

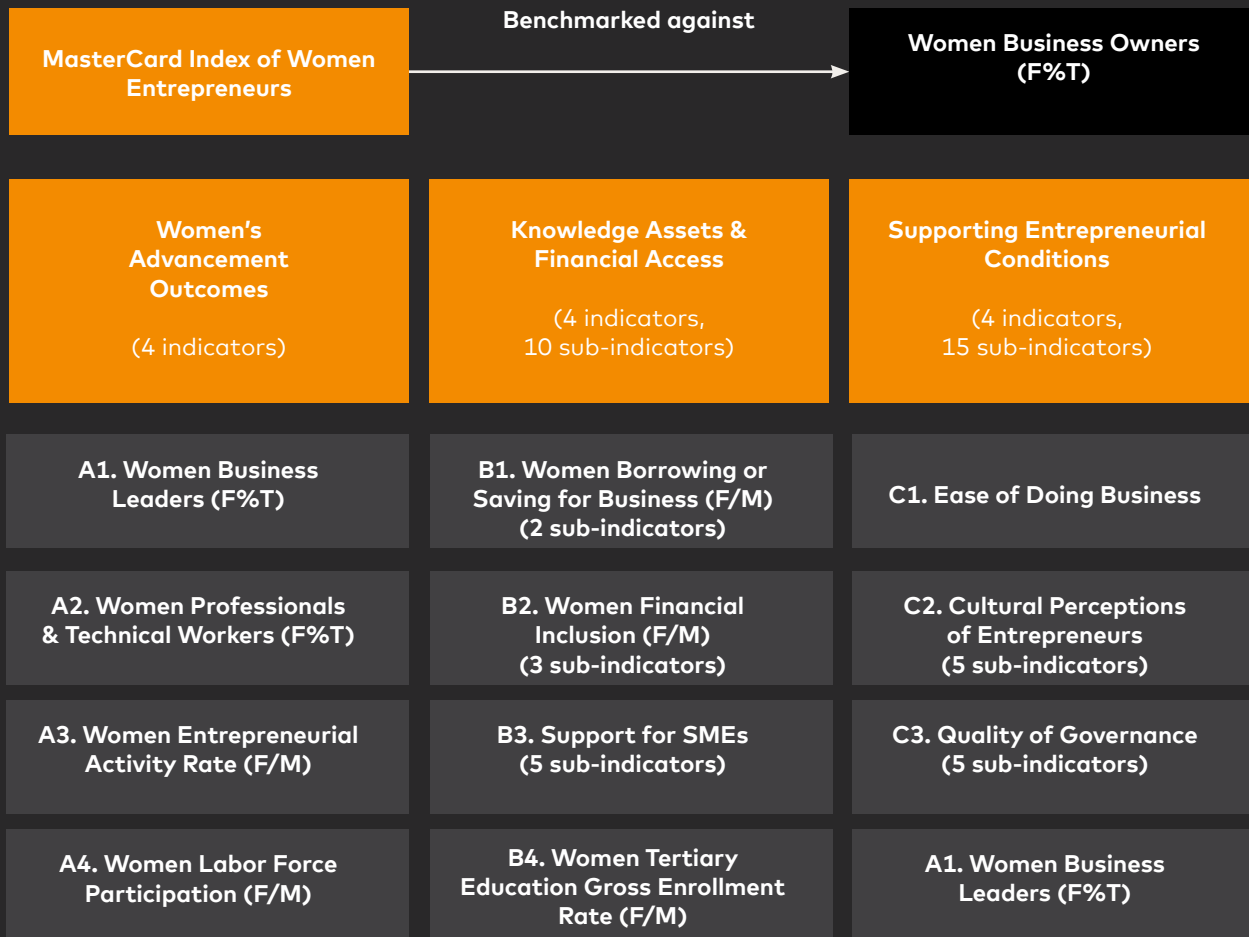
A large, abstract graphic on the left side of the page features three overlapping, semi-circular shapes. The leftmost shape is a solid light gray. The middle shape is a light gray with fine, parallel white lines. The rightmost shape is a light gray with a fine, stippled texture. These shapes are contained within a thin white circular border that is partially visible on the left and bottom edges.

Mastercard
Index of Women
Entrepreneurs
2020

Appendix 3:
Methodology

The Mastercard Index of Women Entrepreneur (MIWE) represents nearly 80% of the world's female labor force. Benchmarked against the indicator Women Business Owners (measured as a percentage of Total Business Owners), the MIWE is derived from the following 3 components to track factors and conditions that best support and fuel female business ownership across the economies.

- Component A: Women's Advancement Outcome – A measure women's progress and degree of marginalization economically and professionally as business leaders, professionals & technical workers, entrepreneurs and labor force participants
- Component B: Knowledge Assets & Financial Access – A measure of women's progress and the degree of marginalization they face commercially as financial customers and academically in terms of access to tertiary education enrolment. It also gauges women's inclination to borrow or save for business purposes, and how much support is rendered for SMEs in terms of availability of government support and underlying infrastructure
- Component C: Supporting Entrepreneurial Conditions – A measure of entrepreneurial conditions as enablers or constraints of women's ability to progress and thrive as business owners. It also measures the sociocultural conditions in each economy as a driver or inhibitor of female entrepreneurship



The table below lists the 58 economies examined as part of the MIWE, spanning five geographic regions (Asia Pacific, Europe, North America, Latin America, Middle East & Africa).

Economy	Code	Income Level ¹	Stage of Development ²
Asia Pacific (15)			
Australia	AUS	High income	Innovation Driven
Hong Kong SAR	HKG	High income	Innovation Driven
Japan	JPN	High income	Innovation Driven
Korea	KOR	High income	Innovation Driven
New Zealand	NZL	High income	Innovation Driven
Singapore	SGP	High income	Innovation Driven
Chinese Taipei	TWN	High income	Innovation Driven
Mainland China	CHN	Upper middle income	Efficiency Driven
Malaysia	MYS	Upper middle income	Efficiency Driven
Thailand	THA	Upper middle income	Efficiency Driven
Bangladesh	BGD	Lower middle income	Factor Driven
India	IND	Lower middle income	Factor Driven
Indonesia	IDN	Lower middle income	Factor/Efficiency Driven
Philippines	PHL	Lower middle income	Factor Driven
Vietnam	VNM	Lower middle income	Factor Driven
Europe (18)			
Belgium	BEL	High income	Innovation Driven
Czech Republic	CZE	High income	Innovation Driven
Denmark	DNK	High income	Innovation Driven
France	FRA	High income	Innovation Driven
Germany	DEU	High income	Innovation Driven
Hungary	HUN	High income	Efficiency/Innovation Driven
Ireland	IRL	High income	Innovation Driven
Italy	ITA	High income	Innovation Driven
Israel	ISR	High income	Innovation Driven
Poland	POL	High income	Efficiency/Innovation Driven
Portugal	PRT	High income	Innovation Driven
Spain	ESP	High income	Innovation Driven
Sweden	SWE	High income	Innovation Driven
Switzerland	CHE	High income	Innovation Driven
United Kingdom	GBR	High income	Innovation Driven
Romania	ROU	Upper middle income	Efficiency/Innovation Driven
Russia	RUS	Upper middle income	Efficiency/Innovation Driven
Turkey	TUR	Upper middle income	Efficiency/Innovation Driven

Economy	Code	Income Level ¹	Stage of Development ²
North America (2)			
Canada	CAN	High income	Innovation Driven
United States	USA	High income	Innovation Driven
Latin America (9)			
Chile	CHL	High income	Efficiency/Innovation Driven
Uruguay	URY	High income	Efficiency/Innovation Driven
Argentina	ARG	Upper middle income	Efficiency Driven
Brazil	BRA	Upper middle income	Efficiency Driven
Colombia	COL	Upper middle income	Efficiency Driven
Costa Rica	CRI	Upper middle income	Efficiency Driven
Ecuador	ECU	Upper middle income	Efficiency Driven
Mexico	MEX	Upper middle income	Efficiency/Innovation Driven
Peru	PER	Upper middle income	Efficiency Driven
Middle East & Africa (13)			
Saudi Arabia	SAU	High income	Factor/Efficiency Driven
United Arab Emirates	ARE	High income	Innovation Driven
Algeria	DZA	Upper middle income	Factor/Efficiency Driven
Angola	AGO	Upper middle income	Efficiency Driven
Botswana	BWA	Upper middle income	Factor/Efficiency Driven
Islamic Republic of Iran	IRN	Upper middle income	Efficiency Driven
South Africa	ZAF	Upper middle income	Efficiency Driven
Egypt	EGY	Lower middle income	Factor/Efficiency Driven
Ghana	GHA	Lower middle income	Factor Driven
Nigeria	NGA	Lower middle income	Factor Driven
Tunisia	TUN	Lower middle income	Efficiency Driven
Ethiopia	ETH	Low income	Factor Driven
Malawi	MWI	Low income	Factor Driven
Uganda	UGA	Low income	Factor Driven

Notes: 1 World Bank GNI Per Capita Income Classifiers. 2 World Economic Forum Stage of Development Classifiers.

BENCHMARK

Indicator	Description (Source, Period)
Women Business Owners (F%M)	Women Business Owners as a % of Total Business Owners. Measures the bias against women compared to men as business owners defined as owners who employ at least one employee other than themselves (International Labour Organization, 2019).

Component A: Women's Advancement Outcomes

Indicator	Description (Source, Period)
A1. Women Business Leaders (F%M)	Women Business Leaders as a % of Total Business Leaders Measures the bias against women compared to men as business leaders defined as general and corporate managers who manage enterprises or their internal departments on the behalf of the proprietor (International Labor Organization, 2019).
A2. Women Professionals & Technical Workers (F%M)	Women Professionals & Technical Workers as a % of Total Professionals & Technical Workers. Measures the bias against women compared to men as Professionals, Associate Professionals and Technicians (International Labor Organization, 2019).
A3. Women Entrepreneurial Activity Rate (F/M)	Total early-stage Entrepreneurial Activity (TEA) of Females in the Female Working Age Population as % of TEA of Males in the Male Working Age Population. Measures the bias against women compared to men in early stage entrepreneurial activity which assesses the % of working age population both about to start an entrepreneurial activity, and that have started one for a maximum of 3 and a half years (Global Entrepreneurship Monitor, 2009 - 2019).
A4. Women Labor Force Participation (F/M)	Female Workforce Participation Rate/Male Workforce Participation Rate. Measures the bias against women compared to men in the workforce defined as the proportion of a economy's female/male working-age population that engages actively in the labor economy, either by working or looking for work (International Labour Organization, 2019).

Component B: Knowledge Assets and Financial Access

Indicator	Description (Source, Period)
B1. Women Borrowing or Saving for Business (F/M)	Composite of 2 sub-indicators of %F/%M who Borrowed or Saved for Business (World Bank, Global Findex Database, 2017).
% of Females/% of Males who borrowed for business	Denotes the percentage of 15+ years old female divided by % of 15+ years old male respondents who report borrowing any money in the past 12 months (by themselves or together with someone else) to start, operate, or expand a farm or business.
% of Females/% of Males who saved for business	Denotes the percentage of 15+ years old female divided by % of 15+ years old male respondents who report saving or setting aside any money in the past 12 months to start, operate, or expand a farm or business.
B2. Women Financial Inclusion (F/M)	Composite of 3 sub-indicators of %F/%M with Financial Account, a Debit Card or a Credit Card (World Bank, Global Findex Database, 2017).
% of Females/% of Males who have an account at a financial institution	Denotes the percentage of 15+ years old female divided by % of 15+ years old male respondents who report having an account (by themselves or together with someone else) at a bank or another type of financial institution.
% of Females/% of Males who have a debit card	Denotes the percentage of 15+ years old female divided by % of 15+ years old male respondents who report having a debit card.
% of Females/% of Males who have a credit card	Denotes the percentage of 15+ years old female divided by % of 15+ years old male respondents who report having a credit card.
B3. Support for SMEs	Composite of 5 sub-indicators of Financial Support for SMEs.
Gender bias in access to financial services	Measures whether women and men have equal access to financial services by law or custom (OECD, Gender, Institutions and Development Database, 2019).
Physical Infrastructure	Reflects the perception of whether the physical infrastructure (roads, utilities, communications, waste disposal) provides good support for new and growing firms.
Government Program Support	Reflects perception of whether almost anyone who needs help from a government program for a new or growing business can find what they need.
Single Government Agency for New Businesses	Reflects perception of whether there is a wide range of government assistance for new and growing firms that can be obtained through contact with a single agency.
Effective Government Programs	Reflect Perception of whether Government programs aimed at supporting new and growing firms are effective.
B4. Women Tertiary Education Gross Enrollment Rate (F/M)	Gross female enrollment at the tertiary level as a percentage of tertiary age group female population (female tertiary GER) divided by Gross male enrollment at the tertiary level as a percentage of tertiary age group male population (male tertiary GER) (UNESCO, 2019).

Component A: Women's Advancement Outcomes	
Indicator	Description (Source, Period)
C1. Ease of Doing Business	Measures the gap between a particular economy's business regulation environment, and the best practice (World Bank, Doing Business Database, 2019).
C2. Cultural Perceptions of Entrepreneurs	Composite of 5 sub-indicators of cultural perceptions of entrepreneurial qualities.
Values Success through Personal Effort	Reflects perception that national culture is highly supportive of individual success achieved through own personal efforts (Global Entrepreneurship Monitor, 2016).
Values Personal Initiative	Reflects perception that national culture emphasizes self-sufficiency, autonomy, and personal initiative (Global Entrepreneurship Monitor, 2016).
Culture of Risk Taking	Reflects perception of whether the national culture encourages entrepreneurial risk-taking (Global Entrepreneurship Monitor, 2016).
Values Creativity and Innovativeness	Reflects perception of whether national culture encourages creativity and innovativeness (Global Entrepreneurship Monitor, 2016).
Values Individuality and Independence	Reflects perception of whether national culture emphasizes the responsibility that the individual (rather than the collective) has in managing his or her own life (Global Entrepreneurship Monitor, 2016).
C3. Quality of Governance	Composite of 5 governance sub-indicators (World Bank, World Governance Indicators, 2018).
Government Effectiveness	Reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Regulatory Quality	Reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Political Stability and Absence of Violence/Terrorism	Measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism.
Control of Corruption	Reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.
C4. Entrepreneurial Supporting Factors	Composite of 5 sub-indicators on Entrepreneurial Supporting Factors.
New Business Economy Entry	Reflects perception of whether new and growing firms can easily enter new economies (Global Entrepreneurship Monitor, 2016).
Skilled Employees	Perception of how easy it is to find skilled employees (WEF, Global Competitiveness Report, 2019).
Intellectual Property Protection	Perceived extent of intellectual property protection (WEF, Global Competitiveness Report, 2019).
Property Rights	Perceived extent of protection of property rights, including financial assets (WEF, Global Competitiveness Report, 2019).
Attitudes toward Entrepreneurial Failure	Perceived attitude toward entrepreneurial failure (WEF, Global Competitiveness Report, 2019).

Supporting Data	
Indicator	Description (Source, Period)
Entrepreneurial Activity Rate (Male and Female)	Total early-stage Entrepreneurial Activity (TEA) of Females in the Female Working Age Population and TEA of Males in the Male Working Age Population. TEA is the percent of the working age population that is about to start an entrepreneurial activity, or that has started one for a maximum of 3 and a half years.
Necessity Driven Entrepreneurship (Male and Female)	Percentage females or males involved in female or male Total early-stage Entrepreneurial Activity (TEA) respectively who are involved in entrepreneurship because they had no other option for work (Global Entrepreneurship Monitor, 2009-2020).
Opportunity Driven Entrepreneurship (Male and Female)	Percentage females or males involved in female or male Total early-stage Entrepreneurial Activity (TEA) respectively who (i) claim to be driven by opportunity as opposed to finding no other option for work; and (ii) who indicate the main driver for being involved in this opportunity is being independent or increasing their income, rather than just maintaining their income (Global Entrepreneurship Monitor, 2009-2020).
Aspiration Driven Entrepreneurship (Male and Female)	Percentage females or males involved in female or male Total early-stage Entrepreneurial Activity (TEA) respectively who are involved in entrepreneurship "to make a difference in the world" (Global Entrepreneurship Monitor, 2019-2020).
Family Tradition Driven Entrepreneurship (Male and Female)	Percentage females or males involved in female or male Total early-stage Entrepreneurial Activity (TEA) respectively who are involved in entrepreneurship "to continue a family tradition" (Global Entrepreneurship Monitor, 2019-2020).
Parliament Representation (Male and Female)	Women or Men in Parliament as % of Total parliament Members (Inter-parliamentary Union, 2019).
Labor Force Participation (Male and Female)	Female Workforce Participation Rate or Male Workforce Participation Rate where workforce participation rate is defined as the proportion of a economy's female/male working-age population that engages actively in the labour economy, either by working or looking for work (International Labor Organization, 2019).
Employees as % of Labor Force (Male and Female)	Female or Male employees as a % of Female or Male Labor Force respectively (International Labour Organization, 2019).
Tertiary Education Gross Enrollment Rate (Male and Female)	Gross female or male enrollment at the tertiary level as a percentage of tertiary age group female or male population respectively (UNESCO, 2012-2018, projected to 2019).
Secondary Education Gross Enrollment Rate (Male and Female)	Gross female or male enrollment at the secondary level as a percentage of secondary age group female or male population respectively (UNESCO, 2012-2018, projected to 2019).