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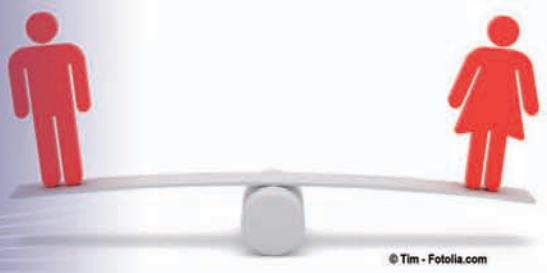

Report on the Gender Initiative: Gender Equality in Education, Employment and Entrepreneurship

OECD
BETTER POLICIES FOR BETTER LIVES

EXECUTIVE SUMMARY

The 2011 Meeting of the OECD Council at Ministerial level is the first milestone in the Gender Initiative, which was launched by the OECD to help governments promote gender equality in Education, Employment and Entrepreneurship (the "three Es"). Reducing persistent gender inequalities is necessary not only for reasons of fairness and equity but also out of economic necessity. Greater economic opportunities for women will help to increase labour productivity, and higher female employment will widen the base of taxpayers and contributors to social protection systems which will come under increasing pressure due to population ageing. More gender diversity would help promote innovation and competitiveness in business. Greater economic empowerment of women and greater gender equality in leadership are key components of the OECD's wider agenda to develop policies for stronger, better and fairer growth.

Promoting gender equality in education

Investing in formal education is essential to promote equality of employment opportunities and strengthen economic growth. It increases cognitive and non-cognitive skills, it improves productivity and it provides individuals with a greater ability to further develop their knowledge and skills throughout their lives. Increased education participation is also associated with better health, and more investments in the education and health of children – especially among women and particularly in developing countries.

Gender equality in terms of participation in, and attainment of, education has been achieved in most OECD countries: girls have on average better grades and often outnumber boys among new college graduates. However, in many developing countries, girls still have poorer educational attainments, especially at the secondary and tertiary levels. Achieving gender equality in education in these countries will not only promote greater equality in employment outcomes but also help postpone early-marriages, reduce infant mortality rates and improve health and education of future generations.

Gaps in cognitive skills of boys and girls around age 15 are similar across countries: boys perform better than girls in mathematics in most countries, and girls outperform boys in reading in all countries. In terms of science literacy, there are no significant gender differences. But young women are much less likely than young men to choose Science, Technology, Engineering, or Mathematics (STEM) as field of study at graduate level; the share of women in these fields further declines at the post-graduate level.

Gender differences in educational choices appear to be related to student attitudes (motivation, interest) in studying a particular subject rather than their ability and school performance. Gender gaps in performance are smaller than gender gaps in fields of tertiary study, indicating that young women often do not translate their good school performance into field of studies for higher education that offer better employment prospects, such as STEM studies. Furthermore, even when women complete STEM studies they are less likely than men to work in these sectors. While it is difficult to separate innate and learned behaviours and to assess the influence of stereotypes, the effect of this gender imbalance is very clear. It hinders women's careers, it lowers their future earnings levels and deprives OECD economies of a source of talent and innovation. It is also an inefficient use of investment in education.

Policy lessons to improve gender equality in education	
Selected lessons for OECD countries	**Selected lessons for developing countries**
Adopt policies to address stereotyping in education and training choices. • Encourage parents and teachers to raise self-confidence and motivation among girls to pursue interests in science and mathematics. • Gear curricula, teaching material and training policies to avoiding gender stereo-typing, and encourage girls to engage in STEM-studies. • A better balance in the gender composition of teachers and the endorsement of female role models in professions typically dominated by men might also contribute to this objective. • Support research to further explore which factors shape gender differences in the choice of field of study.	***Increase female enrolment and completion rates in secondary education through a range of measures***, including: • Reducing user fees, providing school materials, uniforms and meals, making (travel to) schools safer for girls (e.g. through safe transport, the provision of restrooms and training of teachers). • Making cash transfers to poor families conditional on them investing in the education and health of their children. • Effective policies need to be multifaceted because infrastructure, health issues, laws, social norms and cultural practices can also influence the ability of girls to attend and complete school. • Attention should be paid to maintaining and improving the performance of boys so that they are not left behind, which is a phenomenon increasingly observed in some OECD countries.
Enhance the quality of education and efficient management of resources to improve educational outcomes for both girls and boys. • The quality of teaching appears to be especially important for student performance.	***Integrate financial education in schools to equip boys and girls with financial knowledge***. • Support the design and implementation of specific financial education programmes for men and women (and particularly vulnerable groups) to enhance their level of confidence and knowledge on financial issues, to encourage higher savings and to improve the quality of their investments in order to promote a financially secure retirement and to improve their ability to participate more dynamically in economic activities.

Promoting gender equality in employment

In the past few decades, women have been entering the labour force in greater numbers and have been staying employed longer over their life course. Increased educational attainment rates amongst women have contributed to greater employment rates, better earnings and career progression in many OECD and non-OECD countries. Nowadays, in OECD countries new female entrants in the labour market have comparable and often higher education than their male counterparts.

Yet, compared to men, they are less likely to work for pay, more likely to be employed in lower-paid occupation and sectors, and more likely to have temporary employment contracts. Compared to men, employed women also work fewer hours, are less likely to progress in their careers and are under-represented in decision-making positions. As a result of these factors – and in some cases due to discrimination, which however is rarely directly observable or measurable - women are paid 16% less than men, on average across the OECD. Furthermore, wage gaps are often larger at the higher end of the wage distribution, reflecting the so-called glass ceiling which blocks female career progression and consequently leads to loss of talent. Policy needs to tackle the reasons for pay gaps and glass ceilings; one approach that is being discussed, especially in Europe where women hold 12% of board seats on average, is to impose quotas on the number of women on company boards.

Caring obligations for children and elderly relatives and the costs of formal care are important factors in decisions on whether and how much to participate in the labour market and which career profile to pursue. Women are likely to take on more caring responsibilities than men. On average, women devote more than 2 hours per days *extra* to unpaid work than men do. To help parents to combine work and family commitments, all OECD countries, except the United States, provide paid maternity or parental leave. Many countries provide child- and out-of-school hours care support and/or have introduced legislation that either grants part-time work entitlements or gives employees the right to request flexible working-time arrangements. The range of work/family balance supports are particularly important to sole parents who face work-family balance challenges on their own and whose families therefore face an elevated poverty risk.

There is potentially a "business case" for family-friendly workplace support through increased worker satisfaction and productivity and reduced employee turnover. This business case is strongest for flexible workplace arrangements that least affect the production and for workers who are difficult to replace. Hence, governments may wish to intervene to ensure that access to family-friendly workplace supports is distributed across all workers. However, this does impose costs on employers.

Women make more use of such flexible working-time arrangements than men, which contributes to persistent gender differences in career profiles. It has proven difficult for policy to redress the gender balance in earning and caring, partly because countries may not want to impose solutions on parents. However, in a number of countries, including the Nordic countries, Germany and Portugal, fathers are granted the exclusive right to part of the parental leave entitlement and/or ample income support during the leave period. This has resulted in more fathers taking more parental leave days, but it is still unclear as to whether this has led to a better sharing of care responsibilities in the household and whether any changes are durable.

Extending rights to paid leave for fathers can be fiscally neutral when matched by similar reductions in maternal entitlements, but otherwise the development of an integrated set of work/family balance supports for families with children imposes costs on individual employers and taxpayers. But greater female labour force participation and higher earnings contribute to stronger long-term economic growth and reduce poverty risks, not just for the individuals concerned, but also for families. In the recent economic crisis, the increase of labour supply among partnered women helped compensate the job loss and working-hours reductions among partnered men. Higher female employment rates can also help address the labour-market challenge of population ageing in OECD and non-OECD countries.

Especially in developing countries, women often end up in poorly-paid jobs, without social protection and often in the informal sector. Employment conditions and job quality need to improve so that women can maximise their productivity, earn a living wage, and have access to maternity leave, sick pay and other forms of social protection. Policies to support women to organise in unions and protect their rights would also be an important step to better working conditions. Investing in physical and social infrastructure will help reduce time spent on unpaid work and thus help women access labour markets. Policies to improve women's access to, and control over, assets and new technologies are also important for gender equality in labour market outcomes. Public sector employment programmes can also strengthen female employment outcomes. Policies will be most effective when developed across a range of possible partners, including different levels of government, international institutions, social partners, and community organisations and civil society.

Policy lessons to improve gender equality in employment	
Selected lessons for OECD countries	**Selected lessons for developing countries**
Provide strong financial incentives to both parents – and especially mothers – to participate in paid work. • Enhance a continuum of supports throughout the early years of child-related leave (maternity, parental and paternity leave), childcare and out-of-school hours care.	***Improve the employment conditions, access and quality of jobs*** to ensure that both women and men are able to maximise their productivity, earn a living wage and have access to social protection benefits.
Expand the exclusive use of fathers' parental leave entitlements • Encourage fathers to make more and longer use of parental leave entitlements. • Encourage fathers to make more and longer use of flexible working time arrangements. • This will facilitate women to strengthen their labour market attachment, improve perceptions amongst employers on labour market commitment of women, and contribute to a more equal distribution of earning and caring.	***Invest in infrastructure (roads, transport and clean water), especially in rural areas*** *to* reduce the time-consuming aspects of women's and girls' unpaid domestic work. This will: • Enable girls to attend school. • Women to participate in the labour market or take up self-employment opportunities.
Take active measures to combat discrimination. To make legal rules more effective • Empower well-resourced specialised bodies to investigate companies and organisations. • Empower specialised bodies to take legal action against employers who engage in discriminatory practices, even in the absence of individual complaints.	***Improve job quality within the informal sector and ensure that women move away from the most precarious and dangerous forms of informal employment.*** • To ease their transition to formal-sector jobs, investments in women´s education and training, as well as the extension of childcare and social insurance schemes to small employers are of prior importance. • Women's organisations in informal employment are also crucial for the protection of their rights and can be conducive in challenging discriminatory practices that hinder women's equal access to assets such as land, technology, financial service or information.
	Guarantee women's property and inheritance rights and ensure women's awareness of their rights. • Limited access to and control over resources reduces can have a negative effect on food security of the household, increase women's vulnerability to poverty or violence, prevent women from accessing bank loans or financial services, and reduce women's decision-making power. • Policy reforms such as land titling or changes in inheritance legislation that secure women's property rights and incorporate monitoring mechanisms to guarantee the implementation of such laws can play a significant role in ensuring women have more and better employment opportunities.
	Improve the availability of reliable gender disaggregated statistics, which are key to enhancing evidence-based decision-making and policy development.

Gender inequality in entrepreneurship

Entrepreneurship is considered an important driver of economic development and growth in many economies. Apart from the general diversity in entrepreneurial practices, there appear to be significant differences in the characteristics of male and female entrepreneurs. Women entrepreneurs tend to own smaller businesses, operate with lower levels of overall capitalisation, start and manage firms in different industries than men, and the growth rates of their businesses tend to be slower than that of firms owned by men. Entrepreneurial activities are still hampered by constraints that often tend to be gender specific, such as cultural norms, unequal employment opportunities and restricted access to finance for women.

Access to finance is a main concern for entrepreneurs. Even though the sources of finance are the same for men and women, women still tend to face higher barriers to access finance. The main reasons for this gender gap are associated with differences in the sector of activity and the age and the size of female-owned businesses. However, other possible explanations include lack of managerial experience, weaker credit history of women, a reluctance to take risks, and a preference for smaller business size. In a number countries, including those in the Middle East and North Africa (MENA) region, women's access to financial services and resources is further hampered by general limitations to the formal financial infrastructure and – in some cases - legal and institutional barriers. The outreach of microfinance organisations to women does partly close the financial gap, but microfinance can trap businesses in their micro-levels because of credit ceilings.

Data on women entrepreneurs are often not readily comparable across countries. International initiatives to collect cross-country, gender disaggregated, data on entrepreneurship are still plagued by problems of quality and reliability. National data on female entrepreneurship are also available and are largely drawn from business registers and business or household surveys. However, differences in underlying data collection methodologies and definitions of entrepreneurship lead to variations in the available indicators and undermine cross-country comparability. Only a few countries commit to a continuous and regular collection of data on entrepreneurship with a gender dimension.

To close this information gap, the OECD's Gender Initiative will gather comparable data from various sources and expand the existing OECD Entrepreneurship Indicator Programme (EIP) to include gender aspects of entrepreneurship. This database will also provide a foundation for future analysis and policy work beyond the current gender initiative.

Selected lessons for gender equality in entrepreneurship	
Selected lessons for OECD countries	**Selected lessons from the MENA OECD Investment programme**
Relevant policy issues for gender differences in entrepreneurship include, but are not limited to: • Improving access to finance, including usage of various forms of finance for business start–up and growth • Supporting innovation for women-owned enterprises. • Increasing representation of women-owned enterprises in high-growth sectors; and impact of institutional framework on business creation by women.	***Allow the use of moveable assets as collateral for bank loans*** to facilitate women's access to finance. • Since in a number of countries women are still legally constrained in property and inheritance rights, endorsing the right to use assets such as accounts receivables and equipment can increase women's access to financial resources.
To design better evidence-based policies, improve data collection and analysis. • Collect valid and internationally comparable indicators to explain the gender gaps in entrepreneurship. • Business registers are a sustainable data source for the analysis of gender differences in business activity. • The wealth of information provided by the business registers can be greatly augmented if linked to information from other administrative data sources such as tax databases or census data, and surveys that are being carried out.	***Improve credit information systems*** by • Establishing credit bureaus that can serve as vehicles for reducing information asymmetries between creditors and lenders. • Collecting credit history information – microfinance institutions inclusive – to help business-owners obtain larger credits.
Provide an accurate and systematic description of gender differences in business demographics*;* conditional on data availability, cross-country empirical analysis should be conducted to shed light on the determinants of gender differences in entrepreneurship, as illustrated by business demographics, in order to inform policy design.	***Foster women entrepreneurs' access to international markets and business networks, including through the use of web technologies.*** This is of a particular importance to women entrepreneurs operating in the MENA region since travelling to international trade events may not always be possible for them.

Box A. The OECD gender Initiative: The Way Ahead

Building on the expertise and data of the OECD and other international institutions, the OECD's Gender Initiative will identify, bring together and update a set of indicators on the key dimensions of gender inequality in education, employment and entrepreneurship (the "three Es"). The project will also: examine why barriers to gender equality persist; illustrate the importance of gender equality for a stronger and fairer economy; establish standard indicators to measure progress; and develop a database framework and comparable data on entrepreneurship. As part of the Gender Initiative, a one-stop data portal for indicators on gender equality in the "three Es" will be launched by the end of 2012.

Benchmarking against standard indicators of gender equality in the "three Es"

Based on these indicators, the OECD will benchmark OECD and selected non-OECD countries on the various dimensions of gender inequality in the "three Es". The goal is not to rank countries but rather to provide policy makers with a snapshot of where countries are at, allow policy makers to monitor progress and evaluate the effectiveness of their policies.

Develop additional knowledge on persisting barriers to gender equality in the "three Es"

Further and up-to-date evidence needs to be collected on the persistent barriers to gender equality in economic outcomes, on the linkages between inequalities in the "three Es" and on the effect of gender differences in human capital accumulation and labour force participation on economic growth. Data on gender equality focused aid will also be analysed to identify specific areas where donor investments could be increased to achieve gender equality in education, employment and entrepreneurship.

Education: the Initiative will examine the severe under-representation of women in growth-enhancing fields such as science, technology, engineering and mathematics; the effects of such choices on their transition to the labour market and the subsequent career development. In support of attainment of Millennium Development Goals, the project will also look at the mix of policies that can facilitate girls' completion of a quality post-primary education in developing countries by identifying existing good practice that could be replicated.

Employment, the initiative will further analyse gender gaps and barriers that persist in parental leave and labour market outcomes, the drivers of female labour supply and causes and consequences of the horizontal and vertical segmentation of employment by gender, both in OECD and non-OECD countries. The analysis of determinants and consequences for selecting into specific types of informal employment – lower tier or upper tier – will analysed. The gender initiative will also investigate how the sharing of household and family responsibilities between women and men changes with the increasing participation of women in the labour market using time-use surveys, also for some selected developing countries, and will identify good practice programmes. For some developing countries the Gender Initiative will also consider the effects of recent structural changes in global labour markets and trade patterns on women's employment outcomes.

Entrepreneurship, the initiative gender differences in sectoral concentration, issues relevant to gender gaps in financial knowledge and literacy levels, and the utilisation of financial instruments. The Initiative will investigate drivers and obstacles to innovation for women's enterprises and consider measures to foster a greater level of innovation among female entrepreneurs, including high-growth entrepreneurs, both in OECD countries and other regions.

Develop policy recommendations to reduce the persistent barriers to gender equality in the "three Es"

The OECD's Gender Initiative will expand the review of policies and good practices adopted by OECD countries and selected non-member countries to close the gender gap in "the three Es". For developing countries, the review of policies in education will focus on the mix of policies that can facilitate girls' completion of a quality post-primary education. Drawing upon this review and the above analysis, the Initiative will provide evidence-based policy recommendations and will examine how successful policies might be adapted and transferred between OECD countries, emerging and developing economies. A report on these issues is scheduled for next year's Meeting of the OECD Council at Ministerial level. An authoritative report on gender inequality in the economy will appear by the end of 2012.

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INTRODUCTION

1. Across the world, there is strong a case for greater gender equality in the economy. Greater economic opportunities for women can contribute to *stronger, better and fairer* growth by raising the overall level of human capital and labour productivity and by mobilising hitherto underutilised labour supply. Helping more people to realise their work and family aspirations, more men and women will share the benefits of growth. However, achieving greater gender equality remains a big challenge despite the many gains in women's educational and employment outcomes occurred in recent history.

2. Gender parity in educational attainment has been achieved by most OECD countries, but further action is needed in many developing countries to improve enrolment and retention of girls in post-primary education. Furthermore, women remain severely under-represented in key, growth-enhancing fields of education such as science, technology, engineering and mathematics.

3. Labour markets exhibit many "gender gaps". Limits to public support for caring contribute to a persistent imbalance in the household division of paid and unpaid work. Women are less likely to work for pay, they are more likely to have lower hourly earnings, and are less likely to reach decision-making positions in either public or private sectors. Women are also a minority amongst entrepreneurs worldwide and women-owned firms systematically differ from those owned by men in terms of size, sector, capitalisation and performance. As a result, women are more likely to experience poverty and deprivation than men, even though the recent economic crisis has illustrated how female employment can increase families' resilience in face of economic adversity.

4. This Interim Report – the first milestone of the OECD's Gender Initiative – presents indicators to illustrate the relative standing of OECD and selected non-OECD countries on selected dimensions of gender inequality in education and employment. It also includes initial results of joint work with the World Bank on i) linkages between choices in the field of study and gender differences in employment outcomes; and ii) reasons and consequences of the prevalence of women in public employment. The Interim Report also contains a review of existing international and national databases on gender dimensions of entrepreneurship, and presents an extension of the OECD Entrepreneurship Indicator Programme (EIP). This framework captures gender aspects of determinants, performance, and effects of entrepreneurship. Countries are *encouraged* to optimise the exploitation of existing national data from administrative sources to develop indicators in line with this framework.

5. The OECD Gender Initiative is a joint effort drawing upon the expertise of many directorates within the OECD: Employment, Labour and Social Affairs Directorate; Education Directorate; Statistics Directorate; Directorate for Financial and Enterprise Affairs; Directorate of Public Governance and Territorial Development; Directorate for Science, Technology and Industry; the Trade and Agriculture Directorate; the Centre for Entrepreneurship, SMEs and Local Development; the Development Centre, and the Development Co-operation Directorate.

6. The chapters on education (Chapter 1) and employment (Chapter 2) build on existing OECD analyses in these two areas. While new work is being developed, the existing knowledge base facilitates drawing some generalised policy lessons towards furthering gender equality in Education and

Employment. These policies may well remain "aspirational" for the near future in view of capacity constraints in many economies and limits to public budgets, in particular for developing countries. However, this should not deter countries from taking intermediate steps towards greater gender equality in their economies, as so many have committed themselves to, for example, through the Millennium Development Goals. Achieving greater gender equality does not involve a "quick fix", but will require continuous policy attention across a range of issues.

CHAPTER 1: GENDER EQUALITY IN EDUCATION

1.1 A snapshot of gender differences in education

7. Education is essential to advancing human capital by enabling individuals to develop their knowledge and skills throughout their lives. Relatively high levels of education are often related to higher earnings and productivity, better career progression, health, life satisfaction as well as to better investments in education and health of future generations (OECD, 2010a).

8. Chart 1.1 presents five key indicators (in four panels) for OECD and selected emerging economies to illustrate "gender gaps" in participation, attainment, performance in education, as well as field of study. The gender gaps are defined as the difference in scores of men and women relative to the male score for indicators where men have the highest scores on average (i.e. PISA maths scores and the proportion of degrees awarded in mathematics and computer sciences), and the difference in scores between women and men relative to female scores when female scores are highest on average (i.e. enrolment in secondary education, proportion of adults with tertiary education and PISA reading scores). For example, Chart 1.1, panels A and B show that in Australia, compared with boys, girls on average have a 5% disadvantage in secondary education enrolment, a 23% advantage in proportion of young adults with tertiary education and a 7% advantage in PISA reading scores (i.e. secondary school enrolment of boys is 105% of that of girls, the proportion of young men attaining tertiary education is 77% of that of younger women and PISA scores for boys is 93% of that of girls). Similarly, panels C and D of Chart 1.1 show that Australian boys have a 2% advantage in PISA maths scores and a 72% advantage in the proportion of mathematics and computer science degrees awarded, compared with girls (i.e. girls PISA maths scores is 98% of that of boys and the proportion of mathematics of computer science degrees awarded to women is 28% of the proportion awarded to men).

9. Gender gaps in participation levels can be gauged by looking at secondary gross enrolment rates (Chart 1.1, Panel A). Among OECD countries there are no substantial gender gaps in secondary enrolment rates (mostly within 5%) except for Turkey, where women have a strong disadvantage. On the other hand, tertiary attainment levels are higher for girls than for boys in most OECD countries (Chart 1.1, Panel A) and in Finland, Portugal and Slovenia young women are much more likely to participate in tertiary education than young men (i.e. a gender gap larger than 40%). Only in Mexico, Switzerland and Turkey is the share of adults with tertiary education significantly higher among men than women (i.e. a gender gap smaller than -10%), and in Chile there is only a very slight advantage of men over women (gender gap -1%).

10. The remaining three panels of Chart 1.1 show that in OECD countries the main gender differences in education relate to performance and preferences across field of study. Gender differences in cognitive skills among adolescents are shown in Chart 1.1, Panel B and C. At age 15, girls outperform boys in reading in all countries; boys, on the other hand, perform better than girls in mathematics in most countries but there are a few countries (Finland, Slovenia, Sweden, Russian Federation and Indonesia) where the gender gap is small (less than 5%). In terms of science, there are no substantial differences in performance.

11. The largest gender differences, on average, are observed in the chosen field of study in tertiary education (Chart 1.1, Panel D). The positive gap in the proportion of degrees awarded in mathematics and computer science implies that, in all OECD countries, men account for the majority of degrees awarded in these subjects; women in turn account for the vast majority of graduates in the arts and humanities. Differences in the gender composition of graduates in mathematics and computer sciences are large in all countries but they are particularly pronounced (i.e. above 80%) in the Netherlands, Switzerland, Slovenia, Iceland and Belgium. Furthermore, gender gaps in the proportion of tertiary degrees awarded in mathematics and computer sciences are much larger than the gender gaps in performance at age 15 in performance in mathematics (respectively 64% and 2% on average in the OECD).

12. A full assessment of gender inequality in education for emerging economies according to the selected indicators is only possible in Brazil, but information is available for most indicators for the Russian Federation and Indonesia. There is little gender inequality in participation in secondary education in the Russian Federation and Indonesia while there are large gaps in Brazil to the advantage of girls (10%) and India to the advantage of boys (-14%). Tertiary education attainment rates of young women exceed those of men in the Russian Federation and in Brazil, with gender gaps of 20% and 29% respectively.

13. In emerging economies, the performance of boys and girls in the different subjects at the secondary level mirrors the trends observed in most OECD countries: in the Russian Federation, Brazil and Indonesia girls do significantly better in reading while boys score marginally better in mathematics. In Brazil, as in OECD countries, considerably more young men than women choose mathematics and computer science courses (gender gap of 71%), while the opposite is true in Indonesia.[1]

14. While educational outcomes vary across and within countries, there is no one country that consistently has large gender gaps (with an advantage to either men or women) or a near gender parity across all indicators.[2] Across the OECD, even for countries such as Austria, Chile, Germany, Korea and United Kingdom where the gender gap is less than 10% in absolute value for four of the five indicators, the gap in degrees awarded in mathematics and computer science is still high.

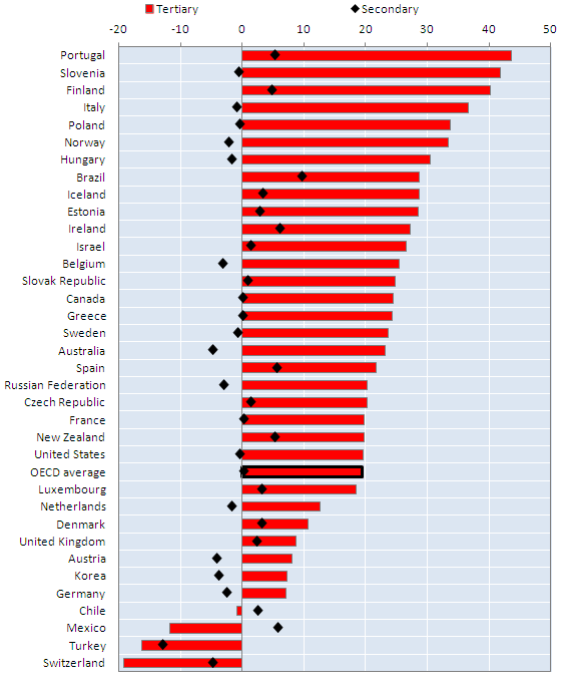
15. On the whole, gender gaps in educational outcomes differ between advanced economies and developing countries. In the former girls perform better than boys, whereas they lag behind in the latter. In advanced economies, coming from a disadvantaged socio-economic background has a larger negative effect for male students while in developing countries the negative effect is larger for girls.

1 . The reasons behind the inversed gap in Indonesia will have to be explored further: while these UNESCO data are slightly different than the data for most countries in the table, insofar as they do not include post-graduate degrees, this inconsistency is not likely to explain the gap reversal.

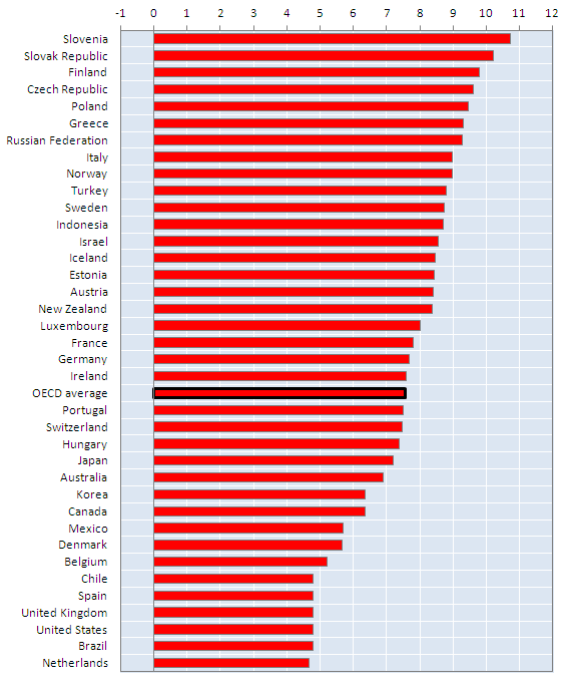
2 . These gender gaps as well as the levels for boys and girls are presented in the Annex to Chapter 1, where they are compared to the OECD average to categorised countries in “above” or “below” groups if they are at least half a standard deviation above or below the OECD average.

Chart 1.1: Gender gaps in education

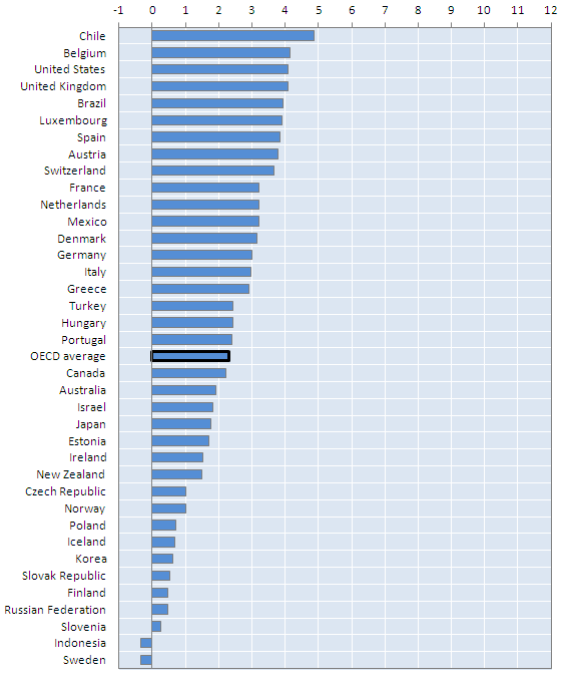
Panel A. Secondary enrolment rate and Tertiary attainment (%)
Male gap to female



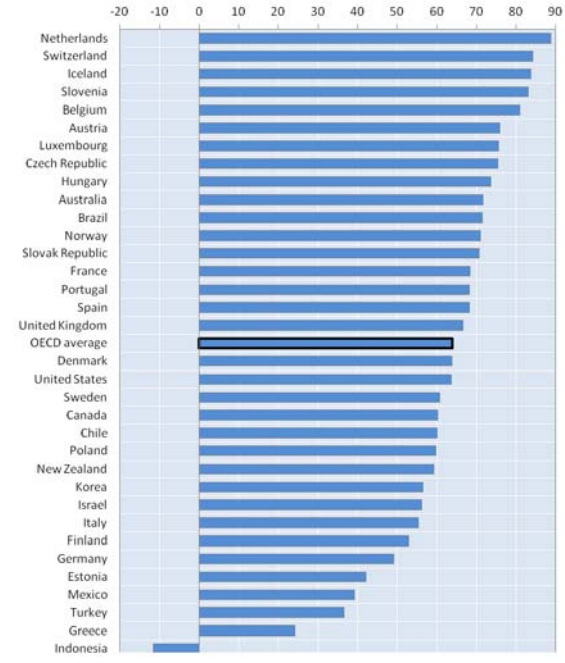
Panel B. PISA reading scores (%)
Male gap to female



Panel C. PISA mathematics scores (%)
Female gap to male



Panel D. Degrees awarded in mathematics and computer science (%)
Female gap to male



Notes: Male to female gaps (red bars) are defined as (female-male)/female; female to male gaps (blue bars) are defined as (male-female)/male. For more detailed notes see Table A1.1, in the Annex to Chapter 1 .
Sources: see Table A1.1, in the Annex to Chapter 1

1.2 Gender differences in education performance

1.2.1 Participation

16. In OECD countries, both boys and girls generally participate in mandatory schooling for at least 10 years from age 5 or 6 onwards and participation in primary and most of secondary education is close to 100% in these countries for both girls and boys.

17. In developing countries in 2008, 78% of girls in primary school age were enrolled in primary education, vis-à-vis 82% of boys. However, enrolment rates in primary education are more unequal in many developing regions (OECD/UNESCO, 2004). On the whole, countries in South Asia, Sub-Saharan Africa and North Africa and the Middle East show the poorest performance in terms of gender equality in participation in primary education, while the CIS, Latin American and Caribbean countries perform above-average for the developing countries. Two factors strongly interact with gender disparities in developing countries: being poor and living in remote areas. A survey of primary-school attendance in 108 developing countries showed that gender parity has been reached in urban areas and among the richest 40% of households, while girls in poor households and rural areas are more likely to be excluded (UN, 2010).

18. Gender disparities in developing countries are often more pronounced in secondary, technical and vocational than in primary education. In South and West Asia, along with sub-Saharan Africa, girls accounted for 44% of students in secondary education in 2007, but just 27% and 39%, respectively, in technical and vocational education (UNESCO Institute for Statistics, 2010). Post-primary education is critical for women's economic empowerment, especially in developing countries where greater participation in quality secondary schooling has strong positive effects on health outcomes for girls, who postpone first childbirth, and better social outcomes via lower infant mortality rates, better nutrition and educational attainment of future generations.

Young people not in education, employment or training

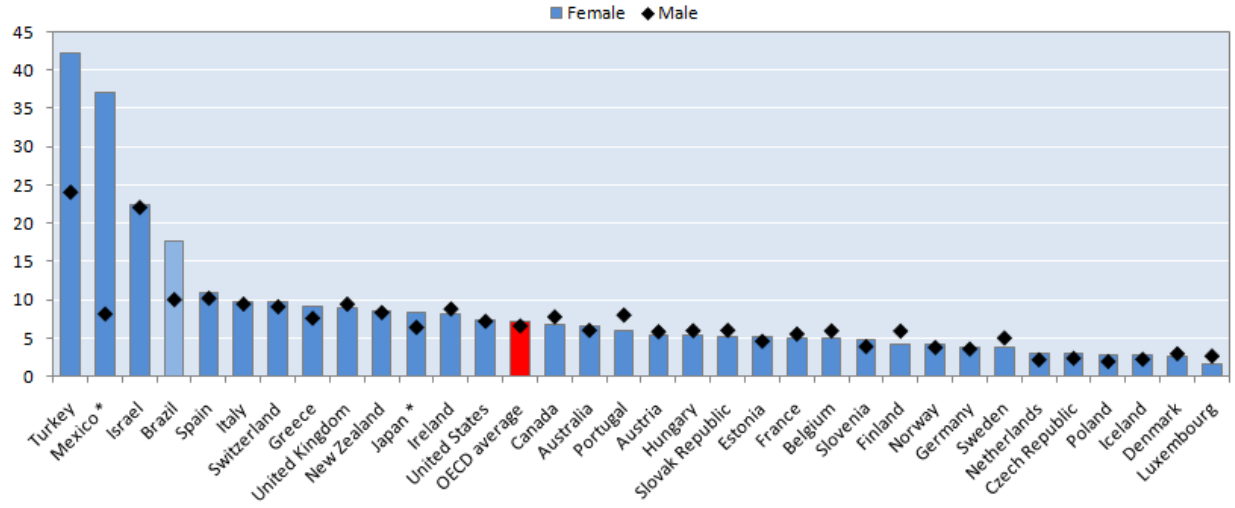
19. Education policies in the OECD encourage young people to complete at least secondary education; attainment levels lower than complete secondary education are associated with high risks of unemployment, labour market marginalisation and social exclusion. A high proportion of young people not in education, employment or training (NEET) contributes to a large pool of low skilled workers and points to issues of school failures and difficult school-to-work transition.

20. The proportion of NEETs varies amongst the OECD countries, as does the gender disparity in NEETs. However, except for Brazil, Mexico and Turkey, the gender gap in NEETs is not substantial as it is within 2 percentage points for most of the countries (Chart 1.2).

21. On average, there are slightly fewer NEETs among boys (6.6%) than among girls (7.1%). However, this result is highly influenced by the relatively high NEET rates recorded for Brazil, Mexico, Israel and Turkey, which have the largest shares of female NEETs. Factors affecting NEET rates often include high participation of youth in the informal sector, negative experiences at school as well as social and behavioural problems. Early marriage or domestic and caring responsibilities are likely causes of high share of female NEET in some countries.

Chart 1.2: There is no clear gender pattern regarding young NEETs

Proportion of young people (aged 15-19 years) not in employment, education or training (NEET), 2008



Note: Countries are ranked in decreasing order of females not in employment, education or training.
* Data refers to those aged 15-24 years in Japan and 15-29 years in Mexico
Source: OECD, 2010a

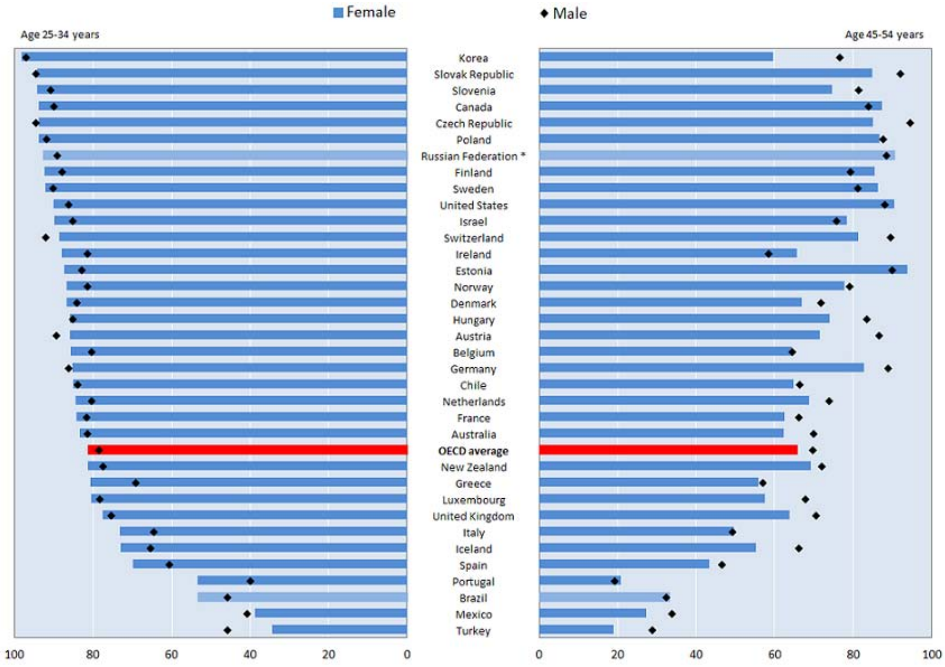
1.2.2 Attainment

22. While gross enrolment rates are a widely available measure of participation in education, they do not capture educational outcomes well as they may be inflated by high repetition rates (see notes to Table A1.2, in the Annex to this chapter). Educational attainment, i.e. the proportion of adults who have completed a given level of education, is thus a better indicator of outcomes.

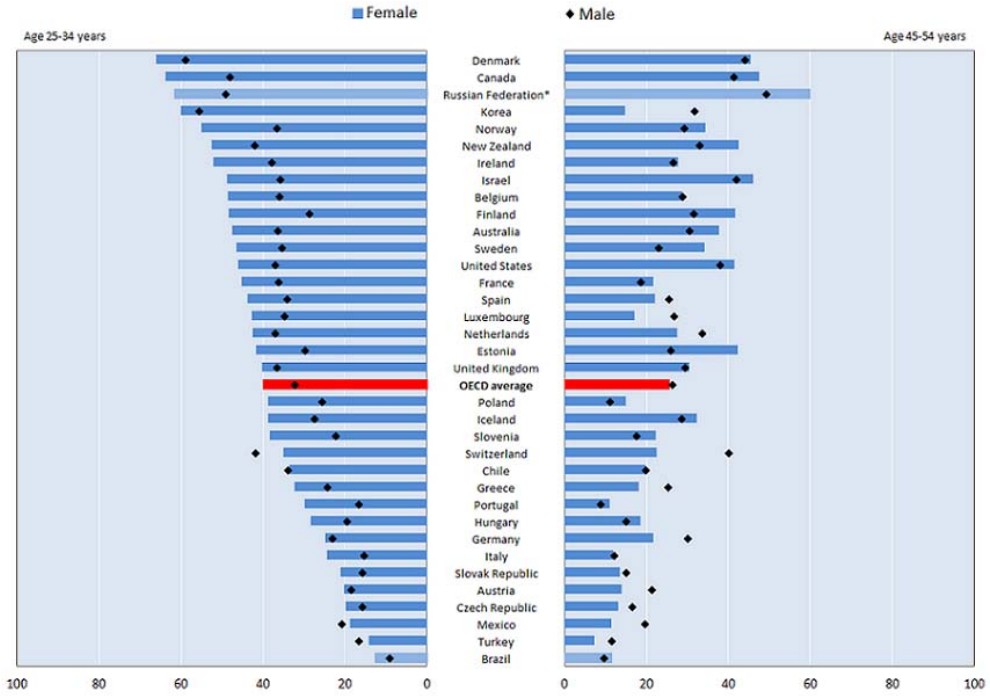
23. There has been progress in attainment levels in secondary and tertiary levels for both men and women in most OECD countries, as illustrated in Chart 1.3 by a comparison of average educational attainments of younger and older age groups. On the whole, women have made more gains than men and many countries have seen a shift in "gender advantage" from men to women. Except for Austria, the Czech Republic, Germany, Mexico, Switzerland and Turkey, secondary education attainment levels of young women (25-34 years) in OECD countries are higher than their male counterparts (Chart 1.2, Panel A) and on average 15 percentage points higher than education attainment levels of women born 20 years beforehand. In the younger cohort, the proportion of adults that completed tertiary education is consistently higher for women than for men in all OECD countries except Chile, Switzerland, Mexico and Turkey (Chart 1.3, Panel B).

Chart 1.3: Younger women are more likely to complete secondary and tertiary education than their male counterparts and women 20 years their senior

Panel A: Proportion of adults with at least upper secondary education, 2008



Panel B: Proportion of adults with tertiary education, 2008



Note: Countries are ranked in decreasing order of the attainment level for adult females aged 25-34 years. Upper secondary education excludes ISCED 3C short programmes. Data available for selected OECD countries only.
* Data refer to 2002.
Source: OECD, 2010a

24. Arguably the change over time has been most dramatic in Korea where educational attainment improved dramatically for both men and women but the gains among women were large enough to close the large gender gap in secondary and tertiary education that existed for the age-cohort 45-54.

25. Concerns are now growing in OECD countries about declining educational attainment of teenage boys, as evidenced by PISA scores. The reasons behind this development are complex and include boys' level of engagement in the learning process but also the ability of schools to motivate their students.

26. Across the world, a focus on the quality of education and efficient management of resources can go a long way in improving educational outcomes for both girls and boys. The quality of education is very important to materialise individual educational and employment aspirations; improvements in quality require above all greater efficiency in the management of existing resources since higher spending per pupil does not automatically improve educational outcomes. A review of education reforms in countries that have high student performance (OECD, 2010b) suggests that a strategy consistently adopted by these countries was to invest in improving the quality of teaching and possibly compensating the cost of higher teacher salaries with larger class sizes.

1.2.3 Increasing participation in developing countries.

27. In developing countries, policies need to target the specific obstacles to female participation in education. These do relate not only to education infrastructure – such as lack of schools, teachers and teaching materials – but also arise from law, health and infrastructure. Social norms and cultural practices, such as early marriage that are prevalent in some regions, can also influence the ability of girls to attend and complete school (OECD Development Centre, 2010). Gender inequality in education is exacerbated by HIV/AIDS, violent conflict, and emergency situations. Effective policies, therefore, need to be multifaceted (World Bank, 2008). At the same time, attention should be paid to maintaining and improving the performance of boys so that they are not left behind, as has happened in many OECD countries.

28. Gender equality in education is a priority for DAC donors. In the period 2008-09, 56% of aid to education targeted gender equality. The share of aid in support of gender equality is higher (65%) in the basic and secondary education sub-sectors, in line with the MDG3 agenda (OECD DCD-DAC Statistics). Donors, however, do not necessarily focus their aid in support of gender equality in regions with lower girls' school enrolment.

29. A number of interventions appear to be successful in raising female enrolment and completion rates in developing countries: reducing user fees, providing school materials, uniforms as well as meals. Addressing concerns about the physical safety of girls attending school (including safe travel) is also important, as is providing proper restroom facilities and training teachers to respond effectively to violence against girls. Some countries have had success by increasing the number of female teachers. Nepal, for example, has made a provision that at least one female teacher be recruited for every primary school and at least one woman be a member of the management committees of institutional and community schools, village management committees and district education committees. Institutional schools are asked to ensure that at least 5 per cent of their scholarships go to girls and other disadvantaged students, while community schools are asked to waive all fees for poor girls (UNDG, 2010).

30. Eliminating user fees for primary education has contributed significantly to the improvement of girls' enrolment in a number of countries (Ethiopia, Ghana, Kenya, Malawi and Mozambique) (UNDG, 2010). User fees are a particular barrier to school attendance for children from poor and/or rural households, girls, orphans, and children with disabilities. The abolition of fees functions most effectively when it is part of a broad government commitment to achieving free universal primary education, even though this will not necessarily remove all costs for parents. Fees for books or uniforms and transport costs

may also be prohibitive for poor families. In Malawi, the policy of free primary schooling was advocated in the early 1990s on the grounds of equity. The country partially abolished fees in the early 1990s and in 1994 the government announced full abolition of all primary school fees for new students. This led to a surge in primary education enrolment, with girls' net enrolment rate rising from 47 per cent in 1991 to 97 per cent in 1999. As a consequence, secondary gross enrolment rates also increased: from 8% in 1991 to 28% in 2005. Importantly, enrolment rates among poorer groups in Malawi increased to a greater extent than among richer groups; however, there remains a wide disparity in girls' secondary enrolment rates between rich and poor households.

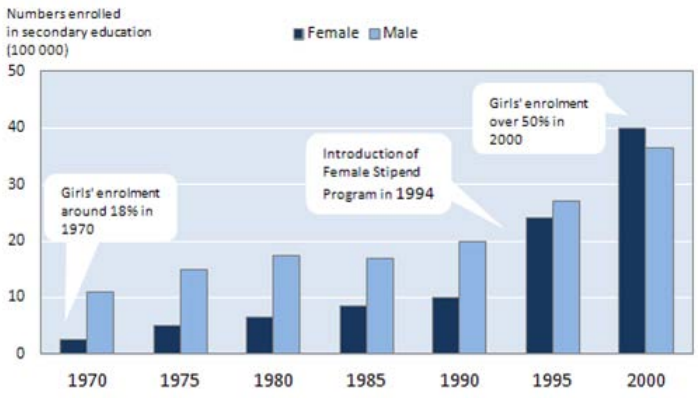
Box 1.1: Raising female participation in secondary education in Bangladesh: the Female Stipend Programme

In developing countries improving female participation in secondary education can discourage early marriages and promote gender equality in education and employment. When Bangladesh gained independence in 1971, female secondary school participation was particularly low, with less than 1 in 5 girls of secondary school-age enrolled in education. Following several programmes to help raise overall enrolment (Ahmed and Ahmed, 2002), the Bangladeshi government introduced a national programme in 1994 aimed specifically at raising female secondary school participation, the Female Stipend Programme (FSP).

Under the FSP, all girls in rural areas who enter secondary school are eligible for a monthly sum ranging from Taka 25 in Class 6 (start of secondary schooling) to Taka 60 in Class 10 (end of lower secondary schooling). Girls receive additional payments in Class 9 for new books and in Class 10 for exam fees. Receipt of payment is conditional on (i) a 75% attendance rate; (ii) a score of 45% or greater in annual school exams; and (iii) staying unmarried until the completion of the Secondary School Certificate (national exam at the end of lower secondary school) or age 18.

Although female enrolment increased steadily during the first twenty years following Bangladesh's independence, there was a particularly large increase in 1995 following the introduction of the FSP (see chart). Since then, girls' enrolment has caught up and overtaken boys' enrolment with more than half all secondary school-aged girls enrolled in education by 2000.

Secondary education enrolment in Bangladesh, 1970-2000



Source: Banbeis, 2003 (adapted from Ray nor and Wesson, 2006).

31. Conditional cash transfers can also be used as a mechanism to improve retention rates of girls in primary and secondary schools, contributing to improved health outcomes for girls and helping to transform discriminatory social institutions such as early marriage. For example, programmes such as *Bolsa Familia* in Brazil and *Juntos* in Peru include cash transfers paid to mothers on the condition of their daughters' continued school attendance. *Oportunidades* in Mexico provides more cash for daughters than sons, in order to increase incentives for them to attend school. In India, a conditional cash transfer scheme, *'Dhan Laxmi'*, provides financial incentives to families (usually the mother) on the fulfilment of specific

conditions such as birth registration, immunisation, school enrolment and insurance coverage, but only if the girl remains unmarried until the age of 18.[3]

1.3 Gender patterns in literacy skills and choices of field of study

1.3.1 Gender differences in student performance at age 15

32. The gender gaps in cognitive skills are similar across countries: as noted above, on average 15-year-old boys perform better in mathematics whereas girls perform better in reading. Moreover, the advantage of girls in reading is larger than the advantage of boys in mathematics. The gender differences in the performance of girls and boys in science are instead less significant (Chart 1.4). Gender gaps in reading – but not in mathematics and sciences – emerge early. In tests administered in grade 4 (i.e. in primary education) girls already perform better than boys in reading while no significant gender differences are found in performance in science and mathematics.[4] The appearance of gender differences in mathematics between primary and secondary education could be related to different factors including: a relative improvement in boys' academic performance, girls losing interest in mathematics or inconsistencies between tests in primary and secondary school age.

33. The widest gender gaps in reading (in favour of girls) are observed in Slovenia and Jordan, whereas the most pronounced gender disparities in mathematics (in favour of boys) are seen in Chile.

34. The pattern observed for average scores in the PISA tests is reinforced when examining the scores of the top and bottom performers. Top performers in the PISA mathematics and sciences tests are predominantly boys, while the top performers in the reading test are girls. In most countries, there are more girls than boys among bottom performers in mathematics but the gender gap is less significant than among the top performers (Chart 1.5).

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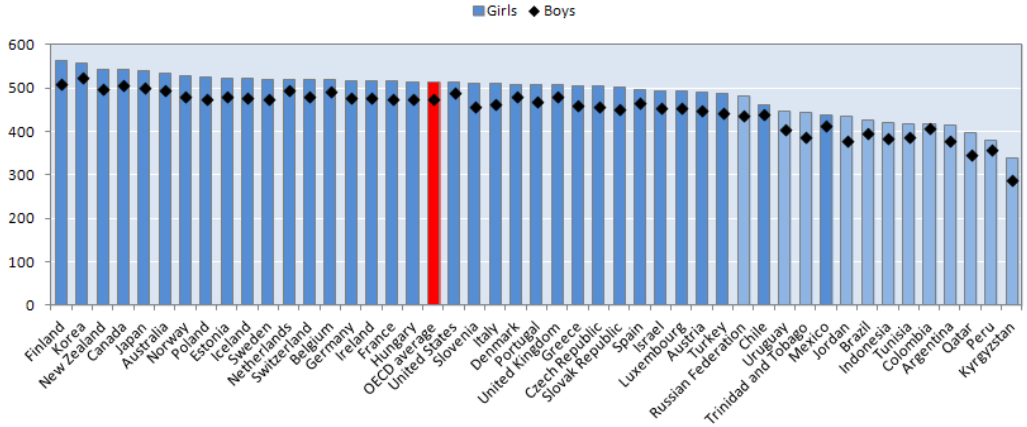
[3] Care should be taken in designing conditional cash transfers programmes so that they do not reinforce traditional gender roles by imposing additional constraints on women's time such as complicated and lengthy application procedures; women frequently end up accompanying children to medical checkups and participatory requirements; programmes may expect mothers to "volunteer" help with certain community-related tasks (e.g. cleaning schools).

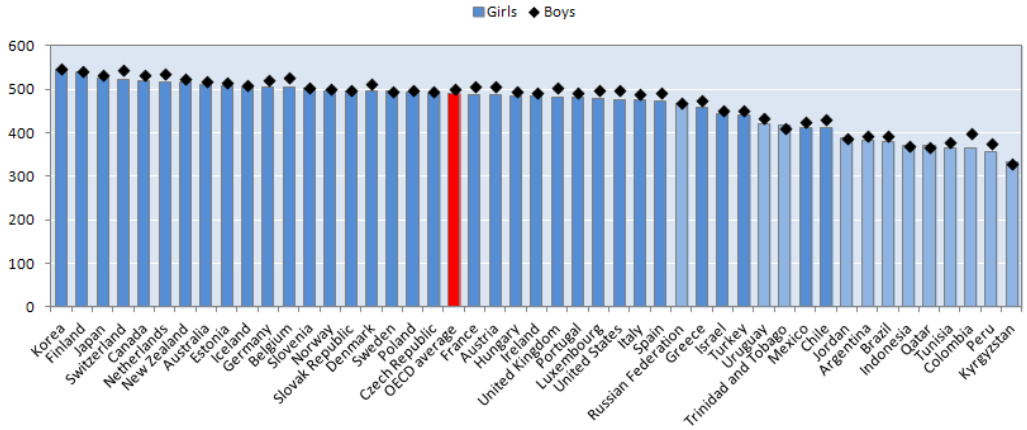
[4] Reading performance at grade 4 is measured in the latest cycle of the Progress in International Reading Literacy Study (PIRLS); mathematics and science performance at grade 4 is measured in the latest cycle of the Trends in International Mathematics and Science Study (TIMSS). Both studies are conducted by the International Association for the Evaluation of Educational Achievement (IEA).

Chart 1.4: Girls read better than boys, while gender differences in mathematics and science are relatively small

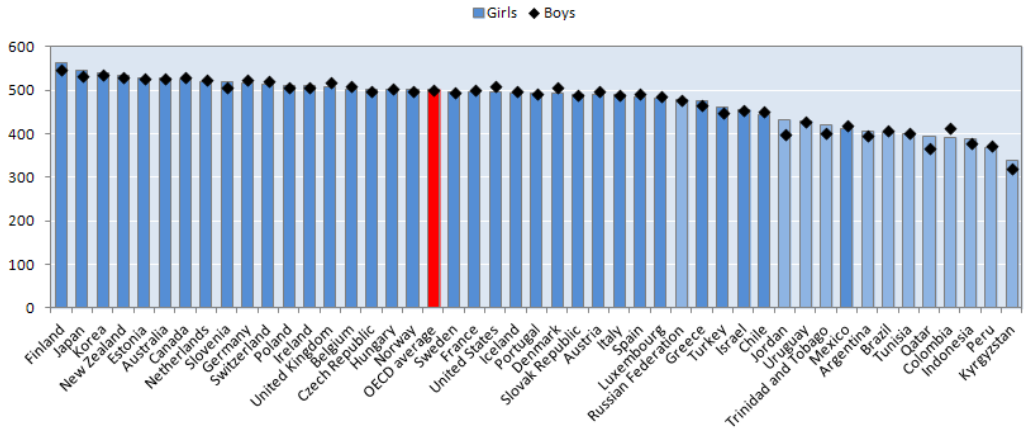
Panel A: PISA mean scores in reading, 2009



Panel B: PISA mean scores in mathematics, 2009



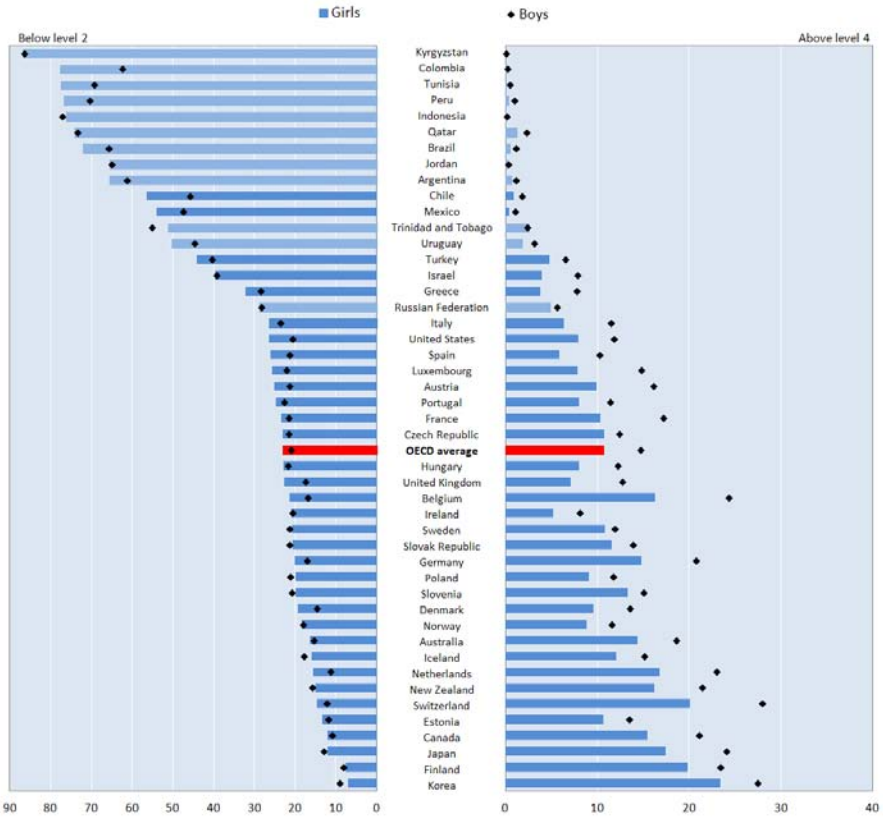
Panel C: PISA mean scores in science, 2009



Note: Countries in each Panel are ranked in decreasing order of girls' mean scores.
Source: *OECD PISA Database* (www.oecd.org/edu/pisa/2009)

Chart 1.5: Boys outperform girls in mathematics

Top and bottom performers of PISA mathematics scales, 2009



Note: Countries are ranked in decreasing order of girls scoring below level 2.
Bottom performers (below level 2) are those with scores of less than 420.07 on the mathematics scale. Top performers (above level 4) are those with scores above 606.99 on the mathematics scale.
Source: *OECD PISA Database* (www.oecd.org/edu/pisa/2009)

1.3.2 Gender differences in financial literacy

35. Women are less likely than men to have a good knowledge of financial concepts, as shown in the initial results of the OECD International Network on Financial Literacy (INFE) survey and available national surveys. Compared with men, they are also less confident in performing financial computations and less likely to take risks when investing their own money. For example, in Ireland 71% of women (81% of men) gave correct responses to financial knowledge questions; and 49% of women (38% of men) disagreed with risking their resources for investment purposes. In addition, women are less likely to keep up to date with financial and economic news than men.

36. The weaker financial knowledge of women puts them at a disadvantage in their ability to build personal wealth and choose the right financial instruments to meet their current and future needs. The risk of under-saving for retirement is also of particular concern to women since they are more vulnerable to old-age poverty, partly due to their longer average life expectancy.

37. Financial literacy has also important consequences for entrepreneurial activity. The prevalent use of conservative financial instruments by women entrepreneurs can also be explained by women's generally lower levels of financial literacy and of confidence in dealing with financial issues. Furthermore, financial

literacy affects the quality of application for funding, and, as a consequence, the likelihood of rejection by financial intermediaries.

38. The attainment of financial literacy for most people is a cumulative and lifelong process; hence it is important to integrate financial education in schools to equip boys and girls with the necessary knowledge that they can build on throughout their lives.[5] In addition to school programmes, the design and implementation of specific financial education programmes for men and women (and particularly vulnerable groups) should be supported to enhance their level of confidence and knowledge on critical financial issues for them. This could help to encourage higher savings and improve the quality of their investments, promoting a financially secure retirement and improving the ability to participate more dynamically in economic activities.

1.3.3 Gender differences in field of tertiary education

39. Even though tertiary attainment rates of women are now equal to or exceed those of men in OECD countries and beyond, there is a persistent gender bias in the choice of discipline. Women still engage in different fields of study than men and are mostly under-represented in the STEM fields (mathematics, technology, engineering and science), as shown in Chart 1.6. At the postgraduate level, the share of women in these fields declines further and yet again in the transition to the workplace.

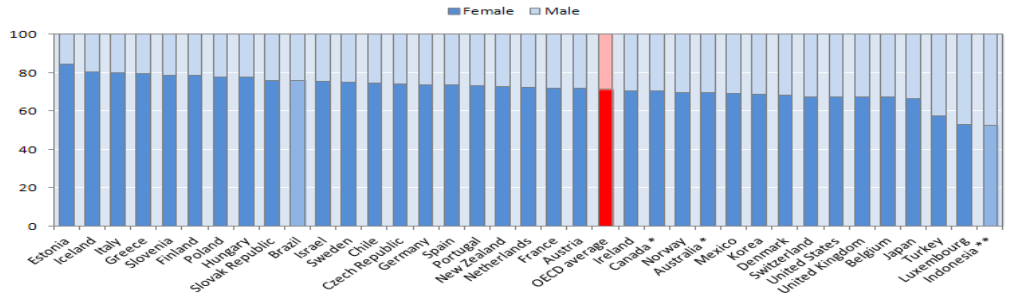
40. In OECD countries the large majority of degrees in humanities and health are awarded to women (average of 71%) while the majority of degrees in mathematics and engineering degrees are awarded to men (average of 75%). The gender gap in engineering, manufacturing and construction degrees is particularly large in Japan where only 11% of graduates are female. For mathematics and computer science degrees, the largest gender disparity is observed in the Netherlands with only 10% of female graduates. Indonesia has the most balanced distribution of female and male graduates across the subject areas with a slightly higher proportion of females graduating in all disciplines.

41. If policy were able to attract and retain more women in the STEM workforce, this would increase the number of scientists and engineers overall – thus promoting research, innovation and, ultimately, long-term growth. Such policies would also help reduce occupational segmentation in the labour force and improve gender equity in labour market outcomes overall (Finnie and Frenette, 2003; AAUW, 2010). Attracting female students to these fields will not be enough to remove gender inequalities in scientific careers: in the academic sector, women tend to be concentrated in the lowest academic ranks and they progress more slowly than men (Research Council of Canada, 2010; Mavriplis et al, 2010; and Observa, 2010). The European Commission project "Practising Gender Equality in Science" (PRAGES), led by Italy's Department for Equal Opportunities, has taken stock of programmes and initiatives aimed at promoting gender equality in scientific research within public institutions in Europe, North America and Australia. The guidelines produced within the project highlight the importance of: creating an enabling working environment (through change in the work culture, support of work-life balance for all and early-stage career development); including the gender dimension in the research process itself; and promoting women in scientific leadership positions.

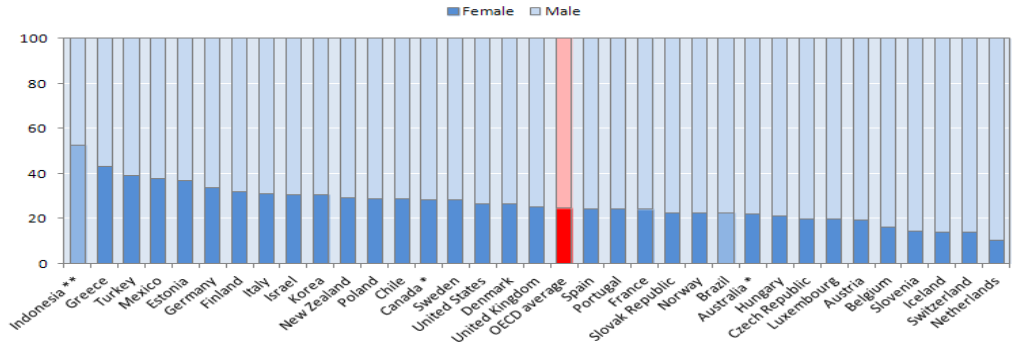
5 . This was recommended in the OECD 2005 Recommendation on Principles and Good Practices for Financial Awareness and Education and is also the subject of the INFE Guidelines on Financial Education at School (2011).

Chart 1.6: Females dominate the humanities and health degrees whereas more males are awarded mathematics and engineering degrees

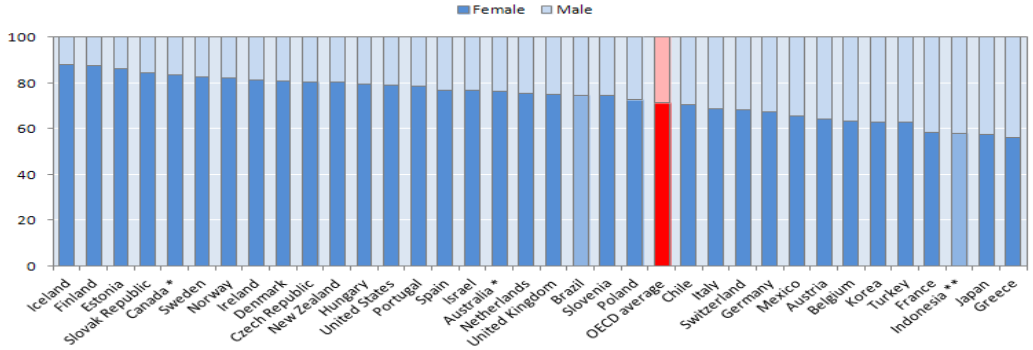
Panel A: Proportion of males and females awarded tertiary degrees in humanities, arts, education, 2008



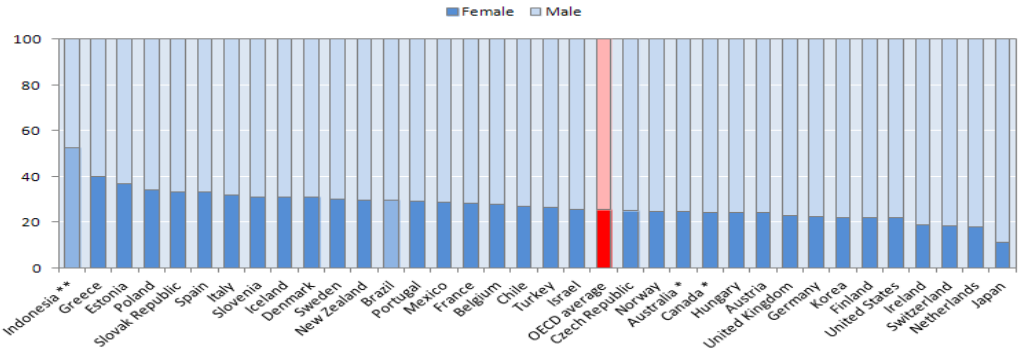
Panel B: Proportion of males and females awarded tertiary degrees in mathematics, computer science, 2008



Panel C: Proportion of males and females awarded tertiary degrees in health and welfare, 2008



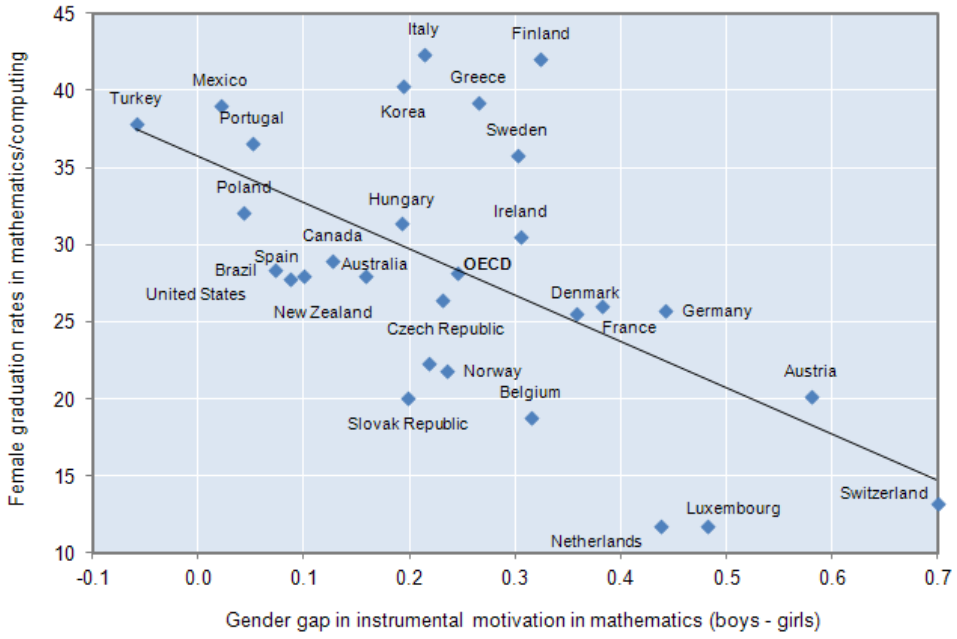
Panel D: Proportion of males and females awarded tertiary degrees in engineering, manufacturing, construction, 2008



Note: Countries are ranked in each panel in descending order of the proportion of females awarded degrees.
* Data refer to 2007; ** Data for advanced research programmes are partial.
Source: OECD, 2010a

42. Analysis of PISA results supports the premise that, at the aggregate level, gender differences in educational choices are not significantly related to ability and performance in the corresponding subject (OECD, 2010c). They appear to be more related to students' subject-related attitudes, i.e. their interest in and enjoyment of the subject and their motivation to study it (Chart 1.7) .

Chart 1.7: Motivation and studies



Note: The index of instrumental motivation is related to the student's perception that mathematics will be useful in the field of study and the job the student intends to pursue. (For further details refer to *Education at a Glance 2007*, www.oecd.org/edu/eag2007)".

Source: OECD, 2007a

43. To the extent that gender differences in the choice of field of study are the result of personal preferences, they would not need to be addressed by policy makers. However, the fact that gender gaps in performance are smaller than gender gaps in attitudes leads experts to believe that choices in tertiary education are partly affected by gender stereotyping, within and outside the school (Sikora and Pokropek, 2011).

44. Thus, wider action is needed to combat gender stereotyping in education. Teachers should be encouraged to consider the expectations that they have of students and to adopt strategies and materials that raise self-confidence and motivation of boys in reading and girls in science and mathematics. Early interventions work best, because gender differences in preferences are already well-established by age 15. Policies in this area should rest on the co-ordinated efforts of educators, teachers and parents. Mexico, for example, has earmarked funding to incorporate the gender dimension in educational programmes and initiatives; the content of free textbooks for primary education has been analysed from a gender equality perspective, teachers and school administrators were also trained to think and act consistently with gender equality principles.[6]

6 . Some initiatives also encourage students to thinks about and discuss gender issues. For example, Mexico funds after-school activities for adolescents (arts, sports, cultural debates) to prevent and reduce violence

45. The strong feminisation of the teaching profession up to lower secondary education in OECD countries might also be relevant. Surveys conducted in Canada, [7] for example, reveal that students believe that their teachers (as well as their parents and friends) influence their perception of science. In OECD countries, on average 81% of primary teachers and 67% of lower secondary teachers are women. The share of women decreases to 54% in upper secondary education and to 40% in tertiary education (OECD 2010a, Table D7.2). In developing countries, on the other hand, men dominate among teachers and this is thought to discourage girls from attending school and engaging actively in learning. Norway's "Action Plan for Gender Equality in Kindergarten and Basic Education 2008-2010", for example, addresses this issue by recommending "a better gender balance among members of staff in kindergarten and in basic education". UNESCO has developed a training manual for educators on how to integrate a gender perspective that combats stereotypes in curriculum development for use in Zimbabwe, Mali and Zambia.[8]

46. Campaigns to interest young women to enter traditionally masculine fields of employment can also be effective in reducing gender segregation in field of study but they should be matched by campaigns to encourage young men to enter "feminised" professions. The lack of professional role models for girls in STEM fields is believed to be another reason why relatively few girls enter such careers. Research indicates that having female role models in professions typically dominated by men is important. Initiatives to make the existing examples and role models more salient to girls could help, and the same should hold for boys in terms of traditional feminine occupations.

47. To be effective, policies and initiatives to address stereotyping in education should not be conceived as isolated initiatives and should be complemented by more general efforts to combat gender stereotyping in social, cultural and economic factors. In particular, the messages delivered by these initiatives should also not be at odds with the messages that children and adolescents absorb through the media and by observing the actual patterns of employment.

48. Different inputs and features of education systems may also somewhat tilt the balance in favour of one gender or the other and translate into different outcomes for boys and girls. The organisation of educational systems is one example: the timing and extent of streaming and tracking of students into different pathways and institutions is likely to disadvantage more boys than girls in OECD countries.

1.3.4 Linkages between field of study in tertiary education and occupation

49. A priori, the different choices of fields of study by men and women may relate to differences in subject-related preferences, performance and different expectations about labour market outcomes. Regardless of their preferred subjects, girls might not consider choosing education careers that lead to occupations where few women are employed or to occupations that are perceived to be difficult to combine with family life.

50. An empirical analysis of labour market outcomes[9] for a cross-national sample of college students commissioned by the OECD and the World Bank sheds more light on the linkages between gender

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against women; the Department for Equal Opportunities in Italy has announced funding for programmes on gender differences in secondary public schools.

7 . The "National Angus Reid Vision Critical Survey", by Let's Talk Science and Amgen Canada Inc., and the "Canadian Youth Science Monitor" by Ipsos Reid.

8 . For the training manual, http://unesdoc.unesco.org/images/0013/001376/137604eo.pdf; for other curricula : http://www.un.org/womenwatch/daw/csw/csw55/Online-discussion-report-CSW55-Eng.pdf

9 . Flabbi (2011, forthcoming) uses data from the Reflex survey, which looks at labour market outcomes for tertiary education graduates (ISCED 5A degrees) about 5 years after their graduation, and therefore strictly

differences in performance in education, career choices in tertiary education and subsequent labour market outcomes. Its initial findings include:

- Women are slightly more likely than men to obtain a tertiary degree but these are more often in the first level of tertiary education (e.g. Bachelor) than in the post-graduate level (e.g. Masters or Ph.D.).

- Most of the individuals in the survey work as professionals or skilled technicians, with a few holding less skilled positions (clerks) and a negligible minority holding more senior positions – which is consistent with the fact that the survey covers college graduates with about five years of work experience. Within these occupation categories, more men than women work in senior and professional positions.

- Gender is a significant determinant of the choice of field of study, even when ability, the perceived quality of the programme and family background[10] are controlled for. The "quality" of the programme has a positive effect on choosing sciences but negative on choosing humanities and "ability" has a slightly larger effect on the choices made by men compared with those made by women.

- Focussing only on professional and skilled technicians, there are strong asymmetries by gender in the correlation between field of study and occupation. Almost 70% of the female graduates from the field of humanities work as teachers compared with about 50% of the male graduates. Most of the differences concern teaching occupations and professions related to physics, mathematics and engineering. The majority (about 55%) of the male graduates in sciences work as professionals in physics, mathematics and engineering as opposed to 33% of the female graduates. Overall, only 7.5% of women work in these fields while physics, mathematics and engineering is the second favourite field for men. Women are more concentrated in teaching (Table 1.1).

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focuses on skilled workers. Fourteen countries are covered: Austria, Belgium (only Flanders), Finland, France, Germany, Italy, the Netherlands, Norway, Spain, UK, Czech Republic, Portugal, Japan and Estonia.

10 . Ability is proxied by secondary school graduation rate; family background is proxied by maternal education level; the perceived quality of the programme is gauged by asking respondents whether they consider the programme as "demanding", "broad" or "prestigious".

Table 1.1: Occupation choice by field of study completed for professionals and technicians - Male and Female

Percentage of graduates by field in each occupation (first job after graduation)

Occupation:	**Physics, mathematics and engineering**	**Life science and health**	**Teaching**	**Other**	**Total**
Field of study, Males					
humanities	7.94	0.89	52.36	38.80	100.00
social sciences	13.40	1.14	7.71	77.75	100.00
Science	55.32	18.40	13.80	12.49	100.00
Health	8.35	76.56	3.12	11.97	100.00
Total	23.03	15.44	16.79	44.74	100.00
Field of study, Females					
humanities	1.98	1.70	68.43	27.89	100.00
social sciences	5.45	2.43	11.42	80.70	100.00
Science	33.65	28.91	22.12	15.32	100.00
Health	5.61	69.89	5.15	19.35	100.00
Total	7.54	21.06	29.92	41.48	100.00

Notes: Occupations are the *sub-major groups* from the International Standard Classification of Occupations. Examples of occupations at the *minor group* level that correspond to the *sub-major group* level occupation *other* are: Business and legal professionals, creative professionals, finance and sales associate professionals.

Source: Flabbi (2011, forthcoming)

ANNEX TO CHAPTER 1: BACKGROUND DATA ON EDUCATION

Table A1.1 presents some key indicators for OECD and selected emerging economies to illustrate gender gaps in participation, attainment, performance in education as well as in the field of study.[11] For each indicator, Table A1.1 also compares gender gaps to the average OECD gender gap and categorises countries in "above" or "below" groups if they are at least half a standard deviation above or below the OECD average gap. Gender equality is achieved in a selected dimension when the gender gap is equal to zero. A gender gap around the OECD average indicates that the gender gaps in a country are close to the average gaps in the OECD. An above-average female to male gap means that gaps are larger than in the OECD, to the disadvantage of women; a below-average female to male gap implies that gaps are smaller than in the OECD to the advantage of women (even though women might be still faring worse than men in the country according to the indicator). The reverse is true for male to female gaps.

Gender gaps in enrolment in primary education are close to zero (i.e. gender equality) and to the OECD average. The gaps start diverging for enrolment in secondary education and become quite diverse in tertiary education attainments. Gender gaps in the field of study are also different than zero; gender gaps in the proportion of degrees awarded in mathematics and computer science are especially large and varied. Overall, however, in the OECD there is no country for which gender gaps in education deviate more than half a standard deviation from OECD average along all dimensions considered (i.e. there is no country with non-white circles). Gender gaps in emerging economies tend to be larger and, in fact, Brazil deviates substantially from the OECD average along all dimensions considered.

Table A1.2 presents the male and female levels used to compute gender gaps in Table A1.1.

11 . These indicators, except for primary enrolment rates, were also represented in Chart 1.1.

Table A1.1: Gender gaps in education compared with the OECD

	Primary education enrolment rate (gross)[1]	Secondary education enrolment rate (gross)[1]	Proportion of adults with tertiary education[2]	PISA reading scores[3]	PISA mathematics scores[4]	Proportion of mathematics and computer science degrees awarded[5]
	*2008**	*2008**	*2008***	*2009*	*2009*	*2008****
	Female gap to male (%) (male-female)/male	*Male gap to female (%) (female-male)/female*	*Male gap to female (%) (female-male)/female*	*Male gap to female (%) (female-male)/female*	*Female gap to male (%) (male-female)/male*	*Female gap to male (%) (male-female)/male*
OECD Average (intervals)	**+1 (+/- 1)**	**0 (+/- 2)**	**+19 (+/- 8)**	**+8 (+/- 1)**	**+2 (+/- 1)**	**+64 (+/- 7)**
Australia	○ 0	⊛ -5	○ +23	⊛ +7	○ +2	● +72
Austria	○ +1	⊛ -4	⊛ +8	○ +8	● +4	● +76
Belgium	○ 0	⊛ -3	○ +25	⊛ +5	● +4	● +81
Canada	○ 0	○ 0	○ +24	⊛ +6	○ +2	○ +60
Chile	● +5	● +3	⊛ -1	⊛ +5	● +5	○ +60
Czech Republic	○ +1	○ +1	○ +20	● +10	○ +1	● +75
Denmark	⊛ -1	● +3	⊛ +11	⊛ +6	● +3	○ +64
Estonia	○ +1	● +3	● +28	○ +8	○ +2	⊛ +42
Finland	○ +1	● +5	● +40	● +10	⊛ 0	⊛ +53
France	○ +1	○ 0	○ +20	○ +8	● +3	○ +68
Germany	○ 0	⊛ -3	⊛ +7	○ +8	○ +3	⊛ +49
Greece	⊛ 0	○ 0	○ +24	● +9	○ +3	⊛ +24
Hungary	○ +1	○ -2	● +31	○ +7	○ +2	● +74
Iceland	⊛ 0	● +3	● +29	○ +8	⊛ +1	● +84
Ireland	⊛ -1	● +6	● +27	○ +8	○ +2	
Israel	⊛ -1	○ +1	○ +27	○ +9	○ +2	⊛ +56
Italy	○ +1	○ -1	● +37	○ +9	○ +3	⊛ +55
Japan	⊛ 0	○ 0		○ +7	○ +2	
Korea	○ +2	⊛ -4	⊛ +7	⊛ +6	⊛ +1	⊛ +56
Luxembourg	⊛ -1	● +3	○ +18	○ +8	● +4	● +76
Mexico	○ +2	● +6	⊛ -12	⊛ +6	● +3	⊛ +39
Netherlands	○ +2	○ -2	○ +13	⊛ +5	● +3	● +89
New Zealand	⊛ 0	● +5	○ +20	○ +8	○ +1	○ +59
Norway	⊛ 0	⊛ -2	● +33	○ +9	⊛ +1	○ +71
Poland	○ +1	○ -1	● +34	● +9	⊛ +1	○ +60
Portugal	● +5	● +5	● +44	○ +7	○ +2	○ +68
Slovak Republic	○ +1	○ +1	○ +25	● +10	⊛ +1	○ +71
Slovenia	○ +1	○ -1	● +42	● +11	⊛ 0	● +83
Spain	○ +1	● +6	○ +22	⊛ +5	● +4	○ +68
Sweden	○ +1	○ -1	○ +24	○ +9	⊛ 0	○ +61
Switzerland	○ 0	⊛ -5	⊛ -19	○ +7	● +4	● +84
Turkey	● +3	⊛ -13	⊛ -16	○ +9	○ +2	⊛ +37
United Kingdom	○ 0	● +2	⊛ +9	⊛ +5	● +4	○ +67
United States	⊛ -1	○ -1	○ +20	⊛ +5	● +4	○ +64
Russian Federation	⊛ 0	⊛ -3	○ +20	● +9	⊛ 0	
Brazil	● +7	● +10	● +29	⊛ +5	● +4	● +71
China	⊛ -4	● +5				
India	● +3	⊛ -14				
Indonesia	● +3	○ -1		○ +9	⊛ 0	⊛ -12
South Africa	● +4	● +4				

● Above the OECD average ○ Around the OECD average ⊛ Below the OECD average

Notes: To facilitate interpretation, gender gaps are here defined as the difference in scores of men and women relative to the male score for indicators where men have the highest scores on average, (i.e. enrolment in primary education, PISA mathematics scores and the proportion of awarded degrees in mathematics and computer sciences), and the difference in scores between women and men relative to female scores when female scores are highest on average (i.e. enrolment in secondary education, proportion of adults with tertiary education and PISA reading scores).
The OECD average is calculated as the unweighted average for OECD countries for which data are available. Countries are categorised in "above" or "below" groups if they are at least half a standard deviation above or below the OECD average.

1) Primary/secondary gross enrolment ratio is defined as the number of pupils (of any age) who are enrolled in primary/secondary education as a percentage of the total children of official primary/secondary school age population.
(2) PISA reading literacy is scored based on a weighted OECD average of 500 and standard deviation of 100: the unweighted OECD average for all countries for girls is 513.
(3) PISA mathematics ability is scored based on a weighted OECD average of 500 and standard deviation of 100: the unweighted OECD average for all countries for girls is 490.
(4) PISA science ability is scored based on a weighted OECD average of 500 and standard deviation of 100: the unweighted OECD average for all countries for girls is 501.
(5) Refers to ISCED levels 5 and 6. Adults here refer to the cohort aged 25-34 years.
(6) Programmes awarded at the tertiary level (ISCED levels 5 and 6).

* 2006 for Canada; 2007 for Greece; ** 2002 for the Russian Federation; *** 2007 for Australia and Canada. Data for advanced research programmes are partial for Indonesia.
Sources: UNESCO Institute for Statistics, *Beyond 20/20 WDS Indicators*, retrieved February 2011; OECD (2010a), PISA 2009 Results: What Students Know and Can Do, www.oecd.org/edu/pisa/2009; and OECD (2010a).

Table A1.2: Primary and secondary education enrolment, PISA mean scores in reading, mathematics and science, and tertiary education attainment overall and in mathematics and computer science, by gender

	Primary education enrolment rate (gross)[1]		Secondary education enrolment rate (gross)[1]		PISA reading scores[2]		PISA mathematics scores[3]		PISA science scores[4]		Proportion with tertiary education[5]		Proportion of mathematics and computer science degrees awarded[6]	
	2008*		2008*		2009		2009		2009		2008**		2008***	
	Male	Female	Male	Female	Boys	Girls	Boys	Girls	Boys	Girls	Male	Female	Male	Female
OECD Average	**103**	**102**	**103**	**104**	**474**	**513**	**501**	**490**	**501**	**501**	**31**	**40**	**74**	**26**
Australia	106	105	153	146	496	533	519	509	527	528	37	48	78	22
Austria	100	99	102	98	449	490	506	486	498	490	19	20	81	19
Belgium	103	103	110	107	493	520	526	504	510	503	36	48	84	16
Canada	99	98	100	100	507	542	533	521	531	526	48	64	72	28
Chile	109	104	89	92	439	461	431	410	452	443	34	34	71	29
Czech Republic	103	103	94	96	456	504	495	490	498	503	16	20	80	20
Denmark	98	99	117	121	480	509	511	495	505	494	59	66	73	27
Estonia	101	99	98	101	480	524	516	508	527	528	30	42	63	37
Finland	98	97	108	113	508	563	542	539	546	562	29	48	68	32
France	111	109	113	113	475	515	505	489	500	497	36	45	76	24
Germany	105	105	103	100	478	518	520	505	523	518	23	25	66	34
Greece	101	101	99	99	459	506	473	459	465	475	24	32	57	43
Hungary	100	98	98	97	475	513	496	484	503	503	20	28	79	21
Iceland	98	98	108	112	478	522	508	505	496	495	28	39	86	14
Ireland	105	105	111	119	476	515	491	483	507	509	38	52	-	-
Israel	110	111	89	91	452	495	451	443	453	456	36	49	70	30
Italy	104	103	101	100	464	510	490	475	488	490	15	24	69	31
Japan	102	102	101	101	501	540	534	524	534	545	-	-	-	-
Korea	106	104	99	95	523	558	548	544	537	539	56	60	70	30
Luxembourg	100	101	95	98	453	492	499	479	487	480	35	43	80	20
Mexico	115	113	87	93	413	438	425	412	419	413	21	19	62	38
Netherlands	108	106	122	120	496	521	534	517	524	520	37	42	90	10
New Zealand	101	101	115	122	499	544	523	515	529	535	42	53	71	29
Norway	99	99	113	110	480	527	500	495	498	502	37	55	77	23
Poland	97	96	100	99	476	525	497	493	505	511	26	39	71	29
Portugal	117	112	101	107	470	508	493	481	491	495	17	30	76	24
Slovak Republic	103	102	92	93	452	503	498	495	490	491	16	21	77	23
Slovenia	98	97	97	97	456	511	502	501	505	519	22	38	86	14
Spain	107	106	117	123	467	496	493	474	492	485	34	44	76	24
Sweden	95	95	104	103	475	521	493	495	493	497	35	46	72	28
Switzerland	103	103	98	94	481	520	544	524	520	512	42	35	86	14
Turkey	101	98	87	77	443	486	451	440	448	460	17	14	61	39
United Kingdom	106	106	98	100	481	507	503	482	519	509	37	40	75	25
United States	98	99	94	94	488	513	497	477	509	495	37	46	73	27
Russian Federation	97	97	86	84	437	482	469	467	477	480	49	62	-	-
Brazil	132	123	96	106	397	425	394	379	407	404	9	13	78	22
China	111	116	74	78	-	-	-	-	-	-	-	-	-	-
India	115	111	64	56	-	-	-	-	-	-	-	-	-	-
Indonesia	121	118	75	74	383	420	371	372	378	387	-	-	47	53
South Africa	105	101	91	94	-	-	-	-	-	-	-	-	-	-

Notes: (1) Primary/secondary gross enrolment ratio is defined as the number of pupils (of any age) who are enrolled in primary/secondary education as a percentage of the total children of official primary/secondary school age population.
(2) PISA reading literacy is scored based on a weighted OECD average of 500 and standard deviation of 100: the unweighted OECD average for all countries for girls is 513.
(3) PISA mathematics ability is scored based on a weighted OECD average of 500 and standard deviation of 100: the unweighted OECD average for all countries for girls is 490.
(4) PISA science ability is scored based on a weighted OECD average of 500 and standard deviation of 100: the unweighted OECD average for all countries for girls is 501.
(5) Refers to ISCED levels 5 and 6. Adults here refer to the cohort aged 25-34 years.
(6) Programmes awarded at the tertiary level (ISCED levels 5 and 6).

* 2006 for Canada; 2007 for Greece; ** 2002 for the Russian Federation; *** 2007 for Australia and Canada. Data for advanced research programmes are partial for Indonesia.

Sources: UNESCO Institute for Statistics, *Beyond 20/20 WDS Indicators*, retrieved February 2011; OECD (2010a), PISA 2009 Results: What Students Know and Can Do, www.oecd.org/edu/pisa/2009; and OECD (2010a).

CHAPTER 2: GENDER EQUALITY IN EMPLOYMENT

2.1 A snapshot of gender differences in employment outcomes

51. Higher educational attainment rates amongst women have contributed to their greater economic independence in many OECD countries and beyond. Today, women are entering the labour force in greater numbers and are staying employed longer over their life course. Yet, despite recent progress, gender differences still persist in labour force participation, hours spent in paid and unpaid work, employment conditions and earnings.

52. These gender gaps for OECD and selected emerging economies have been captured in Chart 2.1. The gender gap is defined as the difference between men and women relative to men for indicators where, at the OECD average, men score higher than women (i.e. the employment to population ratio, its full-time equivalent and median earnings). The gap is defined as the difference between women and men relative to women for indicators where women score higher than men (i.e. share of temporary employment and time spent on unpaid work). As an example, in Australia, men have a 15% advantage over women in terms of the employment to population ratio, a 36% advantage when the ratio is adjusted for hours of work, and a 12% advantage in median earnings (i.e. the employment to population ratio of women is 85% of that of men, and 64% of the value for men when adjusted for hours of work, and the median earnings of women is 88% of that of men). The gender gap in the share of temporary employment (34%) and in the amount of time spent in unpaid work (45%) shows instead higher values for women (i.e. the share of temporary employment for men is 66% of the that of women and men spend 55% of the time spent on unpaid work by women).

53. Overall, differences in labour market outcomes for men and women are wider than gender gaps in educational outcomes. Chart 2.1 shows that, on average across the OECD, hardly any of the gender gaps in labour market outcomes are close to zero, and they are larger than gender gaps in education outcomes.

54. In all countries men are more likely than women to be in paid work (Chart 2.1, Panel A). On average across the OECD, the gender gap in the employment to population ratio is 18% with gaps being smallest (smaller than 10%) in Canada, Estonia and Nordic Countries. These countries also tend to have higher employment rates amongst women: on average across the OECD, the employment to population ratio is 60% while it is above 67% Nordic countries (Annex to Chapter 2).

55. Gender employment gaps may have narrowed over time, but gender differences in working hours are stark. Across all OECD countries, the gender gap in the employment to population ratio is even wider if full-time equivalent (FTE) rates are considered (Chart 2.1, Panel A). This is mainly explained by the higher likelihood of women working on a part-time basis compared to men. On average in the OECD, the gender gap of the FTE employment ratio is 32%, and it is lowest (below 15%) in Estonia and Finland and highest (above 50%) in Chile, Mexico and Turkey.

56. In most OECD countries – and especially in Finland, Japan, and Norway – prime-age women (25-34 year-old) are also more likely than men to have a temporary rather than a permanent employment

contract (Chart 2.1, Panel B), with limited variation across the OECD. By contrast, women in Estonia, Hungary, Mexico and the Russian Federation are more likely to have a permanent contract than their male counterparts; in Poland and the United States there are very small gender differences. Temporary jobs tend to pay less than permanent jobs and sometimes offer less access to training and less access to fringe benefits.[12]

57. Given the relative weak position of women on the paid labour market, it is no surprise they are most intensively involved in unpaid work. On average across the OECD, women spend about 2.4 hours more on unpaid work per day than men (Annex to Chapter 2). As shown in Chart 2.1, Panel C this gender gap is smallest in Denmark, Sweden and Norway and largest in Korea and Japan.

58. Gender wage gaps are also large across the OECD, and on average gender differences are 16% at median earnings[13] (Chart 2.1, Panel D). However, there is considerable variation between countries with the largest gaps of over 30% in Japan and Korea and the lowest in Italy (data reflect hourly earnings) and Hungary (as related to wage increases in the public sector), where the gaps are negligible.

59. Chart 2.1 shows large cross-national differences in labour market outcomes but there is no country that significantly outperforms the others in *all* outcome areas, except for Japan which appears to be significantly underperforming in the selected outcome areas for which data is available (see Table A2.1 in Annex to this chapter).

60. It is difficult to give a full assessment of non-OECD countries. Data on indicators of employment to population ratios are available globally for men and women, but not so for full-time equivalent employment ratios. In Brazil, India and South Africa, gaps in employment to population ratios are larger than those in OECD countries (Chart 2.1, Panel A), whereas China and the Russian Federation are closer to the OECD average.

61. In non-OECD countries women also do far more unpaid work, including care activities, than men. Women in China, India and South Africa are much more likely to be engaged in unpaid work than men (Chart 2.1, Panel C). Available information for Brazil, India and South Africa also depicts large wage gaps (between 29% and 38%) to the disadvantage of women (Chart 2.1, Panel D)

62. In general in developing economies, the informal sector plays an important role in employment for both men and women. OECD, 2009a, *Is Informal Normal?*, suggests that in many developing countries informal employment makes up about half or more of total non-agricultural employment. Women are not always more likely than men to be in informal employment, but they are much more likely to be found in the in the lower-paid and more risky segments of informal employment. Informal employment among women often consists of unpaid work in family businesses or farms; own-account workers and sub-contracted workers who produce from their homes or a small workshop. Section 2.3 contains a discussion of employment issues in developing economies.

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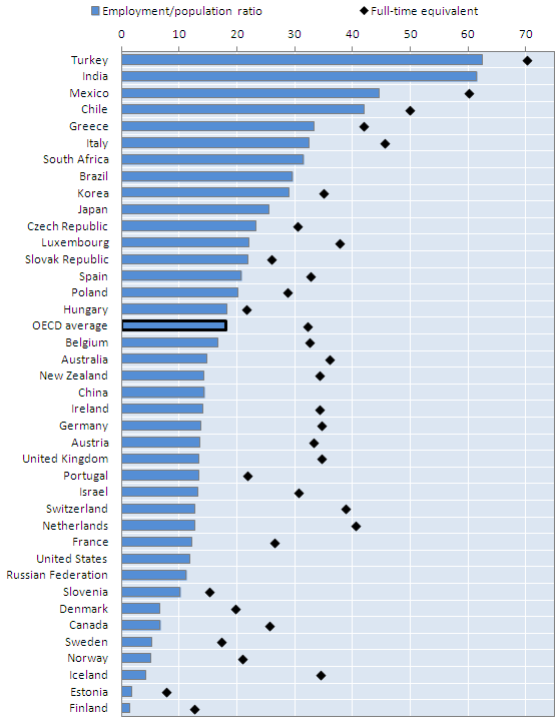
12 . In European countries, statutory benefits are provided to all workers; temporary workers are therefore in principle entitled to the same benefits as permanent workers. However, temporary workers often do not have access to benefits because they do not accrue the necessary minimum contribution period. In North America, on the other hand, most fringe benefits are voluntary and provided by employers, and temporary workers seldom benefit from them.

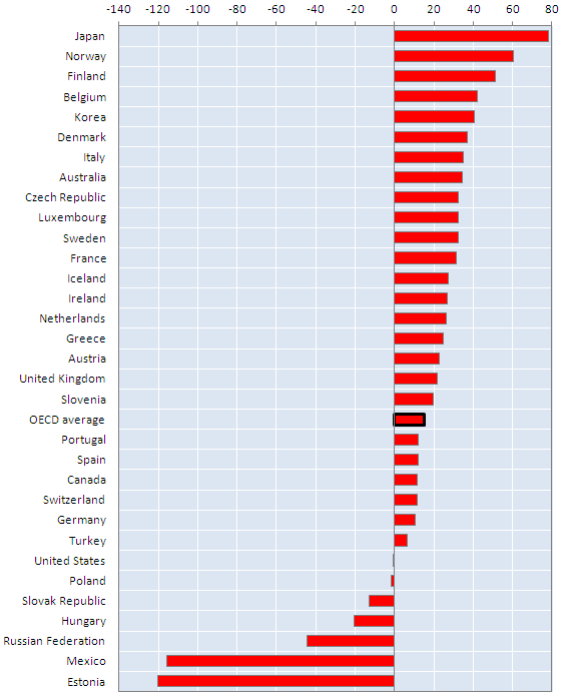
13 . These are unadjusted wage gaps and do not account for gender differences in worked hours, sector of employment, experience, and so on. Research shows that when these differences are controlled for, the gender gap is smaller but still positive. Unadjusted wage gaps are presented here as country coverage of the adjusted gaps is much less comprehensive.

Chart 2.1: Gender gaps in employment

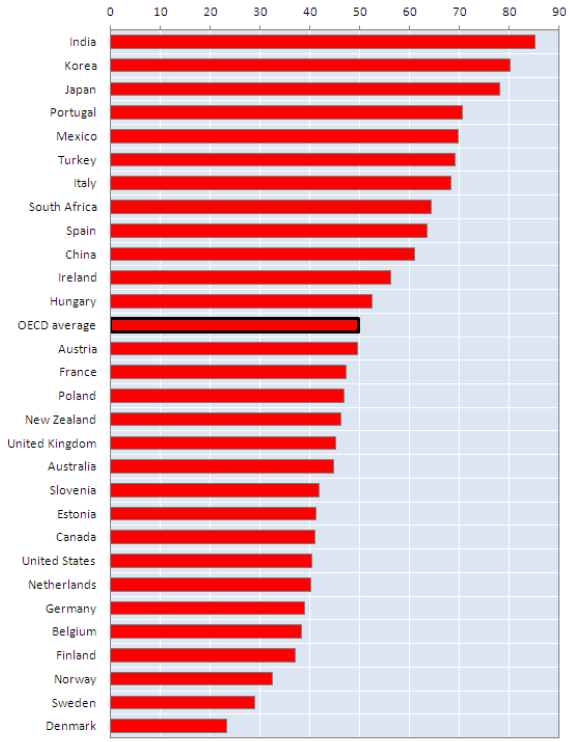
Panel A: Employment rates - Female gap to male (%)



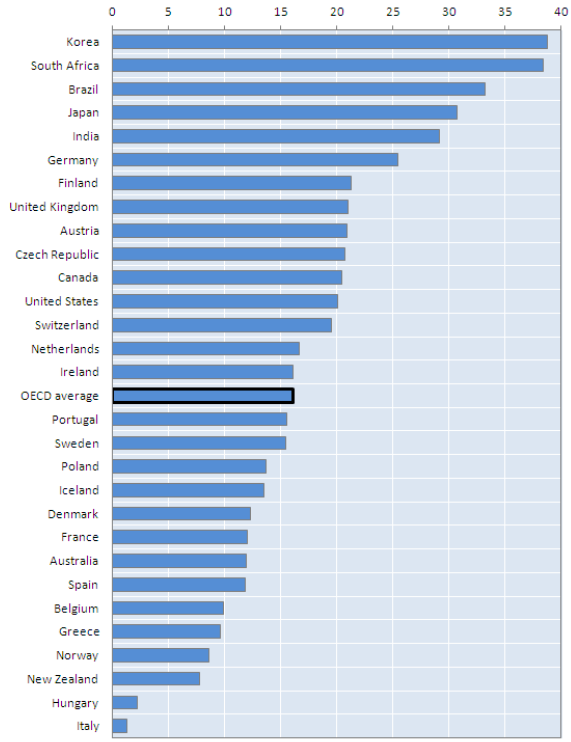
Panel B: Share of temporary employment Male gap to female (%)



Panel C: Average minutes of unpaid work per day Male gap to female (%)



Panel D: Median earnings Female gap to male (%)



Notes: Male to female gaps (red bars) are defined as (female-male)/female; female to male gaps (blue bars) are defined as (male-female)/male. For more detailed notes see Table A2.1 in the Annex to Chapter 2.
Sources: see Table A2.1, in the Annex to Chapter 2

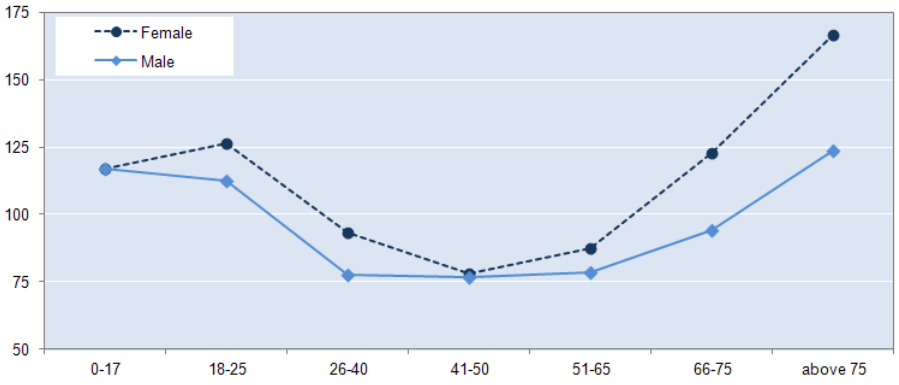
2.1.1 Greater female employment participation limits poverty risks

63. The relatively weak female employment and earnings outcomes (and in particular for older women who are most likely to face gender education gaps) contribute to higher poverty risks (Chart 2.2). In OECD countries, poverty risks are particularly pronounced in old age, as histories of weak labour market attachment combined with longer average life expectancy result in low pension entitlements of older women: in developing economies with limited coverage of pension schemes, poverty differentials for older men and women are less pronounced.

64. Greater female labour force participation reduces poverty risks, not just for individuals, but also for families (OECD, 2011a). Poverty risks are especially high for sole-parent families (OECD, 2011a); improved labour market outcomes for women, coupled with income and/or childcare support, can help reduce poverty risks among sole-parent families given that women are more likely than men to be (resident) sole parents. In the recent economic crisis, female employment in the OECD generally suffered much less than that of men because output losses were concentrated in sectors with a predominantly male workforce, especially manufacturing and construction. There is some evidence that women were instead more vulnerable to the crisis in developing countries.

Chart 2.2: Women are at a higher risk of poverty than men, especially in old age

Risk of relative poverty of men and women by age, OECD average, mid-2000s



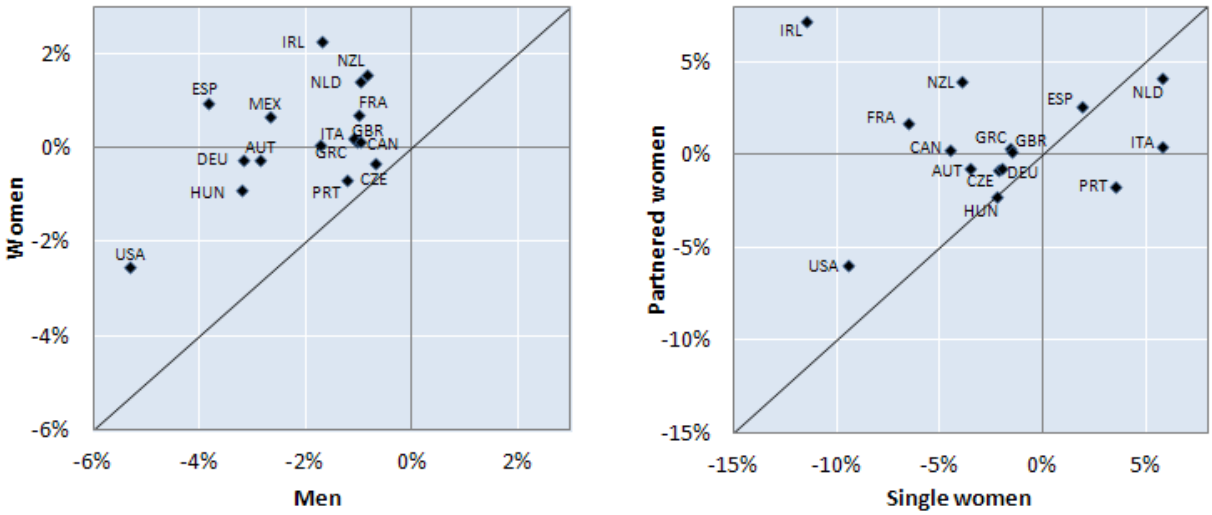
Note: Relative poverty risk is the age-specific poverty rate of men and women divided by the poverty rate for the entire population times 100. The poverty threshold is set at 50% of the median income of the entire population.

Source: OECD, 2008a

65. Recent employment data illustrates how important female labour market experience is to reducing poverty risks. Job loss and working-hours reductions among partnered men have lowered overall working hours in couple families by between 5.5% in the United States and around 1% in Canada, the Czech Republic, France, the Netherlands, New Zealand and the United Kingdom (Chart 2.3, left panel). Over the same period, women's working hours have *increased*, or have fallen less than for men. Chart 2.3 shows that partnered women were significantly more likely to increase working hours than single women.

Chart 2.3: In most countries, women's employment greatly improves families' resilience to economic shocks

Total hours worked by men and women: Change since onset of crisis



Notes: Changes in the left panel are shown relative to *family* pre-crisis hours (*i.e.*, the sum of men's and women's hours). Changes in right panel are shown relative to *individual* pre-crisis hours in the respective groups. Changes capture differences in *both* employment levels and average hours worked in a job. They are measured as total hours in the four latest available quarters minus total hours in the four pre-crisis quarters in each country.

Source: OECD calculations based on tabulations of national labour force data and European Labour Force Surveys.

66. For women already working full-time, options to increase working hours are limited, but at least for some of the women who work part-time there is room for increasing hours. Labour-market institutions that allow swift adjustments of work patterns combined with support for family commitments (e.g. childcare needs) can support greater participation in the labour force, while persistent gender-wage gaps limit women's ability to help stabilise family incomes. Nevertheless, the current momentum in many OECD countries towards a more equal sharing of market work in the household implies that the on-going recovery presents a distinct opportunity for making progress on the gender-equality agenda.

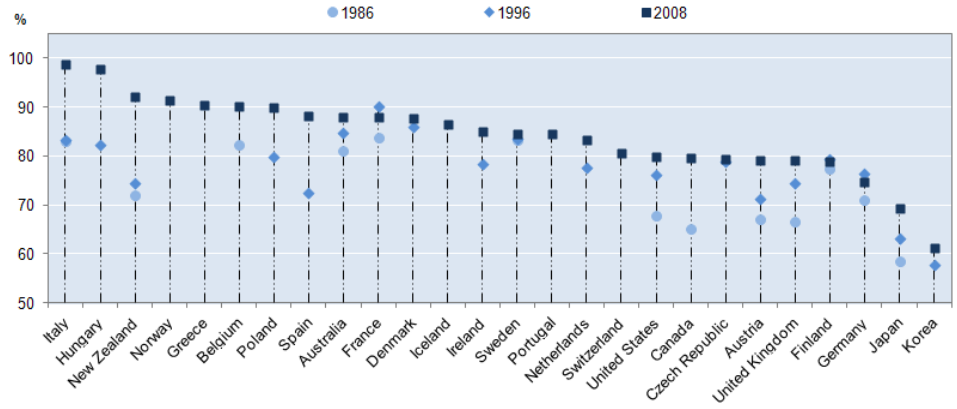
2.2 Promoting gender equality in employment

67. Along with higher female educational attainment levels and employment rates, overall labour market outcomes of women have improved in OECD countries. As a result, gender wage gaps (as measured at 50% of median earnings) have declined over time (Chart 2.4, Panel A) but still remain significant at 16% on average across the OECD.[14] Furthermore, the wage gap is often largest for top earners, reflecting the low proportion of women in managerial positions and top management. The top quintile female wage is generally less than 90% of the top quintile male wage for all OECD countries studied, except for Italy, Greece, Poland, Portugal and Spain. This "sticky-floor" effect in Mediterranean countries – whereby gender wage gaps are larger in the lower portion of the wage distribution – is linked to poor provision of affordable childcare which establishes high barriers to employment for low-wage earner, while highly educated women are more likely to remain in the labour market. As with the median wage, the largest gaps are observed in Japan and Korea where the top quintile female wage is around 60% of the top quintile male wage (Chart 2.4, Panel B).

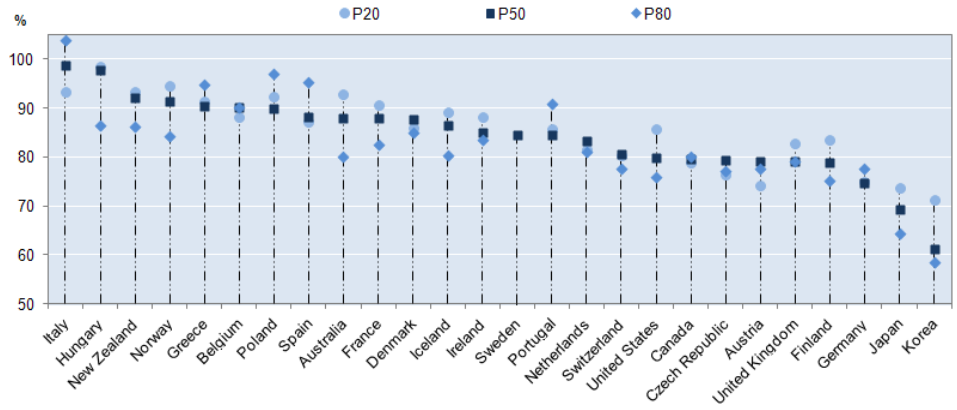
14 . See footnote 13.

Chart 2.4: The gender wage gap is narrowing but remains substantial

Panel A: Trends in the ratio of female median earnings to male median earnings, 1986, 1996 and 2008



Panel B: Ratio of female-to-male earnings at different earnings levels, P20, P50 (the median) and P80, 2008



Source: OECD, *OECD Employment database* (www.oecd.org/employment/database).

68. Gender wage gaps, particularly at higher earnings, partially reflect past education and labour market patterns in OECD countries: older women have lower average levels of education and are less likely to have strong labour market attachment. But earnings differences also relate to a range of often inter-related factors including the scope to reconcile work and family life as well as discrimination and occupational segregation.

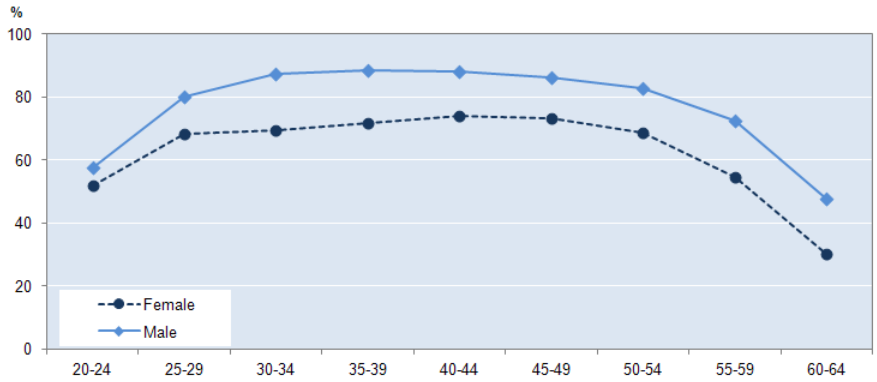
2.2.1 Reconciling work and family life

69. Employment patterns do not differ much among young men and women but, subject to considerable cross-country differences (see the OECD Family Database), they start diverging in the 25-34 age-bracket, when adults are most likely to become parents (Chart 2.5).[15] Male and female employment participation starts to decline when workers enter their 50s: lower female employment rates also reflect care responsibilities for elderly parents which frequently fall on women.

15 . Cross-national comparable data on employment rates of parents of mothers *and* fathers vis-a-vis men and women without children are not available, but in Finland employment rates of fathers and mothers (Age 20-59) with children older than three are actually higher than employment rates of men and women of the same age-group without children.

Chart 2.5: Employment gaps are firmly established at age 30

Employment/population ratio by age groups, 2009



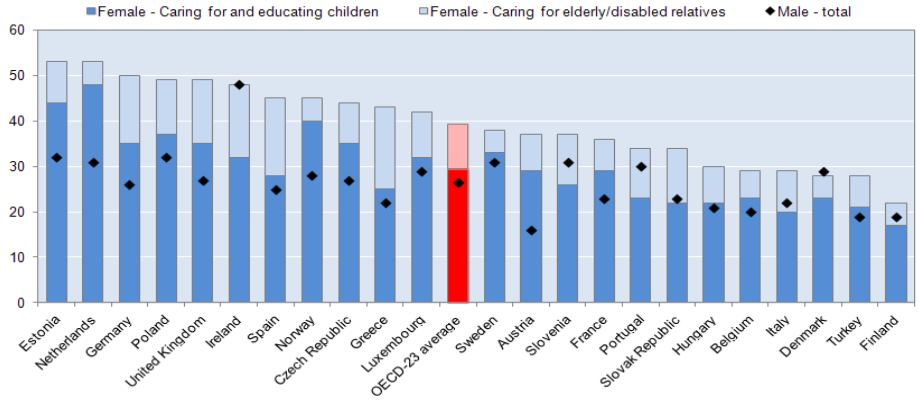
Source: OECD Labour Force Statistics

70. Women engage in much more unpaid work than men (Chart 2.1, Panel C). This is largely related to care activities. Except in Denmark and Ireland, women are much more engaged in care activities than men (Chart 2.6). Even non-working fathers devote less time to caring than working mothers across the OECD. In Austria, Germany, Estonia, the Netherlands, United Kingdom and Greece, the gap is over 20%. More time is spent on caring for and educating children rather than caring for elderly and disabled relatives. There are also clear divisions in the type of care provided by men and women: mothers typically provide physical personal childcare and housework, while fathers spend proportionally more time on educational and recreational childcare activities. In countries with high rates of female employment, more men spend time on unpaid work. This suggests that to mobilise more female labour supply, men would have to participate more in unpaid work in the home.

71. Timing differs among OECD countries, but changing female aspirations have led more women to work. In the late 1960s and throughout the 1970s and 1980s, Nordic countries developed their policy models of a continuum of work/family supports throughout the early life course of children, including the following components: paid and employment-protected child-related leaves (maternity, parental and paternal leave), subsidised early care and education services, and out-of-school hours care (OSH-care) until children enter secondary school (OECD, 2007b). Countries where work/family supports were developed relatively recently (e.g. Germany, the Netherlands, Portugal, Spain and the United Kingdom) and where gaps in access remain have seen a polarisation of female labour market behaviour with respect to family size. In general, the more children women have, the fewer hours they work. Women in full-time employment are most likely to be childless or have only one child, whereas women with more children are more likely not to be in the labour force or only work part-time. This raises concerns about equity between women with and without children regarding their long-term career and earnings prospects.

Chart 2.6: Women dedicate more time to care activities than men

Average weekly hours dedicated to care activities, by men and women aged 18 and over, 2007



Source: European Quality of Life Survey, 2007

72. Women are also the majority of (family) long-term carers and the more intense the care need, the more likely it is that women are the family carers (except in a spousal care situation). One of the economic costs of caring is the related reduction in labour force participation: family carers are 50% more likely than non-carers to be home makers and, when employed, work on average two hours less per week than non-carers. While unpaid carers provide a valuable service to society, informal long-term caring is also associated with increased psychological distress, strain and overall health deterioration. Policy should therefore not encourage women's withdrawal from the labour market for caring reasons.

Financial incentives to work and formal childcare

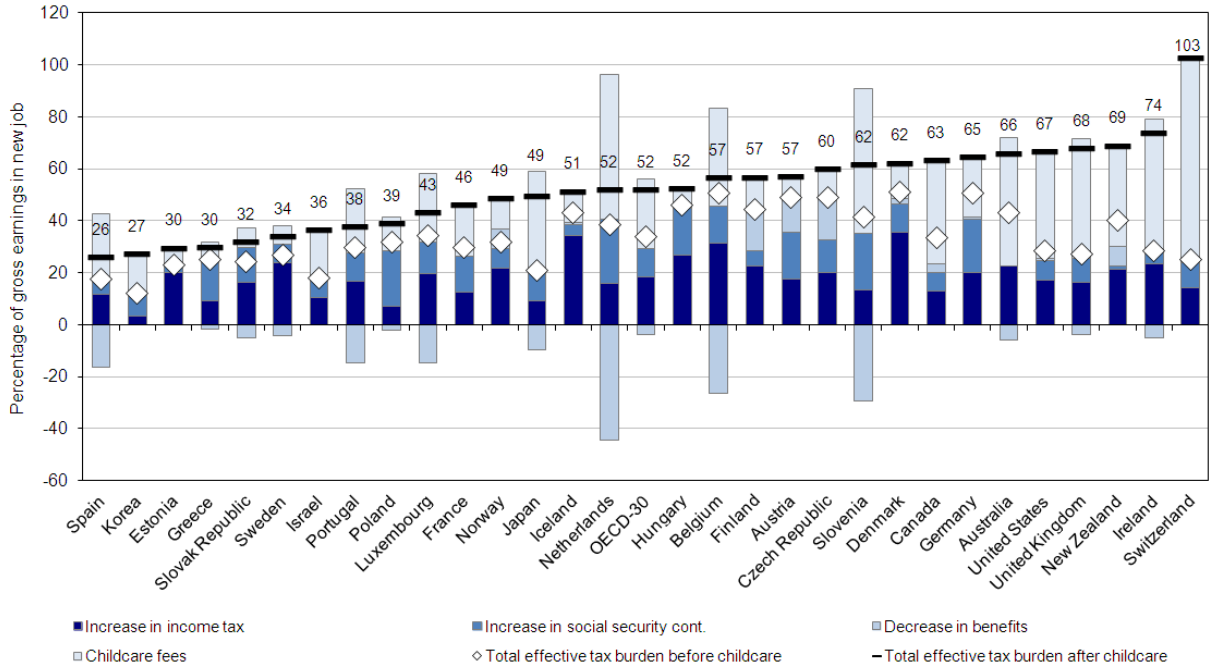
73. To successfully promote female labour supply, policy should provide strong financial incentives to work for both parents and share market work between spouses. Tax-benefit systems in most OECD countries provide slightly more net benefits to dual-earner couples than to single-earner families at the same earnings levels, except in Germany where single-earner families are better off (OECD, Family database). However, when children are under three, some tax-benefit systems provide strong incentives to the lowest income-earner, often the mother, not to engage in paid work. This is because of the high costs of childcare – as in Ireland, Switzerland (Zürich), the United Kingdom and the United States (Michigan, see note to Chart 2.7 – and/or the payment of cash benefits for children under three (e.g. in Austria, Hungary, Finland and Norway). Similarly, some tax-benefit systems limit financial incentives to increase part-time working hours to a full-time working week. But, even if such disincentives did not exist, childcare costs and school hours often prevent mothers from moving into full-time employment. Greater flexibility in childcare hours might also help women participate more fully into the labour market.

74. Access to formal childcare helps parents to participate in paid work and it tends to encourage more full-time than part-time participation. Financial supports for childcare are important. High child-care costs are often the reason for high average effective tax rates (AETRs) and limited financial incentives to work. Across the OECD, once childcare costs are factored in, AETRs are higher for lower income families than for higher income ones. Affordable childcare is especially important for poor and sole-parent families, usually sole-mother families – who often face major time and money constraints – by reducing poverty risks and supporting child development (OECD, 2011a). In order to ensure child well-being and child development, it is important to ensure that high-quality formal childcare is available and affordable; formal

childcare participation and parenting activities are often more significant than maternal employment in determining cognitive and behavioural outcomes of children (OECD, 2011a).

Chart 2.7: Formal childcare costs can significantly reduce returns to paid employment

Net transfers to government (percentage of gross household earnings) and childcare fees;
families with two children aged 2 and 3 where both parents earn 100% of the average worker earnings, 2008



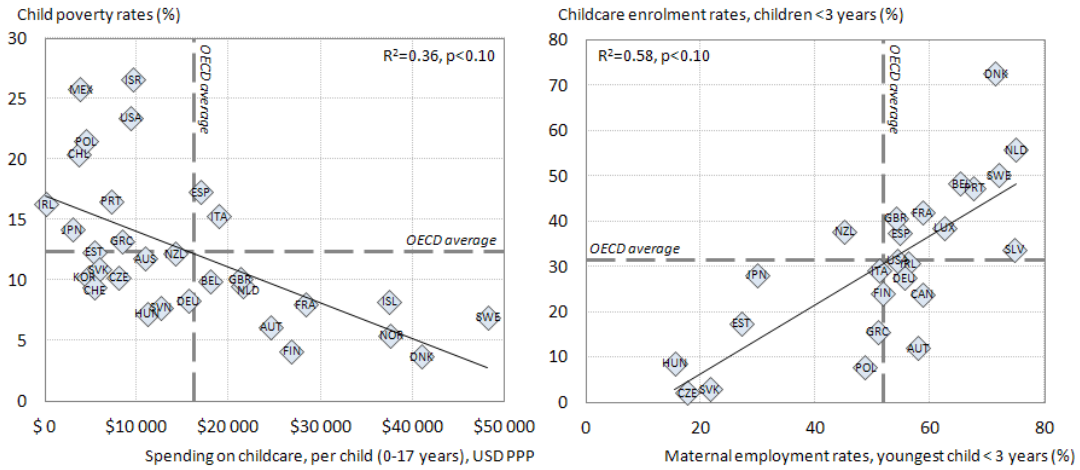
Notes: The childcare cost calculations for Austria reflect the situation in Vienna; for Belgium, the French community; Canada, the province of Ontario; the Czech Republic in villages and towns with more than 2 000 inhabitants; for Germany, Hamburg, for Iceland, Reykjavík; for Switzerland, Zürich; for the United Kingdom, England; and for the United States, Michigan. These results do not represent the situation in the rest of the country. For example, net childcare costs in the Canadian provinces of Alberta or Québec will be different from Ontario.

Source: OECD Tax/Benefit Models 2008

75. Childcare issues do not stop when children enter primary school. Out-of-School-Hours schemes are still in the early stages of development in most countries, but they are important to provide full-time working parents with care solutions in the morning, at lunchtime, after school hours and during school holidays.

76. Public spending on childcare and early education services – from birth up to and including 5-year-olds as a percentage of GDP – varies considerably across the OECD. On average it is just over 0.6% of GDP. It is highest in Nordic countries, France and the United Kingdom at 0.8% of GDP or more where participation rates in childcare and early education are generally also high facilitating employment among mothers with young children (Chart 2.8). As such, investing in childcare is an effective way of promoting female labour supply, reducing poverty and improving child well-being. Spending levels do not have to be as high as in Nordic countries to make a real difference to outcomes for women and their families, in particular in developing countries (Box 2.1).

Chart 2.8: Childcare enrolment facilitates maternal employment and reduces child poverty



Note: Proportion of children aged 0-17 years living in poor households, mid-late 2000s, childcare spending on children aged 0-17 years in USD purchasing power parity, 2007, childcare enrolment rates for children aged less than 3 years ; 2008, and employment rate of mothers with a child aged less than 3 years, 2007.

Source: OECD, 2011a

Box 2.1: Childcare supports in less affluent environments.

In less affluent countries, subsidised childcare facilities are often scarce, which poses parents in poor families without access to care options particularly difficult work/family choices: they need to work, often under difficult circumstances, to provide a basic family income, but they do not wish to leave their children uncared for.

In Chile, since the mid-2000s policy has emphasised the expansion of professional early childhood care and education services in public institutions or affiliated non-government facilities. The programme *Chile Crece Contigo* is a broader child protection system that follows an intersectoral and multidisciplinary approach, aiming to provide equal opportunities for people from the earliest stages in life. Nurseries and childcare centres are free for children in low-income families and by the end of 2009 there were 4 000 nurseries in operation, up from 700 in 2006. Although education credentials are requested for those willing to work in the nurseries and their contracts are those of public-sector employees, their salaries remain among the lowest in the educational sector in Chile.

In Mexico, around 3.6 million mothers with children between 1 and 4 years old (i.e., 75% of all mothers with children in this age range) do not have access to public childcare centres and cannot afford private care. Mothers either do not work while their children are young, or they work leaving their children in the care of relatives, neighbours or friends, or end up taking them to work. To provide more parents with access to child day-care services, in 2007 the Mexican government launched a national child day-care programme – Programa de Estancias Infantiles para Apoyar a Madres Trabajadoras (PEI), and in 2010, public spending on this initiative amounted to about 0.018% of GDP.

PEI kick-starts and subsidises home- and community-based care provision and includes a training component for child-minders. PEI stimulates the supply of childcare through both the supply side - a capital subsidy to those who wish to operate a child day-care centre and (re-)build a facility; and, the demand side, by means of a monthly subsidy (up to about USD 58) to the centre on behalf of the child aged from 1 to less than 4 years (subject to them meeting the eligibility criteria, including on family income). Monthly subsidy can be higher (up to USD 117) for disabled children aged from 1 to less than 6 years.

PEI has grown rapidly, and by December 2010, the programme included 9 587 day-care centres covering 264 164 children and over 247 581 parents. This includes an estimated number of about 1.5 million mothers with children aged 1-4 years, less than 6 minimal wages, and no social security. PEI has generated around 44 100 paid jobs for providers, of whom 98% are women. Most providers (around 82%) were working before opening a day-care centre and many of them (69.5%) were doing so in occupations related with children (e.g., school teachers, head of schools, nannies).

The characteristics of PEI services may not match the quality standards of, for example, Swedish pre-school services, but it is vital to poverty reduction and could serve as an "intermediate standard" for many other countries to aim for, while continuous improvement of quality standards will bring the programme closer to aspired quality standards.

Parental leave and flexible workplace measures

77. All OECD countries, except the United States, provide income support during maternity and/or parental leave as financed by general taxation and/or employer and employee contributions, while employers bear the costs associated with the absence and possible replacement of the employee on leave. Then again, child related-leaves improve child well-being and sustain female labour force participation (OECD, 2011a). In general, countries with shorter periods of leave have higher employment rates among mothers with young children than countries with prolonged (two years or more) periods of paid leave. Leave entitlements immediately around childbirth are likely to strengthen female labour market attachment, as they limit the risk of dismissal during pregnancy and provide a way back to paid work when leave runs out. However, long leave periods can harm career and earnings prospects. Prolonged absences from the workplace may lead to a deterioration of skills and limit work-experience compared to non-leave takers (often men). Also, some employers could perceive taking such leaves as a lack of commitment to firms and careers.

78. Well-established comprehensive public support systems in Nordic countries facilitate both men and women working full-time. Opportunities for flexible starting and working hours, tele-working, and in particular part-time employment opportunities have helped to increase female labour force participation in a substantial number of other OECD countries, most notably in the Netherlands. Working limited hours helps workers balancing work and family life, and for the vast majority of part-timers, it adds to job satisfaction. However, there are disadvantages: part-time employment leads to lower life-time earnings and pensions, it is frequently associated with low quality and precarious jobs, and part-timers often have fewer opportunities for promotion and training with negative consequences for career progression. Part-time employment opportunities and other flexible workplace measures should be embedded in regular employment and career patterns, so that limited periods of working part-time (or use of flexible work options) do not negatively affect careers of the men and women who make use of them. Similarly, relating pay more to performance rather than tenure will also limit the damage to earnings by those who have worked limited hours in the past.

79. There is potentially a “business case” for family-friendly workplace support, but in practice it is not overwhelming.[16] Having a family-friendly workplace can facilitate women’s full-time employment, motivate current staff, reduce staff turnover and sickness absenteeism, help attract new staff, reduce workplace stress and generally enhance worker satisfaction and productivity. These considerations are strongest for workers who are difficult to replace, and for flexible workplace arrangements that least affect the production process. Indeed flexible workplace practices impose a cost on employers to the extent that they do not suit productions processes and/or are difficult to manage. Employers frequently offer part-time employment opportunities, but the business case for other flexible arrangements with employees choosing their own starting and finishing times, or tele-working is less evident. Unions and worker representatives can also play an important role in improving the provision of family-friendly work practices, but either they lack bargaining power, and/or do not prioritise demands in this area. Legislation which gives

16 . Many governments try to raise awareness of the merits of workplace diversity and family-friendly support through campaigns which often include public recognition of "best practice employers". For example, in Mexico, the initiative “Family-Responsible Enterprise Award” recognises organisations that implement practices fostering equality, family and work-life reconciliation. The award is being used as a tool to establish good practices.

employees the right to request some form of workplace flexibility forces both employees and employers to consider the pros and cons of workplace supports and is flexible enough to focus on measures that suit the workplace and the worker, and extends access to many low-income workers whose bargaining position is relatively weak.

80. Giving workers access to, and greater control over, flexible working hours increases their well-being, which is likely to promote their productivity. However, there is one unintended side-effect: since women rather than men make use of such flexible working-time arrangements, it contributes to persistent differences between men and women in their career profiles. To effectively reduce barriers to work, policy should be designed in ways to encourage both fathers and mothers to use these supports.

81. It has proven difficult for policy to redress the gender balance in earning and caring, partly because countries do not want to impose solutions on parents. Hence, parents are generally free to choose who is going to take parental leave or otherwise divide care responsibilities. However, in a number of countries, including Nordic countries but also Germany and Portugal, policy encourages fathers to take leave by granting them the exclusive right to part of the parental leave entitlement and/or ample income support during the leave period (Box 2.2). This has resulted in more fathers taking more parental leave days, but it is unclear whether this has led to a more equal sharing of care responsibilities in the household and whether any changes are durable. For OECD countries with prolonged leave entitlements, reform could be close to fiscally neutral by shortening child-related leave entitlements but paying them at a higher rate, as with recent reform in Germany. For many countries with limited or no rights to maternity leave, it seems that ensuring these rights cover all working women should be a first priority as well as an intermediate step towards a more developed system of child-related leave policies.

Box 2.2: Promoting gender equity and a more equal sharing of parental leave in Germany and Iceland

In OECD countries entitlements to unpaid employment-protected leave are individual-based, whereas entitlements to paid leave (which strongly influences the effective duration of leave) are family-based, and often it is the mother who uses large chunks, if not the whole of the paid-leave entitlement. However, reform can change leave-taking patterns and arguably Iceland has gone furthest in its efforts to generate a more equal use of parental leave days among fathers and mothers.

Since a reform introduced on 1 January 2001, each parent in Iceland has the right to a non-transferable three-month leave period and a shared three-month period until the child turns 18 months old. Eligible working parents in Iceland receive uncapped leave-related benefits equivalent to 80% of average earnings. In 2000, the share of parental leave days in Iceland was only 3.3%, the lowest among Nordic countries, but reform has increased uptake dramatically. In 2001, fathers took an average of 39 days leave or 17% of the total leave days used, while in 2004 fathers used 96 days leave on average or 35% of all leave days used. Similarly, recent reform in Germany provides for a bonus of two months earnings-related paid parental leave if taken by the father. While about 8.8% of children born in 2007 had fathers that took parental leave, the percentage doubled to over 17% in 2008.

2.2.2 Discrimination

82. There is a wide body of literature analysing the sources of earnings differentials between men and women. The evidence tries to explain the pay gaps in terms of observable individual characteristics (such as education, experience, occupation, and, when available, motivation, expectations, and field of study), and/or horizontal and vertical segregation in employment (see below). These factors typically explain large parts of the gender pay gaps, but analyses generally leave at least one fourth of gender wage gaps unexplained (OECD, 2008b).

83. The unexplained part of the gender wage gap reflects the influence of unobservable factors, including discrimination against women in the labour market. However, given that discrimination is rarely

directly observable and because of other measurement problems, it is difficult to pin down precisely its contribution to the size of the pay gap.

84. Almost all OECD countries have established laws to combat discrimination on both gender and ethnic grounds, but empirical evidence on their effect is scarce (OECD, 2008b). Enforcement of these regulations is essentially based on individuals' willingness to claim their rights. Public awareness and incentives for victims to lodge complaints are thus crucial elements of an effective anti-discrimination policy strategy. However, evidence suggests that many workers are not aware of their legal rights and individuals face strong barriers to taking cases to court: legal action remains a costly, complex, time-consuming and adversarial process in many countries. Mediation will help, but that will also work better against the background threat of litigation.

85. Legal rules will be more effective if their enforcement does not completely rely on individuals pursuing individual cases, but is backed up by well-resourced specialised bodies which are empowered to investigate companies and organisations, and take legal actions against discriminating employers, even in the absence of individual complaints. Unfortunately, in many countries, these bodies are not well equipped to take on many cases, or lack the power to impose hefty fines on employers in case of evidence of discrimination.

2.2.3 Occupational segregation and public employment

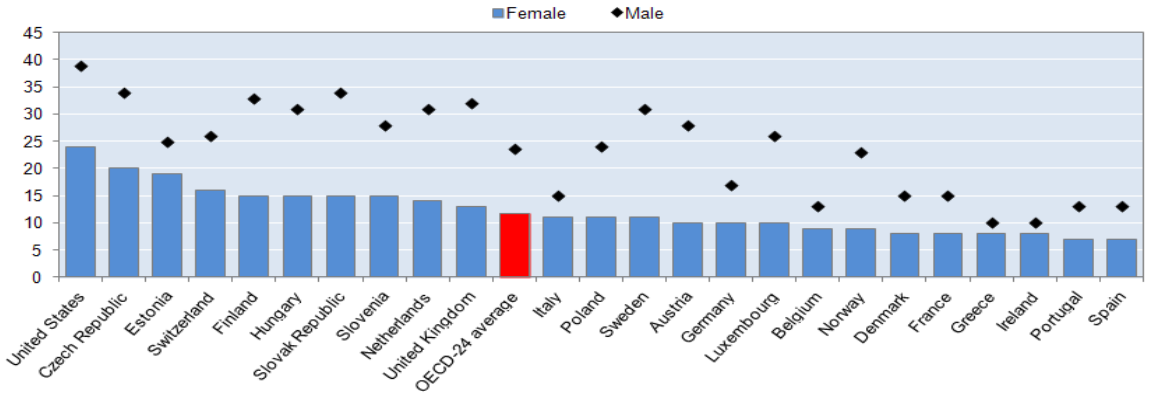
86. In OECD countries, women tend to be concentrated in fewer occupations compared with men. Chart 2.9 shows that, on average, 24 occupations account for half of the employed men whereas only 12 occupations account for half of the employed women. By this simple measure, female employment is the least concentrated in the United States and in the Czech Republic and the most concentrated in Spain, Portugal and Spain, where 50% of the women work in 7 occupations only. The widest gender gaps in occupational concentration are observed in Sweden, the Slovak Republic and in the United Kingdom; the lowest gaps are observed in Greece and Ireland.

87. Women tend to work in clerical occupations, sales, health care, social care and teaching professions; they are under-represented in managerial jobs, physical, mathematics, science and engineering professions as well as in manual and production jobs. Occupational segregation is, therefore, in part the result of the sectoral structure of employment in a country. There is also a "vertical" component to occupational segregation: women are under-represented in managerial jobs, especially at the most senior level.

88. Occupational segregation appears to be more pronounced for low-skilled workers and for women with children. Workers with higher education are found in a much larger number of occupations than less educated workers. Mothers, on the other hand, are more likely than women without children to work as service workers and sales workers. This might be the result of self-selection of mothers into occupations that are more compatible with family responsibilities (including part-time jobs) or related to some employers being less likely to offer mothers career and employment opportunities. Fathers also tend to reinforce their concentration in occupations where men are over-represented, which are in general more likely to be management positions with higher earnings (OECD, 2002).

Chart 2.9: Employed women are concentrated in a smaller number of occupations than men

Number of occupations that account for half of the total of employment, 2007



Source: OECD, *Family database*

89. Part of the differences in occupational choices among women and men are due to different preferences. But other parts may not be and it these issues that policy needs to address. Concentration in only a few occupations curtails female employment opportunities and contributes to skill mismatches. Apart from awareness campaigns there is no specific policy recommendation regarding occupational segregation: policies that address gender differences in education and training (Chapter 1), policies that facilitate the reconciliation of work and family life and anti-discrimination policies (see above) will also help reduce gender segmentation in the labour market, and the feminisation of public employment.

90. Beyond occupational segregation, women also face “vertical segregation”: they are less likely to reach the upper rungs of the corporate ladder. Women in private sector employment across the world tend to be concentrated in entry or middle-level positions; on average in Europe, for example, women held 11.7% of board seats in 2010 (European PWN, 2010). A number of factors (often linked to women’s caring responsibilities) help explain gender differences in career progression: higher exit rates, higher incidence of part-time, higher incidence of entry and exit spells, possibly differences in personality traits. This "glass ceiling" results in a waste of investment in women’s human capital, a loss of talent in the economy and a loss of diversity in decision-making positions.

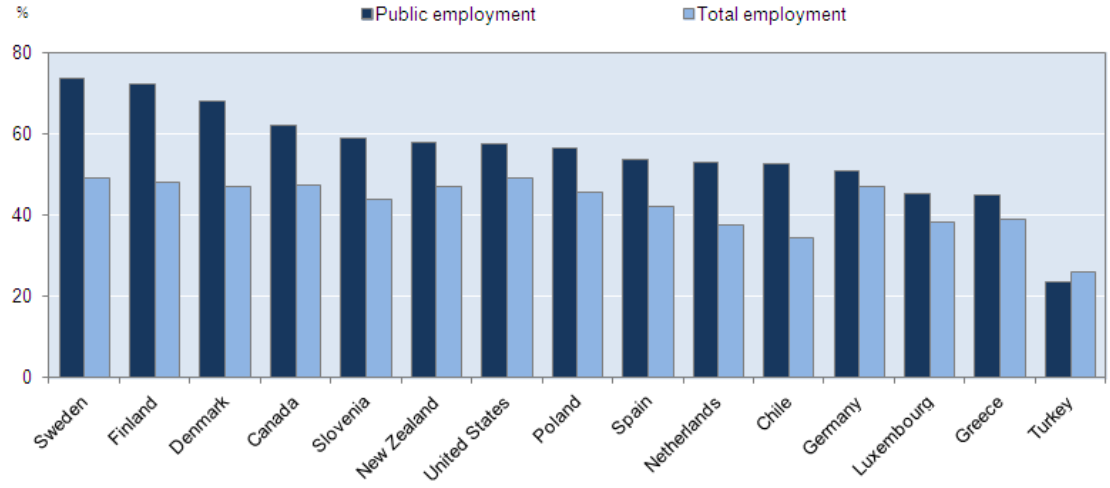
91. In order to help women break the glass-ceiling, some countries (in Norway, France, Iceland and Spain) have introduced provisions for mandatory quotas for women in boardrooms: depending on the size of the company or number of board members, firms may be required to have at least 40% of their boardroom seats assigned to women. Similar draft laws have been filed in other OECD countries (Belgium, Italy, and the Netherlands). Some companies (Deutsche Telekom is one example) have introduced voluntary quotas for women in management. Corporate governance codes are also being used to promote better representation of women in senior managements. The need to introduce quotas for women in boardrooms or in senior management is being widely debated and, conditional on data availability, deserves further analysis to understand its benefits in terms of women’s employment outcomes and firm performance. Some countries also have gender wage bonuses and gender tax credits to stimulate more equal sharing of parental leave, but these measures have not been proven to be significant in their effect.

Public sector employment

92. The overall importance of the public sector in terms of employment varies widely across OECD countries. OECD (2009b) *Government at a Glance* shows that general government employees make up about 5% percent of the Labour Force in Japan and Korea and nearly 30% in Norway and Sweden. But in most OECD countries, women are over-represented in the public sector.

93. New work commissioned by the OECD and World Bank analyses the role played by a number of individual and job characteristics in determining gender differences in the likelihood to work in the public or private sectors, and its effect on wages for 12 OECD countries.[17] In all these countries, the share of women in public sector employment is higher than the share of women in total employment, except for Turkey (Chart 2.10).

Chart 2.10: Women are over-represented in the public sector



Note: Data refers to 2006 for New Zealand and Turkey; 2007 for Denmark, Germany, Greece, the Netherlands, Poland and Sweden; 2008 for Canada, Chile, Finland, Luxembourg, Slovenia, Spain and the United States.

Source: Dolado et al (2011, forthcoming) based on ILO data.

94. It appears that the probability of being employed in the public rather than in the private sector is larger for women than for men with similar characteristics in Nordic countries, Germany, Ireland and Portugal; the opposite holds in Italy, Spain and the Netherlands. There are no significant gender differences in the probability of working in the public vs. private sector in Belgium, France, Greece and the United Kingdom.

95. Across countries, women who are married and have children are more likely to work in the public sector. This finding suggests that, compared with the private sector, employment in the public sector

17 . Angel, de la Rica and Dolado (2011, forthcoming), examine a sub-group of OECD countries (Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, United Kingdom) for which information on public employment is available (data sources include ILO laborsta and the European Community Household Survey). The observed individual characteristics are the worker's age, family status, and educational attainment; the observed job characteristics are the worker's sector of activity, occupation, wage, satisfaction with working conditions, as well as average hours of work and part-time rates in the sector where the worker is employed.

is more easily reconciled with family responsibilities, possibly due to greater labour protection and flexibility in working hours.

96. In Italy, Spain, Sweden and the United Kingdom, the public sector attracts more educated men and women than the private sector. In Denmark and the Netherlands, the public sector attracts more educated men but not more educated women. There is instead no significant difference in average educational attainment between public and private sector workers in Belgium, France and Portugal.

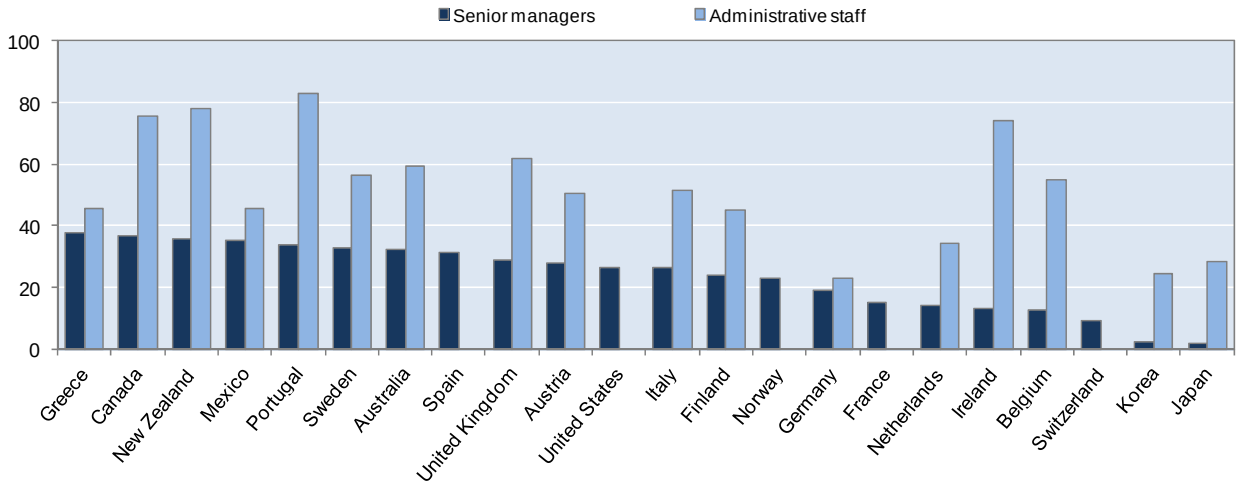
97. In all countries, except Denmark, women who work in the public sector do much better in terms of wages than women with similar characteristics who work in the private sector. In Portugal, Greece, and Ireland and – to a lesser degree – Spain, Italy, France and the UK, women employed in the public sector have higher wages compared with women with similar characteristics employed in the private sector. Denmark is the only country where women in the public sector earn on average 20% less than in the private sector. For men, the wage premium for working in the public sector is smaller than for women and, in some countries, is not significantly different from zero. Higher wages seem then to be the main reason why women are over-represented in the public sector.

98. Despite the greater representation of women in the public sector, they are still under-represented in senior positions. Data collected by the OECD shows that in all OECD countries for which data is available, women accounted for less than 40% of the senior manager positions in central government in 2005 (Chart 2.11). Many OECD member countries have established policies aimed at increasing female participation in the government workforce, especially at managerial levels, to increase equity and diversity.[18] Diversity in the public service, including gender diversity, is important to achieve fairness, transparency, impartiality and representativeness; it is also conducive to improved quality in public services through a better understanding of the needs of the community (OECD, 2009c). Governments and agencies must analyze their processes and policies through a gender lens to ensure that they reach all citizens and respond to the specific needs of women (OECD, 2010g).[19]

18 . Italy, for example, has signed a "Directive on measures to achieve equality and equal opportunities between men and women in public administration".

19 . Gender-responsive budgeting (i.e. the application of gender mainstreaming to the budgetary process) in the public administration is one instrument to achieve this goal and has been adopted by a number of OECD (Belgium, Italy, and Spain among others) and non OECD countries (for example, Egypt and Morocco).

Chart 2.11: Women are under-represented in central government's senior management



Source: OECD (2009b), *Government at a Glance*

2.3 Employment policies in emerging and developing economies

99. Women's full integration into the economy is a desirable goal for equity and efficiency considerations, in OECD and non-OECD countries. Gender gaps in levels of labour force participation can be substantial in less advanced economies (as they are for the MENA region), but gender inequalities in employment are increasingly linked to inequalities in the types and quality of jobs for men and women. Women's position in terms of earnings and employment status is hindered by weak childcare, health, education, labour and anti-discrimination policies. Unequal power relations within the households, an imbalanced distribution of non-market work, restricted access to education and weaker property rights in some countries, further hamper women's empowerment in employment.

2.3.1 Enhancing skills

100. Education is an essential pre-requisite for entering the labour market. However, in many developing countries socio-economic issues hinder girls and young women from obtaining the level of skills though formal education and vocational training required to enter formal employment. To facilitate the entrance of women into the labour market, various training programmes tailored to women's needs have been introduced. For example, the Jóvenes en Accion scheme – that was implemented in Colombia and that provides on-the-job training for young people – also provides supplementary stipends for women with children, leading to significantly better improvements in employment outcomes for women than for men (OECD, 2009a). Another example is the Adolescent Girls Initiative (AGI) that promotes the transition of adolescent girls from school to productive employment through such means as employability skills training and job vouchers that provide short-term subsidies to firms to hire new graduates. (The important role that conditional cash transfers can play has been discussed in section 1.2.3 in the previous Chapter).

101. Female employment can also be stimulated by public sector employment programmes and employment guarantee schemes. In India, for example, the government passed the National Rural Employment Guarantee Act (NREGA) according to which each rural Indian household is now entitled by law to one hundred days of unskilled work per year on public works programmes. Women may be under-represented because such schemes often involve physical work, possible travel issues, lack of information

on the existence of the work-schemes or their rights to participate. Provisions to ensure women's participation, including quotas (as in the case of NREGA), the provision of childcare facilities and flexible working hours (in Ethiopia's Productive Safety Net Programme) and equal wage regulations help foster women's participation and increase respect for women in the community. Overall, programmes initiated by women, local communities and/or those which are more tailored to female participation (e.g., through the provision of child care supports) can be more successful in attracting women.

2.3.2 Access to productive resources

102. In many developing countries, women still face obstacles in accessing land as compared with men reducing their ability to generate sustainable income. Even when non-discriminatory legislation exists, limited awareness and enforcement contribute to ongoing discriminatory practices. Ownership rights are critical for securing a sustainable livelihood and secure income for women and men, and land rights in particular are especially important for poverty reduction. Land ownership is central in countries where the population highly depends on agriculture production or farming-related activities. Amendment, enforcement and monitoring of laws guaranteeing women's rights to inherit and own land and assets other land is an essential step to provide women with more employment opportunities.

103. Policy reforms such as "land titling projects" or changes in inheritance legislation that secure women's property rights and incorporate monitoring mechanisms to guarantee the implementation of such laws can play a significant role in improving women's economic opportunities in developing countries. In Ethiopia, for example, the World Bank initiated a joint land-titling programme granting equal rights to both men and women in accessing and controlling land. Following the programme, reductions in perceived insecurity amongst women, increases in land investment and increased rental market activity were reported.

104. For anti-discrimination laws to be effective, policies need to support and facilitate individuals to take action to enforce their rights and protect their assets. Campaigns to increase awareness about legal rights, as well as legal training, will help, but experience from OECD countries shows that that solely relying on individuals taking cases to court will have limited effect (see above).

105. Similar to land use and property laws, a variety of factors - legal, institutional and socio-cultural barriers – often limit women's access to mainstream financial services. Access to a wide range of financial services (including savings, insurance, remittance transfers and credit) is essential to allow women to benefit fully from economic opportunities (UN, 2009b). Microfinance, which emerged in response to the failure of the formal financial system to reach the poor, provides financial resources to those – without credit history or collateral – seeking to enter the labour market through self-employment. Many microfinance institutions combine financial services with a range of social services to improve investment returns. Yet there is lack of consensus on the extent to which access to microfinance empowers women since cases of abuse by microfinance institutions have come to the forefront in many regions. There is a need to expand the range of existing financial products and assist women to access small bank loans so as to support their income generating activities.

2.3.3 Policies for informal employment

106. OECD (2009a), *Is Informal Normal?* showed that women are most often segregated in sectors and statuses that are generally characterised by low pay, long working hours and informal working arrangements that do not provide access to benefits or social protection programmes. In the informal sector, women are more likely to work as unpaid family workers or as subcontracted workers producing from their home, while men are over-represented among informal employers (Chen, Vanek and Carr, 2004). Particularly in Asia, there is a significantly higher proportion of females in unpaid family work than

males. In South Asia, 51% of women work as contributing family workers vs. 14% of men (ILO, 2010). This has implications for earnings, social protection, work-related benefits and the prospects of social mobility.

107. To most effectively tackle the disadvantageous position of women in the informal economy, a mix of policies is needed. Policies should be adopted to improve job quality within the informal sector and to ensure that women move away from the most vulnerable forms of informal employment, possibly into formal employment. To ease this transition, investments in women´s education and training as well as in child care are of prior importance. Policies to improve the job quality within the informal sector should extend social insurance schemes to small employers and to various occupational groups; improve the capacity of institutional frameworks to deal with administrative tasks associated with the operation of a social insurance scheme and strengthen the representation in the informal sector (ILO, 2010). Women's organisations in informal employment are crucial for the protection of their rights and can be conducive in challenging discriminatory social institutions that hinder women's equal access to assets such as land, technology, financial service or information. The Self-Employed Women's Association (SEWA) in India is a well-known example of a women's union, which is actively engaged in collective bargaining and in leveraging influence over the environment in which women work (Box 2.3).

Box 2.3: Empowering women in the informal economy

The Self-Employed Women's Association (SEWA) is a unique example of empowerment led by poor women working in the informal economy. The informal economy is in India employs more than 90% of working women. Traditional trade unions have had no role for these women and it was to address this failure that SEWA was set up in the early 1970s (OECD, 2011b).

SEWA works to bring poor women together at every level of activity, encouraging them to address their problems by envisioning change and putting it in practice. The common agenda is that of full employment and self-reliance. SEWA is active in the areas of microfinance, training and communication, but it is its work on labour issues – paralegal assistance, lobbying, health insurance, maternity benefits and pensions – that is at the heart of the association.

The empowering work of SEWA has in some cases led to policy changes. In the 1990s, SEWA was able to get the government to approve a law granting garment workers the minimum wage. Following SEWA lobbying in 2004, the Government approved a national policy for protecting street vendors; and, in 2008 legislation on social security for informal workers was approved. By studying women's working conditions and using this as the basis for mobilising change, SEWA has been able to affect policies at a global level. It was one of the main promoters of the process which led to ILO Convention 177 (1996) on the rights of home-based workers.

108. In developing countries, women are more likely than men to be employed in agriculture. Over the past decades, the overall proportion of workers in agriculture has declined, but the ratio of female to male employees in agriculture has increased constantly. In South Asia, 70% of women work in agriculture compared with 44% of men. In the Middle East, 35% of women work in agriculture against 15% of men (ILO, 2010). Even though women have become the main agricultural workers in many developing countries, compared with men, they operate smaller farms, keep less livestock, are more likely to be seasonal and piece-rate workers and are paid less (FAO, 2011). Moreover, the better quality jobs in terms of having a permanent position or managerial responsibilities are still overwhelmingly held by men. The largest proportion of rural women in developing countries also faces gender-specific barriers that reduce their agricultural productivity such as restricted access to productive resources and credit, limited access to improved seeds, fertilisers and innovative technology, as well as limited access to education and extension services.

Unpaid care work

109. Time spent on child-rearing as well as caring for elderly, sick or disabled family members and other unpaid household work has been identified as a major contributor to the persisting gender differences in formal labour market outcomes. Without prejudging the life-course choices of women and their families, governments should aim to eliminate barriers to work confronting women and to ensure more recognition and valuation of the ways in which care work supports and sustains economic development (Box 2.4).

Box 2.4: The unpaid "care economy" in developing countries

Care (whether paid or unpaid) is crucial to human well-being. Care work contributes to economic growth through producing a labour force that is fit, productive and capable of learning. Unpaid care work can also support the public sector by offering health services, elder care, sanitation, water and child care when public provision of such services is lacking or insufficient.

Across all countries much of the work in the care economy is done by women. In many societies, existing norms dictate that girls and women have the main responsibility for the care work which includes taking care of children, elderly and the sick. For less developed, economies this includes also running the household, providing for water and energy supplies. Some aspects of care work, such as looking after family members and neighbours, might be valued and vital for everyone's wellbeing but care work also involves time-consuming activities such as looking for fuel or queuing for water that are often not valued. Moreover, none of the unpaid activities are accounted for in economic statistics.

Mainly as a result of women's increasing participation in the paid labour force, paid care services have become a growing sector in many countries. However, these paid care services tend to generate low-pay and low-quality jobs and working conditions. In countries, where regulations are not easily enforced, care workers often have no protection of rights, as often is the case for domestic workers.

It is vital for policymakers and society to recognise the value of care work and to tackle discriminatory social norms to change attitudes that put the main responsibility of care on women and girls. Since cultural norms are not easily altered, this is a long-term goal. Yet in the short-run investing in physical infrastructure (such as roads, bridges, schools, hospitals and clinics, social care and community social infrastructure upgrading) and improving access to information and new technologies will reduce the time spent in unpaid family care work and in travelling to work, and will thus contribute to removing barriers to women's access to labour markets. The more the burden of care falls on women, the less they are able to receive a formal education or generate income. So unless women are supported in this work their productive potential in the market is constrained.

2.3.4 Monitoring progress

110. An additional constraint in achieving equitable labour market outcomes for men and women is the limited use of gender-sensitive indicators. There is a need for better data collection on women's roles in formal and informal economies and on their time use to monitor and evaluate changes over time. In particular, there is a lack of data on wages, employment security, health and safety at work, access to training, working hours and time allocation between productive and reproductive responsibilities (Box 2.5).

Box 2.5: Aid focussed on gender equality

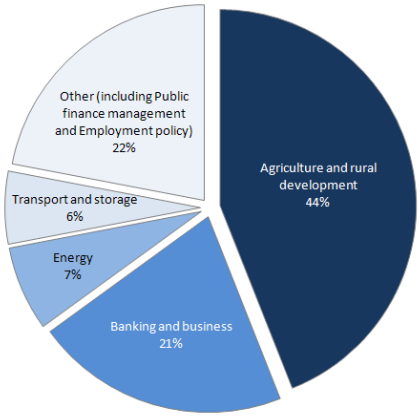
The gender-equality-focussed aid in the years 2007 and 2008 committed by OECD Development Assistance Committee (DAC) members to the economic and productive sectors was on average USD 4.6 billion per year. This accounts for one-fifth of total aid in these sectors. Only a small share of the total amount (2%) targeted gender equality as the principal objective.

The gender-focussed aid was distributed to a number of areas including banking/business, public financial management, urban development as well as agriculture and rural development, which received the largest portion of aid (42%).

There is scope for increasing donor investments in achieving gender equality in areas such as employment, infrastructure, trade and women's access to agricultural innovations, including seeds and adaptive technologies.

Sector distribution of aid targeting gender equality in the economic and productive sectors

DAC members' commitments in each sector as a proportion of total commitment (USD 5.4 billion), 2007-2009



Source: OECD calculations based on OECD DAC Members' reporting on the Gender Equality Policy Marker, 2007-2008.

ANNEX TO CHAPTER 2: BACKGROUND DATA ON EMPLOYMENT

Table A2.2 summarises gender gaps in key indicators of employment outcomes for OECD and selected emerging economies: labour force participation; employment to population rates; full-time equivalent employment to population rates; temporary contracts as a proportion of permanent contracts; time spent in unpaid work and median earnings. Gender gaps are compared to the OECD average and countries are categorised in "above" or "below" groups if they are at least half a standard deviation above or below the OECD average. If a male to female gap is above OECD average then women's scores are higher than men's compared to the OECD average (for example, they are more likely than the OECD average to have a temporary contract, compared to men). If a male to female gap is below average, then women score higher than men but the gender gap is smaller than the OECD average (for example, they are still more likely than men to have a temporary contract but less so than in other OECD countries). The reverse holds for indicators where male to female gaps are used.

Overall, differences in labour market outcomes for men and women are wider than gender gaps in educational outcomes (Table A1.1): more countries are above or below the OECD average than in the education indicators. As for education, there is no country that significantly underperforms the others in *all* outcome areas, except for Japan. Korea is above or below the OECD average in 5 out of six indicators (the country is around the OECD average with respect to full-time equivalent employment rates which, incidentally, are not available for Japan).

Female and male levels in the listed indicators are presented in Table A2.2.

Table A2.1: Gender gaps in employment compared with the OECD

	Labour force participation rate *2009** *Female gap to male (male-female)/male*	Employment to population ratio *2009** *Female gap to male (male-female)/male*	Employment to population ratio - full-time equivalent[1] *2009*** *Female gap to male (male-female)/male*	Temporary employment as a proportion of dependent employment[2] *2009**** *Male gap to female (female-male)/female*	Average minutes of unpaid work per day[3] *1999-2009***** *Male gap to female (female-male)/female*	Median earnings[4] *2008****** *Female gap to male (male-female)/male*
OECD Average (intervals)	**+18 (+/- 6)**	**+18 (+/- 7)**	**+32 (+/- 6)**	**+15 (+/- 20)**	**+50 (+/- 8)**	**+16 (+/- 4)**
Australia	○ +15	○ +15	○ +36	○ +34	○ +45	⊛ +12
Austria	○ +14	○ +14	○ +33	○ +23	○ +50	● +21
Belgium	○ +16	○ +17	○ +32	● +42	⊛ +38	⊛ +10
Canada	⊛ +9	⊛ +7	⊛ +26	○ +12	⊛ +41	● +20
Chile	● +40	● +42	● +50			
Czech Republic	○ +22	○ +23	○ +30	○ +33		● +21
Denmark	⊛ +8	⊛ +7	⊛ +20	● +37	⊛ +23	○ +12
Estonia	⊛ +9	⊛ +2	⊛ +8	⊛ -120	⊛ +41	
Finland	⊛ +3	⊛ +1	⊛ +12	● +51	⊛ +37	● +21
France	⊛ +12	○ +12	○ +26	○ +31	○ +47	○ +12
Germany	○ +14	○ +14	○ +35	○ +11	⊛ +39	● +25
Greece	● +29	● +33	● +42	○ +25		⊛ +10
Hungary	○ +19	○ +18	⊛ +21	⊛ -21	○ +53	⊛ +2
Iceland	⊛ +7	⊛ +4	○ +34	○ +27		○ +13
Ireland	○ +21	○ +14	○ +34	○ +27	○ +56	○ +16
Israel	○ +13	○ +13	○ +30			
Italy	● +31	● +32	● +45	○ +35	● +68	⊛ +1
Japan	● +26	● +25		● +78	● +78	● +31
Korea	● +30	● +29	○ +35	● +40	● +80	● +39
Luxembourg	○ +21	○ +22	○ +38	○ +32		
Mexico	● +45	● +45	● +60	⊛ -116	● +70	
Netherlands	○ +13	○ +13	● +40	○ +26	⊛ +40	○ +17
New Zealand	○ +14	○ +14	○ +34		○ +46	⊛ +8
Norway	⊛ +6	⊛ +5	⊛ +21	● +61	⊛ +32	⊛ +9
Poland	○ +19	○ +20	○ +29	○ -2	○ +47	○ +14
Portugal	○ +12	○ +13	⊛ +22	○ +12	● +71	○ +16
Slovak Republic	○ +21	○ +22	⊛ +26	⊛ -13		
Slovenia	⊛ +10	⊛ +10	⊛ +15	○ +19	⊛ +42	
Spain	○ +20	○ +21	○ +33	○ +12	● +64	⊛ +12
Sweden	⊛ +6	⊛ +5	⊛ +17	○ +32	⊛ +29	○ +15
Switzerland	○ +12	○ +13	● +39	○ +11		○ +20
Turkey	● +62	● +62	● +70	○ +6	● +69	
United Kingdom	○ +16	○ +13	○ +35	○ +22	○ +45	● +21
United States	○ +14	○ +12		○ -1	⊛ +40	● +20
Russian Federation	⊛ +12	○ +11		⊛ -44		
Brazil	● +27	● +30				● +33
China	⊛ +11	○ +14			● +61	
India	● +58	● +61			● +85	● +29
Indonesia	● +43					
South Africa	○ +22	● +31			● +64	● +38

● Above the OECD average ○ Around the OECD average ⊛ Below the OECD average

To facilitate interpretation, gender gaps are here defined as the difference in scores of men and women relative to the male score for indicators where men have the highest scores on average, (i.e. labour force participation rate, employment to population ratio, employment to population ratio (full time equivalent) and median earnings), and the difference in scores between women and men relative to female scores when female scores are highest on average (i.e. temporary employment and unpaid work).
The OECD average is calculated as the un-weighted average for OECD countries for which data is available. Countries are categorised in "above" or "below" groups if they are at least half a standard deviation above or below the OECD average.

Notes: (1) Full-time equivalent employment rates are calculated by multiplying the employment to population ration by the average weekly hours worked by all employees and dividing by 40.
(2) Temporary employees are wage and salary workers whose job has a pre-determined termination date as opposed to permanent employees whose job is of unlimited duration.
(3) Surveys for Canada, China, Denmark, France, Ireland, Japan, Korea, Mexico and South Africa do not cover a complete calendar year and thus, to varying degrees, under-represent holidays. As people do more unpaid work on weekends, excluding holidays overestimates paid work and underestimates unpaid work and leisure.
(4) The median earnings are unadjusted and refer to either hourly, daily, weekly, monthly or annual earnings depending on availability of data for individual countries, and these differences can affect comparisons. Estimates of earnings used in calculating the gaps refer to gross earnings of full-time wage and salary workers. However, these definitions may vary slightly from one country to another. Further information on the national data sources and earnings concepts used in the calculations can be found at: www.oecd.org/employment/outlook.

* 2007 for Brazil, Chile, China, India, Indonesia, Israel, the Russian Federation and South Africa. Data refers to those aged 16-64 for Iceland, Spain, Sweden, the United Kingdom and the United States.
** 2007 for Chile and Israel; 2006 for Canada; 2004 for Mexico; 2002 for Iceland.
*** 2004 for Mexico; 2005 for the United States; 2008 for the Russian Federation.
**** Australia: 2006; Austria: 2008-09; Belgium: 2005; Canada: 2005; China: 2008; Denmark: 2001; Estonia: 1999-2000; Finland: 1999-2000; France: 1998-99; Germany: 2001-02; Hungary: 1999-2000; India: 1999; Italy: 2002-03; Ireland: 2005; Japan: 2006; Korea: 2009; Mexico: 2009; Netherlands: 2006; New Zealand: 1998-99; Norway: 2000-01; Poland: 2003-04; Portugal: 1999; Slovenia: 2000-01; South Africa: 2000; Spain: 2002-03; Sweden: 2000-01; Turkey: 2006; United Kingdom: 2000-01; United States: 2008
Source: OECD Employment Outlook (2010e), www.oecd.org/employment/outlook; OECD Employment Database, 2010, www.oecd.org/employment/database; Miranda (2011), "Cooking, Caring and Volunteering: Unpaid Work Around the World"; and OECD (2010f), "Tacking Inequalities in Brazil, China, India and South Africa - The Role of Labour Market and Social Policies"; and European Quality of Life Survey, 2007; and OECD (2008a).

Table A2.2: Labour force and Employment participation, incidence of part-time employment and temporary employment, and average minutes of unpaid (care) work by gender

	Labour force participation rate		Employment to population ratio		Employment to population ratio - full-time equivalent[1]		Temporary employment as a proportion of dependent employment[2]		Average minutes of unpaid work per day[3]		Average weekly hours dedicated to care activities	
	2009*		2009*		2009**		2009***		1999-2009****		2007	
	Male	Female	Male	Female	Male	Female	Male (25-54)	Female (25-54)	Male	Female	Male	Female
OECD Average	**79**	**65**	**73**	**60**	**78**	**52**	**9**	**11**	**138**	**280**	**27**	**39**
Australia	83	70	78	66	81	52	4	7	172	311	-	-
Austria	81	70	77	66	83	56	4	5	135	269	16	37
Belgium	73	61	67	56	68	46	5	8	151	245	20	29
Canada	82	74	74	69	78	58	9	10	146	248	-	-
Chile	78	47	73	42	82	41	-	-	-	-	-	-
Czech Republic	79	61	74	57	81	56	4	6	-	-	27	44
Denmark	84	77	78	73	72	58	5	8	186	243	29	28
Estonia	78	71	64	63	66	61	3	1	169	288	32	53
Finland	76	73	69	68	69	60	8	17	154	245	19	22
France	75	66	68	60	71	52	8	12	136	258	23	36
Germany	82	70	75	65	77	50	9	10	164	269	26	50
Greece	79	56	74	49	84	49	10	13	-	-	22	43
Hungary	68	55	61	50	63	49	8	7	127	268	21	30
Iceland	88	82	81	77	107	70	6	8	-	-	-	-
Ireland	80	63	67	58	69	45	5	7	129	296	48	48
Israel	68	60	64	56	70	49	-	-	-	-	-	-
Italy	74	51	69	46	72	39	9	13	103	326	22	29
Japan	85	63	80	60	-	-	4	20	59	269	-	-
Korea	77	54	74	52	95	62	14	23	45	227	-	-
Luxembourg	77	61	73	57	75	47	4	6	-	-	29	42
Mexico	82	45	78	43	100	40	22	10	113	373	-	-
Netherlands	84	74	81	71	74	44	11	15	163	273	31	53
New Zealand	84	72	79	67	86	56	-	-	158	294	-	-
Norway	81	76	78	74	74	59	4	11	152	225	28	45
Poland	72	58	66	53	72	51	23	22	157	296	32	49
Portugal	78	69	71	62	77	61	19	21	96	328	30	34
Slovak Republic	76	61	68	53	71	52	4	3	-	-	23	34
Slovenia	76	68	71	64	74	63	10	13	166	286	31	37
Spain	82	66	68	54	71	48	23	26	107	294	25	45
Sweden	81	76	74	70	73	61	9	13	177	249	31	38
Switzerland	88	77	85	74	89	54	6	7	-	-	-	-
Turkey	75	28	65	24	87	26	9	10	116	377	19	28
United Kingdom	83	70	76	66	80	53	4	5	150	273	27	49
United States	80	69	72	63	-	-	3	3	154	258	-	-
Russian Federation	78	69	73	64	-	-	17	12	-	-	-	-
Brazil	81	59	80	57	-	-	-	-	-	-	-	-
China	78	69	79	68	-	-	-	-	91	234	-	-
India	81	34	52	20	-	-	-	-	52	352	-	-
Indonesia	86	49	-	-	-	-	-	-	-	-	-	-
South Africa	60	47	48	33	-	-	-	-	92	257	-	-

Notes: (1) Full-time equivalent employment rates are calculated by multiplying the employment to population ration by the average weekly hours worked by all employees and dividing by 40.
(2) Temporary employees are wage and salary workers whose job has a pre-determined termination date as opposed to permanent employees whose job is of unlimited duration.
(3) Surveys for Canada, China, Denmark, France, Ireland, Japan, Korea, Mexico and South Africa do not cover a complete calendar year and thus, to varying degrees, under-represent holidays. As people do more unpaid work on weekends, excluding holidays overestimates paid work and underestimates unpaid work and leisure.
* 2007 for Brazil, Chile, China, India, Indonesia, Israel, the Russian Federation and South Africa. Data refers to those aged 16-64 for Iceland, Spain, Sweden, the United Kingdom and the United States.
** 2007 for Chile and Israel; 2006 for Canada; 2004 for Mexico; 2002 for Iceland.
*** 2004 for Mexico; 2005 for the United States; 2008 for the Russian Federation.
**** Australia: 2006; Austria: 2008-09; Belgium: 2005; Canada: 2005; China: 2008; Denmark: 2001; Estonia: 1999-2000; Finland: 1999-2000; France: 1998-99; Germany: 2001-02; Hungary: 1999-2000; India: 1999; Italy: 2002-03; Ireland: 2005; Japan: 2006; Korea: 2009; Mexico: 2009; Netherlands: 2006; New Zealand: 1998-99; Norway: 2000-01; Poland: 2003-04; Portugal: 1999; Slovenia: 2000-01; South Africa: 2000; Spain: 2002-03; Sweden: 2000-01; Turkey: 2006; United Kingdom: 2000-01; United States: 2008

Source: OECD Employment Outlook (2010e), www.oecd.org/employment/outlook; OECD Employment Database, 2010, www.oecd.org/employment/database; Miranda (2011), "Cooking, Caring and Volunteering: Unpaid Work Around the World"; and OECD (2010f), "Tacking Inequalities in Brazil, China, India and South Africa - The Role of Labour Market and Social Policies"; and European Quality of Life Survey, 2007; and OECD (2008a).

CHAPTER 3: MEASURING THE GENDER DIMENSION IN ENTREPRENEURSHIP

111. The recent financial crisis has further fuelled already increasing interest in entrepreneurship as an important part of economic development and growth in many economies. However, entrepreneurship is a concept that is not easy to capture. Entrepreneurs, both male and female, are a diverse group running firms of various sizes, in different industry sectors and with varying success rates. Apart from the general diversity in entrepreneurial practices, there are also significant differences in the characteristics of male and female entrepreneurs. Overall women-owned businesses tend to be smaller, cluster in consumer-oriented sectors and generate lower sales turnover than those owned by men. Women generally use a smaller capital base than men to start their businesses, tend to have lower ratios of debt financing, and are much less likely to use private equity or venture capital.

112. Entrepreneurial activities of women are still hampered by constraints that often tend to be gender-specific, such as social conventions, legal and institutional frameworks, unequal employment opportunities, work-life balance and consequently restricted access to finance. In some countries, women's access to formal financial resources can be jeopardised by legal requirements for husbands to sign for loan approval or through smaller inheritances for daughters than for sons (OECD, 2011c). Furthermore, in developing countries women are more likely to operate their businesses in the informal sector and any existing public sector support. Even though microfinance has partly compensated for the marked gender bias in access to formal financial services it perpetuates women's prevalence within micro-businesses.

113. Gender differences in employment and education are likely to play a role in gender differences in entrepreneurship. Women's under-representation among employed managers not only provides them with less direct experience of managing businesses compared with men, but it also hinders the likelihood of successful bids for start-up loans. Moreover, women's lower average earnings endow them with less savings for starting a business. Importantly, undercapitalisation at start-up impacts negatively on the survival rates and growth prospects of firms. Occupational segregation reinforces the concentration of women-owned enterprises in service sectors and jeopardises women's prospects as entrepreneurs in high-growth sectors.

114. The knowledge base on female entrepreneurship has increased markedly in recent years (Minniti, 2009). Research has focused on women business owners' characteristics and development, women's motivations for starting and leading a business, women's leadership styles and management strategies; and barriers encountered by women business owners. Arguably, financing issues are those that triggered the keenest gender-based discussions.

115. Policy development has to address the needs of women entrepreneurs and particular policy lessons include ensuring equal property and inheritance rights; strengthening financial education and encouraging dissemination of financial information to women; facilitating access to public support services; fostering a positive image of entrepreneurship amongst women; promoting development of women entrepreneurship networks; and, supporting mentoring and coaching programmes (OECD, 2000 and OECD, 2004).

116. There is still lack of knowledge on the role of women's entrepreneurship in the society and the economy, as well as on the specific obstacles met by women entrepreneurs. This is mainly because the

analytical activity has been relying mainly on qualitative data and case-based cross country analysis, largely drawing on the experiences of advanced economies. Cross-national analysis remains scant. A more global and diversified analysis of female entrepreneurial activities is needed for solid policy development and policy transferability across countries, as for example through the OECD-MENA Women's Business Forum.

117. As comprehensive internationally-comparable data are lacking, there is no basis yet for a cross-country analysis of gender issues in entrepreneurship that can prompt national policy design. There is a need to improve the factual and analytical underpinnings and to strengthen the statistical basis for carrying out gender-related cross-country comparative analyses. This report focuses on the statistical basis needed for entrepreneurship analysis: it proposes a framework of indicators best suited for capturing gender issues in entrepreneurship.

118. The OECD has undertaken review of available data on entrepreneurship at national and international levels. Its main findings are presented in the first section of this chapter. The next section illustrates the main features of a "gender-focused" version of the framework of the existing OECD–EUROSTAT Entrepreneurship Indicators Programme (EIP), with indicators that are relevant to measuring the gender dimension of entrepreneurial activity. The third section of this chapter suggests good practices in using administrative data sources and surveys to compute gender-disaggregated entrepreneurship indicators, as exemplified with data from Denmark.

3.1 Taking stock of existing data sources on entrepreneurship

119. A review of available data sources on entrepreneurship with gender-disaggregated data provides a foundation for the development of "gendered indicators" on entrepreneurship in the EIP framework. The review focuses on existing data sources within the OECD countries and beyond, primarily in national statistical offices (NSOs) but also international organisations and several main national and international research institutes[20] (the Annex to this chapter provides more detailed information).

National data sources on female entrepreneurship

120. The capacity of national data sources to provide gender-disaggregated statistics on entrepreneurship varies considerably. On the whole, data collection is fragmented. Moreover, cross-national comparability is limited, even when similar indicators are computed. This is largely due to differences in underlying methodologies, the manner in which data are assembled and divergence in time periods. Moreover, there are important differences in national definitions of owners, managers, self-employed and employers.

121. There tend to be two main sources of information on female entrepreneurship: administrative data sources, such as business registers, and business or household surveys. The latter are typically obtained by National Statistical Organisations (NSOs) through surveys of various business aspects (e.g. financing issues); some of which focus on small and medium-sized enterprises (SMEs). The frequency of surveys varies across countries but often they are conducted on an annual or biannual basis. These surveys may contain information on the entrepreneur's motivations, and the type of enterprises covered often reflects the policy priorities of governments.

122. Business registers are the other key data source for analysing business activity. They are extensively used as sources for gender-disaggregated data on entrepreneurship, especially in the Nordic

[20] Labour Force Survey data have not been included since they typically only contain data on self-employment.

countries. In these countries, statistics collected in business registers are linked to information from other administrative sources of data on individuals. Some of the information that can be obtained is presented below using Danish data.

123. Different national data collection methods and varying policy priorities lead to variations in the indicators available in national statistics. The indicators on entrepreneurship by gender most frequently found include: prevalence and start-up rates of female entrepreneurs, basic characteristics of business-owners and enterprises, obstacles to business growth and start up, and attitudes towards entrepreneurship. Less frequent national indicators include: the education level of the business owner, the country of origin and ethnicity of business owners, previous work experience of business owners both in number of years and sector, the type of financial instruments used during start-up, and the innovation activities of the business.

124. A number of important indicators, which would help improve the analysis of the gender dimension of entrepreneurship, are rarely collected. These include the survival rates of firms and their characteristics, use of financial instruments, characteristics of family-owned businesses and time allocated by entrepreneurs to working in their business.

3.1.1 International datasets

125. In addition to national initiatives, there are some cross-national datasets on certain aspects of entrepreneurship by gender. These include the Global Entrepreneurship Monitor (GEM), produced by a consortium of researchers, the European Commission (EC) Eurobarometer survey and the World Bank Enterprise Survey which allow for cross-country comparability of certain aspects of entrepreneurship.

126. These datasets provide different gender-disaggregated variables, but they all include indicators on the prevalence of entrepreneurship. The GEM study and the EC Eurobarometer also focus on attitudes towards entrepreneurship and on motivational aspects of entrepreneurship. Country coverage is typically wide: more than 50 for the GEM dataset, 27 countries for EC Eurobarometer and about 125 countries in the case of the World Bank Enterprise Survey.[21]

127. Another relevant international initiative is the Eurostat Factor of Business Success project. This ad-hoc initiative involved the participation of NSOs in a large group of EU member states, and included gender-disaggregated data on the characteristics of the enterprises and of the entrepreneurs, providing a wide range of information on surviving firms, from motivation to start a business to information on business owners and performance of the enterprise. Collecting such information over the long-run would provide a valuable source of information on entrepreneurial activity of both men and women.

128. Finally, a different approach would consist in exploiting international commercial databases of firm-level data produced by providers of business information, such as the ORBIS database. While these databases were originally not built for analytical purposes, once a number of operations are performed on them to ensure that the data are statistically representative they can become an important source to develop indicators on women entrepreneurship. This approach will be taken forward as part of the OECD Gender Initiative.

129. While internationally comparable gender-disaggregated information on entrepreneurship is becoming more readily available, the objective to obtain a solid base of cross-country evidence on female entrepreneurship is far from being met. The major weaknesses of the existing international datasets

21. The World Bank Entrepreneurship Survey focuses on emerging and developing economies; only a few OECD countries are covered.

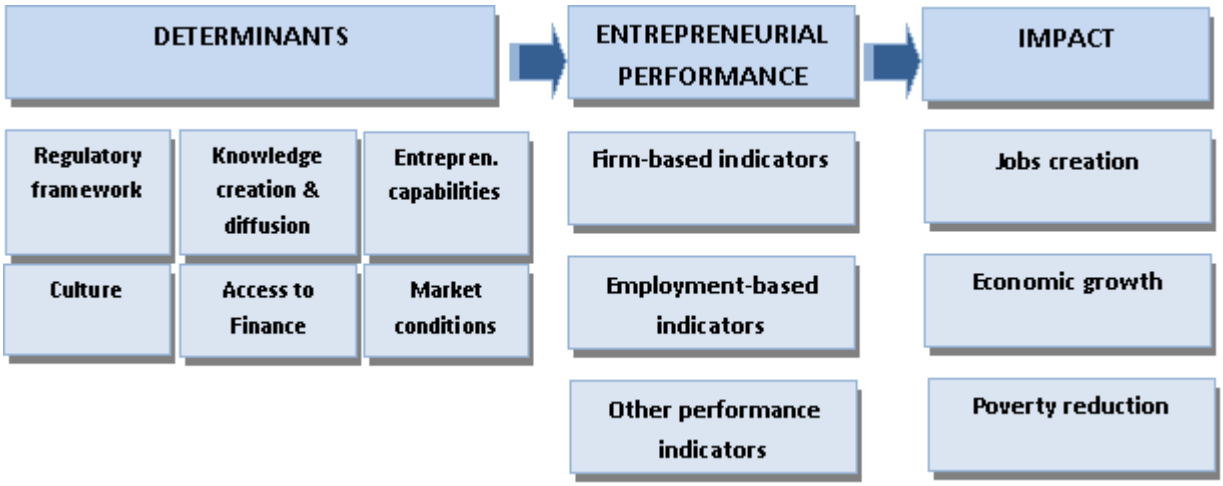
concern two aspects. The first relates to the quality and reliability of the collected data, due to methodological and conceptual issues (in particular, the collected samples are usually small in size, especially when disaggregated by gender, so that the generalisation of the results presents limitations). The second is that, by construction, international datasets such as GEM or the Eurobarometer are best suited for the analysis of the attitude towards entrepreneurship rather than the actual manifestation of the phenomenon. In this regard, the framework set out by the Entrepreneurship Indicators Programme presents a more comprehensive approach to the measurement of entrepreneurship that captures the multiple aspects of the entrepreneurial phenomenon and draws links between the determining factors of entrepreneurial activity and its impact on the economy. Also, it relies on the use of official statistics to collect core indicators of entrepreneurial performance. It therefore constitutes a valuable tool for organising the development of internationally comparable gender-disaggregated data.

3.2 A gender-relevant framework for entrepreneurship indicators

130. The development of indicators is an important pre-requisite for evidence-based policy-making. The EIP establishes a simple but comprehensive framework for the development of empirical indicators on entrepreneurship that are both policy relevant and internationally comparable. The EIP does not propose any single measure as a key to understanding entrepreneurship, but identifies a wide range of indicators that measure different aspects of entrepreneurship (OECD, 2009d).

131. The model consists of three major categories, while several sub-categories are identified within each of the three main categories to guide the selection of indicators (Chart 3.1). The first category includes the *determinants of entrepreneurship*, which contain the many factors affecting entrepreneurship and that can, in turn, be influenced by policymakers; they encompass very different areas, from the regulatory framework in which business set up and operate, to the conditions for accessing finance, to the entrepreneurial culture in a country. The second category looks at the indicators of *entrepreneurial performance*, which capture the amount and type of entrepreneurship that takes place in a country. This core group comprises key indicators measuring the birth, survival, growth and death of enterprises. The final group of indicators focuses on the *impact of entrepreneurship* which can be measured for example in terms of economic growth, job creation or poverty reduction.

Chart 3.1: The OECD-Eurostat EIP Conceptual Framework



Source: Ahmad and Hoffman (2008)

3.2.1 Gender dimension of the EIP Framework

132. The 'gendered' EIP Framework selects a set of indicators of entrepreneurial determinants and performance which, based on the current knowledge, show or are expected to depict gender disparities. Tables 3.1 and 3.2 present the results, but the list of indicators is not exhaustive since only those indicators that are considered of high importance from a policy perspective are shown. The work on entrepreneurship within the OECD Gender Initiative will focus on this set of indicators.

133. Table 3.1 proposes a list of relevant indicators to capture factors that can affect female and male willingness and ability to choose entrepreneurship as a career and to set up and grow their own business. These include some key conditions, such as the rights to own property, the level of the capital required to start a business, family background or the provision of childcare and after-school care facilities. Women are still less likely than men to become entrepreneurs and the availability of role models in the family might have a positive impact on their engagement in entrepreneurship. Given that women undertake most of the caring responsibilities, childcare facilities can increase the time women invest into their businesses. In some countries, women also face particular difficulties in accessing property to serve as collateral, which limits their ability to qualify for bank loans. Since women are more likely to have smaller capital bases, the minimum capital requirements for starting a business is an important prerequisite in determining the level of female entrepreneurial activity. Hence, it is important for the policymakers to consider these indicators when analysing female entrepreneurship. Information on these indicators will be drawn from existing international datasets and used for analytical work within the OECD Gender Initiative.

134. Table 3.2 lists indicators that measure the entrepreneurial performance of a country, in particular as described, by gender, by the profile of entrepreneur, by the creation, survival, growth and death of enterprises, but also in terms of exports and innovation performance of firms. The collection of these performance indicators will also be a focus of the OECD Gender Initiative.

Table 3.1: Entrepreneurial determinants: Key indicators

CATEGORY	DESCRIPTION	DATA SOURCES
ENTREPRENEURIAL DETERMINANTS		
Minimum Capital Required for Starting a Business *	The paid-in minimum capital requirement that the entrepreneur needs to deposit in a bank before registration of the business start	World Bank, Doing Business
Provision of childcare and after-school care facilities	Information on childcare fees; child care benefits, and tax benefits.	OECD Family database
Property Rights *	Survey responses to the question: property rights, including over financial assets (1 = are poorly defined and not protected by law, 7 = are clearly defined and well protected by law).	World Economic Forum, Global Competitiveness Report
Collateral requirements	Collateral value as percentage of loan.	World Bank, Enterprise Survey
Ease of Access to Loans	Survey responses to: how easy it is to obtain a bank loan in your country with only a good business plan and no collateral (1 = impossible, 7 = easy).	World Economic Forum, Global Competitiveness Report
Building Credit*	Identifies minimum loan thresholds in private credit bureaus and public credit registries	World Bank, Women, Business and the Law
Venture Capital	Share of venture capital invested in women-owned businesses	Venture capital associations
Enterprises Using e-Government**	Dummy for use of enterprises using any e-Government services. The measure is based on all firms with 10 employees or more, excluding the financial sector	Eurostat, Information Society Statistics
Population with Tertiary Education (by gender and by subject)	The share of persons aged 25-34 with tertiary-type B education or tertiary-type A education and advanced research programmes	OECD Education at a Glance
Received Training in Starting a Business During School(by gender)	The percentage of the population aged 18-64 that received training - voluntary or compulsory - in starting a business during school.	GEM 2008 Report
Received Training in Starting a Business After School (by gender)	The percentage of the population aged 18-64 that received training - voluntary or compulsory - in starting a business after school.	GEM 2008 Report
Desirability of Becoming Self-Employed (by gender)	Survey responses to: desire to become self-employed within the next 5 years. This question was asked only to non-self-employed individuals	European Commission, Flash Eurobarometer
Entrepreneurship among Managers (by gender)	How senior executives rank the level of entrepreneurship of business managers in the given country from a scale of 0 to 10	IMD World Competitiveness Yearbook.
Image of entrepreneurs (by gender)	Survey responses to: image of entrepreneurs according to their status in society. Entrepreneurs are ranked against civil servants and managers	European Commission, Flash Eurobarometer
Risk for Business Failure (by gender)	Survey responses to: being willing to start a business if a risk exists that it might fail.	European Commission, Flash Eurobarometer
Business owner's relatives also own a business (by gender)	Survey: family of self-employed or not	REM (Germany)

Note: * Indicator that is particularly important for developing countries. ** Diffusion of e-tools facilitates dealing with bureaucracy and administrative duties at a distance. This is of particular importance to women who still shoulder most of the domestic and caring responsibilities and who flexibility in accessing these services is essential.

Table 3.2: Entrepreneurial performance by gender: Key indicators

CATEGORY	DESCRIPTION	DATA SOURCES
PERFORMANCE INDICATORS (collected by sector and size-class)		
Share of enterprises by business-owner	Proportion of female and male-owned enterprises (including information on sector, size and ownership type)	National Statistical Offices (NSOs)
Entrepreneur profile	Profile of the majority owner of the enterprise (including (age, education level, type of ownership)	National Statistical Offices (NSOs)
Employer enterprise birth rates	An employer enterprise birth refers to the birth of an enterprise with at least one employee.	OECD SDBS - National Statistical Offices (NSOs)
Employer enterprise death rates	An employer enterprise death occurs either as the death of an enterprise with at least one employee in the year of death or by moving below the threshold of one employee.	OECD SDBS- National Statistical Offices (NSOs)
Survival rates of employer enterprises	Survival rate reflects the number of enterprises of a specific birth cohort that have survived over different years.	OECD SDBS- National Statistical Offices (NSOs)
Share of high-growth enterprises (as measured by employment)	High-growth enterprises, as measured by employment, are enterprises with average annualised growth in employees greater than 20% a year, over a three-year period, and with ten or more employees at the beginning of the observation period.	OECD SDBS- National Statistical Offices (NSOs)
Export Performance	Including information on exporting enterprises, for instance by employment size class of enterprises or value of trade.	OECD TEC - National Statistical Offices (NSOs)
Innovation performance	Including details on patents, R&D, product, process, marketing or organisational innovation.	Innovation surveys, business statistics

3.3 Using existing data to compute indicators of entrepreneurship by gender

135. Some countries (e.g. Denmark, Iceland, and Sweden) are able to compute high-quality indicators on gender dimensions of entrepreneurship. They do so either by exploiting surveys meant to collect different types of business statistics (e.g. on business financing) or through the optimal use of administrative data collected for other purposes. Their practice illustrates that novel collections of data are not necessarily needed to produce indicators capable of describing women's contribution to entrepreneurship, their motivations and ambitions. The lessons from these country experiences include:

- Use the suggested EIP 'gendered' framework as support for identifying and monitoring the factors that most affect women entrepreneurship.

- Use international databases, when available and relevant, as sources of information on the determinants of women entrepreneurship, in order to facilitate comparisons across countries.

- Optimise the exploitation of existing national data from administrative sources, in particular by linking different types of data, e.g. business register data with registers of data on individuals.

- Always integrate a gender dimension in business surveys that are conducted on a regular or ad-hoc basis.

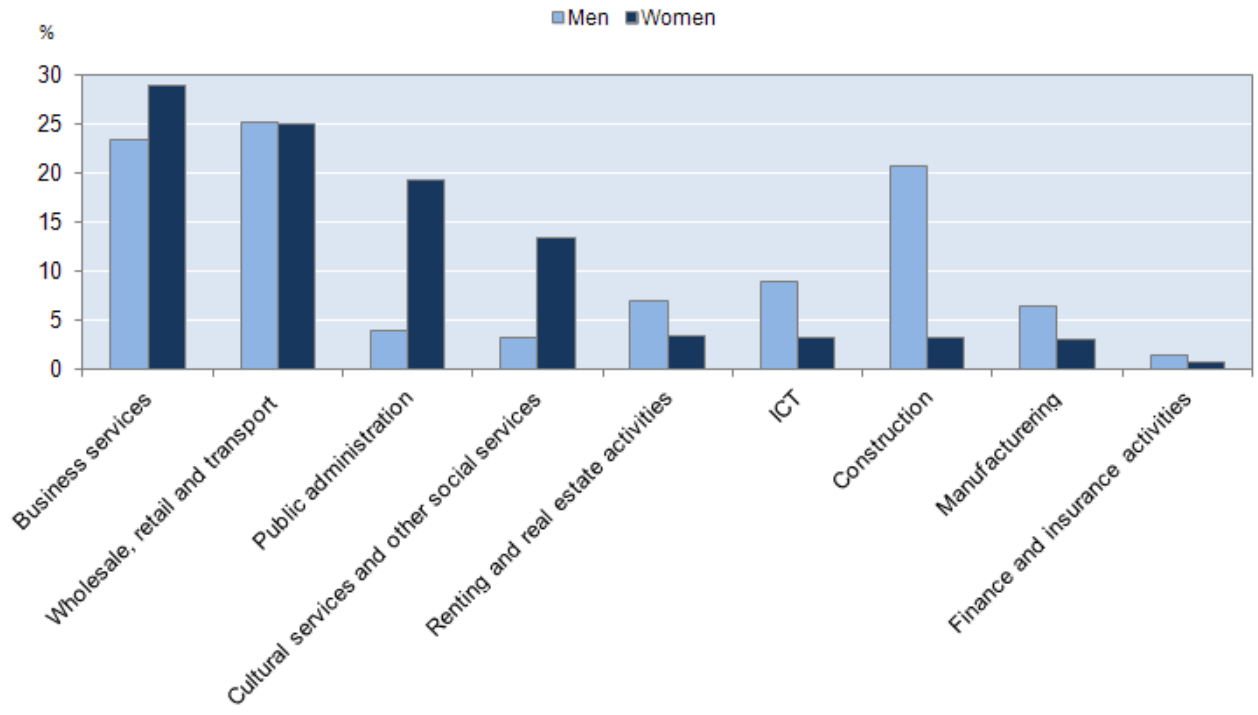
3.3.1. A Danish case study

136. This section concludes with the presentation of a selection of data on entrepreneurship by gender produced by Denmark. The Danish case is illustrative of how the use of existing data from administrative and other official sources can be optimised for developing indicators that allow the analysis of entrepreneurship by gender. Data are obtained by linking business register data with registers of data on individuals.

137. In Denmark, men dominate the entrepreneurship landscape as they make up about 75% of all entrepreneurs. The charts below present gender-disaggregated information in line with proposed indicators by the EIP framework. The charts focus on the first two indicators from the performance category (i.e. share of enterprises by business-owner and entrepreneur profiles by gender). The resulting picture is extremely informative of the profile of women and men entrepreneurs, concerning their educational background, prevalent sectors of activity or the corporate form of the business respectively owned by men and women. For instance, Chart 3.2 shows the dominance of female entrepreneurs in public administration and services, whereas men dominate construction, ICT and manufacturing sectors. This is strongly influenced by the educational and occupational segregation of men and women, as discussed in the previous chapters. The choice of sector might also influence the ownership structure of the enterprises. Most entrepreneurs operate a business as sole-proprietors. However, Chart 3.3 shows that the proportion of "sole-proprietor" is highest among female entrepreneurs in Denmark.

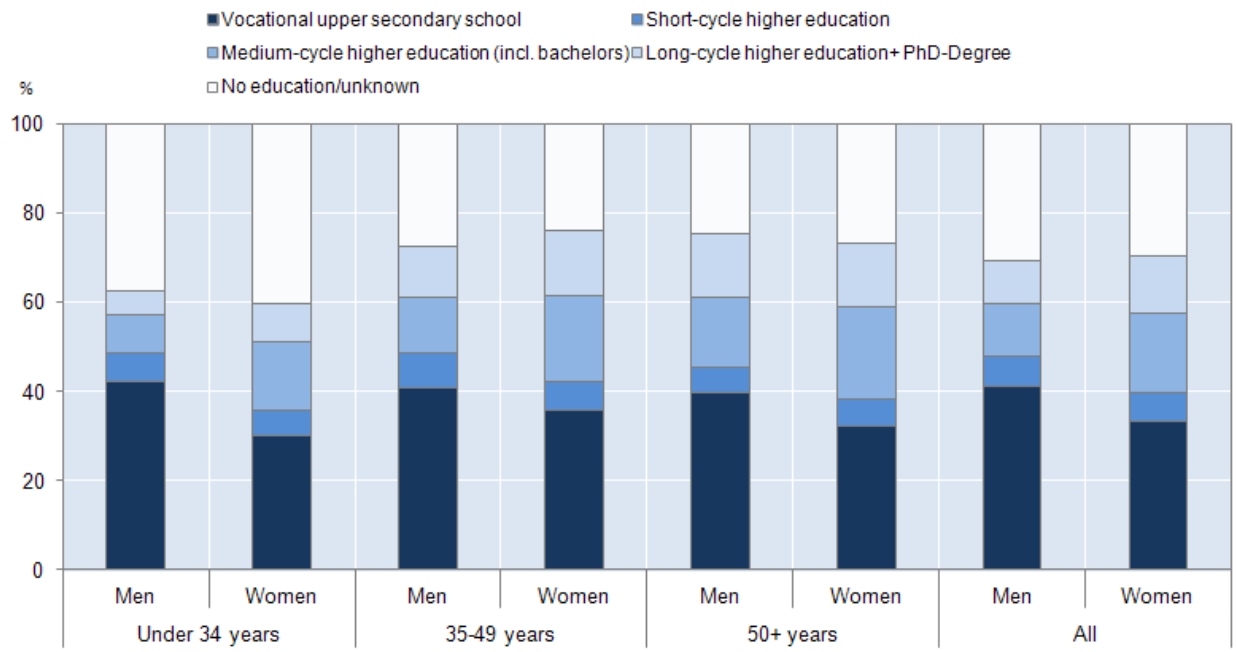
138. Another important gender difference is observed regarding vocational training. Chart 3.3 shows that for all age groups, men are more likely to obtain vocational training which might provide them with more business skills, and hence increase the likelihood of them becoming successful entrepreneurs.

Chart 3.2: Danish entrepreneurs by gender and sector, 2008



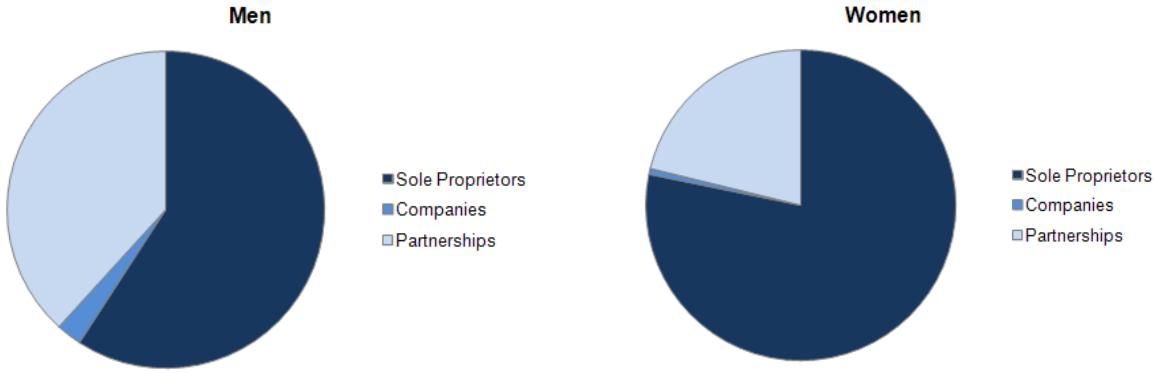
Source: Statistics Denmark

Chart 3.3: Danish entrepreneurs by gender, age and education level, 2008



Source: Statistics Denmark

Chart 3.4: Danish entrepreneurs by gender and ownership type, 2008



Source: Statistics Denmark

139. Mindful of cross-country comparability in indicators, similar analysis should be conducted in other countries to draw a more comprehensive picture of gender differences in business demographics. In order to inform policy design, further empirical research should also be undertaken to better understand the main drivers of such gender differences.

ANNEX TO CHAPTER 3: TAKING STOCK OF EXISTING DATA SOURCES ON ENTREPRENEURSHIP

Table A3.1: Available Women Entrepreneurship Data at National Level

Country	Source	Type of data	Period covered	Data (all by gender)
		OECD countries		
AUSTRALIA	**Australian Business of Statistics**	Survey data	annually until 2003	Proportion of business start-ups and proportion of small and medium enterprises by industry (in growth industries defined in terms of both employment and output)
AUSTRIA	**Statistics Austria**	Administrative data	annually from 2004 to 2008	Methodology and definitions according to the OECD/ES BDS manual.
CANADA	**Statistics Canada** *Survey on Financing of Small and Medium Enterprises*	Business surveys that are linked to tax file data	2000, 2001, 2004, 2007 and 2011 (tentative)	Proportion of businesses with female ownership by demographic characteristics of owner (age, years of experience) and by characteristics of enterprise (sector, size class), and by type of financed instruments used during start-up, by obstacles to business growth, by approval rates of financing type and by R&D expenditures.
	Statistics Canada *Foreign Affairs and International Trade Canada*	Survey data	overview report	Facts & Figures on women-owned enterprises
DENMARK	**Statistics Denmark** *Micro data on Danish individuals*	Business Demography database	annually to date	Proportion and characteristics of new enterprises, entrepreneurs behind sole proprietorships, entrepreneurs behind corporations, and surviving companies.
	Danish enterprise & construction authorities (FORA)	Official sources (OECD, Eurostat, Statistics Denmark)	annually up to 2009	Proportion and characteristics of enterprises.
ESTONIA	**Statistics Estonia**	Survey data (Social Security and Time-use surveys)	annually to date	Data covers work-related issues, income, poverty, education, health, time use etc. of entrepreneurs broken down by gender for: 1) employers, 2) own-account workers, and 3) unpaid family workers.
GERMANY	Panel study of university graduates (**HIS**)	Survey data	every 3 years up to 2009	Proportion of self-employed women by sector
	Regional Entrepreneurship Monitor Germany (**REM**)	Survey data	REM I (2000-2002) & REM II (2002-2004)	Socio-demographic characteristics of nascent entrepreneurs.
ITALY	**Italian Chamber of Commerce** (via Infocamere, Unioncamere)	Business Register	quarterly from 1998 to 2002	Socio-demographic characteristics of entrepreneurs and birth and death rates of enterprises

Table A3.1 (continued): Available Women Entrepreneurship Data at National Level

Country	Source	Type of data	Period covered	Data (all by gender)
		OECD countries		
NORWAY	**Statistic Norway**	Business Register	annually from 2000 to date	Enterprises by type of enterprise, economic activity, organisational structure, by growth in employment and turnover of enterprise; socio-demographic characteristics of owners (national background, level of education, age) and shareholders in public and private limited companies by gender and share.
SWEDEN	**Swedish Institute for Growth Policy Studies**	Business Register	annually to date	Real births of enterprises and survival of real births of enterprises three years after start-up
	Swedish Agency for Economic and Regional Growth	Business Register	annually to date	Enterprises by location; classified limited companies, and company market orientation (local, national, international) and socio-demographic characteristics of owners (age, education)
UNITED KINGDOM	**Household Survey for Entrepreneurship**	Survey data	bi-annually from 2001 to 2007	Characteristics of entrepreneurs (and their enterprises) classified as: **Doers** are those who are self-employed or own a business (fully or partly), either as their main activity or as a sideline to their normal employment activities. **Thinkers** are those who are not currently Doers, but have recently thought about starting a business, buying into an existing business or becoming self-employed. **Avoiders** are those who are neither Doers nor Thinkers.
	Annual Small Business Survey	Survey data	annually from 2003 to 2007, now bi-annual	Proportion of women-led businesses (including information on their businesses: age of business, employment size, amount of investment, family-owned businesses, reasons for business incorporation, exposure to internet access/ ICT, etc)
UNITED STATES	**KFS**, Kauffman Firm Survey	Survey data	annually from 2004 to 2010	KEA Index by gender (and by cross-matching data, broken down by: 1) age, 2) industry, 3) region, 4) race, 5) nativity, 6) education.
	PSED I & II	Longitudinal data on business formation	annually from 1998 to date	The information obtained includes data on the nature of those active as nascent entrepreneurs, the activities undertaken during the start-up process, and the characteristics of start-up efforts that become new firms.
	Census SBO, Survey of Business Owners	Census	annually to date	Ownership of female-own businesses by: ethnicity, size of firm, geo area, home-based/ family-owned, age, educational background

Table A3.2: Gender relevant indicators from national data sources

Indicator	Description	Coverage	Source
SIGNIFICANT INDICATORS BY COUNTRY			
Female ownership by size group, age, years of experience (%)	(# female ownership / tot) by size group, age, years of experience	Canada	**Survey on Financing of Small and Medium Enterprises**- these estimates were generated from the responses of enterprises that employed fewer than 500 employees and generated annual gross revenue of less than $50 million.
Female ownership by R&D exp (%)	# female ownership / tot enterprises surveyed	Canada	**Survey on Financing of Small and Medium Enterprises**- these estimates were generated from the responses of enterprises that employed fewer than 500 employees and generated annual gross revenue of less than $50 million.
Female ownership by type of financing request (%)	# female ownership / tot enterprises surveyed	Canada	**Survey on Financing of Small and Medium Enterprises**- these estimates were generated from the responses of enterprises that employed fewer than 500 employees and generated annual gross revenue of less than $50 million.
Female ownership by approval rates of financing type (%)	# female ownership / tot enterprises surveyed	Canada	**Survey on Financing of Small and Medium Enterprises**- these estimates were generated from the responses of enterprises that employed fewer than 500 employees and generated annual gross revenue of less than $50 million.
Female ownership by obstacles to business growth (%)	# female ownership / tot enterprises surveyed	Canada	**Survey on Financing of Small and Medium Enterprises**- these estimates were generated from the responses of enterprises that employed fewer than 500 employees and generated annual gross revenue of less than $50 million.
Type of financed instruments used during start-up by female ownership (lease, micro-credit, personal saving…), %	# female ownership / tot enterprises surveyed	Canada	**Survey on Financing of Small and Medium Enterprises**- these estimates were generated from the responses of enterprises that employed fewer than 500 employees and generated annual gross revenue of less than $50 million.
% of entrepreneurs by gender for: Marital Status, Age, Number of children, Education, Sector Affiliation, Yearly unemployment, Professional experience in establishment, gross and profit.	The Entrepreneur Database contains information on both entrepreneurs (personal data) and enterprises (enterprise data).	Denmark	**Statistics Denmark**- Entrepreneurship Database
Indicators by ownership in new enterprises broken down by: sector, gender, age, civil status, ethnicity, education, business experience and sector familiarity.	Taken from the 2009 Entrepreneurship Index publication which utilises several sources: OECD, Eurostat, National Official data.	Denmark	**Danish enterprise & construction authorities**
Nascent entrepreneur/adult population by gender	Owner/manager of firm or planning start	Germany	Regional Entrepreneurship Monitor Germany (**REM**)
Personal owned enterprises by economic activity by gender, age and by education	# female ownership / tot	Norway	**Statistics Norway**
% entrepreneurs, by gender broken down by age, level of education, growth ambitions	# female entrepreneurs on total	Sweden	**Nutek and Statistics Sweden 2009** - questionnaire survey targeted at a representative sample of Swedish small enterprises with up to 49 employees. Responses were obtained from a little more than 18 000 enterprises in all sectors throughout the country.

Table A3.2 (continued): Gender relevant indicators from national data sources

Indicator	Description	Coverage	Source
SIGNIFICANT INDICATORS BY COUNTRY			
Proportion of women-led businesses and demographics on the business	Estimate of the proportion of majority women-led SMEs in the UK taken from the Small Business Survey	United Kingdom	**Annual Small Business Survey- BERR**, Dept of Business Enterprise and Regulatory Reform
Access to finance in women-led businesses		United Kingdom	**Annual Small Business Survey- BERR**, Dept of Business Enterprise and Regulatory Reform
Exposure to Export markets for women-led businesses		United Kingdom	**Annual Small Business Survey- BERR**, Dept of Business Enterprise and Regulatory Reform
Obstacles to business success for women-led businesses	To choose among: the economy, access to finance, tax, recruiting staff, cash flow, transport issues, regulation.	United Kingdom	**Annual Small Business Survey- BERR**, Dept of Business Enterprise and Regulatory Reform
Impact of administrative burdens on women-led businesses	Among which: less regulation, change of government, reduce the influence and competition of supermarkets / chains / cheap imports, less bureaucracy / red tape / paperwork.	United Kingdom	**Annual Small Business Survey- BERR**, Dept of Business Enterprise and Regulatory Reform
Changes in the proportions of Thinkers, Doers and Avoiders: 2005-2007 - By age and gender	Doers are those who are self-employed or own a business (fully or partly), either as their main activity or as a sideline to their normal employment activities. Thinkers are those who are not currently Doers, but have recently thought about starting a business, buying into an existing business or becoming self-employed. Avoiders are those who are neither Doers nor Thinkers.	United Kingdom	**Household Survey of Entrepreneurship- BERR**, Dept of Business Enterprise and Regulatory Reform
Thinkers, Doers and Avoiders by marital status and presence of children: Based on women only	see definition above	United Kingdom	**Household Survey of Entrepreneurship- BERR**, Dept of Business Enterprise and Regulatory Reform
Thinkers, Doers and Avoiders by marital status and presence of children: Based on 16-44 year old women only	see definition above	United Kingdom	**Household Survey of Entrepreneurship- BERR**, Dept of Business Enterprise and Regulatory Reform
Barriers to start a business	see definition above	United Kingdom	**Household Survey of Entrepreneurship- BERR**, Dept of Business Enterprise and Regulatory Reform
Ownership of female-own businesses by: ethnicity, size of firm, geo area, home-based/ family-owned, age, educational background	SBO questionnaire is asking for information about characteristics of the businesses and their owners.	United States	**SBO- Survey of Business Owners** (via census)
Kauffman Index of Entrepreneurial Activity by Gender	The KEA index is computed by using the Current Population Survey. The Kauffman Index is then defined as the percent of the population of non-business owners who start a business each month.	United States	**Kauffman Firm Survey**

Table A3.3: Available Women Entrepreneurship Data at International Level

Country	Source	Type of data	Period covered	Country coverage
INTERNATIONAL LEVEL				
World Bank Enterprise Surveys	World Bank Surveys	Indicators measure women's participation in businesses (i.e. proportion of firms with female participation in ownership & proportion of firms with female top managers)	up to date	Survey covers about 125 countries (focus on developing and emerging market economies)
The General Entrepreneurship Monitor (GEM)	The Global Entrepreneurship Monitor consortium	Share of women in age group of 18 to 64 years who are actively engaged in the start-up process or managing a business less than 42 months old in the ref year (in%).	1999 to date	Survey covers about 59 countries
EUROPEAN LEVEL				
Eurostat- Factor of Business Success (FOBS)	Joint initiative of DG MARKT and Eurostat involving 15 NSOs participating on a voluntary basis.	FOBS explores the following factors: - determinants of success; - growth of newly born enterprises; - motivations for starting up own business; - barriers and risks encountered during the first years of existence, and - business plans for future development.	2005 only	AUT, BG, CZE, DNK, ITA, LT, LUX, RO, SWE, SVK
Eurobarometer/ Gallup Survey	Requested by Directorate-General for Enterprise and Industry, coordinated by Directorate-General Communication, and run by The Gallup Organisation Hungary	- Socio-Demographic variables of respondents & families - Reasons to be/ or to become in the future self-employed - Sentiment toward starting a new business	2000 to date	EU27, the EEA/EFTA countries (Norway, Iceland, and Switzerland), Turkey and Croatia, United States of America , Japan, South Korea and China

Table A3.4: Gender relevant indicators from international data sources in line with the OECD-Eurostat Entrepreneurship Indicators Programme

Indicator	Description	Coverage	Source
DETERMINANTS INDICATORS ON MULTI-COUNTRY LEVEL			
Motivation for start-up, by gender [answering the question "What was/were then main incentive(s) for starting the enterprise?"]	Measuring for: Desire for new challenges, to be one's own boss, to make a living from a hobby activity/ Tradition for self-employment in the family/Combining work and private life/Children age/Prospect of making more money and others	Austria, Bulgaria, Czech Republic, Denmark, Estonia, France, Italy, Lithuania, Luxembourg, Latvia, Portugal, Romania, Sweden, Slovenia and Slovak Republic. [*Ref: FOBS Countries*]	**FOBS**- target population- the population surveyed in this project was enterprises born in 2002, that had survived to 2005, and that were still managed by their founders at the time of the survey.
Difficulties at start-up, by gender	Measuring for: access to financing, establishing contacts with customers, price goods or services, to find suitable premises, finding suppliers, getting suitable personnel and other	FOBS Countries	**FOBS**
Previous occupation by gender [answering the question "Just before starting up the enterprise, your occupation was"]	Employee, Running another enterprise, student, Unemployed and available to labour market, No gainful activity and not available to labour market	FOBS Countries	**FOBS**
Attitude towards entrepreneurship, by gender	% female having a strong preference towards entrepreneurship	EU27, the EEA/EFTA countries (Norway, Iceland, and Switzerland), Turkey, Croatia, United States of America, Japan, South Korea and China	**Eurobarometer/ Gallup** survey on Entrepreneurship
Contributing family workers (% of employed), by gender	Contributing family workers are those workers who hold "self-employment jobs" as own-account workers in a market-oriented establishment operated by a related person living in the same household.	Almost all UN countries	**GenderStat –** the World Bank database.
Judgment of enterprise's profitability, by gender	Answering the question: *How do you judge your enterprise's profitability?*	FOBS Countries	**FOBS**
Innovation in the enterprise, founders own assessment, by gender	Product innovation, Process innovation, Organisational innovation, Marketing innovation	FOBS Countries	**FOBS**
Proportion of women in managerial positions (%)	Percentage of women among legislators and managers refers to the proportion of legislators, senior officials and managers who are women.	Almost all UN countries	**GenderStat –** the World Bank database.
PERFORMANCE INDICATORS ON MULTI-COUNTRY LEVEL			
Share of women and men among founders, compared with total labour force (Labour Force Survey)	Enterprise founders / LF, by sex	FOBS Countries	**FOBS**
Female Total Entrepreneurial Activity (TEA)	Percentage of women in the labour force that are either actively involved in starting a new business or who own or manage a business that is less than 42 months old.	35 countries (2007)	**GEM,** Global Entrepreneurship Monitor
Female founders by NACE sectors		FOBS Countries	**FOBS**
Turnover in 2004 broken down by gender of the entrepreneur	Turnover (measured in millions), answering the question: *What was your enterprise's turnover in 2004?*	FOBS Countries	**FOBS**
% of Firms With Female Participation in Ownership	# female ownership / tot	125 countries	**EnterpriseSurvey.org -**the World Bank
% of Firms With Female Top Manager	# female top manager / tot	125 countries	**EnterpriseSurvey.org -**the World Bank
% entrepreneurs, by gender	Female entrepreneurs among all entrepreneurs in the country (% rate).	EU27, the EEA/EFTA countries	**Eurobarometer/ Gallup** survey on Entrepreneurship

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