

Output 3: Indicators for Intermediate outcomes table (LHS)

2x challenge lists interesting outcomes - check.
 Products/Services for women in particular

2X Direct Criterion	2X Direct Sub-Criterion	2X Challenge Indicator (applied to Direct and Indirect Investments)
1. Entrepreneurship	1A. Share of women ownership	1A. Percent of female ownership
	1B. Business founded by a woman	1B. Percent of company founder(s) who are female
2. Leadership	2A. Share of women in senior management	2A. Percent of senior management who are female
	2B(i). Share of women on the Board	2B(i). Percent of Board who are female
	2B(ii). Share of women on the IC	2B(ii). Percent of IC who are female
3. Employment	3A. Share of women in the workforce	3A. Percent of employees (FTE) who are female
	3B. Quality indicator beyond compliance	3B. Investee has initiative in place to specifically advance women in the workforce (Y/N)
4. Consumption	4. Product or service specifically or disproportionately benefits women	4A. Investee's product or service specifically or disproportionately benefits women (Y/N)
		4B. Percent of customers who are female
5. Indirect Investments (investments through financial intermediaries)	5. Financial intermediary meets one of the direct 2X criteria	5A. Share of FI's portfolio that meets at least one of the direct 2X criteria
		5B. Share of Fund's portfolio that meets at least one of the direct 2X criteria

Spectrum	2X Criterion	(Intermediate) outcome	Example Papers (Developed countries)	Example papers (Developing countries)	Dataset
Disclosure		CSR disclosure in annual reports	Issa & Fang (2019 - Arab), Ben-Amar et al (2017 - Canada),	Zou et al (2017 - China)	Annual Reports, and scores from: Reuters, Bloomberg, Prowess, KLD, Compustat, ...
ES(G)		ES(G) avg. scores	Gingler & Raskopf (2021 - France), Chadwick & Dawson (2018 - US), Martinez-Garcia et al (2021 - Spain)		Reuters, Bloomberg, Prowess, KLD, Compustat, ...
Environm.		Environmental score		Wei et al (2017 - China)	Chinese Securities/Stock Market and Accounting Research (CSMAR)
Social	Consumption	Product specifically for women			To be found/self-collected
Social	Employment	(mental) health of employees			To be found/self-collected
Social	Employment	Wage of women	Bertrand et al (2018 - Norway), Adams and Ferreira (2009 - US), Flabbi et al (2019 - Italy), Casarico & Lattanzio (2019 - Italy), Tate & Yang (2016 - US)		ExecuComp, US Bureau of the Census's Longitudinal Employer-Household Dynamics (LEHD) and other social security

					databases
Social	Employment	Employment	Matsa & Miller (2014 - US)		Dun & Bradstreet
Social	Leadership	Share of female managers	Maida & Weber (2020 - Italy)		CONSOB (Italy)
Social	Employment	Skill composition of women	Casarico & Lattanzio (2019 -Italy)		National Social Security Institute
Social		Social responsibility classification of investments	Borghesi et al (2014 - Worldwide)	Borghesi et al (2014 - Worldwide)	KLD Research & Analytics
Social		Citizens' satisfaction with the provision of local public services	Baltrunaite et al (2021 - Italy)		CONSOB (Italy), Ministries of Finance
Governance		Fraud / Compliance with laws / Ethics	Chen et al (2016 - US), Schwartz-Ziv (2015 - Israel), Isidro & Sobral (2015 - EU) Ibrahim et al (2010)	Cumming et al (2015 - China)	World Value Survey Interviews, and scores from: Reuters, Bloomberg, Prowess, KLD, Compustat, ...
Governance		Independence of directors		Sarkar and Selerka (2021 - India)	Prowess, BoardEx
Governance		Conservatism in financial reporting	Peni et al (2010 - US)		Annual Reports
Operational		Worker's effort		Abel et al (2020 - India)	Own experiment
Operational		Worker's feedback		Abel et al (2020 - India)	Own experiment

Governance		Values and attitudes	Adams and Funk (2012 - Sweden)		Own survey
Financial		Return on Equity (ROE)	Most, see Hoobler et al (2016)	Most, see Hoobler et al (2016)	Reuters, Bloomberg, Prowess, KLD, Compustat, ...
Financial		Return on Assets (ROA)	Most, see Hoobler et al (2016)	Most, see Hoobler et al (2016) Sarkar and Selerka (2021 - India)	Reuters, Bloomberg, Prowess, KLD, Compustat, ...
Financial		Tobin's Q (sum of the market value of equity (share price multiplied by the number of ordinary shares in issue at fiscal year-end) and the the book value of debt divided by the book value of total assets)	Most, see Hoobler et al (2016) , Isidro & Sobral (2015),...	Most, see Hoobler et al (2016)	Reuters, Bloomberg, Prowess, KLD, Compustat, ...

Output 4: Useful databases

Dataset	Example Papers	Available RHS indicators	Available LHS indicators	coverage	Accessibility	Identifiers for matching
Annual Reports	Many, e.g. Ujunwa (2012 - Nigeria)	(Partly) Women on Board	(Partly) Non-financial Text sentiment Disclosure Financial	Most registered/listed companies worldwide	Needs extensive text analysis and report scraping, some overview providers by country	(Partly) Company Name, National Registry ID, Location
National firm registers / Stock exchange websites	Many, e.g. Shafique (2014 - Pakistan)	Depends on country	Depends on country	Listed companies	Depends on country	(Partly) Company Name, National Registry ID, Location
<i>Worldwide Databases (Listed/Large companies)</i>						
CSRHub	Yasser (2017 - Malaysia/ Pakistan)	% women on board	CSR	50,000 companies worldwide (mainly listed). Sourced from B-Analytics, S&P Global, covalence, GRI, glassdoor, impactspace, MSCI, ISS, IdealRatings,	Subscription	Company Name, ISIN, Location

				arabesque and more		
Dun & Bradstreet	Matsa & Miller (2014)	% women on board	Some ESG, mainly finance	Worldwide for up to 200m companies	Subscription	Company Name, ISIN, Location
AIDA-BureauVanDijk	Casarico & Lattanzio (2019)	% female board members	ESG	Big companies in Italy		Company Name, ISIN, Location
Sustainalytics	Chadwick & Dawson (2018)	% female board members	ESG			Company Name, ISIN, Location
KLD Research & Analytics	Borghesi et al (2014) , Sanan (2016)	% female board members	ESG			Company Name, ISIN, Location
Eikon Reuters / Asset4	Sarkar and Selerka (2021 - India) , Gingler & Raskopf (2021) , Sundarassen et al (2016) , Martinez-Garcia et al (2021) , Isidro & Sobral (2015)	(Partly) Share of female board members / gender of CEO	Financial Operational (Partly) ESG	Worldwide, daily, ESG for big companies	Subscription	Company Name, ISIN, Location
Moody's-Vigeo-Eiris	Gingler & Raskopf (2021)	(Partly) Share of female board members / gender of CEO	Financial Operational (Partly) ESG	Worldwide, ESG for big companies		Company Name, ISIN, Location
Bloomberg		(Partly) Share of female board members / gender of CEO	Financial Operational (Partly) ESG Trade links	Worldwide, daily, ESG for big companies	Subscription	Company Name, ISIN, Location
ManifestDB	Geiler &	Female directors on	Trading &	Worldwide	Subscription	Company Name,

	Renneboog (2015)	board	manufacturing companies data, director characteristics			ISIN, Location
Perfect Information	Ntim (2016)	% women directors	Annual and sustainability reports, financial, operational, ESG data	28m publicly listed companies worldwide	Subscription	Company Name, ISIN, Location
Bankscope (now: Bankfocus)	Dong et al (2017)	% women directors	Mainly financial and operational, some ESG	30,000 banks worldwide	Via WRDS (Subscription)	Company Name, ISIN, Location
ORBIS		% women directors	Financial, operational, annual reports, some ESG	400m companies worldwide	Via WRDS (Subscription)	Company Name, ISIN, Location
OSIRIS		% women directors	Financial, operational, annual reports, some ESG	Listed companies worldwide	Via WRDS (Subscription)	Company Name, ISIN, Location
COMPUSTAT	Ho et al (2015), Frias-Aceituno (2012)	Gender of Board member	Financial, Operational, (partly) ESG, Board member	Mostly Europe / North America, some rest of the world	Via WRDS (Subscription)	Company Name, ISIN, Location
BoardEx	Isidro & Sobral (2014), Geiler & Renneboog (2015)	% women board members	ESG, compliance to standards, salary	US (top ~5 executives of 2500 biggest companies)	Via WRDS (Subscription)	Company Name, ISIN, Location
ExecuComp			Executive Compensation data		Via WRDS (Subscription)	Links to Compustat via GVKEY and to 13F/ownership databases via CUSIP

CDP		N/A	Primary environmental data (esp. Scope 1-3 GHG)	Biggest firms worldwide(n=?)	Purchase, or via Bloomberg subscription	Company Name, ISIN Location
Worldbenchmarking Alliance		N/A (only specific gender index)	Sector-specific benchmarking scores along E, S and G	2000 biggest firms worldwide and sector-specific additions	Free Partly downloadable, partly need to be scraped from reports	Company Name, ISIN, Location
<i>Worldwide Databases (SMEs)</i>						
Worldbank Enterprise surveys		(Partly) Gender of managers	(Partly) Corruption Institutions Training Environmental Initiatives Financial	Many dev. Countries with surveys of ~1000 firms every couple of years.	free	Location
Bcorp impact data		N/A	BCorp scores by impact area (E,S and G), more specific e.g. worker benefits partly available	~7000 enterprises, mostly from developed countries, a few hundred from South America	free	Company Name, Location, website
Global Entrepreneurship Monitor		Gender of interviewed entrepreneur	Entrepreneurial aspirations/attitudes , Norms, Education, Financial,	43 economies worldwide with 1000+ respondents each	Freely accessible 3 years after data collection, before with good connections to country teams	Location
Microcredit Summit	Strom et al (2014)	Gender of directors	Financial and	Several thousand	Access now more	Location

(and additionally MicroRate, Microfinanza, Planet Rating, Crisil, and M-Cril here and here)		/ CEOs	operational characteristics of MFIs	MFIs worldwide	difficult than previously, use Wayback machine for better access	
Microfinance Information Exchange (MIX) incl. CSAF	Chakrabarty & Bass (2014)	% female board members	Operational, Financial, little ESG	Mostly aggregated country-wise data, some company data of MFIs	Partly freely accessible	Location , Company Name
<i>Worldwide Databases (Individuals)</i>						
World Value Survey Interviews	Chen et al (2016)	Gender of manager	Justification of unethical behaviour (bribery, tax evasion) (women more ethical)			Location
<i>Regional Databases (Africa)</i>						
IBES (Ghana Census of firms)		Gender of firm owner/manager	Form of organization, sector, subsector, sex of ownership, number and sex of persons engaged, skill level of employees and	600,000 firms in Ghana (cross-section 2014, industry-focused census 1962, 1978, 1987 and 2003)	free	District more (tbd)??

			year of commencement			
<i>Regional Databases (China)</i>						
Chinese Securities/Stock Market and Accounting Research (CSMAR)	Wei et al (2017), Zou et al (2017), Khaw et al (2016), Zhang & Qu (2015)		Environmental expenditures, number of female directors, financials, director successions and tenures	China		tbd
ESIEC Public data	tbd			China		tbd
China Listed Firms Corporate Governance Research database	Khaw et al (2016)		Financials, ESG			tbd
<i>Regional Databases (India)</i>						
Prowess	Sarkar and Selerka (2021 - India)	Names of directors	Operational efficiency (e.g. energy consumption), Financial, Governance, CSR-spending, gender/disability of employees, environmental expenses	50,000 Indian companies (annually), quarterly on 5,000 listed companies,	subscription	Company Name, ISIN/CIN, ROC registration number, Location

Indian Boards database	Kuppuswamy et al (2021)	Gender of Director	Financial Operational Independence Backgrounds	12,000 board members of registered boards (identifiers for each executive to track them across boards) across top 2,000 companies		tbd
Indian Annual Survey of Industries		None	Financial, Operational, Environmental indicators	All Indian industrial firms with 20+ workers (2018: 66,000)	Free 3 years delayed	Company Name, ,ROC registration number, CIN, Location
<i>Regional Databases (Europe)</i>						
National Social Security Institute (Italy)	Flabbi et al (2019), Casarico & Lattanzio (2019)	Gender of workers incl. executives	Wage of workers, other worker characteristics like skills	Italian workers		National number, Location
Ministry of Economy and Finance (CONSOB) (Italy)	Baltrunaite et al (2021)	None	citizens' satisfaction with the provision of local public services			?
Næringslivets Hovedorganisasjon (Norway)	Kunze & Miller (2017)	Female share in bosses and female share in peers	Gender gaps in promotions	Norway's company registry		Company Name, ,National number, Location
European Working Conditions Survey (EWCS) (EU)	Lucifora & Vigani (2016)	Immediate boss is female	Perceived gender discrimination at work, family friendly practices	60,000 workers in Europe		Location

<i>Regional Databases (America)</i>						
US Bureau of the Census's Longitudinal Employer-Household Dynamics (LEHD)	Tate & Yang (2016)	Number of women in leadership roles	Wages of women			Registry Location

Output 5: Cross-matching databases

(insert table once all datasets from above are filled)

Links

Data

Listed companies Unlisted companies

