Women Technopreneurs

The landscape for women technology entrepreneurs in Sri Lanka
ABOUT IFC

IFC—a member of the World Bank Group—is the largest global development institution focused on the private sector in emerging markets. We work in more than 100 countries, using our capital, expertise, and influence to create markets and opportunities in developing countries. In fiscal year 2021, IFC committed a record $31.5 billion to private companies and financial institutions in developing countries, leveraging the power of the private sector to end extreme poverty and boost shared prosperity as economies grapple with the impacts of the COVID-19 pandemic. For more information, visit https://www.ifc.org.

ABOUT SLASSCOM

Sri Lanka Association for Software Services Companies (SLASSCOM) is the national chamber for the knowledge and innovation industry in Sri Lanka and acts as the catalyst of growth. We do this by facilitating trade and business, propagation of education and employment, encouraging research and innovation, and by influencing a national policy framework of value to the industry. SLASSCOM has over 350 member companies with a 115,000 workforce. SLASSCOM drives the Imagination Economy: Sri Lanka’s Industry of the future, with the potential to become the #1 export revenue earner for Sri Lanka.

IFC and SLASSCOM do not guarantee the accuracy, reliability or completeness of the content included in this work, or for the conclusions or judgments described herein, and accepts no responsibility or liability for any omissions or errors (including, without limitation, typographical errors and technical errors) in the content whatsoever or for reliance thereon.

© International Finance Corporation [2021]. All rights reserved.

The material in this work is copyrighted. Copying and/or transmitting portions or all of this work without permission may be a violation of applicable law.
This report aims to contribute to the growing knowledge base on innovation and technopreneurship in Sri Lanka. It is a joint effort led by the International Finance Corporation (IFC) and Sri Lanka Association of Software & Service Companies (SLASSCOM)’s Women Technopreneur Forum. This report forms part of the wider program by IFC for Accelerating Competitive Entrepreneurship in Sri Lanka and is implemented in partnership with the Government of Japan.

The project team would like to acknowledge the support from Emojot, PwC Sri Lanka, KPMG Sri Lanka, other chambers who helped to disseminate the survey, and lastly all individuals who participated in the survey.
# Table of Contents

Executive Summary .......................................................... 04
Objectives and Methodology ............................................. 07
Sample Characteristics ...................................................... 08

**Global Landscape for Female Technopreneurs** ............................................. 09
Global Overview .............................................................. 11

**Survey Findings** ............................................................ 12
Section 1 | Skills & Education ................................................. 13
Section 2 | Motivation & Cultural Influences ............................. 15
Section 3 | Top Challenges .................................................... 17
Way Forward ................................................................. 23

Annexures ............................................................................. 26
Annexure 1: Endnotes ....................................................... 26
Annexure 2: List of Graphs and Figures ............................. 28
EXECUTIVE SUMMARY

Sri Lanka’s ICT industry is the country’s fourth largest export earner¹ and targets to generate USD 5 billion in revenue by 2025². The country is well positioned to reach this target with key elements in place – high literacy levels, a regional leader in human capital with a globally recognized tech industry. The tech industry is a green space for innovation and provides new opportunities for women and men to participate in the sector. However, the support women need to advance in this space is at times different from that of men. In Sri Lanka, attention is limited in identifying these differences to support women and reshape their role in the economy through technopreneurship.

The country’s startup sector is predominantly male (87 percent in 2019)³, with low representation of women startup founders. Ensuring that women are well-placed to compete in this space will empower them personally and drive development. To date in Sri Lanka there is limited evidence of the types of support women may need to more effectively participate as technopreneurs. This study seeks to fill this gap. With this in mind, SLASSCOM’s Women Technopreneur Forum, together with IFC, deployed a survey to better understand the challenges women technopreneurs face and to design interventions to support their growth using sex disaggregated data.

The survey reached 151 respondents from nearly all districts in the country and was well balanced with 49 percent female respondents. The findings from the survey analysis has revealed new insights which are explained in detail in this report.
Education – The need for an early start
The survey showed that 69 percent of entrepreneurs had a higher educational qualification (first degree/equivalent or higher). It was encouraging that women constituted almost half of those in this category (47 percent). Focusing on technopreneurs, the survey indicates that more men entered the technopreneur field early on – as undergraduates or fresh graduates. On the other hand, women were mostly from non-ICT backgrounds and were seen in the sector at postgraduate level. Should we not empower our girls with tech skills to enter the sector early on?

Culture – Scope for women technopreneurs
Sri Lanka seems to have moved forward in technopreneurship as a career, with only 40 of the respondents stating discouragement from family or friends when starting a business. Of those who were discouraged, men seemed to be marginally more discouraged by family than women.

Technopreneurship - powered by youth
Technopreneurship is an emerging career trend where 82 percent of technopreneurs were under 40 years. In the youngest age category (below 24 years), there were twice as many men as women, perhaps due to their early entry.

Passion to make a difference
While 58 percent of the respondents cited that their primary motivation to enter the industry was ‘to make a difference’, women particularly stated that this career path gave them flexibility to strive for work-life balance.

Young emerging business
The survey findings indicated technopreneurship as an emerging business with hands-on business owners. For example, 53 percent of the sample were startups that had been operating for fewer than two years, and 83 percent were fewer than five years. Most of the businesses employed fewer than 10 people and earned less than LKR 15MN annually, reflecting the early stage of most businesses and the need for further development and support.

Primary Finance Source - Savings and family support
Access to finance emerges as the most critical constraint in the sector. Therefore, it is not surprising that respondents mentioned that savings and family support was their main funding source (64 percent), indicating a barrier for potential tech businesses without such support. Angel investors had supported 16 percent of the respondents. Access to finance was also the main issue cited by the sector in the 2019 SLASSCOM Sri Lanka Startup Survey.
Women were more hesitant to approach formal financiers
Looking deeper at the issue of funding which appeared a predominant constraint, women seemed more hesitant than their male counterparts to engage in fundraising. Indicating the need for awareness and support to approach funders.

Access to markets is a challenge for all
A majority of Sri Lankan technopreneurs still serve the local market. Asia was the main customer base when venturing out, followed by North America. Access to markets is as important for technopreneurs as access to funding. Thus, a key ask from the nascent Sri Lankan ecosystem is access to markets and networks indicating their readiness to showcase products in the international markets. This need had no gender boundaries.

Relatively low levels of harassment
While overall level of harassment recorded was 17 percent, majority here were females. Yet this was significantly less when compared with the State of Women in Tech and Startups survey 2020 (44 percent).

Mentoring to learn, grow and advance
Globally, women do not have access to the same extended support networks of mentors and peers that men enjoy. This is no different in Sri Lanka. A key ask from women technopreneurs in the survey was support for mentorship though this was not a priority for men.

Training needs
Financial planning and business management skills is a primary training ask by female technopreneurs. Addressing this concern may help to build their confidence in approaching formal funders which is currently low.

Intellectual Property protection
While finance and marketing-related support was the focus for most respondents, the lower emphasis on legal and intellectual property protection, an essential aspect for startups aspiring to attract investors at later stages, likely reflecting the relative inexperience of many in this sector or their understanding of key business needs.
OBJECTIVES AND METHODOLOGY

This report aims to understand the landscape of women technopreneurs in Sri Lanka, their constraints, and the support required.

DEFINITIONS

Technopreneur
A technopreneur is an entrepreneur who uses technology to change orthodox/traditional ways, and is not one who is necessarily from a tech background.\(^7\)\(^8\)

METHODOLOGY

Quantitative analysis based on an online survey conducted in May 2021, to provide insights into issues faced by Sri Lankan women technopreneurs. For comparison, male technopreneurs were also invited to participate.

The analysis lays the foundation for developing targeted interventions to support Sri Lankan female technopreneurs by SLASSCOM and IFC.
SAMPLE CHARACTERISTICS

151 Respondents
77 Male
74 Female
78% Below 40 years

75% Entrepreneurs/technopreneurs using digital

30% Entrepreneurs using/planning to use digital platforms
70% Technopreneurs
45% Use social media shops

<5 83% were in business less than 5 years

46% Based in Colombo

22/25 Districts represented

12% 29% 10% 9% 17% 23% 100%
Respondents in each Stage
Stages
GLOBAL LANDSCAPE FOR FEMALE TECHNOPRENEURS
GLOBAL LANDSCAPE

Across the world, countries are expanding their technology and startup ecosystems, as seen in recent rankings - KPMG’s Global Technology Innovative Hubs report 2020⁹ and Startup Genome 2020¹⁰. The top ranked nations are the US, UK, China, Israel, France and Japan (refer page 11). Looking specifically at the best ecosystems for female founders, the US, Malaysia, China and Australia, rank high¹¹, due to greater institutional support for SMEs, more positive sociocultural mindset and high willingness to take calculated risks.¹²

A consistent statistic shown across the countries is the prevalent female under-representation across the technology start up industry. This is also true for Sri Lanka. Considering the gender parity in education, the potential for Sri Lankan females in the technopreneurship sector is relatively underutilized.
## Global Overview of Female Technopreneurs

<table>
<thead>
<tr>
<th>Women in overall workforce 2019(^\text{13})</th>
<th>Percentage of Females in Total Tech Workforce</th>
<th>Percentage of Female Technopreneurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States (57%)</td>
<td>(29%) (^\text{14})</td>
<td>(26%) (^\text{15})</td>
</tr>
<tr>
<td>United Kingdom (58%)</td>
<td>(19%) (^\text{16})</td>
<td>(4%) (^\text{17})</td>
</tr>
<tr>
<td>India (21%)</td>
<td>(18%) (^\text{18})</td>
<td>(5.7%) (^\text{19})</td>
</tr>
<tr>
<td>Sri Lanka (34%)</td>
<td>(18%)</td>
<td>(2.1%)</td>
</tr>
<tr>
<td>Singapore (62%)</td>
<td>(41%) (^\text{20})</td>
<td>(5%) (^\text{21})</td>
</tr>
<tr>
<td>China (61%)</td>
<td>(40%) (^\text{22})</td>
<td>(22-24%) (^\text{23})</td>
</tr>
<tr>
<td>Israel (60%)</td>
<td>(29%) (^\text{24})</td>
<td>(9%) (^\text{25})</td>
</tr>
<tr>
<td>France (51%)</td>
<td>(27%) (^\text{26})</td>
<td>(9%) (^\text{27})</td>
</tr>
<tr>
<td>Malaysia (51%)</td>
<td>(35%) (^\text{28})</td>
<td>(22-24%) (^\text{29})</td>
</tr>
<tr>
<td>Australia (61%)</td>
<td>(31%) (^\text{30})</td>
<td>(19%) (^\text{31})</td>
</tr>
</tbody>
</table>
The trends emerging from the survey are presented under three categories.

**Section 1 – Skills and Education**
Technopreneur background and skills.

**Section 2 – Motivation & Cultural Influence**
Barriers in the home environment and society limiting technopreneurs, especially women, in their pursuit of technology and entrepreneurship.

**Section 3 – Top Challenges**
While technopreneurs face multiple challenges, the top three: access to finance, access to markets and access to knowledgeable/experienced workforce - are discussed in detail.
Technopreneurs start young

Technopreneurship is an emerging career trend where 82 percent of technopreneurs were below 40 years. In the youngest age category (below 24 years), there were twice the number of men than women.

These trends are similar globally for entrepreneurship overall, where participation peaks in the 25-34 age range and then tapering down with age.

Women enter the sector at higher education levels than men.

Sri Lankan technopreneurs are well qualified with over two thirds of the sample having a first degree or higher qualification. The young technopreneur landscape is dominated by men who entered the technopreneur field early on. Looking at their education, most were undergraduates or fresh graduates with early exposure to ICT. On the other hand, women tend to enter the sector with a post graduate qualification, possibly linked to the fact that women were less likely to have pursued ICT qualifications than men.

Women’s low exposure to ICT qualifications

Having exposure to ICT related education seemed to be common among most technopreneurs (68 percent). Women were predominant among those who had ventured into the industry without an ICT qualification—indicating the untapped potential for females to enter the industry earlier, with relevant exposure to ICT related subjects being an added advantage.

The 2019 Sri Lankan Annual School Census highlights a similar trend. Only 14 percent of girls chose technology for their Advanced levels, compared with 86 percent of boys. The trend raises the question of what limits women in their pursuit of technology.

It is encouraging that the lower level of ICT qualifications among women compared with men, has not deterred women from entering the sector. With the relevant support in place, there is potential for women to better penetrate the sector.

“Though we do need more women to graduate with technical degrees, I always like to remind women that you don't need to have science or technology degrees to build a career in tech.”

-Susan Wojcicki, American technology executive, CEO of YouTube.
SECTION 02
MOTIVATION & CULTURAL INFLUENCE
Technopreneurship as a career

Overall, only 40 respondents stated they were discouraged by family or friends to enter the sector, indicating a positive acceptance towards technopreneurship as a career. However, among those who were discouraged, men seemed to be marginally more discouraged than women, with the most discouragement from parents or relations.

Scope for women technopreneurs

On a positive note, the comparatively lower level of discouragement faced by women indicates scope for women technopreneurs. The results resonate with findings from the Mastercard Index for Women Entrepreneurs\(^3\)\(^4\). The index found that more females are engaged in early-stage entrepreneurial activities (between 30 and 40 percent of the total female working-age population). A possible explanation for this is the increase in society’s acceptance and regard for risk-taking, innovativeness, individuality, and creativeness in entrepreneurship in low, low-middle and upper-middle-income economies\(^3\)\(^5\).

Passion to make a difference

Fifty eight percent of all respondents said their primary motivation to enter the industry was 'to make a difference'. This is similar to the findings from Capital One’s Women in Tech Survey 2019\(^3\)\(^6\), where 93 percent of women who stayed in tech said they rate a sense of purpose as an important or very important trait for successful individuals\(^3\)\(^7\).

Additionally, technopreneurship was found to have helped women achieve work-life balance compared to men. Only 4 percent of the respondents stated they started a business because they could not find a suitable job.

Level of harassment was low

Whilst the level of harassment in the industry was low at 17 percent, the majority of those harassed were females. Still, this is significantly lower than the global average for women technopreneurs who had faced harassment (44 percent)\(^3\)\(^8\).
Key Challenges for Technopreneurs

The challenges faced by technopreneurs evolved with the needs of each stage in the business lifecycle.

While access to finance was a predominant challenge throughout, other challenges emerged as technopreneurs moved across stages. For example, in stage two, technopreneurs struggled to find access to an experienced workforce to develop prototypes or brainstorm ideas. Alternatively, access to markets, though a challenge in most stages, was the biggest issue in Stage three.

Based on the survey responses 3 key challenges emerged and were:

1. Access to finance
2. Access to markets
3. Access to knowledgeable/experienced workforce
1 ACCESS TO FINANCE

Access to finance is a key challenge across all stages

The nature of a technology start-up is one of high upfront costs, uncertainty and zero to no-income in the early stages of the lifecycle making finance key for survival of the business.

It is unsurprising that a majority of the respondents stated access to finance as their biggest struggle. Technopreneurs in Sri Lanka have low access to funding and it was noted that technopreneurs considered access to finance as a key challenge in all six stages of their business.

64 percent of technopreneurs relied on bootstrapping

Bootstrapping is where start-up funds come mainly from personal savings and cash from sales. Our survey highlights that the entrepreneurs' primary source of seed funding was from savings or family funds (64 percent).

16 percent relied on Angel Investors

The second most predominant seed funding source were angel investors at 16 percent.

A 2018 study by the Asian Development Bank of Sri Lanka found that entrepreneurs used angel funding primarily in the early stages of launching their businesses. However, only few angel investors exist in Sri Lanka limiting the ability to fulfill the demand.

The survey showed that 17 percent of women obtained seed funding from Angel investors.

Figure 3: Percentage of female technopreneurs that relied on Angel Investors

Fewer women technopreneurs opt for financial institutions

Only a small number of technopreneurs obtained funding from a financial institution (12 percent). The number of women technopreneurs among this group was almost a third the number of men.

Women were more hesitant to approach formal financiers

Women seemed hesitant to raise funds as 46 percent of female respondents have never attempted to raise funds compared to the 32 percent of male respondents.

Overall, the ability of technopreneurs to raise funds is low at 38 percent - reiterating the issues faced by technopreneurs in access to finance. Most technopreneurs highlighted the need for support in this area – how to fund, how to price, how to manage and plan. Therefore, the improvement of technopreneurs’ skills in this area can be a boost to help them approach funders with confidence and obtain better pricing/valuation.
2 ACCESS TO MARKETS

Market linkage - a key ask

Market linkage was a key ask from technopreneurs (44 percent). Those with young business operations (five years or less) needed this the most (83 percent).

Looking at the markets currently served by Sri Lankan technopreneurs, a majority are limited to the local market.

Outside of Sri Lanka, Asia was the main customer base followed by North America.

Meeting quality expectations

The concentration of marketing efforts within Sri Lanka and Asia, with less focus on other markets, indicates the need for support to access markets beyond networks and funding. Against this backdrop, an ask from technopreneurs was the support/know how to obtain quality certifications. This was a particular focus in stage 4 when having to refine their products based on feedback from early adopters.
3 ACCESS TO KNOWLEDGEABLE / EXPERIENCED WORKFORCE

A young emerging landscape

The youth drives technopreneurship in Sri Lanka (82 percent of technopreneurs are below 40). Thus, it is not surprising that more than half the industry is less than two years in operation, continuing the trend seen in 2019\textsuperscript{42}.

A lack of experience - with a risk of failure

Lack of experience was often cited as a reason for startups to fail. They tend to do better with experienced founders\textsuperscript{43}. Women technopreneurs in particular cited need for know-how and access to a knowledgeable and experienced workforce as top challenges.

The trend is similar to that found elsewhere. For example, a 2014 survey of 2281 startups in India by Tech in Asia, found that 997 failed within the first two years and that the average age of the failed founders was 27 years\textsuperscript{44}.

Given that the Sri Lankan landscape is relatively inexperienced (49 percent of survey respondents were below 30 years), they could be exposed to a higher risk of failure.

Younger people may have more energy and drive, have longer to reap the benefits of starting a business, are more familiar with technology and trends, and, perhaps most importantly, have not yet learned what they can’t do!\textsuperscript{45} Hence, this indicates a need for development and assistance for startups in the technology industry in Sri Lanka driven by young entrepreneurs.

Networking and support structures are key

Networking opens opportunities for expanding markets and businesses. “One of the key predictors in the success of an entrepreneur is the strength of their personal networks”\textsuperscript{46}. Given the high presence of young businesses, the survey finds that a significant majority of them cite the lack of adequate connections to markets as a key constraint. Networking is a key enabler here. Women technopreneurs in the survey particularly highlighted the need for networking and finding more customers as key requirements.
Further to this, having more formal business structures and ensuring protection of intellectual property would help technopreneurs progress along the stages of establishing a business.

**Women would need to consider a formal business structure**

The survey highlighted that 35 percent of the businesses were sole proprietorships, approximately 57 percent were private limited companies, and 8 percent of the respondents were running their business activity as partnerships.

However, of the respondents who had registered private limited companies, 59 percent were male compared with the 41 percent who were female, indicating that more women have personal assets at risk and are likely to run more risky business models than men.

Moreover, the companies that earned more than LKR 251MN in revenue were partnerships and private limited companies with 11 to 200 employees, highlighting that structuring or listing the business could be a factor for future growth that more women need to consider.

**Lower emphasis on Intellectual Property Protection**

Intellectual property protection is critical to fostering innovation as it protect the ideas of founders and their businesses, enabling them to reap the full benefits of their inventions.

However, respondents cited a lower emphasis on legal and Intellectual Property Protection (IPP), indicating low awareness of its importance for future growth and investment. More experienced entrepreneurs are more likely to appreciate the value of property protection of their inventions. The low emphasis on IPP suggests the technopreneur landscape in Sri Lanka needs greater awareness around the importance of intellectual property rights.
Factors for a thriving environment for female technopreneurs

The global ecosystems that have successfully supported female technopreneurs indicate common factors such as ease of doing business, supportive government programs, well developed financial/business systems, along with availability of business networks and mentorship\textsuperscript{47}. The key asks from technopreneurs in the survey resonate the need to improve these factors in the local ecosystem.

A few themes emerge as ways better support female technopreneurs

A key ask for support from both men and women technopreneurs was training. The wordgram represents topics requested for training by the technopreneurs.

Figure 6 - Training requirements of respondents
TRAINING

"Arrange more knowledge sharing sessions, as lack of knowledge could be the major drawback. Those sessions should be in all languages, use less tech jargon when promoting."

Source: Respondent

Points to consider for training:

To ensure that training is effective for women technopreneurs, particularly in a context where women enter the industry little later than men, we must keep in mind their constraints such as time poverty.

When designing training programs, it is important to ensure a “gender-inclusive” approach. This refers to programs that are open to both men and women but are designed to overcome any barriers to women’s full participation. Implementing gender-inclusive skills building programs is a powerful way to promote gender equality and eradicate gender bias. It is about delivering the training in such a way that encourages equitable participation.

Going beyond the aspect of gender, other potential barriers to active participation in training faced by some women and men could include those related to language, religion, caste, age, ethnicity, disability, and sexual orientation.

A key ask particularly from women technopreneurs was mentoring support

Women do not have access to the same extended support networks of mentors and peers that men enjoy. This was reflected from the survey respondents where 19 percent of entrepreneurs stated that mentoring was a key ask for support in business growth. Of this 71 percent were female, indicating this was more of a priority need for women.

Younger women need more assistance via mentoring

"There's good entrepreneur skills of females from rural areas but they don't have ways to showcase. If the female entrepreneurship accelerators are conducted at district level, they can get the exposure they need."

Source: Respondent

MENTORING

Just over half of the female respondents who requested mentorship and guidance were 30 years or less (53 percent), suggesting that younger women need more mentorship support to start-up and convert their ideas into a business and refine their product. The request for mentors by early female technopreneurs is considered a critical factor for development, due to the high risk of failures.
ANNEXURE 1: ENDNOTES

4. Ibid
8. iTMunch, 2020. Article, What is Technopreneurship? What is its meaning, importance & example? [online] Available at: https://itmunch.com/what-is-technopreneurship-what-is-its-meaning-importance-example/.
11. Ibid
17. Hurst, 2021. Article, Women make up just 4% of UK tech startup founders —CodinGame. Information Age. [online] Available at: <https://www.information-age.com/women-make-up-just-4-uk-tech-startup-founders-codingame-123494206/>. 
27. Ibid
ANNEXURE 2: LIST OF GRAPHS AND FIGURES

List of Graphs

Graph 1  Qualification of respondents  14
Graph 2  Who harassed respondents the most?  16
Graph 3  Funding insights  19
Graph 4  Female technopreneurs who need market linkage support  20

List of Figures

Figure 1  Motivation of respondents for starting business  16
Figure 2  Business Life Cycle  18
Figure 3  Percentage of female respondents that relied on Angel Investors  19
Figure 4  Concentration of customers  20
Figure 5  Size of business surveyed  21
Figure 6  Training requirements of respondents  24