Evidence of economic benefits of gender equality in other policy areas

Gender equality area	Indicator used to measure the economic impact of increasing gender equality	Evidence of economic impact
Increasing gender equality in education	Fertility rate	NEGATIVE EFFECT/DECREASE — Existing evidence suggests that, especially in developing countries, an increase in female education reduces fertility (Barro and Lee, 1994; Brummet, 2008; World Bank, 2011, Klassen, 2009)
	Per capita and total GDP growth rate	NEGATIVE EFFECT/DECREASE (for female education) — Barro and Lee, 1994 found that female education was negatively correlated with economic growth. Barro and Lee attribute this to a sign of 'backwardness' in society, where gender differences may be picking up on issues within less developed countries that may not have been captured with an initial GDP variable — Lagerlöf, 2003 also found that increasing gender equality in education can lead to reduction in economic growth POSITIVE EFFECT/INCREASE — Baliamoune, 2008 found that the gender gap in education has a negative effect on income growth. The study found out that the gender gap in education has a stronger negative effect on growth in Arab countries — Brummet, 2008 identified a significant negative impact of the gender gap in education on growth. Similar evidence was provided by Klasen, 2009, who also found that gender gaps in education had a negative impact on economic growth. The regions with the largest gender gaps in education – South Asia, sub-Saharan Africa, and the Middle East and North Africa (MENA) region – were found to incur the largest losses in terms of economic growth. For instance, the total combined effect (direct and indirect) in South Asia, sub-Saharan Africa and the MENA region was estimated respectively at a 1 %, 0.8 % and 0.7 % annual loss in per capita growth
	Labour productivity	POSITIVE/INCREASE — There is some evidence that female education has positive impacts on overall labour productivity, which is more pronounced than in the case of male education (Knowles, Lorgelly, Owen, 2002)

Increasing gender equality in education	Life expectancy/ family and child health	POSITIVE/INCREASE — The literature also identified other types of social benefits associated with decreases in gender gaps in education, such as reduced infant and child mortality, improvement in family and child health and increase in life expectancy (Barro and Lee, 1994; Schultz, 1988; Behrman and Deolalikar, 1988; Bellew, Raney and Subbarao, 1992; Subbarao and Raney, 1995)
	Investment	POSITIVE/INCREASE — Klasen, 2009 found a positive and significant relationship between increased gender equality and education and investment

Increasing gender equality in labour market participation	Per capita and total GDP growth rate	POSITIVE EFFECT/INCREASE
		— International level including EU level:
		  — 13 % higher GDP in the euro area, with the elimination of the gender employment gap (Daly, 2007)
		  — 27–29 % higher GDP for EU average with full gender balance on the labour market (Löfström, 2009)
		  — Higher GDP ranging from +3 % in Sweden to +19 % in Italy with increasing women's employment rate (Aguirre et al., 2012)
		  — Higher GDP growth (+1.3 %) with improvement in equality of opportunities (measured by the following indicators: fertility rate, secondary enrolment gap and literacy rate gap) and higher GDP growth (+1.19 %) with improvement in equality of outcomes (measured by share of women in parliament and gender gap in labour force participation) (Mitra et al., 2015)
		  — Loss in output per worker due to gender inequality in labour market participation (-40 % when all women are excluded from labour market) (Cuberes and Teignier, 2016)
		  — 8 % increase in the annual rate of GDP growth due to the growth in women's share in formal sector employment (Klasen, 1999)
		  — Positive effect on the annual rate of GDP growth due to the growth in women's share of the labour force (magnitude depending on the econometric specification used, Klasen and Lamanna, 2009)
		  — 3.4 % growth in total factor productivity due to the growth in the share of women in the labour force (Loko and Diouf, 2009)
		— Country level:
		  — 0.28 % GDP increase in Italy with +1 % women's employment rate (Casarico and Profeta, 2007)
		  — Higher Italian GDP if women's employment rate increases (three different possible scenarios are presented, Zisza, 2008)
		  — 0.3 % annual increase in real GDP in Japan if women's participation rate increases by 9 % (Matsui et al., 1999)
		  — Higher GDP in New Zealand if women increase labour force participation (two different possible scenarios are presented, Bryant et al., 2004)
		  — From 2 % to 9 % higher GDP in Latin America by removing gender segregation in occupation (Tzannatos, 1999)
		  — Higher per capita income (+319 %) by increasing the ratio of women-to-men managers (from 100 % men to 50–50) and higher per capita income (+153 %) by increasing the ratio of women-to-men workers (from women being 50 % of the employed to 66 %) in India (Esteve-Volart, 2009)

Increasing gender equality in labour market participation	Fertility	POSITIVE EFFECT/INCREASE — Del Boca et al. (2005) show that there is a positive correlation between employment and fertility across MS — In countries where it is relatively easy for women to work and have children, women's employment and fertility both tend to be higher (Daly, 2007) — A more gender equal labour market, welfare system, or households can be accompanied by higher fertility at similar or even higher levels of employment (Smith and Bettio, 2008)
	Investment in health and education of children	POSITIVE EFFECT/INCREASE — Higher women's labour market participation increases bargaining power in the household with positive effects on children' human capital (Klasen and Lamanna, 2009; Kabeer and Natali, 2013)
	Additional taxes and social security contributions	POSITIVE EFFECT/INCREASE — Higher women's labour market participation increases public revenues (Maier and Carl, 2003)
	Social capital	POSITIVE EFFECT/INCREASE — Higher labour market participation increases the opportunities of making social connections and networks at the workplace (Putnam 2000; Norris and Inglehart, 2003; Paugam and Russell, 2000)
	Time devoted by fathers to childcare activities	POSITIVE EFFECT /INCREASE — Fathers increase their care-giving time when mothers increase their paid work (Hallberg and Klevmarken, 2003; Sayer et al., 2004; Mancini and Pasqua, 2012)
Reducing the gender pay gap	GDP growth rate	POSITIVE EFFECT ON GROWTH — No evidence that wage discrimination stimulates economic growth (meta-analysis study, Schober and Winter-Ebmer, 2009) — Higher women's wages reduce men's wages only marginally and increase GDP (simulation study on Latin America, Tzannatos, 1999) — Wage discrimination discourages women's labour market participation and decreases GDP per capita (theoretical model applied to US data, Cavalcanti and Tavares, 2008) NEGATIVE EFFECT ON GROWTH FOR EXPORT-ORIENTED COUNTRIES — Reducing the pay gap reduces economic growth in the short run (study on 20 export- oriented semi-industrialised countries, Seguino, 2000 and 2011)
	Savings rate	POSITIVE EFFECT/INCREASE — 1 % increase in the women's wage bill share raises aggregate savings rate by 0.25 % GDP (Seguino and Floro, 2003) — Higher women's wages increase saving rates (study on older US individuals, Rossi and Sierminska, 2014) — Higher women's wage rates can lead to higher formal savings (Lee et al., 2010)

Reducing the gender pay gap	Expenditures on goods and services for children/ sustainable goods	POSITIVE EFFECT/INCREASE — Women may have a stronger preference than men for spending on goods and services that contribute to the human capital of their children (Stotsky, 2006) — Women tend to buy more eco-labelled or organic food, have a higher propensity to recycle, place more value on efficient energy, and pay closer attention to ethical issues in purchases than men (OECD, 2008)
Increasing gender equality in the distribution of unpaid work	Women's health	POSITIVE EFFECT — Women's greater hours of unpaid work contribute to women experiencing more stress than men (study on time use data from Canada, McDonald et al., 2005) — Equalising gender roles would improve women's health (study on time use data from US, Bird and Fremont, 1991)
	Women's labour market career	POSITIVE EFFECT — Paternity leave is correlated with shorter career breaks, longer working hours, fewer penalties in terms of promotions and wages and improved labour market positions for mothers (Pylkkanen and Smith, 2003; Keck and Saraceno, 2013)
	Children's well-being (social, emotional, physical and cognitive development)	POSITIVE EFFECT — Fathers' involvement in childcare is positively associated with children's social, emotional, physical and cognitive development (Tamis-LeMonda and Cabrera, 2002; Allen and Daly, 2007; Lamb, 2010)
Increasing availability, affordability and quality of social infrastructure	Fertility	POSITIVE EFFECT — Family reconciliation policies in the Nordic countries have a positive impact on fertility (Datta-Gupta et al., 2008) — Family policies can promote the labour supply of women and more equal role-sharing between mothers and fathers in Denmark and Sweden (Pylkkanen and Smith, 2003) — Unequal division of non-paid work within the household, and weak support for combining work and parenthood, reduce fertility intentions (Mills et al., 2008) — There is a positive correlation in OECD countries between attitudes supporting gender equality in the work environment and fertility (Mortvik and Spant, 2005) — Lower labour market penalties due to childbearing breaks induce higher fertility rates (Adsera, 2004)
	Labour market attachment for mothers	POSITIVE EFFECT — Long and well-paid leave and generous provision of childcare services help mothers to remain in paid work (Keck and Saraceno, 2013) — Policies that help women to reconcile work and family increase women's employment and reduce employment penalties after motherhood (Pacelli et al., 2013)

Increasing gender equality in firms' leadership positions	Firm performance/ labour productivity	POSITIVE EFFECT/INCREASE
		- International level including EU level:
		  - Greater women's representation in top positions is associated with 10 % higher rate of return on equity(report on EU companies, McKinsey & Co., 2007)
		  - Companies with more women board members experience 53 % higher returns on equity, 42 % higher returns to sales, and 66 % higher returns on invested capital (study on Fortune 500 companies, Catalyst, 2007)
		  - Gender-diverse boards are associated with significantly higher firm value (study using data on the Fortune 1000 firms in 1997, Carter et al., 2003)
		  - The proportion of women board members is positively correlated with the rate of return on assets and the rate of return on equity (study on the 500 largest EU firms over the years 2010–2012, Isidro and Sobral, 2015)
		- Country-level academic studies:
		  - Top women managers are positively associated with firm profits, value added and revenues (study on 2 500 largest Danish firms for the 1993–2001 period, Smith et al., 2006)
		  - Top women managers significantly improve firm financial performance, but only when the firm's strategy is focused on innovation (study on 1 500 US S&P firms, Dezno et al., 2012)
		  - Firms with gender-diverse boardrooms are generally associated with increased labour productivity (study on 288 largest Australian firms, Ali et al., 2014)
		  - Firms with a higher percentage of women board members are associated with significantly higher firm financial value (study on a sample of Spanish publicly listed companies over the 1995–2000 period, Campbell and Minguez-Vera, 2008)
		  - Labour productivity in firms with a woman CEO significantly increases with the share of women workers (study on Italian manufacturing firms with at least 50 employees, Flabbi et al., 2014)
		  - Women directors working in women-owned firms are associated with significant improvements in the firm's operating profitability (study on Italian family-controlled firms over the 2000–2010 period, Amore et al., 2015)
		
		NULL OR NEGATIVE EFFECT
		- Country-level academic studies:
		  - Women managers do not significantly impact on firm performance (study on Danish firms with more than 50 employees, Parrotta and Smith, 2013)
		  - Women board members do not significantly affect corporate performance, (study on UK listed firms over the 1996–2011 period, Gregory-Smith et al., 2013)
		  - Women board members are not significantly associated with Tobin's Q ([1]) (study on a sample of listed Danish firms during the 1998-2001 period, Rose, 2007)
		  - Increased women's representation in the board of directors significantly reduces Tobin's Q and operating firm performance (study on the Norwegian law on gender quota in boards, Ahern and Dittmar, 2012)
		  - Gender-diverse boards are generally associated with lower firm financial performance (study on a sample of US firms for the 1996–2003 period, Adams and Ferreira, 2009)

Increasing gender equality in firms' leadership positions	Firms' employment	POSITIVE EFFECT — Firms with increasing share of women on boards are significantly less likely to undertake workforce downsizing (study on firms affected by the Norwegian law on gender quotas on boards, Matsa and Miller, 2014) — Firms owned by women are significantly less likely than firms owned by men to downsize their workforce (study on privately owned US firms in the 2006–2009 period, Matsa and Miller, 2013)
	Women's wage/ gender wage gap	POSITIVE EFFECT — Women with wages above the median earn on average more when working for a woman CEO than for men CEOs (+7.8 % in the benchmark specification) (study on Italian manufacturing firms with at least 50 employees, Flabbi et al., 2014) — Women-owned firms are associated with a reduction in the gender wage gap by 1.5 % (study on Portugal covering the 1987–2000 period, Cardoso and Winter-Ebmer, 2010) NULL EFFECT — No evidence that increases in the proportion of women board members has contributed to narrowing the gender wage gap (study on firms affected by the Norwegian law on gender quotas on boards, Bertrand et al., 2014)
	Women's career advancements	POSITIVE EFFECT — Increasing women's leadership helps the career advancements of women in the lower echelons of the firm (study on white-collar workers of more than 4 000 Norwegian firms, Kunze and Miller, 2014)
	Gender awareness	POSITIVE EFFECT — Women top managers and working proprietors are associated with firms that are more prone to provide childcare facilities and mentor women junior staff (study on Germany, Gagliarducci and Paserman, 2015) — Women leaders are more gender-sensitive than men leaders (study on the US, Tate and Yang, 2015)
Increasing gender equality in entrepreneurship positions	Aggregate productivity and income per capita	POSITIVE EFFECT — Loss in output per worker due to gender inequality in entrepreneurship (-10 % when all women are excluded from entrepreneurship) (Cuberes and Teigner, 2015)

Increasing gender equality in political decision-making	Policies concerning social issues	POSITIVE EFFECT /INCREASE
		- Country-level studies with loose control on endogeneity:
		  - A larger fraction of women in politics is associated with a significantly higher degree of activity when it comes to issues relating to women, children and families (study on members of the lower houses of 12 US state legislatures in 1988, Thomas, 1991)
		  - Women are found to have more gender-sensitive policy priorities (study on members of the lower houses of 12 US state legislatures in 1988, Thomas and Welch, 1991)
		  - Child support enforcement policies are higher in states with a high number of women legislators (study on US states for the 1978–1991 period, Case, 1998)
		  - Higher fraction of women legislators is significantly and positively related with expenditure on family assistance per capita, and the degree of child support enforcement (study on 48 continental US states over the 1950–1999 period, Besley and Case, 2003)
		- Country-level studies with endogeneity controls/addressing causal interpretation:
		  - A greater share of women in local municipalities is associated with a significant increase in the expenditure on childcare and the care of the elderly (study on Swedish local councils, Svaleryd, 2002)
		  - Women legislators are found to have a positive impact on policies investing in health and early education, to favour gender-sensitive laws, and to support redistributive policies (study on 16 larger states in India, Clots-Figueras, 2011)

	Functioning of the government	POSITIVE EFFECT/INCREASE - Women politicians are more likely to cooperate (Paxton and Hughes, 2007) - Women politicians are more likely to propose new and creative solutions to problems (study based on interviews with women politicians of the Thai parliament, Iwanaga, 2008)
	Corruption	POSITIVE EFFECT/DECREASE - Higher shares of women politicians are associated with significantly lower levels of corruption (study on a sample of more than 100 countries, Dollar and Gatti, 2001) - Women are significantly more adverse to corruption and tax evasion (Torgler and Valev, 2010; World Bank, 2001; Swamy et al., 2001; Beamen et al., 2009)
	Level of education of politicians	POSITIVE EFFECT/INCREASE - Gender quotas in elections significantly increase the years of schooling of politicians (study on Italian local municipalities in 1993–1995, Baltrunaite et al., 2014)
	Stereotypes on women	POSITIVE EFFECT/REDUCTION - Gender quotas can be helpful in breaking down negative stereotypes against women (study on Italian local municipalities, De Paola et al., 2010)

Reducing the gender gap in health	Different labour market outcomes	— Health has an impact on most labour market outcomes: wages, labour force participation, hours worked, retirement, job turnover. However, there is a lack of studies that analyse gender differences in labour market behaviour as a response to health shocks (Currie and Madrian, 1999). POSITIVE EFFECT/REDUCTION — Health affects exit out of and entries into employment, with an higher impact on women than men Gomez et al., 2010) — Improved maternal health increased labour force participation of married women during the 20th century and generated a rise in income per capita of over 50 % via this channel (Albanesi and Olivetti, 2009) — Access to oral contraception has a positive effect on women's education, career, labour force attachment and earning, and on long-run outcomes of children born (Goldin and Katz, 2002, Hock, 2008, Ananat and Hungerman, 2012, Bailey, 2006, Bailey et al., 2012, Albanesi and Olivetti, 2015)
	Fertility/marital stability	POSITIVE EFFECT — Reduction in maternal mortality increased fertility and women's human capital in 25 advanced and emerging economies between 1900 and 2000 (Albanesi, 2012) — Reduction in maternal mortality increased fertility in US states (Albanesi, and Olivetti, 2014) — Access to oral contraception has a positive effect on marital stability (Zuppan, 2012)