



BRIDGING THE DIGITAL DIVIDE: POLICY RECOMMENDATIONS FOR THE SOCIAL REINTEGRATION OF ELDERLY CITIZENS IN CHINA

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Abstract

In the twenty-first century, due to innovations in medicine, transformed medical procedures, and drastic changes in lifestyle, the average lifespan has increased compared to that of previous generations. In the Asian context, China has been no exception. Its high percentage of elderly citizens is largely attributed to its one-child policy, and the country currently has more than 250 million elderly citizens, whose living conditions are deteriorating.

World-class healthcare facilities, entertainment, and financial security are not enough to ensure a fulfilling life for senior citizens. They need social connections — to bond with others and remain part of society. Yet the rapid digitization of society has excluded older adults from active social participation. Older adults are not comfortable using technology to meet their daily needs. Something as routine as paying taxes online or video calling their grandchildren leaves them excluded from an increasingly digital world. This gap represents a clear opportunity for services tailored to their needs.

This brief outlines the problem landscape, draws on evidence from comparable economies, and proposes strategic recommendations for policy interventions and service models that can bridge the digital divide for the elderly population in China.

Background

Global aging has created new challenges for social resilience. The population aged 60 and over has become the fastest growing segment worldwide as fertility declines and life expectancy increases. For older people to remain healthy, independent, and active in their communities, social infrastructure and services must be available to them. Along with the aging trend, the technological revolution offers greater accessibility for most people to fulfill various goals such as information and communication, entertainment, social support, leisure, work, and relationships.



There are studies that show that technology can significantly increase the independence of older people and improve their quality of life (Fink & Rau, 2020). The spread of technologies around the world, such as computer networks and mobile devices, offers various new channels for reaching older people, for example through telemedicine and online shopping (International Telecommunication Union [ITU], 2021). However, despite the ease of use of technology devices and the affordability of smartphones, the digital divide persists. Older people continue to face barriers to using new technologies effectively and are less likely to adopt new technologies than younger generations (Ericsson, 2021).

Current and future technological development depends on the level of technological knowledge and the acceptance of technology by society. Given the popularity of mainstream digital technologies such as smartphones, digital illiteracy is perhaps the most important cause of the digital divide. One way to keep older people engaged and improve their wellbeing is to narrow the digital divide associated with technology use skills.

The Problem

Previous studies have highlighted and identified the challenges faced by the elderly population around the world. Studies from Bourett and Zugasti discussed the exclusion of senior citizens from the technology-driven world, naming it the digital disqualification of senior citizens. Furthermore, Cornwell and Waite's study indicated that higher chances of depression and anxiety are common in the older population when disassociated from information and communication technology, establishing a clear causal relationship between digital exclusion and deteriorating mental health.

Schaffer similarly identified anxiety and depression in the elderly population in France, referring to it as a loss of meaning in life within senior citizens. The author stated that the older generation finds it difficult to assimilate in the technology-driven world, where learning newer technological practices has become a necessity. The example of miniscule tasks such as paying bills and filing taxes being done online makes the elderly population anxious and nervous.

China is facing a large aging population of over 250 million, the proportion of which accounts for almost 18% and is estimated to double by 2050 (World Health Organization [WHO], 2011). The accelerating digital development has evolved into all spectrums of Chinese daily life including e-shopping, e-travel, e-delivery, and e-fitness. However, many elderly people in fast-paced urban life are feeling isolated and afraid of digital technologies such as the Internet, smartphones, and computers. They not only lack interpersonal relationships but digital literacy as well, leaving them isolated in an increasingly digitized world in which they cannot keep pace with technological evolution.

According to the 47th Statistical Report on China's Internet Development (China Internet Network Information Center [CNNIC], 2021), as of December 2020, the proportion of Chinese non-netizens aged 60 and above accounted for 46.0% of all non-netizens. Among the inconveniences reported by



non-netizens, 27.2% cited the inability to access public places due to the absence of health codes as the most pressing barrier, followed by the inability to make digital payments at 25.8%, and the inability to buy tickets or handle registration at 24.9%. Furthermore, 51.5% of non-netizens did not access the Internet because they had not mastered computer or network skills (CNNIC, 2021).

From the supply side, three structural barriers persist. First, older adults have limited acceptance of current electronic products, as cognitive functionality and adaptability decline with age, making it difficult for the elderly to identify various frauds when using smartphones, which leads to further resistance. Second, public service sectors such as banks, hospitals, and government offices blindly pursue digital management models without fully considering the actual situation of the elderly, thus affecting the exercise of their rights. Third, there is a blind spot in the development of digital technology, as current development is mainly aimed at young and middle-aged people, seeking innovation and speed, while ignoring the actual needs of the elderly group entirely.

International Evidence

Various economies facing similar challenges have adopted distinct strategies to address digital exclusion among older adults, providing actionable benchmarks for comparable interventions in China.

Russia

Mobile operators expanded wireless Internet access to remote parts of the country. The government introduced initiatives to teach the elderly to use Internet products for public services such as paying bills, making medical appointments, and reporting to authorities online, making digital access a matter of civic necessity rather than personal choice (Mediascope, 2020).

South Korea

Recognized as one of the most wired countries in the world (Statista, 2018), the South Korean government launched ed-tech projects to educate the elderly population and include them in the technology-driven society (BBC, 2016). The capital is taking assistance from humanoid robots to familiarize the elderly with smartphones, online web applications, and mobile apps, demonstrating that government-led, technology-assisted training models can be scaled effectively.

Japan

In 2016, the Japanese government introduced the concept of Society 5.0 — a super-intelligent society built on UAV delivery, AI home appliances, intelligent medical care, intermediary care, intelligent automation, and fully automatic driving (UNESCO, 2019). This represents a long-term structural commitment to building a digitally inclusive society where the elderly are not left behind.

Europe

Research funded by the British Academy identified five core barriers for elderly people using technology: lack of self-confidence and patience, fear of breaking devices or making mistakes,



privacy concerns and scams, physical functioning limitations such as small text and screens, and a lack of social capital or perceived reason to go online (Office for National Statistics, 2019). Training programmes developed in response are designed to account for all five factors simultaneously, rather than addressing them in isolation.

North America presents a comparable picture. The Pew Research Center found that 82% of 65 to 69-year-olds use the Internet, while seniors aged 80 and older are significantly slower to adopt new technology, with only 44% of this group reporting Internet use. Data from the 2016 General Social Survey indicate that 22.6% of Canadian seniors do not own a device capable of connecting them to the Internet, compared with 2.1% of non-seniors (Martech Zone, n.d.), reinforcing that the digital divide is not merely a behavioural issue but a structural one requiring deliberate policy intervention. These findings collectively reinforce that no single intervention is sufficient. Comprehensive, layered strategies addressing psychological, physical, and structural barriers simultaneously are required to bridge the digital divide effectively.

Recommendations

In order to address the digital exclusion of elderly citizens in China effectively, the following recommendations are proposed across three strategic areas. Each recommendation is structured around an identified problem, supported by evidence, and accompanied by a concrete course of action.

Problem 1: Digital Exclusion Driven by Absence of Accessible and Tailored Training

Senior citizens are excluded from active societal participation due to the absence of accessible, tailored training infrastructure. According to CNNIC (2021), the primary factor motivating non-netizens to access the Internet is the convenience of communicating with family members, accounting for 32.5% of respondents, followed by the provision of free relevant training and guidance at 30.3%. Therefore, policymakers and service providers should develop structured training frameworks segmented by age group — youngest old, middle old, and oldest old — and by technology literacy levels, ranging from no engagement to semi-engagement to independent use. Memory devices such as mnemonics, routines, visualization, and linking new learning to something personally meaningful have shown the greatest gains when combined with cognitive restructuring, and training programmes should be designed accordingly. Communities should guide the elderly to master the basic usage of smartphones and software, while family members should play an active role in guiding and teaching the elderly in daily life, improving their ability to identify network fraud.

Problem 2: Fragmented Approach Without Targeted Market and Policy Segmentation

A one-size-fits-all strategy is structurally insufficient given the diversity within the elderly population across age, income, and digital literacy levels. Policy interventions and commercial services should be designed with separate strategies for institutional and individual consumer



segments, and further segmented within each by age and income level.

For the youngest old, the priority service is companionship and social engagement, reachable through Internet and social media channels with flexible pricing, as this group may still be financially supporting their children. For the middle old, engagement with technology, companionship, social engagement, and healthcare support are all relevant, reachable through a combination of traditional and modern channels. For the oldest old, all listed services are required at their most basic level, reachable primarily through family-facing advertising and partnership with retirement and nursing homes.

From an income perspective, those at lower income levels are primarily struggling with basic needs, and healthcare support should be the entry point, potentially facilitated through social welfare or donation mechanisms. Those at medium income levels represent the broadest potential beneficiary group, with a wide variety of needs that can be addressed through tiered service packages. Those at higher income levels require the most comprehensive and tailored services, with a pricing strategy focused on adding value rather than affordability.

Problem 3: Underutilized Go-To-Market Infrastructure for Digital Inclusion Services

Existing service models and policy interventions targeting elderly digital inclusion have not been converted into structured, commercially viable, or institutionally supported delivery frameworks. A thoughtful go-to-market strategy is necessary to avoid potentially disastrous hitches in rollout. Test rollouts should be conducted in urban centres such as Shanghai by targeting locations with a strong presence of elderly citizens accompanied by their children or grandchildren, including metro stations, pharmacies, and geriatric clinics.

For institutional outreach, offline channels should include direct door-to-door engagement and telephone outreach, while online channels should include social media platforms, elderly-focused websites, and cooperation with established digital platforms. For individual consumer outreach, the advertising strategy should focus on powerful content in strategic locations, emphasising the emotional dimension of technology — specifically, the ability to get closer to loved ones and remain independent from family for daily tasks. The distance with close ones, particularly grandchildren, is a compelling dimension to foreground. Furthermore, the Chinese cultural context should be considered, as elderly citizens are often reluctant to represent a burden for their family or for society, and messaging that positions digital literacy as a means of independence rather than dependence is more likely to resonate.

Additionally, bundle partnerships with optical chains, dental clinics, and smartphone brands targeting seniors can offer trial periods as a conversion mechanism. Partnering with senior travel agencies to organize promotional events during travel would help familiarize seniors with technology in a comfortable and familiar environment, without removing them from their comfort zone.



Conclusion

China's aging industry is still in the blue ocean stage, and with the rapid development of science and technology and the mutual integration of industries, there will be more opportunities and a broad prospect for development. However, without centralized training infrastructure, a clearly segmented policy and service framework, and formal partnerships with institutional stakeholders, the elderly population will continue to be excluded from the dividends of China's digitizing society.

It is evident that addressing the digital divide among older adults requires cooperation among the government, enterprises, and communities. The government should implement service-oriented policies that give full consideration to the special situation of the elderly in the formulation of routine and high-frequency digital services. Enterprises should focus on the needs of the elderly, advocating human-centred intelligent product design. Communities should guide the elderly to learn to use scientific and technological products. In doing so, China can ensure that its growing elderly population is not left behind in an increasingly digital world, and that the social and economic dividends of technological development are shared by all.



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