

A Framework Proposal for Research into Silver Labour from a Resilient Perspective

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Abstract: Currently, enterprises face changes in the labour structure, determined by demographic factors. Population ageing in Europe is a relevant issue that has to be carefully analysed to be prepared and adapt European aspects and conditions to today’s generation. In light of this, the present paper proposes a framework as a first attempt to support enterprises in their management of the workforce age increasing average from a resilient perspective. The framework was built based on three constituent capacities of enterprise resilience: preparedness, adaptive, recovery capacities. For each one, research macro-areas and enterprise features were identified. Further research lines will focus on validating this framework and on extending its development to include specific actions.

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Keywords: Resilience, Silver Labour, Silver Enterprises, Framework, Preparedness, Adaptive, Recovery

1. INTRODUCTION

There is no doubt that enterprise manpower is the most valuable and important asset for companies. However, the increasingly proportion of senior workers means that companies must meet their needs for both parties to benefit: enterprises and their personnel.

The economy of the future is undergoing a fundamental change in the labour market structure, as determined by demographic factors. The main one consists in significantly increasing the population’s retirement age (Desfontaines, Korchagina and Strekalova, 2019). This new concept has been coined as Silver Economy (SE) and is related to the economic activities of the population aged 50 years and over.

Bojanic, Dzeba and Perisic, (2018) state that SE should focus on opening a new frontier in practical and policy thinking, and by considering aged people to be business opportunity instead of a “fiscal threat”. Therefore, silver enterprises should be resilient enough to adapt to this demographic labour shift. As Perry (2010) highlighted, effective strategies and coordinated efforts are needed to reduce the potential negative impact, and to turn the silver challenges of an ageing workforce into gold.

According to Eurostat data, the proportion of the population aged 50-64 years represents 20.7% of the total EU-27 population (Eurostat, 2019). Figure 1 shows the population share of the different age groups compared to the total population in year 2019. More than 40% of the European population is older than 50 years (green bars) and Eurostat’s baseline scenario projects that the ongoing population ageing pattern in the EU-27 is likely to continue until 2100, with both the size and proportion of seniors increasing in the total population (Eurostat, 2020). These projections also indicate that over the next eight decades, the average age of the EU-

27 total population is likely to increase by 5.1 years as a result of lower mortality rates, among others.

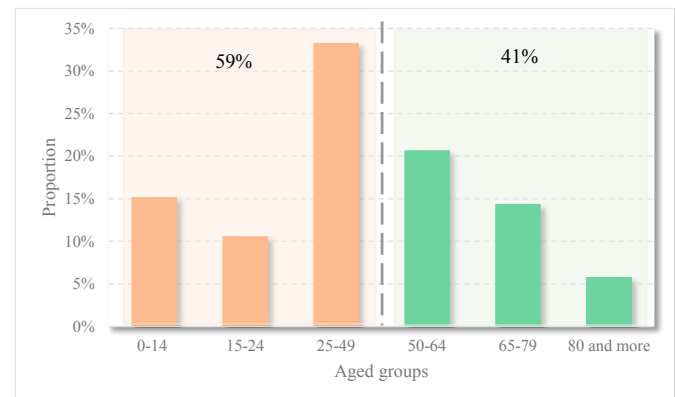


Fig. 1. Share of the population in the different age groups compared to the total population in 2019 (source: Eurostat, 2019).

Population ageing in Europe is a relevant issue that has to be carefully analysed to be prepared and adapt European strategies to fulfil the particular needs of the senior population from professional, health, technological perspectives, to name but a few. For this reason, involving an employable older population in the labour market means having to the study the necessary adjustments that enterprises have to develop to adapt to senior labour’s needs with a twofold goal (Desfontaines, Korchagina and Strekalova, 2019). Firstly, to address senior labour, while the second is related to the enterprise perspective. The first goal is to offer senior labour all the means for it to properly perform its professional activity. The second goal is related to companies being able to obtain advantages from the activity performed by senior labour through their valuable experience and by

managing the training projection for current labour. In light of this, the objective is to study and propose how enterprises have to manage the increasing workforce age average from a resilient perspective. Accordingly, the main scientific contribution of this research is to define a proposal from both the silver and enterprise resilience perspectives to frame macro-areas and/or strategies to enhance the resilience capacity of silver enterprises. Although this proposal mainly addresses manufacturing enterprises, it is worth mentioning that it could also be applied to any company type (e.g. service companies like banks, supermarkets, etc). Therefore, this study is addressed to answer the research question: which research areas should be addressed to enhance the resilience capacity of silver enterprises? Considering this first proposal is a high-level framework and further research will focus on complementing it with a more in-depth definition.

2. LITERATURE FOUNDATIONS

2.1 Silver Economy Foundations

"The silver economy (SE)" study, commissioned by the European Commission, defines SE as the sum of all the economic activity that serves the needs of people aged 50 and over, including the products and services they purchase directly, and the further economic activity that this spending generates. Consequently, SE includes a unique cross-section of economic activities that address the production, consumption and trade of relevant goods and services for seniors, which are both public and private, including direct and indirect effects (European Commission, 2015). Other SE definitions cover different age ranges: Andersson (2011) defines a silver generation with people aged 65 years and older. The present research considers SE to target people aged 50 and more.

SE, which recognises the ageing population to be a new source of economic and business opportunities, is already attracting significant attention from policy and decision makers worldwide (Barkovic Bojanic, Dzeba and Perisic, 2018).

As mentioned by the European Commission, (2015), SE comprises a vast range of knowledge domains and research fields to address the senior population. Krzymińska (2020) supports this idea by considering SE to be a holistic concept that covers various economic, professional and social aspects. The present study contemplates this broader vision of SE by taking into account the professional perspective. It particularly focuses on the challenges that enterprises have to deal with when older adults work in them. Normally silver labour is made up of members of several ages and is, therefore, characterised by very heterogeneous groups. In addition, life expectancy is becoming increasingly longer, and the professional activity expectancy of the silver generation is also consistently higher.

As the SE concept is a very broad one, the literature contains studies that have focused on different research aspects, such as technology development to guarantee the healthcare of the SE (Cho and Lee, 2007), research into the characteristics of silver population demand in old and new EU countries

(Pauhofova and Palenik, 2013), ergonomics issues (Perry, 2010), geriatric medicine aspects (Berrut, 2013) and architecture aspects adapted to the silver population's functional capacities (Andersson, 2011; Yang *et al.*, 2016; Rogelj and Bogataj, 2019).

Laperche *et al.*, (2019) coined a new term related to SE: 'geront' innovation'. It qualifies various forms of innovations developed to cater for seniors' people's needs. Sobolewska-Poniedzialek (2019) studied the implications of lifelong learning for SE development.

Based on the assumption that older people's increased activity is conditioned by better meeting their needs, some authors focus their research on sectors like recreation and tourism (Kyriakou and Belias, 2017; Sawinska, 2018). Others consider that the ageing population phenomenon is an opportunity for senior entrepreneurship (Dragusin *et al.*, 2017)

From an enterprise resilience perspective, prolonging the professional activity period leads companies to change their workforce model to be prepared beforehand for ageing labour, to adapt to their new necessities, and to recover whenever required, and to efficiently employ the silver generation's potential and expertise to benefit the company.

2.2 Enterprise Resilience Foundations

There are many resilience concept definitions. Plenty of disciplines define this term from different perspectives and knowledge domains. However, this research work is interested in the definition from the psychology and enterprise perspective. From psychology, one of the definitions that matches the vision of the present research is that by Charles (1998), who considers individual resilience to be the ability to cope with difficult working conditions to maintain workers' performance by promoting their well-being. To accomplish these welfare and security conditions, enterprises need to be as resilient as possible. Enterprise resilience encompasses the actions performed by companies to avoid, adsorb, adapt and recover from disruptions (Madni and Jackson, 2009). More information about resilience from an enterprise and/or supply network perspective is found in the research and literature reviews by Tukamuhabwa *et al.*, (2015); Ivanov *et al.*, (2017); Dolgui, Ivanov and Sokolov, (2018); Kochan and Nowicki, (2018); Bevilacqua, Ciarapica and Marcucci (2019) Hosseini, Ivanov and Dolgui, (2019); and Bevilacqua *et al.*, (2020).

As previously mentioned, this paper focuses on enterprise resilience from the business and silver labour perspectives. One of the European Union policy recommendations is to increase seniors' active participation in the labour market (European Commission, 2015).

Based on this, our research proposes a new key action from a holistic point of view to help to enhance enterprise resilience when dealing with silver labour.

A silver enterprise is one whose labour, or part of its labour, belongs to the silver generation. In this research work, we do

not define and quantify the percentage of silver labour that a company should have to be classified as a silver enterprise. However, this aspect will be studied in further research lines to provide insights into the ageing structure of European enterprises. This will allow us to define when a company can be considered a silver one more precisely. In this paper, a silver enterprise is considered to be any company in which at least one employee is aged 50 years or older.

By extending the silver enterprise definition with the resilient perspective, silver enterprise resilience is defined as enterprises' ability to be prepared in advance, adapt and recover to withstand the effects of labour ageing while retaining their integrity and ability to continue functioning. From this definition, three main capacities have been identified (Sanchis, Canetta and Poler, 2020), namely preparedness, adaptive and recovery, which are defined from a silver perspective as follows:

- Preparedness capacity. It is related to the anticipation and projection of the effects of labour ageing to guarantee the enterprise's long-term overall operation (based on Kamalahmadi and Parast, 2016)
- Adaptive capacity. The degree at which a silver enterprise modifies its circumstances and moves towards a stability condition (based on Luers *et al.*, 2003). Resilience accepts inevitability of change, and attempts to create a system capable of adapting to the new conditions and imperatives motivated by silver labour (based on Dovers and Handmer, 1992). So the more adaptable a silver enterprise is, the easier it is for it to anticipate and recover from labour ageing effects. This idea is also supported by Desfontaines, Korchagina and Strekalova, (2019), who affirm that a modern enterprise's successful activity depends on how flexible and adaptive its personnel management system is
- Recovery capacity. It is the ability to respond and recover from a situation which involves silver labour. This capacity focuses on competences to find a return path (recovery) to a steady state of functionality (stabilisation) once silver labour-related disruption has occurred (based on Melnyk *et al.*, 2014).

3. FRAMEWORK FOR RESILIENT SILVER ENTERPRISES

Following the foundations of the research by Sanchis, Canetta and Poler (2020), the framework herein proposed is based on the three constituent capacities of enterprise resilience: (i) the preparedness capacity with which silver enterprises should advance towards the labour aging phenomenon of its labour adoption prospective strategies; (ii) the adaptive capacity by which silver enterprises will make silver labour requirements or conditions suitable; (iii) the recovery capacity to regain and return to the steady level of operation. Within the proposed framework, the first two capacities work under certainty as silver labour is an expected and currently known projection that needs to be managed. The third capacity context (recovery) is more uncertain because it is related to sudden or unexpected events that have potentially more negative impacts on the silver generation.

Events like the current COVID-19 pandemic, which has more harmful and devastating effects on older populations than on young generations, is one example of this uncertainty. Figure 2 shows the framework proposal to build resilient silver enterprises.

Based on the three constituent capacities of enterprise resilience, different macro-areas and/or strategies were identified to enhance the resilience capacity of silver enterprises. The research methodology related to the identification of the main strategies is based on the literature review. Different sets of keywords are defined from a general perspective: TITLE-ABS-KEY ("silver economy") to more specific ones such as: (TITLE-ABS-KEY ("silver economy" OR "senior labour") AND ALL ("enterprise")); (TITLE-ABS-KEY ("silver economy" OR "senior economy" OR "seniors") AND TITLE-ABS-KEY("enterprise") AND TITLE-ABS-KEY("resilience")), among others and searched using Scopus. The results allowed the identification of areas like technology, innovation, banking services, health aspects, home appliances, among others. Based on this first identification, the different areas/strategies related to the enterprise/business perspective are categorised by considering criteria like the alignment level of each area with the constituent capacities of enterprise resilience, and the manifestation level of the different areas in the literature review.

From the preparedness capacity, the following three strategies were considered:

- Multiple functional versatility, defined as the agreement between labour and the enterprise's management, by which labour will be prepared to perform the functions of more than one professional group, and will be classified according to the functions they have performed for the longest time (Arroyo Varela and Rodríguez Rodríguez, 1999). Among the advantages of the multiple functional versatility to enhance enterprise resilience, we highlight: more diversified experience between young and silver generations; a more complete vision of the business strategy as labour performs different tasks on a regular basis; more resources availability to make any change; more tolerance in uncertainty situations.
- Mentoring: having to form mixed work groups, including representatives of several aged and gender cohorts (Desfontaines et al., 2019) is vital so that enterprises are prepared in advance before silver labour leaves them. Mentoring involves the practice of assigning a young member of the enterprise to the care of a silver experienced person to assist this young member during his/her professional career development. Palacios and Lumbreras (2006) highlight that the young member's professional career usually improves in relation to promotions, higher income, satisfaction in the work context and socialisation in the workplace. Silver mentors benefit from reputation and personal satisfaction. Finally, enterprises benefit from greater employee motivation, achieving more prepared labour, be willing to share their knowledge with others and being capable of facing decision-making processes with more guarantees.

- Training. Developing older people's professional and social potential has become a matter of intense deliberations in recent years. The improvement of such development is based on increasing qualifications through further education (Sobolewska-Poniedzialek, 2019). Armstrong-Stassen and Templer, (2005) identify the following issues related to training older workers: access to training; adjusting training methods and the learning environment to meet older employees' needs,

preferences and learning styles. They affirm that substantial evidence exists about work-related training being limited, and often non-existent, for older employees. Hence the need to design and implement silver members' policies and practices to provide training opportunities, and to encourage them to participate. Moreover, the training design and methods should be tailored for the silver labour's learning styles and experience.

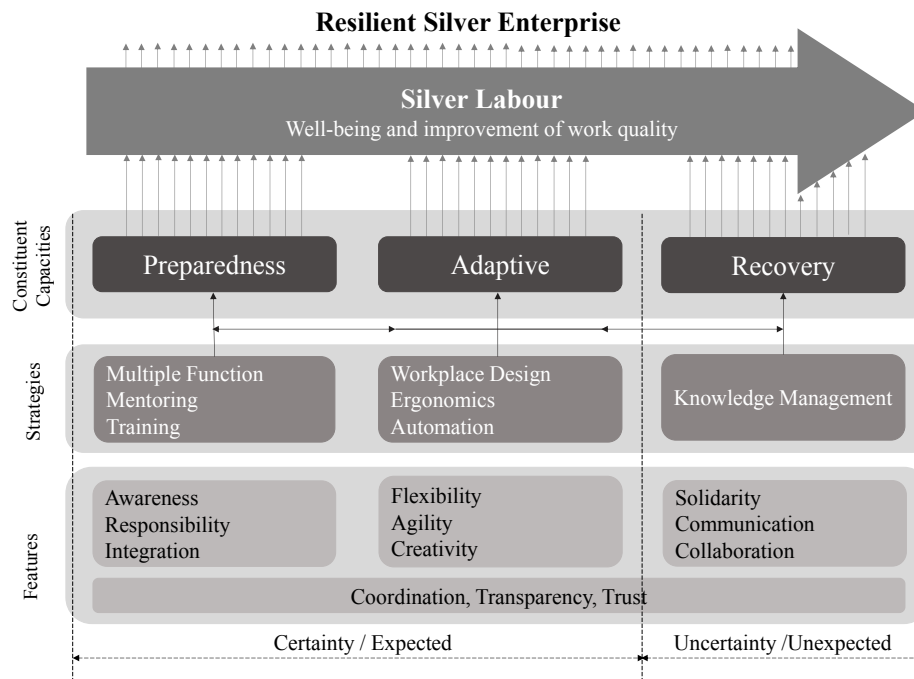


Fig. 2. Framework proposal for research into silver labour from a resilient perspective.

In order to build resilient silver enterprises, features like awareness of all company members of the senior personnel's main characteristics and requirements, responsibility from both top management and the company's employees to make reliable decisions that affect senior employees, and integration to make senior staff feel useful, experienced and part of the company, are all vital for supporting the preparedness capacity to face ageing changes. It is important for the whole company to be sensitive to the new context characterised by the particularities of silver labour's professional activity to make responsible decisions in an integrated manner by defining a holistic approach and avoiding patches to solve specific problems. Griffiths (1997) argues that changing managers' attitudes towards ageing workers through age awareness programmes is important.

From the adaptive capacity, the following main areas were identified as the most influential ones, and were included in the proposed framework:

- Ergonomics: the main function of ergonomics is to adapt machines and workstations to the enterprises' workforce characteristics. It is an interdisciplinary science in which different knowledge areas intervene, such as: psychology, anatomy, engineering or architecture. In this case, ergonomics is the enabler that reduces physical discomfort and improves comfort in work environments by reducing silver labour's fatigue. In this case,

ergonomics should be adapted to silver labour's specific needs. The study by Gonzalez and Morer's (2016) focused on ergonomics to include older workers in the knowledge workforce. It proposes a theoretical framework intended to develop a design guidance tool for the inclusive workstation. Given the broad scope of ergonomics science and, in order to delimit the areas of the proposed framework, workplace design and automation were taken as independent study areas to enhance enterprises' adaptive capacity to address silver labour. However, most studies have considered both areas in ergonomics science.

- Workplace design: conceptualising the workplace design and the adaptation process begins by recognising that silver labour has particular needs, values and interests. Workplace design should contemplate implementing health promotion activities. Some standards like ISO/TR, 20081: 2008 have inclusive purposes for older users and consider aspects like posture measurement tools, assessment and recommendations, which are all relevant for workstation design and development (Gonzalez and Morer, 2016).
- Automation: resilient silver enterprises should adopt techniques, methods or systems to operate and control processes by highly automatic means using the Internet of Things paradigm to facilitate human intervention. The research of Acemoglu and Restrepo, (2018) concludes

that those countries undergoing more major demographic change have invested significantly more in new robotic and other automation technologies. Their study also shows that, by using data on intermediate exports and patents, demographic change not only encourages the adoption of automation technologies, but also their development. Therefore, based on these results, it would seem that companies adopt automation as an adequate strategy to mitigate silver labour effects. Thus, more effort should be made to investigate this field.

Flexibility and agility are important aspects that enterprises should pay attention to because the more flexible and agile a company is, the more adaptable it becomes. Creativity is another characteristic that can allow companies to develop ingenious solutions to meet silver labour's needs.

Finally, the third capacity (recovery) is related to the fact that, although an enterprise has anticipated and prepared adaptively, it has been impacted by an unexpected event, such as the COVID-19 outbreak, whose influence is stronger on the silver generation than on the younger one. In this case, the proposed strategy encompasses the knowledge management area that requires the acquisition, creation and use of information to bounce back from unexpected changes (Nonaka, 2007). Resilient enterprises should be able to create, register and distribute knowledge rapidly and efficiently to recover from a disruption in the shortest possible time and at the lowest cost (Sanchis et al., 2021).

For this reason, it is of utmost importance that enterprises efficiently manage their knowledge. This needs solidarity by all the labour to make the knowledge employed in similar situations explicit. Moreover, communication should flow smoothly to become available whenever and wherever it is needed. Collaboration is another of the main features that resilient silver enterprises should promote in its labour to enhance the recovery capacity.

On the generic features that a resilient silver enterprise should have, coordination among all the functional units and its members is critical to minimise the labour ageing impact. The coordination of this change will be led by the enterprise's management to guarantee that all activities follow the same direction and fulfil the resilience silver-oriented objectives. It is also important to plan and implement all actions with transparency to generalise access information and to, thus, foster a better understanding of the opportunities, circumstances and procedures related to silver labour to create new decision-making perspectives. Ultimately, trust and confidence in the decisions made to build resilient silver enterprises will guarantee that silver and junior labours are aware of the plans and actions for directing and achieving labour well-being and companies' goals.

4. CONCLUSIONS

The SE term encompasses many aspects. This holistic SE perspective involves several different economic, professional and social aspects. This study is taken from the professional angle by particularly focusing on the challenges that enterprises have to face with their ageing workforce, also known as silver labour, by taking into account its resilience capacity. A framework for resilient silver enterprises is

proposed, which comprises three fundamental constituent capacities of enterprise resilience: preparedness, adaptive, recovery. For all these constituent capacities, a first attempt of strategies and research macro-areas was identified. Finally, according to the identification of previous areas, a set of advisable enterprises' features was proposed to manage silver labour's ageing in a resilient way. This framework is a first attempt to raise enterprises' awareness about the silver labour phenomenon. Future research lines will be addressed to look in more depth and more specifically at the framework, and particular actions will be implemented to assess its utility through mathematical modelling.

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