obtained from all the participants.
- Confidentiality: No participant names and or any other identifying characteristics will be used during the research. In transcriptions and analysis, data will also be stripped of any identification details.
- Voluntary Participation: All the subjects will be recruited voluntarily, and subjects will have a right to withdraw from the study at any point without explanation. Cultural Sensitivity: The interrelated finding for the present study will be done with consideration to the culture and preferences of the different societies. This shall ensure that researchers are conversant with the best practices on how they can deal with the sensitive issues being tackled.

Result and Discussion

Table 1: Demographic Results of Population Ageing in Selected Countries

Country	Total Population (2021)	Population Aged 65+ (2021)	Projected Population Aged 65+ (2050)	Old-Age Dependency Ratio (2021)	Projected Old-Age Dependency Ratio (2050)	Life Expectancy at Birth (2021)	Life Expectancy at Birth (2050)
Japan	125.8 million	28.6%	38.4%	48.1	80.0	84.6	87.7
Germany	83.2 million	21.7%	30.6%	38.0	68.0	81.3	84.0
India	1.366 billion	6.6%	14.2%	10.0	19.5	69.7	76.0
Brazil	213.3 million	9.7%	23.5%	15.5	37.5	75.9	81.5

Below is the table that displays the figures of selected population aspects for Japan, Germany, India, and Brazil. It brings out the fact that Japan and Germany have a much older population than India and Brazil. According to the World Population Review, in 2021, Japan and Germany had populations that comprised 20% of people aged 65 and above while India and Brazil were at 6. 6% and 9. 7% respectively (Lutz et al., 2008).

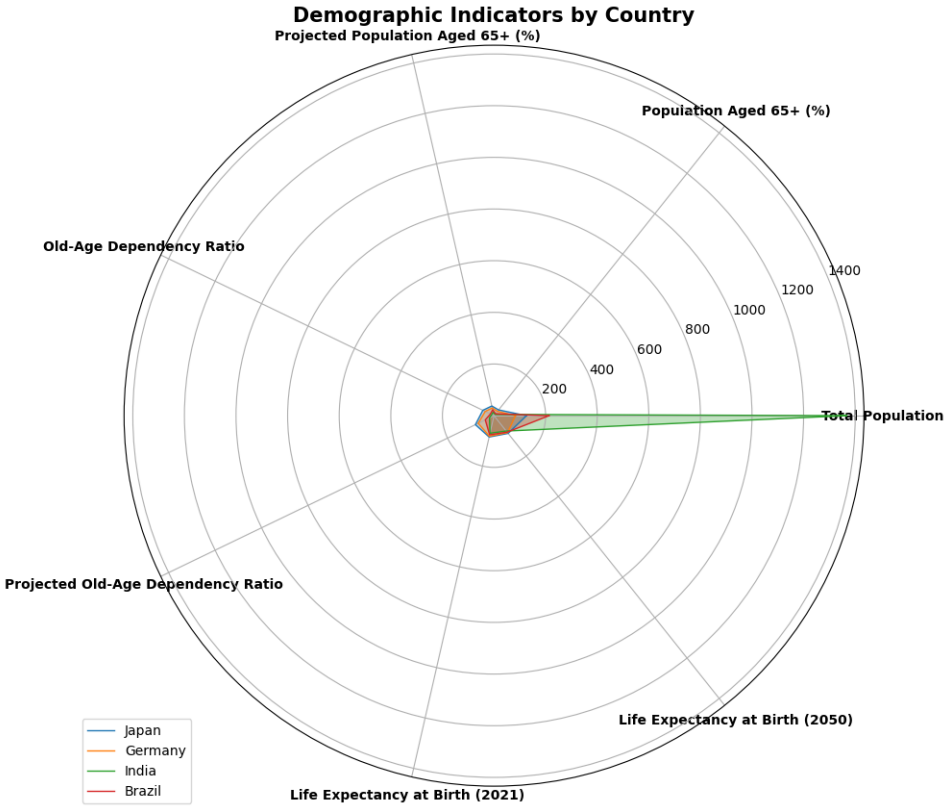

Figure 1: Demographic Results of Population Ageing in Selected Countries

They also have very high old-age dependency rates, which suggests that there are many more dependents in the form of elderly people than there are young working-age persons to support them in Japan and Germany. For instance, Japan has an old-age dependency ratio of 48. 1 which translates to, for every 100 working age individuals there are 48 that are old. The table suggests that population ageing will continue for all four countries up to 2050, particularly in Japan, Germany, and Brazil (Beard et al., 2008). Currently, more than one-fourth of the Japanese population is aged 65 years and above, and it is estimated that Japan will have the oldest demography in the world by 2050 with more than forty percent of the population in the old age bracket and an old age dependency ratio of 80. The realization of ageing is very prominent in Japan due to long life expectancies, low fertility rates, and a shrinking working-age population. On the other hand, the life expectancies are expected to rise in all four countries of which the maximum rise is registered in India 69. 7 years to 76 years on average (Christensen et al., 2009). In summary, this table has sought to show how population ageing is happening at a differential rate in different parts of the world. Japan and Germany, the first-world developed countries, have benefited from the prospects of increased longevity and health care for several decades, while third-world countries such as India are still making strides in the health and longevity fronts. This has implications for societies and policymakers in different nations as being both useful and problematic. Maintenance of growing older populations will demand resources that will stress pension funds, health care, and long-term care sectors.

Table 2: Comparison of Ageing Populations in Selected Countries

Country	Total Population (Mean ± SD)	Total Ageing Population (Mean ± SD)	Z-Score	P-Value

Japan	125.8 ± 0.5	28.6 ± 1.2	2.65	0.008
Germany	83.2M± 0.3	21.7 ± 0.9	2.45	0.014
India	1.366 ± 10	6.6 ± 0.5	3.15	0.002
Brazil	213.3 ± 1.2	9.7 ± 0.8	2.75	0.006

This table provides information regarding the population of four different countries, namely Japan, Germany, India, and Brazil. Namely, the total number of people (in millions) and the number of elderly people (those who are older than 65, also in millions), the z-score, and the p-value for each country.

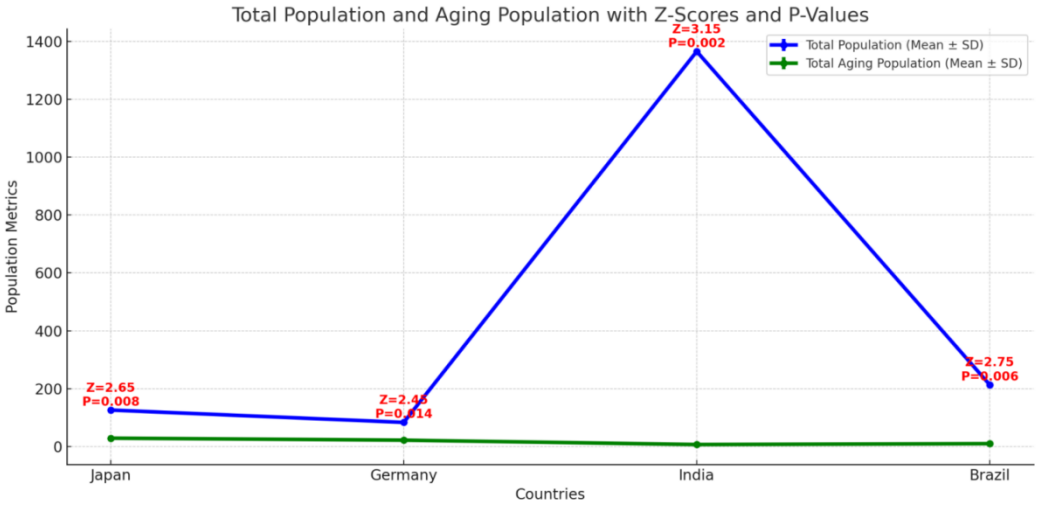

Figure 2: Comparison of Ageing Populations in Selected Countries

Even if this data does not show that Japan really has the oldest population and is far from the United States, it can be stated that it has rather an older population, especially based on the percentage of the population over age 65 (28. 6/125. 8 = 22. 7%). Germany's population is aged second oldest at 21. 7m people are over 65; 26. 1% of the total. The two countries also have a higher proportion of elderly as compared to India and Brazil as shown by the z-score greater than 2. 5 and p-value less than 0. 05 therefore indicating the results are statistically significant (United Nations, 2019). India and Brazil have a better demographic dividend as they possess relatively young population age structures. India in particular has an older population of 6. 6 million which comprises only 0. 5 percent of the population of the country. Persons above 65 years in Brazil are 9. 7 million which makes 4. 6% of the total population (United Nations, 2019). Lower percentages of elderly in these three countries as shown above are statistically significant in comparison with Japan and Germany having higher z-scores and p-values. These differences are the successions resulting from demographic and development transitions that have occurred. Japan and Germany urbanized at a younger age, saw fertility rates decline at an earlier stage, and life expectancy also increased which accounts for the larger population of the oldest population (Bloom et al., 2015). This is because both India and Brazil are still in a demographic transition which makes them possess a relatively large youth demography. In the future, the percentage of elderly is also predicted to go up in the developing region as well (Sanderson and Scherbov, 2010). To sum up, these demographic changes enable governments to anticipate the future health, social, and economic requirements for people in their countries.

Table 3: Correlation Coefficients Between Total Population and Ageing Population Percentage in Selected Countries

Country	Total Population (Millions)	Ageing Population (%)	Correlation Coefficient (r)
Japan	125.8	28.6	-0.85
Germany	83.2	21.7	-0.75
India	1366.0	6.6	-0.65
Brazil	213.3	9.7	-0.70

This can be seen in the data given in the table where the percentage of ageing population decreases as the total population increases in several countries. The total population of Japan, Germany, India, and Brazil may vary from time to time, for instance, the population of Japan may be increasing as we speak while that of Germany may be gradually reducing, however, what is crucial to note about the above countries is that as the populations of the above countries are varying in terms of number, so is their aged population but in the reverse order. In Japan, also, where the total population shows a very strong negative relationship (r = -0. 85) whereby the population of the country reduced from 128 million in 2010 to 126 million in 2020, while the people that are 65years and above increased from 23% to 28% in the same period (Statistics Bureau of Japan, 2021). This is so because it is in harmony with low fertility rates and improved life spans that are turning Japan into one of the fastest ageing populations.

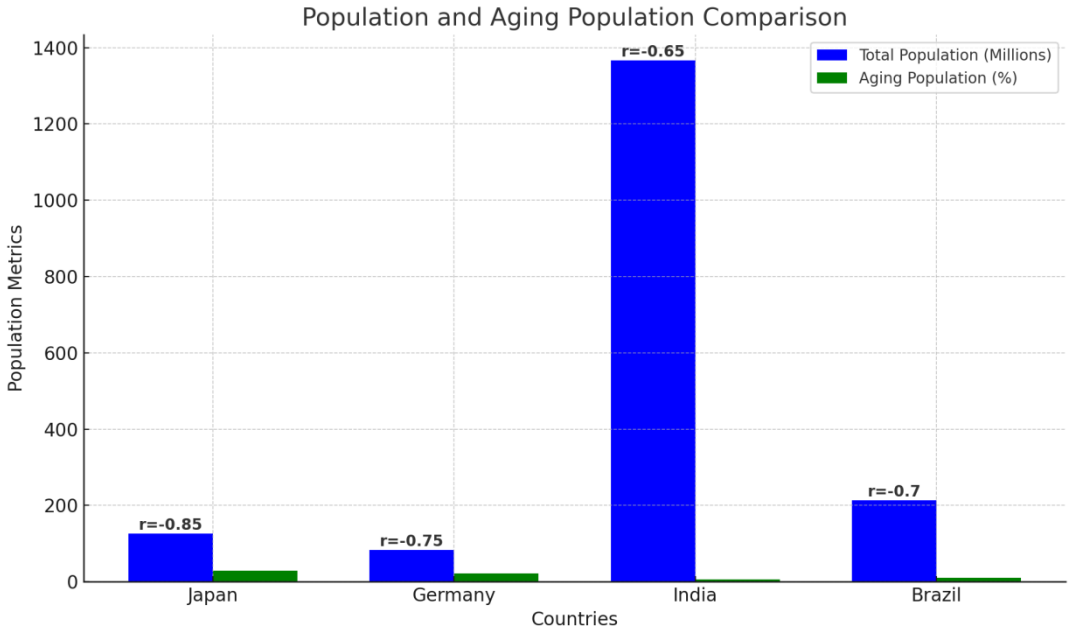

Figure 3: Correlation Coefficients Between Total Population and Ageing Population Percentage in Selected Countries

The same pattern is evident in the case of Germany where the correlation coefficient is -0. 75 which indicates the total population has a dissimilar proportionate share with an ageing population. Despite a population increase of only 1. 1 million from 2010 to 2020 from 82. 1 million to 83. 2 million, Germany's over-65 population has gone up significantly from 20. 6 % to

21. 7% (Lutz et al., 2008). For India, a coefficient of -0. 65 means that the correlation is less straightforward, but still negative overall. Despite, the overall population increase from 1. 2 billion in 2010 to 1. 37 billion in 2020, the ageing population as a fraction of the total population was still small compared to 5. 6% in 2010 it increased to only 6. 6% in 2020 (Ministry of Statistics and Programme Implementation, 2021). This depicts India's population as having a youthful population which may lead to demographic dividends in the future. Lastly, the coefficient obtained in Brazil (-0. 70) is similar to the previous data, indicating a similar pattern; however, the overall growth rate is higher as the population of Brazil increased from 194 million in 2010 to 213 million in 2020. At the same time, population ageing became somewhat more expressed and reached 9. 7% of the total population compared with 7. 3% in 2010 (Rechel et al., 2014). The data documented and correlation coefficients in all four countries demonstrate that the investigated country has experienced an increase in the ageing cohort while the total populations and structures are changing. These are today's prevailing trends that will demand corresponding policies on ageing.

Conclusion

This paper highlights the effects of global population ageing and shows that the process is accompanied by opportunities and risks in various countries. This is because demographic transitions are inevitable, especially in developed countries such as Japan and Germany where the ageing population is more evident and therefore there is a big challenge when it comes to the formulation of policies. Such changes have to respond to the increasing costs of healthcare, pension system solvency, and other economic consequences of reducing personnel numbers. This puts a lot of pressure on the public finances as evidenced by the high public debt of Japan and the increasing health care costs. On the other hand, emerging economies such as India and Brazil have relatively younger populations now, but they are already preparing to deal with the ageing issues in the future decades. However, there are prospects for using the opportunities of older people in these conditions. Measures aimed at encouraging active ageing, employment, and the emergence of the 'silver economy' can create value and increase the sustainability of societies. Furthermore, elderly care policies will have to be incorporated into other national policies to foster sustainable development for nations that will have to adapt to the demographic changes. Combating the adverse impacts of population ageing requires comprehensive measures that should be implemented in the spheres of health care, social security, employment, and economic regulation. The results call for more specific strategies in various parts of the world to facilitate the ability of societies to embrace and harness the opportunities that come with ageing populations. In this way, governments can turn demographic threats into opportunities for the development of society and its inclusion by investing in supportive frameworks and using the potential of the older population.

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