

Silver Economy in Latin America and the Caribbean

Aging as an opportunity for **innovation**, **entrepreneurship**, and **inclusion**

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The IDB Group is the leading source of development finance for Latin America and the Caribbean. It helps to improve lives by providing financial solutions and development know-how to public and private sector clients. The group comprises the IDB, which has worked with governments for 60 years; IDB Invest, which serves the private sector; and IDB Lab, which tests innovative ways to enable more inclusive growth.



The Silver **Economy** in **Latin America** and the Caribbean

Aging as an opportunity for innovation, entepreneurship, and inclusion

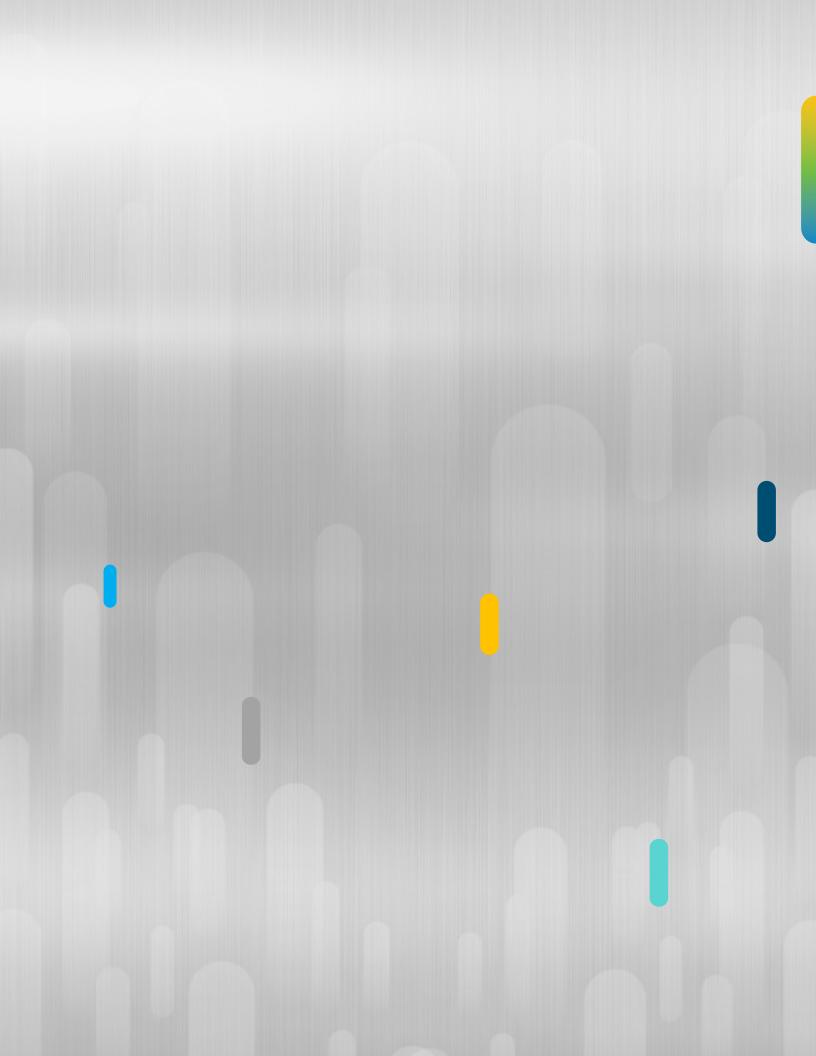
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What is the silver economy?

As the world's population ages, the silver economy has gained increasing attention from those who shape public policy, academics, and businesses or startups. The silver economy is the subset of the global economy associated with the demographic shift bought about by population aging. It focuses on the needs and demands of older people¹.

Aging is often seen as an added burden on society. It poses the challenge of meeting growing demand on three fronts: pensions, health services, and long-term care². Additionally, the COVID-19 pandemic has reemphasized the physical and social vulnerability of older generations. Ensuring society has enough capacity and resources to meet these growing demands has become a central challenge.

However, the major difficulties involved with aging also bring possibilities for economic development, new business ventures, and job opportunities. Also, older people now contribute more to the economy because better health conditions allow them to be more productive in their old age. Today's seniors, for example, are more likely to be able to keep working, studying, and spending. They are in better physical

condition than the elderly of decades ago, and they have more energy to enjoy life and continue contributing to society through their work.

Societies should therefore be ready for aging and its new economic opportunities. This also includes creating the conditions that allow an increased participation of older persons in economic activities, and the development of the necessary human capital. This process affects both the public and private sector and touches on all economic spheres.

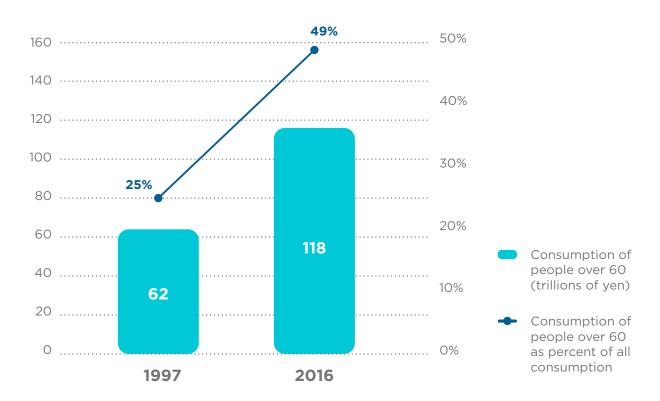
¹ In most cases in this publication, older people are defined as people over age 60. However, other publications on the silver economy also include people ages 50 to 60, depending on the context (see, for example, European Commission, 2018). ² Aranco *et al.* (2018).

How big is the silver economy?

The silver economy in Japan is estimated to be worth over US\$1.1 trillion, a figure that has doubled over the last 20 years and now accounts for almost half of all consumption (Figure 1). In the European Union, the

silver economy has ballooned to €3.7 trillion as of 2015, and is projected to reach €5.7 trillion by 2025, with an annual growth rate of 5%³.

FIGURE 1
Consumption of older people (over 60) in Japan

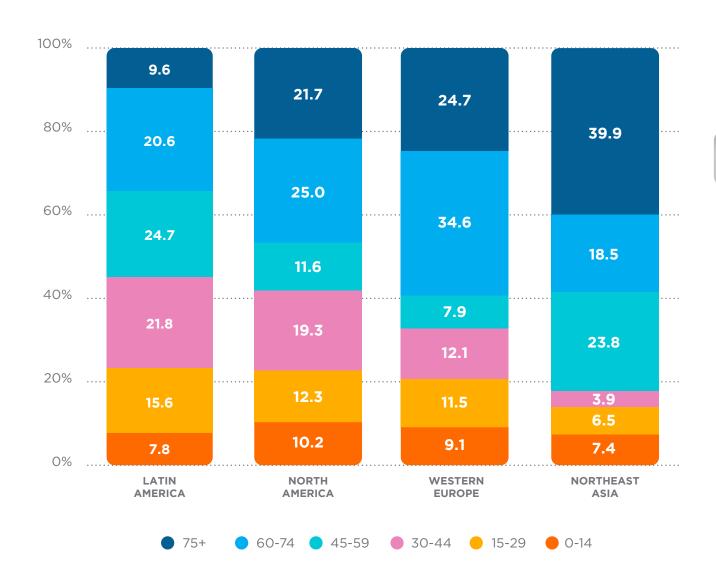


Source: Dai-ichi Life, *Economic Trends*, Kumazaki, 2017. The consumption of people over age 60 reached US\$1.1 trillion (1 USD=106 yen) in 2016, or 48.5% of all consumption.

³ European Commission (2018), based on people over age 50

This data suggests that the silver economy could serve as an economic driver. For example, it is estimated that from 2015 to 2030, people over age 60 will be the source of nearly 60% of all growth in consumption in cities in Northeast Asia and Western Europe. This same statistic is 30% in Latin America and the Caribbean (LAC), and estimates show it is set to rise (Figure 2).

FIGURE 2
Percentage of consumption growth from 2015 to 2030, by age group



Source: prepared by the authors based on *Urban World: The Global Consumers to Watch* (McKinsey Global Institute, 2016).

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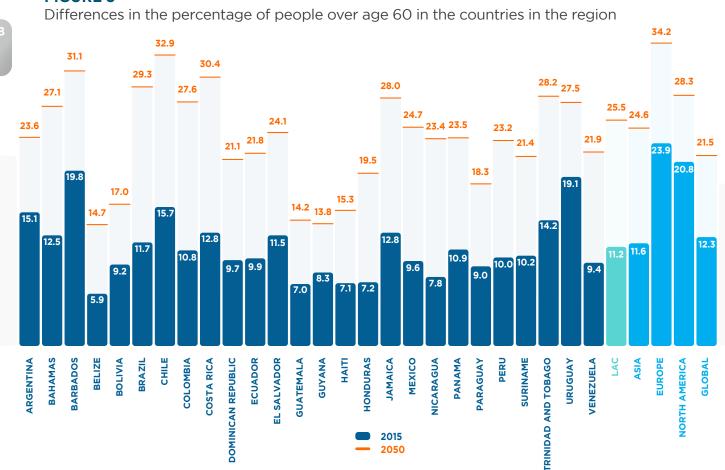
Why is it relevant to Latin America and the Caribbean?

Latin America and the Caribbean is still a relatively young region compared to other parts of the world. On average, people over 60 make up 13% of the region's population, a significantly smaller proportion than in Europe (26%) or North America (23%)⁴.

However, there is a sharp disparity between countries, and the older population constitutes close to 20% in Barbados and Uruguay (Figure 3).

Also, LAC is now the most rapidly aging region in the world. Projections hold

FIGURE 3



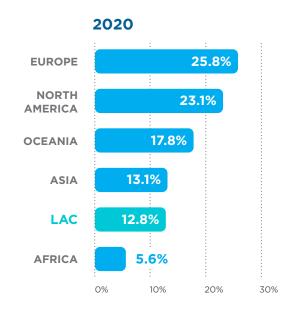
Source: Aranco et al. (2018).

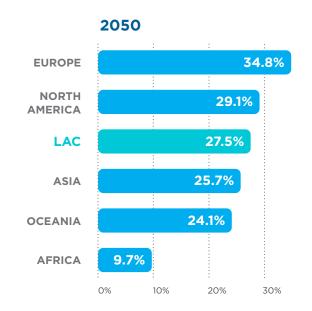
⁴ World Bank (2019). Mexico is included in LAC, not North America.

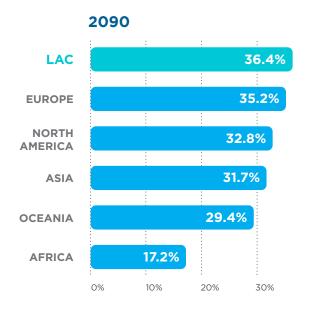
that by 2050, more than one in every four people in the region (27.5%) will be over age 60. The transition from 10% to 20% will only take 28 years, as opposed to 30 years in Asia and more than 60 in Europe and North America. In 2090, the LAC region will have the highest percentage of people over age 60, at more than 36% (Figure 4). In

light of this rapid aging, countries in the region urgently need to start preparing, transforming their economies and adapting their protection systems.

FIGURE 4Projected percentage of the population over age 60, by region







Source: United Nations World Population Prospects (2017). The intermediate scenario was chosen for this analysis. Mexico is included in LAC.



4.

What changes are expected?

Older people consume goods and services that are, at least in part, different from those consumed by the rest of the population. Meeting their needs generates major investment and production opportunities. In the housing sector, for example, aging leads to a demand for housing designed to allow older people to live independently despite functional limitations (like impaired sight, hearing, or mobility between rooms). In cities, it increases demand for public services adapted to people with impaired mobility. In the health industry, it expands the market for services for preventing and managing chronic diseases, and loss of autonomy heightens demand for care services.

These are a few examples of trends that offer business and economic development opportunities. Table 1 provides an overview of the challenges and opportunities related to the expansion of the silvery economy.

For each category, the "source" column specifies whether the sector's growth is caused by a rise in the population with health problems or with loss of autonomy or, on the other hand, by the growing number of independent older people who are in good health.

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TABLE 1

Main challenges and opportunities related to the silver economy

CHALLENGES OPPORTUNITIES SOURCE

HEALTH

Population aging drives up demand for health services at all levels. This trend has financial implications for governments and families.

The recent events related to COVID-19 have underscored the physical vulnerability of older generations, which die from the virus at a higher rate.

INVESTMENT AND INNOVATION IN HEALTH SERVICES

The rising demand for health services necessitates an expansion of supply at all levels, but especially at the primary level, including telemedicine for managing chronic diseases. Investments in preventive medicine, healthy diets, or physical exercise for active aging are also needed.

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MORE OLDER
PEOPLE WITH PEOPLE IN
HEALTH PROBLEMS GOOD HEALTH



DEPENDENCE ON LONG-TERM CARE

Many older people, especially those suffering from chronic diseases and functional limitations, depend to some degree on long-term care and need support services in addition to health services. People can be considered care dependent when they have difficulty performing activities of daily living (whether basic or instrumental) like eating, getting dressed, or moving around the house, for example.

DEVELOPING LONG-TERM CARE

As more older people need long-term care, developing these services becomes an opportunity. Currently, most of this demand is met by women in older people's families who put aside their work to care for their older loved ones⁶. Well-designed policies can channel this demand toward a new industry with new jobs, as has been the case in South Korea or Japan, for example⁷.



SAVINGS AND FINANCINGOlder people who have saved

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enough for retirement need advice on how to manage their assets. Those who have not saved enough need financial products to replace a traditional pension plan.
Older people have a hard time accessing loans. As people age, they become less solvent. Only a few countries give financing to older people to look for business opportunities. Most loans to this segment of the population must be very well secured⁸. The shift to technology-based platforms, which reduces personal

interaction with customers,

FINANCIAL SERVICES AND PRODUCTS

This generation creates opportunities for new financial services and products in the areas of savings, insurance, reverse mortgages, and pensions, which should come from both the private and public sector. Some financial institutions are tailoring their service channels to older people by (i) providing in-home financial services through specialized workers for customers who cannot or do not want to go to a physical branch; (ii) implementing technological solutions designed for older clients,



TABLE 1 (continued)

Main challenges and opportunities related to the silver economy

CHALLENGES **OPPORTUNITIES** SOURCE

poses a challenge. Some older customers are not willing to make this technological shift and prefer the traditional means of doing bank transactions9.

including training on how to use them, and (iii) redesigning some existing products, like debit and credit cards that are easy to read and include visual aids on how to insert the card into ATMs and POS terminals¹⁰.

The silver economy has certain unique characteristics that make it an attractive segment for financial institutions, like high net worth in some cases, a range of assets that need to be managed, reliable income in the form of pensions, and the need for financial services (access to accounts and credit), among others.

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MORE OLDER PEOPLE WITH PEOPLE IN HEALTH PROBLEMS GOOD HEALTH

MORE OLDER





HOUSING

Older people, especially in Latin America and the Caribbean, prefer to grow old surrounded by their family. To make this happen, they need houses that help them remain functionally independent.

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SUPPLY OF AGE-FRIENDLY HOUSING

The supply of affordable rental housing that is adapted to older people's needs: for example, close to public transportation, without stairs, smaller in size (for one person), with intergenerational experiences, with the possibility of services, etc.





IV

MOBILITY AND CONNECTION

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Older people, particularly when their physical mobility is limited in some way, often need urban infrastructure (entryways, sidewalks, etc.) to be modified to be able to live independently. Older people living in rural areas, which are increasingly disconnected and lack access to basic services, like medicine or stores for basic supplies, face additional challenges.

COVID-19 also presents an added difficulty in terms of meeting this generation's daily needs during

ADAPTING URBAN INFRASTRUCTURE, TRANSPORTATION. AND TELEMEDICINE

Infrastructure-related challenges, especially in the areas of mobility and transportation. bring with them major investment opportunities. Public transportation needs to be adapted to be more age-friendly. These adaptations can also be an opportunity for new services like, for example, transportation in autonomous vehicles or home food deliveries.



VII

not necessarily meet the specific

demands of older people, given

their physical and financial

TABLE 1 (continued)

Main challenges and opportunities related to the silver economy

CHALLENGES OPPORTUNITIES SOURCE MORE OLDER MORE OLDER PEOPLE WITH PEOPLE IN HEALTH PROBLEMS GOOD HEALTH quarantines or the different Older people in rural areas need phases of lifting restrictions. solutions that include connection services and the digitalization of Societal support for older people in the face of additional challenges caused by epidemics, like COVID-19, should also be taken into account. **WORKFORCE** MORE ACTIVE PARTICIPATION As the population ages, OF OLDER PEOPLE IN THE young people's share in the **LABOR MARKET** labor market dwindles. This Older people can work for demographic shift can lead to a more years as employees or as labor shortage in many industries entrepreneurs. Promoting their that can bog down productivity working life is key, not just to and economic growth. resolve workforce shortages but also to increase older people's quality of life. It is important for their technical knowledge and business experience to be passed on to future generations instead of getting lost. **EDUCATION** PERSONALIZED AND AGE-Education has generally focused FRIENDLY EDUCATIONAL on youth and then gradually **OPTIONS** expanded to include adults. Older people can continue to learn Currently, neither the volume both at traditional institutions like universities and in online courses of available options nor their content adequately meets the and potentially apply what they demands and interests of older learned on the job market. Here people. the concept of re-skilling-new career directions to extend people's working life—is relevant. **OTHER MARKETS NEW CONSUMPTION OPPORTUNITIES** The products and services developed for young people do One of the most promising

areas is tourism. In the countries

transition, business have

farthest along in the demographic

TABLE 1 (continued)

Main challenges and opportunities related to the silver economy

	CHALLENGES	OPPORTUNITIES	SOURCE	
			MORE OLDER PEOPLE WITH HEALTH PROBLEMS	MORE OLDER PEOPLE IN GOOD HEALTH
VIII	conditions, among other factors.	developed packages tailored to older people's mobility needs, with different schedules and trips during the off-season. These age-friendly services can attract demand from mid- to high-income older people from other countries. Silver tourists are notable as an emerging segment because they have higher discretionary income and more time. Medical tourism also holds potential for this group. For example, Colombia and Argentina are well known for their low-cost ophthalmology treatments. Fashion is another promising sector. Clothing, shoes, and canes designed for older people cater to their preferences. Other growing markets include food, gyms, entertainment, etc.		

Source: prepared by the authors

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⁵Cafagna *et al.* (2019). ⁶Stampini (October 2019).

⁷Stampini (June 2019). ⁷World Bank (2019).

⁸ECLAC (2015). ⁹Goff, S. (2014) ¹⁰Financial Times (2014).

Who benefits from the silver economy?

Developing the silver economy has important ramifications for gender equity, as well as for socioeconomic and generational equality. On average, women live five years longer than men, leading to the "feminization" of aging. Currently in LAC there are 8 million more women than men over age 60. Women make up 55% of older people. This gender gap grows wider with age. For example, 62% of people over age 80 are women¹¹.

Likewise, women shoulder the lion's share of the aging-related workload in families. In LAC, they provide around 80% of the care for older people¹². Because of a lack of proper support services, they may be obligated to care for their loved ones, lowering their labor market participation and depriving the economy of part of the region's talent. Conversely, most formal jobs created by the long-term care market are held by women. In Korea, for example, 95% of long-term care workers are women, most of whom are over age 45.

The situation of the most vulnerable people, with lower levels of education and fewer formal jobs, becomes more precarious during old age: they have less access to social security and, therefore, less income; fewer chances

to benefit from new jobs and business opportunities; and higher rates of chronic diseases and dependence on long-term care. Despite greater need, this population is less able to pay for high-quality health and long-term care services. In the absence of public services, the private sector is more likely to start offering services for more lucrative market niches, namely, high quality and high-priced services. Given this situation, the most important challenge for the IDB Group as a whole may well be to improve the lives of older people in LAC, with a special focus on the poorest and most vulnerable who face, now and in the future, more complex challenges than those with a higher income or more savings. It should be stressed that older people in our region are much more socioeconomically vulnerable than their counterparts in high income countries in Europe, North America, or East Asia. For that reason, the IDB Group can play a key role in helping the silver economy's goods and services reach all socioeconomic strata.

Intergenerational equity should be given special consideration in all solutions. Higher public spending on

pensions and health, for example, could saddle future generations with debt, in a context in which social spending is already skewed towards older people, chiefly due to contribution-based pension systems. For example, Brazil's contributory social security spending is currently 14% of its GDP, and, without reforms, this percentage is projected to rise even further. Developing the silver economy calls for a broad discussion that includes the entire society and fosters connections, communication, and the quest for solutions based on intergenerational cooperation. This intergenerational connection also helps break stereotypes about older people—the "ageism" or discrimination that affects older people around the world. The way the Master Plan for Aging was developed in California is an example of this process.



6.

How can the IDB Group contribute to the silver economy in LAC?

To develop the silver economy, the public and private sectors will need to work together. In the care market, for example, governments play an essential role in funding services for the most vulnerable groups, regulating training for human resources, and monitoring the quality of services. Meanwhile, it is the private sector that offers almost all the services. The IDB Group, as a strategic partner of the public and private sectors, and given its capacity to generate knowledge and its focus on inclusion for the most vulnerable, is well-positioned to help the silver economy expand in LAC.

Promoting adaptations and adjustments to society in advance is crucial and strategic. In some cases, it could give countries a competitive advantage over those slower to change and allow them to build a well-known brand. For example, a country that develops services for older people can attract high-income retirees within and beyond its borders, building an economy around specific services for that age group. The economy of Florida, in the United States, clearly reflects this approach, which has also started to emerge in a few local areas in LAC, like in Mexico, for example.

The IDB Group can support the development of the silver economy in LAC through dialogue, knowledge generation, and funding. Through its constant dialogue with the public and private sectors, it fosters public policy development, promotes the creation of regulations, and identifies innovative business ventures that could potentially solve the challenges of aging, creating economic opportunities. It includes building connections between governments, academia, civil society, businesses (corporations and startups) and investors within and beyond this region. This dialogue is supported by knowledge generation, which involves publishing data that can be used to compare different countries and evaluate their challenges and ability to respond to them, as well as sharing international best practices. Lastly, the IDB Group can provide financial backing for public and private initiatives. This backing includes sovereign guaranteed loans, loans to the private sector. and technical assistance to assemble evidence on successful models.

IDB Lab, IDB Group's innovation laboratory, will play a key role in the

area of the silver economy since this challenge is new for the region and its countries and thus requires pilot programs and trial runs with higher risk tolerances to test out different versions of solutions and learn lessons to then replicate them or implement them on a large scale. This process of laying the groundwork is especially important at this early stage, where the public sector does not yet see the challenge as urgent and the private sector does not see it as sufficiently lucrative. In this context, IDB Lab can serve as a bridge to connect different stakeholders and can prepare the way, focusing on emerging business

ventures and on high-risk, innovative/ technological solutions. Meanwhile, IDB Invest's actions will focus more on the subsequent growth phase.

Table 2 provides a list of possible areas for experimentation.

The IDB has been a strategic partner of LAC countries as they develop their long-term care sector and reform their health and pension systems. In the first case, the IDB has supported the implementation of Uruguay's care system through a lending operation since 2016. It is the first system of its kind in the region and includes home

TABLE 2Potential fields for experimentation¹³

	OPPORTUNITIES		AREAS FOR EXPERIMENTATION PREVIOUSLY IDENTIFIED BY IDB LAB	
	l.	HEALTH SERVICES	Connected health, telemedicineRobotics for lightening the care loadTasks-sharing models for doctors and nurses	
	II.	LONG-TERM CARE	 Providing long-term care in the home Telecare Training and certifying providers Robotics to facilitate independence (for example, wearables for monitoring people in cognitive decline, fall detectors, panic buttons, etc.) 	
	III.	FINANCIAL SERVICES AND PRODUCTS	Reverse mortgagesInheritance services	
•••••	IV.	HOUSING	 Rental housing that is well suited to older people's lifestyles and needs Shared housing Smart homes 	

TABLE 2 (continued)

Potential fields for experimentation¹³

OPPORTUNITIES	AREAS FOR EXPERIMENTATION PREVIOUSLY IDENTIFIED BY IDB LAB	
 V. URBAN INFRASTRUCTURE, TRANSPORTATION, AND TELECARE	 Autonomous vehicles Home delivery services City without barriers with recreation areas Public transportation adapted to and geared towards the needs of older people 	
VI. LABOR MARKET	 Promoting business ventures among older people Using technology to reduce physical strenuousness Robotics, artificial intelligence (AI), Internet of things (IoT), etc. The sharing economy for older people 	
VII. EDUCATION	 Universities without age restrictions Training on computer technology Online courses for older people (for example, digital literacy courses for older people offered by university students) 	
VIII. NEW CONSUMPTION	 Tourism Sports, exercise Video games (for example, virtual reality)	

care for people over age 80 who are severely care-dependent, telecare for care-dependent people over age 70, as well as professional training and a guarantee of the quality of the services. Building on this experience, in 2018 the IDB launched the Panorama of Aging and Long-Term Care website, which provides statistics and technical information for implementing or

expanding care service systems. In the health sector, given the increased prevalence of chronic diseases in LAC, the Bank has supported the transformation of how health services are provided in the region. The changes mainly center on prevention and primary care, on improving hospital care for the elderly, on leveraging digital technologies to ensure continuity of care and coordination, even from home, and on integrating health care and social services. These

¹³ Prepared by IDB Lab based on the market analysis in *The Silver Economy.* Final Report (EC, 2018).

principles have been applied to lending operations in Argentina, Brazil, Peru, and Suriname, among other countries.

The IDB has supported the pension reform processes of various LAC countries—like Chile, Honduras, and El Salvador—through lending operations. It has also promoted initiatives to help countries guarantee the social and financial sustainability of their pension systems. For example, in 2015 the IDB created the Network for Pensions in Latin America and the Caribbean (PLAC) to aid the region's countries in their efforts to improve the institutional and technical capabilities of their pension institutions. Through this initiative, the IDB finances activities for sharing international best practices, thus establishing a unique space for discussion about the present and future of the region's pension systems. To get people in Latin American and the Caribbean to save for old age, in 2017 the IDB launched the Retirement Savings Laboratory. This initiative seeks innovative ways to encourage saving through actions based on behavioral economics and new technologies and digital solutions.

At the same time, the IDB Group supports the development of the silver economy through the investments of IDB Invest. In the area of health, in 2018 IDB Invest granted a US\$10 million loan to Emergencias, an Argentinian company that provides prehospital health services, with a strong focus on applying technological developments to health. The business's services include medical and emergency

appointments, ambulance rides, home care, or transportation for people with disabilities. These types of projects are higher impact and are important for older people with limited mobility, chronic diseases, and/or disabilities.

In the sphere of financial institutions, IDB Invest has not yet completed any transactions with financial intermediaries that can be classified as part of the silver economy, but its initiatives to mobilize resources in local currency through local pension funds indirectly benefit retirees by improving the risk/return profiles and asset diversification of the pension funds' portfolios.

Additionally, new technological solutions for health are expected to improve the quality of care and play a major role in diagnosing and treating chronic diseases. With this vision, IDB Invest has identified opportunities related to:

- Private investments or publicprivate partnerships (PPP) for implementing and operating technological equipment for chronic diseases (for example, linear accelerators, angiographies, neurosurgery equipment, magnetic resonance imaging). Under this scheme, the private sector supplies the equipment, and also installs, maintains, and replaces it for the duration of the contract.
- mHealth. The mHealth market, including home care, holds significant development potential.

It encompasses devices/ applications that aid in the areas of prevention, diagnosis, monitoring, and well-being, with the aim of providing better diagnoses, among other goals.

Conclusions and recommendations for a work plan

The demographic shift is recognized as one of the most accurate projections in existence. In other words, aging is not just a possible future, but we should rather see it as a reality. It is therefore crucial to begin addressing it early enough that the LAC region has time to adapt to the major changes in upcoming decades, responding to the challenges of aging and taking advantage of the silver economy's opportunities.

If this approach is successful, in five years, for example, LAC would have significantly more companies offering products and services for older people. These products and services would offer innovative solutions for ensuring access to socioeconomically vulnerable older people, and the IDB Group would have fostered the changes in the region as one of the leaders on the issue. For example, the hope with regards to long-term care is for an increase in the supply of care services, initiatives to improve their quality, and public-private initiatives for providing home care services. The aim is also for certain members of the private sector to achieve successes that serve as an example so that more players understand the potential and importance of the issue in this region and join the effort to meet the challenges. Regarding education and the labor market, success would mean developing opportunities for older people that boost this group's economic contribution. Another important goal is helping reduce "ageism" and contributing to a more open and positive outlook on aging and older people in the region.

Along the way, the IDB Group considers it a priority to explore the issue by working together to test out solutions. To achieve this, the following steps will be considered:

Workshops with internal and external participants to prioritize the issues for each IDB Group player and define approaches for tackling those issues specific to each geographical area. In this vein, in November 2019 the IDB hosted the Regional Policy Dialogue "Pillars of Long-Term Care: How to build a care system". Additionally, in December 2019, it organized the first multi-sector workshop on the silver economy

in Montevideo, Uruguay. Some of the findings from this workshop are included in this publication.

- Mapping silver economy actors in Latin America and the Caribbean, and identifying business opportunities that could be supported by the IDB Group.
- A call for silver economy proposals, in which entrepreneurs and NGOs are asked to submit solutions for problems related to the silver economy in LAC, such as how to bring private long-term care services to vulnerable groups, or how to develop solutions that increase older people's functional independence in their homes.
 The call for proposals will be paired with pilot projects.



Appendix I.

Examples of silver economy actors from outside of LAC

The silver economy's ecosystem of private actors consists of a mix of large and small enterprises. In some cases. all products and services are focused on older people (for example, in longterm care businesses), while in other cases only a single line of products are meant for the elderly demographic (for example, certain tourism packages from operators who serve the entire population, or geriatric health services). It should be noted that startups are serving as a powerful driver of innovation in the silver economy. A study of the U.S. market has found more than 170 businesses of this kind¹⁴.

As indicated in the conclusions section, we plan to create an overarching map of the players in LAC's silver economy. This appendix contains a list of examples of players from outside of LAC in different sectors of the silver economy. Their main activities are grouped by type of opportunity. This list is based on: a Google search performed by the authors using the terms "silver economy" and "solution & aging" during the last quarter of 2019; the players included in the market

map on www.thegerontechnologist.
com; the participants in the HighLevel Forum on the Silver Economy,
held in Finland in July 2019, and the
participants in the Regional Policy
Dialogue "Pillars of Long-Term Care"
hosted by the IDB in November 2019.
This list is neither exhaustive nor
representative; it is merely intended to
offer an idea of the silver economy's
businesses and opportunities.

¹⁴ https://www.thegerontechnologist.com/



Yoshiki Ohshin Clinic

- Kyoto, Japan (http://yoc.or.jp/).
- Start-up.
- Founded in 2015, this clinic has established a **medical home appointment service** for older people who have difficulties going to hospitals. It serves its customers 24 hours a day, 365 days a year. It forms a network of specialists including doctors, nurses, and pharmacists, among others, based on a **task sharing** concept.



Insightec

- Haifa, Israel (https://www.insightec.com/).
- Start-up.
- It develops a technology that uses ultrasound waves to remove deep brain tissue. The waves are used to temporarily open the blood-brain barrier to potentially make it easier to clean out plaque.



Honda

- Hamamatsu, Japan (https://www.honda.com/mobility/walking-assist-technology).
- Corporation.
- Drawing on its robotics experience, it develops devices that help people walk well. The devices are mainly designed for older people.



Active Protective (Tango Belt)

- Philadelphia, United States (https://www.activeprotective.com/).
- Start-up.
- Founded in 2006, Active Protective makes a belt designed to allow older people to walk safely. This belt, called Tango Belt, inflates like an airbag when users are going to fall down to minimize the risk of serious injury.



Cyberdyne

- Tsukuba, Japan (https://www.cyberdyne.jp/english/).
- Start-up.
- Founded in 2004 by Yoshiyuki Sankai, a professor at the University of Tsukuba, Cyberdyne develops and makes exoskeleton suits to help make people stronger using robotics technology. One of the expected applications is for workers who provide special care to older people.



Linked Senior

- Washington D.C., United States (https://www.linkedsenior.com/).
- Start-up.
- This startup offers a service that analyzes patients with Alzheimer's disease and provides a **more personalized treatment** plan for each one on the platform. All family members and nursing staff can access the platform. Since it analyzes data in real time, people connected to the platform can learn the best treatment plan for the patient.

II. LONG-TERM CARE



Visiting Angels

- Pennsylvania, United States (https://www.visitingangels.com.mx/).
- Corporation.
- Visiting Angels has offered home care services for older people since 1998. It has grown into one of the largest players in this market in the United States, with more than 10,000 employees. They help elderly people bathe, get dressed, walk, and do shopping, and they also prepare meals. The Mexican franchise opened in 2014

(https://www.entrepreneur.com/article/326706)



Home Instead Senior Care

- Omaha, United States (https://www.homeinstead.com/).
- Corporation.
- Founded in 1994, Home Instead Senior Care offers care to older people that centers on allowing them to continue to live in their own homes. It has a range of services and entertainment for seniors suffering from Alzheimer's and their families.



Honor

- San Francisco, United States (https://www.joinhonor.com).
- Corporation.
- Founded in 2014, Honor provides a platform that connects helpers providing non-medical services, like assistance with shopping and daily activities, with older people who need care. Older people and their families can use the application to immediately call people who provide domestic help, who can also see the older people's profile and the type of care they need, resulting in a better relationship for both parties.



Rejob

- Tokyo, Japan (https://rejob.co.jp/).
- Start-up.
- Founded in 2009, Rejob is a job search platform focused on medicine and beauty. As a new area of activity, it has launched a **platform for the senior care industry** that connects individuals offering services with centers or special housing that have those services. Centers can hire individuals on an hourly basis without employing them full-time. This system can work as a solution for ensuring there are enough workers to meet demand when a full work day is considered excessive and the labor market has limited supply.



Logos

- Nagano, Japan (https://www.logos.co.jp/).
- Start-up.
- Founded in 1996, Logos develops solutions using Pepper, Softbank Group's humanoid robot. One of its proposed solutions is the *Mainich Robo Lec* for long-term care centers. The robot Pepper offers entertainment programs, like riddles, music, or basic conversation, among others, personalizing the content with cumulative data and face recognition.



Carely

- Alpha, Ohio, United States (https://www.care.ly/index.html).
- Start-up
- Founded in 2013, Carely offers an application for families whose elderly members live in care facilities. The application has features designed for those families, like communication with care providers, health status updates, etc. (https://youtu.be/WaeYJianUg0)

III. FINANCIAL SERVICES AND PRODUCTS



True Link Financial

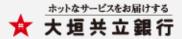
- San Francisco, United States (https://www.truelinkfinancial.com/).
- Start-up.
- Founded in 2013, True Link Financial offers **credit cards designed for older people**. It allows the cards' functions to be personalized: for instance, the places where the cards can be used can be limited to prevent elder fraud.

III. FINANCIAL SERVICES AND PRODUCTS



Cake

- Boston, United States (https://www.joincake.com/).
- Start-up.
- Cake offers services to help older people prepare for their last days, organizing wills, making funeral plans, managing digital data on social media, etc. It works with financial institutions and insurance companies to meet older people's needs. mayores.



Ogaki-Kyoritsu Bank

- Gifu, Japan (https://www.okb.co.jp/all/idou_tenpo/index.html).
- Bank.
- To improve access to financial services for older people who
 live in rural areas far from its branch offices, Ogaki-Kyoritsu
 Bank, a local bank in Gifu, has outfitted trucks as "mobile
 branches." The trucks have an ATM and offer all basic services
 in the same way normal branch offices do. As of July 2019, it
 has four trucks that serve rural areas with a set schedule and
 itinerary.

IV. HOUSING



Seniorly

- San Francisco, United States (https://www.seniorly.com/).
- Start-up.
- Founded in 2014, Seniorly offers an **online platform where older people can search for housing** with various levels of care services. It also helps older clients with visits to the homes, as well as with their negotiations and contracts.

V. INFRASTRUCTURE, URBAN SERVICES, AND RURAL COVERAGE



JTB

- Tokyo, Japan (https://www.jtbcorp.jp/jp/innovation/geron/).
- Corporation.
- JTB is one of Japan's largest travel agencies. As one of its new services, in 2018 and 2019 it experimented with taxis with a fixed monthly fee, exclusively for people over age 70. Customers can use this taxi service, called Geron taxi, to travel as often as they want between their home and fixed destinations—like supermarkets, hospitals, or towns. The price varies based on where customers live, but it ranges from US\$100 to US\$300 per month.

V. INFRASTRUCTURE, URBAN SERVICES, AND RURAL COVERAGE



GogoGrandparent

- San Francisco, United States (https://gogograndparent.com/).
- Start-up.
- GoGoGrandparent connects older people with ridesharing services like Lyft. It will soon do the same for services for meals, groceries, and medications. It aims to create a virtual care platform that will delay or even eliminate the need to hire a care agency or move into a retirement community.

VI. LABOR MARKET



Workforce50.com

- United States (https://www.workforce50.com/).
- Corporation.
- Workforce50. is an online job platform exclusively for people over age 50. Job searchers enter some basic information, like academic training or specializations, to find jobs that are a good fit. Employers pay a fee to post their job openings on the website. It also offers career services, like how to write a resume or LinkedIn profile, for example.



Kanagawa Prefecture

- Kanagawa, Japan (https://www.pref.kanagawa.jp/docs/sr4/senior.html).
- Public sector.
- The prefecture offers services and support for older people who consider themselves entrepreneurs. It offers three **spaces** where older people can pitch their business ideas and work on them. To encourage older entrepreneurs, it holds an annual contest for potential entrepreneurs in this generation (over age 55). It also published an entrepreneurship guide for older people, with 32 examples of local oldpreneurs.

VII. EDUCATION



CareAcademy

- Boston, United States (https://careacademy.com/).
- Start-up.
- Founded in 2013, CareAcademy provides **online classes for caregivers**. Classes can be personalized so participants can meet the requirements of every State in the Union.

中高年のためのプログラミング教室 TECH GARDEN SCHOOL

Tech Garden School

- Tokyo, Japan (https://techgardenschool.com/).
- Start-up.
- The school offers programming classes for people over age 50. The materials and classes are designed for older IT beginners.



Keio University

- Tokyo, Japan (https://www.keio.ac.jp/ja/academics/lifelong-learning/).
- Academia.
- Keio University, one of the most reputable universities, is among many in Japan that have begun offering programs for older people. It has designed a set of lifelong learning activities for older people. Options include a series of online programs geared towards older people under the motto, "Once again, the joy of studying."



Advanced Institute of Industrial Technology (AIIT)

- Tokyo, Japan (https://aiit.ac.jp/english/).
- Academia + Public sector.
- In collaboration with the government of Tokyo, AIIT has launched a **graduate entrepreneurship program** for older people.



Washington DC

- Washington D.C., United States (https://connect.dc.gov/seniors).
- Public sector.
- As part its digital inclusion initiative, it offers a program called Senior Tech, with classes on digital topics designed for older people. Topics range from smart phones to social media to internet security.

VIII. NEW CONSUMPTION



Gillette

- Boston, United States (https://gillette.com/en-us/products/gillette-treo).
- Corporation.
- Gillette, one of the world's largest shaving product manufacturers, launched a new product line in 2017 called TREO, which is intended especially for older people's caregivers. All components, like razors, handles, or shaving gel tubes, are designed so caregivers can safely shave older people.



Rendever

- Cambridge, United States (https://rendever.com/).
- Start-up.
- Founded in 2015, Rendever brings images with virtual and augmented reality to older people who have difficulty leaving the house. Using a device designed for this service, customers can enjoy images of places ranging from those associated with personal memories, like houses where they used to live, their favorite parks, wedding ceremonies, etc., to travel destinations like Machu Picchu and Paris.



Club Tourism International

- Tokyo, Japan (https://www.club-t.com/).
- Corporation.
- Founded in 1993, Club Tourism's business model is a travel agency exclusively for older people. It offers plans that are relevant to older people, and one of its strengths is forming groups of customers with shared interests, which makes them more likely to take another trip.



Aeon

- Chiba, Japan (https://www.aeon.info/en/).
- Corporation.
- Aeon, one of Japan's two largest supermarket and shopping center chains, has begun to overhaul its products, services, and stores to adapt to the country's aging population. Its initiatives include an expanded range of leisure services, like travel and cultural experiences, along with products designed for older people. The idea is to transform its business from "consumption of products" to "consumption of services and experiences," offering better opportunities for older people to live more active lives.



IKEA

- Leiden, Netherlands (started in Sweden) (https://www.ikea.com/jp/en/catalog/categories/collections/39821/).
- Corporation.
- IKEA is one of the world's largest furniture brands, with its own distribution chains. In 2018 began trialing, in certain countries, a product line designed for people who are older or have physical disabilities. Branded OMTÄNKSAM, which means "be kind and considerate," the line's products feature ergonomic technology that is functional, safe, and comfortable without sacrificing aesthetics. In 2019, it expanded its sales to new regions.





Ziegler Link-Age Longevity Funds

- Chicago, United States (https://www.ziegler.com/z-media/4387/ziegler-linkage-funds-overview-may-2019.pdf).
- Venture Capital.
- In 2014, Ziegler, an investment bank focused on technology, and LinkAge Ventures, a venture capital firm, created a \$27 million fund exclusively for actors in the silver market. After investing in 12 companies, they formed a second fund worth US\$37 million in 2018, which has invested in an additional 12 companies. Most of the companies are from the United States



MIT AgeLab, Massachusetts Institute of Technology

- Boston, United States (http://agelab.mit.edu/).
- Academia.
- Founded in 1999, AgeLab aims to inspire new ideas and turn technologies into practical, life-long solutions for enhancing people's health and lifestyles. This multidisciplinary research program partners with the corporate sector, the public sector, and NGOs.



Aging 2.0

- San Francisco, United States (https://www.aging2.com/).
- Nonprofit network
- In over 70 sites in 22 countries around the world, Aging 2.0 studies successful applications of technology to issues related to aging in order to promote innovation in this field. It fosters connections between investors, entrepreneurs, startups, corporations, and academics through events, conferences, and activities in the media. Among other things, it organizes the "Grand Challenges" startup competition to find potential startups and connect them with investors or academics



SilverEco.org

- France (http://www.silvereco.org/en/).
- Company.
- This international portal for the silver economy focuses on all technologies designed to help older people remain autonomous and independent, as well as products and services for aging in general. It offers information on new initiatives and organizes events, like study trips to the most advanced countries in this area.



Institute of Gerontology (IOG), University of Tokyo

- Tokyo, Japan (http://www.iog.u-tokyo.ac.jp/?lang=en).
- Academia.
- Founded in 2009, IOG tackles aging-related issues as a cross-disciplinary division within the University of Tokyo. Its three fundamental focuses are: research, education, and social contribution activities. As part of its focus on education, it has a program for training global leaders called the Graduate Program in Gerontology Global Leadership Initiative for an Age-Friendly Society (GLAFS).



Sompo Digital Lab (Sompo Holdings)

- Silicon Valley, United States (https://sompo.io/en/).
- Corporation.
- Founded in 2014 as part of Sompo Holdings—one of the largest players in Japan's insurance market—Sompo Digital Lab explores **new aging-related business opportunities, identifying key problems and pursuing solutions in collaboration with startups**. For example, it is developing a system to prevent accidents in bathrooms or beds.

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