

Co-Creating Productivity in a Regenerative Silver Economy

An Ecosystem Perspective

Lichia Saner-Yiu & Raymond Saner
Diplomacy Dialogue/CSEND/

Geneva, 19th September 2026 (v.11)
CSEND Policy Brief Nr. 20

(Excerpts from our chapter to be published in book “Ageing and Society: A Multidisciplinary Approach”, a forth coming volume in Edward Elgar Publishing's "Multidisciplinary Movements in Research" series. Edited by Dr Andrzej Klimczuk)

Co-Creating Productivity in a Regenerative Silver Economy

An Ecosystem Perspective

Abstract

Population ageing is frequently framed as a fiscal and social burden, yet this perspective reflects a growing structural gap between demographic realities and prevailing ageing paradigms. In a post-2030 world shaped by labour shortages, ecological constraints, and technological transformation, prevailing models of “active” or “healthy” ageing are no longer sufficient to address demographic change. A more systemic response requires a framework of regenerative ageing that positions older adults as co-creators of economic, social, and ecological value within a Regenerative Silver Economy (RSE). The RSE links intergenerational collaboration, productivity ecosystems, and sustainability transitions. Integrating ageing into the post-SDG development agenda therefore requires a shift from dependency narratives towards regenerative participation and the co-creation of value. The brief concludes with recommendations for enabling this transition.

1. Introduction: Ageing at a Systemic Turning Point

1.1 Emerging Signals of Change in a Post-2030 World

Population ageing has long been recognised as a defining demographic trend of the twenty-first century. However, the decoding of its implications is undergoing a profound transformation. Ageing is no longer seen as a process unfolding in isolation; rather, it is interacting with a set of converging systemic disruptions that are reshaping the foundations of economies and societies. These systemic disruptions include:

- **Technological Transformation:** The rapid diffusion of artificial intelligence and automation is profoundly changing work organisation, labour markets, and economic activity.
- **Ecological Constraints:** Intensifying pressures associated with climate change and environmental degradation are affecting planetary security.
- **Socio-Economic Disparities:** Widening inequality and social unrest across developed and developing contexts, both within and between generations, can contribute to displacement, migration, and the erosion of trust and social cohesion.

Taken together, these dynamics constitute a critical signal of change for ageing societies. Labour markets are being reconfigured, with simultaneous workforce shortages in key sectors (e.g., healthcare, social care, construction, skilled trades, engineering, and systems design) alongside displacement risks in others. Concurrently, ecological pressures challenge growth-dependent, linear economic models, while widening inequalities erode social cohesion, intergenerational trust, and institutional stability.

In this context, the primary question is no longer whether societies can “afford” ageing populations, but whether existing socio-economic systems can adapt to harness the full spectrum of capabilities and potentials embedded in longer lives -- capitalizing on the “longevity bonus” enabled by advances in public health and medical technology.

1.2 Towards a Regenerative Reframing of Ageing

In response to these societal dynamics, ageing must be reconceptualized through an analytical and normative reorientation. Rather than viewing ageing as an end-stage to be managed or optimised, regenerative ageing positions “later life” as a vital phase of renewed productivity, stewardship, and value creation within a broader socio-ecological system, a purposeful and creative third age.

This reframing is operationalised through the “**regenerative silver economy**” (**RSE**), in which older adults act as co-creators of economic, social, and ecological value. Through intergenerational collaboration, entrepreneurship, care provision, knowledge transmission, volunteering, and civic engagement, older populations contribute not only to economic output but also to the regeneration of social cohesion, institutional resilience, cultural heritage and natural capital.

Central to this perspective is a shift in the meaning of productivity:

Productivity shifts from a narrow focus on market-based outputs towards the capacity to generate and sustain multidimensional value, including reductions in inequality, stronger community ties, and contributions to ecological sustainability.

In this sense, ageing becomes a potential driver of systemic regeneration rather than of decline.

2. Shortcomings in Contemporary Framings of the Silver Economy

As the world approaches the post-2030 horizon, sustainability will increasingly depend on recognising longevity not only as a social achievement, but also as a shared responsibility and an untapped source of human potential. Integrating ageing into sustainability policy requires a paradigm shift (Mavrodaris et al., 2022) that connects life-course, regenerative-economic, psychological, and intergenerational perspectives with social protection, care systems, and the green and digital transitions.

Transitioning from the conventional silver economy to a Regenerative Silver Economy represents a fundamental shift in perspective. The conventional paradigm operates on a consumption-focused model that views older adults primarily as recipients of goods and services within a linear, extractive economic framework. In contrast, the Regenerative Silver Economy shifts toward value co-creation and personal agency, prioritizing the recirculation of accumulated human, social, and financial assets within a circular and regenerative system logic.

Traditionally, the silver economy refers to market dynamics associated with the consumption patterns of older adults, focusing on goods and services such as eldercare, health technologies, assistive devices, retirement housing, and specialized tourism (European Commission, 2018).

However, framing older adults primarily as consumers while relying disproportionately on younger generations as producers and providers is increasingly unsustainable. By 2050, the global population aged 65 and above is projected to reach approximately 1.5 billion—about one in six people worldwide (UN DESA, 2019). Promoting a silver economy driven primarily by consumption risks reinforcing extractive, linear models that can intensify environmental degradation and social inequality (Raworth, 2017; Ellen MacArthur Foundation, 2019).

2.1 Definition of the Regenerative Silver Economy (RSE)

The regenerative silver economy (RSE) is defined as the participation of older adults in generating social, economic, and ecological value by mobilising their accumulated capabilities, knowledge, financial assets, time, and social capital. Rather than focusing exclusively on age-related

consumption, the RSE emphasizes the reintegration of these assets back into productive, social, and regenerative systems, where older persons choose to remain engaged.

In this sense, the RSE aligns with the logic of SDG 12 (Responsible Consumption and Production) and with broader sustainability transitions beyond 2030 (UNEP, 2021).

2.2 Theoretical Foundations

This brief synthesizes several complementary theoretical traditions:

- Institutional Economics & Commons Theory (Ostrom, 1990)
- Social Innovation & Co-Creation Theory (Moulaert et al., 2013; von Hippel, 2005)
- Capabilities Approach (Sen, 1999; Nussbaum, 2011)
- Life-Course Perspectives (Elder, 1994; Riley, 1987)
- Systems Thinking (Meadows, 2008)
- Humanistic psychology (Maslow, 1954; Rogers, 1961)

The regenerative ageing framework draws on several complementary theoretical traditions that together explain how older persons' capabilities can be mobilised within supportive social, institutional, and ecological systems. Institutional economics and commons theory (Ostrom, 1990) highlight how rules, governance arrangements, collective action, and shared resources shape opportunities for participation and sustainable value creation. Social innovation and co-creation perspectives (Moulaert et al., 2013; von Hippel, 2005) emphasise that innovation can emerge through collaborative processes involving citizens, communities, users, and other stakeholders rather than being produced solely by markets or formal institutions. The capabilities approach (Sen, 1999; Nussbaum, 2011) shifts attention from economic output alone to people's substantive freedoms, agency, dignity, and opportunities to pursue forms of participation they have reason to value. Life-course perspectives (Elder, 1994; Riley, 1987) situate later life within trajectories shaped by accumulated experiences, resources, relationships, and changing institutional contexts, while also drawing attention to mismatches between longer lives and established social structures. Systems thinking (Meadows, 2008) connects these dimensions by viewing ageing as embedded within interacting economic, social, technological, institutional, and ecological systems characterised by feedback loops and potential leverage points for transformation. Finally, humanistic psychology (Maslow, 1954; Rogers, 1961) brings the individual and relational dimension into the framework, emphasising human potential, personal growth, autonomy, meaning, and the enabling conditions through which people can continue to develop and contribute throughout later life.

Humanistic psychology adds a psychological and relational perspective that is less explicit in the other five theoretical traditions. It helps explain the inner and relational conditions of agency—why an older person might rediscover purpose, confidence, creativity, or a willingness to contribute—while Ostrom, Meadows, and the other traditions largely illuminate the institutional and systemic conditions that enable or constrain such agency. Humanistic psychology therefore helps explain the personal transformation through which latent capabilities can be activated and translated into meaningful regenerative participation. Taken together, these traditions support a view of regenerative ageing in which older persons are neither passive beneficiaries nor simply economic resources, but **agents and co-creators whose accumulated capabilities can contribute to individual flourishing, intergenerational wellbeing, and the regeneration of wider socio-ecological systems.**

3. Typology of Ageing Paradigms: From Extractive to Regenerative Models

To address the structural gap (Riley et al., 1994) between outdated linear conceptualisations of ageing or life course (i.e., education → work → retirement) and contemporary demographic realities, we propose a two-dimensional typology of ageing paradigms:

- a. Mode of Participation: Limited Agency (Dependency) vs. Active Value Creation (Contribution)
- b. Economic Logic: Extractive vs. Regenerative

This typology (Table 1) highlights that the principal limitation of current paradigms lies not merely in their level of ambition, but in their underlying logic. Even approaches that promote productivity of the older workers often remain embedded within extractive systems that prioritise short-term economic output over long-term social and ecological regeneration.

		Underlying economic logic	
		Extractive	Regenerative
Mode of participation	Limited agency (Dependency-Oriented)	Quadrant I: Traditional Model Ageing viewed as dependency, fiscal burden, and declining productivity; focus on care transfers (Magnus, 2009).	Quadrant III: Social Participation Focus on volunteering and community engagement; builds cohesion but underutilises broader innovative capacity.
	Active value creation (Contribution-Oriented)	Quadrant II: Extended Working Life Focus on prolonging market employment; risks reinforcing labour commodification and precarity without systemic reform.	Quadrant IV: Regenerative Ageing (RSE) Integrates economic agency with ecological and social renewal via knowledge recirculation, mentoring, and stewardship.

Table 1: Typology of Ageing Paradigms in Relation to Economic and Regenerative Systems (author's own conceptualisation)

4. Operationalising the Regenerative Ageing Framework

4.1 The RSE Co-Creation Ecosystem

Moving towards Quadrant IV requires an integrated co-creation ecosystem centred on a dedicated Co-Creation Hub. Within this structure, older adults participate through five primary operational channels:

1. Intergenerational Collaboration: Facilitating knowledge exchange, skill transfer, and joint innovation between younger and older generations.
2. Silver Startups and Social Enterprises: Supporting entrepreneurial ventures, social innovation projects, and venture mentoring led by older adults.
3. Reciprocal Care Systems: Establishing dual-role frameworks where older adults serve as active providers as well as recipients of social care.

4. Civic and Environmental Stewardship: Mobilizing older citizens for active participation in local governance, community resilience, and climate adaptation initiatives.
5. Regenerative Support and Lifelong Learning: Strengthening self-awareness and agency while broadening the repertoire of psychosocial roles available in later life.

Through these processes, the regenerative silver economy generates multi-dimensional value, extending beyond conventional economic metrics to include social and ecological contributions. Importantly, value creation is not a one-way output but part of a dynamic, iterative process in which outcomes feed back into system conditions.

Discussion: Ethics, Power, and the Political Economy of Regenerative Ageing

5.1 Intergenerational Equity and the Social Contract

Traditional welfare state bargaining is under severe strain due to shifting demographic ratios, housing market pressures, and changing labour dynamics (OECD, 2023, 2025). Without structural adaptations, perception of intergenerational inequity risk weakens social cohesion. RSE reframes the social contract from intergenerational transfer (a zero-sum redistribution model) to intergenerational co-creation (a synergistic model).

5.2 Addressing Inequalities and Algorithmic Ageism

Ageing experiences remain highly uneven across socioeconomic status, gender, and geography (UN DESA, 2023). Key risks to mitigate include:

- The Digital Divide: Exclusion from AI-driven labour platforms due to limited access, affordability, or digital capability.
- Algorithmic Ageism: Age-related bias or exclusion in automated recruitment, credit scoring, or public-service allocation systems (Stypinska, 2023; Saner & Yiu, 2026).
- Gender Disparities: Lifetime earnings gaps and uncompensated informal caregiving burdens (OECD, 2021a).
- Digital Literacy and Maturity: Limited digital literacy can constrain the ability to use digital technologies for learning, access to services, and productive participation.
- Barriers to lifelong learning: Inequitable access to flexible, age-inclusive learning limits older persons' opportunities to renew their digital, technical, relational and entrepreneurial capabilities throughout the life course (OECD, 2020).

5.3 Governance and Policy Implications

Transitioning to an RSE requires multi-level, adaptive governance (Ansell & Torfing, 2016) that complements conventional top-down administration with participatory co-production. Policymakers should develop anticipatory governance arrangements (UNITAR, 2026) that integrate:

- Flexible, non-linear retirement transition policies.
- Financial incentives for social enterprises led by intergenerational teams.
- Metrics measuring multi-dimensional value creation beyond standard GDP metrics (Stiglitz et al., 2009).

6. Conclusion: Reframing Ageing for Post-2030 Futures

Population ageing stands at a systemic inflection point. Viewing longevity primarily as a fiscal liability reflects a paradigm increasingly out of step with post-2030 realities. A Regenerative Silver Economy offers a pathway for transforming demographic change into an asset for sustainability, resilience, and

social cohesion. By aligning structural conditions, behavioural incentives, and normative values, societies can enable older adults—where they choose and are able to do so—to remain active co-creators of regenerative futures.

References

- Ansell, C., & Torfing, J. (Eds.). (2016). *Handbook on theories of governance*. Edward Elgar Publishing. <https://doi.org/10.4337/9781782548508>
- Elder, G. H., Jr. (1994). Time, human agency, and social change: Perspectives on the life course. *Social Psychology Quarterly*, 57(1), 4–15.
- Ellen MacArthur Foundation. (2019). *Completing the picture: How the circular economy tackles climate change*.
- European Commission. (2018). *The silver economy: Final report*. Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs.
- Magnus, G. (2009). *The age of aging: How demographics are changing the global economy and our world*. Wiley.
- Maslow, A. H. (1954). *Motivation and personality*. Harper & Brothers.
- Mavrodaris, A., Lafortune, L., & Brayne, C. (2022). Policies out of sync—Are healthy ageing agendas fit for the future? *European Journal of Public Health*, 32(Suppl. 3). <https://doi.org/10.1093/eurpub/ckac129.290>
- Meadows, D. H. (2008). *Thinking in systems: A primer*. Chelsea Green Publishing.
- Moulaert, F., MacCallum, D., Mehmood, A., & Hamdouch, A. (Eds.). (2013). *The international handbook on social innovation: Collective action, social learning and transdisciplinary research*. Edward Elgar Publishing.
- Nussbaum, M. C. (2011). *Creating capabilities: The human development approach*. Harvard University Press.
- OECD. (2020). *Promoting an age-inclusive workforce: Living, learning and earning longer*. OECD Publishing. <https://doi.org/10.1787/59752153-en>
- OECD. (2021a). *Towards improved retirement savings outcomes for women*. OECD Publishing. <https://doi.org/10.1787/f7b48808-en>
- OECD. (2023). *Promoting active ageing and intergenerational solidarity*. OECD Publishing.
- OECD. (2025). *OECD employment outlook 2025: Demographic change and the future of work*. OECD Publishing.
- Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge University Press.
- Raworth, K. (2017). *Doughnut economics: Seven ways to think like a 21st-century economist*. Random House.
- Riley, M. W. (1987). On the significance of age in sociology. *American Sociological Review*, 52(1), 1–14. <https://doi.org/10.2307/2095388>
- Riley, M. W., Kahn, R. L., & Foner, A. (Eds.). (1994). *Age and structural lag: Society's failure to provide meaningful opportunities in work, family, and leisure*. Wiley.
- Rogers, C. R. (1961). *On becoming a person: A therapist's view of psychotherapy*. Houghton Mifflin.

- Saner-Yiu, L., Saner, R., Yang, Y.F., Bonilla Garcia, & A., Borisch, B. (2026). Sustainability and Regenerative Ageing: Co-Creating Productivity in A Regenerative Silver Economy. DRAFT Chapter to the Book entitled "Aging and Society: A Multidisciplinary Approach", a forthcoming volume in Edward Elgar Publishing's "Multidisciplinary Movements in Research" series1. Edited by Dr Andrzej Klimczuk.
- https://www.researchgate.net/publication/404921714_Sustainability_and_Regenerative_Ageing_Co-Creating_Productivity_in_A_Regenerative_Silver_Economy_DRAFT
- Saner, R., & Yiu, L. (2026). Urgent need for synergy between the 2030 Agenda for Sustainable Development and the Paris Agreement. *Environment*, 68(1), 27–44.
- Sen, A. (1999). *Development as freedom*. Oxford University Press.
- Stiglitz, J. E., Sen, A., & Fitoussi, J.-P. (2009). Report by the Commission on the Measurement of Economic Performance and Social Progress.
- Stypinska, J. (2023). AI ageism: A critical roadmap for studying age discrimination and exclusion in digitalized societies. *AI & Society*, 38(2), 665–677. <https://doi.org/10.1007/s00146-022-01553-5>
- United Nations Department of Economic and Social Affairs (UN DESA). (2019). *World population ageing 2019: Highlights (ST/ESA/SER.A/430)*. United Nations.
- United Nations Department of Economic and Social Affairs (UN DESA). (2023). *World social report 2023: Leaving no one behind in an ageing world*. United Nations.
- United Nations Environment Programme (UNEP). (2021). *Catalysing science-based policy action on sustainable consumption and production: The value-chain approach and its application to food, construction and textiles*. United Nations Environment Programme.
- United Nations Institute for Training and Research (UNITAR) (2026). *Anticipatory Governance: Systems Thinking & Strategic Foresight for SDG-Aligned Integrated Planning*. <https://www.youtube.com/watch?v=FnTUHSvyCBk&t=75s>
- von Hippel, E. (2005). *Democratizing innovation*. MIT Press.