

A Review of Literature on Sustainable Cities and Urban Ageing: Challenges and Opportunities for Developing Countries

Sri Lanka Journal of Social Sciences and Humanities
Volume 3 Issue 1, February 2023: 63-70
ISSN: 2773 692X (Online), 2773 6911 (Print)
Copyright: © 2023 The Author(s)
Published by the Faculty of Social Sciences and
Languages, Sabaragamuwa University of Sri Lanka
Website: <https://www.sab.ac.lk/sljssh>
DOI: <http://doi.org/10.4038/sljssh.v3i1.86>



Premaratna S.P.^{1,*}, Padmasiri H.M.N.², Rathnayaka, I.W.³, Indeewari, G. K. D.⁴, and Kodippili Arachchi. P.⁵

^{1,3,5} Department of Economics, University of Colombo.

² Department of Business Economics, University of Colombo.

⁴ Department of Economics, University of Sri Jayewardenepura.

Received: 22 September 2022, **Revised:** 24 November 2022, **Accepted:** 22 December 2022.

How to Cite this Article: Premaratna, S.P., Padmasiri H.M.N., Rathnayaka, I.W., Indeewari, G.K.D., & Kodippili Arachchi. P. (2023).

A review of literature on sustainable cities and urban ageing: Challenges and opportunities for developing countries. *Sri Lanka Journal of Social Sciences and Humanities*, 3(1), 63-70.

Abstract

The proportion of the elderly population is increasing rapidly. This trend demands measures and actions that enable elderly people to stay active and self-sufficient as long as possible. However, in cities, elderly people are more vulnerable to climate change, and socioeconomic changes since most city environments are designed to support the working population. Therefore age-friendly living environments and facilities are necessary to promote active ageing. Sustainable cities and ageing populations have been researched widely as separate concepts, but these two have not been researched together. The paper provides a review of empirical research on sustainable cities and urban ageing by giving a special focus on challenges and opportunities for developing countries. The review identifies eight domains in age-friendly cities: (1) outdoor spaces and buildings; (2) transportation; (3) housing; (4) social participation; (5) respect and social inclusion; (6) civic participation and employment; (7) communication and information; and (8) community support and health services. Challenging areas include elderly labour force participation, elderly caring, social security, inclusive urban infrastructure, urban poverty, and peace and security. As a policy implication, collective efforts should be made to formulate policies and programmes to keep the active and productive elderly in the labour market, community development, and decision-making process.


Keywords: Challenges and opportunities, Developing countries Sustainable cities, Urban ageing.

INTRODUCTION

Urbanization and ageing are two key demographic trends and issues faced by many developing countries today (Plouffe & Kalache 2010) and these two are the culmination of successful human development (Plouffe & Kalache 2010, van Hoof et al., 2018). These two trends are having a major impact on sustainable development (Han et al., 2021). According to the United Nations (UN, 2015), the population share of those 65 years old and over is expected to climb to 16.5 per cent in 2030 and 21.5 per cent in 2050 in the world. The share will be 29.2 per cent in more developed regions and 14.2 per cent in less developed regions by 2030. Interestingly, cities in particular are home to 43.2 per cent of this older population today. By 2030, about 60 per cent of the world's population is expected to settle in cities, and about 67.2 % of the world's population by 2050 (UN 2013). According to Gentilini (2015), by 2025, the global urban economy will have grown over 20 times its level of 1950, representing 75 per cent of the world's economy. These trends put more pressure on policymakers and planners to redesign urban development plans and social protection strategies in line with sustainable development. Cities face many challenges in achieving sustainable development:

social, economic, environmental, and governance challenges. Despite the challenging nature of this demographic trend, it also produces many development opportunities. Empirical literature (Bahraini 2001, Conelly 2007, Larijani 2016, Varol et al., 2010) highlighted that on the one hand cities are considered centres of social, economic, and environmental development and, on the other hand, the cities are the most appropriate places where the problems of economic, social and environmental arise from them. The purpose of the paper is to identify challenges and opportunities for sustainable cities and urban ageing that are faced by developing countries. The two concepts together have not been researched and very few researchers have even studied these two separately although urbanization and the well-being of rural elderly are separately, widely researched. The rest of the paper will be organized under five sections: a) sustainable development, b) sustainable cities, c) urban ageing in developed and developing countries, d) challenges and opportunities in urban ageing, and e) conclusion.

* Corresponding author: Tel.: +94 (77) 343 9323; Email: spp@econ.cmb.ac.lk

 <https://orcid.org/0000-0003-1071-339X>



This article is published under the Creative Commons CC-BY-ND License (<http://creativecommons.org/licenses/by-nd/4.0/>). This license permits use, distribution, and reproduction, commercial and non-commercial, provided that the original work is properly cited and is not changed in anyway.

SUSTAINABLE DEVELOPMENT

Sustainability has been defined as the development (WCED, 1987) that meets the needs of the present without compromising the ability of future generations to meet their own needs. This definition tries to justify capturing basic ideas of interring and intergenerational justice. Meanwhile, most of them require that the "quality of life" should not decline over the long-term future. All the definitions of sustainable development highlight social, economic and environmental aspects of development. For example, according to Bali Declaration (1992), sustainable development objectives 'are to balance human needs and aspirations with population, resources and the environment and to enhance the quality of life today and in the future. UN 1992: 4).

Sustainable development means combining the economic, social and environmental objectives to maximize the present human well-being without damaging the ability of future generations to meet their needs (OECD, 2001:11). The World Bank had committed to promoting sustainable development and to the proposition that "economic growth, the elevation of poverty and sound environmental management in many cases mutually consistent objectives." (Pezzey 1992: 23). The 2030 Agenda for Sustainable Development that was adopted by 193 Member States at the UN General Assembly Summit in 2015 committed to achieving sustainable development by 2030.

In the last decades (Mulder, Jeroen and Bergh, 2001), there has been an increasing worldwide interest in the goal of sustainable development. The concept of sustainable development emerged when the economic development path focused on economic aspects more than environmental and social aspects (Shoja & Heidari 2015). The economic view on sustainable development (Munasinghe, 2002) is geared towards improving human welfare, primarily through increasing the consumption of goods and services. Economists look at the environment only from the point of view of externalities (Baumal & Oates 1988, Van de Bergh 2010). The environmental domain focuses on the protection of the integrity and resilience of ecological systems. The social domain emphasizes the enrichment of human relationships and the achievement of individual and group aspirations, '*human-centred development*' (Shoja & Heidari 2015). The interactions among these domains are also important to ensure a balanced assessment of trade-offs and synergies that might exist among the three dimensions.

The concept of sustainable development (Abazi, et al, 2017, Wang 2010) has become one of the most contested concepts and is indispensable at present time. Sustainable development consists of three main components: (1) economic freedom, (2) environmental protection and (3) social inclusion. An economically viable system should be able to produce goods and services and continue to maintain manageable levels of government and external debt. Finally, this will be able to avoid extreme sectoral imbalances that cause damage to the environment. A sustainable environmental system should maintain a sustainable resource base, avoiding the over-exploitation of renewable resources. In terms of the social domain, a sustainable social system should achieve equality of distribution, provision of social services including health and education, gender equality, and political and participation responsibilities.

Achieving sustainable development (UNO, 2013) will require global actions to be delivered on the legitimate aspiration towards further economic and social progress, requiring growth and employment, and at the same time strengthening environmental protection. According to Abazi et al (2017), sustainable development requires economic growth, which leads to increased productivity, increased employment, reduced poverty, inflation stability, the boost of human capital, and rapid technological progress (Abazi et al 2017). Poverty eradication, changing unsustainable and promoting sustainable patterns of consumption and production, and protecting and managing the natural resource base of economic and social development are the overarching objectives of and essential requirements for sustainable development (UNO, 2013). In this broader context, the protection of climate and the environment will need to be pursued as a universally shared goal.

The concept of social sustainability is about more than just providing for our social well-being – it is about sustaining a high level of social well-being in the long term (Brain, 2019). Equity, understanding diversity inclusion, quality of life, opportunity and individual empowerment have been identified as social factors that are key to sustaining social well-being in the long-term (Brain 2019).

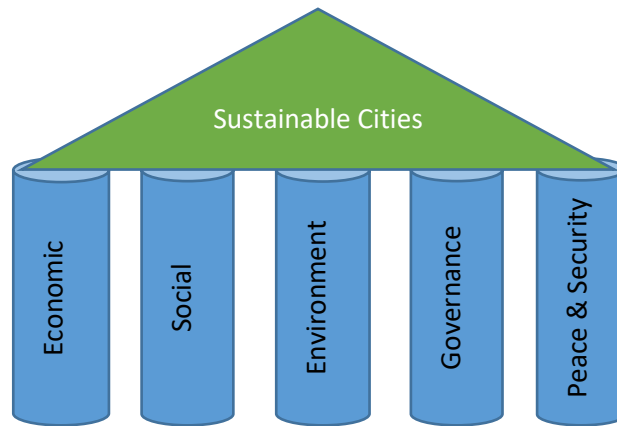
Economic freedom has also been an influential factor towards sustainable development. Economic freedom provides choice for selecting business opportunities and secures property rights (Mushtaq & Khan, 2018). Trade, financial and labour freedom are components of economic freedom and the government should encourage civil and political freedom, improving investors' confidence and sustainable development. The study by Mushtaq & Khan (2018) analyzed economic freedom and sustainable development for a panel of 58 countries and observed that economic freedom has been found positively influence sustainable development. Economic freedom provides choice for selecting business opportunities and secures property rights.

Sustainable Cities: The concept of sustainable cities has been discussed since the 1990s (Satterthwaite, 1992). Sustainable city development involves economic, social and environmental development (Albayrak & Eryilmaz 2017, Albayrak & Senlier, 2015). However, the idea of "urban sustainable development" is mainly coming from environmentalists through their discussions about environmental issues, especially through the discussion about issues in the urban environment (Shoja & Heidari 2015). The urban sustainable theory also investigates the sustainability of the city, the sustainable model of settlements, and the effective transport model since it considers urban development for the joy of the urban settlers (Ziari, 1999). The concept of sustainable city development is a very broad aspect of studies in development. The concept is not only considered historical developments but also in this regard the rational development of various sciences and social knowledge are considered (Larijani 2016). This focuses on better living and working conditions for the inclusive groups (UN 2013). United Nations in its Rio de Janeiro Conference on Environment and Development in 1992 gave the highest priority to sustainable development. However, urban sustainability was discussed as a vital component of the sustainable development agenda in 1996 at the United Nations Conference on Human Settlements, held in Istanbul (UN 1997). It addressed urban sustainability as an integration of economic, social and environmental issues.

An in-depth discussion on sustainable cities was done in 2002 at the World Urban Forum. In addition to the three aspects of sustainable development, governance issues were also addressed at the World Urban Forum in 2002. These four issues were again discussed at the World Summit on Sustainable Development, held in Johannesburg in 2002 and governance issues were addressed under the broader theme of peace and security. Therefore, sustainable cities can be seen as an integration of four pillars; (1) economic

development, (2) social development, (3) environmental management, and (4) urban governance (UN 2013). The economic development pillar is built upon green productive growth, decent employment, renewable energy, and technology and innovation. Education and health, food and nutrition, green housing and building, water and sanitation, green public transportation, green energy, and social capital are taken under the social development pillar (Figure 1).

Figure 1: Pillars of sustainable cities



The environmental management pillar consists of forest and soil management, waste and recycling management, energy usage efficacy, water management, air quality, and adaptation to and mitigation of climate change. Environmental-ecologic values hold priority in the environmental pillar (Albayrak & Eryilmaz 2017). The urban governance pillar includes planning and decentralization, reduction of inequalities, strengthening of civil and political rights, and support of local, national, regional and global links (Shoja & Heidari 2015, UN 2013). According to the definition provided by the United Nations Development Programme (UNDP) governance is “the exercise of political,

economic and administrative authority in the management of a country’s affairs at all levels” (UNDP 1997: 5). However, the current global security situation heavily puts pressure on city planners. Cities all over the world are facing security challenges because, over the years, the incidences of crime and terrorist acts and the degree of violence have increased terrifically (Hove et al., 2013, Savitch, 2000). Insecurity is a widespread threat to sustainable city development. Cities are investing a significant amount of resources for security purposes. Therefore, peace and security can also be considered the fifth pillar for sustainable cities.

Table 1: International attempts for sustainable city development

Year	Event-activity
1992	Agenda 21 / Local Agenda 21 / UN Conference on Environment and Development, Rio (Brazil)
1992	European Urban Charter I
1994	European Conference on Sustainable Cities & Towns, Denmark
1999	ESDP-European Spatial Development Perspective, Postdam
2000	Guiding Principles for Sustainable Spatial Development of the European Continent CEMAT
2001-2007	Sustainable Cities Program UNEP-UN Habitat
2004	Charter of European Cities & Towns Towards Sustainability - Aalborg Charter, Aalborg, Denmark
2006	European Sustainable Development Network (ESDN)
2007	Leipzig Charter on Sustainable European Cities, Leipzig
2008	European Urban Charter II
2016	UN-Habitat III Conference on Housing and Sustainable Urban Development, Quitom Ecuador
2000, 2002, 2004, 2006, 2008, 2010, 2012, 2013, 2014, 2015, 2016, 2017, 2019	International Conferences on Sustainable City: Rio (2000), followed by Segovia (2002), Siena (2004), Tallinn (2006), Skiathos (2008), A Coruña (2010), Ancona (2012), Kuala Lumpur (2013), Siena (2014), Medellin (2015), Alicante (2016), Seville (2017), and Valencia (2019)

Source: Adapted from Albayrak & Eryilmaz (2017).

Recently, sustainable city development has been recognized in the Sustainable Development Goals (SDGs) in the 2030 Agenda for Sustainable Development. While several SDGs relate to sustainable cities, Goal 11 directly addresses sustainable cities: *"make cities and human settlements inclusive, safe, resilient and sustainable."* The following targets were set for achieving sustainable cities: Target 11.2- By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons; target 11.3- By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries; target 11.4- Strengthen efforts to protect and safeguard the world's cultural and natural heritage; target 11.5- By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations; target 11.6- By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management; target 11.7- By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities; target 11.a- Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning; and target 11.b- By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels (UN 2015).

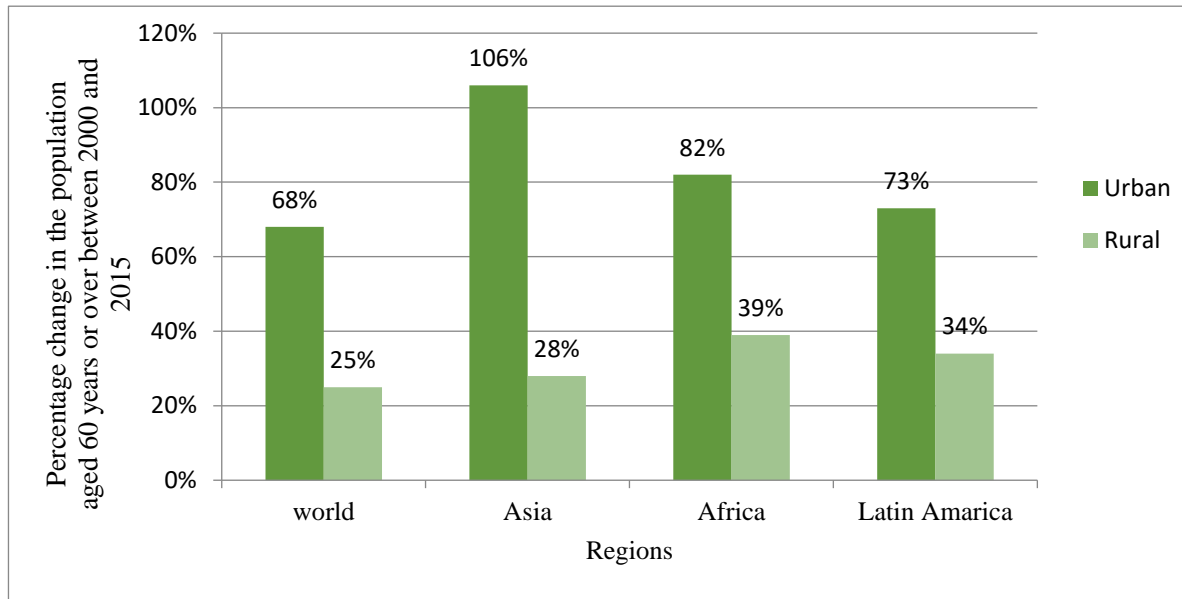
Urban Aging: Today ageing is a major policy issue in the developing world (UN, 1991). Every country in the world is facing growth in the number and proportion of elderly persons in their population which makes changes in social investment, production, health care services, public utilities, transportation, social protection, savings and consumption structure enormously. In Asia, the crisis is an immediate one (World Bank, 1994). In Africa, ageing is a crisis that is just beginning to reveal its shape (Apt, 1995). In the Latin American region, it takes as a potential cause for concern. It is poised to become one of the most significant social transformations of the twenty-first century, with implications for nearly all sectors of society (United Nations, 2015). The socioeconomic consequences of ageing are

significant areas for policymakers all over the world. Meanwhile, ageing leads to the burden of dependency. Growth in the numbers and proportions of the elderly population can be expected to have far-reaching economic, social and political implications including labour and financial markets, the demand for goods and services, such as housing, health care, transportation and social protection, as well as increasing the demand for care, and technologies to prevent and treat non-communicable diseases and chronic conditions associated with old age. Demographers demonstrate population ageing as increasing the median age of a population or an alteration in the age structure of a population, so that elderly persons are increasingly represented within a country's overall age structure. Meanwhile, population ageing is a natural, mostly irreversible consequence of the demographic transitions that all countries are going through or have completed (Bloom, 2012).

Population ageing is no longer a phenomenon in developed countries. The pace of population ageing is progressing much more quickly in developing countries. Developed countries such as Australia, Georgia, Hong Kong, China, Japan, New Zealand, and Russian Federation have already experienced increasing ageing of their populations. Meantime, many countries including China, the Republic of Korea, Macao, Singapore; Sri Lanka and Thailand are facing the pressures of the ageing population. In recent years, fertility has declined in nearly all regions of the world. Even in Africa, where fertility levels are the highest among all the regions, total fertility has fallen from 5.1 births per woman in 2000-2005 to 4.7 in 2010-2015 (United Nations 2017). Therefore, in the current world, many middle and lower-income countries are presently experiencing rapid growth in their older populations as a result of socioeconomic and demographic factors. The dynamics of population ageing vary from country to country depending on their level of social, economic and demographic development.

Ageing population and urbanization have become major underlying demographic shifts taking place in nearly all the countries of the world (United Nations, 2013). Urban ageing is an emerging main factor that contracts with the population of elder people living in cities. The ageing population of urban areas is a positive and challenging phenomenon in developing countries because population ageing and urbanization are the culmination of successful human as well as economic development. The elderly population is rising faster in urban areas than in rural areas. The number of people aged 60 years or over increased by 68% in urban areas, compared to a 25% increase in rural areas during the period between 2000 and 2015 (See figure 2). As an outcome, older persons are increasingly concentrated in urban areas. In 2015, 58% of the world's people aged 60 years or over resided in urban areas, up from 51% in 2000 (United Nations, 2015).

Figure 2: Percentage change in the population aged 60 years or over between 2000 and 2015 for the developing regions, by urban/rural area



Source: United Nations, 2015.

There is a significant increase in the number of elderly people in Asia, Africa and Latin American countries. The number of people aged 60 years or over in urban areas in 2015 was more than double (106%) the number in 2000 in Asia. Meantime, the regions that are urbanizing the fastest in Latin America and the Caribbean, Asia and Africa saw major differentials in the growth of the number of older persons between urban and rural areas. Due to this phenomenon, urban areas in developing countries must make sure of their inclusion and total access to urban spaces, structures, and services. Therefore, urban areas are called upon to complement the efforts of governments to address the consequences of the unprecedented demographic shift.

Population ageing and urbanization are some of the direct results of successful human development during the last century. This takes place in the context of processes of modernization, democratization, complex migration flows and patterns, emerging technologies, economic globalization, fiscal constraints and climatic change (Makore, 2018). Further, with the urbanization in developing countries, there is an increasing trend towards nuclear families coupled with declining fertility and increasing longevity, and the ability of families to take care of old aged people is gradually declining. Besides, the changing family structure and composition in the face of urbanization would have a negative impact on social and economic norms in familial care imposing pressure on the provision of formal residential care for the elderly. As a result, the challenges faced by ageing developing economies in the world in the years to come would be more complex than those faced by ageing developed economies.

It is estimated that within the next five decades, over 80% of the world's older people will be residing in developing countries. Meanwhile, urbanization is pushing an ever-increasing number of people to urban areas. China has experienced a huge wave of internal migration from rural areas and from small- and medium-sized cities to large cities. The elderly percentage in urban areas increased by 0.6% between 1982 and 1990 and 1.78% between 1990 and 2000 (Gan and Fong 2018). To reduce the burden, China's 12th

"Five Year Development Plan on Ageing" includes developing a nationwide system of older persons' homes with 3.42 million more beds for the elderly and encourages all grassroots medical institutions to provide health services and monitor the conditions of people aged 65 and older (Du & Wang, 2016).

On the other hand, India will be the youngest country in the world by 2020, but 20 per cent of its population will be 60 years and above by 2050, up from 8% in 2011. India's total urban population in 2011 was 377.11 million. According to the United Nations projections, India will add another 416 million urbanites by 2050, making the total urban population around 793 million. 20 per cent of this population (approximately 160 million) will be the old, comprising the young-old (60-70 years), the middle-old (70-80 years) and the very old (above 80 years). The very old among these would be the fastest-growing segment (Jha, 2019). To overcome the above situation, the policymakers in India make efforts to create geriatric wards in hospitals and exempt the elderly from queues, introduce training and orientation to medical and para-medical personnel in healthcare of the elderly, and mobile health services, special camps and ambulance services for the old by charitable institutions and not-for-profit healthcare organizations. India also works in elder-friendly layouts of housing colonies, and ease of access to public and other private services for elderly people.

Further, South Korea is one of the fastest-ageing countries and is expected to become a super-aged society within 12 years (Lee et al., 2014). The country has experienced both sharp declines in fertility and substantial gains in longevity (United Nations, 2015). As well as the unemployed elderly or the elderly who live with their children are most likely to move to urban areas (Pak & Kim, 2016). To address the situation, the city of Seoul has made the subway system more accessible to seniors; the city introduced several age-friendly adaptations to accommodate elderly people.

The oldest population of the Latin American region in 2050 is expected to be around 40% of its population aged 60 years and over. Many older people are moving to cities like Bolivia. Meanwhile, the demographic window remains open for

another 20 years to address ageing populations in Latin America. Therefore, the region should establish appropriate policies to overcome this situation. The presence and the growing numbers of elderly people in urban areas call for a better understanding of the context of ageing in sub-Saharan Africa as well as the situation of older people living in urban areas in the region. These urban areas are characterized by worsening economic and social conditions, especially in the sprawling, informal settlements of cities across sub-Saharan Africa (Ezeh et al., 2006).

Challenges and opportunities in urban ageing

This section identifies the man economic, social, environmental, governance and peace and security connected to building sustainable cities with special attention to urban ageing in developing countries. The demographic shift toward urban ageing has significant implications for sustainable city development. In developing countries, low quality and lack of urban infrastructures such as power generating system failures, congested motor traffic, inadequate public transport, inefficient ports, and inadequate competitive and equipped schools have hindered urban competitiveness and sustainable economic development. Van Hoof et al. (2018), based on their studies in European settings, highlighted that the features of age-friendly cities were determined in eight domains of urban life: (1) outdoor spaces and buildings; (2) transportation; (3) housing; (4) social participation; (5) respect and social inclusion; (6) civic participation and employment; (7) communication and information; and (8) community support and health services.

Elderly 'silver' labour: Older people become a very significant resource group in the labour market since they are skilful, experienced, and healthy. Employing the elderly 'silver' labour is a real challenge in city areas and a wonderful opportunity for the labour market. *'A group of healthy old people with knowledge and skills is the precious wealth of the entire society'* (Wang, 2010: 207). However, a flexible work environment and lifelong learning possibilities must be offered. Retaining older city employees and promoting entrepreneurship among older people are important. Increasing the labour force participation of older people improves their quality of life and minimises their health hazards and risks of isolation. According to United Nations (2017b), labour force participation of men aged 65 years or over has increased gradually from 1990 to 2015 in developed countries including Europe, Oceania and Northern America, but it declined gradually in Asia, Africa and Latin America and the Caribbean. Older women's labour force participation increased in all regions between 1990 and 2015. Many countries have changed their retirement policies to keep the valuable elderly group in the labour force. Countries should gradually increase the age of retirement. For instance, Germany has increased the age of retirement to 67 to cut down on the retirement pension budget. This may also help to improve their quality of life.

There are two main challenges in employing elderly people: (1) their knowledge of new technology in the case of smart industries, and (2) their physical strength, energy and adaptability in the case of labour-intensive industries. Governments in developing countries should support the life-long learning and employment of the older population.

Elderly caring: Current demographic trends show that the elderly population becomes bigger and bigger, and they live longer. It has also been predicted that the majority of elderly persons live in urban areas. In many developing countries,

working-age family members look after their elderly family members. Thus burden mainly goes to female family members, which directly and negatively affects female labour force participation. In city areas, working-age family members have limited capabilities and capacities to look after elderly persons since city dwellers have to face a tremendous amount of economic pressure. In 2015, there were 7 people in the traditional working ages, 20-64 years, for each older person aged 65 years or over in the world. By 2050, there will be 3.5 working-aged people for each older person in the world. In Japan, the elderly dependency ratio will be 1 to 1 by 2050. Family base caring is not practical for city elders. Many countries are currently unable to provide sufficient long-term care solutions. Elderly caring, therefore, becomes one of the key challenges as well as it would be a good opportunity for sustainable cities. This trend will create new job opportunities for caregivers, and emerge new products and facilities with the support of new technologies. New smart elderly care residents will also promote more social and community nitrations among older persons by replacing in-home family-only caring and interaction to visits-to nursing residents, which further enhance the health conditions of elderly groups.

Social Security: In response to recent trends in population ageing, many developing countries have expanded the coverage of their contributory pension schemes and initiated non-contributory social pensions. Since there is no proper policy or mechanism to keep elderly people in the labour force in developing countries, social security pressure on GDP becomes very high in these countries. For example, in China, Wang (2010: 208), according to statistics of the subject report of "Establishment and Perfection of China Social Security System" by the Ministry of Labour in 1994, states that the total amount of insurance benefits of all retired people all over the country was 10.61 billion Yuan in 1984, 47.24 billion Yuan in 1990, 206.83 billion Yuan in 1997, and will respectively reach 7321.95 billion Yuan in 2030 and 18219.52 billion Yuan in 2050. In most countries of Latin America and the Caribbean, public spending on pensions varied from 1 per cent to 8 per cent of GDP but European countries spend in pensions about 8% on average.

Many cities in developing countries have not been developed with proper plans. The uncontrolled and unplanned urbanization has brought about severe socio-economic, cultural and environmental problems. (Daramola & Ibem, 2011, Jiboye, 2011, UNCHS, 2007). The working-age population has to generate more income and production to provide the elderly population with a good and healthy social security package, but the proportion of the working-age population to the population of the elderly is gradually narrowed down. In a country like China, it approaches 2:1 (Wang, 2010). However, one major concern is that pension coverage is usually lower among women than among men because of women's lower rates of participation in the labour market, their over-engagement in the informal sector, and their work as self-employed or unpaid family workers. Rural elderly people are almost totally dependent on their children, which will increase the economic burden on the family. But urban elderly people are mostly isolated and self-dependent. Therefore, it is very important to *establish and make perfect the old-age security system*. Such a system not only should guarantee the economic and healthy life of the elderly, but also encourage young people to become entrepreneurs. Such social protection systems must be free from high transaction costs. For example, India has a comprehensive social pension system, but transaction

cost is very high (Gentilini, 2015). Social protection for all is a key goal of the 2030 Agenda for Sustainable Development (Goal, 11).

Green and inclusive infrastructure: The demographic structure in urban ageing may require cities to revisit their urban design and plans to be attractive and competitive. Providing infrastructure facilities to keep elderly citizens mobile, connect, and inclusive while maintaining sustainable cities is a big challenge for city planners. These are good opportunities as well on the other hand. For example, investment in green and inclusive infrastructure can help the 'silver' citizens live longer and engage in some economic activities, which together promote sustainable development. Use of smart technology is increasingly used by many developed countries as a possible solution for dealing with some of the challenges related to urban ageing (Van Hoof, 2018).

Accessibility for older people to employment, healthcare, social care services, housing and the community is a major concern since many cities lack older people-friendly infrastructure. Many cities in developing countries have been not planned properly and lack proper and suitable facilities and services for the elderly. Therefore, the housing and services adapted to older residents should encourage the development of new types of housing, facilities, information and telecommunication technologies that improve access to health and social services.

Being healthy and staying healthy are important objectives for societies. Health services, preventative measures, and healthcare are some of the challenges of urban ageing societies. Walking is one of the preventive measures. Eco-friendly walking tracks are the most effective measures of preventative care (Cocchia, 2014, Righi, 2015, van Hoof et al., 2018). It is very important to redesign the urban area to increase attractiveness, well-being, and green. Cities must provide infrastructure for transport, communication, and other essential utilities including supplying electricity, water, sewage and other waste disposals. There is numerous such age- and eco-friendly cities in the Netherlands and Poland (van Hoof et al., 2018). Yokohama built new town districts to accommodate urban ageing and sustainable cities.

Urban poverty and ageing: Urban poverty is significantly higher and more complex than that of rural. Many developing countries have underestimated urban poverty and urban ageing, and are more focused on rural poverty. For example, according to Gentilini (2015), the coverage of safety nets among the urban poor is significantly lower in urban areas relative to rural areas. About 16.6 per cent of the urban household in the poorest quintile are covered by some form of safety net program, as opposed to 23.4% of the poorest rural quintile (Gentilini, 2015: 27). Cost of living in urban areas is considerably higher than in rural settings. Things in urban areas come through the market- transactions. Things are relatively expensive in urban areas. For example, in urban Nepal households spend about 28 per cent of their income on housing but in rural households about 7 per cent (Garrett & Ersado, 2003).

Good and effective urban governance: According to the UNDP (1997), good governance is a necessary condition to achieve equitable and sustainable development. At the UN-Inter-Agency meeting in 2001, five principles of good urban governance were adopted, namely (1) effectiveness, (2) equity, (3) participation, (4) accountability and (5) security (UN-HABITAT, 2004). Good urban governance must be free from corruption. In most developing regions including

Africa, Asia and Latin America, cities emerged as trading points and gateways for export and import. They have not been properly planned. Many developing countries use the top-down approach to policy formulation and implementation. However, effective and good governance must be characterized by greater involvement of NGOs and community organizations, greater transparency and accountability in both planning and implementation of local policy and the devolution of responsibility for urban affairs from the state or national level to the local level. Development policies, plans and programmes should be based on the real needs of the people. They must use the participatory development approach

Peace and security: Cities all over the world are affected by both random and organised criminal operations, and terrorist activities. Ensuring public security and enforcing peace is one of the key urban governance challenges facing developing countries. Over the years, the incidences of crime and the degree of violence have increased tremendously in many cities in developing countries. Women, the elderly and children are key victims of all kinds of crime. City businesses are also heavily affected by such crimes, violence and terrorism. Urban insecurity becomes a major challenge for urban governance. Reduction of disaster risk, crime and all other natural and human-made hazards for urban environments is closely connected to sustainable development, which aims to protect the environment and address human development and well-being.

CONCLUSION

Demographic structure in the world has already changed profoundly. The elderly proportion of the demographic structure is rapidly increasing. Urbanization is also a key concern in the world. Urban females more and more participate in the labour force. These trends have significantly altered family relations and family demographic structure. A new social protection approach that can minimize government budgetary burden, optimize social values, and protect ecological resources, needs to be developed. Labour market and infrastructure facilities should change and adjust to accommodate the older population.

Further research studies need to be conducted to examine the complex nexus among the five components of sustainable city development: social, economic, environmental, governance and peace and security. Indexes related to sustainable cities and urban ageing need to be developed to support planning, implementation and monitoring and evaluation of, as well as research on, urban ageing population and sustainable cities. More attention should be given to formulating urban policies to cope with the socio-economic and environmental consequences of urban ageing in fields such as social protection, education, employment, health, food security, housing, elderly care, and welfare services. Collective efforts should be made to formulate policies and programmes to keep the active and productive elderly in the labour market, community development, and decision-making process. Countries should take full advantage of this wonderful window of opportunity.

REFERENCES

- Abazi, H, Chaushi, B.A, Chaushi, A, & Tanevska, H.A, (2017). Identifying factors that influence sustainable development: the case of Masadonia. Conference paper: *Socio-economic perspectives in the age of xxi century globalization*, AT: Tirana, Albania, 525 - 530.

- Albayrak, A.N & Eryilmaz, Y. (2017). Urban growth in sustainability perspectives, *International Journal of Advances in Agricultural & Environmental Engineering (IJAAEE)* 4 (1), 139-143.
- Albayrak A.N & Senlier, N. (2015). "Industrial Ecology for Sustainable Cities" in *Environment and Ecology at the Beginning of 21st Century*, R. Efe, C. Bizzarri, I. Curebal, G. N. Nyusupov, Ed, Sofia: St.Kliment Ohridski University Press, 2015, 190-202.
- Bahraini, S. H. (2001), sustainable urban development: from thought to action. *Journal of Ecology*, 27 (2), 34-45.
- Baumol, W.J., & Oates, W.E., (1988). *The Theory of Environmental Policy*, 2nd Ed. Cambridge University Press, Cambridge, UK.
- Bloom, D. E. (2012). *The shrinking share of young people will more than offset the ageing of the population*. United Kingdom: IPPF.
- Brain, J. (2019). docplayer.net. Retrieved from <https://docplayer.net/https://docplayer.net/34683465-The-social-side-of-sustainability-joanna-brain.html>
- Cocchia, A. (2014). Smart and digital city: A systematic literature review. In *Smart City: How to Create Public and Economic Value with High Technology in Urban Space*; Dameri, R.P., Rosenthal-Sabroux, C., Eds.; Springer: Cham, Switzerland, 13-43.
- Connelly, S., (2007). "Mapping sustainable development as a contested concept", *Local Environment*, 12(3), 259-278.
- Daramola, A. & Ibem, E. O. (2010) Urban Environmental Problems in Nigeria: Implications for Sustainable Development. *Journal of Sustainable Development in Africa*. 12 (1), 124-144.
- Du, P & Wang, Y, (2016). Population ageing and the development of social care service systems for older persons in China, *International Journal on Ageing in Developing Countries*, 1 (1), 40-52.
- Ezeh, A. C., Chepngeno, I., Kasiira, A. Z., & Woubalem, Z. (2006). *The Situation of Older People in Poor Urban Settings: The Case of Nairobi, Kenya*. The National Academic Press.
- Gan, Y., & Fong, E. (2018). Elderly population changes in small- and medium-sized cities in China, 1982-2000. *SAGE Journal*. 12 (2): 19-23.
- Garrett, J. & Ersado, L. (2003). *A Rural-Urban Comparison of Cash and Consumption Expenditure*. IFPRI. Washington, D.C.
- Gentilini, U. (2015), *Entering the City: Emerging evidence and practices with safety nets in urban areas*, Discussion Paper No. 1504, World Bank.
- Han, J.; Chan, E.H.W. Qian, Q.K. & Yung, E.H.K. (2021). Achieving Sustainable Urban Development with an Ageing Population: An "Age-Friendly City and Community" Approach. *Sustainability* 13, 8614. <https://doi.org/10.3390/su13158614>
- Hove, M., Ngwerume, E.T. & Muchemwa, C., (2013). The Urban Crisis in Sub-Saharan Africa: A Threat to Human Security and Sustainable Development. *Stability: International Journal of Security and Development*, 2(1), 7- 14.
- Jha, R. (2019). Senior citizens, cities and city planning. *India matters*.
- Jiboye, A. D. (2011). Shelter for the Urban Homeless: The Challenge for Sustainable Cities' development in Nigeria. *The Built & Human Environment Review*. 4 (2), 14-21.
- Larijani, A.H, (2016). Sustainable Urban Development, concepts, features, and indicators, *International Academic Journal of Science and Engineering* 3 (6): 9-14.
- Lee, E. Y., Kim, H. C., Rhee, Y., Youm, Y., Kim, K. M., Lee, J. M., & Kim, C. O. (2014). The Korean urban-rural elderly cohort study: study design and protocol. *BMC geriatrics*, 14, 33. doi:10.1186/1471-2318-14-33
- Makore, B. C. N, (2018). Ageing in Urban Spaces: Developing Inclusive Urban Environments for Older People in Global South Cities. PhD Thesis, The School of the Built Environment, the University of Salford. The UK.
- Mulder, P., Jeroen C.J.M & Bergh, V.D. (2001). Evolutionary Economic Theories of Sustainable Development. *Growth and Change*, 12 (2), 110-134.
- Munasinghe, M. (2002). The Sustainability Trans - disciplinary meta - Framework for making Development more sustainable: Applications to Energy Issues. *International Journal of Sustainable Development*, 14 (2): 6-54.
- Mushtaq, S & Khan, A. (2018). Economic Freedom and Sustainable Development: A Panel Data Analysis. *The Pakistan Journal of Social Issues*, 5 (2), 89 -97.
- OECD; (2001). *The DAC guidelines, strategies for sustainable development*; OECD Publishing; Paris, France.
- OECD. (2015). *Ageing in Cities*. OECD Publishing; Paris, France.
- Park, J., & Kim, K. (2016). The residential location choice of the elderly in Korea: A multilevel logit model. *Journal of Rural Studies*, 44(3): 261 - 271.
- Pezzey, J. (1992). *Sustainable Development Concepts: An Economic Analysis*. World Bank Environment paper.
- Plouffe L., & Kalache A. (2010). Towards global age-friendly cities: Determining urban features that promote active ageing. *Journal of Urban Heal*. 87(3), 733-739
- Righi, V. Sayago, S. & Blat, J. (2015). Urban ageing: Technology, agency and community in smarter cities for older people. In *Proceedings of the 7th International Conference on Communities and Technology*, Limerick, Ireland, 27(3), 11-128.
- Savitch H.V.C. (2000). *Cities and security: toward a framework for assessing urban risk* (eds) Rosan. C, Ruble B.A, & Tulchin J.SC, Urbanization, population, environment and security, Woodrow Wilson International Center for Scholars, Washington DC. www.wilsoncenter.org
- Shoja, H & Heidari, M. (2015). The Role of Urban Sustainable Development and Urban Sustainable Management in Architecture, *European Online Journal of Natural and Social Sciences*, 3 (3): 29-35, Special Issue on New Trends in Architecture, Civil Engineering, and Urban Studies
- UNCHS (2007). *Urbanization: A Turning Point in History*. Global Report on Urbanization [Online] Available: www.unhabitat.org.
- United Nations (1991). *Ageing and Urbanization*. New York. Sales No. 91.XIII.12.
- United Nations (1992). *Bali declaration on population and sustainable development*, Fourth Asia and Pacific Population Conference, Bali.
- United Nations (1997). *Report of the United Nations Conference on Human Settlements (Habitat II)*, Istanbul. 3-14 June 1996, United Nations, New York.
- United Nations, (2013), *Sustainable Development challenges*, World Economic and Social Survey 2013, United Nation, New York.
- United Nations, U. (2015). *World Population Ageing*. New York: United Nations.
- UN General Assembly (2015). *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 14
- United Nations, (2017a). *World Population Prospects: the 2017 Revision*. United Nations.
- United Nations, (2017b). *Changing population age structures and sustainable development*, United Nation.
- UNDP. (1997). *Governance for Sustainable Human Development*. New York. United Nations Development Programme.
- UN-HABITAT, (2004). *Urban Governance Index Conceptual Foundation and Field Test Report*. Global Campaign on Urban Governance Global Urban Observatory. August 2004. United Nations HABITAT. Nairobi.
- UNO. (2013). *World Economic and Social Survey*. New York: Department of Economics and Social Affairs
- van Hoof, J., Kazak J.H, Perek-Bialas, J.M, & Peek S.T.M, (2018). The Challenges of Urban Ageing: Making Cities Age-Friendly in Europe, *International Journal of Environmental Research and Public Health*, 15(2), 1-17.
- van den Bergh J. C.J.M. (2010), Externality or sustainability economics? *Ecological Economics* 69 (2010) 2047-2052
- Varol, C., Ercoskun, O., & Gurer. Y. (2010). "Local participatory mechanisms and collective actions for sustainable urban development in Turkey", *Habitat International*.
- Wang H, (2010), Research on the ageing of the population and sustainable development, *Asia Social Science*, 6 (12), 206-210.
- World Commission on Environment and Development (1987). *Our Common Future* (the Brundtland Report). Oxford: Oxford University Press
- Ziyari, K. (1999). *New urban planning*, SAMT Publication, Tehran.