

Introduction

**Asia's Prospects for Leading
Longevity Industry Growth in the
Next Decade**

Why Asia?

What is the Longevity Industry? The “Longevity Industry” refers to scientific research into aging and its diseases and a set of synergies between four intersecting sectors: P4 (personalized, precision, preventive, participatory) medicine, AgeTech (HealthTech that focuses on technology to improve the lives of older people), and Longevity finance (consisting of a set of novel financial systems) with the combined potential to extend healthy life span.

What makes Asia a natural center for the future of Longevity Industry growth, diversification and activity?



Demographics

Asia will feel the impact of demographic aging before any other world region.

As such, there is a great demand among governments and industry for industrial solutions to this “Silver Tsunami”.



Broad Adoption of Advanced Technology

Asian technological innovations have long outpaced those in the West. Products that sound like recent or even future innovations to most Westerners have been available for decades in Asia, particularly in Japan.



Financial Centers

Long established financial centers such as Singapore have become the leading startup hub in Southeast Asia thanks to a mix of ready capital and government policies.



Technological Centers

With so much at stake, cities from Singapore to Vietnam's Ho Chi Minh City are competing to become the next Silicon Valley – home not only to successful startups but also to the mentors, investors and institutions that support them.

Asia and the Race for the Fourth Industrial Revolution

The population of Asia is over four billion, and although not every country has a problematic aging demographic, some, such as Japan, certainly do.

However, the current age demographics of Asia's oldest countries are soon to become the new normal for all of them.

This is unfortunate in many ways, and represents an accumulating financial burden, known informally among economists as "The Silver Tsunami".

But now, at the dawn of the Fourth Industrial Revolution in Asia, the dividend locked up in this older demographic represents a potential future financial opportunity for those countries with the foresight to seize it.

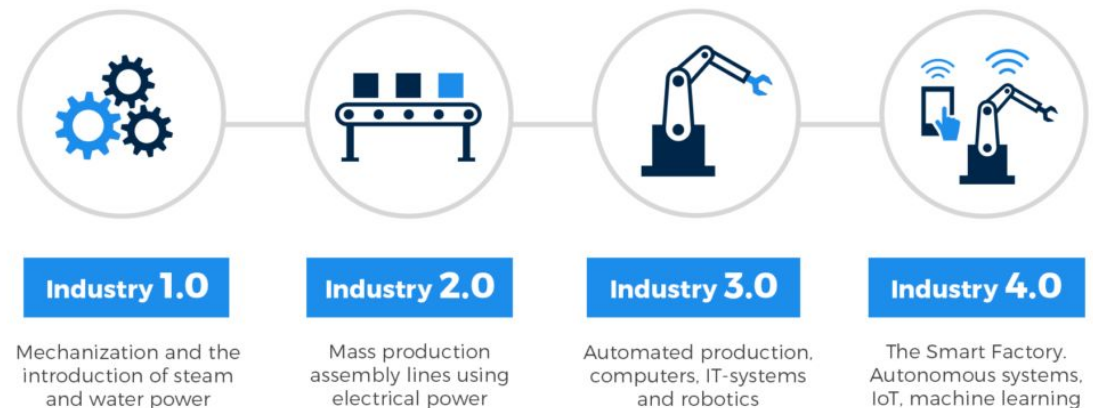
Innovations in biotechnology, financial technology, and AgeTech, will transform Asia's burgeoning population into an asset. Many of these innovations are happening much faster there than on other continents, with centres of progress being metropolitan areas of Singapore, Shanghai, Taiwan, Seoul, and Hong Kong.

Indeed, the arrival of the Silver Tsunami in those Asian countries that are most technologically, financially, and politically prepared, will mark the arrival of 5th industrial revolution, which among other things will result in elimination of inequalities between the young and old.

This introduction summarises the forms of innovation which comprise Asian countries' strengths in this regard.

Source: spectralengines.com

The Four Industrial Revolutions



The Silver Tsunami

The phrase “silver tsunami”, might have been invented for Asia. It is a term used by economists to describe the projected wave of global demographic aging sweeping from east to west, and the economic devastation it is expected to produce.

The Asia-Pacific region is undergoing profound and rapid population change. All countries in Asia and the Pacific are in the process of ageing at an unprecedented rate, although the timing of this transition varies across the region.

This process is reflected through the following trends:

By 2016, approximately 12.4% of the population in the region was 60 years or older, but this is projected to increase to more than a quarter – or 1.3 billion – people by 2050.

There are however variations across the region. In East and North Asia (which includes countries with significant ageing populations such as Japan and the Republic of Korea), over a third of the population is expected to be 60 years or older by 2050, whereas in Northern and Central parts of the continent one in four persons will be 60 years or older.

Globally, the share of older population in less developed regions is growing faster than in the more developed ones. Therefore, older persons will be increasingly concentrated in the less developed regions of the world.

By 2050, nearly 8 in 10 of the world’s older population will live in the less developed regions.

This is especially relevant for a region such as Asia and the Pacific, which comprises some of the wealthiest nations as well as some of the poorer countries in the world, and correspondingly mixed age demographics.

Projections are that between them the Asia-Pacific region will contain 60% of the global aged population by 2030.

The Technological Solutions

Asia's technological hot spots are helping to stem the tide of the tsunami, with high-tech, non-biomedical solutions to global demographic aging.

Japan for example, which is renowned for its superiority in robotics, is responding to the challenge of a dwindling workforce by extending this technological sphere into the realm of elder care.

- PARO is a robotic seal designed to provide cognitive stimulation to those dealing with Alzheimer's and dementia.
- Silver Wood Corp. is a care home operator Japan, has partnered with various companies to develop a dementia-simulating VR headset that assists caregivers in their treatment of patients.
- There are also robots designed for heavy-lifting and mobility support. E.g. Robear, a bear-shaped robot developed to assist with the lifting of elderly patients in and out of hospital beds, INNOPHYS' Muscle Suits to help employees to lift heavy items, extending the working life span of skilled and experienced physical labourers. They claim to have sold 10,000 units worldwide.



PARO, left, offers cognitive stimulation to the cognitively declined, while Robear, top, assists elderly patients in and out of bed.

The Technological Solutions

The Singapore Government has realised that by 2030, one in four of their population will be over 65 and that 92,000 of them will be living alone. This creates an opportunity for AgeTech to play a significant role in extending and improving life.

Furthermore, the city-state's small size and tiger economy allows for an extraordinary degree of strategic initiative.

But whereas robotics was the central theme to Japan's strategic initiative, the central theme in Singapore's aging strategy is smart homes and tech-enabled home care.

In 2015, Singapore launched an **Action Plan for Aging Well**, which includes a range of preventative programmes for the over-40s.

- The National Silver Academy, offers educational programmes to the elderly, providing home visits and making health services and government schemes more accessible.
- In October 2016, Singapore Health Minister Gan Kim Yong announced a rethink of care strategy that involved moving care from the hospital out in to the patient's home community.
- The Singapore Management University created the SHINESeniors Project, winner of the 9th annual SuperNova AI & Augmented Award. It aims to provide data-driven community care to seniors and "smart homes" for elderly people living on their own, with innovations ranging from smart sensors that monitor the environment and living patterns of the elderly, fall prevention sensors, medication reminder alerts and many more.
- GERI, AgeTech combines Internet of Things (IoT) technology with data analytics and a multimodal series of sensors to detect declining cognition in those at risk of dementia.
- Using a proprietary algorithm, Healthstats' BPro wearable tech captures arterial pulse wave data, converting it into 24-hour ambulatory blood pressure readings.

The Financial Solutions

Rapid demographic aging affects all aspects of our society, health care and social services, and also finance in general. If this continues as projected, it will impose huge pressures on national budgets, as the ratio of retirees to workers rises, and the growth rate of working-age taxpayers slows. AgeTech can only buy time for the economy. To keep the economy dry of the Tsunami, nations must invest in automation and methods for upskilling the current workforce, in order to enable experienced workers to stay on the job longer, and monetise the benefits of age and diverse experience.

Then there is the question of social care. As described previously, emerging technologies can address the caregiving needs of older adults – a growing reality. For this purpose, governments must improve their long-term care systems, community social infrastructures, and national industrial strategies, as populations decline and the dependency of the old increases. But we cannot assume that more and better-trained caregivers and a roboticized workplace will alleviate the net financial impact of an aging population. **Personal** financial stability becomes even more important for those living longer. Rapidly aging Asian populations, and changes to the traditional family-based, old-age support practices, have created a rising demand for income and support services for the elderly and the poor. Therefore, governments and their populations are rightly concerned about the long-term sustainability of their social security and fiscal health.

Public pension systems must find ways to cope with these pressures, as many struggle with structural challenges such as early retirement ages, and diverging replacement rates under different systems. Most developing Asian economies do not have mature and functioning pension systems, particularly the CLMVT (Cambodia, Laos, Myanmar, Vietnam and Thailand) economies. They are also not homogenous and show significant variations in their pension schemes. Some countries have publicly managed defined benefit schemes, some have publicly managed defined contribution schemes, and some have privately managed defined contribution schemes. Despite these differences, these systems share a need for significant improvements in their institutional capacity, governance, and regulation.

Each system must meet its demands by devising a strategic national plan for an integrated, professional, transparent, and independent system for old-age income support.

The Political Solutions

This brings us to the crucial question of the necessary role of government in developing this strategy.

In all cases, government must function as a coordinating force between the financial and technological solutions mentioned here, acting as a unifying component for the Longevity industry.

In the Western Hemisphere this often involves investment in the biotech or preventive medicine sectors.

In the UK for example, which might have the most comprehensive of all government strategies for preparing for the Tsunami, the focus is on things such as digital health and biotech investment.

In the Eastern Hemisphere however, where the populations are older, poorer, and more numerous, the governments often focus more on social support.

In a 2019 policy paper for example, China announced a five-point strategy outlining a mixed technological, financial and legal approach to social support.

It specified that China should deal with the ageing problem through increased social investment and input, building a high quality workforce, better health care and retirement services, use of advanced and innovative technologies, and enhanced legal and social protections.

The paper, jointly issued by the Communist Party's Central Committee and the State Council, acknowledged that the country faced a serious ageing problem but said China must "find its own way out, and that means taking a path with Chinese characteristics".

The uniqueness of each government's approach, and the strengths and weaknesses of each national economy, is briefly documented in the later chapters of this report.

Report Summary

- ▶ This report examines some of the demographic challenges faced by Asian countries and the innovations in technology, policy and finance, and the intersection between the three, which will solve these challenges by transforming Longevity into an asset, and form the emerging Longevity industry in Asia.
- ▶ It begins with **Landscape Overview** section, offers an overview of this industry, laying out the full range of sectors from biotech to finance and everything in between, and examine the sector structures of FinTech, AgeTech and P4.
- ▶ Due to the high concentration of “grey money” (wealth held by those aged 60+) in Asia, and its role as home to the many of the world’s top financial hubs, the financial sector of the Longevity industry has a special role to play here. **Longevity Financial Industry In Asia 2020** examines the burdens being imposed on traditional financial systems in the region and how some of the more forward thinking among them are reaching for novel practical technologies to transform this crisis into an opportunity, exploit the grey dollar and make health the new wealth.
- ▶ **The National Healthy Longevity Comparative Analysis** chapters elucidate the challenges and opportunities even further, comparing the health systems and demographics of different Asian countries, as well as eastern and western hemispheres.
- ▶ This has allowed us to prioritise the countries for profiling, in the chapters that follow, which document the various **national government strategies** already in place for building financial and technological defences against the looming tsunami.