

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/312369239>

# INNOVATION CHALLENGES OF THE SILVER ECONOMY

Article · April 2016

---

CITATIONS

3

---

READS

4

1 author:



[Martin Zsarnoczky](#)

Szent István University, Godollo

15 PUBLICATIONS 8 CITATIONS

SEE PROFILE

All content following this page was uploaded by [Martin Zsarnoczky](#) on 15 January 2017.

The user has requested enhancement of the downloaded file. All in-text references [underlined in blue](#) are added to the original document and are linked to publications on ResearchGate, letting you access and read them immediately.



## INNOVATION CHALLENGES OF THE SILVER ECONOMY

**Martin Zsarnoczky**

*Szent Istvan University, Enyedi György Doctoral School of Regional Sciences*

---

### Annotation

The human population is ageing. This phenomenon is a major challenge for the society, but it can also be a great opportunity for business and economy. The competition for a better position in the ageing segment of the economy has already started worldwide. „Calico” was the first huge project in the United States to enter into this economic segment in an innovative way. In the EU, the „Silver economy” focused on developing strategies related to the ageing population, mainly in terms of special technology services. These services generally aim to support well-being through health monitoring, robotic assistance, electrical mobility or sport activities including health tourism, green care and web based home care solutions. Nowadays, innovation developers focus on solutions for elderly people. Economic sectors involved in innovation and development want immediate strategies and clear visions for the next decades. Health and social care, health services, self-health management and senior tourism all require ready models. The question is whether there is an innovative ready-to-use model that will be suitable for the needs of the Silver Economy?

KEY WORDS: Silver economy, innovative economic model, European demography, healthcare diamond, successful ageing

### Introduction

The population in the majority of the developed countries of the world is ageing. Many studies analyse the phenomenon itself, but only a relatively small group of researchers focus on the impact assessment and its possible benefits. Up until recently, industrial decision makers had not considered the 50+ generation as a strong market potential, and services and products designed for them were not prioritised. However, in today's unstable economic environment, senior people - pensioners and elderly people whose children live independently - represent one of the most important groups of buying power. This group - often called silver economy - is a major economic growth factor. Created by scholars of Oxford University, the term “silver economy” refers to the economy of the 50+ age group, including all their economic activities, products, demands and expenditures. Although the definition covers a huge economic potential, it is only a part of the total market mechanism; a so-called niche segment that still represent a strong buying power. By now, experts have realised that the elderly population is not a homogenous group of pensioners. Senior citizens are different in many ways. Age is a main distinctive feature: there can be decades of difference, which means that we can talk about “younger” and “older” elderly people. In their case, the right to well-being is just as significant as in case of other segments (European Commission 2015).

Different industries are constantly developing products and services especially designed for senior people; a new model needs to be created because of the differentiating factors within the silver sector: gender, cultural background, acquired skills, life experience or health status are of key importance. Taking into consideration the whole group of elderly people, it is

clear that there is a huge market segment with a currently unexploited potential. My research focuses on whether the existing mechanisms are suitable to answer the “ageing” challenges or new innovations are needed to fulfil the demands of the silver economy.

### Research methodology

The research topic is quite interesting because silver economy can create a new market niche and also carries a great innovation opportunity for all stakeholders. My study will describe the newest innovation areas and the most significant results achieved so far. I will also emphasize the importance of bottom-up and top-down innovation incentives related to the field of my study. My research is based on qualitative analysis. Qualitative methods provide rich and detailed information on the independent thoughts and opinion of the interviewees (Macdonald et al 2008). Interviews are one of the most popular qualitative research methods, with semi-structured interviews being the most widely used technique (Dicicco-Bloom et al 2006). This research method enables the researcher to get an in-depth knowledge about the impressions and attitude of the respondents. In the case of semi-structured interviews, it is vitally important to carefully select the right interviewees and interview types. My work consisted of 11 interviews with experts of the field of my research. The interviews were based on pre-defined open questions that also enabled further spontaneous questions.

### Results

The different impacts of innovations can be defined in all aspects of society and economy. The effectiveness of the management system strongly affects the competitiveness and the general life standard of the population. Innovative impacts are important because the

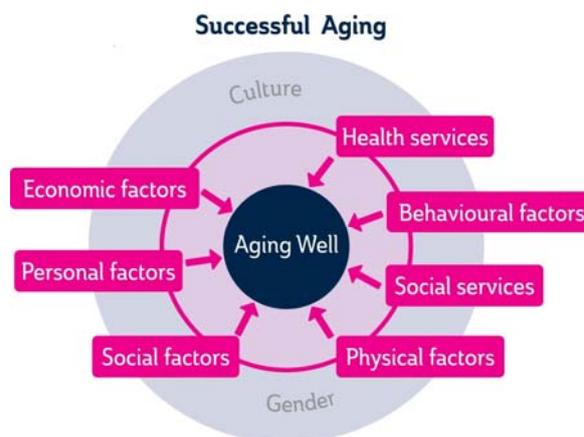
identification and solution of the possible unsuitable social processes play a key role in the mechanism of large scale reforms. Based on the common opinion of open societies, democracy and freedom of thought are the natural environment of innovation-based social mechanisms. Economic growth factors like education, knowledge and research are all closely connected to innovation. According to former studies of economics, human resources, natural resources, capital, technology and innovation were the key factors of economic growth. Among the aforementioned elements, innovation has become the most important factor, because in terms of the contribution to economic growth, education, knowledge and research have become more significant than capital (Gáspár 1998).

Innovation is most commonly used when something is renewed, a practice is transformed or a previous operation mechanism is changed. In this meaning, the term ‘innovation’ basically refers to renewal or upgrading. On one hand, innovation substantially means the renewal or upgrading of a process, while on the other hand it also refers to the adaptation capacity in a constantly changing situation. In that sense, the change takes place in accordance with a conscious development plan that aims to create a better, more effective and improved technology. Innovation usually takes place in connection with a specific development area instead of a whole system. When examining the history of economy, it is of common sense that new industries tend to displace the older ones, while some industries will mutate and survive by altering (innovating) their production systems or by developing new products or services. In his concept of creative destruction, Schumpeter replaces the old ones by creating new designs, companies and industries (Schumpeter 1934). The core characteristic of innovative thoughts is to question the existing order by exploring its deficiencies. Thus, innovation is not an action or a single result of action but a process. Its forward movement is based on continuous conflicts: some stakeholders are interested in the spreading of something new, and therefore they will go against the traditional interests of others. As a result of its adaptation strategy based on trial and error, innovation induces continuous economic growth. In reality, innovation does not only refer to new products, production methods, new markets and new production systems. With regards to the whole picture, innovation will result in replacement, transition, completion without alteration, organisational changes and in strengthening or displacement of traditional “behaviour”. Industrial organisations will choose conscious and differentiated adaptive behavioural strategies in order to achieve the best possible results. Therefore, new concepts, ideas and combinations are the basis of innovation that will create economic growth (Schumpeter 1934; Cohen et al 1989).

Demographic predictions and international research show that the world population is rapidly growing. Today’s 4:1 ratio of active earners and pensioners is projected to become 2:1 by 2060 (European Commission 2015). Within the growing population, the number of elderly people is increasing, with a higher rate of women

among them. With the development of economies, this trend is foreseen to increase further. With a predicted increased longevity, the senior population will age further. The developed world has to face a major challenge caused by the fact that the reproductive performance of the population is below the replacement level (i.e.: the number of deaths is higher than the number of new-borns) (L. Rédei 2006).

Based on the results of demographic studies, new scientific fields have emerged in order to better understand the new challenges. These scientific fields focus on studies aiming to fully comprehend the processes related to the elderly. For example, the science of gerontology examines the chronological changes in human life processes and aims to define the characteristic principles of ageing. Within gerontology, geriatrics experts focus on the health issues of senior people; in summary, geriatrics refers to preventive, curative and rehabilitation medicine. The understanding of ageing is of vital importance for service providers, because a healthy senior citizen is also one good consumer.



**Fig 1.** Successful Aging

Source: Zsarnoczky, M. Are we at the beginning of a new age of human and economic evolution?

The factors of successful ageing are closely connected to the environment and environmental impacts. It is of key importance to understand the chronological changes in human life processes that affect everybody equally. According to gerontologists, the ageing of the body is a normal biological process, not necessarily accompanied by pathological lesions or diseases. However, the biological processes of natural ageing increase the vulnerability to diseases and accidents.

Innovation industries need to realise that hereditary factors, environmental impacts, personal lifestyles developed in younger years, behaviour, social status, emotional and cognitive development, moral and ethical values and the accessibility to quality free time all influence ageing and life expectancy (Imre 2007).

The age of a person affects the self, the family, society, institutions, economy, culture, health and politics. Different risk factors can emerge at any stage during ageing, but there is a so-called “healthy ageing process” (Czigler 2000). To get a better understanding of the situation, it is necessary to realise that elderly people become ill because they are affected by a disease, and not

because they are old. Health issues directly related to ageing are typically movement coordination disorders, lack of stamina or dementia (Halmos 2002). The aforementioned statements clearly indicate that today's research related to the elderly is far more advanced in the field of health sciences than in economics.

The “new elderly” have an impact on almost all segments of the economy. The figure below shows that silver economy plays an important role in several different economic fields. The needs of the elderly create a pull-effect that will result not only in economic growth, but also will cause an unparalleled social alignment.



**Fig. 2.** Economic segments of the silver economy.  
Source: Zsarnoczky, M. New Hope for the EU

Service providers and the elderly people are gradually starting to realise the importance of a healthy lifestyle, and there is a tendency among them to open up towards regular physical activity and physical-emotional-intellectual harmony, and as a result, a higher level of empathy will emerge towards them. With regards to innovation, the process of ageing goes on in parallel with today's trends of urbanisation: the senior population tends to migrate from rural and peripheral regions towards central urban areas (Enyedi 2012). One of the major problems of urbanisation is that senior people are willing to move to urban areas mainly because of the available services, but the cities are often not ready to receive them (Veres 2006).

Developers of the “urban future” will have to cope with huge challenges in the near future. The creation of a senior-friendly space will greatly affect local people, living environments, existing road and pavement systems, utility and transport services, community spaces and parks, workplaces, shopping facilities, doctors' offices, schools, hospitals, and public institutions. Senior friendly accessibility will become an integral part of everyday life, offering user-friendly solutions for the whole society. The implementation of senior friendly spaces is a long-term process where the transformation of urban areas is only part of the development. However, with smart decision making, the newly developed spaces can also serve tourism purposes (Michalkó 2007). According to tourism experts, the innovative marketing brand of „designed for older people” will spread widely. There are several examples of senior friendly urban development incentives, where designated and independent areas are

created with the special need of elderly people in mind (The Green House Project/USA). One of the main safety priorities in such cases is that the development area should lie far away from any natural disaster area. Some world-class projects have become so complex that they offer multifunctional apartments specially designed for senior people where nursing and other healthcare services are available; in addition, the tenants and their family members can also enjoy health tourism services at the premises (Park Royal Resorts/Hungary). In the field of senior friendly solutions, the European Union is currently in the lead. Within the frameworks of the “Living Lab” projects in LÄNSI-SUOMI in western Finland, experimental settlements have been established with a population of several hundred people; the main objective of the project is to fully restore and also increase the mental and physical health of the tenants. The CALICO project (established by Larry Page, founder of Google) has a different approach towards ageing. The project defines the stoppage of ageing by biotechnology as a first objective, and aims to find the solution for that. With regards to “conventional” innovation processes, this reverse approach is quite unique, because usually, the discovery of a new technology is followed by the exploration of its utilisation possibilities.

## Conclusions

Innovations are various as different. The examination of innovations is generally based on three factors and is conducted in a planned and targeted way. The assessment of the current situation and the detection of innovation are based on previous experiences, while the innovation results will lead to acceptance or rejection. According to Drucker, the mere possibility of change can be considered as innovation, which can be interpreted in all aspects of life. “And it is change that always provides the opportunity for the new and different. Systematic innovation therefore consists in the purposeful and organized search for changes, and in the systematic analysis of the opportunities such changes might offer for economic or social innovation. As a rule, these are changes that have already occurred or are under way. The overwhelming majority of innovations exploit change” (Drucker 1993).

In order for a change to become an innovation, the majority of interests and intentions have to agree on a number of factors, .i.e.: the assessment of the situation, the conditions regarding the forthcoming processes, the objectives, and the evaluation of the results and the principles of networking. Innovation is typically a bottom-up incentive that usually starts from the side of the manufacturer (Baldwin et al 2011). Innovation has the potential to link products, services, technology, processes, organisations, management concepts, governance and institutional systems (Schumpeter 1969). Also we know that innovation in public service sectors is different from innovation in private services (Fuglsang et al 2011). In the new of life in old age, real innovations arise in the form of feedback from the side of consumers, and often have trouble reaching developers (Magnusson et al 2003). According to the newest research results, front employees tend to be the most successful (Cadwallader et al 2012).

To manage the system, a monitoring organisation is required with the ability to provide constant feedback. For example, in a senior home, the first interaction level is realised between patients and nurses; this relationship can be mutually and easily strengthened and developed. The next step is the second level, where the nurse will have to negotiate with the management level to improve the work processes. In the case of silver economy, the majority of the manufacturers' problems can be traced back to the fact that the first step of the interaction chain is missing. Of course, in all other ways, they have infinite innovation opportunities: the health industry is constantly in demand of new medications, and the newly developed therapies will always need new technologies. Robotics, for instance has become an integral part of our life, not only in industrial sectors but everywhere. 2.0 technologies are present in all industrial sectors: in finance (e.g. stock market programmes), transportation (e.g.: autonomous trains, home delivery by drone technology), space science, utility management (e.g. underground cleaning robots), architecture – all this can be seen as a whole robot society (Wasen 2015).

The emerging silver economy brings forward huge innovation challenges created by the demand for the development of services tailor made for the elderly. Companies have to prepare for the upcoming changes by capacity development, increased accessibility of their products and enhanced social equality. The winners will be those companies who can successfully adapt to the changing environment and are able to increase the satisfaction of their customers by developing a so-called anti-ageism approach. For the elderly, "age in place," in a place that is safe, affordable, walkable, healthy, and inclusive is of key importance. They will prefer places and services where they can feel a sense of connection and belonging. Older people today have a higher level of education than previous older generations and are more experienced in the use of technology. Across the UNECE region, the proportion of people aged 55-74 using a computer and using the Internet has increased considerably over the last ten years, albeit on very different levels across countries. (UNECE Statistical Database 2013). The baby-boomer generation has a higher level of discretionary income than before. They are more flexible in making choices and they are typically open to new services. They appreciate human values like kindness, patience and hospitality. This is especially true in the case of silver tourism, where the elderly represent a consumer group that is in many ways different from average travellers (Zsarnoczky 2016)

The sector of AHA (active and healthy ageing), wellbeing, eHealth, senior tourism, age-friendly housing, health and social care and their ICT-related subsectors are facing huge development processes in the near future. In the US, several large companies are moving into silver economy markets, such as Google with the acquisition of NEST and iRobot as well as Apple with its eHealth Kit and Wellness business. European larger companies like Bosch, Legrand or Philips have developed Silver Economy strategies. Japanese companies are also in the lead in development. Companies like HONDA, Kawada and Toyota have already achieved significant results in developing humanoid robots that are mostly used for

household or entertainment purposes. The development of robots specialised for helping handicapped people are another focus of robotics development worldwide.

Real estate experts emphasize the importance of developing "smart" buildings that use ICT technologies, especially because the market price of the formerly novel innovative technologies has fallen in the past years. Smart technologies are breaking through in all sectors; for example, in the real estate sector, there is a growing demand for social homes especially designed for senior people. Instead of the previously available automatized equipment, today it is possible to satisfy individual needs by remote controlling. The former one-way communication that mostly aimed at energy efficiency and remote controlling of lights, heating, cooling, entrance systems, etc., is being replaced by the newest developments of IT and robotics. In the case of senior healthcare, a special attention is given to nursing and monitoring robotics (Giraffplus/Italy).

Current studies show that the public funding rate is decreasing worldwide in the sector of senior care, resulting in a growing need for widely accessible and financially sustainable technologies. Today's senior healthcare system consists of five different sub-sectors, shown in the figure below. Four out of the five can be considered as optional services, while the fifth element represents single people or those without access to health services (because of financial or other reasons).



**Fig. 3.** Healthcare diamond  
Source: own edition

In some regions like southern Europe or Asia, the elderly still play an important role in the family life. Senior people are an integral part of the family system, and they are valued members of the society, too. However, in other societies, where the traditional family model had been displaced, the elderly mean a huge challenge for the so-called "sandwich generation" who has to take care of their children and parents at the same time (Kibbe 2003).

Active senior people who have financial resources represent a prioritised population segment. There are numerous preventive and medical services developed especially for them by healthcare and tourism service providers. In the tourism industry, huge amounts are

invested into the development of new medical tourism destinations. There is a fierce competition within health and medical tourism for the senior age group. New technologies represent huge possibilities for industries like cosmetology, plastic surgery, anti-ageing therapy and gene therapy.

Based on the results of my research, the largest strategic developments in the silver economy are foreseen to take place in the field of healthcare services. Within the sector, organisational and technologic innovations are the two main types. Organisational innovations can be vertical or horizontal. Horizontal innovation means that several service providers enter the market at the same time, while vertical innovation means that the same company comes up with multiple treatments or/and services. Technological innovation focuses on organisational changes related to services, in order to provide better accessibility of medicines or healthcare services, i.e.: logistic development of a novel medicine distribution system based on home delivery (Herzlinger 2006).

## References

- Baldwin, Carliss Y., von Hippel, Eric (2011) *Modeling a Paradigm Shift. From Producer Innovation to User and Open Collaborative Innovation*, *Organization Science*, 22/6: 1399-1417 <http://dx.doi.org/10.1287/orsc.1100.0618>
- Cohen WM, Levinthal D (1989) *Innovation and learning: the two faces of R&D*. *Economic Journal* 99/397: 569-596 DOI: 10.2307/2233763
- Czigler István (2000) *Túl a fiatalságon (Megismerési folyamatok időskorban)* Pszichológiai tanulmányok XVIII. Akadémiai Kiadó, Budapest, pp. 39-73.
- Drucker, P. (1993) *Innováció és vállalkozás az elméletben és gyakorlatban*. Park Kiadó, Budapest, pp. 43.
- Gáspár László (1988) *Általános innovációelmélet*. Magyar Innovációs Szövetség, Budapest, pp. 16-17.
- Enyedi György (2012) *Városi világ*. Modern Regionális Tudomány Szakkönyvtár, Akadémiai Kiadó, Budapest, pp. 186-189.
- Fuglsang, L. Ronning, R. Enquist, B. Framing (2011) *Innovation in Public Service Sectors* Routhledge New York, pp. 3-5.
- Imre Sándor (2007) *A klinikai gerontológia alapjai*. Medicina Könyvkiadó Zrt., Budapest, pp. 27-61.
- Halmos Tamás (2002/4) *Az öregedés élettani és társadalmi jelenségei*. Magyar Tudomány, Budapest, pp 402.
- Kibbe, C. (2003). *Employed caregivers struggle to find resources*. *New Hampshire Business Review*, 25(22), 1-2.
- Kohli, M. (2006) *Alt – Jung*, in S. Lessenich/ F. Nullmeier (Eds.), *Deutschland – Eine gesplante Gesellschaft*, Frankfurt/ New York, pp. 115
- L. Rédei Márai (2006) *Demográfiai ismeretek*. Reg-Info Kiadó, Budapest, pp. 53-113.
- Michalkó Gábor, Rátz Tamara (2007) *A tér vonzásában: a turisztikai termékfejlesztés térspecifikus vonásai*. Kodolányi János Főiskola tanulmánykötet, pp. 6-23.
- Schumpeter, J.A. 1934 (1961). *The Theory of Economic Development. An Inquiry into Profits, Capital, Credit, Interest and Business Cycle*. Oxford: Oxford University Press, pp. 29-54.
- Seelos, C., and J. Mair (2012) „*Innovation Is Not the Holy Grail. It is Time to Move from Innovation as an Ideology to Innovation as a Process.*” *Stanford Social Innovation Review* 12 (Fall) pp. 45-49.
- Veres Valér (2006) *A demográfia és a népességszociológia*. Egyetemi Kiadó, Kolozsvár, pp. 38-53.
- Wasen, K. (2015) *Innovation Management in Robot Society*. Routhledge Taylor & Francis Group, New York, pp. 27-49.
- Zsarnoczky, M. (2016) *Are we at the begging of new age of human and economic evolution?* Károly Róbert College, Gyöngyös, pp. 2-6
- Zsarnoczky, M (2016) *Silver Tourism*. Slovenská Pol'nohospodárska Univerzita, Nitra, pp. 3-7.
- Europa.eu (2015): Regional Policy [http://ec.europa.eu/regional\\_policy/en/projects/finland/the-living-lab-on-wellbeing-services-and-technology-enables-independent-living-for-elderly-people](http://ec.europa.eu/regional_policy/en/projects/finland/the-living-lab-on-wellbeing-services-and-technology-enables-independent-living-for-elderly-people)
- European Commission (2015): Growing The European Silver Economy <http://ec.europa.eu/research/innovation-union/pdf/active-healthy-ageing/silvereco.pdf>
- European Commission (2015): The 2015 Ageing Report: Economic and budgetary projections for the 28 EU Member States (2013-2060) [http://ec.europa.eu/economy\\_finance/publications/european\\_economy/2015/ee3\\_en.htm](http://ec.europa.eu/economy_finance/publications/european_economy/2015/ee3_en.htm)
- Giraff Plus [http://www.giraffplus.eu/index.php?option=com\\_content&view=frontpage&Itemid=54&lang=en](http://www.giraffplus.eu/index.php?option=com_content&view=frontpage&Itemid=54&lang=en)
- Park Royal Senior Care Homes (2013) Concepts and ideas. <http://parkroyal.hu>
- The Green House Project <http://www.thegreenhouseproject.org/>
- UNECE Statistical database (2013) Available from <http://w3.unece.org/pxweb/>

RECEIVED: 1 April 2016

ACCEPTED: 20 April 2016

**Martin Zsarnoczky, Szent Istvan University**, Enyedi Gyorgy Doctoral School of Regional Sciences PhD Student. Medical Tourism and Silver Economy are the scientific research fields. 3242 Parádsasvár, II Rakoczi Ferenc street 17. Address. Phone number +36/709-388-874. E-mail [martin@anunatrel.hu](mailto:martin@anunatrel.hu) Experiences are in developing rural areas, rural tourism and senior care homes.