

The Gender Global Entrepreneurship and Development Index (GEDI)

A 30-country analysis of the conditions that foster high-potential female entrepreneurship

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Global Entrepreneurship and Development Institute

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Foreword

By Charlotte Deal, Director Women's Initiatives, Dell

There is increasing awareness and interest around the role and contribution of women in the world's economies. However, while many of us understand that women are critical to global growth and prosperity, there is very little information available around how to drive change and harness that potential. Last year, we set out to address that shortfall when we commissioned the pilot Gender-GEDI study, focused on the ways in which governments, institutions and corporations can support the effort to improve the conditions for high potential female entrepreneurship worldwide. And for the past five years, we've supported women entrepreneurs through the Dell Women's Entrepreneur Network – a program that brings together leading women from all over the world to share their experiences and do business with one another.

This year, we increased the scope of the study with a view to making it truly global and representative by taking it from 17 countries to 30 and by expanding the research itself to delve more deeply into the issues faced by women entrepreneurs. What we uncovered in the process is that while there is still a lot of work to do, there is much we can learn from each other. Even countries that performed the best, like the United States, Australia and Sweden, can implement lessons from other countries that might have performed lower overall. All nations displayed strengths and weaknesses when it comes to the social and business environment that female entrepreneurs are operating in and there is room for improvement everywhere.

Our goal with this research is to provide a diagnostic tool that will point the way for leaders, policy-makers and law-makers to identify strategies to incrementally improve conditions in their country and enable businesses founded by women to thrive. At Dell, we believe that by improving access to education, technology, capital and networks, dramatic improvements will follow. Already, we're encouraged by the real-life results produced by the Gender-GEDI research. The leading change-agents that form the expert panel that was convened to inform the research parameters have already put it to good use, promoting it within governments and global organizations with the power to institute reform. We thank them for their passion and support.

While there are bright spots and room for optimism, the overall picture points to an urgent need for change. The world cannot prosper without the economic participation of women. It is our fervent hope that this research will help to inspire and guide action that will lead to a brighter future for women entrepreneurs everywhere.

Key Findings

In the 2014 Gender GEDI Index, the number of countries analyzed increased from 17 to 30. Built upon the same theoretical framework as the 2013 Gender-GEDI – measuring entrepreneurial environment, ecosystem and individual aspirations, and scoring nations on a scale ranging from 0 to 100 – our analysis this year uncovers the following key findings:

- The United States (with a score of 83), Australia (80) and Sweden (73) are the top ranking countries in the 2014 Gender-GEDI. They are followed by France and Germany (tied at 67), Chile (55), the United Kingdom (54) and Poland (51) which all received an overall score of 50 or more.
- Twenty-two countries received an overall Gender-GEDI score of less than 50 out of 100, indicating that many of the fundamental conditions for high potential female entrepreneurship development are generally lacking in the majority of countries.
- The Gender-GEDI Index identifies strengths and weaknesses at all score levels. Top performers who rank in 1st through 8th place tend to have good overall business environments and would benefit from supporting programs to activate and accelerate the growth of high-potential women entrepreneurs.
- Fourteen countries ranked from 9th to 22nd place in the Gender-GEDI Index make up the ‘Moderate Performers’ group. The areas that mid-ranking economies could focus on to move them into the highest-ranking tier would be both to implement current women’s enterprise development interventions and support as well as make basic improvements in the business-enabling environment.
- In the lowest tier are eight economies ranked 23rd to 30th place in the Gender-GEDI Index. They include Nigeria (29), Morocco and Ghana (both 27), India (26), Uganda and Egypt (both 19), Bangladesh (17), and Pakistan (11). The areas that need improvement for the lowest-performing economies include basic legal rights and education for women and acceptance of women’s social and economic empowerment, in addition to specific women’s enterprise development support and the overall business environment in terms of regulations, R&D investments and capital markets.
- Among the 17 countries included in both the 2013 and 2014 Gender GEDI Index reports, four increased their ranking and four declined. Japan improved the most, up three places from 12th to 9th. Brazil jumped two places, from 14th to 12th. India and the United Kingdom each moved up one place in the rankings. The biggest decline was seen in Malaysia, which dropped four ranks, from 9th to 13th. Egypt, Mexico and Morocco each dropped one place on the comparative 2013-14 ranking.

Introduction

Globally, women and men are not on a level playing field in terms of access to resources, which continues to impact women's ability to start and grow businesses. The Gender-GEDI focuses specifically on identifying and assessing the gendered nature of factors that, if addressed, could allow high potential female entrepreneurs an equal chance to flourish.

There is increasing awareness of a gender dimension to entrepreneurship and an increasing realization among policy makers and practitioners alike, that gender-blind business support measures do not support women's enterprise development to the extent that they support its male equivalent. Focusing efforts specifically on women's enterprise development, and measuring their impact, is paramount. The Gender-GEDI Index results distill the most important issues for policy makers, governmental officials and other decision makers interested in improving the conditions for high potential female entrepreneurship development.

The Gender-GEDI identifies high potential female entrepreneurs as women who own and operate businesses that are innovative, market expanding and export oriented. Through their entrepreneurial activities, high-potential female entrepreneurs not only contribute to improving their own economic welfare but to the economic and social fabric of society through job creation, innovative products, processes, and services, and cross border trade. By focusing on the gender differentiated conditions that often affect high potential female entrepreneurship development, the Gender-GEDI provides a new systematic approach that allows for cross-country comparison and benchmarking.

The Gender-GEDI is the world's first diagnostic tool that comprehensively identifies and analyzes the conditions that foster high potential female entrepreneurship development. As such, the Gender-GEDI does not simply provide a measurement of the quantity of female entrepreneurs, rather it focuses on identifying a country's strengths and weaknesses in terms of providing favorable conditions that could lead to high potential female entrepreneurship development. Launched in 2013, the initial pilot study provided a comparative analysis for 17 developed and developing economies spanning several regions and levels of national economic development.

The 2014 Gender-GEDI has been improved in a number of key ways. First, we have added 13 countries¹ to the original 17 countries,² which provides increased regional coverage in Africa, Asia, Europe and Latin America and the Caribbean. These 30 countries combined represent 66% of the world's female population and 75% of the world's GDP. In addition to expanding geographic coverage, we have also created and adapted nine indicators that result in an even richer analysis. To frame these content innovations, the 2014 Gender-GEDI also reflects a context innovation: a new research perspective based on a female entrepreneurship continuum. This shift in perspective places more emphasis on areas where there is the greatest potential for impact: public policy initiatives targeting Promising and Potential Entrepreneurs, which can most significantly increase the pool of high potential female entrepreneurs.

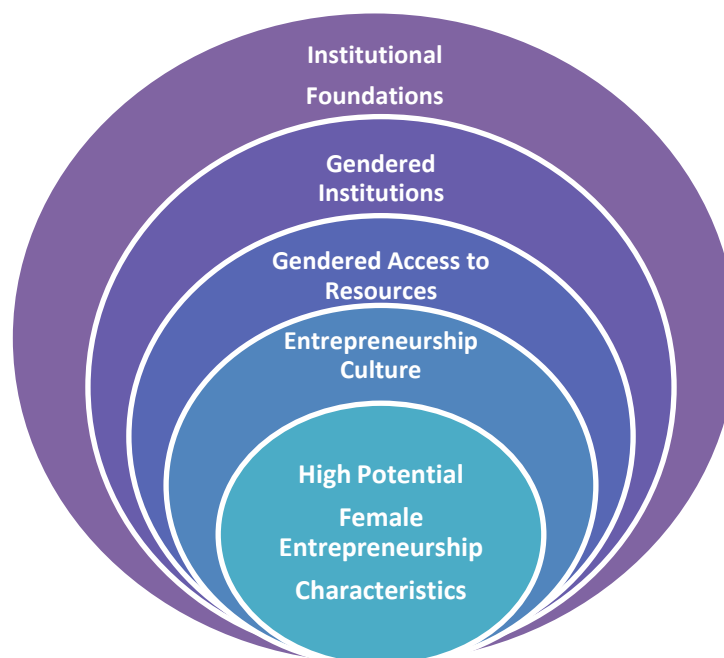
Conceptualizing High

Potential Female Entrepreneurship

The conditions and characteristics that lead to high potential female entrepreneurship occur on multiple levels. Female entrepreneurs, like their male counterparts, are influenced by the general business environment where they live. If the general business environment is unstable, if the procedures for starting, running or exiting a business are highly regulated or bureaucratic, there is a disincentive for startups, regardless of gender. But formal institutions or cultural conditions create additional barriers for women that make it more difficult to start or grow a business. Such conditions can include diminished legal rights (either for all women or with respect to rights that a woman may give up when she marries), restrictions to a woman's activities outside of the home, or her ability to inherit or own property. This combination of gendered attitudes, social norms and beliefs can result in more limited access to resources critical for business development, such as education, skills and finance.

Attitudes also play a crucial role in forming a country's entrepreneurial culture, meaning how the general population views entrepreneurial endeavors, risk taking, and acceptance. This cultural environment in turn influences individual opportunity recognition and willingness to take the risk to start a new venture. The nested structure of these five layers is captured in the Gender-GEDI conceptual model shown in Figure 1.

Figure 1: The Gender-GEDI Model



The 'Melting Middle' and the continuum of Female Entrepreneurship Development³

There are many types of female entrepreneurship. For the Gender-GEDI, we adopt the 'Melting Middle' perspective⁴ to identify the female entrepreneurs that would benefit the most from public policy interventions. This perspective classifies female entrepreneurship according to six groups along a continuum.

These six groups include

- Privileged Entrepreneurs
- Die-Hard Entrepreneurs
- Promising Entrepreneurs
- Potential Entrepreneurs
- Reluctant Entrepreneurs
- Resistant Non-Entrepreneurs

The Gender-GEDI Index results are focused on fostering conditions for Promising and Potential Entrepreneurs. This is also the group for which public policy interventions would have the greatest impact. The two opposing ends of the continuum are less affected by public policy.

Public Policy initiatives would have less impact on **Privileged Entrepreneurs**. These are entrepreneurs that enjoy network and resource advantages due to their elite social status and family connections. They are privileged in the sense that they operate above the normal limitations in a given environment. In contrast, **Die-hard Entrepreneurs** will start businesses regardless of prevailing conditions. These entrepreneurs are often considered born entrepreneurs since they often started to engage in entrepreneurship at a young age. Public policy will also have little effect on these types of startups but could favorably influence growth potential for Die-hard entrepreneurs.

Promising and Potential Entrepreneurs occupy the middle of the continuum. **Potential Entrepreneurs** are individuals who could be entrepreneurs in terms of their attitudes, skills, interests, education or experience, yet have not engaged in any start-up activity. For some individuals, specific skill areas may need to be strengthened or developed. **Promising Entrepreneurs** are entrepreneurs at the startup phase or with an existing business. For these entrepreneurs, some conditions prevent their business from growing. These two groups occupy the continuum's middle section referred to as the **'Melting Middle'**: entrepreneurs who are very sensitive to conditions—self-reinforcing in institutions, markets or attitudes/social norms. The pool of Promising and Potential Entrepreneurs seems to appear or disappear in response to prevailing conditions and it is the area for which public policy is best positioned to deliver impact. In some countries, the impediments for most forms of promising and potential female entrepreneurship are so extreme that this type of entrepreneurship may not seem to exist at all. In most countries, there are bottlenecks that limit the emergence of these two groups which result in the tendency for lower overall rates of female entrepreneurs.

The final two groups of entrepreneurs are Reluctant Entrepreneurs and Resistant Non- Entrepreneurs. **Reluctant Entrepreneurs** are individuals who engage in business activities in order to generate an income when other options are lacking or nonexistent⁵. In contrast, **Resistant Non-Entrepreneurs** have no interest in entrepreneurship. Unlike Reluctant Entrepreneurs who only engage in entrepreneurial activity when needed, Resistant Non-Entrepreneurs do not perceive entrepreneurship as a viable option. In the short run, Reluctant Entrepreneurs may benefit from public policy initiatives such as access to credit or skills training programs. However, since these individuals started businesses reluctantly, they tend to cease their business operations if another more attractive means to earn a living becomes available.

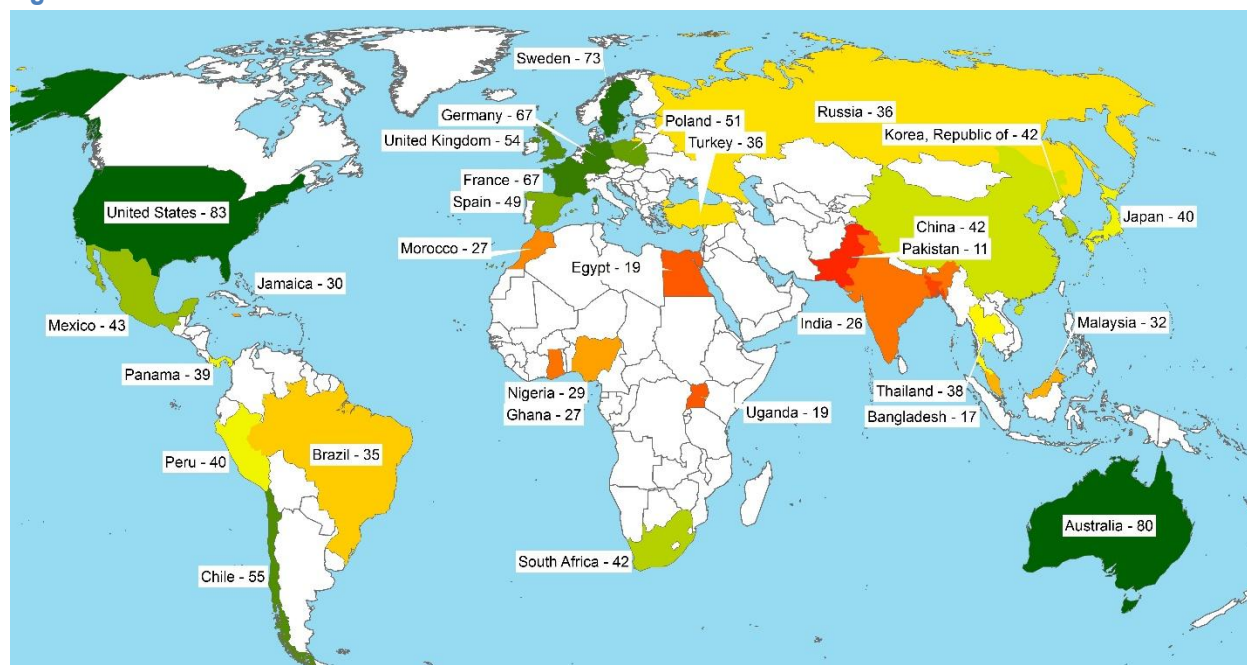
The Gender-GEDI Approach

The Gender GEDI Index's unique methodology brings together variables that measure individuals and institutions in a composite index that highlights issues relevant for high potential female entrepreneurship development and growth. Thirty individual-level and institutional-level variables are paired together into fifteen pillars that are further divided into three main sub-indices: Entrepreneurial Environment, Entrepreneurial Eco-System and Entrepreneurial Aspirations. The novel Penalty for Bottleneck methodology is applied to the pillar scores so that the 'bottleneck' (i.e. pillar with the lowest score) penalizes the final country score. This approach encourages countries to address their weakest areas first since it will have the greatest effect on their final score. For a more in depth discussion of the Gender-GEDI's data and methodology, see the Gender-GEDI 2014 Report of Findings www.dell.com/women.

The Gender-GEDI 2014 Results

A color coded world map of the 2014 Gender-GEDI Index scores is shown in figure 2. Countries with the highest scores are shown in dark green while countries with mid range scores are colored yellow and the lowest scoring countries are shown in dark orange. Table 1 provides both the Gender-GEDI ranks and scores.

Figure 2: Gender-GEDI 2014 scores



Key: Color coding ranges from dark green for the highest scoring countries to yellow for mid level scoring countries to deep orange for the lowest scoring countries.

The 2014 index includes six instances where up to three countries received the same overall Gender-GEDI Index scores and so their rankings are tied. This occurred for France and Germany, tied for 4th place and both receiving a score of 67. South Africa, South Korea and China all had a final score of 42 and are tied for 11th place. Peru and Japan both receive a score of 40 and are tied for fourteenth place, while Turkey and Russia are tied for 18th place with a score of 36. Morocco and Ghana tied for 24th place with a score of 27 and Uganda is tied with Egypt for 27th place with an overall score of 19.

Table 1: Gender-GEDI 2014 Ranks and Scores

Rank	Country	Score	Rank	Country	Score
1	United States	83	16	Panama	39
2	Australia	80	17	Thailand	38
3	Sweden	73	18-19	Turkey	36
4-5	France	67	18-19	Russia	36
4-5	Germany	67	20	Brazil	35
6	Chile	55	21	Malaysia	32
7	United Kingdom	54	22	Jamaica	30
8	Poland	51	23	Nigeria	29
9	Spain	49	24-25	Morocco	27
10	Mexico	43	24-25	Ghana	27
11-13	South Africa	42	26	India	26
11-13	South Korea	42	27-28	Uganda	19
11-13	China	42	27-28	Egypt	19
14-15	Peru	40	29	Bangladesh	17
14-15	Japan	40	30	Pakistan	11

It is important to note that each country in the Gender-GEDI Index is characterized by strengths and weaknesses and that there is room for improvement at all score levels. Even top scoring countries such as the United States which receives a final score of 83 on a 100-point scale have areas that can be improved. In addition, even among the ten top-ranked countries there is a distinct gap between the top three countries scoring between 83 and 73 and the next five countries scoring between 67 and 51. A closer look at a country's 30 variable scores provides additional country specific insights. Individual country results at the variable level are in detail in Appendix 1 and 2.

Charting the differences: Gender-GEDI and GEDI comparisons

In this section, we compare country ranks with respect to their 2014 Gender-GEDI ranking and their 2014 Global Entrepreneurship and Development Index (GEDI)⁶ ranking in order to gain insights into the possible gendered differences for rankings and scores at the country level. Both the Gender-GEDI and the GEDI Index are based on the same framework and share a number of the same variables. However, the Gender-GEDI includes 23 gender-specific variables focusing on female entrepreneurs, but the GEDI Index includes only two variables in one gender-related pillar⁷. For this exercise we have simulated GEDI and Gender-GEDI rankings based on our sample of 30 countries in

the 2014 Gender-GEDI. The simulated GEDI ranks thus preserve the order of countries in the full index, eliminating countries that were not included in the Gender-GEDI to produce a list of how countries would have ranked in the GEDI if that index included only the 30 Gender-GEDI countries.

As figure 3 shows, the following changes in rank occurred:

- Ten countries rank better in the Gender-GEDI Index with respect to high potential women's entrepreneurial development than for general entrepreneurial conditions;
- Eight countries rank worse in the Gender-GEDI Index than in the GEDI Index;
- Twelve countries including the three top ranked countries, the United States (#1), Australia (#2) and Sweden (#3) maintain their relative ranks in both the Gender-GEDI and the GEDI Index.

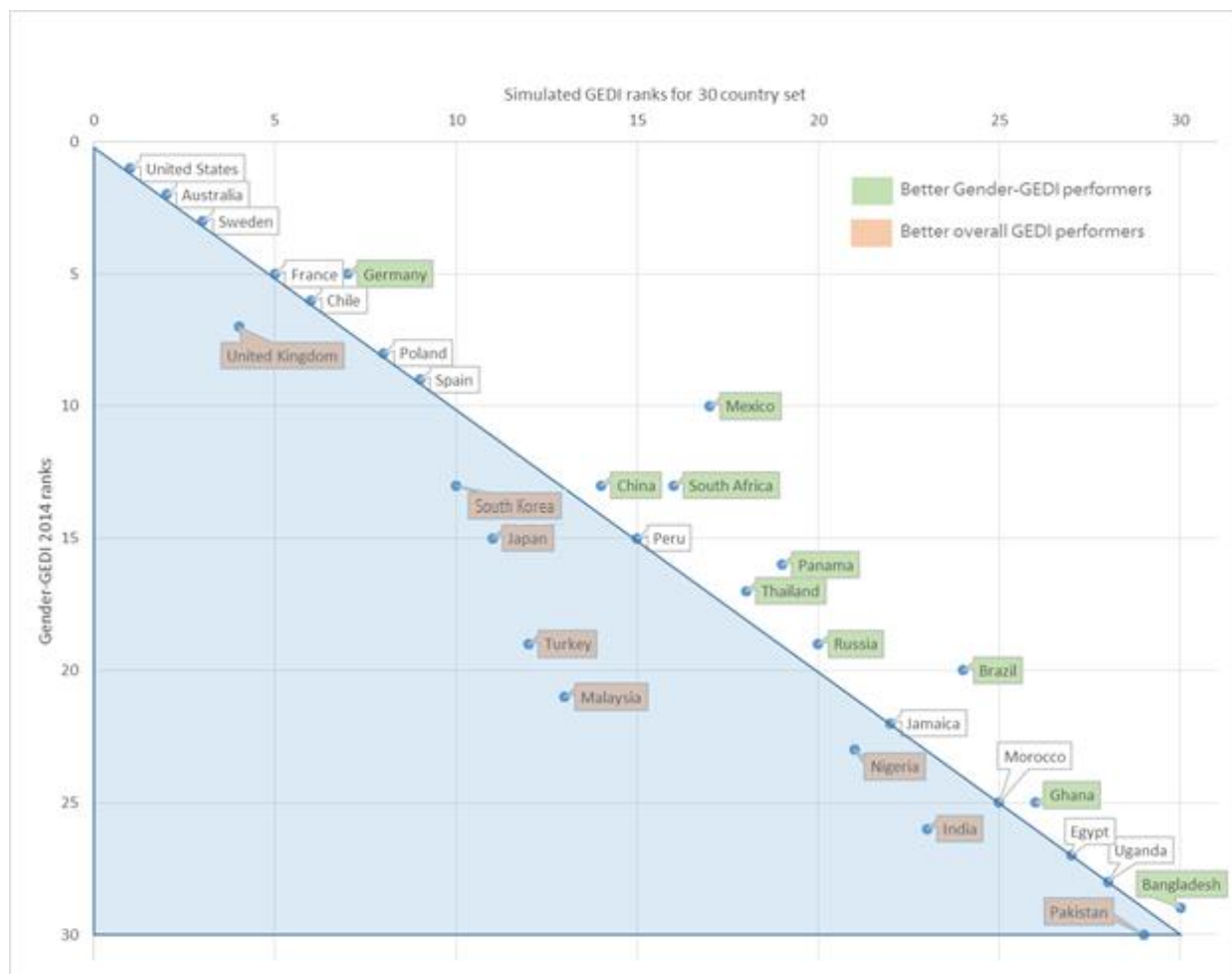
It is striking that the ranks of 60% of the 30 countries included in the Gender-GEDI Index are affected by focusing on the factors affecting high potential female entrepreneurship development. Specifically, the following two countries rank much better in the Gender-GEDI Index:

- Mexico (10th place in the Gender-GEDI Index but only 17th place in the GEDI)
- South Africa (11th place in the Gender-GEDI Index but only 16th place in the GEDI Index);

While the following countries rank better in the GEDI Index than in the Gender-GEDI Index:

- Malaysia is ranked in 13th place in the GEDI Index but only in 21st place in the Gender-GEDI Index;
- Turkey's relative ranking is also better in the GEDI Index (12th) compared to 18th place in the Gender-GEDI;
- The United Kingdom's relative ranking is high at 4th place in the GEDI Index but its rank in the Gender-GEDI Index is worse at 7th place;
- For the lowest ranked countries, Pakistan and Bangladesh traded places: Bangladesh was ranked 30th place in the GEDI Index and Pakistan was ranked 30th in the Gender-GEDI Index.

Figure 3: Including gendered variables affects 60% of rankings



Source: Gender-GEDI (2014)

It is also interesting to see if there have been any changes to countries' ranks when comparing the 2013 Gender-GEDI Index and the 2014 Gender-GEDI Index. Since the 2013 Gender-GEDI Index included only 17 countries, we only used these same 17 countries for our analysis and simulated their rankings to also be based on the same 1 to 17 rank scale. The results as shown in figure 4 indicate that:

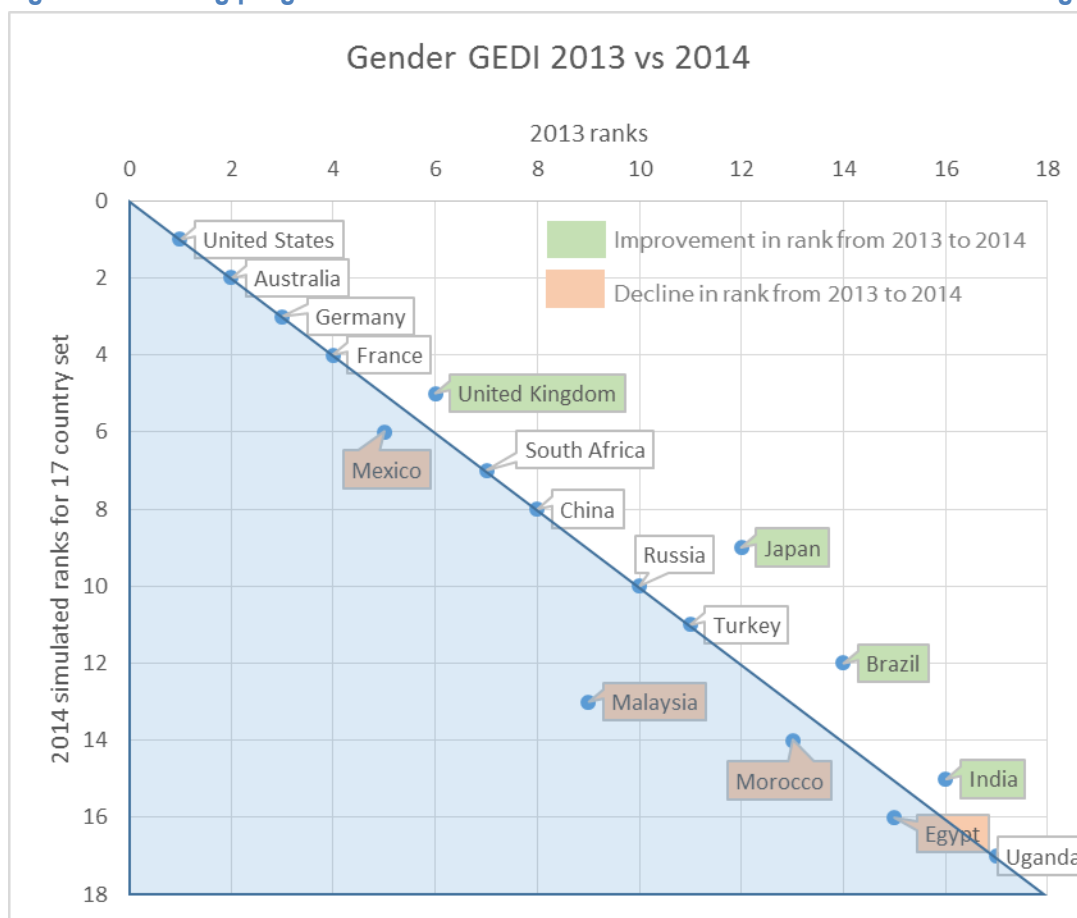
- Four countries increased in rank;
- Four countries declined in rank;
- Nine countries maintained a similar rank level in both the Gender-GEDI 2013 and 2014 indices.

Specifically, Brazil's 2014 score charted an increasing percentage of growth oriented, exporting and market expanding female startups. These increased scores improved Brazil's overall rank by two spots from 14th to 12th place (based on the 2013 Gender-GEDI Index 17 country sample). Japan also saw its overall rank increase due to increasing numbers of female startups and a larger percentage of female startups that export their goods or services.

Based on the original Gender-GEDI Index 17 country sample, its rank improved three places from 12th to 9th. The United Kingdom and India also improved their scores by one rank place.

The greatest decline in rank occurred for Malaysia. This result is based on a decreasing score for growth-oriented female startups and lower levels of female leadership (as measured by the percentage of women in leadership positions). Based on the original 2013 Gender-GEDI Index 17 country sample, its rank declined four places from 9th to 13th place. Egypt's rank decline is influenced by not only decreasing numbers of opportunity motivated female startups but also fewer growth-oriented or exporting female startups and lower levels of female business owners who are highly educated. Also, there has been a deterioration of women's freedom of movement and a decline in the overall business environment in terms of business risk. Based on the original 17 countries, its rank declined one spot from 15th to 16th place. Mexico and Morocco also declined by one rank.

Figure 4: Charting progress: The Gender-GEDI 2013 vs the Gender-GEDI 2014 rankings compared



Source: Gender-GEDI (2014)

Key: The 17 original Gender-GEDI 2013 countries include: Australia, Brazil, China, Egypt, France, Germany, India, Japan, Malaysia, Mexico, Morocco, Russia, South Africa, Turkey, Uganda, United Kingdom and the United States.

Three-Tier Analysis of the Gender-GEDI 2014 Rankings and Scores

The Gender-GEDI rankings can be divided into three tiers in order to better understand the general trends between the top, moderate and low performing countries. These three tiers are shown in table 2 and discussed in greater detail below. Each tier is described in terms of general strengths and weaknesses exhibited by the countries included followed by policy recommendations on how to improve the existing conditions to foster high potential female entrepreneurship development.

Table 2: The Gender-GEDI 2014 results divided into three tiers

Top Performers			Moderate Performers			Low Performers		
Rank	Country	Score	Rank	Country	Score	Rank	Country	Score
1	United States	83	9	Spain	49	23	Nigeria	29
2	Australia	80	10	Mexico	43	24-25	Morocco	27
3	Sweden	73	11-13	South Africa	42	24-25	Ghana	27
4-5	France	67	11-13	South Korea	42	26	India	26
4-5	Germany	67	11-13	China	42	27-28	Uganda	19
6	Chile	55	14-15	Peru	40	27-28	Egypt	19
7	United Kingdom	54	14-15	Japan	40	29	Bangladesh	17
8	Poland	51	16	Panama	39	30	Pakistan	11
			17	Thailand	38			
			18-19	Turkey	36			
			18-19	Russia	36			
			20	Brazil	35			
			21	Malaysia	32			
			22	Jamaica	30			

1st tier Top Performers: Ranked 1 – 8

The top performers in the Gender-GEDI Index are all OECD member countries with highly developed economies. These countries are primarily in the European region but also include the United States, Australia and the highest ranking Latin American country, Chile.

This category can further be divided into two subgroups: The first group made up of the United States, Australia and Sweden which all receive a score higher than 70 and the second group made up of the remaining five countries (France, Germany, Chile, the United Kingdom and Poland) with scores between 50 and 70. In general, the top performers in the Gender-GEDI Index provide a good enabling environment for female entrepreneurship development both in terms of the business context as well as equal legal rights, access to resources such as SME training programs, access to leadership roles, and favorable attitudes towards women as executives. However, even under these favorable conditions, growth oriented female entrepreneurship is still low, and female startups in the tech

sector are extremely low. Further, there are weaknesses in the female entrepreneurial environment as seen in the low levels of exposure to entrepreneurs, and less than optimal performance in terms of opportunity perception and startup skills.

Public Policy: Opportunities for improvement

The main area in need of improvement for these countries is to activate and accelerate high potential female entrepreneurship through gender smart policies. Gender smart policies focus on tweaking the existing enabling environment through (1) Adapting and transforming cultural norms that continue to inhibit Promising and Potential Entrepreneur; (2) Adjusting existing supposedly gender-neutral programs so that women are fully integrated as participants and recipients, and (3) Integrating women into traditionally male dominated labor sectors in order to open up these sectors to female entrepreneurship.

The low level of female startups in the tech sector is not limited to top performing countries but characterizes the majority of countries at all performance levels. It points to a broader underlying issue: the educational and labor force crowding of women is further reflected in the sectors where women start businesses. This underlying cause needs to be addressed in order to diversify the sectors where female entrepreneurship occurs. For this reason, we included the Labor Force Parity indicator in the Gender-GEDI 2014, which measures gender balance in labor force sectors (see also section 5).

2nd Tier Moderate Performers: Ranked 9 – 22.

The fourteen countries in this category include both OECD countries and emerging economies predominantly in Latin America and East Asia but also in Eurasia and Africa.

The main strength seen in these countries is their balanced results: this tier performs moderately well across most pillars, rather than exceptionally well in just a few areas. In most cases, there is a reasonably good business environment and fairly good access to resources. These countries also tend to do well in terms of women's willingness to take the risk of starting a business and are not deterred by failure. They do reasonably well for access to finance and female startup activity rates. A noticeable weakness is the lower level of female leadership. Other weak areas tend to be the same as for top performers: low levels of tech startups and low levels of growth-oriented female entrepreneurs.

Public Policy: Opportunities for improvement

The main focus area for these countries lies in improving from a reasonable level to a favorable level. For this to occur, fundamental business enabling issue need to be addressed such as (1) Breaking up monopolies in the business environment that crowd out newcomers; and, (2) Improving the use of and investment in new technologies. In addition, it is critical to (3) Increase opportunities for and shift attitudes towards women in senior management and decision making positions. Finally, this tier could benefit from efforts to (4) Develop and support programs that promote female entrepreneurs' equal access to finance and the resources to grow.

3rd Tier Low Performers: Ranked 23 – 30

The eight countries that make up the third category tend to be culturally conservative emerging economies that adhere to traditional women's roles in society. They include countries from Africa, Asia, and MENA region.

These countries tend to show strengths in their entrepreneurship culture: a relatively large percentage of the female population feels that they have the skills to start a business. Female startups in these countries also tend to be active in new markets, which indicates a level of innovativeness. However, these countries are characterized by a weak enabling environment both in terms of the overall business climate (such as business freedom, business risk and very low levels of R&D expenditure and low development of capital markets) as well as women's equal legal rights, women's access to public spaces and women's access to banking. Women's access to education is a critical issue for many of these countries, both in terms of low rates of secondary education and low education levels among female business owners.

Public Policy: Opportunities for improvement

The specific areas for these countries to improve are the fundamental weaknesses in (1) Women's access to education; (2) Equal legal rights; and, (3) Women's access to bank accounts. Ensuring women equal rights is a first step towards improving attitudes towards high potential female entrepreneurs and women in executive positions. Beyond providing the basics to foster female entrepreneurship, these countries need to improve women's access to SME training programs, access to finance and access to resources such as the internet. But in order for businesses to prosper, these countries must also concentrate efforts on (4) Improving the overall business environment.

Comparing the United States, Japan and Pakistan

In order to better understand how the strengths and weaknesses of the three tiers compare with one another, figure 5 shows the Gender-GEDI Index results at the pillar level for three countries representing each of the performance tiers: the United States as a top performing country ranked #1, Japan as a moderate performing country ranked #14 (tied with Peru) and Pakistan as a low performing country ranked #30.

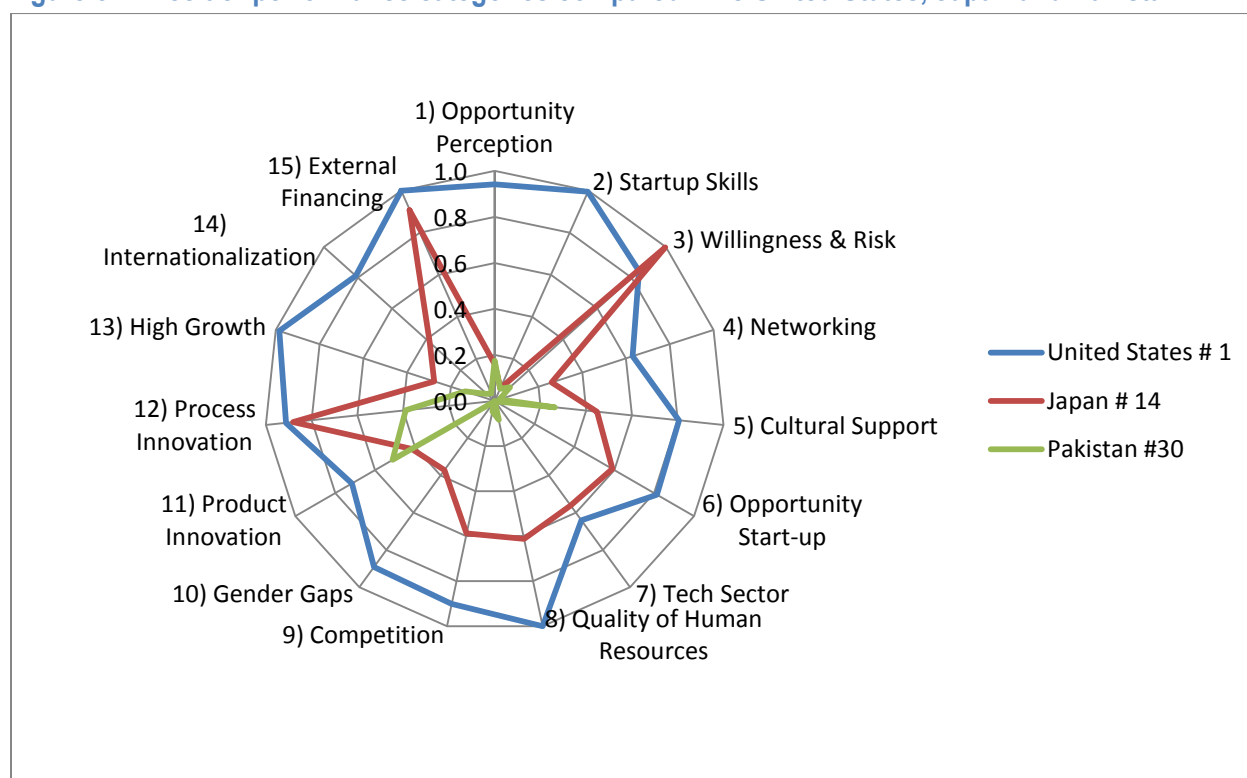
In the spider chart, the large and generally round shape of the pillar results for the United States indicates its strong relative performance for most of the 15 pillars included in the index. But it also shows that certain pillar scores could be improved. Specifically, the scores for Pillars 3 (Willingness and Risk), 4 (Networking) and 5 (Cultural Support), that make up the female Entrepreneurial Environment sub index are lower than the rest. The United States also receives relatively low scores for Pillar 7 (Tech Sector) driven mainly by a very low level of female tech startups.

Japan's pillar scores follow the trend of many other moderate performers in terms of lower but balanced pillar scores for Pillars 5 through 11 and relatively good scores for Pillar 3 (Willingness & Risk) and Pillar 15 (External Financing). However, Japan also exhibits some unique characteristics. Its scores are much higher than other moderate performers for Pillar 3 (Willingness & Risk) and Pillar 15 (External Financing) but are much lower for Pillars 1, 2 and 4. The results for Japan show a well developed financial sector and low levels of business risk but also indicate that women in Japan are less likely to see opportunities to start businesses or feel they have the skills to start a business. Also, the acceptance of women in executive positions is low.

Pakistan is in the low performer group and exemplifies many of the characteristics of this group. Its overall scores are low on most Pillars with the exception of a relatively high score for Pillar 11 (Product Innovation) where its score is higher than that of Japan. This result is driven by a high level of female startups introducing new products or services to the market. Pakistan also shows a relatively high score for Pillar 12 (Process Innovation) which indicates that female startups in Pakistan are adopting new technologies. However, as the severely contracted shape located close

to the center of the spider chart shows, Pakistan is characterized by low overall pillar scores. Like other low-performing countries, Pakistan needs to focus on improving fundamental issues such as women's rights, women's access to resources such as education and bank accounts, women's access to broader labor force sectors as well as improving the business regulatory environment.

Figure 5: Three tier performance categories compared: The United States, Japan and Pakistan



Source: Gender-GEDI (2014)

Regional Highlights

The Gender-GEDI sample can be divided into six regions: Africa, East Asia, South Asia, Europe, Latin America and the Caribbean (LAC) and Middle East and North Africa (MENA). A closer look at the regional level averages allows us to identify some general regional strengths and weaknesses.

The **Africa** region represented by Ghana, Nigeria, South Africa and Uganda is characterized by a high level of female entrepreneurial drive, particularly in the case of Opportunity Perception, with an average of 69% of the female population identifying opportunities to start a business. The female startup activity rate is also high at 8.6 female startups for every 10 male startups. Also, the Africa region has on average good female representation in leadership: 39% of managers and senior officials are female. The region's weaknesses are mainly related to low educational attainment amongst women in general and female entrepreneurs in particular. Of the African countries in our sample, only 46% of the adult female population has completed secondary education and only 13% of female business

owners have a college education. Also, there is little availability of equity finance. The highest ranking country in the Africa region is South Africa, ranked #11 (tied with South Korea and China).

The **East Asia** region is comprised of China, Japan, South Korea, Malaysia and Thailand. South Korea and China are the highest ranking countries in East Asia and are tied with South Africa for 11th place. Most of these countries are moderate performers in the index. They are generally characterized by a good business environment with low business risk and with the highest regional average for R&D expenditure at 1.9% of GDP. Also, there is generally wide availability of equity capital. The East Asia regional weaknesses are mainly concentrated in the female Entrepreneurial Environment sub-index with (on average) only 26% of the female population identifying business opportunities (Opportunity Perception) and 26% of the female population believing they have the skills to start a business (Startup Skills). Also this region is characterized by a low level of female leadership. On average only 17% managers and senior officials are female.

Table 3: Regional Highlights

Region	Strengths	Weaknesses
Africa	<ul style="list-style-type: none"> • Female Startup Rate • Female Leadership 	<ul style="list-style-type: none"> • Access to Education • Access to Capital
East Asia	<ul style="list-style-type: none"> • Access to Capital • Business Environment 	<ul style="list-style-type: none"> • Opportunity Identification • Startup Skills
South Asia	<ul style="list-style-type: none"> • Willingness to Start 	<ul style="list-style-type: none"> • Equal Rights • Access to Education
Europe	<ul style="list-style-type: none"> • Equal Rights • Good Business Environment 	<ul style="list-style-type: none"> • Opportunity Identification • Access to Networks
Latin America & Caribbean	<ul style="list-style-type: none"> • Female Startup Rate • Market Expanding Startups 	<ul style="list-style-type: none"> • High Growth startups • Access to Childcare
MENA	<ul style="list-style-type: none"> • New Technology use by Startups 	<ul style="list-style-type: none"> • Equal Rights • Attitudes towards Female Executives

Source: Gender-GEDI (2014)

Note: The United States, Australia and Russia are not included in the regional analysis since they do not fit well in terms of both geography and characteristics into the six regional groups.

The **South Asia** region includes Bangladesh, India and Pakistan. These countries are all Low Performers in the index with India ranked highest at #26. Though most score averages are low, one of the strengths in this region is the relatively higher score for the female Entrepreneurial Environment sub-index, as on average 65% of the female population is willing to start a business. The region's weaknesses are related to the lack of women's equal rights, higher levels of female labor crowding and low general educational attainment amongst women. On average only 25% of adult females have some secondary education in the South Asia region. Also, this region exhibits the lowest female startup activity rates at just 2.8 female startups for every 10 male startups.

The **European region** is made up of six countries: Sweden, France, Germany, Poland, Spain and the United Kingdom. All six countries are High Performers in the index. Sweden is the highest ranking country in the European region and is ranked in third place. The European region scores well for women's equal rights and for low levels of female labor crowding. It is also characterized by favorable attitudes towards women in executive positions. Access

to childcare is at a good level, as is access to education. On average 49% of female business owners have college degrees. The European region also has a favorable business environment and provides a large amount of SME training programs geared towards women. Access to financing (which measures access to bank accounts and financial training programs) is generally good, especially at the 1st tier level. The regional weaknesses are concentrated in the female Entrepreneurial Environment sub-index, especially the female population's recognition of business opportunities (31%) and relatively low percentages of women who know an entrepreneur (31%).

The **Latin American and Caribbean region** includes Brazil, Chile, Jamaica, Mexico, Panama and Peru. These countries represent High Performers, Moderate Performers and also Low Performers. The highest ranking country in the region is Chile, ranked #6 in the index. The strengths in the Latin American and Caribbean region include a relatively high female startup activity rate at 8.4 female startups for every 10 male startups. Also, this region exhibits a high level of female startups in markets with little competition which indicates that market expanding and often innovative activities are occurring in this region. The regional weaknesses include a low level of high-growth female startups, on average only 7% of all female startups. There is also relatively little access to high quality and affordable childcare. The region is also characterized by a low level of R&D expenditure with a regional average of only 0.4% of GDP.

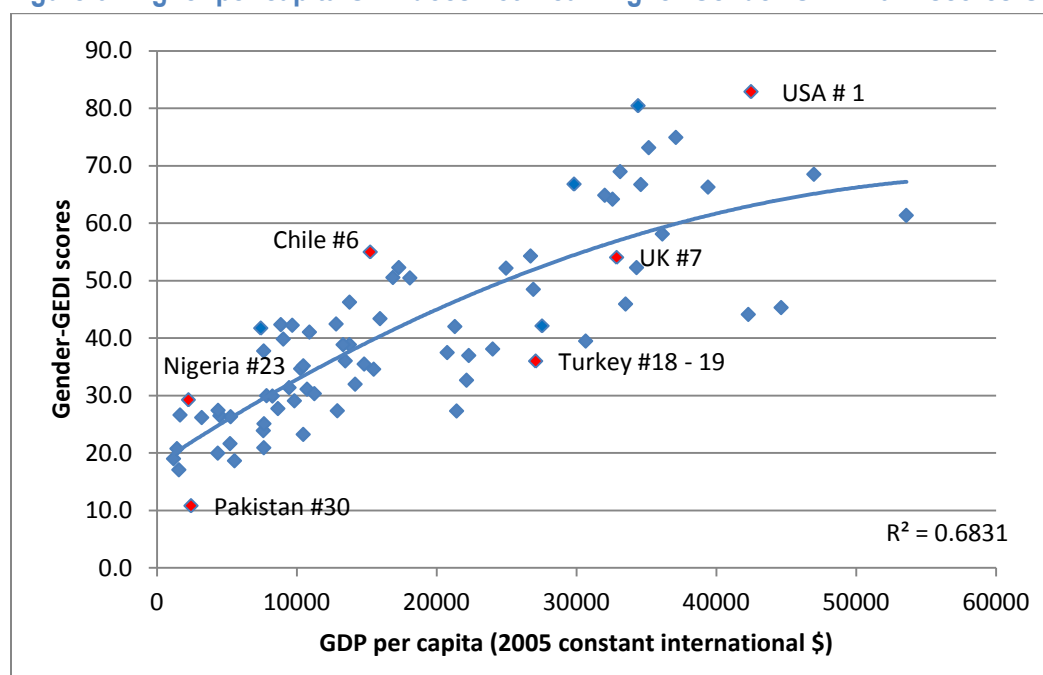
The **Middle East and North Africa** region is comprised of Egypt, Morocco and Turkey. The highest-ranking country in this region is Turkey, which is a Moderate Performer ranked #18 in the index (and tied with Russia). Both Egypt and Morocco are Low Performers. A relative regional strength is the percentage of female startups using new technology (39%). The main weaknesses in the MENA region are the low levels of women's equal rights, less favorable attitudes towards women in executive positions and fewer women in leadership positions. On average only 11% of the managers and senior officials in these countries are women. Access to high quality, affordable childcare is also relatively low.

Focus Areas: Key issues that affect Gender-GEDI rankings

At first glance, the Gender-GEDI results may seem directly linked to a country's economic development and GDP levels. As shown in figure 6, the relationship between a country's per capita GDP and the Gender-GEDI scores is significant, with an R-squared value of 0.68 which means that a variation in GDP per capita explains 68% of the variation in Gender-GEDI scores.

However as is evident from the data points located both above and below the trend line, a number of countries do not fit this pattern. For example the United States (#1), Chile (#6), and Nigeria (#23) have relatively higher scores on the Gender-GEDI in relation to their per capita GDP while the United Kingdom (#7), Turkey (#18) and Pakistan (#30) have a relatively lower Gender-GEDI score with relation to their level of per capita GDP.

Figure 6: Higher per capita GDP does not mean higher Gender-GEDI 2014 scores GDP⁸



Source: Gender-GEDI (2014)

Though GDP plays a role in creating favorable conditions for female entrepreneurship development, other issues also have an impact. Specifically, our results show that the conditions for high potential female entrepreneurship development are hampered in the following ways for our 30 country sample: 73% countries exhibit female labor crowding; 73% countries limit legal rights for married women; 27% countries limit women's access to property; 23% countries restrict women's access to public spaces and in 23% of countries at least half of the female population is unbanked.

In addition, regardless of GDP levels, the Gender-GEDI Index results indicate low levels of high growth oriented female startups and female tech sector startups throughout the 30 countries in our sample. Unfortunately the data to unravel the influences on a country comparative basis simply does not exist. However, a number of the variables that are currently included provide an indication as to the underlying causes for Potential Entrepreneurs choosing not to grow their businesses and Promising Entrepreneurs choosing to opt out of starting businesses. Five areas which are likely to impact these results are discussed in further detail in the following sections. Some of the five areas such as female labor crowding, equal legal rights and access to capital affect most countries in our sample. Others, like acceptance of women in leadership positions, affect a portion of our sample and provide a further glimpse into the favorability of a country's environment for potential entrepreneurs to grow their businesses. Finally, access to public spaces or bank accounts are widely available in most countries but severely limited in a small group of countries.

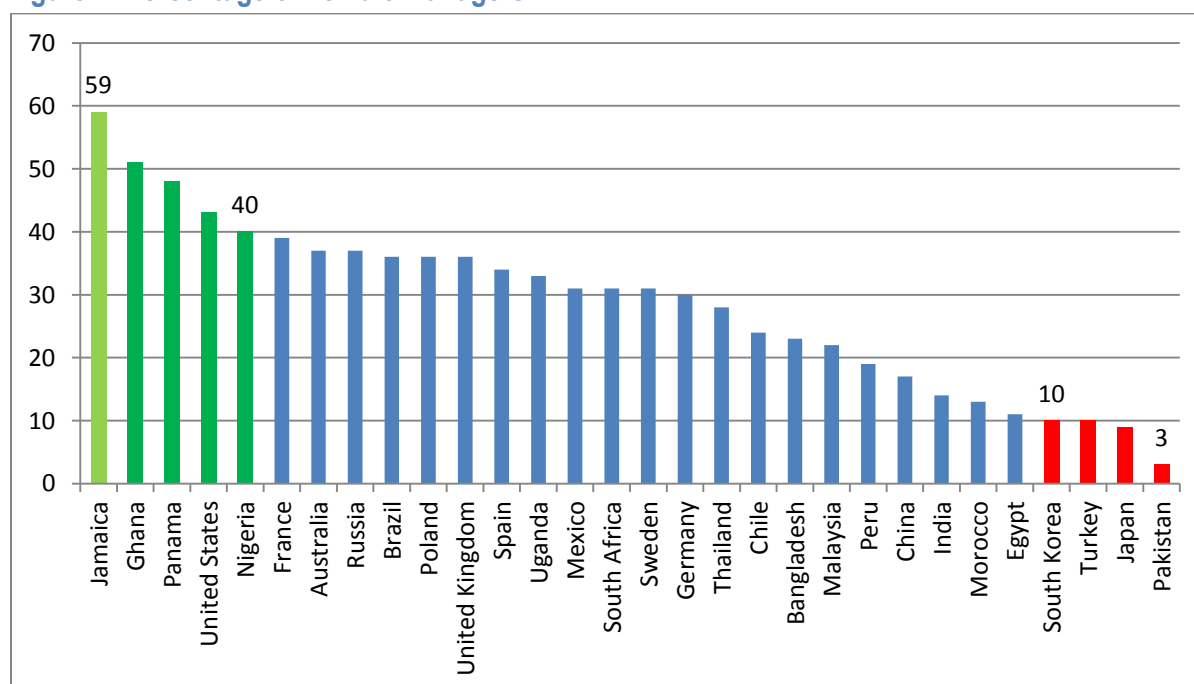
1. Acceptance of Women in Leadership Positions

Social norms impact female entrepreneurship in two critical ways: First, they impact the general societal support for women as entrepreneurs, which can affect an individual woman's decision to take the risk to become an

entrepreneur as is the case for Promising Entrepreneurs. Second, social norms also impact the access women have to experiences as decision-makers and leaders as well as to the range of occupations women have – all of which may act to either impede or encourage the development of high growth female entrepreneurs.

With respect to pre-entrepreneurial career development, in 83% of our sample countries, female managers⁹ make up less than 40% of total managers. Only five countries have 40% or more female managers. Jamaica leads with the highest percentage of female managers (59%), followed by Ghana, Panama, the United States and Nigeria. Access to higher levels of education forms the foundation for high potential female entrepreneurship, but management experience provides women with additional skills, experience and networks that facilitate female entrepreneurship success. However, for the vast majority of countries, women are not strongly represented in management positions. In addition, for four countries, the percentage of women in management is 10% or less: South Korea (10%), Turkey (10%), Japan (9%) and Pakistan (3%).

Figure 7: Percentage of Female Managers



Key: Countries highlighted in green are the highest ranking countries, countries highlighted in blue are moderate to low ranking countries; countries highlighted in red are the lowest ranking countries.

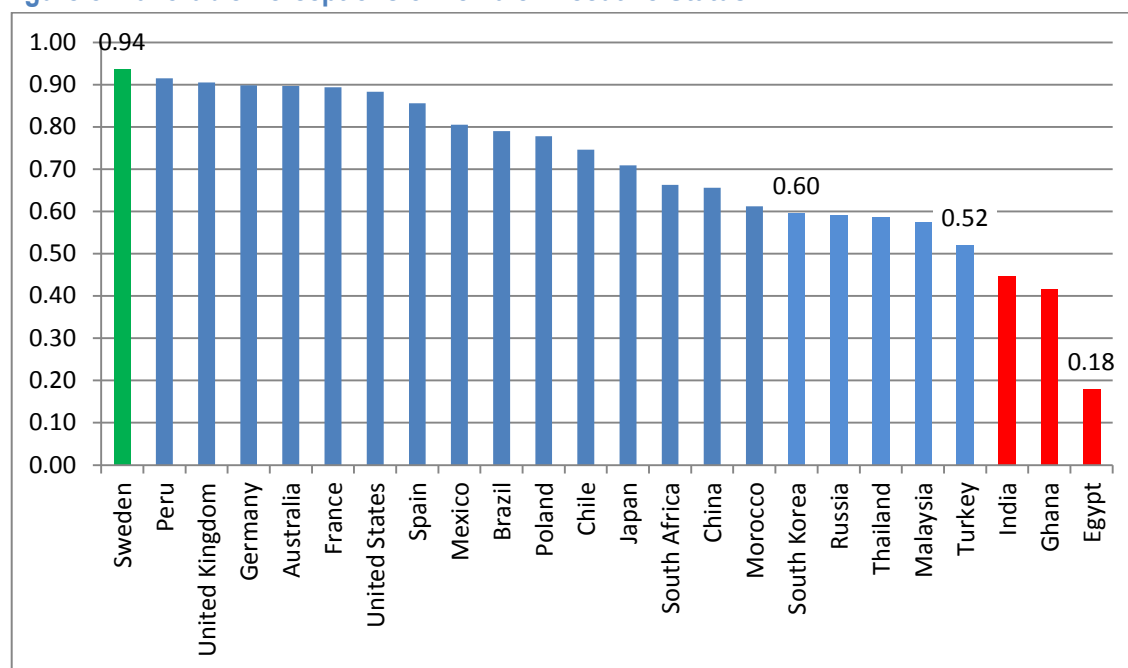
Source: GGGI (2011)¹⁰

Attitudes towards women in executive positions can have a strong effect on women choosing to take on these higher roles and responsibilities in entrepreneurship. Successful high potential female entrepreneurs are similar to female executives in terms of their visible leadership roles in the private sector. Figure 8 shows the female responses to a survey that asked respondents whether male business executives are better than female business executives. The variation between countries is striking. The results are given in terms of the percentage of women that do not think there is a difference. Sweden has the highest percentage (94%) which indicates that the majority of women do not feel there is any difference between male and female business executives. However, in eight countries, 60% or less female respondents believed there was no difference: South Korea (60%), Russia (59%), Thailand (59%), Malaysia

(57%), Turkey (52%), India (45%) and Ghana (42%). In Egypt only 18% of the female respondents felt that there was no difference.

When such a strong opinion is expressed in a hypothetical case (where the actual capabilities of the male and female executive are unknown), it is reasonable to expect that attitudes towards women in other positions demanding decision-making and leadership capabilities such as high potential female entrepreneurs would encounter a similar bias. This may have a detrimental effect on Potential Entrepreneurs choice to grow or not grow their business operations.

Figure 8: Favorable Perceptions of Female Executive Status¹¹



Key: Countries highlighted in green are the highest ranking countries, countries highlighted in blue are moderate to low ranking countries; countries highlighted in red are the lowest ranking countries.

Source: World Values Survey (various years).

2. Women's rights and access to resources are still legally restricted

Equal legal rights form the foundation for the development of 'high potential' female entrepreneurship, yet in many countries women's rights are more limited. This difference in rights is particularly evident with regards to married women, access to property and employment. In 22 countries included in our sample, married women do not enjoy the same legal rights as married men, and in eight countries included in our sample, women do not enjoy the same legal access to property as men¹². Moreover, in 21 countries women do not enjoy the same access to employment as men. A number of countries also limit women's access to public spaces¹³. In three countries (Egypt, Nigeria and Pakistan) there are legal restrictions to women's access to public spaces while in four additional countries (Bangladesh, Jamaica, Malaysia and Uganda) discriminatory practices limit this access. When legal rights are restricted, it can become more difficult or even impossible for women to perform the activities necessary to grow female businesses, thus hampering the development of Promising and Potential Entrepreneurs.

3. Access to Capital

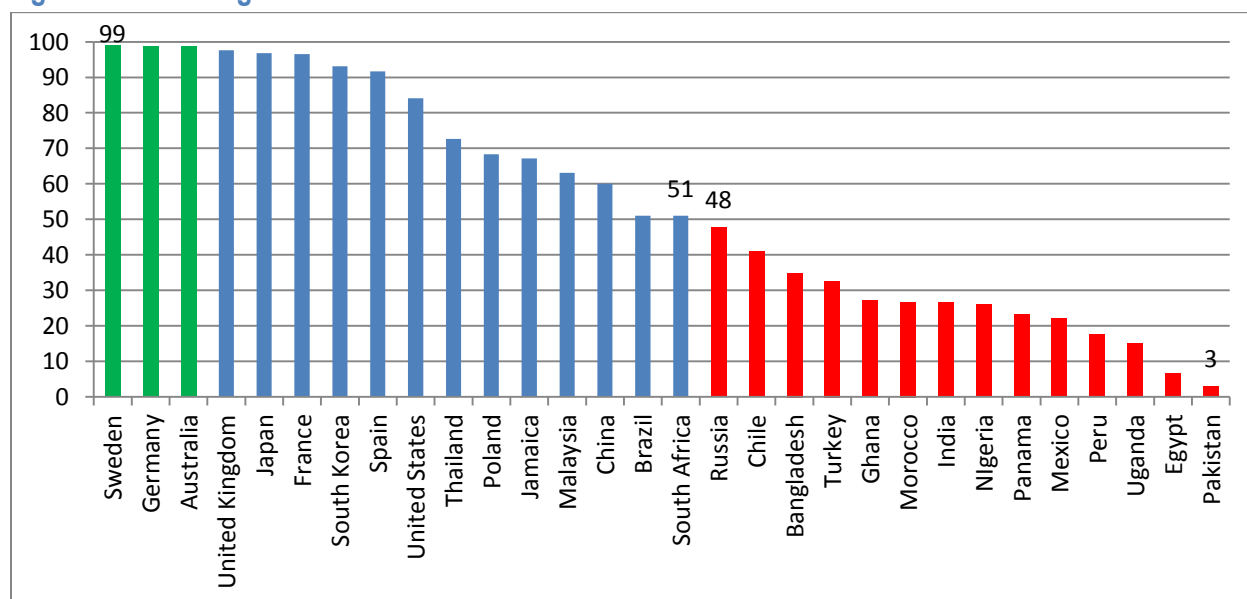
Access to a formal bank account is critical for high potential female entrepreneurs, especially since it is a necessary precursor to financing—bank loans, credit lines, etc.—that fuels business growth. But in 14 of the 30 countries included in the Index, 50% or more of the female population is unbanked. These countries are Russia, Chile, Bangladesh, Turkey, Ghana, Morocco, India, Nigeria, Panama, Mexico, Peru, Uganda, Egypt and Pakistan. Gender disparities between men and women with bank accounts are highest in Turkey, where half as many women as men have bank accounts. In the following six countries there exists a 10% or greater male/female difference: Brazil (10%), Mexico (11%), Uganda (11%), Pakistan (14%), India (17%) and Morocco (25%).

In contrast, five countries not only have the highest levels of women with bank accounts (over 90%), all five have higher percentages of women than men with bank accounts (albeit the differences are very small). These five countries are: Sweden (99%), Germany (99%), United Kingdom (98%), Japan (97%) and South Korea (93%).

Formal financing is especially important for female entrepreneurs, who tend to have less personal capital to invest in their businesses. This lack of formal financing thus limits the ability of female Potential Entrepreneurs to grow their businesses. In many countries where the percentages of women with formal bank accounts is low, many female entrepreneurs are operating in the informal economy. Yet business growth depends on formalization, the lack of which often stunts business development. However, improving access to formal financing is not a cure-all: in cases such as Japan women enjoy almost universal access to bank accounts, but other issues (such as social norms) need to be addressed in order for high potential female entrepreneurship to develop.

Access to bank accounts forms the baseline measure for an entrepreneur's access to capital. Access to credit constitutes an important 'next level' or 2nd tier of financing. Unfortunately there is only anecdotal evidence of more limited access for female entrepreneurs to credit, as non-proprietary, comparative data is not currently available.

Figure 9: Percentage of Women with a Bank Account at a Formal Institution

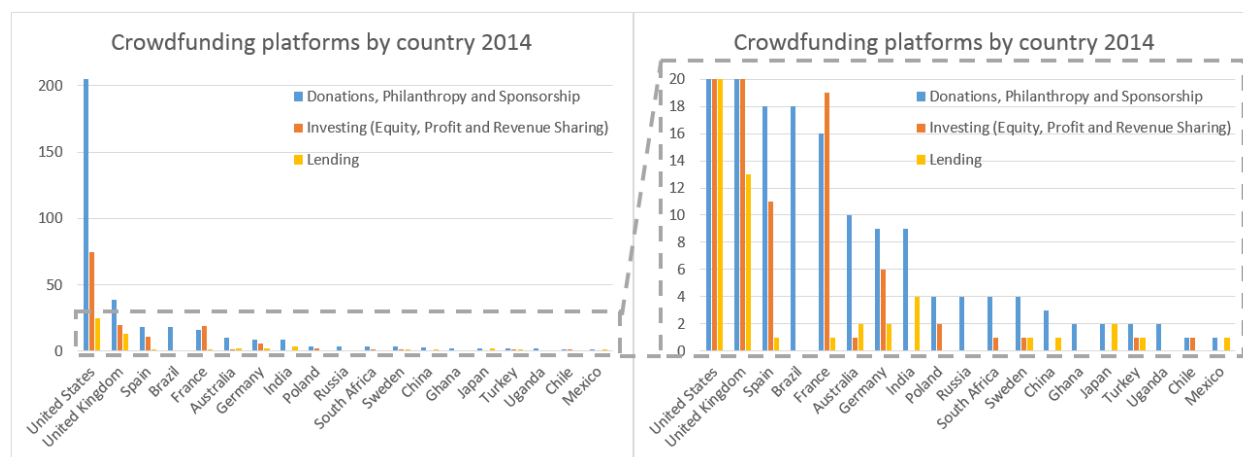


Key: Countries highlighted in green are the highest ranking countries, countries highlighted in blue are moderate to low ranking countries; countries highlighted in red are the lowest ranking countries. Source: World Bank Findex Database (2011)

The 3rd tier of financing is access to equity capital. Worldwide, women receive less outside funding for their businesses than men, but the gap becomes even more apparent at the highest level of capital needs—high potential female entrepreneurs in need of greater amounts of risk capital typically provided by Venture Capital (VC). Comparative, sex-disaggregated data on VC funding is not widely available. In the United States where limited data is available, female entrepreneurs are increasingly receiving VC funding. According to Pitchbook, in the first half of 2013 13% of all VC deals went to women-founded companies, which constitutes a 9% increase since 2004¹⁴. In addition, a 2013 United States based study found a positive and significant relationship between current or prior investments in women-led businesses¹⁵ with future investments in other women-led businesses¹⁶—those who invest in women once tend to invest in women again. Taken together, these results indicate the likelihood of an increasing trend for VC funding for female entrepreneurs. But a large funding gap still remains and other funding options are needed.

Crowdfunding is a new and developing alternative source of seed and growth financing for entrepreneurs. Research on female entrepreneurs has revealed that crowdfunding may be significantly easier for women to access than conventional forms of business debt or equity financing (Robb and Sade 2014). Forty-seven percent of all successful campaigns on Indiegogo, one of the main crowdfunding platforms in the United States, are run by women (Macloed 2014). As Indiegogo co-founder Danae Ringelmann notes ‘women are nearly four times more successful when crowdfunding than raising capital through traditional means... this is a great example of how democratizing finance helps ensure women are on a completely level playing field with men’ (ibid.). But even in crowdfunding, gender preferences persist. Investors are more likely to fund entrepreneurs of the same gender. This preference is stronger among men than women (Stengel 2014: 64). As figure 10 shows, crowdfunding is still limited in most countries included in our sample.

Figure 10: Availability of Crowdfunding



Source: Data compiled from www.crowdfund.org

Note: The following 11 countries are not shown: Jamaica, Malaysia, Nigeria and Pakistan which have only one investing platform per country; Bangladesh and Morocco have no crowdfunding platforms listed and data was not available for Egypt, Korea, Panama and Thailand.

4. Entrepreneurship Crowding as a consequence of Female Labor Crowding¹⁷

For 73% of our country sample, female labor crowding exists

Research indicates that female entrepreneurs tend to be concentrated in the service sector and in businesses that conform to conventional female roles - such as beauty parlors, food vending and sewing¹⁸. In addition, women tend to work in sectors, industries, occupations and jobs with lower average (labor) productivity, which explains a large fraction of the gender gap in productivity and earnings¹⁹. Productivity differences between female-owned and male-owned businesses are often explained by differences in access to and use of productive resources, where these differences are primarily a function of the business size and sector of operation rather than a gender-specific factor²⁰. There is evidence to suggest that women are as efficient as men in production when given access to the same inputs and resources²¹. If women are inherently no less productive than men, why do women concentrate in certain sectors?

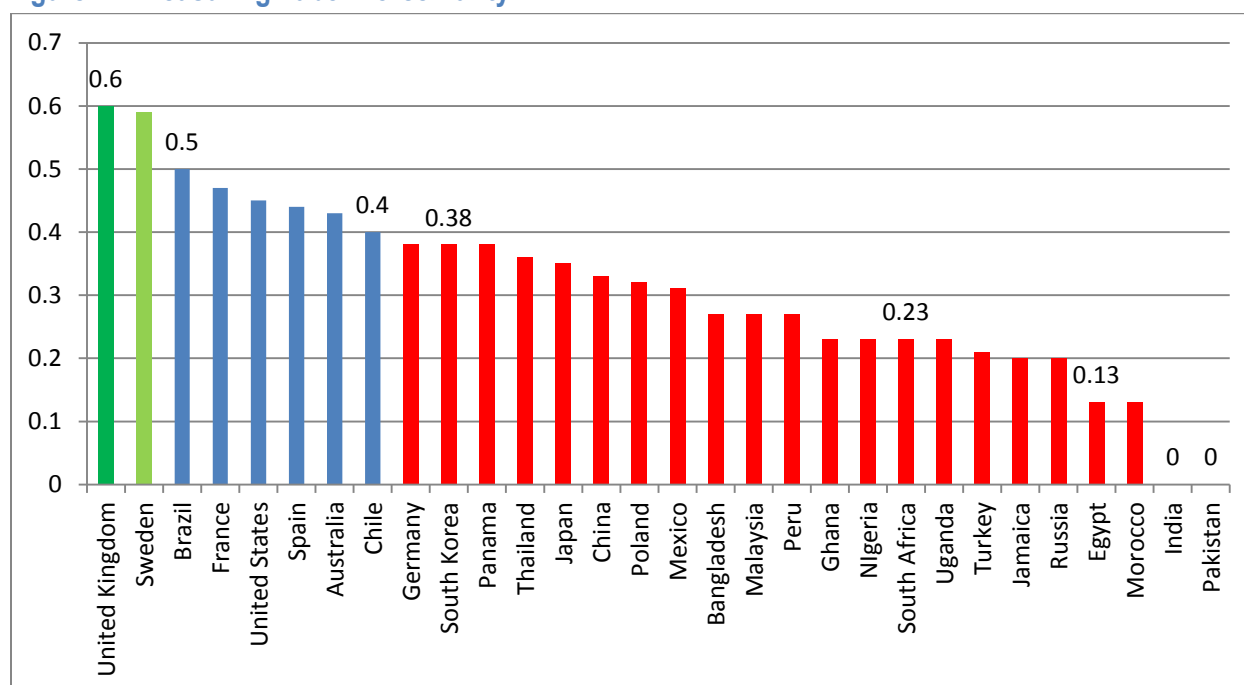
Female entrepreneurs do not exist in a vacuum but are influenced by previous work experience and networks so it is no wonder that women's entrepreneurial activity tends to be concentrated in specific sectors. In that sense occupation crowding in terms of jobs being considered 'male' or 'female' jobs influences entrepreneurship crowding in terms of female entrepreneurial activities being concentrated in a small number of sectors.

Empirical evidence of the effects of occupation crowding²² indicates that crowding benefits some specific groups by reducing competition for the most desirable occupations. In fact, United States based estimates indicate that 12 – 37% of the United States gender wage gap is attributable to crowding²³—there are too many women competing for jobs in a few sectors, driving wages down, while other sectors lack female competition, resulting in higher wages for a smaller pool of primarily male competitors.

The 2014 Gender-GEDI Index includes a variable to measure labor force parity which is the female to male balance in terms of formal labor force participation according to a ratio of 60:40 or 40:60. Out of 30 countries, only eight countries are characterized by at least 40% of their labor force sectors within the ideal 60:40 or 40:60 ratio. Moreover, for two countries (India and Pakistan) all employment sectors are highly sex segregated so that no employment sectors are balanced.

What is the possible link of occupation crowding to the low levels of tech female startups in the Gender-GEDI Index? The Center for Talent Innovation's 2014 report on women in Science, Engineering and Technology (SET) careers in the United States, Brazil, China and India sheds light on the dynamics that inhibit women's participation in these three male dominated fields. Two factors stand out: (1) Women are marginalized by the often 'macho' culture predominant in the lab-coat, hard-hat, and hoodie workplace cultures; and (2) Women feel excluded from 'buddy networks' among their peers and lack female role models²⁴.

Figure 11: Measuring Labor Force Parity



Key: Countries highlighted in green are the highest ranking countries, countries highlighted in blue are moderate to low ranking countries; countries highlighted in red are the lowest ranking countries. India and Pakistan have no sectors exhibiting Labor Force Parity and their average score is 0.

Source: International Labor Organization – most recent data available (2005 – 2012)²⁵

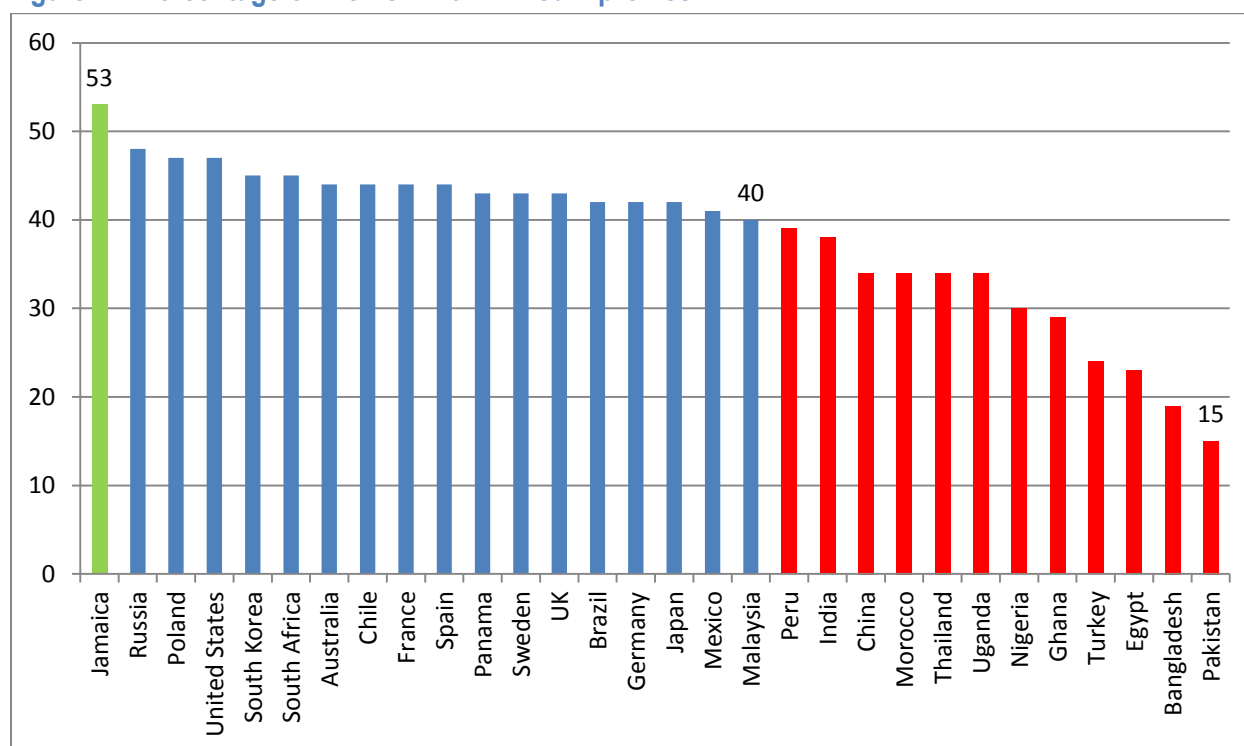
The two top scoring countries for labor force parity, Sweden and the United Kingdom, are both involved in initiatives to further integrate traditionally male dominated sectors. In Sweden, the Swedish metals mining company Boliden's has set a goal to increase the participation of women to at least 20% by the end of 2018. In addition, a new Swedish campaign 'From Macho to Modern' in the forestry sector focuses in developing strategies to integrate women this traditionally male dominated sector. New initiatives in the United Kingdom are targeting the construction sector: Though United Kingdom's construction sector is a major employer and is short of skilled labor, women account for only 11% of the workforce and only 1% in manual trades²⁶. Positive initiatives are not restricted to top scoring countries as evidenced by South Africa's 10% female participation target for the male dominated mining industry. This percentage is likely to increase to 20% by 2018²⁷.

5. Professional Social Media platforms

For 37% of our country sample, women are not taking advantage of professional social media platforms

Professional social networking platforms help entrepreneurs in a number of ways: increasing the visibility and profile of the entrepreneur to a broader audience; facilitating referrals; expanding contacts in professional groups; increasing access to existing and potential customers; and, as a forum to advertise new business related developments.

Figure 12: Percentage of Women with LinkedIn profiles



Key: Countries highlighted in green are the highest ranking countries, countries highlighted in blue are moderate to low ranking countries; countries highlighted in red are the lowest ranking countries.

Source: Comscore, 2013 data.

Facebook is a social media platform which tends to be more frequently used by women than men. However, while Facebook can be successfully used by entrepreneurs, it is generally used for personal purposes. LinkedIn, on the other hand, is specifically geared towards building professional networks. Though LinkedIn is present in all 30 countries of our sample, other professional social networking platforms are as popular as or even more popular than LinkedIn. Xing is an example of a LinkedIn competitor used in many German speaking countries. However, there is no indication that the gender composition would be any different in terms of individual profiles on competitor platforms.

The percentage of women with LinkedIn profiles provides us with insights into women's use of professional social networking platforms. There is no obvious impediment to the use of professional social networking platforms such as LinkedIn since it is free of charge and widely available. Yet as shown in figure 12, in 37% of our 30 country sample, less than 40% of women had LinkedIn profiles.

Conclusion: Looking ahead

The 2014 Gender-GEDI Index takes a holistic approach to analyzing the conditions that foster high potential female entrepreneurship development by combining individual and institutional characteristics that can act as a driver or inhibitor to the process. An enabling environment that supports businesses development cycle in terms of startup, growth and exit, is an important foundation. But so are the attitudes, norms, values and legal environment that support women's access to resources such as education, accepts women in leadership positions and allows them to gain work experience in all sectors. Without these fundamental building blocks in place, how is it that we expect women to take the risk to start new businesses and then scale those businesses to the next level? Taken together, they constitute the country ability to both foster and support the female entrepreneurship process.

In this report, we analyzed the general regional and performance category trends for our 30 country sample. Top ranking countries are not necessarily the countries with the highest GDP levels, rather they are countries who are characterized by an enabling environment for female entrepreneurship development. But even amongst these countries, lower numbers of growth oriented startups are common. In addition, the percentages of women choosing to start businesses in the tech sector remains critically low.

In terms of the Gender-GEDI results, the course for future action according to the three main performance categories is clear. To harness the full potential for low performing countries, fundamental improvements in terms of access to equal legal rights and women's access to education as well as improvements to the general business environment are paramount. Without these improvements, we will continue to see large numbers of female Die Hard, Privileged and Reluctant Entrepreneurs but low levels of Promising or Potential Entrepreneurs.

The main strength for the moderate performing countries is their balanced results: this tier performs moderately well across most pillars, rather than exceptionally well in just a few areas. In most cases, there is a reasonably good business environment and fairly good access to resources. A noticeable weakness is the lower level of women in leadership positions. Other weak areas tend to be the same as for top performers: low levels of tech startups and low levels of growth-oriented female entrepreneurs. These countries need to tackle improvements on all fronts in order to increase the aspirations of the female population to start businesses as well as to grow existing businesses.

Top performers do well in providing an enabling environment for entrepreneurship development. Education levels are generally high amongst women and they are represented in leadership positions. Yet these seemingly fertile business environments are still characterized by low levels of growth oriented female entrepreneurs. Also many exhibit a weaker female entrepreneurial environment in terms of identifying not only the opportunities for business startup but also having the skills, drive and networks to support business development. For these countries, targeted improvements that remove subtle yet powerful cultural inhibitors that define high growth entrepreneurship as male are needed.

Many gaps still exist in data critical to the analysis of female entrepreneurship. New datasets like the World Bank's Global Findex Database and the World Bank's Women, Business and the Law provide gender specific data on previously under-researched areas such as access to basic financial resources and equal legal rights. However, many data gaps still exist in key areas. Some especially important areas where data is needed include comparable data on female entrepreneurship rates that differentiate between part-time and full-time business owners, home-

based businesses and intensity of business operations. Sex disaggregated data on access to finance differentiated according to the three main types of financing: debt financing, credit and equity capital would allow for a better categorization of countries than gender-neutral data which provides a general impression but does not reveal the underlying gendered realities. In many instances when sex-disaggregated data is available, such as labor force data, the sector categories currently used do not allow us to differentiate the sectors we find most important such as the technology sector, a sector characterized by extremely low levels of female startups.

The subtle but detrimental effect of social norms and attitudes towards women on entrepreneurial outcomes continues to present challenges for inclusion in the index. We rely on proxies for favorable attitudes towards female executives yet entrepreneurship specific data would lead to richer results. Anecdotal evidence continues to emphasize the importance of social norms on entrepreneurial outcomes yet no comparative data is currently available.

In addition, though much emphasis has been placed on the importance of increasing the numbers of women with Science, Technology, Engineering and Mathematics (STEM) education and experience, we were not able to include this area due to lack of comparable data. It is our aim to continue to refine and improve the Gender-GEDI Index and we are eager to receive comments and suggestions.

Data and Methodology

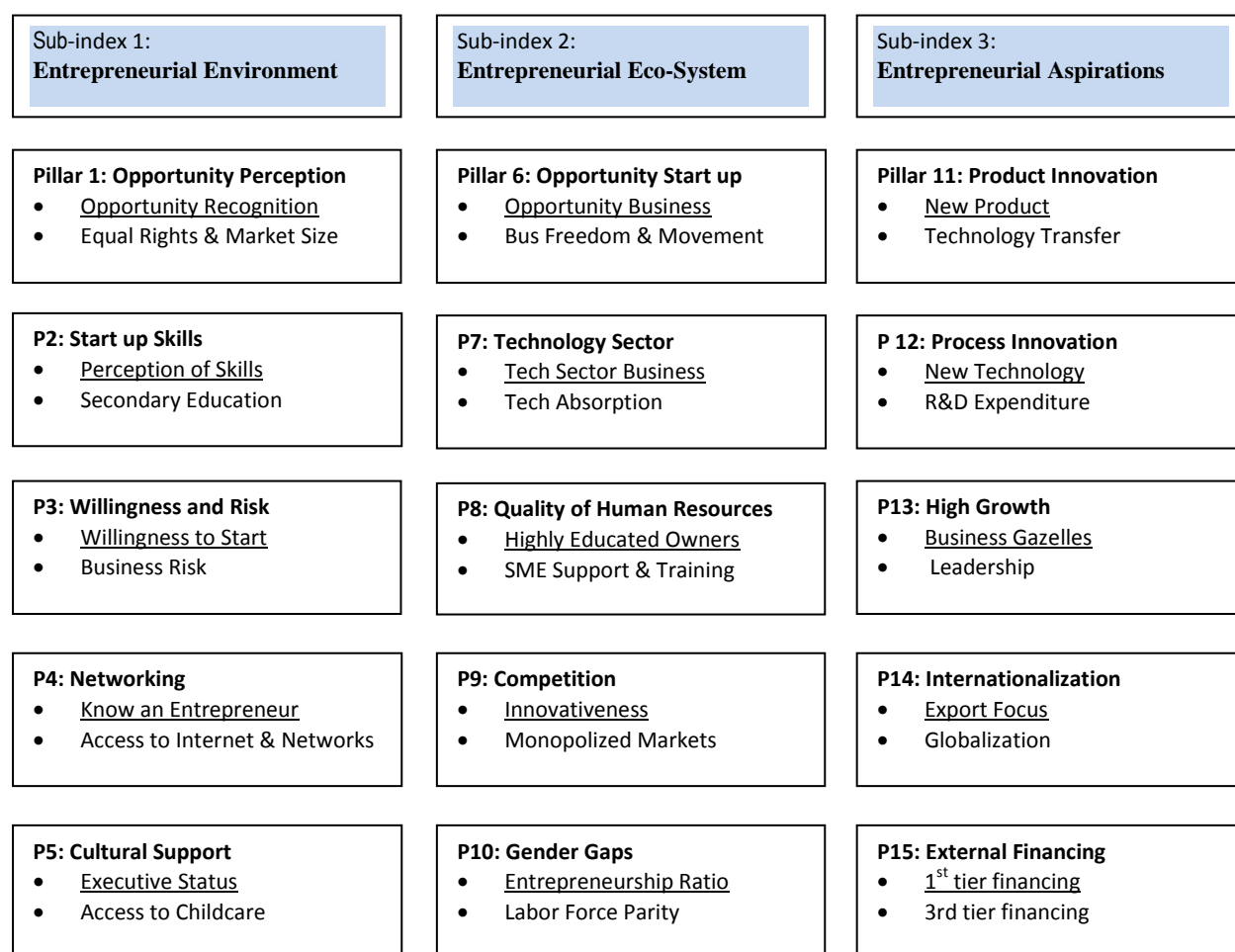
The Gender GEDI Index's unique methodology brings together variables that measure individuals and institutions in a composite index that highlights issues relevant for high potential female entrepreneurship development and growth. Thirty individual-level and institutional-level dimensions are paired together into fifteen pillars that are further divided into three main sub-indices: Entrepreneurial Environment, Entrepreneurial Eco-System and Entrepreneurial Aspirations. The Gender-GEDI applies the novel Penalty for Bottleneck methodology to the pillar scores so that the 'bottleneck' (i.e. the pillar with the lowest score) penalizes the final country ranking, thus allowing for the inter-related nature of the pillars to affect the final scores. This approach encourages countries to address their weakest areas first since that improvement will have the greatest effect on their final score. Data is sourced from existing internationally recognized datasets such as the Global Entrepreneurship Monitor (GEM), World Economic Forum (WEF), World Bank, UNESCO, ILO, etc.

The 2014 Gender GEDI Index sponsored by Dell includes 30 countries: Australia, Bangladesh, Brazil, Chile, China, Egypt, France, Germany, Ghana, India, Jamaica, Japan, South Korea, Malaysia, Mexico, Morocco, Nigeria, Panama, Pakistan, Peru, Poland, Russia, South Africa, Spain, Sweden, Thailand, Turkey, Uganda, United Kingdom and the United States. The data used for creating the 2014 Gender-GEDI Index was primarily from 2013. Additional country scores were calculated for the purposes of estimating normalized indicator values and for benchmarking.

The goal of the Gender-GEDI Project is two-fold: (1) to provide a robust basis for discussion, analysis and cross-country comparison for high potential female entrepreneurship development, and (2) to identify where critical data gaps exist.

The Gender-GEDI uses existing data from reliable, internationally recognized datasets and is limited by the data that is currently available. However many data gaps exist especially in terms of data measuring social norms; more fine-tuned data on female entrepreneurship; and in the specific areas of capital, technology and networks.

Figure 13: The 2014 Gender-GEDI Framework



Note: Each pillar contains an individual level indicator (underlined) and an institutional level indicator.

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Abbreviations

GEDI: Global Entrepreneurship and Development Index

GEM: Global Entrepreneurship Monitor

GGGI-WEF: Global Gender Gap Index, World Economic Forum

GII: Gender Inequality Index

ILO: International Labor Organization

OECD: Organization for Economic Co-operation and Development

TEA: Total Entrepreneurship Activity - the percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business (no more than 42 months old)

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNDP: United Nations Development Program

VC: Venture Capital

WB: World Bank

WBL: Women Business and the Law Database, World Bank

WEF: World Economic Forum

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Appendix 1: Gender-GEDI Results by Country

Pillar	Indicator	Pillar	Indicator	Pillar	Indicator	Pillar	Indicator
1	Opportunity Recognition	4	Know an Entrepreneur	8	Highly Educated Owners	12	New Technology
1	Equal Rights	4	Internet and Networks	8	SME support and training	12	R&D Expenditure
1	Market Size	5	Executive Status	9	Innovativeness	13	Business Gazelles
2	Perc. Of Skills	5	Access to Childcare	9	Monopolized Markets	13	Female Leadership
2	Secondary Education	6	Opportunity Business	10	Entrepreneurship Ratio	14	Export Focus
3	Willingness to Start	6	Bus Freedom & Movement	10	Labor Force Parity	14	Globalization
3	Business Risk	7	Tech Sector Business	11	New Product	15	1st tier financing
		7	Tech Absorption	11	Technology Transfer	15	3rd tier financing

Individual level indicators are listed in black, Institutional level indicators are listed in blue

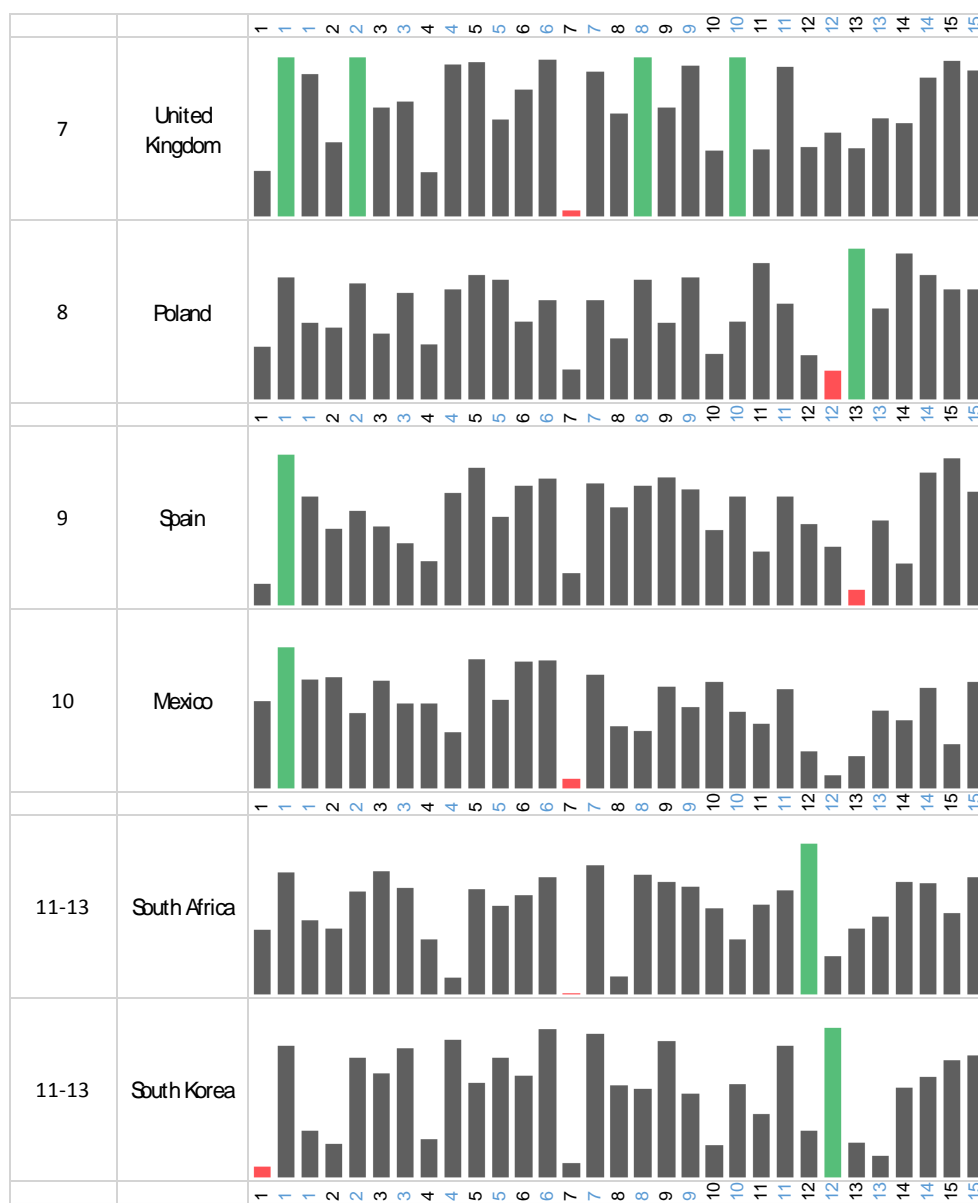
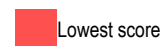
■ Highest score ■ Lowest score



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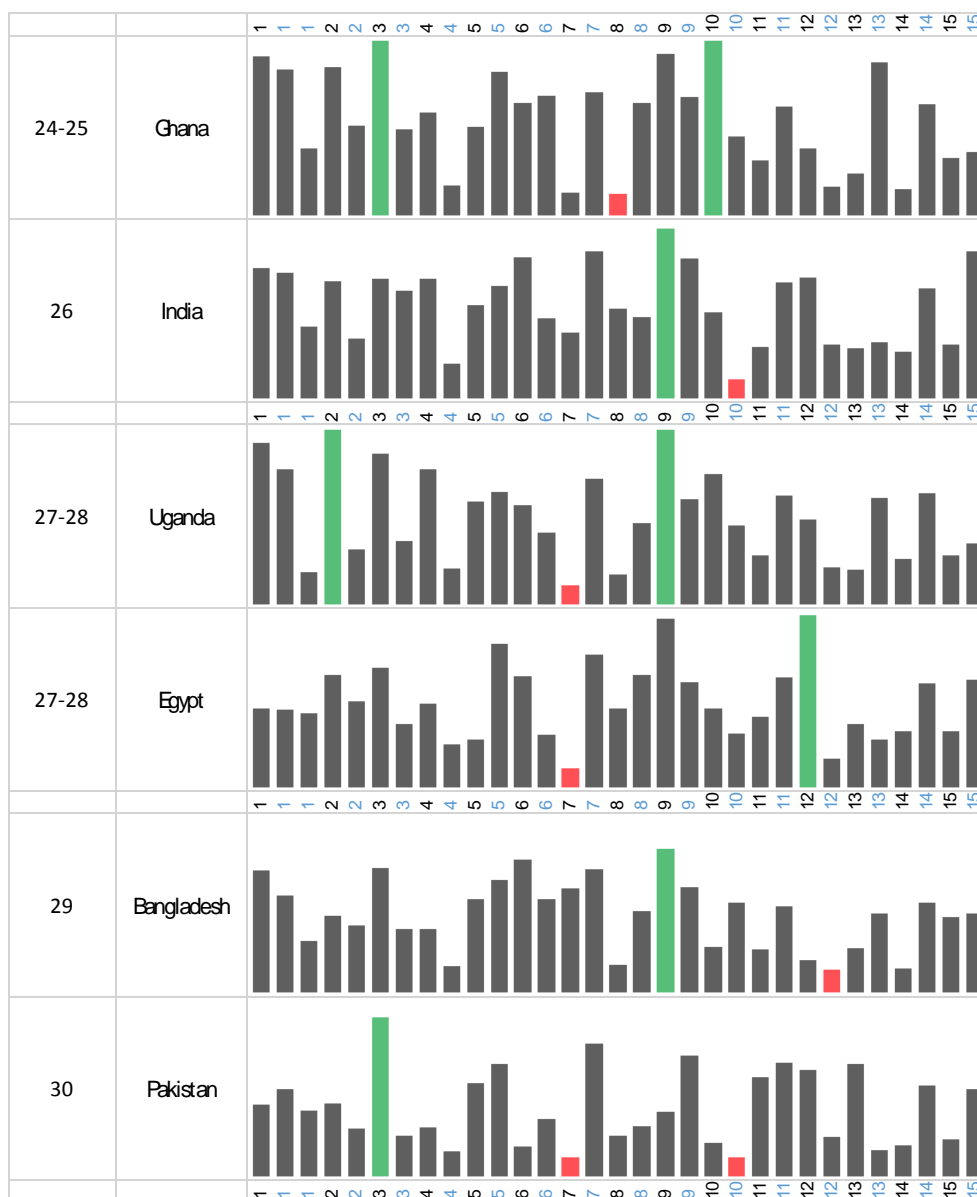


Gender-GEDI Results by Country

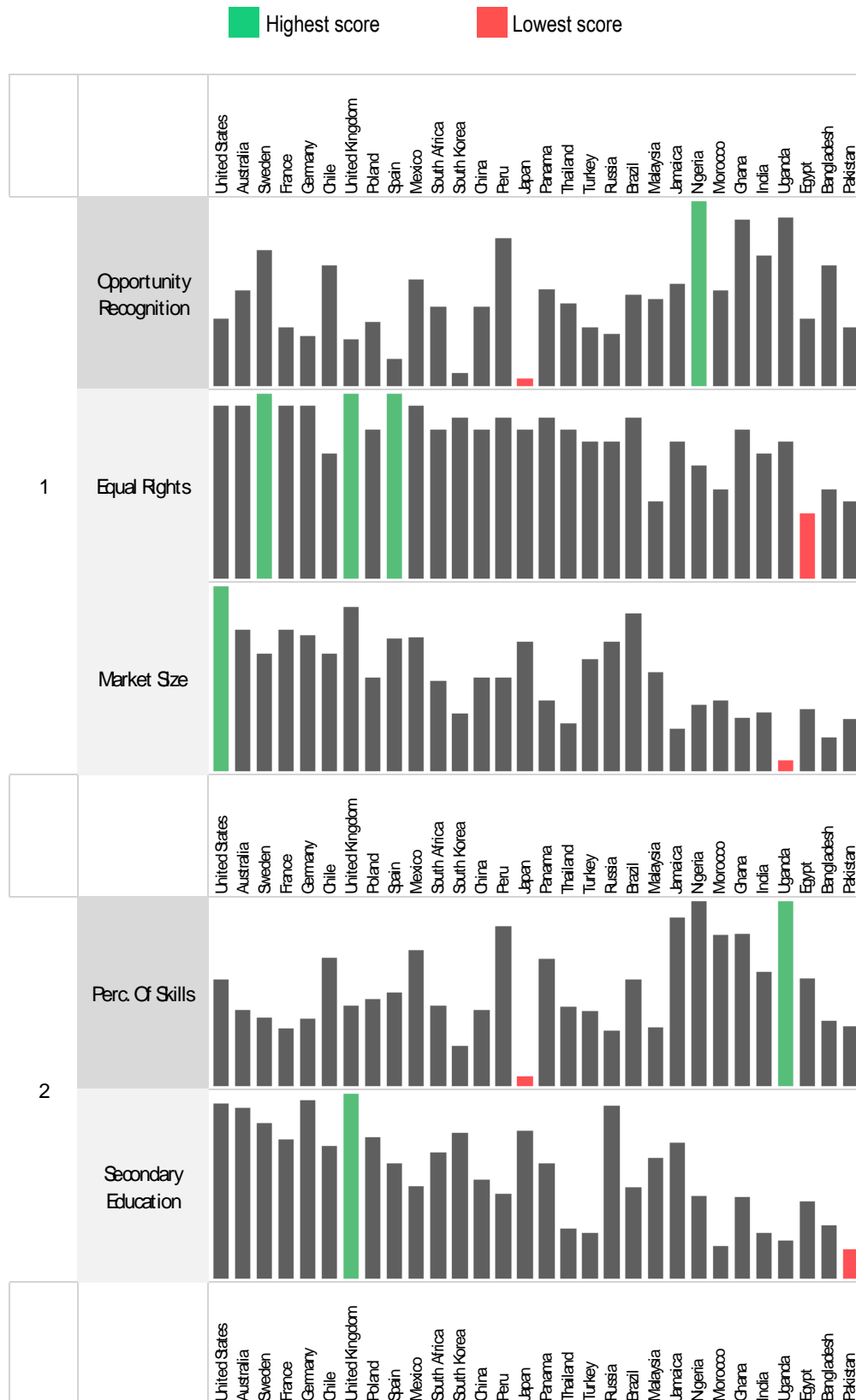
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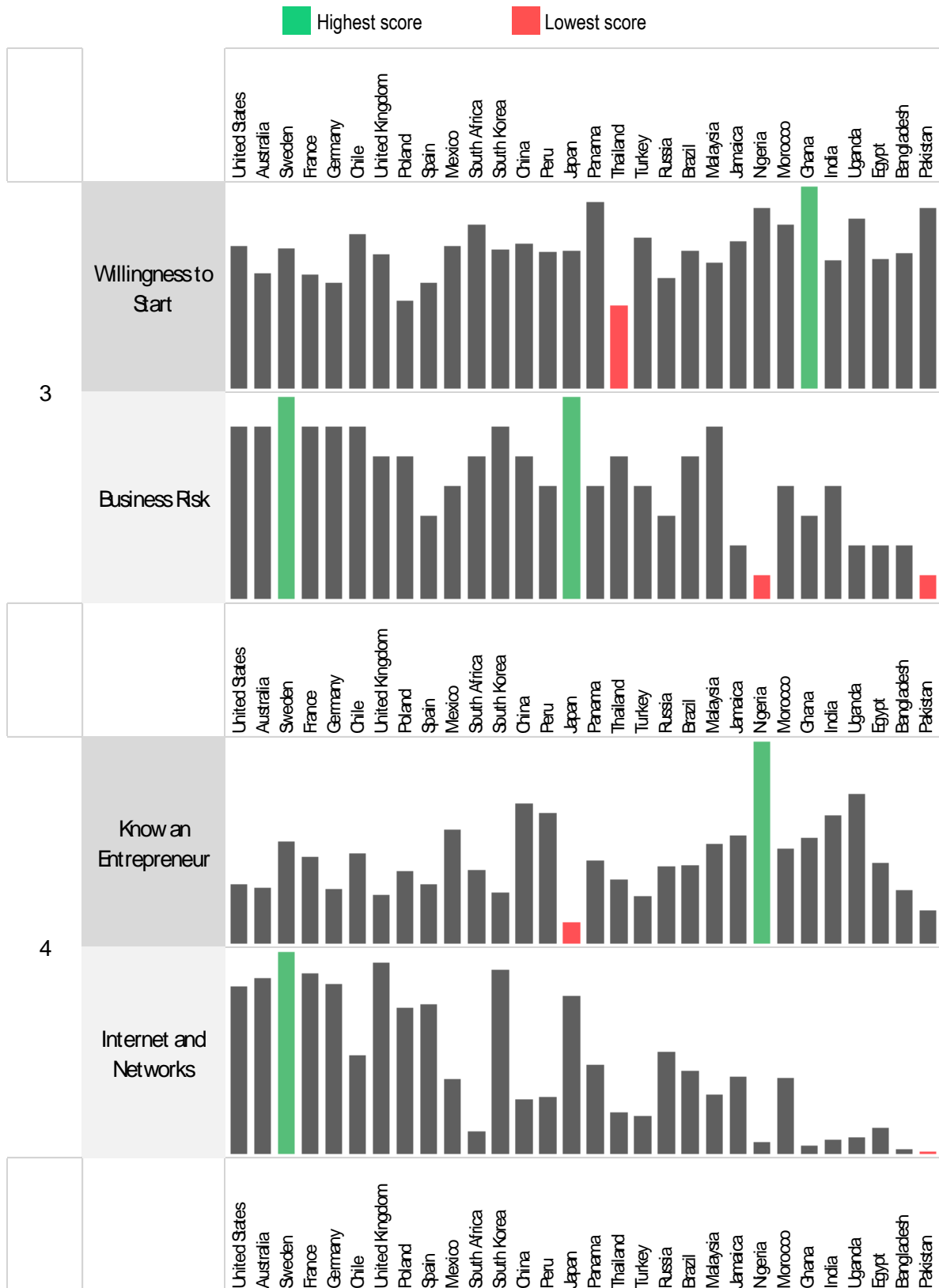
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Appendix 2: Gender-GEDI Results by Pillar

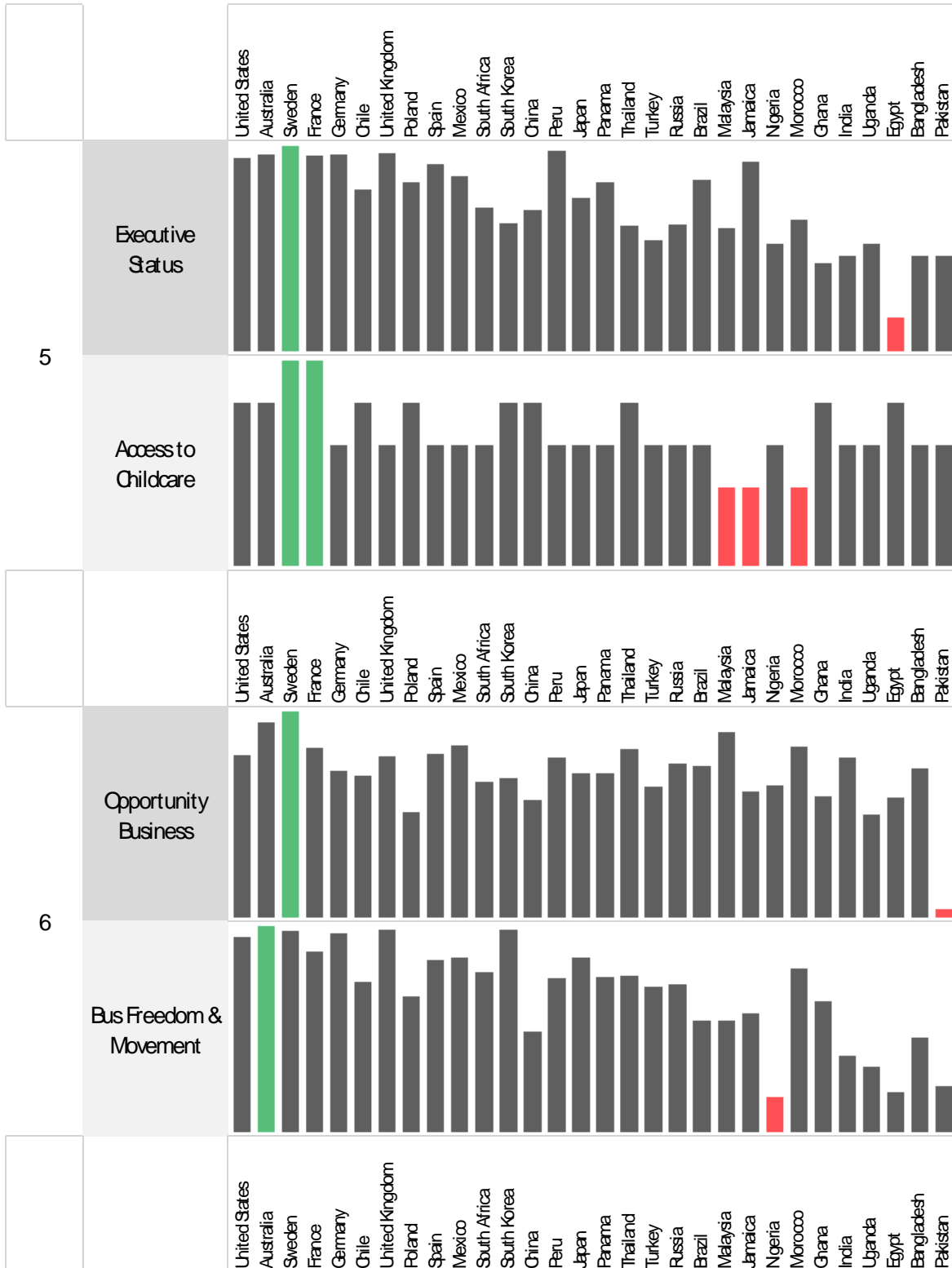


Gender-GEDI Results by Pillar



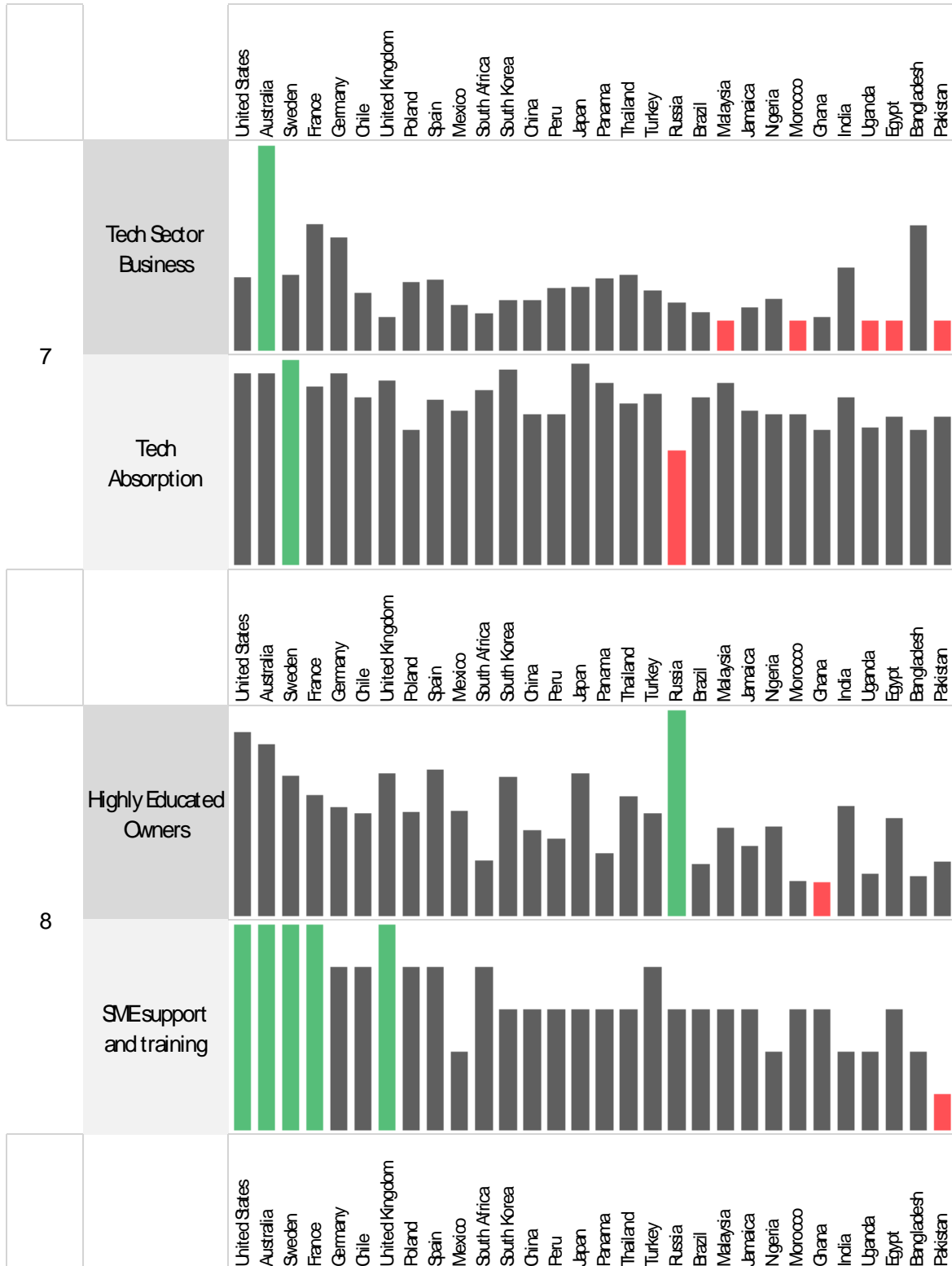
Gender-GEDI Results by Pillar

■ Highest score
 ■ Lowest score



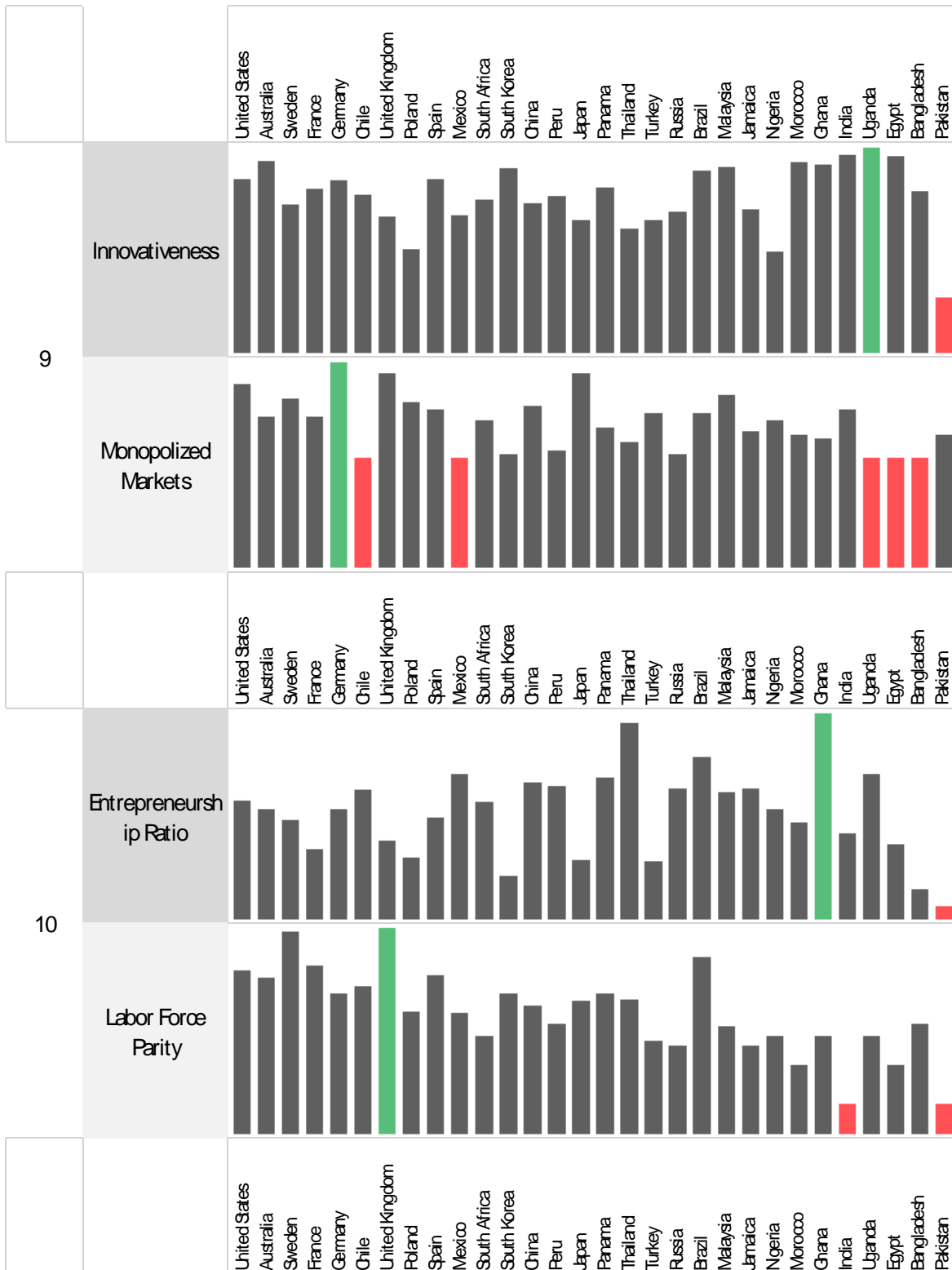
Gender-GEDI Results by Pillar

■ Highest score ■ Lowest score



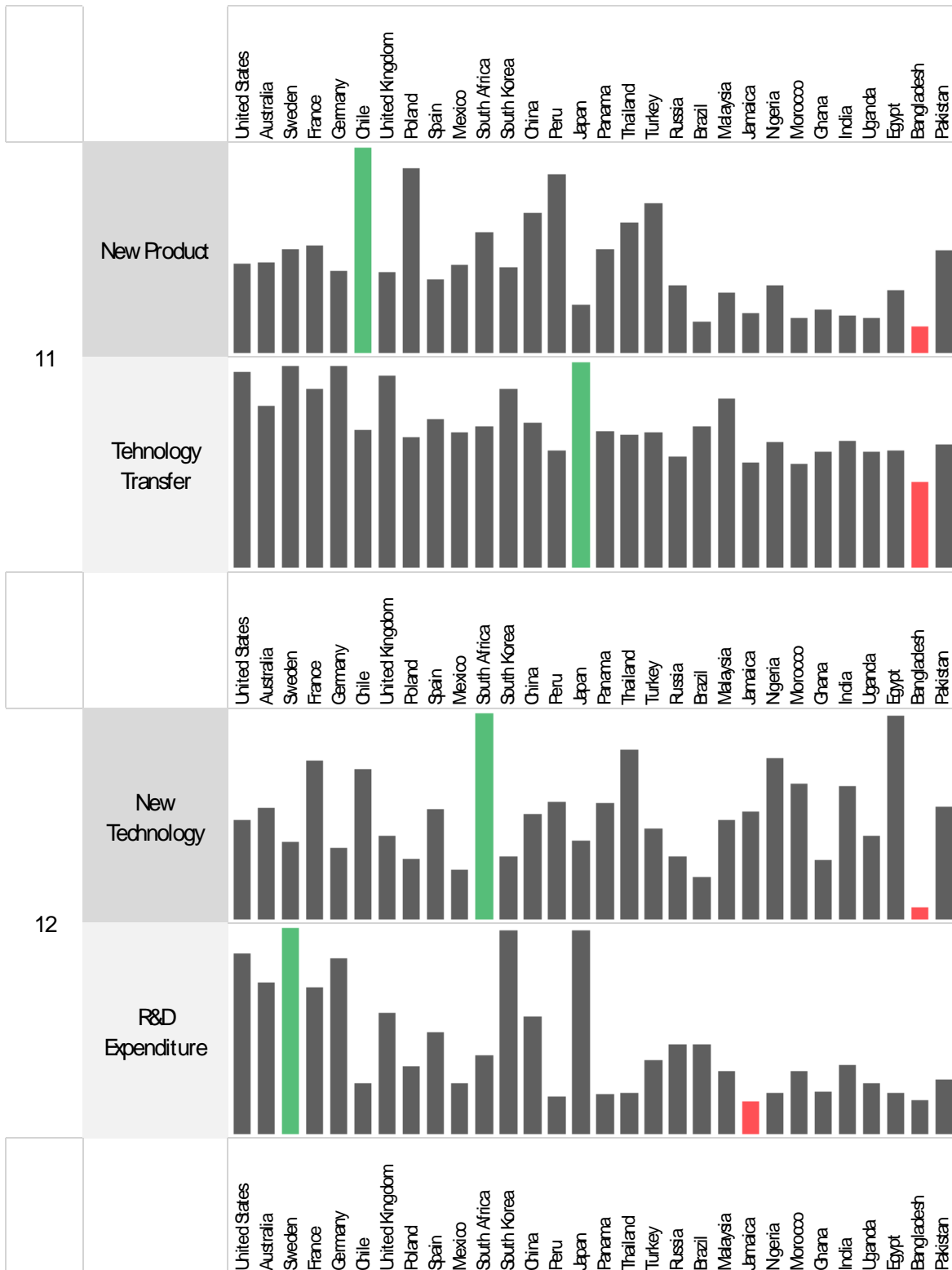
Gender-GEDI Results by Pillar

■ Highest score ■ Lowest score



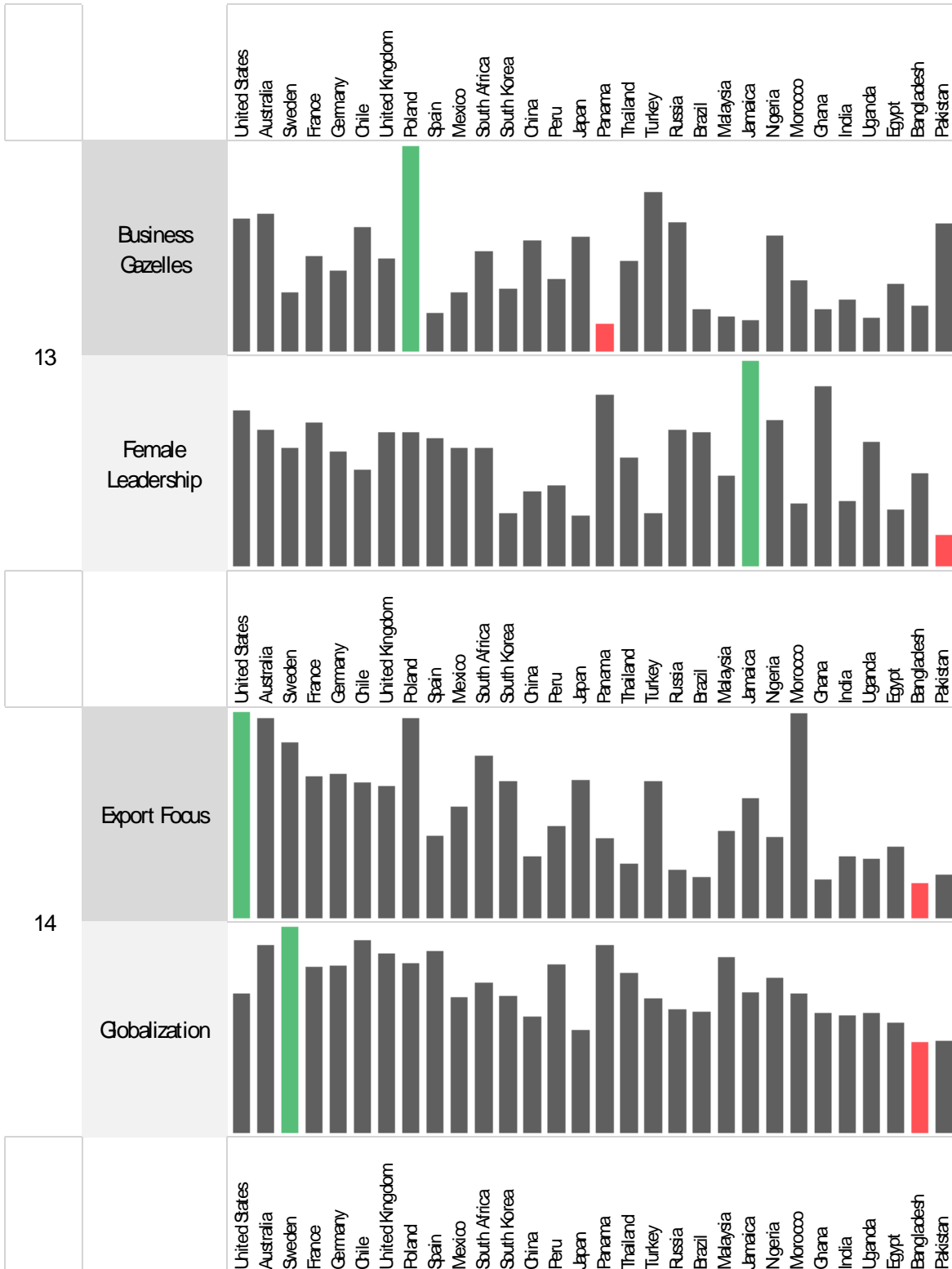
Gender-GEDI Results by Pillar

■ Highest score
 ■ Lowest score

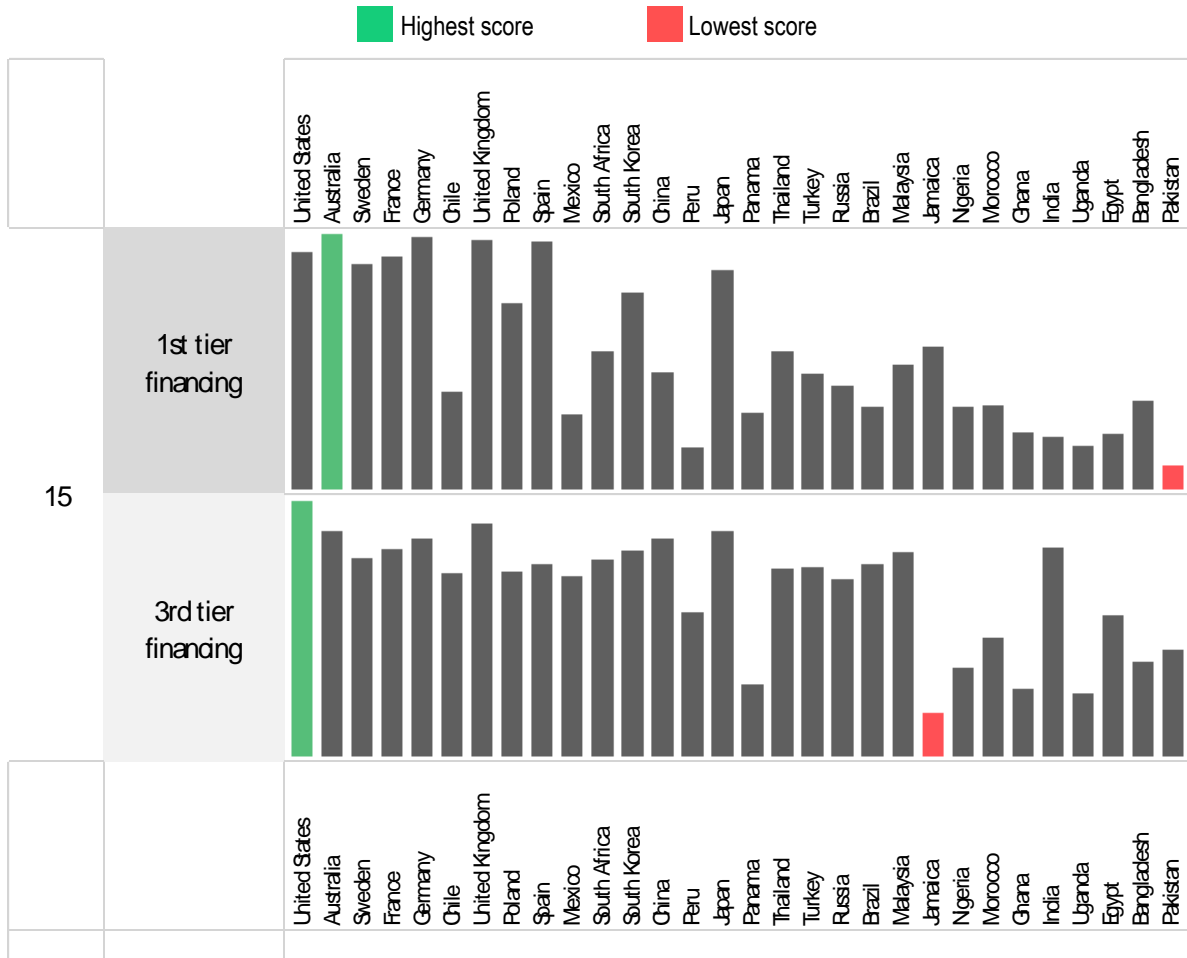


Gender-GEDI Results by Pillar

■ Highest score ■ Lowest score



Gender-GEDI Results by Pillar



Notes

- ¹ The 13 new countries include: Bangladesh, Chile, Ghana, Jamaica, South Korea, Nigeria, Panama, Pakistan, Peru, Poland, Spain, Sweden and Thailand.
- ² The 17 original countries include: Australia, Brazil, China, Egypt, France, Germany, India, Japan, Malaysia, Mexico, Morocco, Russia, South Africa, Turkey, Uganda, United Kingdom and the United States.
- ³ Excerpt from Aidis, R. (2014) *The Melting Middle: Institutions, Entrepreneurship and Public Policy*, paper. By author's permission.
- ⁴ Aidis (2014).
- ⁵ It should be noted that in the Reluctant Entrepreneur category, some individuals may transition from Reluctant to Potential Entrepreneurs. The purpose of these six categories is to identify the general trends.
- ⁶ For the full report, see Acs and Szerb (2014).
- ⁷ The 2014 GEDI Index contains a new gender pillar based on two dimensions: the percentage of female start-ups combined with a measure for equal economic participation and opportunity. For further information see www.thegedi.org.
- ⁸ Additional countries were included for this analysis beyond the 30 country sample in order to allow for more robust comparison and benchmarking.
- ⁹ Female managers also includes legislators and senior officials.
- ¹⁰ Additional sources also used. Please refer to the Methodology section in Gender-GEDI Report of Findings (2014) for full description.
- ¹¹ Favorable attitudes towards female business executives measures the percentage of the female population that disagree with the statement: Do men make better business executives than women. Scores for six countries were estimated and are excluded from the figure: Bangladesh, Jamaica, Nigeria, Panama, Pakistan and Uganda.
- ¹² Based on an analysis of 17 indicators using 2013 data sourced from the World Bank's Women, Business and the Law database. These 17 indicators make up the 'Equal Legal Rights' variable used in Pillar 1 of the Gender-GEDI Index (for a more detailed description of this indicators please refer to the 2014 Gender-GEDI Report of Findings www.dell.com/dwen).
- ¹³ 2012 data sourced from the OECD's Gender, Institutions and Development (GID) Database.
- ¹⁴ Fogel (2013).
- ¹⁵ defined as a business with at least one woman in senior management.
- ¹⁶ SBA (2013).
- ¹⁷ Excerpt from Aidis (2014) *Occupation Crowding and Entrepreneurship Crowding: Effects on female entrepreneurship development*, paper. By author's permission.
- ¹⁸ Bates (1995); Hallward-Dreiermeier (2011); Verheul et al (2006).
- ¹⁹ World Bank (2012:207).
- ²⁰ Sabarwal, et al (2009); Hallward-Driemeier (2011).
- ²¹ World Bank (2012:204).
- ²² Bergmann (1974).
- ²³ Darity (2008).
- ²⁴ Hewlett and Sherbin (2014).
- ²⁵ For a further description of Labor Force Parity calculations see Aidis and Lloyd (2014).
- ²⁶ Hackett (2014).
- ²⁷ Nicole Hall quoted in Buthelezi (2013).