Financial Health for the Future of Work in Singapore

2020
Contents

Executive Summary 4
Introduction 8
Automation, Machine Learning and Artificial Intelligence 11
The Platform Economy 14
Socio Demographic Changes 17
Entrepreneurship 20
Implications 23
  People Over Products 23
  Financial Literacy 25
  Flexibility 26
Conclusion 28
Appendix 30
Executive Summary

The future of work in Singapore will see fundamental changes wrought by rapid adoption of technological changes such as automation, machine learning and artificial intelligence; the rise of the gig economy and independent work; socio-demographic changes such as ageing; as well as the increasing attractiveness of entrepreneurship as a career path. These changes require corresponding shifts in other sectors. Singapore’s greatest resource is its workers and the Singapore government has invested heavily in policies to help prepare them for the changing skill requirements of a new world of work. At the same time, sectors like education and health are also responding to the shifts in the labor market.

This research paper is the first to consider the implications of the future of work on the financial sector and on the financial health of Singaporeans. The findings in this report are based on a survey that was administered to 1,000 working age Singaporeans in 2019. To support the insights gained from the survey, we conducted an extensive literature review and more than 100 interviews with experts on financial services and/or the future of work from all over the world, including several Singaporean experts. Finally, we leveraged proprietary PayPal data to help understand the changing dynamics in the labor market. Here are the key findings from our research:

While Singaporeans will face greater job churn in response to automation than any other major economy in Southeast Asia, the government’s emphasis on future proofing the Singaporean workforce has led to high levels of awareness about impending changes. In response, a large section of the Singaporean society has invested in skills upgradation programs in order to better equip themselves for the future.

- 89% of Singaporeans believe that automation is good for the Singaporean economy.
- 77% believe that their jobs will be highly impacted by new or changing technology in the next five years. This is seven percentage points more than the global average of 70%.
- 79% of Singaporeans whose jobs are at high risk of automation are aware of this fact, the global average is only 68%.
- 77% of all Singaporeans and 81% of those most at risk of job displacement due to automation have taken measures to upgrade their skills or learn new ones to prepare for these changes.
However, our survey results also show that the Singaporean workforce has a long way to go in preparing financially for automation and allied changes.

- 51% of the workers whose jobs are at high risk of automation said that they believe that their incomes will be more predictable in the next five years suggesting that they might be unaware of the financial impact of these changes.

- Workers in jobs that are at high risk of automation show more signs of financial distress - 54% of them have paid a bill late and incurred additional fees or interest in the last year while only 34% of those in jobs at low risk of automation had done so.

- At the same time, 34% of workers in highly automatable jobs would be unable to cover three months of expenses with their savings if they lost their main source of income - amongst those in jobs with low risk of automation, only 23% expressed difficulty covering three months of expenses with their savings.

Singaporean workers are increasingly taking up income earning opportunities offered by the online platform economy. Most of them work in the sector out of choice rather than necessity; and show signs of positive financial health as well as higher optimism regarding their financial future. However, platform workers face unique challenges due to the variable nature of their income. The absence of financial tools suited to their needs could hinder their ability to build up long-term savings and to plan for retirement.

- 29% of the respondents in our survey said they work in the online platform economy and 40% of these workers indicated platform work is the only job they hold.

- 73% of platform workers said that they feel that they have control over their monthly income – 16 percentage points higher than those who do not work on online platforms. Platform workers are also more financially resilient, as 77% said that they can cover three or more months of expenses with their savings in the event of losing their main source of income, compared to only 55% of non-platform workers.

- 57% said that their incomes would be more predictable in the next five years. In comparison, amongst those who do not work in the online platform economy, only 37% believe that their income will be more predictable in future.
Singapore, like other developed countries in the region, is undergoing socio-demographic changes including a rapidly ageing population as well as the increased participation of women in its workforce. At the same time, young people in Singapore are voicing increasing concerns regarding their long-term financial health and ability to retire in comfort.

- By 2030, one in four Singaporeans will be of age 65 or above.\(^1\) Elderly employment is also rising and there are many opportunities for financial services to step in to serve the needs of this growing segment of the population.

- 54% of the millennials (ages 22-38) we surveyed expressed a lack of faith in their ability to retire at their desired age.

- 47% of millennials hope to use their savings and investments as the primary mode of funding their retirement.

- Nearly 80% of both millennials and Gen X-ers (ages 39-50) stated that they make a consistent income each month and that they are able to cover all their expenses each month with their current income.

- 46% of millennials expect their income to be more predictable in the future, amongst Gen X-ers this figure is 38%.

- Millennials are also more confident about their ability to increase their income over time – with 66% of them saying that they would be able to do so, in contrast with only 46% of Gen X-ers.

Women in Singapore may need more support to be able to invest time and effort in skills-upgradation. They are also less optimistic about their financial future.

- 75% of the female respondents stated that they expect their jobs to be impacted by new or changing technology in the next five years, yet only 65% have taken measures to upgrade existing skills or learn new ones to remain competitive. In comparison, 80% of men had taken such initiatives to future proof their jobs.

- Only 50% of the women we surveyed are at least somewhat confident that they will be able to reach their financial goals. Amongst men, this figure was 60%.
Entrepreneurship is fundamental to the Singapore economy. While Singaporean entrepreneurs are, in general, financially healthier than their global counterparts, more can be done to support the enterprises that are financially distressed.

- In Singapore, 65% of entrepreneurs reported having a consistent income each month, while globally, only 46% of entrepreneurs do so.
- 88% of Singaporean entrepreneurs report being able to cover all their expenses each month with their current income – 10 percentage points higher than the population average and 6 percentage points higher than the share of global entrepreneurs.
- 76% of Singaporean small business owners reported having control over how much income they make each month, 14 percentage points higher than the population average of 62%.
- However, 57% of all small business owners we surveyed said that they had paid a bill late and incurred additional fees or interest as a result in the past year.
- Nearly half (49%) of all entrepreneurs in our survey expressed interest in a product that would enable them to manage their cash flow with changes in income.

The future of work brings both challenges and opportunities to the Singaporean workforce. In our research, we find that the Singaporean worker’s financial needs and aspirations are being transformed in response. The financial system therefore has a vital role to play in empowering Singaporeans to navigate these changes. However, a majority of the financial tools and solutions available today were designed for a very different world – one where a traditional nine-to-five job was seen as the norm. The evolving needs of the Singaporean workforce can only be met by a financial ecosystem that is sensitive to the changes in the way people work and earn and which places financial health at the very heart of its products and services.
Introduction

Singapore is a model country in the changing world of work due to the rapid digitalization of its economy; the focus of its policymakers on building up a resilient workforce; and the enabling regulatory environment for financial services that has placed it at the forefront of innovations in financial technology (FinTech). In October 1969, Singapore’s founding father and then-Prime Minister Lee Kuan Yew said, “The differences between the performance of various human societies are in considerable measure a reflection of their differences in their trained brain power, and their capacity to organize themselves to harness science and use technology to create a better life for themselves.” Five decades later, Singapore’s growth strategy in the face of rapid global changes continues to be shaped by these prescient words.

As an early pioneer of FinTech, PayPal has played an important role in the global digitalization of payments and e-commerce. As a two-sided payment network, PayPal has a unique perspective on how people earn their income and how they manage their financial lives. In 2019, we processed 12.36 billion payment transactions globally. As of January 2020, we have over 24 million merchant accounts used for earning an income, as well as over 305 million active accounts used by individuals to move and manage money using PayPal products and services. Our core mission to democratize financial services places the financial health of our customers at the heart of our strategy. Having witnessed the rise of platform companies and the growth of small-and-medium enterprises on our platform, we realized that there is a need to understand how changing trends in the world of work is impacting the financial health of workers globally.

Once a humble “fishing village”, Singapore has undergone a phenomenal transformation. Today, Singapore is lauded around the world as a city of the future. Key to its success has been the city-state’s openness to technology adoption and investments in digitalization. At the same time, Singapore’s policymakers have also taken into account the socioeconomic impact of rapid technological progress on its people. They are also concerned about the socioeconomic pressures that are being exerted due to Singapore’s rapidly ageing population. As a result, Singapore is one of the few countries in the world that invested early and heavily in measures to help people navigate the fundamental changes brought about by technological progress and demographic shifts.
The Singapore government has adopted pro-active, farsighted, and collaborative policy measures to prepare the nation for industry 4.0. Singapore’s Deputy Prime Minister (DPM) Minister for Finance Heng Swee Keat, at the Singapore Conference on the Future of Work in April 2019, said that these policy measures are founded on a three-pronged approach that has focused on:

- strengthening partnerships between the government and tripartite stakeholders and industry;
- investing in Singaporean people to ensure that they are equipped with skills for the future; and
- strengthening international cooperation and partnerships to deal with common challenges.

One of the first initiatives under this approach was the creation of SkillsFuture Singapore (SSG) in 2014. SSG is a statutory body under the Ministry of Education that seeks to provide avenues for lifelong learning and instill a culture of constant skill upgrading in Singapore. SSG works in tandem with Workforce Singapore (WSG), a statutory body under the Ministry of Manpower, aimed at transforming the Singaporean workforce and businesses to meet ongoing economic challenges. Skill-development and retraining initiatives under both these agencies are also integrated with the Smart Nation Singapore initiative that seeks to ensure that Singapore keeps pace with global technological progress. Since 2016, the Singapore government has also rolled out Industry Transformation Maps (ITMs) for the 23 major industries in Singapore. These ITMs lay out growth and competitiveness plans for industries and aim to boost innovation and trade while also increasing the Singapore economy’s productivity and equipping workers with deeper skills to generate value creation and employment. This integrated approach that places future-readiness at the heart of urban, social, and economic planning has enabled Singapore to prepare its citizens for the changing world of work. A 2018 report by the World Economic Forum named Singapore as one of only 25 countries in the world that are well-positioned to benefit from changes in production driven by digitalization and automation. The same study found that nearly half the population (47%) requires no significant reskilling to flourish in industry 4.0 while another one-third of the population (33%) would require less than 6 months of reskilling to ready themselves.

An aspect of the future of work that deserves more attention is the role of financial services in supporting Singaporeans through these changes. Financial services are instrumental in enabling people to manage changes in their working lives. Well-designed financial services enable workers to get paid, spend, and save. People rely on financial products such as savings, returns from investments, or loans to cope with times of income uncertainty and during job transitions. Furthermore, in the absence of financial health, individuals are often unable to summon the resources required to build up their skills and to prepare for the changing world of work.
In this paper, PayPal seeks to understand how Singaporean workers are managing their financial lives while also navigating changes in the labor market. To do so, we look into four major trends that we believe will impact Singapore’s labor market:

1. Automation, Machine Learning, and Artificial Intelligence
2. The Platform Economy
3. Socio-Demographic Changes
4. Entrepreneurship

We examine how these areas relate to individual financial health and opportunities for the private and public sectors to innovate and collaborate. We also hope that these insights will enable financial service providers to better serve the needs of a changing workforce and to build up the financial health of their customers.

To better understand the role of financial services in the future of work, we surveyed 1,000 working age (20 to 50 years) Singaporeans on these topics in 2019. For comparison, we also leveraged data collected from a 2018 PayPal survey of 8,000 working age individuals in eight markets across the globe. Additionally, we analyzed proprietary data from various PayPal platforms to better understand the role of financial services in supporting the changing workforce. Finally, we conducted more than 100 phone interviews with experts in Singapore and around the world, who are working in areas related to future of work and/or financial services.

In a speech on the occasion of his sixtieth birthday in 1983, Mr. Lee Kuan Yew said, reflecting on the future of Singapore: “There will be unexpected problems ahead, as there were in the past. They have to be met, grappled with, and resolved. For only people who are willing to face up to their problems and are prepared to work with their leaders to meet unexpected hardships with courage and resolution, deserve to thrive and to prosper.” Through this report, PayPal hopes to spark a conversation on the financial health of Singaporean workers as they heed Mr. Lee’s advice and rise to new challenges and opportunities in the new digital economy.
Automation, Machine Learning, and Artificial Intelligence

Automation, machine learning, and artificial intelligence are reshaping nearly every aspect of our lives and societies, especially the workforce. For Singapore, whose only natural resource, as Dr Annie Koh of the Singapore Management University says, is “human resource,” taking advantage of and building resiliency in the face of these changes is an existential concern.

A 2018 study found that 20.6% of Singapore’s full-time equivalent workforce will have their jobs displaced by artificial intelligence by 2028. This is the highest share amongst the six largest economies in Southeast Asia (SEA) – Indonesia, Malaysia, The Philippines, Singapore, Thailand, and Vietnam. However, the same study acknowledged that the higher displacement in Singapore is due to the enabling environment for accelerated digital transformation that facilitates the easy and rapid adoption of cutting-edge technology by businesses. While this improves productivity and efficiency, Singaporean workers have to work harder than their counterparts in other Southeast Asian economies to upskill themselves in order to keep pace with these changes.

The Singapore government, in recognition of these challenges has made significant forward-looking investments through the creation of dedicated measures to bridge the skills gap and by spreading awareness amongst Singaporean workers about the need for constant upskilling and training. Due to the government’s holistic approach and policy foresight, Singapore is better prepared than any other global city for technological disruptions due to AI and automation.

This sense of preparedness is reflected in Singaporeans’ attitudes towards automation. Singaporeans are overwhelmingly positive about automation – of those we surveyed, 89% of respondents said that they believe that automation is good for the Singapore economy. There is strong acceptance of automation and technological change notwithstanding the acknowledgement that automation could result in job displacement. Our survey also found that Singaporeans are widely aware of the advent of automation and its impacts on their jobs. The survey shows that 77% believe that their jobs will be highly impacted by new or changing technology in the next five years. This is seven percentage points more than the global average of 70%. At the same time, 79% of Singaporeans whose jobs are at high risk of automation (classification based on data from the OECD) are aware of the incoming impacts of technological change – a share that is 11 percentage points greater than the global average of 68%.

Singaporeans are taking initiatives to prepare themselves for the changes that are expected from automation. Seventy-seven percent of all Singaporeans and 81% of those most at risk of job displacement due to automation have taken measures to upgrade their skills or learn new ones to prepare for these changes.
The SkillsFuture credit program is especially popular, with 431,000 Singaporeans taking advantage of the subsidy since its launch in January 2016. More than 80% of those who used this subsidy, and other skills-upgrading programs offered by SkillsFuture Singapore, found such training to be helpful in their work.

However, Singaporeans’ financial readiness for technological changes might not be as robust as the programs that have been created for upskilling and getting back to work after displacement. In fact, many Singaporeans have not yet considered the financial implications of changes from automation. Amongst our survey respondents, about half (51%) of the workers whose jobs are at high risk of automation said that they believe that their incomes will be more predictable in the next five years.

Workers in jobs that are at high risk of automation also show more signs of financial distress - 54% of them have paid a bill late and incurred additional fees or interest in the last year while only 34% of those in jobs at low risk of automation had done so. They have more difficulty covering their monthly expenses with their current income. These workers’ ability to handle income shocks is lower – with one-third of them (34%) saying that they would be unable to cover three months of expenses with their savings if they lost their main source of income. This is in contrast with workers in jobs that are at lower risk of automation, amongst whom only 23% have difficulty covering three months of expenses with their savings.

Skills development alone might not help workers at a high risk of automation in the event of an income shock or job loss. Building up financial literacy and awareness is also important so that workers are able to support themselves during periods of job transition. As Cher Pong Ng, Chief Executive of SkillsFuture Singapore noted, “It is difficult to have career resilience, if financially, you don’t have the resilience to manage the shock and transitions. This is especially true in Singapore where the labor market is extremely tight, and the workforce growth is flat.”

Dedicating time and resources to reskilling is not without opportunity cost, even though Singapore has tried to minimize such costs by following a modular and bite-sized approach to retraining. Financial institutions can also support workers looking to reskill by extending savings or credit products that would enable workers to offset such opportunity costs and invest in their own long-term development.

The experts we spoke to noted that some of the disruptive technologies that are likely to cause job churn may help provide the
solution for increased financial health. Ye-Her Wu, Executive Director of the National University of Singapore’s School of Continuing and Lifelong Education (SCALE), observed that an individual has more control over their expenses than their income. As a result, she said, digital products that use artificial intelligence and machine learning to help users track their expenses for anomalous or unplanned spending are more relevant than ever. As workers face up to a future where earning potential is less predictable, designing products that enable prudent savings and investment behavior is one of the ways in which financial services can contribute to financial resilience.
The Platform Economy

Singapore, unlike many other large cities globally, has historically been home to a very small informal economy.²¹ The abundance of formal employment opportunities, a strong legal system, and controlled immigration has meant that the Singaporean workers have, in the past, worked almost exclusively in traditional full-time jobs. With increased connectivity and the advent of mobile technology, however, many Singaporeans have begun to embrace the task-based income earning opportunities that have been facilitated by the internet.

Even though gig work and the platform economy are relatively novel components of the Singapore economy, the share of Singaporeans engaged in independent work is growing steadily. According to latest available data from the Singapore Ministry of Manpower, the number of Singaporeans engaged in independent work rose from 200,100 in 2016 to 223,500 in 2017, a nearly 12% increase year over year. Amongst these independent workers, those who find work through online platforms are engaged in many different activities, with private hire car drivers forming the largest group. There are also workers providing professional and creative services in fields such as accounting, graphic design, and media and communications.²²

According to latest available data from the Singapore Ministry of Manpower, the number of Singaporeans engaged in independent work rose from 200,100 in 2016 to 223,500 in 2017, a nearly 12% increase year over year.

In Singapore, increasingly more workers pursue jobs provided by the platform economy to take advantage of the flexibility and independence that the sector affords. According to a 2018 study by the Singapore Civil Service College, 82% of all freelancers in the country work in the gig economy by choice rather than necessity.²³ This is higher than other developed countries – for example, in the United States, only 72% of independent workers who work in the platform economy do so by choice.²⁴

A 2018 survey of Singaporean gig workers by Manulife found that 47% of online gig workers sell goods and services on e-commerce platforms such as Lazada; 43% are engaged as private hire drivers or in other part-time work; 24% are engaged in online content creation; and 11% have launched their own start-ups through digital platforms.²⁵ Many, though not all, of the jobs undertaken by freelance workers in Singapore involve value-added work. A 2017 study by PayPal found that amongst those working in the online platform economy in Singapore (not including private
transport and delivery services), 21% are engaged in data entry and research with graphic design, project management, and software development as popular choices.\textsuperscript{26} The same study found that 88% of Singapore’s platform workers work with international clients who contribute 43% of their business.\textsuperscript{27}

Nearly one-third (29%) of the Singaporeans we surveyed for this study work in the online platform economy and 40% of these workers indicated that platform work is the only job they hold. On average, Singaporean freelance workers seem to lead financially healthy lives. Nearly three-quarters (73%) of them said that they feel that they have control over their monthly income – 16 percentage points higher than survey respondents who do not work on online platforms. They are also more financially resilient, as 77% of platform workers said that they can cover three or more months of expenses with their savings in the event of losing their main source of income. Only 55% of those who do not work in the platform economy shared the same confidence.

PayPal’s role as a payment services provider has enabled us to witness at first hand the global growth of platform companies. Examining our global dataset, we found that platform companies using PayPal grew on average 47% year-over-year between 2014 and 2018.\textsuperscript{28} The growth of these companies presents, in turn, burgeoning opportunities for workers on these platforms. The continued growth of these platforms is perhaps why Singaporeans working on them express optimism about their financial futures. More than half (57%) said that their incomes would be more predictable in the next five years. In comparison, amongst those who do not work in the online platform economy, only 37% believe that their income will be more predictable in future. Workers in the rapidly growing platform economy express higher confidence in their ability to meet other important financial objectives as well, as seen in Table 1.

<table>
<thead>
<tr>
<th>Share of respondents who are at least somewhat confident that they can –</th>
<th>Does not work in the platform economy</th>
<th>Works in the online platform economy</th>
</tr>
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<tbody>
<tr>
<td>Retire at their desired age</td>
<td>44%</td>
<td>60%</td>
</tr>
<tr>
<td>Increase their income over time</td>
<td>56%</td>
<td>72%</td>
</tr>
<tr>
<td>Budget their money</td>
<td>70%</td>
<td>79%</td>
</tr>
<tr>
<td>Reach their financial goals</td>
<td>50%</td>
<td>67%</td>
</tr>
<tr>
<td>Provide for their family</td>
<td>69%</td>
<td>80%</td>
</tr>
</tbody>
</table>
At the same time, workers in the platform economy have their share of challenges. Former Minister for Manpower Mr. Lim Swee Say summarized these challenges well, “[Freelancers have] concerns over the lack of income security, for example, arising from work injuries, or when attending training or going for skills upgrading. Some of them are also concerned about [not receiving] timely and complete payment from their clients. … [T]hey are also concerned about their savings for housing and retirement.“29

A key reason for these challenges is the variable nature of income from platform work. PayPal’s study of freelancers in 2017 found that 62% of those considering freelancing as a career option in Singapore are concerned about the irregular nature of income from freelancing.30 Dr. Koh said, “There is currently a need to match irregular sources of income with regular needs.” This need, when unmet, can result in signs of financial distress amongst freelancers including late or missed bill payments. In our survey, we found that platform workers (56% of them) are 23 percentage points more likely than others (33% of non-platform workers) to have paid a bill late and incurred additional fees or interest in the past 12 months. Consequently, in our survey we found that the most popular demand from platform workers in Singapore with regard to prospective financial products is one that helps to manage cash flow with changes in income.

The experts we spoke to for this study also raised the voluntary nature of Central Provident Fund (CPF) contributions by gig workers as a cause for concern. The CPF is the primary savings mechanism through which many Singaporeans fund their retirement, healthcare, and housing needs. Workers in traditional jobs make mandatory monthly contributions to the CPF. However, the variable nature of income from gig work rules out the possibility of mandatory monthly contributions from them.31 The low liquidity of CPF funds also disincentivizes regular or high contributions by workers with variable income as funds from the CPF can only be withdrawn under specific conditions.32 In the absence of such a mandated savings requirement, freelancers make sporadic contributions to the CPF, if at all.

A lack of long-term savings behavior could have adverse consequences on the financial health of gig workers. Manulife estimates that freelancers in Singapore have an average retirement savings gap that is 55% wider than workers in traditional jobs.33 While some platform companies and a few insurance providers have begun to offer credit and insurance products to platform workers, more can be done. Products that penalize missed payments or mandate fixed monthly premium amounts cannot meet the needs of platform workers. Financial service firms in the private sector can step in to bridge this gap by providing flexible savings and retirement products that are tailored to the needs and income patterns of platform workers.
Socio Demographic Changes

Singapore has gone through a fundamental demographic shift in the past few years. As of 2019, Singapore is an “aged society”, as per the World Health Organization (WHO) definition, with over 14% of its population aged 65 years or older. At the same time, Singapore’s high life expectancy of 83 years and low fertility rate of 1.14 means that there will be fewer young people to support the elderly population. The old-age support ratio in Singapore, which measures the number of working age people who can provide economic support to the elderly, is expected to nearly halve from 4.8 in 2018 to 2.7 in 2030.

Prime Minister Lee Hsien Loong described the impact of these changes in a speech in 2015, “We are going to be growing older faster than nearly any other society in the world... Already we are seeing the impact of an ageing population today. There are more sandwich families, typically two adults working, maybe one and a half working adults supporting children, supporting elderly parents. We are seeing greater demand for healthcare and social services.”

These demographic shifts are visible in the workforce as well. The elderly employment rate (of residents aged 65 and older) has increased from 16.4% in 2009 to 27.4% in 2019. The Singapore government implemented the responsible re-employment program in July 2017 in recognition of the need for employment opportunities for the elderly. The program effectively raised the retirement age from 62 to 67. The government also provides a credit to employers who voluntarily re-employ workers aged 65 and above.

Despite these measures, as well as supplementary welfare schemes such as the Pioneer and the Merdeka Generation Packages, the elderly in Singapore are still at risk of job loss due to automation and resultant financial distress. A 2019 study by Mercer found that while Singapore fares much better than other Asian economies in preparedness to deal with the impact of workplace automation on the ageing, it still lags other major economies globally. Even more disquieting, is their finding that jobs done by Singapore’s elderly are more disproportionately vulnerable to automation than jobs done by younger workers.

Enabling the elderly to adjust to these changes will require a concerted approach...
between the government and businesses. The government provides numerous avenues for
talent development and skills upgrading for Singaporeans that the elderly can take advantage
of. Dedicating time and resources to these courses, however, incurs opportunity costs.
Financial services can play an important role in enabling the elderly to take advantage of these
opportunities through the provision of savings, investment, and credit products that take these
opportunity costs into account. Equipping the elderly to lead financially healthy lives enhances
their independence and quality of life. It is estimated that by 2030, one in four Singaporeans will
be of age 65 or above.46 There will be a tremendous opportunity to design financial products and
public private partnership solutions with the elderly in mind in the future, especially considering
demographic projections that indicate that they will soon form a sizeable consumer base.

Multiple experts we spoke with mentioned
the role of family as a financial support system
in Singapore. Dr. Annie Koh summarized this
as, “Even if you can’t feed yourself, your family
will feed you.” Although families provide
an important financial support system in
Singapore, anxiety regarding financial health
remains, especially amongst the youth. More
than half (54%) the millennials we surveyed
expressed a lack of faith in their ability to retire
at their desired age. A survey by BlackRock
found that 63% of Singaporean millennials said
that insufficient income is the main source of
stress in their lives.47

Diana Wu David, author of Future Proof:
Reinventing the Age of Work, told us, “The
family structure in Singapore is such that
there are young people supporting their
families from the get-go. Many of them live
with their parents until they get married.
On the one hand, they may give all their
income to their parents. But on the other
hand, they have a roof over their heads.”48
Consequently, while the young may have
temporary protection from income volatility
by living with their parents, they may not
be building up adequate savings to weather
income shocks in the long run. Nearly half
(47%) of the millennials we surveyed hope
to use their savings and investments as the
primary mode of funding their retirement. It
is important that these millennials plan out
and save adequately for retirement. It is also
interesting to note that across all age groups
surveyed, reliance on support from children
was the least popular mode of retirement
funding, with less than three percent of
respondents across all age groups stating this
as their preferred option. This suggests that
while family may act as a safety net, unlike in
many other countries, Singaporean workers
prefer to be self-sufficient and financially
independent in their retirement.

Looking into inter-generational differences
in financial health between Gen-Xers and
millenials, our survey data reveals mixed
results. While nearly 80% of both millennials
and Gen X-ers stated that they make a
consistent income each month and that
they are able to cover all their expenses each
month with their current income, millennials
expressed more certainty than Gen X-ers
about future income prospects. Nearly half of all millennial respondents (46%) expect their income to be more predictable in the future – eight percentage points higher than Gen X-ers. Millennials are also more confident about their ability to increase their income over time – with 66% of them saying that they would be able to do so, in contrast with only 46% of Gen X-ers expressing similar optimism. This anxiety about their future incomes seems to inspire Gen X-ers to save more, with 47% of them saying that they would be able to cover six months of expenses with their savings if they lose their main source of income. Amongst millennials, only 43% are confident that their savings would enable them to cover six months of expenses. There are opportunities to enable Gen X-ers to obtain higher returns from their savings and investments while also helping them plan for possible shifts in income.

Another demographic factor that is reshaping the labor market in Singapore is gender. With a female labor force participation rate that has steadily hovered around 60% over the last half-decade,43 Singapore ranks 9th amongst the OECD countries in the metric. However, a 2018 study of these countries by the International Monetary Fund (IMF) found that a larger proportion of the female workforce is at a high risk for automation than of the male workforce – primarily because of the fact that women on average, perform more routine tasks than men across all sectors and occupations.50 Such tasks are more vulnerable to automation.

While the Singapore government has enacted several proactive measures to ensure that women keep pace with men in skills development, women may have less time to invest in training programs as they bear a disproportionate share of family responsibilities such as caring for young children and elderly parents.51 In our survey, we found that 75% of the female respondents stated that they expect their jobs to be impacted by new or changing technology in the next five years, yet only 65% have taken measures to upgrade existing skills or learn new ones to remain competitive. In comparison, 80% of men had taken such initiatives to future proof their jobs.

The impact of women’s ability to adjust to changes in the labor market is further exacerbated by the gender pay gap in Singapore. While statistics from the Ministry of Manpower suggest that the overall gender pay gap is around nine percent,52 others estimate that the figure might be a high as 18%.53 Consequently, women have cause to be less optimistic about their financial future than men. Only 50% of the women we surveyed said that they are at least somewhat confident that they will be able to reach their financial goals, as opposed to 60% of men who feel that they will be able to do so. Creating financial services and products that take these challenges into account can enhance women’s financial health and resiliency.
Entrepreneurship

Singapore is an aspiring entrepreneur’s dream come true. Named the most competitive economy in the world in 2019 and consistently ranked at or near the top of ease of doing business rankings, Singapore’s strong regulatory structure and robust intellectual property protection regime have attracted aspiring entrepreneurs from all over the world. This has, in turn, created an environment where entrepreneurs have easy access to funding, mentors, and accelerator programs. At the same time, institutes of tertiary education in Singapore are also focused on nurturing entrepreneurship amongst their students leading to 32% of millennials entrepreneurs having started their business while still in school – the global average is 24%.

Entrepreneurship is vital to the Singapore economy. Small and medium enterprises constitute 99% of all businesses in the country, contributing 48% of Singapore’s GDP and employing 72% of its labor force. These figures are only likely to go up as more Singaporeans – especially those of the millennial generation – express a desire to start their own business or be their own boss in the near future. Entrepreneurship is being seen as an increasingly viable path for income generation by Singaporeans.

Through our survey, we found that Singaporean entrepreneurs are financially healthier than their global counterparts. 65% of entrepreneurs reported having a consistent income each month while globally, only 46% of entrepreneurs do so. In addition, 88% of Singaporean entrepreneurs report being able to cover all their expenses each month with their current income – which is 10 percentage points higher than the population average and six percentage points higher than the share of global entrepreneurs.

Another finding from our survey is that 76% of Singaporean small business owners reported having control over how much income they make each month, which flies in the face of the common perception that entrepreneurs deal with higher levels of unpredictability of income. This is 14 percentage points higher than the Singaporean population average of 62%. Agatha Xavier, a former investment banking professional turned entrepreneur explained that with experience, businesses in Singapore – especially in sectors like food and beverage, in which she operates - can predict approximate monthly sales levels. She said, “The first year was very difficult as I had not anticipated this fluctuation in sales. With experience, I know roughly how much I can expect to make each month. The biggest months are during the holiday season which, in Singapore, begins with Christmas in
December and extends until Chinese New Year in February. Other occasions like Nurses’ Day or Teachers’ Day also bring in more sales. With time, I have also learned that there are some things I can do to boost sales during slow months like posting a giveaway or advertising on social media.60

Another important reason why SMEs in Singapore are faring better than their global counterparts is digital connectivity. The high levels of digitization and connectivity of the Singaporean economy provides avenues for entrepreneurs to reach their consumers without devoting a large amount of resources to marketing through traditional media. The domestic market in Singapore is limited and in order to succeed, entrepreneurs must often seek out global customers. The internet has made cross border trade easier, faster, and more efficient. Agatha’s business, Lucia Cakes, for instance, receives orders from across the globe from international customers who want to send baked goods to their loved ones in Singapore. These customers find her online or on social media and make payments online. Digital payment service providers allow trusted and instantaneous means for payments, transfers, and refunds and are crucial in enabling the success of small businesses. The demand for such solutions is only likely to rise as even aspiring entrepreneurs have global ambitions. Sixty-eight percent of aspiring entrepreneurs wish to own a global business.61 Seventy-nine percent of them also believe that technology enables them to reach a global customer base and eases the process of setting up a business. In our survey research, we found that entrepreneurs are also very positive about upcoming technology changes, with 93% of them stating that they believe that automation will be good for the Singapore economy.

While Singaporean entrepreneurs, on average, are in better financial health than their global counterparts, not all Singaporean enterprises fare the same. According to the Department of Statistics, half of new small enterprises fail in their first three years.62 The founders of many such failed start-ups find themselves faced with debt that they are unable to pay back.63 According to the Monetary Authority of Singapore, the non-performing loan ratio for SMEs rose from less than 2% in 2014 to 5.1% in 2018.64

Some of the experts we spoke to for the study said that part of the problem might be the timing of credit availability. Bernard Tan, who leads PayPal’s SME Outreach Program as part of the Singapore Development Centre told us, “The irony of financial services right now is that when an entrepreneur needs credit, institutions are risk-averse and do not provide it to them. When he/she can generate cash flow, they don’t need credit but
institutions are willing to lend to them.\textsuperscript{65} Most traditional financial institutions in Singapore do not provide credit unless the business is at least 6 months old.\textsuperscript{66} As the initial stages of a business often require significant investment, this could result in start-ups having trouble even getting off the ground. Entrepreneurs who require starting capital often take out personal loans that may not have repayment terms that suit business needs. Others deplete their personal savings to raise the money required to start their businesses. Some entrepreneurs turn to illegal moneylenders,\textsuperscript{67} who charge exorbitant rates of interest and may even use harassment or violence in the event of delayed or lapsed payments.

Financial services, and especially FinTechs, can play an important role in resolving the access to finance gap for SMEs by exploring non-traditional means of credit risk assessment. Another area where entrepreneurs would like financial services to do more, according to our survey, is in enabling them to manage fluctuations in income. Nearly half (49\%) of all entrepreneurs in our survey expressed interest in a product that would enable them to manage their cash flow with changes in income.

Fluctuating incomes can cause challenges in managing expenses for small businesses. For instance, 57\% of all small business owners we surveyed said that they had paid a bill late and incurred additional fees or interest as a result in the past year. Such fees could eat into the profits of a business and could also impede the business’ ability to serve its customers. Working capital loans – especially those for smaller sums that can help businesses tide over lean periods – could be a viable solution for these problems. Working capital products could work especially well in a market like Singapore, where, as our research shows, monthly income levels of businesses can be predicted in advance based on their past performance. At the same time, Singapore has a highly supportive regulatory environment for innovation in FinTech;\textsuperscript{68} and FinTech firms (including digital banks and payment service providers) are well-equipped to serve the working capital needs of SMEs due to their ability to build risk profiles that look beyond traditional risk assessment metrics.
Implications

Traditional financial institutions and the products and services they offer were designed for a world where people had permanent jobs and stable incomes. Today, changes in the world of work have led to increased demand for new and accessible financial products and services that can meet changing user needs. Variable incomes, longer lifespans, and rising job churn require a financial service industry that employs a radically different calculus from the existing norm. Across the world, there is growing recognition that financial services will have to be redesigned by factoring in the long-term financial health of customers as well as the opportunities for innovation that are offered up by technology.

In Singapore, both policymakers and citizens are actively embracing the opportunities offered by technological innovation while also readying themselves for the inevitable upheaval in employment structures that some of these changes will bring. In our interviews with global experts, Singapore was repeatedly cited as an example of a country that is getting things right in preparing for the future of work and whose efforts in reskilling are being replicated globally. Financial institutions in Singapore have the opportunity to support these efforts by bolstering workers’ ability to cope with the threat of job displacement. The right financial tools can also empower Singaporeans to participate in reskilling initiatives and to take advantage of income-earning opportunities that are provided by digitalization.

People Over Products

Singaporean workers are already thinking about the implications of changes in the world of work on their financial lives. At the same time, the Singapore government has adopted a strategic, collaborative, and forward-looking stance towards innovation in the financial services industry and is an active champion of FinTech in the region and globally. The financial services industry in Singapore is thus well-placed to roll out innovative products and services that can cater to the changing needs of the workforce.

It is increasingly clear that new and improved financial services must place the financial health of their users at the core of their construction. At the same time, in order for these novel or reimagined products and services to have a significant impact on the financial health of the Singaporean worker, their design must place customer needs at the forefront. Anil Gupta of Microsave told
us, “Many financial firms design a product and then push it out with an expectation that people will use it and like it. This is a problem. Depending on where people are in their lives, they are going to need different products. Currently, financial products aren’t flexible and personalized enough. When you design a product, you should be solving a particularized problem.”

In Singapore, as in other parts of the world, the majority of the population turn to traditional financial institutions such as banks in order to manage their financial lives. While they are seen as more reliable due to their long-established presences as well as the provision of physical locations that customers can visit for assistance or dispute resolution, the products they offer are often too broad-based to meet the needs of customers with specialized needs. This, in turn, could result in customers having their needs unmet or being forced to use products that do not align with their needs and which therefore do not help them meet their financial goals.

Financial institutions can help address these problems by shifting away from broad classifications of their customers in order to provide what Dr. Annie Koh describes as “precise financial services.” One of the ways for the financial industry to do so is to work closely with the Singapore government to identify gaps in the system that ought to be filled. For instance, the industry can work with the government to analyze anonymized demographic data to pinpoint segments of the population facing financial distress. Thereafter, traditional financial institutions and newer FinTech players can collaborate to provide technology-driven bespoke solutions for customers with unique needs. In the past, such bespoke products and services have been a luxury reserved for the wealthy. However, with technology enabling increased efficiency and decreased costs in design and delivery of financial services, financial institutions have the opportunity to enable larger segments of the population to choose and utilise financial services and products that are tailor-made to their individual needs.

Additionally, as with any other product, empathetic and inclusive design is a key component in enabling financial services to serve the underserved. While market surveys and research are, of course, helpful in informing decisions around strategy and product design, reorienting financial services to place people over products will require the
underserved to have a seat at the decision-making table. Financial service providers could ensure that the products and services they are creating to address the gaps in the financial system are effective by recruiting workers and advisers who themselves have had experience dealing with variable income or have experienced financial distress. Having faced financial uncertainty and distress themselves, such individuals would be able to identify missed opportunities, impediments to product adoption, or other nuanced aspects of product design and delivery that might not even be considered by the experts in the field. Incorporating these elements into the creation of innovative financial products and services will help ensure that they achieve the impact that is intended in their creation.

Financial Literacy

The best-researched best-designed tool is only meaningful if users take advantage of it. It is therefore important to raise awareness and understanding of financial products amongst Singaporean workers. The private sector can work closely with the government to enable Singaporeans to choose the right products and services at the right time to meet their changing needs. With the rapid move towards the digitalization of banking and payments systems in the country, financial education also needs to go hand in hand with digital education. Without the confidence and the ability to understand the pros and cons of the plethora of product options available, people may continue to rely on outdated but relatively simple products which, in turn, may not meet their financial needs. This is a risk that needs to be addressed especially amongst the elderly, whose lack of financial know-how can even put them at risk of being the victim of scams, many of which now target elderly victims through the internet. Financial service providers can play a key role in addressing this risk by partnering with the government on its many scam-prevention and cyber literacy schemes.

The experts we spoke to also highlight the need to integrate financial planning in the educational curriculum from a very young age. Yoke Yong Lai, former Startup and Incubation Lead at the PayPal Singapore Development Center, told us that while there are financial literacy initiatives being implemented at the tertiary education level, the people at the bottom of the pyramid who are most at risk of financial health concerns are also those who are least likely to enrol for tertiary education. The private sector can partner with institutes of primary and secondary education in Singapore to develop and deliver curriculum that can help build a nation of financially adept citizens.
FinTechs can go one step further by integrating financial education into the design of their products themselves. Dr. Annie Koh suggests the integration of automated mechanisms that checks for the appropriateness of a financial product for the users’ needs or self-check quizzes that users are administered to gauge their understanding of a product before they proceed to use it.74

In addition, with the development of the right user-friendly products, emerging technologies including automation and Application Programming Interfaces [APIs] can be utilised to protect users and to empower them to choose products that are right for their needs as well as to make responsible fiscal decisions. Val Yap, the founder of PolicyPal, raises the example of a prospective tool that makes budget tracking easier, “Currently, there are platforms that allow people to track their expenditure. However, it is still a manual process of entering the details of the transaction. This process can be cumbersome for most people. It takes a certain discipline to manually key in a transaction every time the user makes a transaction, to ensure accurate data at the end of the month. Tech companies are exploring how to automate the tracking process while also ensuring that people can trust their platforms to take appropriate security measures.”75 Financial services and products that identify such pain points while also placing fiscal responsibility and their users’ financial health at their core are increasingly relevant today.

Flexibility

With variability in income comes the need for flexibility in financial products. According to our survey, the greatest demand amongst Singaporean workers is for a product that enables them to manage their cash flow when income changes. Nearly half of all respondents (44%) said that such a product would be useful to them. In the absence of such products, Singaporeans with variable incomes are already showing signs of financial strife. Our survey shows that 30% of Singaporeans with variable incomes report an inability to cover all their monthly expenses with their current income. Amongst Singaporeans with consistent incomes, this share was half that at 15%. Workers with variable income are also more likely (51% vs 35% of stable income earners) to report feeling like that they do not have control over their monthly income. They were also more likely (46% vs 39% of stable income earners) to have paid a bill late and incurred additional fees or interest as a result in the past year. Amongst those who had incurred such additional charges, 52% said that the delayed payment was caused because the bill was due before they received their income.
Entrepreneurs and platform workers are especially prone to fluctuating incomes from month-to-month. Conventional savings, investment, and retirement products are therefore often inadequate for their needs. However, credit risk assessment was highlighted as requiring significant change by a majority of the experts we spoke to. According to Chia Hock Lai, President of the Singapore FinTech Association, “With variable income, the use of traditional methods of credit risk assessment are becoming less relevant. Alternative data to assess a person’s credit worthiness – such as information gathered from their smartphones on their location through the day – may provide clues to the nature of their jobs and credit worthiness. Technology can also help incorporate multiple sources of income in such risk assessment.”

Providing low cost financial credit products that rely on such alternative methods of risk assessment could significantly ease financial strife for independent workers and entrepreneurs during lean times. Nominated Member of Parliament and labor economist Dr. Walter Theseira told us, “A savings buffer is essential for workers who encounter mismatches between their earnings and expenditure. This is an area where there is room for financial products. For instance, in Singapore, there are insufficient product offerings that provide low cost financial credit. Workers with variable incomes do not have access to a credit card like those in high paying jobs in the traditional sector. Financial institutions can better serve these workers by designing products that use alternate and more efficient methods to determine their risk profile.”

Credit repayment plans also need to be sensitive to fluctuations in income as well as the nature and sector of an individual’s employment. For instance, Mich Goh, Head of Public Policy, Southeast Asia for Airbnb, told us that for individuals and microentrepreneurs in sectors like travel and tourism where seasonality has a significant impact on earnings, credit payment schedules can be structured in a way that allows for higher repayment amounts in the high season and lower payments in the off-season.

Financial institutions need to develop a more holistic understanding of their customers’ financial lives, in order to identify such opportunities to inject flexibility into the system to benefit their customers. This can be achieved by incorporating social and behavioral data to create a holistic understanding of customer needs and also by working with diverse stakeholders across various sectors to identify and address problems in the system. The changes in the way that Singaporeans work and earn call for changes in the way financial services help them get paid, save, invest, receive credit, or plan for retirement. While erratic streams of income may be inevitable, the right financial products can help people meet their current expenses and plan for the future even in the midst of such unpredictability.
Conclusion

Singapore is undoubtedly a global leader in preparing for the changing future of work. The Singapore government and citizenry are early and agile adopters of digitalization and emerging technologies. By providing an enabling ecosystem through strong regulatory protection and by promoting innovation through tax incentives and grant programs, Singapore has also been able to attract global technology players to establish their presence in the country. The Singapore government’s strategic investments in human capital development through the provision of training programs and skills development incentives have enabled the average Singaporean to cope with the changing requirements of the workplace. In designing these training programs, the government worked closely with the private sector in order to understand employers’ changing needs and with Singaporean workers in order to alleviate their anxieties and support their aspirations. Other countries, both within the Asia Pacific region and beyond, can learn and adapt best practices from Singapore as they prepare their citizens for the future of work.

At the same time, trends like automation, the rise of the gig economy and entrepreneurship, and socio-demographic changes are going to cause fundamental changes in the labor market across the globe. Not all changes in these areas can be predicted and even the most astute forward-thinking policymakers cannot prepare every citizen under their care to keep pace with changes in the labor market brought about by accelerated technological change. Though Singapore is an economic powerhouse, due to its highly globalized nature, the Singaporean economy is also susceptible to changing geopolitical waves. It is therefore not enough that Singaporeans are prepared for a changing world of work with enhanced skills. They also need to be able to manage their financial lives in ways that will buttress them against financial unpredictability.
Ensuring financial health is a key component of the future of work that deserves more attention in Singapore. Sound financial health can empower individuals to make confident and optimistic professional choices even in tumultuous times. Financially healthy individuals are more able to invest in their continued education and upskilling. Financially healthy entrepreneurs create employment, pay fair wages, and support the economic and cultural life of their communities.

Preparing people to think about and prepare for a financially healthy future is not something that can be done by the government alone. Planning for the long-term financial health of the Singaporean workforce requires a concerted approach and enhanced partnerships and collaboration between universities, businesses, and policymakers. Such an ecosystem-wide approach can help provide efficient and innovative solutions that will help people meet their current needs while also preparing for a changing future. Due to its in-depth understanding of the changing financial needs of the Singaporean population, the financial services industry is well-positioned to kickstart a conversation towards this goal. This report is an attempt to promote deeper thinking and closer collaborations across academia, industry, and government about ways in which financial services and social safety nets can be redesigned and strengthened to help Singaporeans face up to the future of work.
Appendix

The principal researcher and author of this report was Amrita Nair from PayPal. Steven Chan, Jerry Tso, and Usman Ahmed were also instrumental to the success of this report. This research study is a continuation of a global study done by PayPal with the Center for Social Sector Leadership, University of California at Berkeley and Centre for Public Policy, Indian Institute of Management in Bangalore. The survey research was conducted by Logica Research. The survey analysis was supported by Sidley Austin. The report design was created by Nimblebot.
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3. Financial Health is a concept that goes beyond measuring financial inclusion in terms of access to a payment account. PayPal CEO Dan Schulman wrote on the subject in 2018, “[…] we must consider all of the financial services that people need to take control over their financial lives—everything from financial-planning tools for managing budgets and expenses to access to affordable credit to start businesses and invest in college; insurance to help deal with unexpected expenses; retirement accounts for long-term savings; and more.” [Source: Dan Schulman. “Dan Schulman on Shifting From Financial Inclusion to Financial Health.” Wall Street Journal. January 17, 2018. https://www.wsj.com/articles/dan-schulman-on-shifting-from-financial-inclusion-to-financial-health-1516201094]


10. Dr. Annie Koh (Singapore Management University), telephone interview by authors, November 15, 2018.


13. Figure obtained from 2018 PayPal survey of respondents in Brazil, Canada, China, France, Germany, India, the United Kingdom, and the United States


15. The programme provides a S$500 allowance to Singaporeans aged 25 and older who can use this amount on top of existing Government course subsidies to pay for a wide range of skill development and upgrading courses.


17. Ibid.

18. Cher Pong Ng (SkillsFuture Singapore, telephone interview by authors, November 2018

19. Dr Michael Fung (SkillsFuture Singapore), telephone interview by authors, October 11, 2019

20. Ye-Her Wu (NUS-SCALE), telephone interview by authors, October 2, 2019


27 Ibid.

28 Based on internal PayPal data. We analyzed the total payment volume of a sample of 50 online platform companies from 2014 to 2018 and calculated the average year-over-year growth rate.


30 PayPal. “PayPal & Freelancers Singapore,” October 2017. This analysis is based on an online survey of 300 Singaporean freelancers conducted in Singapore in October 2017.

31 Gig workers can make voluntary contributions to the Central Provident Fund. They are also required to make compulsory contribution to the MediSave account of the CPF (see footnote 26) if their net trade income is more than S$6,000. More information available at https://www.iras.gov.sg/IRASHome/Businesses/Self-Employed/Working-out-your-taxes/Deductions-to-Save-Tax/Compulsory-and-Compulsory-and-Voluntary-MediSave-Contributions/

32 CPF contributions are distributed into three accounts. The Ordinary Account (OA) can be used for housing, insurance, investment in specified products, and local tertiary education. The Special Account (SA) is for old age and investment in retirement-related financial products. The MediSave Account (MA) is for hospitalization expenses and approved medical insurance products. The Retirement Accounts (RA) is created automatically on the fund owner’s 55th birthday. From age of 55, the fund owner can withdraw up to S$5,000 from the Special and Ordinary Accounts after setting aside the Full Retirement Sum (specified by the CPF for each year) in their Retirement Account. Monthly payouts will be made from the Retirement Account to fund owners from the payout eligibility age. More information is available at https://www.cpf.gov.sg/Members/Schemes


36 This is of concern as the share of the population available and willing to support the elderly may not match up. Some segments of the population (such as children and young adults pursuing education) do not have the income or the resources to support the elderly. At the same time, not all elderly members of the population will receive assured and sustained support from their working-age relatives. For additional context, the global average of share of population aged 65 years or older is 8.8%.

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