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**Asia-Pacific
Economic Cooperation**



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APEC WOMEN AND THE ECONOMY DASHBOARD

Introduction and Analysis

APEC Policy Partnership on Women and the Economy (PPWE)

U.S.-APEC Technical Assistance to Advance Regional Integration
(US-ATAARI)

April 2015

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Moreover, each of APEC's 21 economies reviewed the Dashboard and refined it through active and thoughtful contributions. Designated APEC and PPWE representatives contributed significantly to the final Dashboard, using input from innumerable agencies throughout their respective economies. APEC leaders endorsed the Dashboard in November 2014.

FOREWORD

The whole conversation on the women's economic empowerment agenda has always been one of the Philippines' main areas of concern ever since the *Women Leaders Network* was founded in 1996 during our hosting year. Through this landmark initiative, gender equality was introduced into the Action Program of APEC whereby leaders, for the first time, put special emphasis on the participation of women in APEC. I am delighted to note that, throughout the years, the women's agenda has continuously been integrated into the discussions in APEC.

In the 2011 APEC Women and the Economy Summit, the various efforts in overcoming barriers to the full economic integration of women were recognized. Measuring progress of women's economic advancement was, however, identified as a need. The development of the Women and the Economy Dashboard, as endorsed by the APEC Leaders in November 2014, is thus a welcome development. It has further strengthened and substantiated the bases of actions for the APEC economies to form the baselines.

Recognizing the importance that economies agree to the set of indicators stated in this document, I am honored and thankful for all the efforts of each economy to reach a shared goal, which is to have clear and concrete metrics for evidence-based planning and programming. It will also measure progress and evaluate the levels of success in reducing the barriers to women's economic empowerment. The establishment of this Dashboard will be very useful as it will help us track our progress over time and determine to what extent women have advanced in their enterprises and contributed to their economies.

The challenge which can be overcome is in ensuring that the data and information gathered are reliable, current, and mirror, as much as feasible, the latest data found in the governments of the APEC member economies. Mindful that the Dashboard should maintain its essence and consistency, the economies and the concerned international organizations are encouraged to collaborate in improving the Dashboard over time. The continued relevance of the Dashboard will motivate the private sector, the academe, and civil society organizations to pursue the discussions on women's economic empowerment. In the end, economies in consensus can put forward actionable recommendations that lead to building better societies and inclusive growth in the region.

Nora Kakilala Terrado

Undersecretary of Management Services Group/Chief of Staff, Philippines Department of Trade and Industry

Chair, APEC Women's Economic Forum, 2015

ACRONYMS

APEC	Asia-Pacific Economic Cooperation
CSOM	Concluding Senior Officials Meeting
CRVS	Civil Registration and Vital Statistics
EIU	Economist Intelligence Unit
EPI	Environmental Performance Index
ICRW	International Center for Research on Women
ICT	Information and communications technology
IFC	International Finance Corporation
ILO	International Labor Organization
ITU	International Telecommunication Union
NGO	Nongovernment organization
OECD	Organization for Economic Cooperation and Development
PPWE	Policy Partnership on Women and the Economy
PSU	Policy Support Unit
R&D	Research and development
SME	Small and medium enterprises
STEM	Science, technology, engineering, and mathematics
STI	Science, technology, and innovation
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNSD	United Nations Statistics Division
USAID	United States Agency for International Development
US-ATAARI	U.S.-APEC Technical Assistance to Advance Regional Integration
WEF	World Economic Forum

EXECUTIVE SUMMARY

The purpose of this document is to introduce the APEC Women and the Economy Dashboard, a set of objective and quantifiable indicators on the status of women and the economy in the APEC region. This document explains how the Dashboard was developed, shares underlying technical notes and analysis, and sets forth expectations for its implementation.

Created and endorsed in 2014 through APEC's Policy Partnership on Women and the Economy (PPWE), the Dashboard was developed as a foundation for understanding the status of women as economic actors across the 21 APEC economies and measuring the progress of women throughout APEC. The Dashboard responds directly to APEC's commitment to promoting women's economic empowerment and greater inclusion of women throughout the regional economy. As affirmed by the PPWE in May 2014, shared metrics that gauge the progress and effectiveness of reform-oriented initiatives are a critical aspect of advancing the economic interests of women.

The Dashboard tracks the PPWE's five endorsed priorities:

1. **Access to capital and assets**, including through such sources as land and personal property, participation in the workforce, and financial services;
2. **Access to markets**, including markets for labor and for goods and services produced by women-owned enterprises;
3. **Skills, capacity building, and health**, so women are physically capable of a range of economic pursuits and are prepared both educationally and technically;
4. **Leadership, voice, and agency**, through which women are valued as contributors, professionals, and leaders in the private, not-for-profit, and public sectors; and
5. **Innovation and technology**, so women have the same opportunities as men to benefit from and participate in development and implementation of scientific advances and new technologies.

Development of the Dashboard entailed extensive study and far-reaching consultations with data experts and economy representatives. Throughout the consensus-driven process, the goal was to identify credible, up-to-date metrics that align with PPWE's priorities so that policymakers have a clear picture of gaps and opportunities. The Dashboard in its final form captures each PPWE priority through five or six contributing factors, which are themselves measured by one or more indicators—totaling more than 75—drawn from a range of international data sources, including the United Nations, the World Bank, the International Labor Organization, the World Economic Forum, and the World Health Organization (Table 1). These sources are generally recognized for their objective and high-quality data as well as rigorous analysis. The coverage is broad, the numbers are consistent and comparable across economies, and the reporting is transparent.

Table I

APEC Women and the Economy Dashboard: Framework for Measuring Progress under the Five PPWE Priorities

Contributing Factor (Enabling environment—EE or Outcome-specific—O)		Sources	Indicator	No. of Economies Covered by Sources ¹	Frequency of Publication
Access to Capital and Assets					
I EE	Property and Inheritance Rights	World Bank, <i>Women, Business and the Law</i> , Using Property	Economy showing on four tracked Using Property indicators: a. Whether unmarried women and unmarried men have equal rights to property b. Whether married women and married men have equal rights to property c. Whether there is equality of inheritance rights between sons and daughters d. Whether there is equality of inheritance rights between husbands and wives	20	Biennial (next study to be published in 2015)
2 O	Labor Market Participation	International Labor Organization, ILOSTAT	a. Proportion of the population ages 15 and older that is economically active, by sex b. Ratio of female to male labor force participation (in %)	21	Periodically updated; variable by economy
3 EE/O	Financial Services: Availability, access, literacy, outreach, and learning	General availability of financial services: International Monetary Fund, Financial Access Survey	Commercial banks per 100,000 adults	20	Annual
		Access for women: OECD, <i>Social Institutions & Gender Index (SIGI)</i> , Restricted Resources and Entitlements—Access to Credit	Score (0, .5, or 1) on SIGI Access to Credit measurement of women's right, and de facto access, to bank loans (0: No legal restriction/discriminatory practices reported; 0.5: No legal restrictions, but discriminatory practices widely reported; 1: Legal restrictions or discriminatory practices are widespread).	18	Biennial (next study to be published in 2016)
		Women's financial literacy, outreach, and learning: Economist Intelligence Unit, <i>Women's Economic Opportunity Index</i> , Access to Finance	Availability of three types of financial outreach programs: (a) initiatives to provide financial accounts to women (for example, current accounts, savings accounts and deposit accounts); (b) outreach efforts aimed at improving women entrepreneurs' access to credit/loans/lines of credit, etc.; and (c) provision of financial literacy or risk-management programs to women.	18	Biennial
4 O	Financial Services: Formal savings and borrowing	World Bank, Global Financial Inclusion Survey	a. Percent of women who saved money at a financial institution in the past 12 months	a. 19 b. 19	Every 3 years (next study to be published in 2016)

¹ The columns indicating Number of Economies Covered by Sources and Frequency of Publication have been reviewed and updated for the purposes of this report and are current as of April 2015. Most of the sources listed in the Dashboard aim to increase their coverage of economies in future editions.

Contributing Factor (Enabling environment—EE or Outcome-specific—O)		Sources	Indicator	No. of Economies Covered by Sources ¹	Frequency of Publication
		(Findex); World Bank enterprise surveys.	b. Percent of women who borrowed money from a financial institution in the past 12 months c. Percent of female-owned SMEs with account at a formal institution d. Percent of female-owned SMEs with a loan or line of credit	c. 7 d. 7	published in 2015) WB Enterprise Surveys take place every 3–6 years and more economies are likely to be surveyed in the future
5 EE	Building a Credit History	World Bank, <i>Women, Business and the Law</i> , Building Credit	Economy showing on four tracked Building Credit indicators: a. Minimum loan amounts required to be included in private credit bureau b. Reporting of formal micro-loans to credit bureaus c. Reporting of retail loan satisfaction to credit bureaus d. Reporting of utility bill payments to credit bureaus	20	Biennial (next study to be published in 2015)
Access to Markets					
Markets for Goods and Services					
I O	Infrastructure	WHO-UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation; International Road Federation statistics (as reported in World Bank data portal, “Infrastructure”)	Infrastructure conditions with particular impact on women: a. Improved water source (rural) b. Use of improved sanitation facilities (rural) c. Improved water source (urban) d. Use of improved sanitation facilities (urban) e. Roads, paved (% of total roads)	a. 17 b. 17 c. 18 d. 17 e. 12	JMP: Biennial (next study to be released in 2016) Road statistics: intermittent, depending on the economy
2 EE	Competitive Access for Entrepreneurs	World Economic Forum, <i>Global Competitiveness Report</i> , Goods market efficiency pillar, Competition subpillar	Quality of economy’s competition as illustrated by: a. Effectiveness of anti-monopoly policy b. Extent of market dominance c. Intensity of local competition	20	Biennial (next study to be published in 2015)
3 EE	Access to International Trade	Heritage Foundation, <i>Index of Economic Freedom</i> , Trade Freedom subindex	Access of domestic companies to international markets, as rated for the absence of tariff and nontariff barriers that affect imports and exports of goods and services	21	Annual
Labor Markets					
4 EE/O	Vulnerable Employment	ILO statistics (as reported in World Bank data portal)	Proportion of own-account workers and contributing family members in total employment	15	Periodic; varies by economy
5 EE	Non-Discrimination in Employment Access and Opportunity	OECD, <i>Social Institutions & Gender Index (SIGI)</i> , Civil Liberties-Access to Public Space	Score (0, .5, or 1) on SIGI Access to Public Space measurement of restrictions women face in accessing public space	18	Biennial (next study to be published in 2016)

Contributing Factor (Enabling environment—EE or Outcome-specific—O)		Sources	Indicator	No. of Economies Covered by Sources ¹	Frequency of Publication
		World Bank, <i>Women, Business and the Law, Getting a Job</i>	Economy showing on representative “Working Hours and Industry Restrictions” indicators, specifically: a. Whether nonpregnant and nonnursing women can do the same jobs as men under the law b. Whether nonpregnant and nonnursing women can work in mining in the same way as men c. Whether nonpregnant and nonnursing women can work in construction in the same way as men d. Whether nonpregnant and nonnursing women can work in factories in the same way as men e. Whether nonpregnant and nonnursing women can work in jobs requiring lifting weights above a threshold in the same way as men f. Whether nonpregnant and nonnursing women can work the same night hours as men	20	Biennial (next study to be published in 2015)
Skills, Capacity Building, and Health					
I EE	Educational Attainment	World Economic Forum, <i>Global Gender Gap Report</i> , Educational Attainment subindex (drawn from UNESCO data)	Based on UNESCO data, how close women are to achieving parity with men in literacy; net primary school enrollment; net secondary school enrollment; and gross tertiary enrollment	18	Annual
2 O	Educational Achievement	OECD/Program for International Student Assessment (PISA)	a. Mean scores of girls in math and reading b. Ratio of boys’ scores to girls’ scores in math and reading	15	Every three years; all economies are surveyed at the same time. Last assessment taken in 2012; next assessment takes place in 2015.
3 O	Technical Vocational Education and Training	World Bank data portal	Percentage of female secondary education vocational pupils	16	Annual updates using most recent economy data
4 EE	SME Training and Incubation	Economist Intelligence Unit, <i>Women’s Economic Opportunity Index</i> , Education and Training	Whether SME training has wide geographic availability; is accessible to women as well as men; is affordable for the majority of intended beneficiaries; takes into account women’s time burdens; and is culturally appropriate	18	Biennial
5 O	Health Care, Access to Health Services, and Personal Safety	Health Care: World Health Organization, Global Health Observatory data repository	Representative health considerations: a. Maternal mortality b. Female population 15+ living with HIV/AIDS	a. 19 b. 18	Variable by economy; most economies measure every five years

Contributing Factor (Enabling environment—EE or Outcome-specific—O)		Sources	Indicator	No. of Economies Covered by Sources ¹	Frequency of Publication
		Access to Health Services: WHO Global Health Observatory data Repository	Representative considerations: a. Births attended by a skilled health professional b. Hospital beds (per 10,000 people)	a. 19 b. 18	Annual, using periodically updated economy data
		Personal Safety: 1. World Bank, <i>Women, Business and the Law</i> , Protecting Women from Violence 2. OECD, <i>Social Institutions & Gender Index (SIGI)</i> , Restricted Physical Integrity—Violence Against Women	1. Economy showings on two WBL domestic violence indicators: a. Whether there is legislation that specifically addresses domestic violence b. Whether there is a specialized court or procedure for cases of domestic violence 2. Score (0, .25, .5, .75, or 1) on SIGI measurement of the existence of women’s legal protection from rape, assault, and harassment, as determined by “lifetime prevalence of domestic violence”	1. 15 2. 18	1. Biennial (next study to be published in 2015) 2. Biennial (next study to be published in 2016)
Leadership, Voice, and Agency					
I EE	Civil Registration and Vital Statistics (CRVS)	UNData (future repository); no single consolidated source at this time.	Whether economies keep continuous, permanent, compulsory, and universal records of vital events (notably, live births, deaths and causes of death)	NA	NA
2 O	Care Economy: Time spent on unpaid work	OECD, gender equality data	Average time spent (hours and minutes per day) on unpaid work, by sex (including caring for children and other family members, housework, volunteering, and community work)	8	Periodic updates using most recent data
3 EE	Conditions for Career Advancement	World Bank, <i>Women, Business and the Law</i> , Getting a Job and Incentives to Work	How the economy fares on indicators for parental benefits and for childcare, specifically whether a. The law mandates equal remuneration for men and women for work of equal value b. It is illegal for an employer to ask about family status during a job interview c. There are laws penalizing or preventing the dismissal of pregnant women d. Employers must give employees an equivalent position when they return from maternity leave e. The law mandates paid or unpaid maternity leave f. The law mandates paid or unpaid parental leave g. Payments for childcare are tax deductible	20	Biennial (next study to be published in 2015)
4 O	Private-Sector Leadership	World Bank enterprise surveys	Percentage of: a. Firms that report female participation in ownership b. Firms that report female participation in top management	9	Every 3–6 years, and more economies are likely to be surveyed the future.

Contributing Factor (Enabling environment—EE or Outcome-specific—O)		Sources	Indicator	No. of Economies Covered by Sources ¹	Frequency of Publication
5 O	Public-Sector Leadership	World Economic Forum, <i>Global Gender Gap Report</i> , Political Empowerment subindex (data from Inter-Parliamentary Union and WEF)	How close women are to parity with men at the highest levels of public-sector decision-making, through ratio of women to men in: (a) minister-level positions and (b) parliamentary positions. Also, years of women in executive office (PM or president) for the last 50 years are included.	18	Annual
6 O	Positions of Influence: Media; Judiciary; Academia	News media: International Women's Media Foundation, <i>Global Report on the Status of Women in the News Media</i>	Percentage of women in all professional media positions (including governance; management; news professional; production and design; sales, finance, and administration)	9	Periodic
		Judges and university presidents: no single consolidated source.	Total number of each, disaggregated by sex	NA	NA
Innovation and Technology					
1 O	Mobile Technology	ITU (and supplementary sex-disaggregated data, where possible)	a. Percentage of population who are mobile telephone users (by sex, where possible) b. Percentage of total population covered by a mobile network signal	21	Annual
2 O	Internet Use	ITU (and supplementary sex-disaggregated data, where possible)	Percentage of population who are Internet users (by sex, where possible)	13	Annual
3 EE	“Networked Readiness”	World Economic Forum, <i>Networked Readiness Index</i>	Economy’s scores on following survey queries: a. Affordability: mobile cellular tariffs (average per-minute costs of different types of mobile cellular calls) b. Government online service index (quality of government’s delivery of online services) c. Impact of ICT on access to basic services (access of all citizens basic online services—health, education, financial) d. Use of virtual social media networks (how widely used)	20	Annual
4 O	Women in STEM	UNESCO Institute for Statistics, Science, Technology, and Innovation and Women in Science	a. Percentage of women as STEM-related bachelor degree students, Ph.D. students, and researchers b. Total R&D personnel by sex (%)	16	Annual

Contributing Factor (Enabling environment—EE or Outcome-specific—O)		Sources	Indicator	No. of Economies Covered by Sources ¹	Frequency of Publication
5 EE	“Green” Awareness and Activity	Yale Center for Environmental Law and Policy, et al. <i>Environmental Performance Index</i>	Economy’s score for environmental issues of particular interest to women in two broad policy areas: (a) protection of human health from environmental harm; and (b) protection of ecosystems, namely: a. Household air quality b. Exposure to air pollution c. Wastewater treatment d. Pesticide regulation e. Fish stocks	20	Biennial

I. WOMEN AND THE ECONOMY DASHBOARD

The need for data is indisputable. In the area of gender equality and women's empowerment, data illuminate the extent to which men and women experience their shared environments differently, and how those differences translate into gaps in economic opportunity, participation, and empowerment. Without numbers that substantiate their case, advocates of gender equality often face skepticism and disbelief when they try to explain how, especially in the economic sphere, women face far more legal, institutional, and cultural constraints than those experienced by men. As then-U.S. Secretary of State Hillary Clinton said on July 19, 2012, at a U.S. State Department conference on closing the gender gap:

"When we're making the case for elevating the roles of women, we can't just rely on moral arguments, as important and compelling as they might be. We have to make a rigorous case, backed up with solid evidence and data."²

In addition to making the case for reform, data can drive the creation of solutions. Across the many technical areas it addresses, the Asia-Pacific Economic Cooperation (APEC) forum increasingly emphasizes the use of credible, consistently acquired data to inform all its policy discussions.

More and better data not only strengthen discourse; they also lead to more tangible goals and, over time, a sounder means of measuring progress. In 2014, the leaders of APEC's 21 member economies specifically recognized "the importance of data to measure progress in reducing barriers to women's economic participation." The leaders welcomed the establishment of the APEC Women and the Economy Dashboard ("the Dashboard") as a tool for informing policy discussions.³ In developing the Dashboard, the PPWE sought data that could inform a multidimensional understanding of how women, across all APEC economies, experience their business and work environments. In the process, the PPWE confirmed what many gender researchers have long pointed out: that there is a dearth of sex-disaggregated data, particularly on economic activity. This lack of information inhibits the ability to gauge where women stand relative to men, as well as to measure progress toward gender equality and women's economic empowerment.

Fortunately, a variety of international institutions, private initiatives, and NGOs have introduced systems in recent years for tracking the status and progress of women. The Organization for

Before we can solve a problem, we need to understand it. We need to be able to evaluate systematically what sorts of interventions work, which don't, and why. But data and evidence are also important to make visible the lives of women and girls.

—Dr. Jim Yong Kim, President of the World Bank, *Evidence and Impact: Closing the Gender Data Gap* (U.S. State Department conference, July 19, 2012)

² Rodham Clinton, Hillary. 2012. Remarks on Evidence and Impact: Closing the Gender Data Gap. July 19. <http://www.state.gov/secretary/20092013clinton/rm/2012/07/195244.htm>.

³ APEC. 2013. Leaders' Declaration. November 11: para. 43, http://www.apec.org/Meeting-Papers/Leaders-Declarations/2014/2014_aelm.aspx.

Economic Co-operation and Development (OECD), the World Bank, the World Economic Forum, the International Labor Organization, and a variety of other development and research institutions collect data on general conditions faced by women, including their health, education, and participation in communities, as well as particular aspects of economic participation and opportunity. Using the data available through these sources—though still encumbered by a great many gaps, requiring use of generalized data—the PPWE strived in 2014 to develop a consensus among APEC member economies for the establishment of a shared baseline for tracking women’s economic empowerment. The result is the APEC Women and the Economy Dashboard, introduced and detailed in this report.

BACKGROUND

Since 1998, APEC has underscored gender equality and the economic empowerment of women as essential components of its overall mission to support sustainable economic growth and prosperity throughout the Asia-Pacific region. During that time, understanding of the direct relationship between women’s economic participation and reduced poverty, as well as the significant contributions women entrepreneurs and managers make to their respective economies and firms, has expanded significantly and persuasively.⁴ In May 2011, building on progress in the region and invigorated commitment worldwide to women’s empowerment,⁵ APEC established the PPWE, a working group within its Senior Officials Meeting (SOM) Steering Committee on Economic and Technical Cooperation. The PPWE consolidated APEC’s existing gender initiatives into a single public-private entity charged with streamlining and elevating the influence of gender and women’s economic empowerment within APEC.⁶ The goal of PPWE is to provide linkages between APEC working groups, APEC Economies, and the APEC Secretariat to advance the economic integration of women in the APEC region for the benefit of all members.⁷

Following its first two high-level dialogues in 2011 and 2012, the PPWE enunciated five core priorities for women’s economic empowerment: (1) access to capital and assets; (2) access to markets; (3) skills, capacity building, and health; (4) leadership, voice, and agency; and (5) innovation and technology.⁸ These priorities are summarized in Table 2.

⁴ United Nations/Exxon Mobil Foundation. 2013. *A Roadmap for Promoting Women’s Economic Empowerment*; Women Moving Millions. 2014. *All in for Her: Top 100 Reports* (on women and girls).

⁵ UN Commission on the Status of Women. 2011. *Agreed conclusions on access and participation of women and girls in education, training and science and technology, including for the promotion of women’s equal access to full employment and decent work*.

⁶ APEC. 2011. *Declaration from the High Level Policy Dialogue on Women and the Economy*. September 16. http://www.apec.org/Meeting-Papers/Ministerial-Statements/Women/2011_women.aspx.

⁷ APEC. SOM Steering Committee on Economic and Technical Cooperation, Working Groups, Policy Partnership on Women and the Economy. <http://www.apec.org/Home/Groups/SOM-Steering-Committee-on-Economic-and-Technical-Cooperation/Working-Groups/Policy-Partnership-on-Women-and-the-Economy>.

⁸ APEC. 2011. *Declaration from the High Level Policy Dialogue on Women and the Economy*. September 16. http://www.apec.org/Meeting-Papers/Ministerial-Statements/Women/2011_women.aspx; APEC. 2012. *Statement from*

Table 2
Summary of PPWE Priorities

Priority	Summary
Access to capital and assets	<p>Discriminatory legal and regulatory systems and banking practices can pose specific hurdles for women's access to capital and assets, which include land; machinery; production facilities; technology; human resources; time; and financial services. Even where the law is neutral, evidence shows that women-owned businesses and farms tend to be smaller, more newly established, and less profitable than male-owned businesses and farms due to additional constraints. Women's overall financial inclusion and engagement in financial services is lower than men's.</p> <p>Examples of barriers include: regulatory laws and discriminatory practices, a lack of information and knowledge about lending requirements, a lack of financial literacy and financial knowledge, lack of access to financial services, and lack of access to technology.</p>
Access to markets	<p>Both domestically and internationally, a lack of access to markets for goods and services impedes the startup, growth, and productivity of women-owned businesses and female agricultural producers, restricting the number of jobs and outputs these ventures can create. Access to labor markets is also often curtailed; women are prohibited by law or cultural practice from employment that offers the same opportunities men have.</p> <p>Examples of barriers include: additional risks of theft and violence when traveling to markets; inability to travel without a male companion; inability to obtain an identity card; increased vulnerability to corruption or bribery in obtaining permits or crossing borders; and lack of access to information on international standards, certification requirements, or processes for opportunities in public and private-sector procurement.</p>
Skills, capacity building, and health	<p>Access to skills, capacity building, and health services is essential for an economy to develop its human capital—one of three main factors affecting economic growth. However, in many economies women face barriers to education, training, digital literacy, health services, and development of life skills are particularly acute in the science, technology, engineering, and mathematics (STEM) fields. Standards of living for women and their families improve when skills training are coupled with health services, awareness of gender-based violence, or development of life skills.</p> <p>Examples of barriers include: knowledge of processes and procedures; social and cultural norms; limited access to technology; lack of discrimination, safety or gender-based violence; poor labor conditions; time constraints; and biases.</p>
Leadership, voice, and agency	<p>Globally, in economic sectors, women lack representation in leadership roles in both the private and public sectors. Women's voice and agency are critical to being able to rise in leadership positions and fully participate at all levels in the economy. Voice is defined as the degree to which women can influence the final outcome of a service through some form of participation or articulation. Agency is the ability to make choices and to act on those choices.</p> <p>Examples of barriers include: organizational obstacles, including a lack of role models and exclusion from informal networks; work-life balance challenges, including travel requirements, lack of childcare and elderly care and long work schedules; institutional, social and cultural norms that evaluate women differently from men for positions; and individual mindsets, due to a lack of positive reinforcement, and peer and senior-level support.</p>
Innovation and Technology	<p>Information communication technology (ICT) Science, Technology, Mathematics, and Engineering (STEM) provide significant economic growth potential and innovation. Yet women and girls have less access than men and boys to ICT resources and STEM jobs, and fewer opportunities to rise in leadership positions within ICT and STEM fields. Key areas to consider include: 1) developing policies, programs and structural reforms that close the gender technology divide; 2) ensuring that women have effective access to and knowledge of how to use ICT tools to further economic opportunities and start and grow their businesses; and 3) focusing on women's ability to access and rise in ICT and STEM jobs and opportunities.</p> <p>Examples of barriers include: mobility and safety in accessing ICT services; cost of accessing resources; lack of awareness that ICT services could be beneficial; legal and discriminatory regulations and environments; cultural and social norms; and lack of education, skills, and capacity.</p>

In February 2014, the PPWE began an effort to track progress in each of its five priority areas. Specifically, it started to develop and implement a mechanism establishing “collective aspirational objectives which can be measured and tracked to show progress and effectiveness in advancing women’s economic participation, regional economic growth, and trade.”⁹ The model substantially reflected the methodology underlying another APEC initiative, the Bogor Goals Dashboard, introduced in 2011. That tool was designed to “provide easy-to-understand figures to track the advances in areas critical to promoting greater regional economic integration, such as liberalization and facilitation of trade and investment.”¹⁰ Specifically, the Bogor Goals Dashboard displays a set of harmonized indicators, drawn from “respectable public sources only,” laying out the evolution of certain aspects of trade and investment liberalization and facilitation.¹¹ That dashboard informs action in that dashboard illuminates the Bogor Goals Progress Reports, periodic updates on which analyze APEC’s progress toward these goals¹²

Thus, as envisioned, the Women in the Economy Dashboard would supply a set of metrics that align with the PPWE priorities and establish a platform for understanding where economies stand vis-à-vis their own policy objectives and one another. From there, APEC economies could set goals for progress or reform, both within their own systems and as a region.

NEXT STEPS FOR THE DASHBOARD

Endorsement of the APEC’s Women and the Economy Dashboard in November 2014 by ministers and leaders allowed for its implementation to begin. Using the approved structure, the APEC Policy Support Unit (PSU) is now poised to compile data that form a fully executed set of economy dashboards. Upon endorsement of the framework, senior officials specifically agreed to:

1. Establish and compile the full Women and the Economy Dashboard, according to the framework in Table 1.
2. Task the APEC Policy Support Unit (PSU) to compile the APEC Women and the Economy Dashboard biannually, with the first set of data to be compiled in 2015 before PPWE’s meeting in May.
 - a. The PSU would include in the Dashboard analysis of the data, including an examination of how current APEC economies or initiatives are addressing the issues.
 - b. Economies would have the choice of supplementing the internationally published data with indicator-specific, economy-collected data, in which case data from both international and domestic sources would be included. For APEC aggregates and averages, only the international data would be used for consistency in reporting and methodology.

⁹ United States. 2014. *Non-Paper for APEC China Host Year 2014—Promoting Growth in APEC by Enhancing Women’s Economic Participation*.

¹⁰ APEC Policy Support Unit. 2012. Bogor Goals Dashboard. http://publications.apec.org/publication-detail.php?pub_id=1309.

¹¹ Ibid.

¹² Ibid.

3. Direct the PPWE to consider the data and information provided in the Dashboard, and to develop possible recommendations for actions APEC economies and APEC subforums may take. The possible recommendations will be provided to the relevant APEC subforums.
4. Encourage the PPWE, APEC sub-forums, and APEC economies to use the data to:
 - a. Inform priorities for capacity building,
 - b. Inform future evidence-based policy commitments, and
 - c. Serve as a basis for evidence-based policy reform in APEC member economies.¹³

At future meetings, the PPWE will include in its agenda a discussion of the Dashboard-generated data, including priorities and objectives for women's economic empowerment, options for capacity building, and future APEC policy commitments. Economies will update their Individual Action Plans each year, aiming to include plans to address barriers to achieving all five PPWE priority areas. In developing these plans, economies are also encouraged to include initiatives (domestic, bilateral, multi-economy, or APEC-wide) which make an effort to address at least one indicator under each of the five priority areas. In addition, economies would be encouraged to develop APEC projects to address one or more of the indicators.

Exhibit I

Excerpt from Ministerial Statement: 2014 APEC Women and the Economy Forum, May 23, 2014, Beijing

The Ministerial Statement that followed the May 2014 Women and the Economy Forum stressed the importance of “innovative development solutions and reforms, including mitigation and adaptation strategies [that] address environmental vulnerabilities,” along with the critical role of women as “change agents and contributors to green development and resilience.” The statement encouraged all APEC economies to take these and other measures:

- Recognize the importance of integrating a gender perspective into economic growth, gender equality and social justice in the realization of green transformation, and develop gender-sensitive policies, programs and messaging geared toward green development, taking into account the differences and specificity of women's needs in the processes of economic restructuring and urbanization to promote and facilitate women's full and equal participation in and benefit from green growth;
- Facilitate women's access to capital, access to markets, skills and capacity building and innovation and technology with a view toward promoting women's opportunities to turn green practices into profitable business opportunities and entry into the new market;
- Provide green education, mentoring, and training to women and girls, including online and mobile resources, to ensure women's enhanced knowledge, skills and capacity, which would not only contribute to enhancing women's opportunities to find decent work and full employment, but also open up new entrepreneurial opportunities for them;
- Promote gender equity in green development jobs by improving data collection and

¹³ This summary of implementation is drawn from the memorandum circulated by the United States to APEC member economies entitled “Developing APEC Indicators for Women's Economic Participation,” prepared for CSOM, November 5–6, 2014.

dissemination on women's participation in STEM education and careers. Share best practices to create job-based skills training to enable women to contribute to resilience, sustainability, and green development innovations;

- Encourage and promote opportunities for women, especially indigenous women, in decision-making roles to enable their full participation in the discourse on economic development, social progress and environmental protection and management. This includes the design and implementation of adaptation and mitigation measures in response to climate change, the restoration and reconstruction from natural disasters, and the role of clean energy in economic growth and enhanced efficiency; [and]
- Promote ways for women entrepreneurs and women-owned companies to participate in trade in environmental goods and services, and to take advantage of economies' implementation of their commitments to reduce their applied tariffs to 5 percent or less by the end of 2015 on the 54 products in the APEC List of Environmental Goods (EGs).

2. TECHNICAL NOTES

This discussion addresses the major technical considerations behind the final iteration of contributing factors and indicators in the Woman and the Economy Dashboard. First, this section summarizes cross-cutting issues that shaped the overall development of the Dashboard. Second, this section sets forth key considerations pertaining to the Dashboard's specific contributing factors and indicators. Among the considerations included in this discussion are: (a) the relationship between the proposed factor or indicator and the PPWE priority it supports; (b) key methodology-related information drawn from the original data sources; (c) additional suggestions presented by Dashboard reviewers, and how they may have resulted in changes to the Dashboard or why those suggestions may not have been adapted in the final version; and (d) additional information as warranted.

CROSS-CUTTING ISSUES

Choice of Contributing Factors

Since the first draft of the Dashboard was distributed in May 2014, nearly all reviewers from APEC economies understood and accepted its overall presentation and organization around the five PPWE priorities. Still, stakeholder feedback led to changes in a number of the proposed contributing factors. Changes reflected a confirmed lack of sufficient data to support certain proposed factors; shifts in how the priorities might most effectively be interpreted through available data; or new ideas that “fit” better than the previous designations.

In several cases, recommendations for new or different contributing factors could not be accommodated. This is not because they did not represent useful ways of assessing progress under the PPWE priorities; rather, they typically were ruled out because sufficient supporting data, particularly sex-disaggregated data, was not available across all or most APEC economies. In fact, a comprehensive review of data on women's participation and well-being, sponsored by the UN Foundation and issued in March 2014 (“Data2x”),¹⁴ concludes that the design of policies and programs to promote female advancement and expanded opportunities generally has been hampered by lack of data. According to Data2X, the dearth of information is more severe in developing than in industrial economies and, in all economies, data on women's economic engagement is especially poor.

For example, the PPWE workshop recommended including voter turnout and intellectual property as contributing factors within the Dashboard. These areas did not, however, prove to be tracked across all or most APEC economies in a way that lends itself to straightforward and consistent compilation. In both cases, the availability of data may change in the future, in which case the proposed contributing factors can be revisited.

¹⁴ Buvinic, Mayra et al. 2014. *Data2X: Mapping Gender Data Gaps*, United Nations Foundation. http://data2x.org/wp-content/uploads/2014/11/Data2X_MappingGenderDataGaps_FullReport.pdf.

Inclusiveness of Indicators

Another concern articulated while building the Dashboard was that in each draft a few economies are included significantly less often among data sources than most of the other economies. This concern is attributable to a variety of factors, and the PPWE is in a position to address them in different ways over time. In certain instances, the PPWE, US-ATAARI, or member economies can encourage or even facilitate the expanded acquisition of data by international sources. In other cases, particularly with respect to developing economies, the PPWE can encourage donor institutions to support building the capacity of economies to more actively and credibly produce data that are sought for measurement by international institutions. Developed economies that are missing certain data may take it upon themselves to bridge conspicuous gaps. All economies can benefit from strengthened efforts to collect detailed economic data that is disaggregated by sex.

Scope of Contributing Factors and Indicators

Regarding the scope of the indicators, the following themes emerged while assembling the Dashboard:

Sex-Disaggregated versus Non-Disaggregated Statistics

Reviewers observed, with mixed opinions, that the indicators are generally divided between (a) those for which sex-disaggregated or gender-specific data are available (such as most data emerging from the World Bank's *Women, Business and the Law* activity or the World Economic Forum's *Global Gender Gap* report); and (b) those that reference general data with clear gender implications (such as the World Health Organization-UNICEF Joint Monitoring Program for Water Supply and Sanitation information or the World Economic Forum's *Global Competitiveness Report*). Although the activities contributing to the Dashboard's development underscored a preference for sex-disaggregated data, reviewers generally understood the inability to access such data in all areas covered by the methodology. Thus, in many instances—infrastructure being a central example—carefully chosen data lacking gender specificity has been included to serve as a “proxy” until credible, disaggregated data that is derived from all or most of the APEC economies becomes routinely published.

Boundaries of ‘Economic Empowerment’

A number of reviewers proposed inclusion of metrics that are not strictly measures of economic empowerment, but which may relate indirectly, such as various additional health indicators or indicators on persons with disabilities. Other reviewers expressed a preference for keeping the scope of the inquiry narrowly tied to quantifiable issues of economic participation, notwithstanding the breadth of social or policy topics that may relate to such issues. In the end, the contributing factors and indicators that were selected for the Dashboard reflect the view of economic empowerment found within the PPWE priorities.

Breadth of Indicators

The process of assembling the Dashboard balanced the need to be thorough and respond to the PPWE priorities, and to avoid creating a tool that is too long or unwieldy. In a number of cases, the first widely circulated draft referred to indexes of information maintained by international organizations. These indexes, including the *Global Gender Gap* report and the *Networked Readiness Index*, contained as few as three or four individual indicators and as many as 50–100. Although an index provides just one or two indicators behind a single contributing factor (such

as with respect to infrastructure, green activity, and networked readiness), feedback emphasized an interest in greater precision and disaggregation of key data. Accordingly the Dashboard contains more individual, outcome-specific indicators than originally proposed.

Timeliness of Indicators

The Dashboard must accommodate differences in the frequency of publication of the data sources for its individual indicators. Some data sources are published annually, others bi-annually, and few only sporadically or occasionally. Each report for an individual economy based on the Dashboard will include the most recent data available for an economy.

Types of Measurement Afforded by Indicators

Reviewers noted differences among the types of measurement proposed in the Dashboard. These types of measurement are roughly divided into (a) those that address the enabling environment (EE) for women's economic participation; and (b) specific statistical outcomes (O) of individual economy environments. Both types offer value. The Dashboard identifies each contributing factor as reflecting EE, O, or both.

Absence of Consolidated Data Sources

Nearly all indicators chosen for the Dashboard are maintained or tracked in an existing source of consolidated data, including such international institutions as the World Bank, the IFC, the International Labor Organization, and the World Health Organization. There is a strong preference in the Dashboard for this type of information, based on its relative ease of access and the consistency of how the contributing economy data can be reviewed for reliability and be presented. A few contributing factors proposed in earlier drafts (including voter turnout, supply chains for goods and services, and intellectual property) were discarded due to the absence of a single consolidated data source, as well as the overall difficulty in acquiring self-reported data measured under consistently defined and similarly collected conditions. On the other hand, two sets of indicators (number of judges and number of university presidents, disaggregated by sex) are found within a single contributing factor (Positions of Influence, within Leadership, Voice and Agency) and do not have a single, consolidated source. In this instance, due to the relatively straightforward ability to count these positions, APEC economies will be asked to self-report on the information as they maintain it themselves.

Desired Outcomes

Early drafts of the Dashboard included suggested goals for economies, usually drawn from the top third of rankings or scores developed by international sources. Feedback on this approach resulted in elimination of this section, with the idea that the PPWE may choose to establish clear objectives after a full set of Dashboard economy reports is generated and analyzed.

ACCESS TO CAPITAL AND ASSETS

In emerging markets throughout the world, there are about 8–10 million woman-owned SMEs, representing one-third or more of all SMEs in emerging markets, according to estimates from the International Finance Corp. (IFC).¹⁵ The SMEs owned by women tend to be smaller and less likely in the formal sector than those owned by men. The women-owned SMEs also experience slower growth, due not only to specific financial barriers, but also to nonfinancial barriers such as the legal and regulatory environment, women's access to public spaces and community infrastructure, and personal characteristics, including financial literacy, use of networks, and expectations about women's role as primary family care providers.

ACCESS TO CAPITAL AND ASSETS Contributing Factors

1. Property and inheritance rights
2. Labor market participation
3. Financial services: access, availability, and capacity/literacy
4. Savings and borrowing through formal financial institutions
5. Building a credit history

In light of these constraints, the PPWE identified access to capital and assets as a central priority in 2011. Across APEC and within individual economies, potential sources of capital and assets include ownership of land and personal property, wage employment, own-account employment, and entrepreneurship, as well as formal and informal lending. For the purposes of the Dashboard, the contributing factors selected for this priority are based on economy-specific research about how women in APEC economies access capital and assets, in particular for building an enterprise, but also for such purposes as educating family members and investing in tangible and intangible inputs.¹⁶ The contributing factors listed below reflect a consensus about the strongest indicators for access to capital and assets, balanced against a limited supply of sex-disaggregated data in this area.

Property and Inheritance Rights

Data source: World Bank's Women, Business, and the Law (WBL) index, Using Property subindex

Property and inheritance rights have long been recognized a cornerstone of women's access to capital and assets. As summarized by Human Rights Watch, equal property rights are “fundamental to women's economic security, social and legal status, and sometimes their survival.”¹⁷ APEC-sponsored inquiries in Papua New Guinea and Chile in 2013 found numerous

¹⁵ IFC and Global Partnership for Financial Inclusion. 2011. Strengthening Access to Finance for Women-Owned SMEs in Developing Countries.

¹⁶ USAID/US-ATAARI. 2013. Women's Economic Participation in Papua New Guinea: Achieving APEC Priorities for Gender Equality; USAID/US-ATAARI. 2013. Women's Economic Participation in Chile: Achieving APEC Priorities for Gender Equality; The Asia Foundation. 2013. Access to Trade and Growth of Women's SMEs in APEC Developing Economies (Malaysia, Indonesia, Philippines, Thailand).

¹⁷ Human Rights Watch. Women's Property Rights: Violations Doom Equality and Development; International Center for Research on Women. 2014. Securing Women's Land and Property Rights.

examples of how women who inherit or buy land tend to be more profitable as entrepreneurs than those who have few real property assets.¹⁸

The four questions selected as indicators in support of this contributing factor are drawn from the World Bank's overall effort to analyze "women's ability to access and use property based on their capacity to own, manage, control and inherit it." According to the *Women, Business and the Law* report, "The ability to access, manage and control property can be especially important in developing economies, where women are more likely to work in family enterprises and where their income affects their access to property." From the report's four-part section on "Using Property," the Dashboard integrates two sections—property and inheritance—with two questions each. The World Bank explains its methodology for answering the questions as follows:

Do unmarried men and unmarried women have equal ownership rights to property?

- This question is designed to determine whether there are gender-based differences over property for unmarried men and unmarried women. Ownership rights as used here include the ability to manage, control, administer, access, encumber, receive, dispose of and transfer property;
- The answer is "Yes" when no specific legal restriction is applied to single women or men, based on gender, with regard to property;
- The answer is "No" when legal restrictions are applied to single women or men, based on gender, with regard to property.

Do married men and married women have equal ownership rights to property?

- This question is designed to determine whether there are gender-based differences over property rights for married men and married women. Ownership rights as used here include the ability to manage, control, administer, access, encumber, receive, dispose of and transfer property. The answer to this question is based on whether husbands and wives married under the default property regime have equal ownership rights over property;
- The answer is "Yes" when no specific restriction or difference in legal treatment is applied to married women or men, based on gender;
- The answer is "No" when there are differences in the legal treatment of spouses regarding property based on gender, and broken down by marital status. For example, if husbands are granted administrative control over marital property, the answer is "No."

Do sons and daughters have equal inheritance rights to property from their parents?

- This question examines whether there are gender-based differences in the rules of intestate succession (that is, succession in the absence of a will) for property from parents to children;
- The answer is "Yes" where the law recognizes children as heirs without any restrictions based on gender with regard to property;

¹⁸ USAID/US-ATAARI. 2013. Women's Economic Participation in Papua New Guinea: Achieving APEC Priorities for Gender Equality; USAID/US-ATAARI. 2013. Women's Economic Participation in Chile: Achieving APEC Priorities for Gender Equality.

- The answer is “No” where there are gender-based differences between children recognized as heirs, on inheritance for property.

Do female and male surviving spouses have equal inheritance rights over property?

- For the purpose of this question, it is assumed that the deceased spouse left no children or other heirs other than the surviving spouse;
- This question examines whether both spouses have equal rank and rights when it comes to inheriting assets in the absence of a will;
- The answer is “Yes” where the law recognizes the same rights to surviving spouses, once his or her spouse is deceased;
- The answer is “No” where there are gender-based differences on inheritance.¹⁹

Reviewers of the Dashboard expressed concern over not only the clear legal right of women to own and inherit real property, but also over whether these laws are actually enforced. Although the World Bank did not measure enforcement of law in its 2014 report on *Women, Business and the Law*, future WBL reports will aim to capture evidence or practices of enforcement. Some reviewers of the Dashboard also asked if certain economies would object on religious grounds to including inheritance. None of the economies voiced such objections during the several months of Dashboard review.

Labor Market Participation

Data source: International Labor Organization, ILOSTAT

As summarized by the International Center for Research on Women, “women’s economic empowerment—that is, their capacity to bring about economic change for themselves—is increasingly viewed as the most important contributing factor to achieving equality between women and men.”²⁰ Because most women are not capable of bringing about economic change through the benefits of significant family property or inherited wealth, the capital and assets they use to support their families, advance their education, or start and self-finance new businesses are most often drawn from funds earned while participating in the workforce. Thus, the rate at which women participate in their respective economies is a critical component of their access to capital and assets.

The labor market participation rate is the proportion of the male and female population ages 15 and older who are economically active (in that they supply labor for the production of goods and services during a specified period. Given the variation across APEC economies in *overall* rates of economic participation, the Dashboard reports on both the rate of female participation in the labor force *and* the ratio between the rates at which women participate versus those of men.

¹⁹ World Bank. *Women, Business, and the Law. Using Property*. Methodology available at <http://wbl.worldbank.org/Methodology/using-property>. The Inheritance subtopic focuses on the applicable law where there is no will. In economies where codified law applies only to individuals who have affirmatively renounced customary law, an affirmative renouncement is presumed to have been made.

²⁰ International Center for Research on Women. *The Issue: Women’s Economic Empowerment*. <http://www.icrw.org/what-we-do/economic-empowerment>.

Data on women's participation in the labor market are maintained at a number of sites, with the International Labour Organization's ILOSTAT database recommended by Dashboard reviewers as a reliable, credible, and routinely updated source. A number of other possible indicators were considered to illustrate the access of women to capital and assets that are not directly based on property ownership. Economy scores on the Global Gender Gap Report's Economic Participation and Opportunity Index were discarded as an option due to one economy's lack of confidence in one component of that index. In addition, some reviewers suggested integrating wage data—in particular, wage differences between men and women—but this was not possible due to insufficient data across a representative number of APEC economies.

Financial Services: Availability, Access, Literacy, Outreach, and Learning

The availability of financial services—which at their most basic include deposits and loans, with more complex services encompassing insurance and equity products—represents a crucial link between weak or stagnant economic conditions and opportunities for enterprise development and poverty reduction. The United Nations elucidated the importance of financial inclusion in a comprehensive report issued in 2006:

[A]ccess to a well-functioning financial system can economically and socially empower individuals, in particular poor people, allowing them to better integrate into the economy of their [economies], actively contribute to their development and protect themselves against economic shocks. Creation and expansion of financial services targeted to poor and low-income populations can play a vital role in enhancing financial access. Inclusive financial sectors—those in which no segment of the population is excluded from accessing financial services—can contribute to attaining the goals contained in the United Nations Millennium Declaration, such as halving the proportion of people in the world who live in extreme poverty by 2015.²¹

All over the world, for reasons attributable to public policy and to social norms, women tend to be excluded from financial services to a greater degree than men. As summarized in one scholar's detailed review,

While both men and women face similar barriers, evidence from recent studies suggests that these barriers are higher for women. The reasons for this include culture, lack of traditional collateral (such as land or property which is often registered in men's name), women's lower income levels relative to men, and financial institutions' inability (or lack of appetite) to design appropriate products and outreach strategies to reach women.²²

Although data on women's access to financial services and related issues have historically been limited, knowledge in this field has increased in recent years. This contributing factor aims to incorporate the strongest relevant data available across most of the APEC economies to paint a picture of availability of and access to financial services for women, along with the capacity of women to take advantage of those services.

²¹ United Nations. 2006. Building Inclusive Financial Sectors for Development.

²² Narain, Sushma. 2008. Gender and Access to Finance. (Noting that gender and finance studies are largely early and exploratory, and that research "other than on gender and microfinance" is limited and data on financial markets and access are "largely gender blind.")

Availability

Data source: International Monetary Fund, Financial Access Survey (FAS)

The first indicator used in this contributing factor represents a simple measure of whether there are enough banks to serve the populace at large. The indicator is drawn from the IMF's Financial Access Survey, a repository of geographic and demographic data on access to basic consumer financial services worldwide. According to the IMF, the FAS is the sole source of global supply-side data on financial inclusion, which encompasses internationally comparable basic indicators of financial access and use of financial services. The indicator chosen from the FAS—commercial banks per 100,000 people—speaks to the prevalence of commercial banks. A comparable indicator on lending from noncommercial bank sources, such as formal or informal microfinance institutions, was unavailable across most APEC economies.

Access

Data source: OECD, Social Institutions & Gender Index (SIGI), Restricted Resources and Entitlements—Access to Credit

This second indicator was chosen to illustrate women's access to bank loans and other forms of credit in the APEC economies, as measured by the presence of an enabling legal framework (which is also measured by the World Bank's *Women, Business and the Law* initiative) and by de facto access to credit—that is, whether social and economic conditions permit women to exercise their rights. Based on data from economy-specific sources, the OECD/SIGI assigns values for this indicator according to the following scale:

0—Women have the same rights to access credit and bank loans as men.

0.5—Women only have the right to access some kinds of credit (for example only through microcredit) or they have rights but in practice they face discrimination in accessing credit.

1—Women have no/few rights to access credit or access is severely restricted by discriminatory practices.²³

Literacy, Outreach, and Learning

Data source: Economist Intelligence Unit, Women's Economic Opportunity Index, Access to Finance

Both the capacity of business owners to manage their balance sheets and the financial literacy of entrepreneurs are critical to the survival and growth of a business. Financial literacy emphasizes habits, such as saving, budgeting, and using credit wisely that improve creditworthiness.²⁴ The Dashboard's Literacy, Outreach, and Learning indicator tracks the availability of three types of financial outreach programs directed to women in particular: (a) initiatives to provide financial accounts to women (for example, current accounts, savings accounts, and deposit accounts); (b) outreach efforts aimed at improving women entrepreneurs' access to credit, loans, lines of credit; and (c) provision of financial literacy or risk-management programs to women.

²³ OECD/SIGI Information about variables and 2014 data sources at <http://genderindex.org/data>.

²⁴ World Bank, DFID, OECD, and CGAP. 2009. *The Case for Promoting Financial Literacy in Developing Countries: Promoting Access to Finance by Empowering Consumers*.

The scale for this indicator, as developed by the EIU, is 1–5. The scoring for this indicator is as follows:

- 1— None of the three programs are available
- 2— Only one of the three programs is available, but it is limited in scope (less than 20 percent of women in the formal sector have access)
- 3— Two of the three programs are available, but they are modest in scope (about 50 percent of women in the formal sector have access)/or only one of the three programs is available, but it is reasonably broad in scope (about 70 percent of women in the formal sector have access)
- 4— Two of the three programs are available and they are reasonably broad in scope (about 70 percent of women in the formal sector have access)/or women’s access to financial services is already very broad, so these programs are largely unnecessary
- 5— All three programs are available, they are comprehensive in scope/or women’s access to financial services is already widespread, so these programmes are unnecessary.²⁵

An early draft of the Dashboard included financial literacy among the contributing factors for the priority Skills, Capacity Building, and Health. Participants in the PPWE workshop in August 2014 agreed that the issue better contributes to the overall picture of access to capital and assets. Later comments on the Dashboard resulted in the subtitle being changed to Literacy, Outreach, and Learning, to better reflect the EIU data.

As of November 2014, the EIU had no plans to publish a third edition of the Women’s Economic Opportunity Index, previously published in 2010 and 2012. Another potential source of metrics for financial literacy, Visa’s International Barometer of Financial Literacy, covers too few APEC economies to be useful. The U.S. government is moving forward with enlisting continued tracking of this indicator by the EIU or another source across the APEC economies.

Financial Services: Formal Savings and Borrowing

Data source: World Bank, Global Financial Inclusion Database (Global Findex)

This contributing factor examines the extent to which women and women-owned enterprises use financial services available to them. The underlying measures are intended to gauge a general understanding, first, of the extent to which individual women engage with formal financial institutions, and, second, the extent to which women-owned SMEs hold accounts with formal financial institutions.

The World Bank’s Global Financial Inclusion Database, Global Findex, is an important new resource for understanding women’s use of available accounts. In 2012, the Global Findex reported on the results of more than 150,000 telephone and in-person surveys across 148 economies to determine the rates at which men and women save, borrow, and otherwise access financial services. The survey was carried out over the 2011 calendar year by Gallup Inc. as part of its Gallup World Poll, which since 2005 has surveyed approximately 1,000 people annually in up to 157 economies, using randomly selected, nationally representative samples. The target population of the poll is the entire civilian, noninstitutionalized population age 15 and

²⁵ Economist Intelligence Unit. 2012. Women’s Economic Opportunity Index. Appendix: Sources and Definitions, 42.

older. Surveys are conducted in the major languages of each economy.²⁶ In 2015, the Global Findex will report again on these issues, providing, among other insights, an important view of where and to what extent conditions for women have changed.

The Dashboard includes two data points available through the Global Findex: (1) the percentage of females 15 and older who saved money at a financial institution in the past year; and (2) the percentage of women who have received a loan from a financial institution in the past year. For the purpose of these inquiries, the Global Findex includes within its definition of financial institution “a bank, credit union, microfinance institution, or another financial institution such as a cooperative.”²⁷

Second, this section aims to integrate available information about the extent to which women-owned SMEs access formal banking accounts and financial products. As documented by the IFC, women-owned SMEs are a “financially underserved segment.”²⁸ These enterprises are less likely than their male-owned counterparts to obtain formal financing; they often pay higher interest rates; and they tend to receive smaller loans.²⁹ Unfortunately, as noted in documentation accompanying in the earliest iteration of the Dashboard,³⁰ it is difficult to get a clear picture of the relative representation of women-owned enterprises in an economy’s formal economy, let alone of informal enterprises. Business registries rarely record the gender of the majority ownership of newly registered companies. Household surveys sometimes allow for rough estimates, but details about ownership can prove elusive. Accordingly, tracking the rate at which women-owned SMEs engage formal banking services is all the more challenging.

The best information identified for the purposes of the Dashboard is drawn from the World Bank’s enterprise surveys (and also recorded in the G20 Basic Set of Financial Inclusion Indicators, announced and endorsed in 2012). From these surveys, two pertinent metrics can be assessed: (1) the percentage of female-owned SMEs with an account at a formal institution; and (2) the percentage of female-owned SMEs with a loan or line of credit. For the purposes of these metrics, the term “female-owned” refers to companies that have females within their ownership (that is, women are not necessarily majority owners). Although data could be found for just seven economies as of November 2014, the inclusion of this category in the Dashboard signals the desire to increase the amount of responsive information in the future.

Building a Credit History

Data source: Women, Business, and the Law (WBL), Building Credit

As summarized by the World Bank in 2014, information asymmetries represent one of the most significant limitations on the ability of most SMEs to obtain adequate external financing to support their productive activities. Namely,

²⁶ The full Global Findex methodology is available at <http://siteresources.worldbank.org/EXTGLOBALFIN/Resources/8519638-1332259343991/Methodology7.pdf>.

²⁷ World Bank. Global Findex Glossary.

²⁸ IFC. 2011. Strengthening Access to Finance for Women-Owned SMEs in Developing Countries: 35.

²⁹ Ibid, 35–37.

³⁰ USAID/US-ATAARI. 2014. The PPWE Priorities for Women’s Economic Empowerment: Proposed Indicators for Measuring Change.

Creditors assess the creditworthiness of credit/loan applicants based on two basic criteria: their financial capacity or ability to repay a loan, and their willingness to repay the loan. Due to information asymmetries, however, not all necessary information to assess creditworthiness of applicants is available to creditors. In addition, gathering information that is not readily or easily available is overly costly. These problems are normally exacerbated in the case of SMEs, and are often a cause of the denial of loans and other forms of external financing to them.³¹

Thus, whether economies operate broad-based credit bureaus, which allow potential borrowers to build credit histories based on even small measures of credit, such as utility payments, store financing, or microloans, is an issue of particular interest to individuals and enterprises that start out with few assets. Since its inception in 2003, the World Bank's Doing Business initiative has highlighted the importance of credit bureaus for all borrowers within its Getting Credit inquiry. The World Bank's *Women, Business and the Law* tool further underscores the importance of the issue to women, who tend to be disproportionately represented among microenterprises and very small formal businesses.

As explained by the World Bank, the Building Credit component of its inquiry

identifies minimum loan thresholds in private credit bureaus and public credit registries and tracks bureaus and registries that collect information from microfinance institutions. Low minimum loan thresholds mean more coverage for small businesses—many of which are owned by women, who tend to take out small loans. Such loans can help these businesses build credit histories if credit bureaus and registries set low thresholds for inclusion in their data. And because most microfinance users are women, they are more likely to benefit from credit bureaus and registries that collect and distribute microfinance data. Having a credit record can allow women to graduate to larger loans.

From the WBL's section on Building Credit, the Dashboard integrates four questions. WBL explains its methodology for answering the questions as follows:

What is the minimum loan amount covered in the private credit bureau or public credit registry (as a percentage of income per capita)?

- This number reflects the lowest minimum loan amount of any credit bureau or registry in the economy in question;
- If a credit bureau or registry collects data on loans worth less than 1 percent of income per capita, it is treated as if it collects data on loans of any value; thus an answer of 0 here means either that there is no minimum loan amount in at least one credit bureau or registry, or that at least one credit bureau or registry collects data on loans worth less than 1 percent of income per capita;
- The answer is N/A, if there is no credit bureau or registry in the economy.

Do microfinance institutions provide information to private credit bureaus or public credit registries?

- For the purposes of this question, it is sufficient that any one private credit bureau or public credit registry in the economy in question collects information from microfinance institutions;

³¹ World Bank. 2014. International Committee on Credit Reporting. *Facilitating SME Financing Through Improved Credit Reporting*.

- The answer is N/A, the economy in question is high-income;
- The answer is N/A if there is no private credit bureau or public credit registry;
- If the economy in question has no operational credit bureau or registry, or if these entities collect information for less than 0.1 percent of the adult population, the entities are treated as not collecting information from microfinance institutions.

Do retailers provide information to private credit bureaus or public credit registries?

- For the purposes of this question, it is sufficient that any one private credit bureau or public credit registry in the economy in question collects information from any retailer;
- The answer is N/A if there is no private credit bureau or public credit registry.

Do utility companies provide information to private credit bureaus or public credit registries?

- For the purposes of this question, it is sufficient that any one private credit bureau or public credit registry in the economy in question collects information from a utility company;
- The answer is N/A if there is no private credit bureau or public credit registry.

For purposes of clarity in relation to the other contributing factors in this section, the Dashboard changed the name of this contributing factor from Building Credit in earlier drafts to Building a Credit History.

ACCESS TO MARKETS

Although the PPWE's original definition of Access to Markets concerned exclusively markets for goods and services, participants at the August 2014 PPWE workshop in Beijing recommended also incorporating into the Dashboard metrics on women's access to labor markets. Both types of markets are discussed in this section.

ACCESS TO MARKETS

Contributing Factors

Markets for goods and services

1. Infrastructure
2. Competitive access for entrepreneurs
3. Access to international trade

Labor markets

4. Vulnerable employment
5. Nondiscrimination in employment access, opportunity, and conditions

Markets for Goods and Services

For the purposes of the Dashboard, *markets for goods* are defined as the buying and selling of inputs for production and the final goods that are produced. These markets entail a wide variety of goods, for example seed, fertilizer, and all types of foodstuffs in the agricultural sector, as well as inputs for and outputs from manufacturing processes, including garments, housewares, electronics, and machinery. Markets may be casual outdoor trading centers; small, medium, and large retail establishments; massive wholesale depots; virtual marketplaces; and other venues.

Markets for services describe the delivery, purchase, or hiring-in of services that can enhance or upgrade productive activities. A variety of services can help improve personal lives and productivity, as well as expand the scope and value of market activities. Moreover, provision of services is a way that women can develop businesses that do not require a significant outlay of capital.

With respect to markets for both goods and services, the Dashboard did not find a single, credible resource for objective and high-quality data on a sex-disaggregated basis across the majority of APEC economies. Accordingly, the contributing factors under this priority include issues of infrastructure, competition, and trade-friendliness, because each is so important to all

entrepreneurs trying to access markets. As resources grow for understanding differences in how women and men experience enabling environments, future iterations of the Dashboard will incorporate sex-disaggregated data.

Infrastructure

Data source: WHO-UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation; International Road Federation statistics (as reported in World Bank data portal Infrastructure)

There is widespread agreement over the importance of strengthening the access of poor people, including both women and men, to roads, transportation services, telecommunications, energy, and water. Awareness is growing within and beyond APEC about how women often use infrastructure differently, or may have different infrastructure-related priorities, than men.³² For example, women are far more likely than men to miss work or even drop out of the workforce due to factors such as health problems in their families, a lack of mobility to get to and from work, the need and responsibility of obtaining clean and potable water. In rural economies, where women may disproportionately work in agriculture, the need for roads, depots, and other facilities that minimize product spoilage and post-harvest loss is often critical. Where women are a crucial source of labor in communities that depend on manufacturing and services, their access to safe transportation, including affordable public transportation, is often an underserved need.

Evidence is growing that poor infrastructure impairs women's entrepreneurs' ability to expand their businesses.³³ There is a patent lack of sex-disaggregated data, however, that cover these and related issues in a majority of APEC economies. Accordingly, the Dashboard relies on gender-neutral indicators of particular interest to women—namely, the availability and quality of water and the general availability of roads. These indicators were selected in light of both availability of data and feedback from Dashboard reviewers, who preferred specific indicators which could be targeted and tracked as opposed to the more general infrastructure index drawn from the World Economic Forum's annual survey of executives.

In its final iteration, the Dashboard includes four indicators developed by the WHO-UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation, including: (a) improved water source (rural); (b) use of improved sanitation facilities (rural); (c) improved water source (urban); and (d) use of improved sanitation facilities (urban). Materials from JMP detail in length

Women and men often have different patterns of mobility due to differences in domestic and professional responsibilities and social norms that govern where, how, and when they can travel. Women tend to have less access to vehicle transportation and often utilize pedestrian routes, non-motorized vehicles, and public transportation.... The inability to travel long distances safely and quickly can deter women's participation in cross-border trade.... [For example] Women in Cambodia are often able to get the best prices for their goods only if they are at the market very early in the morning. Without access to feeder roads, the extensive travel time forces some women to sleep in their market stalls at high risk to their personal safety.

—USAID/Enabling Agricultural Trade Project, "Women in Cross-Border Agricultural Trade" (2012)

³² Asian Development Bank. 2011. Empowering Women through Rural Infrastructure; ADB conference report. 2008. *Mainstreaming Gender Equality in Infrastructure Projects: Asia and Pacific Regional Meeting*.

³³ IFC. 2011. Strengthening Access to Finance for Women-Owned SMEs in Developing Countries: 32.

how water, sanitation and hygiene (WASH) are essential for health, welfare, and livelihoods, and increased access and better services lead to higher levels of school achievement and improved economic productivity.³⁴

In addition, the Dashboard incorporates the best available indicator on access to market-related infrastructure, namely the percent of roads that are paved, as reported by the International Road Federation statistics and published in the World Bank's data portal Infrastructure. Although this indicator captures just a small part of the relationship between women's access to infrastructure and their ability to progress economically, it is one of the few available datasets crossing the majority of APEC economies that, as of November 2014, spoke to the issue.

During development of the Dashboard, a number of other ideas for infrastructure-related indicators were proposed. While pertinent and meaningful, most could not be used due to lack of available data. These included women's use of public transportation; women graduates as professional engineers (percentage share of total engineering graduates); women as equal partners or owners of firms engaged in infrastructure planning or design, construction, and maintenance; and paved and unpaved roads with adequate accessibility, safety, and security services (percentage share of all roads).

Competitive Access for Entrepreneurs

Data source: World Economic Forum (WEF), Global Competitiveness Report, Goods Market Efficiency pillar, Competition subpillar

The extent to which economies place a premium on competition within the marketplace relates directly to the ability of women-owned enterprises to establish their initial footing and grow. Competition rewards producers who work efficiently and offer the most attractive array of price and quality choices in response to consumer demand. When consumers dislike the offerings of one seller, they can turn to others, thus creating demand for new and innovative goods and services.

In some economies or sectors, however, a handful of firms may engage in practices that undermine competition, such as price-fixing among themselves or imposition of barriers against other companies seeking to enter their respective markets.³⁵ APEC economies vary in the extent to which they have developed and implemented laws of competition, which typically include aspects of antimonopoly policy and consumer protection. In fact, private companies often seek the *intervention* of government into markets to shield them from the harsh realities of competition. They may, for example, seek subsidies; restrictions on potential competitors; or high tariffs, if not outright bans, on imports. Because women are often latecomers to business arenas, restrictions on competition may harm them especially.

The Dashboard highlights competitive access for female entrepreneurs as a contributing factor toward their overall access to markets. Given the lack of sex-disaggregated data in this area, the Dashboard draws its indicators from the World Economic Forum's survey of business executives, which is the foundation of its annual *Global Competitiveness Report*. That report

³⁴ WHO/UNICEF. 2014. Progress on Drinking Water and Sanitation and other JMP materials, available at <http://www.wssinfo.org>.

³⁵ USAID/Nicholas S. Klissas. 2014. Frontiers in Development. *Expecting More, but Getting Less*.

includes a subpillar on competition that captures the enabling environment for opportunities for newer, smaller businesses (the type women are more likely to operate) to enter markets without being inappropriately dissuaded or undercut by dominant players. Business executives specifically report on the quality of competition in their respective economies as illustrated by (a) effectiveness of antimonopoly policy; (b) extent of market dominance; and (c) intensity of local competition. Each indicator is scored on the WEF's scale of 1–7.

Access to International Trade

Data source: Heritage Foundation, Index of Economic Freedom, Trade Freedom subindex

There is broad consensus that deeper integration of economies into regional and international markets offers myriad benefits, including improved quality of goods and services; more stable food supplies; and a more promising trajectory of economic growth. For many enterprises, “going international” is an important way to pursue larger markets.³⁶ Thus, the private sector depends on trade policy. Trade policy embodies an economy's commitment to building and sustaining formal trade relations with its neighbors, its region, and international markets, through such mechanisms as mutual tariff reductions, harmonization of laws, and shared commitments to international norms.

With respect to cross-border trade, very little gender-specific information is available. No meaningful universe of data exists on the experiences of women and minority groups who work (actually or virtually) at the border, whether as officials in agencies in charge of customs, immigration, trade, or other border functions; as purveyors of customs brokerage, freight forwarding, storage, transport, and other trade-related services; or as representatives of informal or formal enterprises importing and exporting foreign goods.

Accordingly, the indicator chosen for this contributing factor, the Heritage Foundation's trade freedom subindex, is based on two inputs: (a) the trade-weighted average tariff rate; and (b) nontariff barriers (NTBs), a term for a variety of government actions affecting trade, such as quotas, price restrictions, licensing requirements, investment restrictions, and mandatory product inspections, and direct government intervention into markets. The Heritage Foundation rates economies on a scale of 1–100.

In some [economies] ... women are restricted as to what professions they can enter and what hours they can work.... [T]hese rules undermine women's economic participation and women's dignity and rights while reinforcing the damaging idea that women should be treated differently because of our gender.

—Hillary Clinton, U.S. Secretary of State
Remarks at APEC Women and the Economy
Forum (2012)

Labor Markets

Labor markets concern the exchange of work for wages or other remuneration. Labor may be formal or informal. Formal work is regulated by labor and employment law and, in some instances, collective bargaining agreements. Informal labor is much more precarious, with less clarity in wages and hours. A worker's skills and bargaining power tend to be directly related: a

³⁶ The Global Entrepreneurship Monitor. 2012. Women's Report: Going International.

worker with skills that are needed can receive more pay and command better conditions of work in general.

For the purpose of assessing labor markets, the Dashboard relies on two contributing factors—Vulnerable Employment and Non-Discrimination in Employment—that supplement the overall participation of women in labor markets, included under the previous priority.

Vulnerable Employment

Data source: ILO statistics (as reported in World Bank data portal)

In considering ways to represent the extent to which women find opportunity in an economy's labor market, Dashboard reviewers proposed and supported a measure of *vulnerable employment*. This metric illustrates compellingly how, even if they are working, many women cannot find employment beyond their own microenterprises or unpaid labor and therefore earn less than needed to support a family or even contribute significantly to household income. Vulnerable workers tend to be especially harmed in macroeconomic downturns. They have little or no access to social safety nets that may be available to formally employed workers.³⁷

Vulnerable employment measures the rate of unpaid family workers and own-account workers as a percentage share of total employment. Own-account workers are those workers who, working on their own account or with one or more partners, hold the type of jobs defined as a self-employment jobs (i.e. remuneration is directly dependent upon the profits derived from the goods and services produced), and have not engaged on a continuous basis any employees to work for them during the reference period. Contributing family workers, also known as unpaid family workers, are those workers who are self-employed, as own-account workers in a market-oriented establishment operated by a related person living in the same household. Although vulnerable employment is not yet reported using sex-disaggregated statistics, the heavy presence of women among own-account and contributing family workers means that the metric provides an important perspective on women and labor markets.

Nondiscrimination in Employment Access and Opportunity

Even as women become increasingly educated and qualified to hold positions previously dominated by men, they often find, when seeking work, many doors remain closed to them. Sources of workforce discrimination are often found in economy laws and regulations, as documented by the World Bank's Women, Business and the Law initiative. Discrimination also emerges in practices that relate to the ability of women to travel to and from work. As illustrated by the OECD's Social Institutions & Gender Index (OECD/SIGI), women may be kept out of the workplace simply because they cannot reach public spaces where jobs are typically found.

Drawing from a number of comments and recommendations made during the PPWE workshop in Beijing, the Dashboard incorporates three particular aspects of discrimination: access, opportunity, and conditions of work.

³⁷ International Labour Organization. ILO Trends. 2010. *Vulnerable employment and poverty on the rise*, Interview with ILO chief of Employment Trends Unit.

Access (Data source: OECD, *Social Institutions & Gender Index (SIGI)*, *Civil Liberties—Access to Public Space*)

The OECD/SIGI’s “access to public space” inquiry measures the restrictions women face in accessing public space, such as laws preventing women from choosing where they live, restrictions on their travel, and social or public violence against women. The SIGI score is based on legal restrictions or discriminatory practices affecting women’s access to public space, for example the restrictions on women’s choice of domicile, restricted ability to visit family and friends, requirements for husband’s approval apply for a passport or widespread threats of civil unrest. Assigned values are based on the following scale:

- 0**—No legal restrictions and no discriminatory practice is reported
- 0.5**—No legal restrictions, but discriminatory practices widely reported
- 1**—There are legal restrictions, or discriminatory practices are widespread.³⁸

Opportunity (Data source: *Women, Business and the Law, Getting a Job—Working Hours and Industry Restrictions*)

The WBL Working Hours and Industry Restrictions inquiry addresses the reality that restrictions on which hours women can work or types of industries that they can work in—perhaps motivated by a desire to protect women—might limit their ability to get the jobs they want.³⁹ In many economies, nonpregnant, nonnursing women are barred by law from working the same hours as men—particularly at night—and participating in certain fields, such as mining and other occupations that may involve underground work and heavy lifting. This means that women do not have even a chance to show that they are as capable as men in performing the essential functions of the job. Even “benign” restrictions, such as the right of women to retire at a younger age than men, may make women more expensive than men to employ or may otherwise diminish their economic potential.

From the WBL’s four-part section on Getting a Job, the Dashboard integrates six questions from the Working Hours and Industry Restrictions subsection. WBL explains its methodology for answering the questions as follows:

Can non-pregnant and non-nursing women do the same jobs as men?

- Restrictions which are specific to pregnant women or nursing mothers are not included in this question;
- This question is designed to determine if there are specific jobs in which women explicitly or implicitly cannot work, except in limited circumstances;
- Both partial and full restrictions on women’s work are counted as restrictions. For example, if women are allowed to work only in certain jobs within the mining industry, for example, as health care professionals within mines, but not as miners, this counts as a restriction;
- Explicit restrictions are examined regarding women doing certain jobs such as mining. Also examined are implicit restrictions stating that women cannot work in “hazardous” or “arduous” conditions;

³⁸ OECD/SIGI Information about variables and 2014 data sources, available at <http://genderindex.org/data>.

³⁹ World Bank. *Women, Business, and the Law*. 2013. Mapping the Legal Gender Gap in Getting a Job.

- This includes jobs in which there is a limit on how many hours a woman can work but not for men;
- This includes restrictions, which do not apply to men, for night work on certain jobs;
- Where the law indicates that regulations restricting women's work in particular industries may be promulgated by the relevant minister or ministry, this is counted as a restriction.

Can nonpregnant and nonnursing women engage in [mining] in the same way as men?

- The answer is “Yes” if there is no restriction on women working in the mining industry;
- The answer is “No” if there is a full or partial restriction on women working in the mining industry.

Can nonpregnant and nonnursing women engage in [construction] in the same way as men?

- The answer is “Yes” if there is no restriction on women working in construction;
- The answer is “No” if there is a full or partial restriction on women working in construction.

Can nonpregnant and nonnursing women engage in [factory work] in the same way as men?

- The answer is “Yes” if there is no restriction on women working in factories;
- The answer is “No” if there is a full or partial restriction on women working in factories.

Can nonpregnant and nonnursing women engage in [jobs requiring lifting weights above a threshold] in the same way as men?

- The answer is “Yes” if there is no restriction on women engaging in jobs with a minimum weight-lifting requirement;
- The answer is “No” if there is a full or partial restriction on women engaging in jobs with a minimum weight-lifting requirement.
- The answer is also “No” if women cannot perform work requiring heavy lifting, for example, if the law prohibits women from working in jobs which involve loading and unloading goods.

Can women work the same night hours as men?

- This question does not factor in night work restrictions on pregnant women or nursing mothers;
- Where the law indicates that regulations may be promulgated by the relevant minister or ministry, restricting women's work at night, this is counted as a restriction.

SKILLS, CAPACITY BUILDING, AND HEALTH

In recent generations, there has been remarkable progress in education, particularly as measured by literacy, with progress for women particularly notable. Between 1970 and 2000, the global average ratio of female to male literacy improved from 59 to 80 percent.⁴⁰ The representation of women in secondary and higher education, including professional education, has also vastly increased, with many APEC economies now reporting more female university graduates than men. At the same time, women's health has markedly improved: globally, for example, an estimated 287,000 maternal deaths occurred in 2010, down 47 percent from levels in 1990.⁴¹

SKILLS, CAPACITY BUILDING, AND HEALTH

Contributing Factors

1. Educational attainment
2. Educational achievement
3. Technical and vocational education and training
4. SME training and incubation
5. Health care, access to health services, and personal safety

Where women are healthier and better educated, their chances of economic success dramatically improve. The contributing factors selected for this priority include both widely maintained education and health data, aggregated by international institutions, along with a number of targeted indicators that aim to capture aspects of health and education correlating with women's economic participation and success.

Educational Attainment

Data source: World Economic Forum, Global Gender Gap Report, Educational Attainment subindex (drawn from UNESCO data)

In the 20th century, the systematic exclusion of girls and women from school and the labor force in many economies resulted in a less-educated workforce, inefficient allocation of labor, lost productivity, and diminished progress in economic development.⁴² To address these deficiencies, Goal 3 of the UN's Millennium Development Goals (2000–2015) targeted the elimination of gender disparity in primary and secondary education. Perhaps as a result of this worldwide focus on results, data available on education enrolment and attainment of milestones are relatively well developed and broadly available.

The Dashboard indicator that supports Educational Attainment as a contributing factor is a subindex in the WEF's *Global Gender Gap Report*. The subindex as reported in 2014 is summarized in Table 3. All subindexes in the *Global Gender Gap Report* assign weights to certain variables to ensure that each variable has the same relative impact on the subindex. For example, a variable with a small variability or standard deviation, such as primary enrolment rate,

⁴⁰ Kenny, Charles. 2011. *Getting Better: Why Global Development is Succeeding and How We Can Improve the World Even More*: 80.

⁴¹ WHO, UNICEF, UNFPA, and The World Bank. 2012. *Trends in maternal mortality: 1990 to 2010*: p. 2.

⁴² World Bank. *Girl's Education*.
<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTEDUCATION/0,,contentMDK:20298916~menuPK:617572~pagePK:148956~piPK:216618~theSitePK:282386,00.html>.

gets a larger weight within the Educational Attainment subindex than a variable with a larger variability, such as tertiary enrolment rate. Therefore, an economy with a wide gender gap in primary education (a variable where most economies have achieved near-parity between women and men) will be more heavily penalized.

Table 3

Educational Attainment, Structure of Educational Attainment Subindex (Structure of Global Gender Gap Index (excerpt), Educational Attainment)

Variable	Source
Ratio: female literacy rate over male value	UNESCO Institute for Statistics, Education database, 2013 or latest data available; United Nations Development Programme, Human Development Report 2009, the most recent year available between 1997 and 2007
Ratio: female net primary enrolment rate over male value	UNESCO Institute for Statistics, Education database, 2013 or latest data available
Ratio: female net secondary enrolment rate over male value	UNESCO Institute for Statistics, Education database, 2013 or latest data available
Ratio: female gross tertiary enrolment ratio over male value	UNESCO Institute for Statistics, Education database, 2013 or latest data available

SOURCE: WEF Global Gender Gap Report (2014), p. 4.

Educational Achievement

Data source: OECD/Programme for International Student Assessment (PISA)

Although data for educational attainment are widely accessible, data on learning outcomes, using shared definitions of achievement, are less prevalent. Fortunately, a system of international examinations has provided a means of comparing relative student achievement in certain core areas.

PISA, the indicator chosen for the Dashboard, assesses reading, mathematics, and science competencies in about 28 million 15-year-olds globally. The aim of PISA is to assess the extent to which students at the end of compulsory education can apply their knowledge to real-life situations and be equipped for full participation in society. PISA's two-hour tests mix open-ended and multiple-choice questions about passages describing real-life situations. Students take different combinations of different tests. The information collected through background questionnaires also provides context that can help analysts interpret the results.⁴³

PISA was selected for the Dashboard instead of the Trends in International Mathematics and Science Study (TIMSS), another cross-economy means of assessing students. PISA covers a few more economies than TIMSS (15, as opposed to 13) and is given more often—every three years, rather than every four. PISA also represents something of a finishing line for achievement, rather than the mid-education assessments of fourth and eighth graders measured by TIMSS.

Following the recommendation of participants at the PPWE workshop in Beijing, another indicator of educational achievement, specifically on women and Science, Technology, Engineering and Math (“STEM”), was placed in the Dashboard's section on Innovation and Technology.

⁴³ OECD. About PISA. <http://www.oecd.org/pisa/aboutpisa/>.

Technical and Vocational Education and Training

Data source: World Bank data portal (incorporating UNESCO statistics)

Although the draft Dashboard presented at the PPWE workshop in August 2014 did not include a metric for technical and vocational education and training (TVET), workshop participants felt that, given the relationship between girls and women in TVET and the qualifications of women to obtain skilled jobs, the issue should be incorporated.

ILO and UNESCO define TVET as “referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life.” Common examples of such activities include, for vocational education, plumbing, electrical, beautician services, automobile mechanics, and agricultural trades. Technical education may involve computer programming or maintenance, certain health fields, scientific calibration, or higher-level care of animals.

The indicator selected for this contributing factor measures the number of female students enrolled in TVET programs at the secondary education level expressed as a percentage of the total number of students (male and female) enrolled in TVET programs in a given school year. This information is useful, although it does not capture the common segregation of females into certain TVET disciplines (beautician training and office administration, for example) and away from others (automotive, plumbing, electrical). Data in this area would strongly benefit from more specific inquiries into the representation of males and females in TVET programs.

SME Training and Incubation

Data source: Economist Intelligence Unit, Women’s Economic Opportunity Index, Education and Training

This contributing factor captures the extent to which entrepreneurs—whatever their educational background—have access to programs and initiatives that offer capacity-building assistance to enhance their prospects of success. The selected indicator measures the existence of government or nongovernment programs offering SME support (including incubation services) and development training. As noted by the source of this information, EIU, most working women, particularly working mothers, require programs and services that do not take them away from their families for an extended period of time or which are suitably timed. This fact reflects the general imbalance between the household responsibilities held by men and women.

The indicator considers training programs aimed at both men and women in both rural and urban areas. The maximum score an economy can receive is 5, with one point each assigned to the following five conditions: (1) the services have wide geographic availability; (2) they are accessible to women as well as men; (3) they are affordable for the majority of intended beneficiaries; (4) they are culturally appropriate; and (5) they take into account women’s time burdens.

As noted, as of September 2014, the EIU did not plan to publish a third edition of the Women’s Economic Opportunity Index, previously published in 2010 and 2012, which is the source of this metric. However, the U.S. government is enlisting continued tracking of this indicator by the EIU or another source.

Health Care, Access to Health Services, and Personal Safety

Participants at the PPWE workshop in Beijing strongly supported robust metrics on women's health and safety, including such indicators as violence committed by an intimate partner, as health and access to health care affect a woman's ability to work. Early discussions emphasized that not all health indicators are relevant or could be included, as the emphasis should be placed on indicators that affect labor force participation. Broad consensus emerged that health and safety directly relate to women's ability to fully engage as workers and entrepreneurs. There is interest in exploring additional indicators further with the APEC Human Resource Working Group and Health Working Groups.

Health Care

Data source: World Health Organization, Global Health Observatory Data Repository and UN Programme on HIV/AIDS

Like educational attainment, general health data are widely available across economies. The Dashboard aimed to include a limited number of representative metrics, and the following two indicators were ultimately selected: (1) maternal mortality, measuring the deaths of women while pregnant or within 42 days after pregnancy; and (2) number of females 15 and older living with HIV/AIDS. Both of these are found in the minimum set of gender indicators endorsed by the UN's Statistical Commission (detailed at length in the study document that accompanied the first iteration of the Dashboard).

Additional metrics were suggested but not incorporated into the Dashboard for lack of relevance, lack of sufficient data, or overall space considerations. These included prevalence of smoking among women; women's cancer rates; access to family planning services; and economic opportunities for women with disabilities. Although most economies also supported inclusion of (1) prevalence of modern contraceptive use; and (2) prevalence of obesity in nonpregnant women, one economy withheld endorsement of the Dashboard until these indicators were removed.

Access to Health Services

Data source: World Health Organization

Participants at the PPWE workshop in Beijing recommend adding two indicators of access to health services: (1) births attended by a skilled health professional (WHO Global Health Observatory); and (2) inpatient beds available in public, private, general, and specialized hospitals and rehabilitation centers (most data include both acute and chronic care) (World Bank data portal). The WHO's Global Health Observatory provides access to over 1,000 indicators on priority health topics including mortality and burden of diseases, the Millennium Development Goals (child nutrition, child health, maternal and reproductive health, immunization, HIV/AIDS, tuberculosis, malaria, neglected diseases, water and sanitation), noncommunicable diseases and risk factors, epidemic-prone diseases, health systems, environmental health, violence and injuries, equity. As explained by the Observatory:

Many of these datasets represent the best estimates of WHO using methodologies for specific indicators that aim for comparability across [economies] and time; they are updated as more recent or revised data become available, or when there are changes to the methodology being used. Therefore, they are not always the same as official national estimates, although WHO whenever possible will provide Member States the

opportunity review and comment on data and estimates as part of [economy] consultations.⁴⁴

There were virtually no sex-disaggregated data on women's access to health-care facilities.

Personal Safety

Data source: Women, Business and the Law Protecting Women from Violence and OECD, Social Institutions & Gender Index (SIGI), Restricted Physical Integrity—Violence Against Women)

Participants at the PPWE workshop favored including a meaningful measure of women's personal safety across the APEC economies, particularly with respect to gender-based violence, as such violence clearly affects a woman's ability to participate in the economy. This issue is now represented in the Dashboard in two parts. The first uses two components of the WBL Domestic Violence indicator, and the World Bank explains its methodology as follows:

Is there legislation that specifically addresses domestic violence?

- The answer is “Yes” if there is a law or provision addressing domestic violence that includes criminal sanctions or provides for orders of protection for domestic violence (i.e., if domestic violence is only prohibited, the answer will be considered “No”);
- The answer is “No” if there is no law or provision addressing domestic violence or if the law or provision only prohibits domestic violence but does not provide for sanctions or orders of protection;
- The answer is also “No” if the provision only protects a specific category of women (e.g., pregnant women) or defines the offence in connection to specific motives (e.g., violence against a person performing a professional or civil duty);
- Aggravated penalties for crimes committed between spouses or within the family will not be considered as legislation specifically addressing domestic violence; however, they are considered under the specific types of domestic violence offenses to which they are applicable.

Is there a specialized court or procedure for cases of domestic violence?

- The answer is “Yes” if the law establishes a court with exclusive jurisdiction on matters of domestic violence;
- The answer is “Yes” if the law establishes relaxed rules of civil procedure, the appearance of adversaries without legal representation, the use of plain language and relaxed evidentiary rules, fast-track or expedited procedures or simplified procedural rules, the work of specially trained judges for matters of domestic violence under the auspices of a nonspecialized court;
- The answer is “Yes” if the law establishes special procedures for issuing restraining orders in cases of domestic violence.

The second part uses the OECD/SIGI measurement of the existence of women's legal protection from rape, assault, and harassment and the lifetime prevalence of domestic violence, which is defined as the percentage of women who have experienced physical violence, including sexual violence, from a partner at some time in their life. The SIGI scoring is as follows:

⁴⁴ WHO. Global Health Observatory. About the Observatory. <http://apps.who.int/gho/data/node/resources>.

0—There is specific legislation in place

0.25—There is specific legislation in place, but there are widespread reported problems with implementation

0.5—There is general legislation in place, or specific legislation is inadequate (e.g. rape laws do not criminalize marital rape)

0.75—Legislation is being planned, drafted or reviewed or existing legislation is highly inadequate

1—No legislation.

Finally, one health-related area that Dashboard reviewers hoped to measure, occupational safety and health of women, does not appear in the final version. In general, little sex-disaggregated data exist in this field, and use of general data would likely not be useful toward better understanding specific conditions for women. At this time, the ILO's global database on occupational safety and health legislation does not lend itself to comparative consideration of industrial conditions for women working in APEC economies. Future iterations of the Dashboard, however, may integrate this issue as sex-disaggregated data become increasingly available.

LEADERSHIP, VOICE, AND AGENCY

Across APEC and within individual economies, women's opportunities for leadership, voice, and agency may depend not only on their gender, but also on their economic status, education, local culture, and other factors. Accordingly, the contributing factors set forth under this priority aim to capture opportunities for women across all types of communities—beginning with whether the births of girls, along with other key life events, are formally registered, followed by the extent to which women provide unpaid care to their households and family. The contributing factors then seek to show how women may progress in their respective workplaces and achieve leadership positions and influential professional positions. This section also addresses the vital issue of women's leadership in public spaces.

LEADERSHIP, VOICE, AND AGENCY Contributing Factors

1. Civil registration and vital statistics
2. The care economy: time spent on unpaid work
3. Conditions for career advancement
4. Private-sector leadership
5. Public sector leadership
6. Positions of influence

Civil Registration and Vital Statistics (CRVS)

Data source: Not yet available

Civil registration is defined by the UN as “the continuous, permanent, compulsory, and universal recording of the occurrence and characteristics of vital events (live births, deaths, fetal deaths, marriages, and divorces) and other civil status events pertaining to the population as provided by decree, law, or regulation, in accordance with the legal requirements in each [economy].”⁴⁵

⁴⁵ UN Foundation. Data2X. 2014. Civil Registration, Vital Statistics, and Gender.

Development and strengthening of CRVS systems are important for improving the quality of an economy's vital statistics, and for using this critical information for guiding policies and programs. The UN defines a vital statistics system as “the total process of: 1) collecting information by civil registration or enumeration on the frequency or occurrence of specified and defined vital events, as well as relevant characteristics of the events themselves and the person or persons concerned; and 2) compiling, processing, analysing, evaluating, presenting and disseminating these data in statistical form.”

CRVS are not tracked through international sources. However, it is an issue of such strong international policy interest that APEC economies can expect to hear more in the near future about the importance of tracking such information. As of June 2014, the UN was working to improve collection of civil registration data, including establishment of a universal CRVS target in the post-2015 United Nations agenda.⁴⁶ For now, implementation of the Dashboard will include a request that economies self-report whether they maintain continuous, permanent, compulsory and universal recording of vital events (notably, live births, deaths and causes of death).

Care Economy: Time Spent on Unpaid Work

Data source: OECD, Gender Equality Data

All over the world, women overwhelmingly bear the burden of unpaid care work—that is, care for families, children, elderly parents, and others. They also assume a disproportionate share of paid and unpaid household jobs, which, in the case of paid work, are often poorly regulated for safety, wages, and other conditions of work.⁴⁷ Increasingly, the care burden of women is taken seriously by policymakers as a critical aspect of women's access to a range of opportunities, including employment, rights at work, education, health, social security, and the benefits of scientific progress. The UN's special rapporteur on extreme poverty and human rights asserts that failure of economies to adequately support care creates and worsens inequalities between men and women. Moreover, a “lack of timely, reliable and comparable sex-disaggregated data on women's unpaid care work is a major obstacle to evidence-based, gender-sensitive policymaking, leading to negative outcomes for those who perform significant amounts of unpaid work,” according to the UN.⁴⁸

Over the last 50 years, women decreased their hours of unpaid work as they increased the hours of paid work. Men have been doing more housework and child care, but they didn't take up the slack, so gender inequalities in the use of time are still large in all economies.

Participants at the PPWE workshop in Beijing encouraged the integration of one or more measures of the “care economy” into the Dashboard. Unfortunately, relatively few APEC economies routinely keep time-use statistics to measure unpaid work. The UN recommends reporting on the average number of hours spent on unpaid domestic work by sex (with a

⁴⁶ Ibid.

⁴⁷ For a comprehensive discussion of paid and unpaid care work, see ECLAC, *Social Panorama of Latin America* (2012). Oriented toward Latin America, this paper sets an example for how issues of the care economy can be monitored in all regions of the world in the future.

⁴⁸ United Nations. 2013. Report of the Special Rapporteur on Extreme Poverty and Human Rights: Unpaid Care Work and Women's Human Rights.

separation of housework and child care if possible) and average number of hours spent on paid and unpaid work combined (total work burden), by sex.⁴⁹ The Dashboard includes this contributing factor and accompanying indicators, with the expectation that responsive data will become increasingly available.

Conditions for Career Advancement

Data source: Women, Business and the Law, Getting a Job and Incentives to Work

As discussed at the PPWE workshop in Beijing, women miss out on opportunities to assume leadership positions if they are not treated as equals in the workplace throughout their careers. Conditions for Career Advancement was thus introduced as a contributing factor in the Dashboard, replacing Workforce Protections, to illustrate the many ways that policy or practice may impede or support a woman's ability to progress.

Drawing from the WBL's sections on Getting a Job and Providing Incentives to Work, the Dashboard uses indicators to illustrate conditions for career advancement. Although many additional possibilities for metrics are found within these sections of the WBL, the Dashboard incorporates these as a strong representation of the issue, collectively, across the APEC economies. The WBL explains its methodology as follows:

Does the law mandate equal remuneration for men and women for work of equal value?

- This question captures whether employers are legally obliged to remunerate equally male and female employees who do work of equal value.

Is it illegal for an employer to ask about family status during a job interview?

- This question is designed to determine whether an employer is allowed to inquire about the family status of a prospective employee during a job interview; the law may prohibit discrimination based on this information but remain silent as to whether employers are allowed to ask for it in the first place;
- Here, family status means whether the employee is married or not, and whether the employee has any minor children.

Are there laws penalizing or preventing the dismissal of pregnant women?

- This question is designed to determine whether pregnancy can serve as grounds for dismissal;
- The answer is "Yes" if the law explicitly prohibits and/or penalizes the dismissal of pregnant women.

Must employers give employees an equivalent position when they return from maternity leave?

- The question considers paid and unpaid leave and captures whether the employer has a legal obligation to reinstate the returning employee in an equivalent or better than the pre-leave position and salary;
- Where the maternity leave regime explicitly establishes a suspension of the employee's contract, the answer is assumed to be "Yes;"

⁴⁹ Grum, Francesca. 2013. United Nations Statistics Division. Time Use Statistics to Measure Unpaid Work, Seminar on Measuring the Contribution of Women and Men to the Economy (February).

- In economies which also have parental leave and the law guarantees the return to the same position or an equivalent position paid at the same rate after parental leave, but is silent about the guarantee to the same position after maternity leave, the answer is “Yes;”
- If the answer is N/A, no paid or unpaid maternity leave is available.

Does the law mandate paid or unpaid maternity leave?

- Here maternity leave can be paid or unpaid, as long as the government explicitly mandates some form of maternity leave;
- Maternity leave is defined as a leave available only to the mother; parental leave that is available to both parents is not included in maternity leave;
- Provisions for circumstantial leave by which an employee is entitled to a certain number of days of paid leave (usually fewer than five days) upon the birth of a child are considered paternity leave; even if the law is gender neutral, such leave is not considered maternity leave, provided maternity leave is covered elsewhere under the law. It is assumed that if the mother can choose between two schemes of maternity leave, one being a shorter leave paid at 100 percent and the second being a longer leave paid at 80 percent, that she will choose the first at 100 percent.

Does the law mandate paid or unpaid parental leave?

- Here parental leave can be paid or unpaid, as long as the government explicitly mandates some form of parental leave shared between both mother and father;
 - Allowances for a fixed number of days per year to be applied toward family emergencies, or child-related responsibilities are not considered parental leave; the leave must be contiguous with the birth of the child and maternity or paternity leave.

Are payments for childcare tax deductible?

- The answer is “Yes” if childcare expenses are listed as deductible items in the personal income tax code; for this purpose, childcare expenses cover the various options: kindergartens or crèches, daycare centers, after-school centers, in-home care, child-minding arrangements.

Private-Sector Leadership

Data source: World Bank enterprise surveys

Worldwide, research shows that the general lack of equal female representation as business owners, managers, and members of corporate boards may lead to several factors which impact optimal business operations as well as women’s overall ability to participate in the economy. These impediments include poor conditions for workplace advancement, social attitudes toward women as leaders, and unequal family obligations that result in women choosing to leave or reduce their presence in the workforce, and others. Statistics show that companies that expand management opportunities for their female employees generate higher returns to shareholders than those that do not.⁵⁰ Throughout development of the Dashboard, there has been strong agreement that the progress of women as leaders in the private sector should be tracked.

⁵⁰ UN Women. Facts and Figures: Economic Empowerment (Benefits of Economic Empowerment). <http://www.unwomen.org/en/what-we-do/economic-empowerment/facts-and-figures#sthash.Y7Qutlr2.dpuf>.

Unfortunately, although inquiries into women in management have increased, there is not yet a shared system across economies for routinely collecting data on women as business owners, managers, and members of corporate boards. Using the best information available—which is still quite limited—the Dashboard draws on two indicators from the World Bank Enterprise Surveys to measure women in private-sector leadership. Namely, the Enterprise Survey reports give the percentage of firms that report female participation in ownership and the percentage of firms that report female participation in top management.

As reported by the World Bank’s accompanying documentation, enterprise surveys use “standard survey instruments to collect firm-level data on [an economy’s] business environment from business owners and top managers.” The survey aims to capture, among other issues, the place of gender in an economy’s private nonagricultural economy. As of 2014, the proportion of firms with a female top manager averaged across all surveyed economies (86 developing economies to date) “seems low at about 19 percent; it ranges between a high of 39 percent (St. Vincent and the Grenadines) and a low of 0.1 percent (Yemen).”⁵¹

As an alternative source of data on this issue, some reviewers recommended reference to the ILO database on employment by gender and detailed occupational groups (SEGREGAT). Although this source contains statistics for over 80 developed and developing economies for years near to 1970, 1980, 1990, and 2000, it lacks more recent data that would be necessary for the Dashboard. Moreover, SEGREGAT statistics generally lack comparability across economies and specific years, and present significant differences regarding the sources of data collection, worker coverage, and classifications. Another source, a survey of the presence of women on corporate boards conducted by GMIRatings Inc. covered 15 APEC economies as of 2013,⁵² although for some economies just a few companies were surveyed. The GMI Ratings survey may become an appropriate source for future iterations of the Dashboard if it broadens its sample sizes.

Upon review of the draft Dashboard in September 2014, one economy sought inclusion of an indicator showing the ratio between men and women as represented in leadership the private sector, using a voluntary definition of leadership by each economy (for example, United Nations level P-5 and above). Since the Dashboard as a whole does not use complex forms of self-reported data, this suggestion was not incorporated.

Finally, at the Beijing workshop, participants suggested that the following questions be asked of economies:

- Is there a company registration requirement that companies report the percentage of women on boards?
- In the domestic framework for corporations, are there incentives for companies to appoint women to boards?

Given the Dashboard’s greatly limited ability to incorporate self-reported data, these questions were left out.

⁵¹ Amin, Mohamed and Asif Islam. 2014. The Presence of Women in Top Managerial Positions. *Enterprise Note* (29).

⁵² GMI Ratings. 2013. Women on Boards Survey (April).

Public Sector Leadership

Data source: World Economic Forum, *Global Gender Gap Report*, Political Participation subindex (drawn from Inter-Parliamentary Union and WEF)

Diversity in leadership and decision-making is crucial to delivering effective government services and economic competitiveness. But while diverse teams stimulate innovation and new ways of problem-solving, much work remains to be done before governments and business become truly representative of the societies which they serve. With 1 billion women expected to join the workforce, start businesses, and take up leadership positions over the next decade, women are now seen as the next big emerging market—and one that governments around the world need to understand. Many governments actively advance policies to improve the gender distribution across leadership roles; however, most government decision-making positions are not yet representative of the number of women in the community, in the public-sector workforce and in higher education.⁵³

The World Economic Forum's *Global Gender Gap Report* for 2014 summarizes the critical relationship between the opportunity for women to serve as leaders and the overall economic well-being of communities:

Research has found that inequality is lower in [economies] where more women have been engaged in public life. The breadth of issues women tend to advocate and prioritize investments on, have broader societal implications relating to family life, health and education, thereby fostering greater credibility in institutions and producing more democratic outcomes. There is also some evidence ... that women in local government roles make decisions with better outcomes for communities than men do when charged with budget decisions. They also appear to be more competent representatives than men, obtaining more resources for their constituencies despite having significantly lower education and relevant labor market experience. More equal female representation in [elected] bodies also affects the participation of women in the workforce, suggesting that greater participation of women in politics could serve as a policy tool to positively impact labour force participation by increasing supply and demand of employment opportunities for women.⁵⁴

Within the PPWE, there is strong interest in promoting greater awareness and action concerning the importance of women in government leadership positions. For example, Japan has proposed that all APEC economies set goals for greater participation of women in government by 2020, including as both elected and appointed officials. Various international sources increasingly track the presence of women in government leadership to see how women are perceived and what opportunities they are afforded in individual economies. The impact of their participation—that is, correlations between the presence of women in government and the actions that governments take—is also a growing field of inquiry.

The Dashboard indicator that supports public sector leadership as a contributing factor is the Political Empowerment subindex found in the WEF's *Global Gender Gap* report. This indicator

⁵³ Ernst and Young. Worldwide Index of Women as Public Sector Leaders. [http://www.ey.com/Publication/vwLUAssets/EY_Worldwide_Index_of_Women_as_Public_Sector_Leaders/\\$FILE/EY-Worldwide-Index-of-Women.pdf](http://www.ey.com/Publication/vwLUAssets/EY_Worldwide_Index_of_Women_as_Public_Sector_Leaders/$FILE/EY-Worldwide-Index-of-Women.pdf).

⁵⁴ World Economic Forum. 2014. *Global Gender Gap Report*: 43.

conveys the gap between men and women at the highest levels of public-sector decision-making, through the ratio of women to men in minister-level positions and the ratio of women to men in parliamentary positions. In addition, the indicator incorporates the ratio of women to men by years in executive office (prime minister or president) for the last 50 years.

As noted in the *Global Gender Gap* report, a clear drawback in this category is the absence of indicators capturing differences between the participation of women and men at local levels of government. Should such data become available at a global level in future years, they will be considered for inclusion in the *Global Gender Gap* index.

During its review of the Dashboard, one economy sought inclusion of an indicator showing the ratio between men and women as represented in leadership the public sector. In fact, this information is substantially incorporated in the Political Empowerment subindex in the WEF's *Global Gender Gap* report.

Who leads the public sector is important. Its leaders make decisions that affect millions of people every day. Public sector leaders—politicians, civil servants and board members—are responsible for the general welfare of their citizens and give protection to the most vulnerable members of society.

On a local level, elected and paid officials oversee public services that benefit everyone, from local schools, transportation systems, and leisure facilities, to the day-to-day business of living, dealing with the nitty-gritty of garbage collection, recycling and parking permits. And, importantly, public sector leaders in the 21st century are dealing with complex, long-term, systemic issues such as the economy, urbanization, globalization, aging populations, health care and climate change. Many of these issues demand new solutions to leave [economies] and their citizens better placed for the future.

—Ernst & Young, *Worldwide, [G20] Index of Women as Public Sector Leaders* (2012)

Positions of Influence

Throughout the development of the Dashboard, there was interest in representing the extent to which women rise to influential professional positions in their respective economies. Different drafts represented the concept in different ways. Finally, PPWE workshop participants meeting in Beijing constructed a new contributing factor, Positions of Influence, as a way of capturing this important aspect of women's leadership. They recommend tracking three professional areas—media, the judiciary, and academia—in which the leadership of women is especially valuable due to the perspectives and experiences they bring to the job and the influence that, in turn, they can exercise.

Media

Data source: International Women's Media Foundation, Global Report on the Status of Women in the News Media

In 2012, with the support of UNESCO, Ford Foundation, and others, the International Women's Media Foundation (IWMF) issued its first *Global Report*, presenting data on gender positions in news organizations around the world. The report's findings were collected from interviews of executives at more than 500 companies in 59 economies. Overall, the IWMF found that 73 percent of the top management jobs were occupied by men, compared to 27 percent occupied by women. Among reporters, men held 64 percent of the jobs and women held 36 percent. However, among senior professionals, women were closer to parity with 41 percent of the news gathering and editing jobs.

Drawing from the IWMF study, the Dashboard will report on representation of women in the media and media-related positions, as well as potential glass ceilings (referring to the nonphysical barriers that could prohibit women's full participation and upward mobility in the workplace due to external factors, like institutionalized prejudice). The indicator is the percentage of women in all professional media positions, including governance; management; news professionals; production and design; and sales, finance, and administration.

Judiciary

Data source: self-reported

This indicator, showing the presence of women in the judiciary, reflects society's interest in having judicial institutions reflect all people in the economy. This inclusiveness is especially important when it comes to addressing issues of particular interest to women, such as family violence, job discrimination, and sexual harassment. Although the UN has recommended that all economies maintain this information, it is not yet widely reported. Thus, implementation of the Dashboard will include a request to economies that they provide data specifically concerning the representation of women judges in economy-wide judicial institutions.

Also with respect to an economy's judicial systems, Dashboard reviewers expressed interest in having an indicator of one or more aspect of women's access to justice. As of November 2014, there was little consolidated data about women's experiences with civil or criminal courts that would be sufficient to incorporate into the Dashboard.

Academia

Data source: self-reported

Women as academic leaders contribute to research, serve as important role models to students, and influence the budgetary choices of their respective institutions. Although there is a dearth of consolidated statistics on the place of women in academia, one way to assess how far women have come is through a simple assessment of their representation among university presidents, both in public and private degree-granting institutions. Implementation of the Dashboard will include a request to economies that they provide specific data in this area.

INNOVATION AND TECHNOLOGY

Information and Communications Technology (ICT) is a cornerstone of economic growth and human development. ICT increases the productivity and efficiency of businesses of all sizes, opens new markets domestically and abroad, and creates high-quality jobs. ICT can also improve access to education and healthcare, increase civic engagement, and drive new innovations that transform the way people interact and do business. In less than a generation, according to the McKinsey Global Institute, the Internet contributed an average of 21 percent of GDP in mature economies.⁵⁵ Increasing access to, use of, and jobs within ICT can have multiplicative effects throughout an economy.

⁵⁵ McKinsey Global Institute. 2011. Internet Matters: The Web's Sweeping Impact on Growth, Jobs, and Prosperity.

The PPWE's original definition of Innovation and Technology pertained exclusively to women's access to ICT and to education and opportunities in Science, Technology, Mathematics, and Engineering (STEM). Participants at the August 2014 PPWE workshop called for addition of Green Activity and Awareness into this category, specifically indicators that illustrate environmental issues of particular concern to women. The expanded definition recognizes that innovation and technology are also connected to the growing interest in and need for jobs and innovations that help the environment.

Men and women differ greatly as both consumers and developers of ICT. Across most economies, men are more likely to be employed in ICT and STEM professions and to start firms in these areas. Yet differences in how men and women access and use technology across the APEC economies are just barely understood. According to Intel's study *Women and the Web*, in low- to medium-income economies, women were 23 percent less likely than men to use the Internet. Women and girls were also less likely to study STEM topics or pursue careers in STEM and ICT. Even where teenage girls used computers and the Internet at similar rates to boys, they were five times less likely to consider a technology-related career. Now, globally the vast majority of jobs—some estimate up to 95 percent—have a digital component. Yet women are vastly underrepresented in these fields. Although integration of technology into everyday life, particularly through mobile telephones and the Internet, offers the potential of capturing data on the numbers of users and participants in networks at large, there are no widely available data on similarities and differences in technology use among men and women. Data on women in education are somewhat better, as UNESCO has sought in recent years to track women in ICT and STEM professions.

Concerning women and the environment, there is increasing awareness that climate change and environmental degradation have social and economic impacts that, while felt by all, do not affect all people equally. People with the least access to resources face graver consequences than more privileged groups, because they have fewer tools of mitigation and adaptation. Poor women are more likely than most to be harmed by loss of homes and personal property, rising healthcare costs, increase in violent conflicts, and the forgone income that accompany disasters and instability brought about by climate change.⁵⁶

Mobile Technology

Data source: International Telecommunication Union data and supplementary sex-disaggregated data, where possible

Mobile technology is increasingly influential in entrepreneurial efforts and formal employment for women. Mobile technology can facilitate branchless banking and rapid transfer of funds, which are widely acknowledged to “constitute a way forward” for women-owned enterprises that may otherwise lack access to financial services.⁵⁷ Mobile phones are indispensable for business-related communications, speeding up transactions in a way that diminishes potential for product spoilage, loss, or pilferage.

⁵⁶ Women's Environment and Development Organization. Our Story. <http://www.wedo.org/about/our-story>.

⁵⁷ IFC. 2011. Strengthening Access to Finance for Women-Owned SMEs in Developing Countries: 32.

Despite these and many other opportunities, the pan-European association dedicated to mobile telephony has reported that women are significantly left out of opportunities associated with mobile technology:

Despite the rapid growth in mobile telephony in low and middle-income [economies] in recent years, women are 21% less likely than men to own a mobile phone. This has given rise to a mobile phone “gender gap,” where there are 300 million fewer female mobile subscribers than male subscribers in low to middle income [economies]. As a result, women are less likely to reap the benefits of using mobile phones, such as gain economic opportunities and to empower themselves at the household level, community level and beyond.⁵⁸

The Dashboard includes two indicators on mobile technology: (1) percentage of the population who are mobile telephone users; and (2) percentage of the total population covered by a mobile network signal. The data supporting these indicators are maintained by the International Telecommunication Union, a Geneva-based institution that serves the United Nations as its official source for global ICT statistics. The ITU’s Data and Statistics Division, which is part of part of ITU’s Project Support and Knowledge Management Department within the Telecommunication Development Bureau, is charged with verifying and harmonizing telecommunication and ICT statistics for about 200 economies worldwide. The ITU collects telecommunication and ICT data from economy-based telecommunication and ICT ministries and regulatory authorities. These figures include data on the fixed telephone network, mobile cellular services, Internet and broadband, traffic, revenues and investment, and prices of ICT services. The ITU also uses household data collected from national statistical offices (NSOs); these data include information on households’ access to ICT and individual use of ICT.

Although sex-disaggregated data in this area of mobile technology remain the exception rather than the rule, future implementation of the Dashboard may encourage economies to track women’s use of mobile technology.

Internet Use

Data source: International Telecommunication Union data and supplementary sex-disaggregated data, where possible

Similar to mobile technology use, the impact of Internet use on women’s ability to more comprehensively participate in the economy is consistently growing. This contributing factor and indicator, also maintained by the ITU, is measured by the percentage of the population who are Internet users. Again, although sex-disaggregated data in this area remain the exception rather than the rule, future implementation of the Dashboard may encourage both international institutions, including data providers, and economies to track Internet use by women.

Networked Readiness

Data source: World Economic Forum, Networked Readiness Index

⁵⁸ GSM Association. Mobile for Development Impact.
https://mobiledevelopmentintelligence.com/impact_pathways/women-and-mobile.

Networked readiness describes an economy's willingness and ability to take advantage of opportunities created by or through ICT. In its first draft, the Dashboard proposed listing the overall score, on a scale of 1–7, received by each APEC economy in the World Economic Forum's Networked Readiness Index. Participants at the PPWE workshop in Beijing proposed selecting just a few of the 54 areas measured by the Networked Readiness Index, with an emphasis on aspects of the index that are likely of particular interest to most women.

As a result, the Dashboard now incorporates as indicators four scores drawn from the index. The following table shows the relationship between those indicators and PPWE's Innovation and Technology priority, along with the sources of the data:

Table 3
Dashboard Indicators Drawn from Networked Readiness Index

Indicator from Index	Source	Link to PPWE "Innovation and Technology" Priority
Affordability, measured by mobile cellular tariffs (average per-minute costs of different types of mobile cellular calls)	Authors' calculations based on International Telecommunication Union, ITU World Telecommunication/ICT Indicators Database and on domestic sources.	Women have greater access to the benefits of technology if it is generally affordable.
Government online service index (the quality of the government's delivery of online services)	United Nations, United Nations E-Government Survey 2012: E-Government for the People	Where the quality of government online services is high—including access to information; ability to perform registration and licensing functions; ability to pay taxes or otherwise do business—time is saved and the productivity of women's enterprises and women's work generally increases.
Impact of ICT on access to basic services (access of all citizens to basic online services—health, education, and financial)	World Economic Forum, Executive Opinion Survey, 2012 and 2013 editions	Women who can readily access information on basic services such as health and education have a better opportunity to take advantage of these basic services than those who do not.
Use of virtual social networks (e.g., Facebook, LinkedIn, Twitter), measured by how widely they are used.	World Economic Forum, Executive Opinion Survey, 2012 and 2013 editions	As determined in numerous studies, including the PPWE-sponsored inquiries in Papua New Guinea and Chile, female-dominated microenterprises and SMEs rely extensively on social media for low-cost opportunities in business networking, marketing, and other communications.

Women in STEM

Data source: UNESCO Institute for Statistics, Science, Technology, and Innovation and Women in Science

As reported by UNESCO, just 30 percent of the world's researchers are women. Although a growing number of women enroll in university STEM programs, many opt out at the highest levels required for a research career. Increasing the presence of women in STEM promises many benefits; among those benefits are a greater diversity in perspective when it comes to choosing areas of research, and higher salaries for women than those in non-STEM fields. Throughout development of the Dashboard, reviewers and workshop participants articulated a strong interest in documenting the participation of women in STEM professions.

Accordingly, the Women in STEM contributing factor consists of two indicators measured by UNESCO Institute for Statistics (UIS): (1) percentage of women as STEM-related bachelor degree students, Ph.D. students, and researchers; and (2) percentage of female research and development personnel. These indicators aim to capture the pipeline for women into STEM professions—they examine not only whether women become academically credentialed in the STEM professions, but whether they move on to perform research in their fields as well.

Green Activity and Awareness

Data source: Yale Center for Environmental Law and Policy, and others, Environmental Policy Index

Although some early reviewers of the Dashboard did not discern a clear link between women's economic participation and issues concerning the natural environment, participants at the PPWE workshop in Beijing agreed that these issues present important metrics of economic interest to women. In fact, they are well in step with other APEC initiatives that stress the importance of “green growth” and the “blue economy”—that is, the development of environmentally friendly enterprises, including those using resources available in cascading systems, so that the waste from making one product becomes an input for another. Also, workshop participants noted that environmental degradation may in some ways have a disproportionate impact on women.

Thus, similar to their proposal with the Networked Readiness Index, participants at the PPWE workshop in Beijing proposed selecting just a few of the 20 indicators presented in the Environmental Policy Index, with an emphasis on aspects of the index that are likely of particular interest to most women. Based on ideas discussed at the workshop, five indicators of particular relevance emerged:

Table 4
Dashboard Indicators Drawn from Environmental Policy Index

Indicator from Index	Source	Link to PPWE “Innovation and Technology” priority
Household air quality, measured by use of indoor solid fuel	WHO Household Energy Database, drawn from Household Surveys	Particularly in developing economies, where many people lack access to advanced stoves, household air pollution is one of the most important causes of poor health. Women and girls, who perform a disproportionate share of housework, are the most harmed by poor household air quality.
Exposure to air pollution, measured by exposure to fine particulate matter	Aaron van Donkelaar of Dalhousie University; and Global Rural Urban Mapping Project, NASA Socioeconomic Data and Applications Center, hosted by the Center for International Earth Science Information Network (CIESIN) at Columbia University.	Though invisible to the naked eye, fine particulate matter, when inhaled, can lead to health problems, particularly for young children, pregnant women, and the elderly. In addition to being victims of air pollution, women as primary household caretakers are more likely than men to miss work or reduce their economic activity to care for family members.
Wastewater treatment,	Yale Center for Environmental Law & Policy	Untreated water harms public health. Because

The UIS is the statistical branch of the United Nations Educational, Scientific and Cultural Organisation ([UNESCO](#)). The Institute produces the data and methodologies to monitor trends at domestic and international levels. It delivers comparative data for [economies] at all stages of development to provide a global perspective on education, science and technology, culture, and communication. Based in Montreal (Canada), the UIS was established in 1999 with functional autonomy to meet the growing need for reliable and policy-relevant data. The Institute serves Member States, UNESCO and the UN system, as well as a range of intergovernmental and non-governmental organizations, research institutes and universities.

Source: UIS website

Indicator from Index	Source	Link to PPWE “Innovation and Technology” priority
measured by what economies do to wastewater before returning it to the environment	(YCELP), integrating a combination of statistics reported from economy ministries along with official statistics from the OECD, the United Nations Statistical Division, FAO, with inputs from the Pinsent Masons Water Yearbook and additional expert advice.	women are disproportionately engaged in the care economy, the health consequences of bad water disproportionately affect women and their livelihoods.
Pesticide regulation, measured by whether economies allow, restrict, or ban persistent organic pollutants (POP) under the Stockholm Convention	Score based on economies' efforts toward banning the 'dirty dozen' POPs in the Stockholm Convention (25 maximum points awarded). The Stockholm Convention is an international treaty that aims to protect human health from toxic (POP) chemicals.	The POPs harm human health through food and other contact. Women are disproportionately affected as caretakers and because of their high representation in agriculture, including in informal roles that involve exposure to pesticides. These chemicals also are present in factories, where women are often disproportionately represented.
Fish stocks, measured by catch data that identifies species being exploited over a sustainable level and therefore jeopardizing stock resources.	University of British Columbia Fisheries Centre; FAO; the International Council for the Exploration of the Seas (ICES); the STATLANT database; the Northwest Atlantic Fisheries Organization (NAFO); and data provided from Canada, the U.S., and other governments.	Fisheries are an important source of women's livelihoods, with some value chains in particular dominated by women. Women also care about fish as an important source of protein for their families.

3. Methodology

Developing the Women and the Economy Dashboard entailed many steps. At the PPWE meeting in Beijing, China on May 21–23, 2014, the United States-APEC Technical Assistance to Advance Regional Integration (US-ATAARI) project presented a first-draft framework, along with a report detailing the many limitations in available data on women’s economic participation.⁵⁹ In this draft, as in the final Dashboard, each PPWE priority was delineated through five or six general “contributing factors.” The contributing factors are themselves measured by one or more supporting indicators drawn from a range of international data sources, including the United Nations, the World Bank, the World Economic Forum, the International Labor Organization, and the World Health Organization. As detailed in the report that accompanied the proposed framework, these sources are widely respected for their use of objective and high-quality data, along with rigorous analysis, breadth of coverage and comparability, clear links to economic empowerment of women, and overall consistency and transparency.⁶⁰

Following the PPWE’s consensus at its May 2014 meeting that it should move forward with soliciting economy feedback and additional contributions to the Dashboard, a number of activities took place. In June 2014, the PPWE issued a survey of all 21 economies on the Dashboard’s first draft, along with additional suggestions. Responses were received from 14 economies. In July 2014, the U.S. sponsored a meeting in Washington, D.C., attended by data professionals representing several of the major data sources for the framework, including the World Bank, the IFC, the OECD, and the United Nations Foundation. In addition, preparation of the next draft included extensive consultations with individual experts and stakeholders from APEC economies and additional international organizations.

On August 12–13, 2014, the U.S. hosted a PPWE workshop in Beijing where a revised Dashboard was presented to representatives from 14 APEC economies. Guided by inputs from data professionals representing the World Bank, the OECD, and the United Nations Foundation, economy representatives discussed the proposed contributing factors and supporting indicators of the Dashboard, forming a general consensus around a framework that APEC could agree to in late 2014. At the end of the meeting, workshop participants recommended a final set of 26 contributing factors for the purposes of the Dashboard, understanding that these factors would be illustrated through a number of indicators.

In September 2014, the APEC Secretariat circulated a revised draft for further comment to all economies. All contributing factors included in this revised framework were drawn from the

⁵⁹ That process is detailed at the document that accompanied the framework, “The PPWE Priorities for Women’s Economic Empowerment: Proposed Indicators for Measuring Change” (May 2014). As noted in that document, statistical resources and other materials accessed for the Dashboard are accessible in English over the Internet. Development of the Dashboard did not include in-depth review of comparative analysis developed in individual economy sources or non-English-language materials.

⁶⁰ Ibid.

final consensus and recommendations of workshop participants, as supported and enabled by available data. Two contributing factors recommended at the workshop, Voter Turnout and Women and Intellectual Property Rights, were not included in the next draft, due to lack of sufficient available data. In addition, indicators referencing “political participation” were revised to read “public-sector participation.” The revised draft, including a full set of proposed indicators, was reviewed during September and October 2014, and, after some modifications suggested by a number of economies, a final draft was presented for endorsement by APEC’s Concluding Senior Officials Meeting (CSOM).

Based on final discussions, one economy withheld endorsement of the Dashboard until indicators these indicators were removed: obesity rates of women; access to modern methods of contraception; and sexual harassment in the workplace. In addition, the indicators on financing for women owned-SMEs were added.

The Dashboard was endorsed on November 3, 2014.