

# OECD GENDER INITIATIVE

---



**Gender Equality**



**Education - Employment - Entrepreneurship**

Copyright OECD All Rights Reserved

## TABLE OF CONTENTS

GENDER EQUALITY IN EDUCATION, EMPLOYMENT AND ENTREPRENEURSHIP **ERROR! BOOKMARK NOT DEFINED.**

EXECUTIVE SUMMARY .....	4
Chapter 1: Gender equality in education.....	6
Summary and main findings: Promoting gender equality in education .....	6
1.1 A snapshot of gender differences in education.....	7
1.2 Gender differences in education performance .....	9
1.2.1 Participation.....	9
1.2.2 Attainment .....	10
1.2.3 Increasing participation in developing countries.....	12
1.3 Gender patterns in literacy skills and choices of field of study .....	14
1.3.1 Gender differences in student performance at age 15 .....	14
1.3.2 Gender differences in financial literacy.....	16
1.3.3 Gender differences in field of tertiary education .....	17
1.3.4 Linkages between field of study in tertiary education and occupation.....	20
ANNEX TO CHAPTER 1: BACKGROUND DATA ON EDUCATION .....	22
Chapter 2: Gender equality in employment .....	25
Summary and main findings: promoting gender equality in employment .....	25
2.1 A snapshot of gender differences in employment outcomes .....	27
2.1.1 Greater female employment participation limits poverty risks .....	29
2.2 Promoting gender equality in employment .....	30
2.2.1 Reconciling work and family life .....	31
2.2.2 Discrimination .....	36
2.2.3 Occupational segregation and public employment.....	36
2.3 Employment policies in emerging and developing economies .....	40
2.3.1 Enhancing skills.....	40
2.3.2 Access to productive resources.....	40
2.3.3 Policies for informal employment .....	41
2.3.4 Monitoring progress .....	43
ANNEX TO CHAPTER 2: BACKGROUND DATA ON EMPLOYMENT .....	45
Chapter 3: Measuring the gender dimension in entrepreneurship .....	48
Summary and main findings: building the cross-national dataset to strengthen evidence-based policy development in entrepreneurship .....	48
3.1 Gender inequality in entrepreneurship .....	49
3.2 A gender-relevant framework for entrepreneurship indicators.....	51
ANNEX TO CHAPTER 3: SOME EXISTING DATA SOURCES ON ENTREPRENEURSHIP.....	55
REFERENCES .....	57

## Tables

Table 1.1: Occupation Choice by Field of Study Completed for Professionals and Technicians - Male and Female.....	21
Table A1.1: Gender gaps in education compared with the OECD .....	23
Table A1.2: Primary and secondary education enrolment, PISA mean scores in reading, mathematics and science, and proportion of engineering, manufacturing and construction degrees awarded, by gender....	24
Table A2.1: Gender gaps in employment compared with the OECD.....	46
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.....	47
Table 3.1: Entrepreneurship: some key entrepreneurial determinants and performance indicators .....	53
Table A3.1: Available Women Entrepreneurship Data at National Level.....	55
Table A3.2: Available Women Entrepreneurship Data at International Level.....	56

## Boxes

The OECD Gender Initiative: The Way Ahead .....	5
Box 1.1: Policy lessons to improve gender equality in education - .....	7
Box 1.2: Raising female participation in secondary education in Bangladesh: the Female Stipend Programme.....	13
Box 2.1: Policy lessons to improve gender equality in employment .....	26
Box 2.2: Childcare supports in Chile and Mexico .....	34
Box 2.3: Promoting gender equity and a more equal sharing of parental leave in Germany and Iceland .....	35
Box 2.4: Empowering women in the informal economy .....	42
Box 2.5: The unpaid “care economy” in developing countries .....	43
Box 2.6: Aid focussed on gender equality .....	44
Box 3.1: Selected lessons for gender equality in entrepreneurship .....	49

## Charts

Chart 1.1: Gender gaps in education.....	8
Chart 1.2: There is no clear gender pattern regarding young NEETs.....	10
Chart 1.3: Younger women are more likely to complete secondary and tertiary education than their male counterparts and women 20 years their senior.....	11
Chart 1.4: Girls read better than boys, while gender differences in mathematics and science are relatively small.....	15
Chart 1.5: Boys outperform girls in mathematics .....	16
Chart 1.6: Females dominate the humanities and health degrees whereas more males are awarded mathematics and engineering degrees .....	18
Chart 2.1: Gender gaps in employment .....	28
Chart 2.2: Women are at a higher risk of poverty than men, especially in old age .....	29
Chart 2.3: The gender wage gap is narrowing but remains substantial .....	30
Chart 2.4: Employment gaps are firmly established at age 30.....	32
Chart 2.5: Formal childcare costs can significantly reduce returns to paid employment .....	33
Chart 2.6: In 2008 women were most likely to be in top positions in the Philippines and the United States.....	37
Chart 2.7: Women are over-represented in the public sector.....	39
Chart 2.8: Women are under-represented in central government’s senior management .....	39
Chart 3.1: Men are generally more likely than women to own a business .....	50
Chart 3.2: The OECD-Eurostat EIP Conceptual Framework .....	52

## EXECUTIVE SUMMARY

1. Across the world, there is a strong 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 in recent history.

2. In 2011 the OECD launched its Gender Initiative 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.

3. This report is an adaptation of a report presented to the OECD Ministerial Council Meeting in May 2011; it focuses on OECD countries in the Pacific Rim and, where possible, brings in cross-nationally comparable data for other APEC countries. Chapters 1 (Education) and 2 (Employment) build on existing OECD work in these two areas. Chapter 3 summarizes some key findings on Entrepreneurship that can be gleaned from OECD analyses and presents a framework for gender-sensitive cross-national data collection in this area.

4. 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.

5. 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.

6. The existing knowledge base facilitates drawing some generalised policy lessons towards advancing gender equality. 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. Across the OECD as well as the APEC economies, achieving greater gender equality does not involve a "quick fix", but will require continuous policy attention across a range of issues.

### **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 the 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 practices 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 be 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 will explore 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 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. Further reports on these issues will be released in 2012.

## Chapter 1: Gender equality in education

### *Summary and main findings: Promoting gender equality in education*

7. 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 a 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. Young women often do not translate their good school performance into fields of studies for higher education that offer better employment prospects, such as STEM studies. The effect of this gender imbalance is very clear: it hinders women's careers, it lowers their future earnings levels and deprives OECD and APEC economies of a source of talent and innovation. It is also an inefficient use of investment in education. 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.
- 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. In addition, specific financial education programmes for particularly vulnerable groups should be supported to enhance their level of confidence and knowledge on critical financial issues. 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.

**Box 1.1: Policy lessons to improve gender equality in education -**

*Presented at the Meeting of the OECD Council at Ministerial level, Paris 25-26 May 2011 (OECD 2011a)*

Selected lessons for OECD countries	Selected lessons for developing countries
<p><b><i>Adopt policies to address stereotyping in education and training choices.</i></b></p> <ul style="list-style-type: none"> <li>• Encourage parents and teachers to raise self-confidence and motivation among girls to pursue interests in science and mathematics.</li> <li>• Gear curricula, teaching material and training policies to avoiding gender stereo-typing, and encourage girls to engage in STEM-studies.</li> <li>• 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.</li> <li>• Support research to further explore which factors shape gender differences in the choice of field of study.</li> </ul>	<p><b><i>Increase female enrolment and completion rates in secondary education through a range of measures, including:</i></b></p> <ul style="list-style-type: none"> <li>• 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).</li> <li>• Making cash transfers to poor families conditional on them investing in the education and health of their children.</li> <li>• 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.</li> <li>• 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.</li> </ul>
<p><b><i>Enhance the quality of education and efficient management of resources</i></b> to improve educational outcomes for both girls and boys.</p> <ul style="list-style-type: none"> <li>• The quality of teaching appears to be especially important for student performance.</li> </ul>	<p><b><i>Integrate financial education in schools to equip boys and girls with financial knowledge.</i></b></p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>

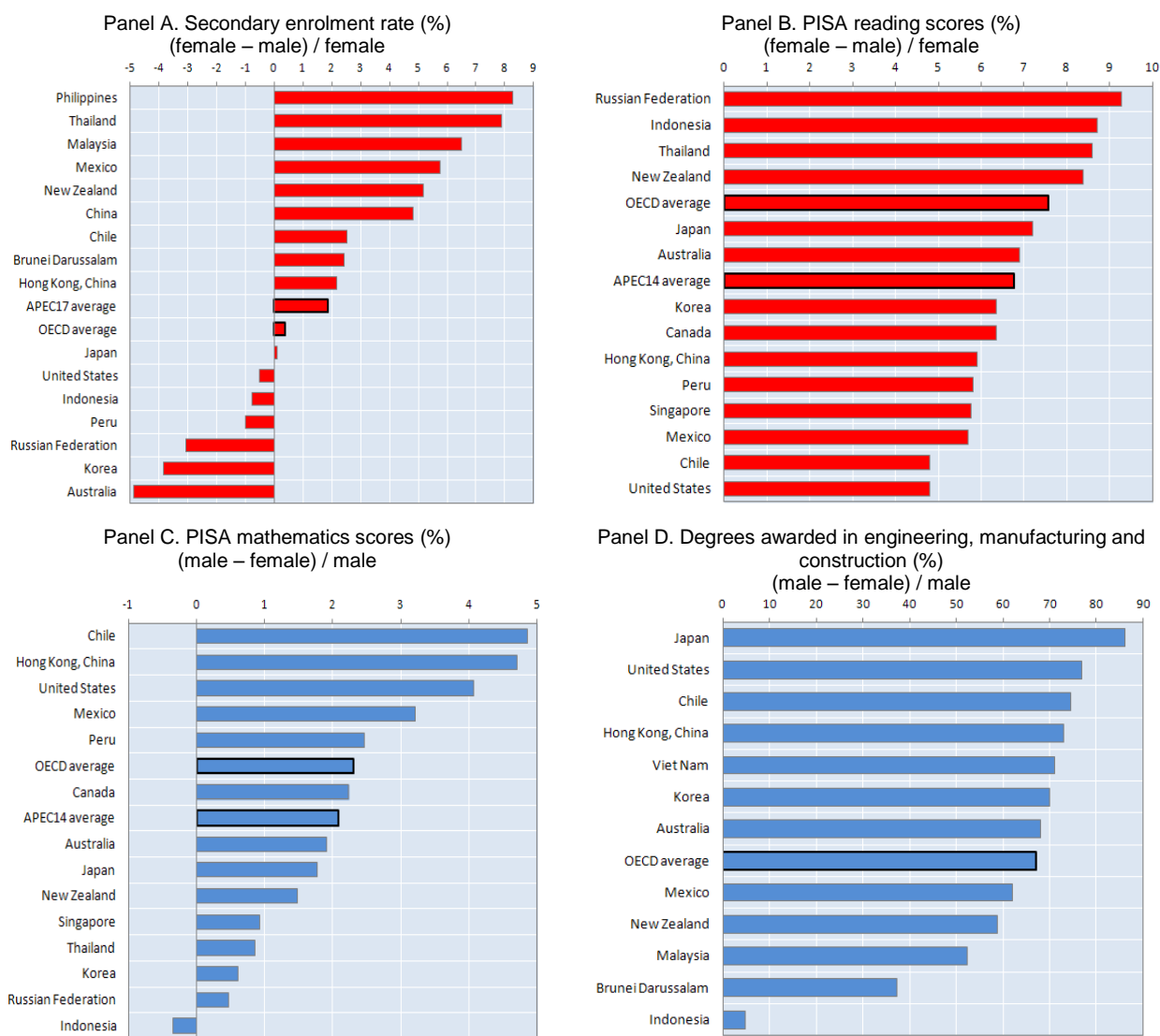
**1.1 A snapshot of gender differences in education**

8. Education enables individuals to develop their knowledge and skills throughout their lives and thus builds human capital. 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).

9. Chart 1.1 presents five key indicators (in four panels) for OECD and APEC 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 (Panels with blue bars: i.e. PISA maths scores and the proportion of degrees awarded in engineering, manufacturing and construction), and the difference in scores between women and men relative to female scores when female scores are highest on average (Panels with red bars: i.e. enrolment in secondary 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, and a 7% advantage in PISA reading scores (i.e. secondary school enrolment of boys is 105% of that of girls, 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 while about two-thirds of the degrees in the engineering, manufacturing and construction areas are awarded to boys.

**Chart 1.1: Gender gaps in education**



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 . For notes on the OECD and APEC averages please see Table A1.1, in the Annex to Chapter 1. Sources: see Table A1.1, in the Annex to Chapter 1

10. Gender gaps in participation levels can be gauged by looking at secondary gross enrolment rates (Chart 1.1, Panel A). On average among OECD countries the gender gap is negligible, with the APEC average being very small. For most APEC countries the gender gaps in enrolment rates are not substantial (mostly within 5%), while among countries for which data is available, young women in Thailand and the Philippines have the strongest disadvantage.



11. Gender differences in cognitive skills among adolescents are shown in Chart 1.1, Panels B and C, and show that APEC and OECD averages are quite close together. 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 (Singapore, Thailand, Korea, the Russian Federation and Indonesia) where the gender gap is small (Finland, Slovenia and Sweden are among the OECD countries with similar results, see (OECD, 2010a)).

12. 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 engineering, manufacturing and construction implies that on average across the OECD and APEC 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 these topics are large in most countries but they are particularly pronounced (i.e. above 75%) in Chile, the United States and Japan. The gender gaps in the proportion of tertiary degrees awarded in mathematics and computer sciences are much larger than might have been expected on basis of the gender gaps in performance in mathematics at age 15.

13. 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 (these gender gaps as well as the levels for boys and girls are presented in the Annex to this Chapter). Across the OECD and the APEC economies as Australia, Brunei Darussalam, Chile, Japan, Korea, Mexico, New Zealand and Viet Nam where the gender gap is less than 10% in absolute value for most indicators, the gap in degrees awarded in engineering, manufacturing and construction is still high (also see the Annex to this Chapter).

14. 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.

## **1.2 Gender differences in education performance**

### **1.2.1 Participation**

15. In APEC and 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. Among the APEC countries for which data is available, participation in secondary education is lowest at between 65 and 80% for both boys and girls in China, Indonesia, Malaysia and Thailand (Annex to this Chapter).

16. In developing countries in 2008, 78% of girls of 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).

17. 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

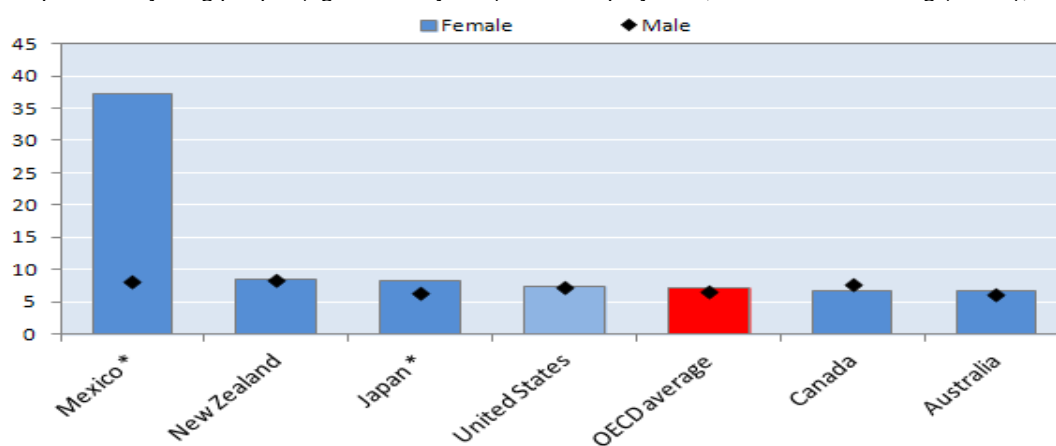
18. Education policies in the OECD and APEC countries often encourage young people to complete at least secondary education; attainment levels lower than complete secondary education are associated with high risks of unemployment, labour market marginalisation and social exclusion. A high proportion 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.

19. Across the OECD there is some variation in the proportion of NEETs as well as in the gender disparities among NEETs (OECD, 2010a). However, among the APEC countries that belong to the OECD, variation is limited and except for Mexico, there is no substantial gender gap in NEETs (Chart 1.2).

20. 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 the high share of female NEET in some developing 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

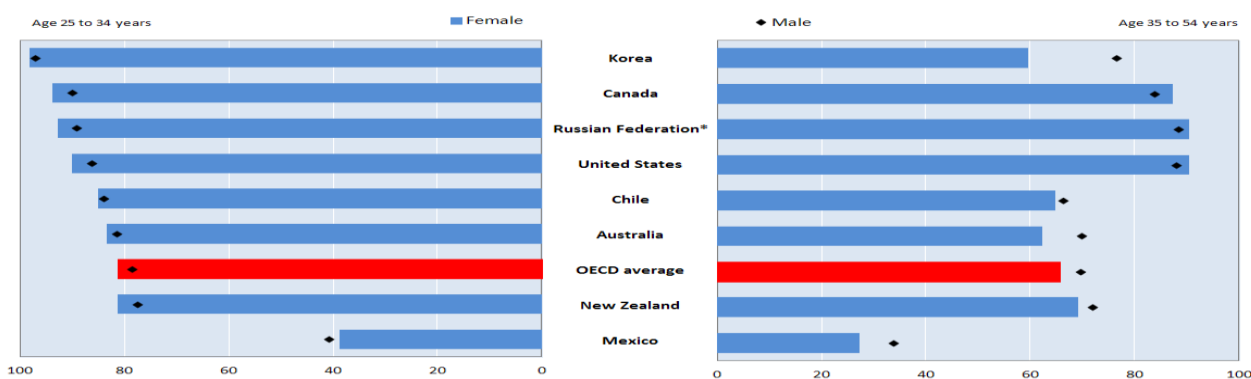
21. While gross enrolment rates are a widely available measure of participation in education, they do not capture educational outcomes well as they may be inflated by high repetition rates (see notes to Table A1.2 in the Annex to this Chapter). Educational attainment, i.e. the proportion of adults who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

completed a given level of education, is thus a better indicator of outcomes, but these are not always available for non-OECD countries.

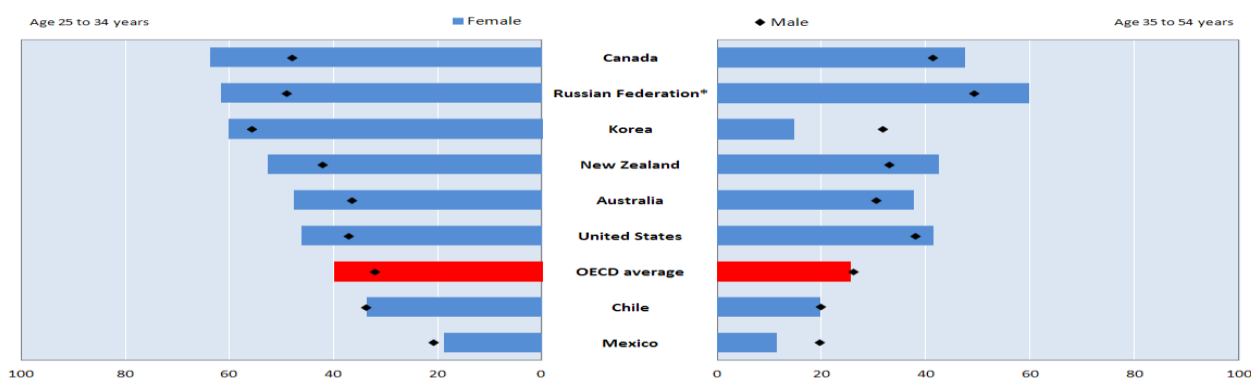
22. There has been progress in attainment levels in secondary and tertiary levels for both men and women in most OECD countries, as illustrated in Chart 1.3 by a comparison of average educational attainments of younger and older age groups. On the whole, women have made more gains than men and many countries have seen a shift in "gender advantage" from men to women. Except for Mexico, secondary education attainment levels of young women (25-34 years) in APEC countries for which the OECD has data, are higher than their male counterparts (Chart 1.3, Panel A). Furthermore on average across the OECD, secondary educational attainment levels among young women are on average 15 percentage points higher than among women born 20 years beforehand, and progress was particularly strong in Korea.

**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 refer to 2002.

Source: OECD, 2010a

23. In the younger cohort, the proportion of adults that completed tertiary education is higher for women than for men in all countries except Chile and Mexico (Chart 1.3, Panel B). Compared with older women tertiary educational attainment gains have been largest in Chile, Mexico and Korea. Indeed, the change over time has been most dramatic in Korea where tertiary 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.

24. 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.

25. 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.*

26. 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.

27. Gender equality in education is a priority for DAC donors.<sup>1</sup> 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.

28. 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).

---

<sup>1</sup> The OECD Development Assistance Committee is a unique international forum of many of the largest funders of aid, including 24 members. The World Bank, IMF and UNDP participate as observers. The DAC has the mandate to: "... promote development co-operation and other policies so as to contribute to sustainable development, including pro-poor economic growth, poverty reduction, improvement of living standards in developing countries, and to a future in which no country will depend on aid. ..."

29. 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.

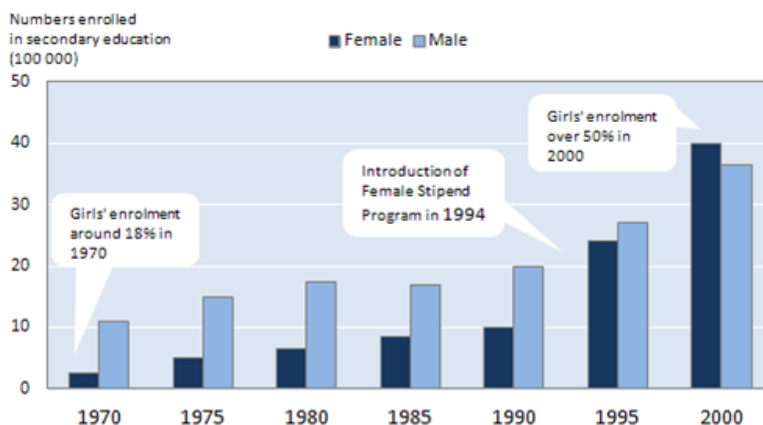
**Box 1.2: Raising female participation in secondary education in Bangladesh: the Female Stipend Programme**

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 Raynor and Wesson, 2006).

30. 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.<sup>2</sup>

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

#### 1.3.1 Gender differences in student performance at age 15

31. 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 (OECD, 2010c). Moreover, the advantage of girls in reading is larger than the advantage of boys in mathematics (Chart 1.4 Panels A and B). The gender differences in the performance of girls and boys in science are instead less significant (Chart 1.4, Panel; C). 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.<sup>3</sup> 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.

32. The widest gender gaps in reading (in favour of girls) are observed in New Zealand, Russia and Thailand, whereas the most pronounced gender disparities in mathematics (in favour of boys) are seen in Chile, Peru and Viet Nam.

33. 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).

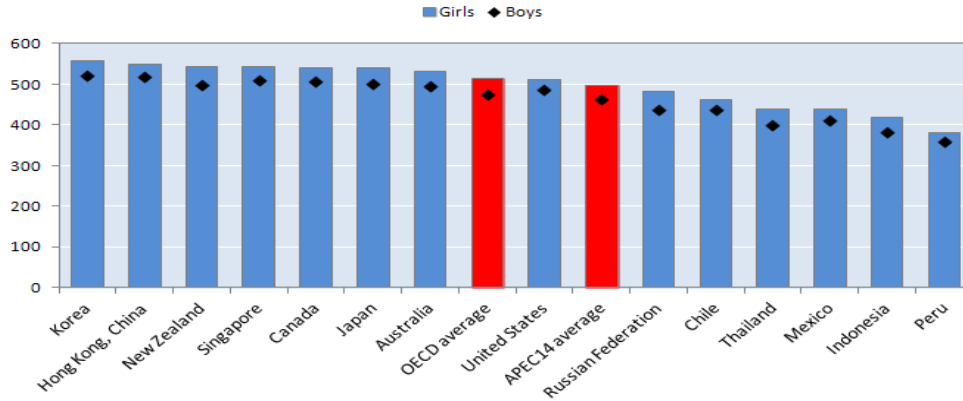
---

<sup>2</sup> 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).

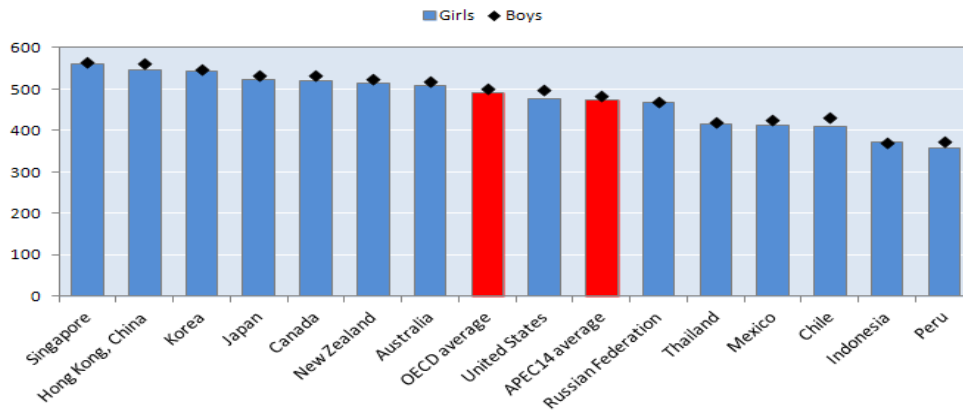
<sup>3</sup> Reading performance at grade 4 is measured in the latest cycle of the Progress in International Reading Literacy Study (PIRLS); mathematics and science performance at grade 4 is measured in the latest cycle of the Trends in International Mathematics and Science Study (TIMSS). Both studies 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**

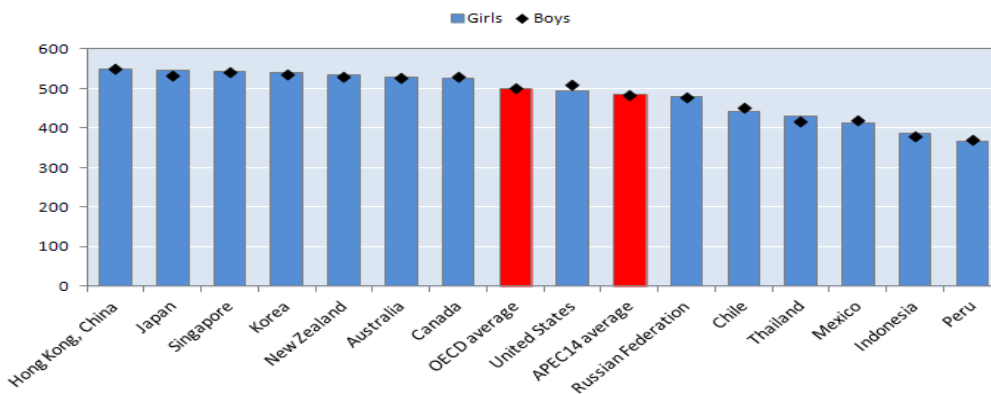
Panel A: PISA mean scores in reading, 2009



Panel B: PISA mean scores in mathematics, 2009



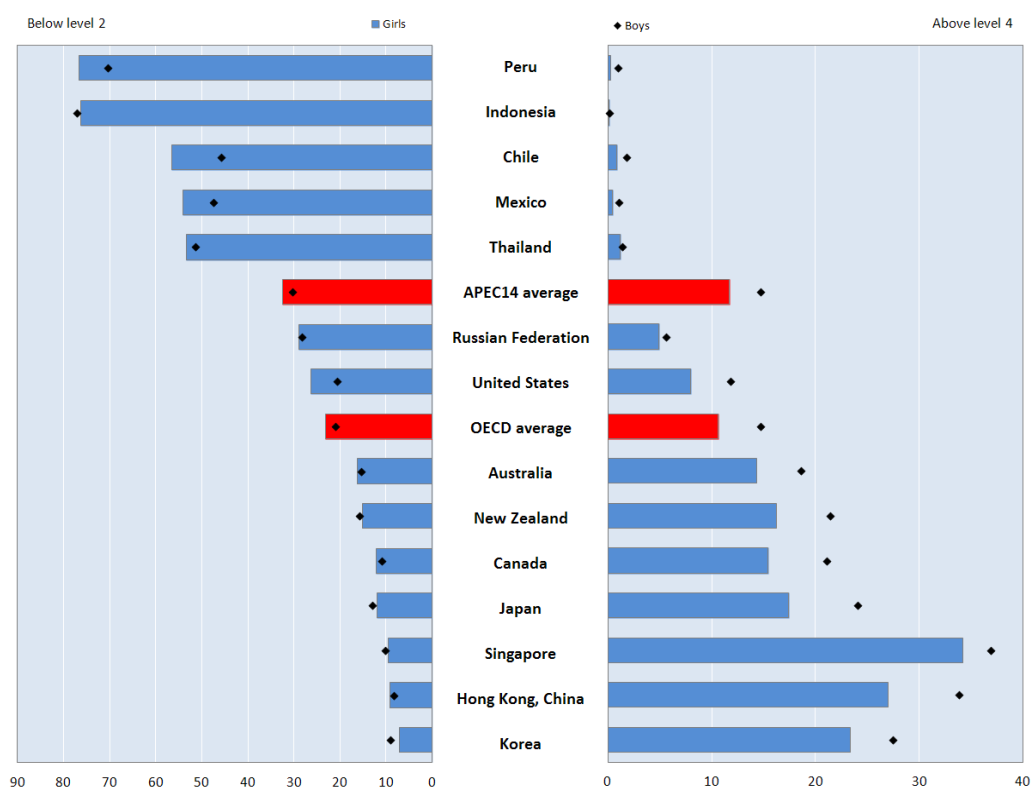
Panel C: PISA mean scores in science, 2009



Note: Countries in each Panel are ranked in decreasing order of girls' mean scores.  
 For notes on the OECD and APEC averages please see Table A1.2, in the Annex to Chapter 1.  
 Source: OECD PISA Database ([www.oecd.org/edu/pisa/2009](http://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. For notes on the OECD and APEC averages please see Table A1.2, in the Annex to Chapter 1. Source: OECD PISA Database ([www.oecd.org/edu/pisa/2009](http://www.oecd.org/edu/pisa/2009))

### 1.3.2 Gender differences in financial literacy

34. 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. In addition, women are less likely to keep up to date with financial and economic news than men.

35. 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.

36. Financial literacy also has 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 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.



37. 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.<sup>4</sup> 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

38. 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.

39. On average across the OECD as well as the APEC countries for which comparable data is available the large majority of degrees in humanities and health are awarded to women (Chart 1.6, Panels A and C) while the majority of degrees in mathematics and engineering degrees are awarded to men (Chart 1.6 panel B). The gender gap in engineering, manufacturing and construction degrees is particularly large in Japan where only 11% of graduates are female (Chart 1.6, Panel D: more information on APEC countries can be found in Chart 1.1 Panel D, but information on items as in Chart 1.6, Panels A, B, and C is not available). 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.

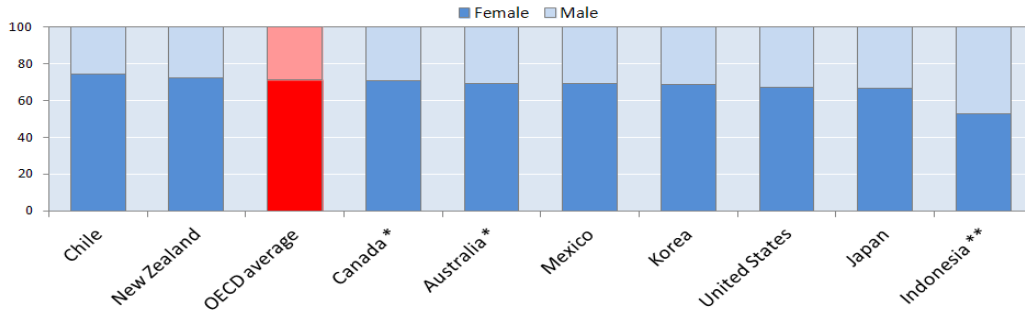
40. If policy were able to attract and retain more women in the STEM workforce, this would increase the number of scientists and engineers overall – thus promoting research, innovation and, ultimately, long-term growth. Such policies would also help reduce occupational segmentation in the labour force 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.

---

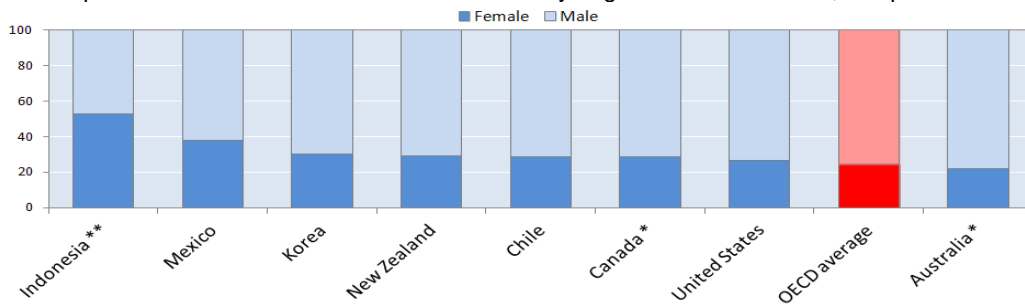
4. This was recommended in the OECD 2005 Recommendation on Principles and Good Practices for Financial Awareness and Education and is also the subject of the INFE Guidelines on Financial Education at School (2011).

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

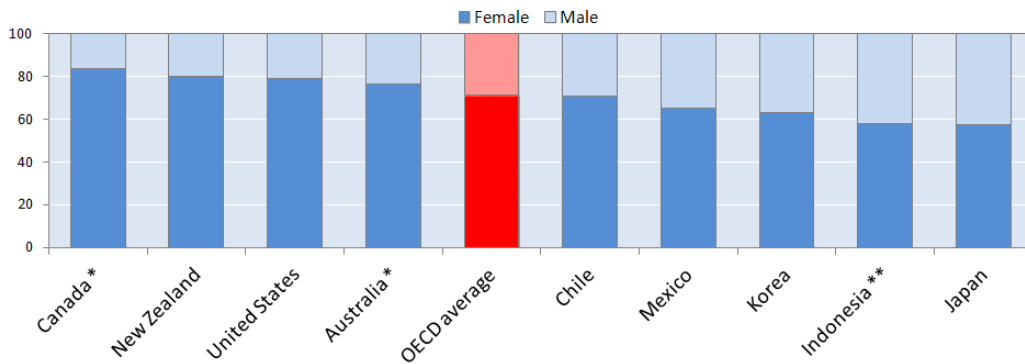
Panel A: Proportion of males and females awarded tertiary degrees in humanities, arts, education, 2008



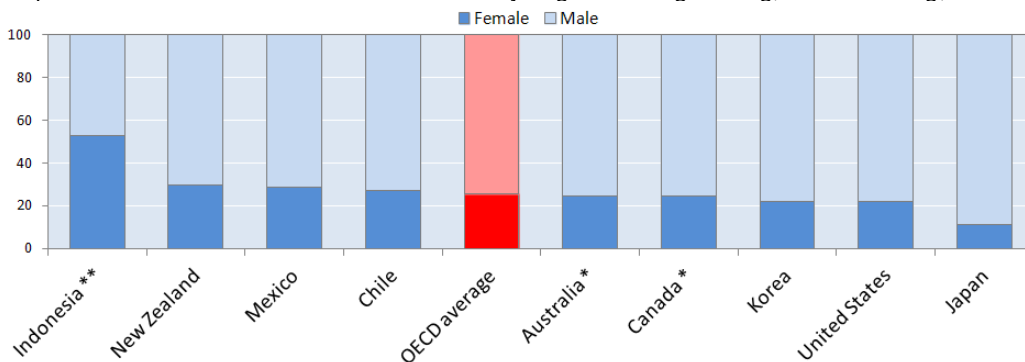
Panel B: Proportion of males and females awarded tertiary degrees in mathematics, computer science, 2008



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

41. 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. 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 (OECD, 2007a and 2010d).

42. 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 suggests that choices in tertiary education are partly affected by gender stereotyping, within and outside the school (Sikora and Pokropek, 2011).

43. 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.<sup>5</sup>

44. The strong feminisation of the teaching profession up to lower secondary education in OECD countries might also be relevant. Surveys conducted in Canada,<sup>6</sup> 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.<sup>7</sup>

45. 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.

46. 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

---

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

6. 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.

7. 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>

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.

47. 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*

48. 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.

49. An empirical analysis of labour market outcomes<sup>8</sup> for a cross-national sample of college students commissioned by the OECD and the World Bank sheds more light on the linkages between gender 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<sup>9</sup> 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

---

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

9. 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".

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).

**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)

<b>Occupation:</b>	<b>Physics, mathematics and engineering</b>	<b>Life science and health</b>	<b>Teaching</b>	<b>Other</b>	<b>Total</b>
<b>Field of study, Males</b>					
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
<i>Total</i>	<i>23.03</i>	<i>15.44</i>	<i>16.79</i>	<i>44.74</i>	<i>100.00</i>
<b>Field of study, Females</b>					
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
<i>Total</i>	<i>7.54</i>	<i>21.06</i>	<i>29.92</i>	<i>41.48</i>	<i>100.00</i>

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 APEC countries for which cross-national data was available to illustrate gender gaps in participation, attainment, performance in education as well as in the field of study. Gender equality is achieved in a selected dimension when the gender gap is equal to zero. Table A1.2 presents the male and female levels used to compute gender gaps in Table A1.1.

Across APEC economies, gender gaps in enrolment in primary education are close to zero, but are somewhat larger for enrolment in secondary education. Gender gaps in the field of study are very different than zero. Girls do better than boys in reading literacy and less well in mathematics, results in science literacy are sometimes in favour of girls (Indonesia, Japan, New Zealand, Russia and Thailand) and favour boys in other cases (Canada, Chile, Mexico, Peru and Viet Nam).

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

	Primary education enrolment rate (gross) <sup>1</sup>	Secondary education enrolment rate (gross) <sup>1</sup>	PISA reading scores <sup>2</sup>	PISA mathematics scores <sup>3</sup>	PISA science scores <sup>4</sup>	Proportion of engineering, manufacturing and construction degrees awarded <sup>5</sup>
	2008*	2008*	2009	2009	2009	2008**
	Female gap to male (%) (male-female)/male	Male gap to female (%) (female-male)/female	Male gap to female (%) (female-male)/female	Female gap to male (%) (male-female)/male	Male gap to female (%) (female-male)/female	Female gap to male (%) (male-female)/male
OECD Average	+1	0	+8	+2	0	+64
APEC Average	+1	+2	+7	+2	0	-
Australia	0	-5	+7	+2	0	+68
Brunei Darussalam	0	+2	-	-	-	+37
Canada	0	0	+6	+2	-1	-
Chile	+5	+3	+5	+5	-2	+75
China	-4	+5	-	-	-	-
Hong Kong, China	-1	+2	+6	+2	0	+73
Indonesia	+3	-1	+9	0	+2	+5
Japan	0	0	+7	+2	+2	+86
Korea	+2	-4	+6	+1	0	+70
Malaysia	+1	+7	-	-	-	+52
Mexico	+2	+6	+6	+3	-2	+62
New Zealand	0	+5	+8	+1	+1	+59
Papua New Guinea	-	-	-	-	-	-
Peru	0	-1	+6	+5	-1	-
Philippines	+2	+8	-	-	-	-
Russian Federation	0	-3	+9	0	+1	-
Singapore	-	-	+6	+1	0	-
Thailand	+2	+8	+9	+1	+3	-
United States	-1	-1	+5	+4	-3	+77
Viet Nam	-	-	-	-	-	+71

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 engineering, manufacturing and construction), 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, PISA reading and science scores).

The OECD average is the unweighted average for the OECD countries for which data is available.

The APEC average is the unweighted average for the APEC countries for which data is available. The APEC average is only presented for indicators for which data are available for more than 2/3<sup>rd</sup> of the member countries (14 countries or more).

**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) Programmes awarded at the tertiary level (ISCED levels 5 and 6).

\* 2006 for Canada; \*\* 2002 for the Russian Federation. Data for advanced research programmes are partial for Indonesia.

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

**Table A1.2: Primary and secondary education enrolment, PISA mean scores in reading, mathematics and science, and proportion of engineering, manufacturing and construction degrees awarded, by gender**

	Primary education enrolment rate (gross) <sup>1</sup>		Secondary education enrolment rate (gross) <sup>1</sup>		PISA reading scores <sup>2</sup>		PISA mathematics scores <sup>3</sup>		PISA science scores <sup>4</sup>		Proportion of engineering, manufacturing and construction degrees awarded <sup>5</sup>	
	2008*		2008*		2009		2009		2009		2008**	
	Male	Female	Male	Female	Boys	Girls	Boys	Girls	Boys	Girls	Male	Female
OECD Average	103	102	103	104	474	513	501	490	501	501	75	25
APEC Average	105	104	92	93	462	496	484	474	484	484	-	-
Australia	106	105	153	146	496	533	519	509	527	528	76	24
Brunei Darussalam	107	107	96	98	-	-	-	-	-	-	61	39
Canada	99	98	100	100	507	542	533	521	531	526	-	-
Chile	109	104	89	92	439	461	431	410	452	443	80	20
China	111	116	74	78	-	-	-	-	-	-	-	-
Hong Kong, China	102	102	82	84	518	550	561	547	550	548	79	21
Indonesia	121	118	75	74	383	420	371	372	378	387	51	49
Japan	102	102	101	101	501	540	534	524	534	545	88	12
Korea	106	104	99	95	523	558	548	544	537	539	77	23
Malaysia	95	94	66	71	-	-	-	-	-	-	68	32
Mexico	115	113	87	93	413	438	425	412	419	413	72	28
New Zealand	101	101	115	122	499	544	523	515	529	535	71	29
Papua New Guinea	-	-	-	-	-	-	-	-	-	-	-	-
Peru	109	109	89	89	359	381	374	356	372	367	-	-
Philippines	111	109	79	86	-	-	-	-	-	-	-	-
Russian Federation	97	97	86	84	437	482	469	467	477	480	-	-
Singapore	-	-	-	-	511	542	565	559	541	542	-	-
Thailand	94	92	71	77	400	438	421	417	418	431	-	-
United States	98	99	94	94	488	513	497	477	509	495	81	19
Viet Nam	-	-	-	-	-	-	-	-	-	-	78	22

The OECD average is the unweighted average for the OECD countries for which data is available.

The APEC average is the unweighted average for the APEC countries for which data is available. The APEC average is only presented for indicators for which data are available for more than 2/3<sup>rd</sup> of the member countries (14 countries or more).

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. The high secondary education enrolment rates in Australia and New Zealand are partly due to the large numbers of foreign students enrolled in secondary education.

(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) Programmes awarded at the tertiary level (ISCED levels 5 and 6).

\* 2006 for Canada; \*\* 2002 for the Russian Federation. Data for advanced research programmes are partial for Indonesia.

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



## Chapter 2: Gender equality in employment

### *Summary and main findings: promoting gender equality in employment*

50. 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.

- 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 APEC and OECD countries alike.
- Compared to men, women 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 and in Asian OECD countries they are twice as large. 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.
- 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, but in Korea, Mexico and Japan this "gender gap" is at least 3 hours per day. To generate greater gender equity in paid and unpaid work, many OECD countries, including Japan, are trying to get fathers to take more parental leave and spend more time on unpaid work activities around the home. To help parents to combine work and family commitments, all OECD and APEC countries, except the United States, provide paid maternity or parental leave. In addition, many OECD countries provide child- and out-of-school hours care support and/or have introduced legislation that facilitates flexible working time arrangements. However, for many APEC countries with limited rights to maternity leave, it seems that ensuring universal coverage of these rights should be a first priority and an intermediate step towards a more developed system of child-related leave policies.
- 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.

**Box 2.1: Policy lessons to improve gender equality in employment**

*Presented at the Meeting of the OECD Council at Ministerial level, Paris 25-26 May 2011 (OECD 2011a)*

Selected lessons for OECD countries	Selected lessons for developing countries
<p><b><i>Provide strong financial incentives to both parents – and especially mothers – to participate in paid work.</i></b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	<p><b><i>Improve the employment conditions, access and quality of jobs</i></b> to ensure that both women and men are able to maximise their productivity, earn a living wage and have access to social protection benefits.</p>
<p><b><i>Expand the exclusive use of fathers' parental leave entitlements</i></b></p> <ul style="list-style-type: none"> <li>Encourage fathers to make more and longer use of parental leave entitlements.</li> <li>Encourage fathers to make more and longer use of flexible working time arrangements.</li> <li>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.</li> </ul>	<p><b><i>Invest in infrastructure (roads, transport and clean water), especially in rural areas</i></b> to reduce the time-consuming aspects of women's and girls' unpaid domestic work. This will:</p> <ul style="list-style-type: none"> <li>Enable girls to attend school.</li> <li>Women to participate in the labour market or take up self-employment opportunities.</li> </ul>
<p><b><i>Take active measures to combat discrimination.</i></b> To make legal rules more effective:</p> <ul style="list-style-type: none"> <li>Empower well-resourced specialised bodies to investigate companies and organisations.</li> <li>Empower specialised bodies to take legal action against employers who engage in discriminatory practices, even in the absence of individual complaints.</li> </ul>	<p><b><i>Improve job quality within the informal sector and ensure that women move away from the most precarious and dangerous forms of informal employment.</i></b></p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>
	<p><b><i>Guarantee women's property and inheritance rights and ensure women's awareness of their rights.</i></b></p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>
	<p><b><i>Improve the availability of reliable gender disaggregated statistics,</i></b> which are key to enhancing evidence-based decision-making and policy development.</p>

- 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.

## **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 and APEC 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 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 (Panels with blue bars: i.e. the labour force participation rate, the employment to population ratio, 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 (panel with red bars: i.e. time spent on unpaid work).

53. As an example, in Australia, the gender gap in labour force participation is 16% (Panel A) and this is 19% regarding the employment-to-population ratio (Panel B). The median earnings of women are 88% of that of men. By contrast women spent more time on unpaid work: Australian men spend 55% of the time spent on unpaid work by women.

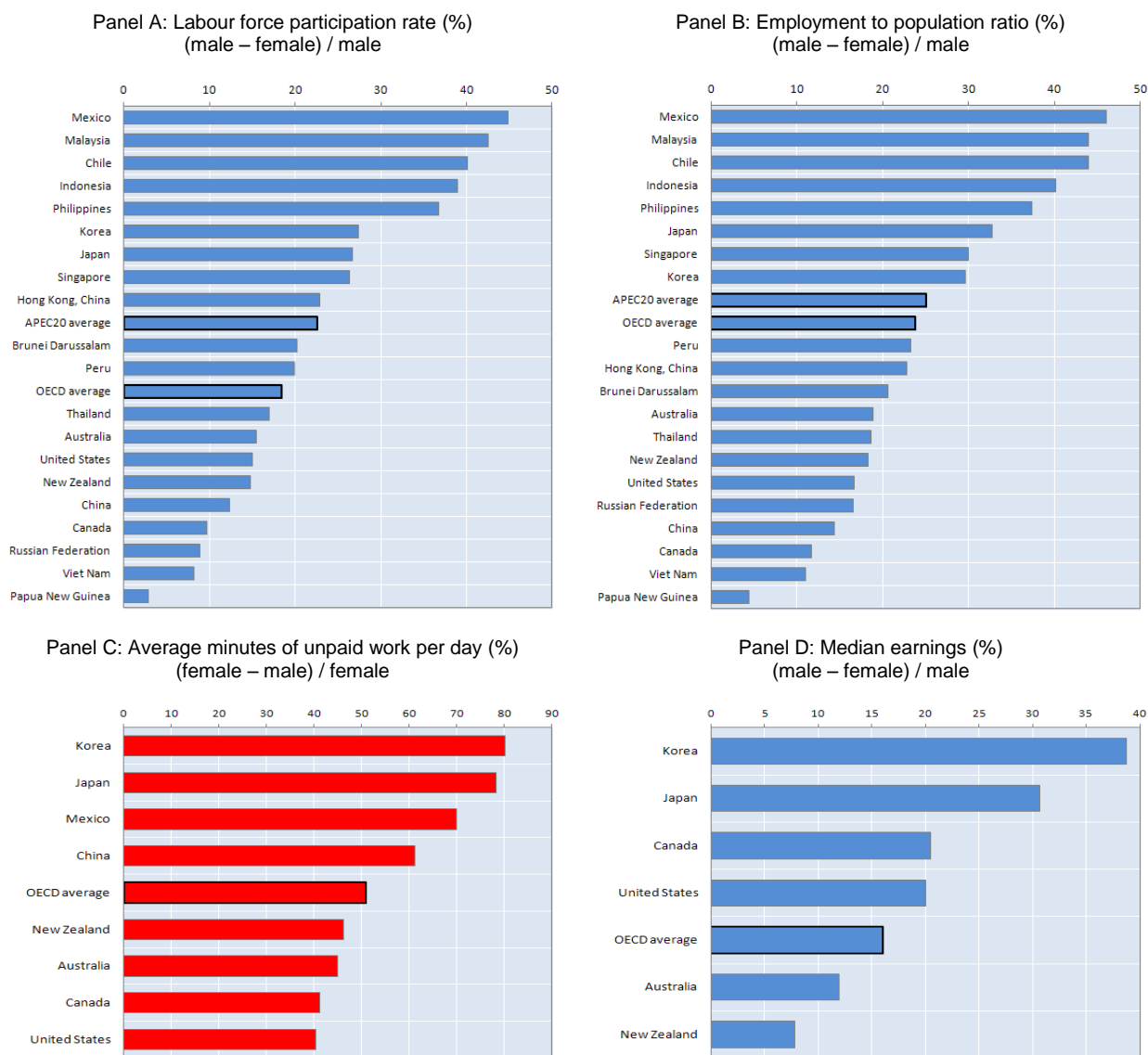
54. Overall, differences in labour market outcomes for men and women are wider than gender gaps in educational outcomes. Chart 2.1 shows that, on average across APEC and OECD countries, hardly any of the gender gaps in labour market outcomes are close to zero, and they are larger than gender gaps in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

55. 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, China, Papua New Guinea, the Russian Federation and Viet Nam (Annex to this Chapter).

56. There also remain substantial gender differences in working hours. Across all OECD countries, the proportion of part-time employment in total employment was 16% in 2009, and women's share in part-time employment was 71%. In many APEC economies part-time employment is far less prevalent. The proportion of part-time employment was around 17-18% in Canada and Mexico; around 10% in Chile and the United States; and, around 3% in Russia (OECD, 2010e and the Annex to this Chapter).

57. In most OECD countries, including Australia, Korea and Japan, – prime-age women (25-54 year-old) are much more likely than men to have a temporary rather than a permanent employment contract (Annex to this Chapter). By contrast, women in Mexico and the Russian Federation are more likely to have a permanent contract than their male counterparts. In these latter two countries women in formal employment are often in public sector employment while wage growth is strongest in the private sector.

**Chart 2.1: Gender gaps in employment**



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. For notes on the OECD and APEC averages please see Table A2.1, in the Annex to Chapter 2. Sources: see Table A2.1, in the Annex to this Chapter.

58. 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 this Chapter), and Chart 2.1 Panel C shows that these gender differences are particularly large in Korea and Japan, while men in Anglophone countries in the Pacific rim take on a much greater share of the household chores.

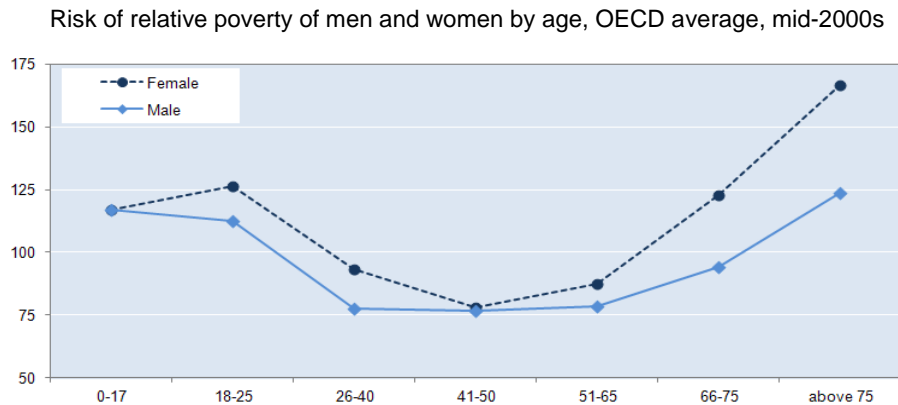
59. Gender wage gaps are also large across the OECD, and on average gender differences are 16% at median earnings (Chart 2.1, Panel D). However, there is considerable variation between countries with the largest gaps of over 30% in Japan and Korea, and the smallest in Australia and New Zealand. Men's taking on of more work at home appears to contribute a stronger position of women at the labour market and economies making better use for their skills.

60. 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 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.

### 2.1.1 Greater female employment participation limits poverty risks

61. 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.

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



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

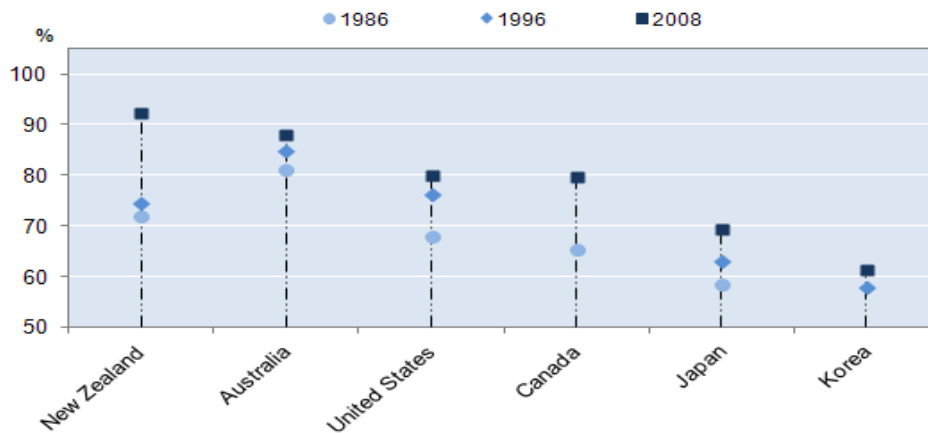
62. Greater female labour force participation reduces poverty risks, not just for individuals, but also for families, and particularly for sole-parent families (OECD, 2011a); improved labour market outcomes for women, coupled with income and/or childcare support, can help reduce poverty risks among sole-parent 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.

## 2.2 Promoting gender equality in employment

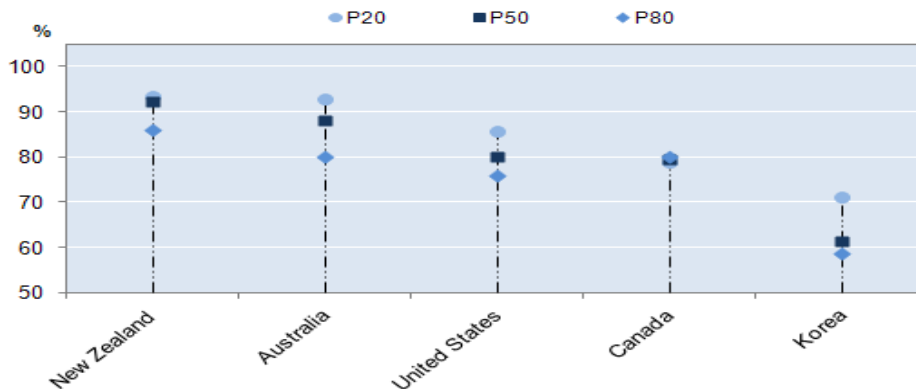
63. Along with higher female educational attainment levels and employment rates, overall labour market outcomes of women have improved in OECD countries. As a result, gender wage gaps (as measured at 50% of median earnings) have declined over time (Chart 2.3, Panel A) but still remain significant at 16% on average across the OECD.<sup>10</sup> 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. 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 2.3, Panel B).

**Chart 2.3: 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 Employment database ([www.oecd.org/employment/database](http://www.oecd.org/employment/database)).

10. 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.

64. 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*

65. 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 2.4). Particularly in Japan and Korea – and to a lesser extent in Australia, do young women still leave employment in their late 20s/early 30s, with employment participation increasing again to peak in the late 40s. In all countries 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.

66. Also in OECD countries at least, 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 (OECD, 2011c). Policy should therefore not encourage women's withdrawal from the labour market for caring reasons.

#### Financial incentives to work and formal childcare

67. Timing differs among OECD countries, but changing female aspirations have led more women to enter the labour force work. In some European countries this has led, since the late 1960s and throughout the 1970s and 1980s, to the development of policy models that provided a continuum of work/family supports throughout the early life course of children. For example, the Nordic countries (Denmark, Finland, Iceland, Norway and Sweden), provide an integrated system of the following supports: 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).<sup>11</sup> However, in most OECD and APEC countries there remain significant gaps in support.

68. 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 APEC countries that belong to the OECD are gender equitable in that they provide slightly more net benefits to dual-earner couples than to single-earner families at the same earnings levels (*OECD Family database*).

69. Tax/benefit systems in these countries also provide strong incentives to work. But high child-care costs can be the reason for relatively high average effective tax rates (AETRs): the costs of childcare can significantly reduce to returns to work for families in Australia, New Zealand and the United States (Michigan, see note to Chart 2.5). 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. 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

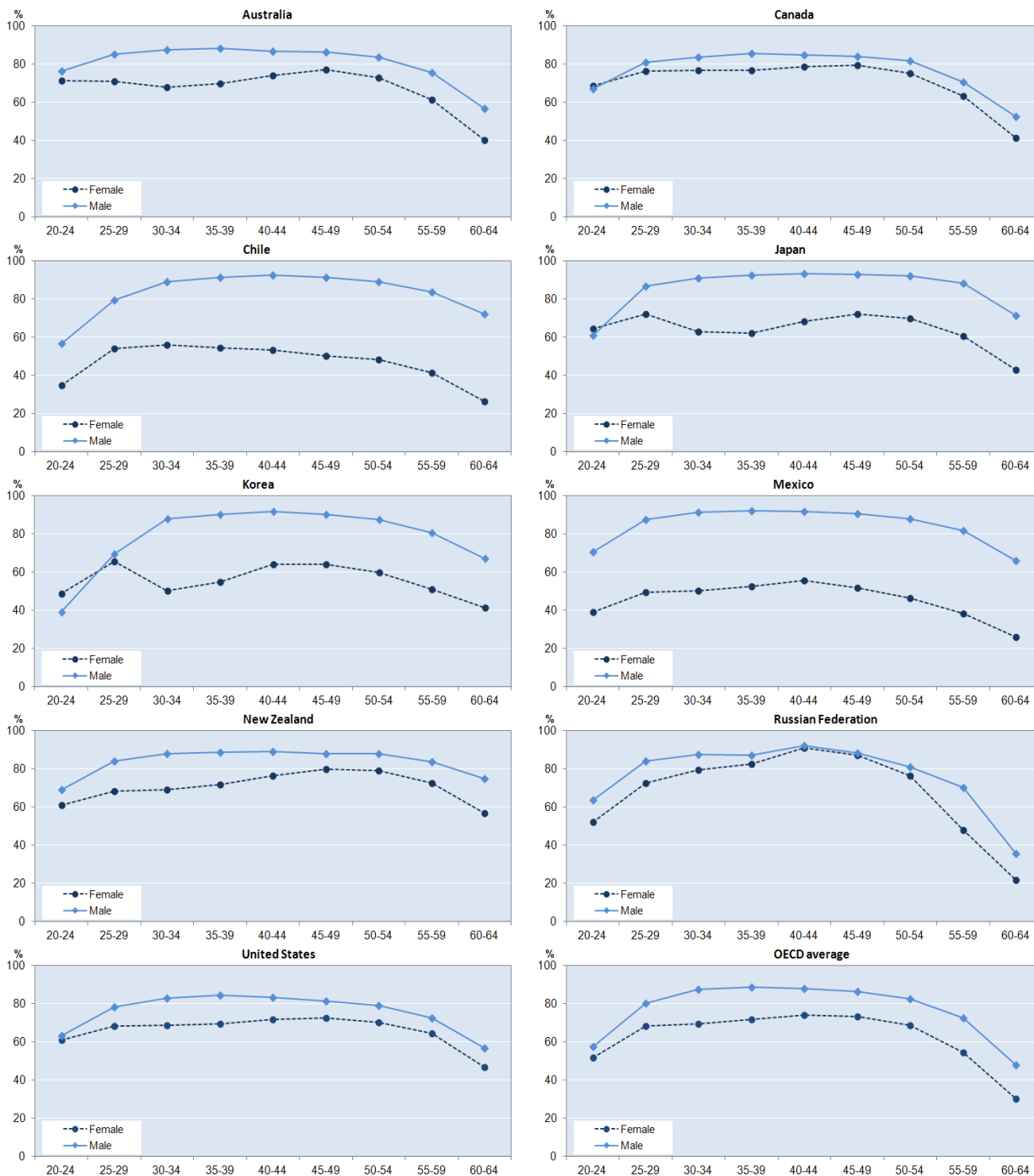
---

<sup>11</sup> Out-of-School-Hours schemes provide working parents with care solutions in the morning, at lunchtime, after school hours and during school holidays, but are still in the early stages of development in most countries.

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

**Chart 2.4: Employment gaps are firmly established at age 30**

Employment/population ratio by age groups, 2009<sup>1</sup>



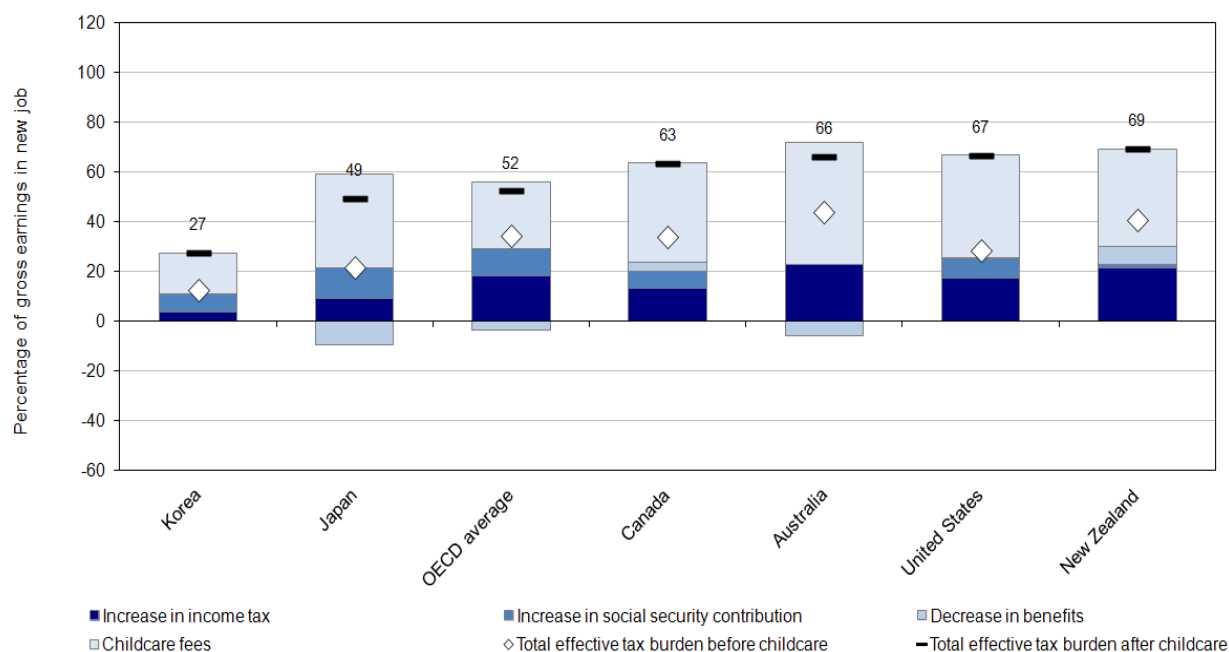
Notes: (1) Data refer to 2007 for Chile and the Russian Federation.

Source: OECD Labour Force Statistics



**Chart 2.5: 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 Canada, concern the province of Ontario; and for the United States, Michigan, and do not represent the situation in the rest of the country.

Source: OECD Tax/Benefit Models 2008

70. As such, investing in childcare is an effective way of promoting female labour supply, reducing poverty and improving child well-being. Public spending does not have to be close to the high public spending levels in Nordic and some other European countries to make a real difference to outcomes for women and their families, in particular in developing countries (Box 2.2).

#### Parental leave and flexible workplace measures

71. 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.

### Box 2.2: Childcare supports in Chile and Mexico

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.

72. 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 in OECD countries, 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. In OECD countries, including Japan and Korea, 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.

73. There is potentially a “business case” for family-friendly workplace support, but in practice it is not overwhelming.<sup>12</sup> 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 production 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 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.

74. 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.

75. However, it is proving difficult for policy to redress the gender balance in earning and caring, partly because countries do not want to impose solutions on parents. Nevertheless in a number of OECD 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 2.3). Japanese policy makers are also trying to get more fathers to take parental leave - a feature unimaginable only 10 years ago. Nevertheless, for many APEC countries with limited rights to maternity leave, it seems that ensuring universal coverage of these rights should be a first priority and an intermediate step towards a more developed system of child-related leave policies.

**Box 2.3: 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 the 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.

---

12. 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.

### 2.2.2 *Discrimination*

76. 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).

77. 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.

78. In some APEC countries there are different rules for men and women in the areas of accessing institutions, using property, getting a job or dealing with taxes (World Bank, 2010), while almost all OECD countries have established laws to combat discrimination on both gender and ethnic grounds. However, 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.

79. 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*

80. In OECD countries, women tend to be concentrated in fewer occupations compared with men. 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 whereas in some Southern European countries 50% of the women work in 7 occupations only.

81. Across the OECD, 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.

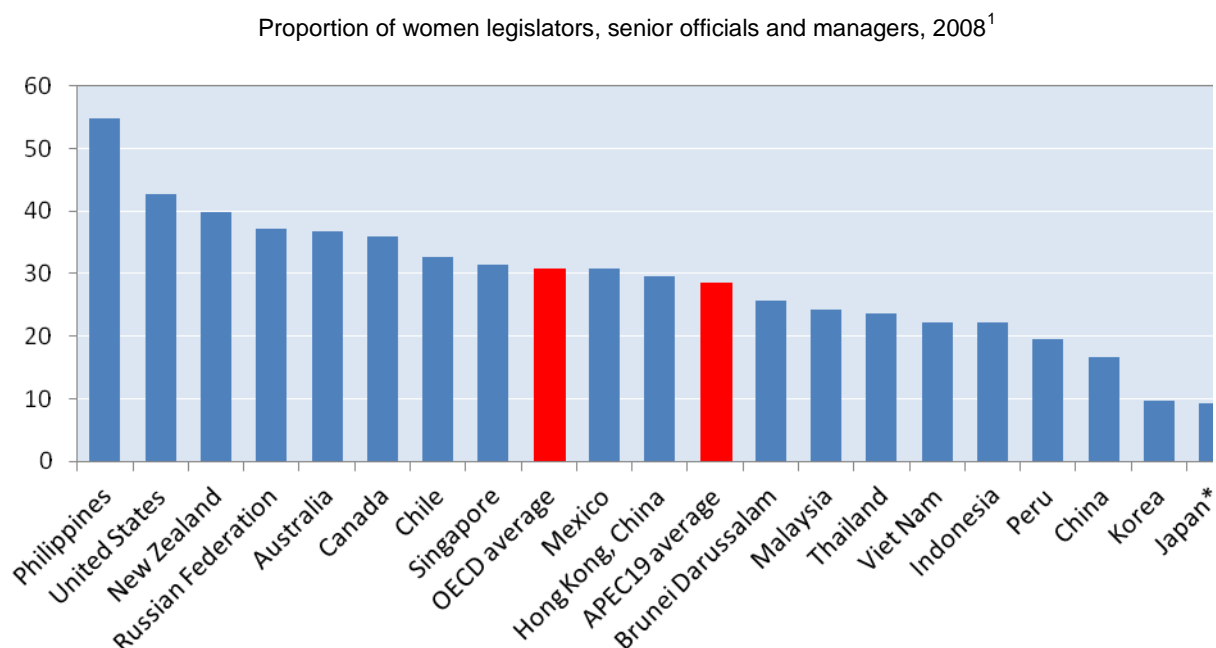
82. Occupational segregation appears to be more pronounced for low-skilled workers and for women with children. Workers with higher education are found in a much larger number of occupations than less educated workers. Mothers, on the other hand, are more likely than women without children to work as 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).

83. Part of the differences in occupational choices among women and men are due to different preferences. But other parts may not be and it is 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.

84. 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). On the whole women make up about 25 to 40% of managers across the OECD (OECD, 2007b). Looking across the broader group of managers, senior officials and legislators (Chart 2.6), a similar picture emerges for most APEC countries, while ILO data suggest this was around 50% in the Philippines. In Japan, China and Korea the proportion of women in top positions is less than 20%.

**Chart 2.6: In 2008 women were most likely to be in top positions in the Philippines and the United States**



Notes: (1) The data refers to 2001 for Brunei Darussalam; 2002 for Chile; 2004 for Viet Nam; and 2005 for China.

\* The countries in the tables measure their workforce using the International Standard Classification of Occupations version ISCO-88, and the relevant category counts legislators, senior officials, and managers. However, Japan measures its workforce using the International Standard Classification of Occupations version ISCO-1968, and the relevant category includes administrative and managerial workers. The information for Japan is thus not strictly comparable with data for other countries.

Source: ILO LABORSTA database "Yearly data: total employment, by occupation", retrieved July 2011.

85. 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.

86. In order to help women break the glass-ceiling, some European countries (e.g. 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. Also, 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

87. 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 is about 15% in Australia and across the OECD on average (OECD, 2011d). However, regardless of size, women are often over-represented in the public sector across the OECD and in APEC countries (Chart 2.7).

88. 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.<sup>13</sup>

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

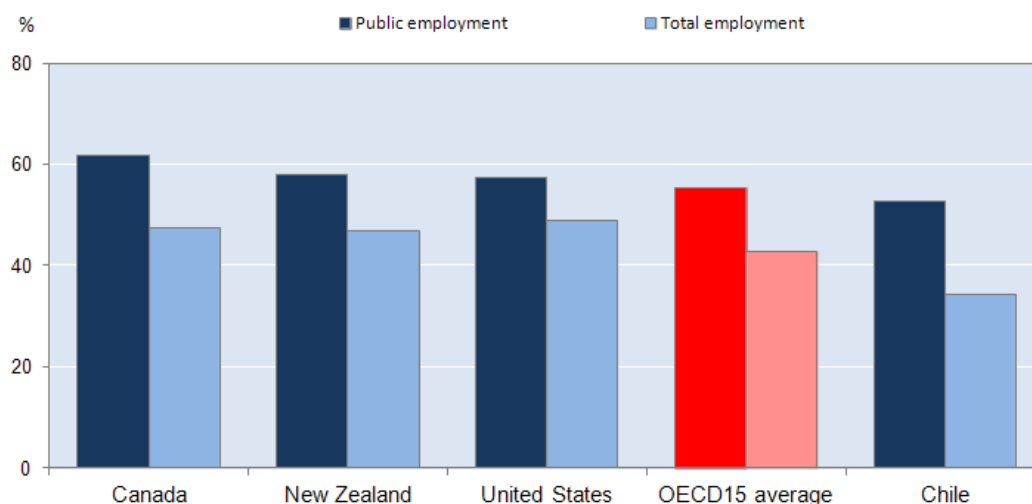
90. Despite the greater representation of women in the public sector, they are still under-represented in senior positions. Chart 2.8 shows that on average across OECD countries for which data is available, women accounted for less than a quarter of the senior manager positions in central government in 2005, while constituting about half of all administrative staff. 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. 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,

---

13. 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.

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).<sup>14</sup>

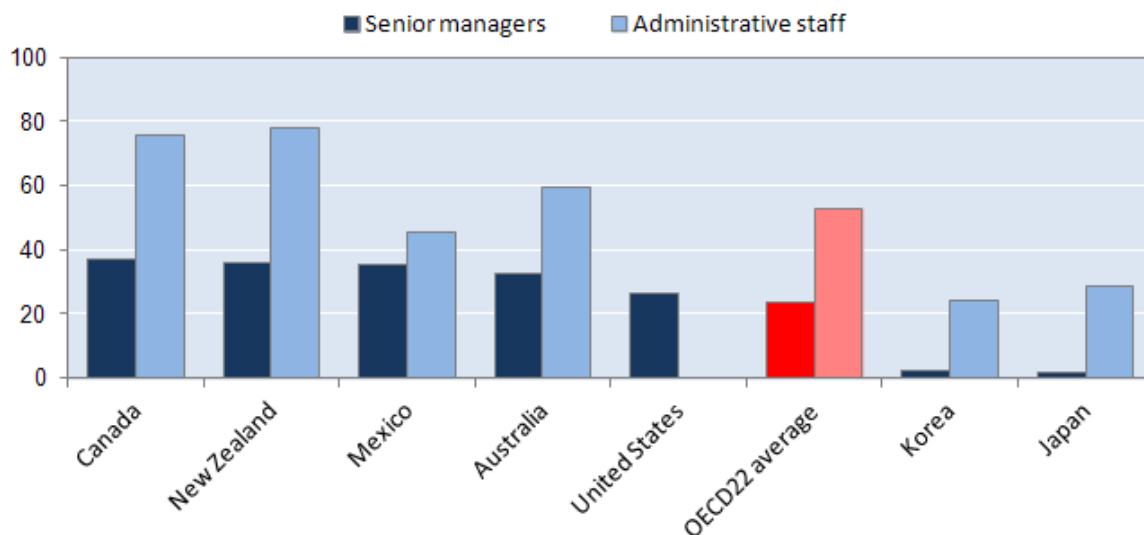
**Chart 2.7: Women are over-represented in the public sector**



Note: Data refers to 2006 for New Zealand; 2008 for Canada, Chile and the United States.

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

**Chart 2.8: Women are under-represented in central government's senior management**



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

14. 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).

## 2.3 *Employment policies in emerging and developing economies*

91. 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*

92. 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 was discussed in Chapter 1).

93. 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*

94. 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.

95. 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.

96. 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 solely relying on individuals taking cases to court will have limited effect (see above).

97. 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 a 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*

98. 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.

99. 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 2.4).

#### **Box 2.4: 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 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, 2011e).

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.

100. 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**

101. 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 2.5).

### **Box 2.5: 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 also includes 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*

102. 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 2.6).

### Box 2.6: Aid focussed on gender equality

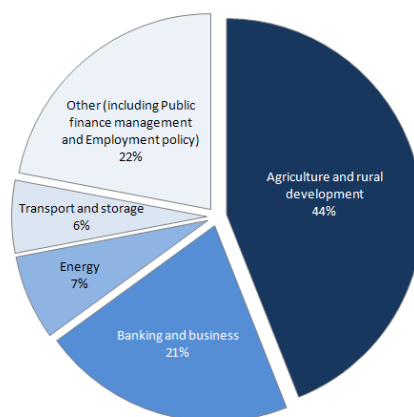
The gender-equality-focussed aid in the years 2007 and 2008 committed by OECD Development Assistance Committee (DAC) members to the economic and productive sectors was on average USD 4.6 billion per year. This accounts for one-fifth of total aid in these sectors. Only a small share of the total amount (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 A2.1 summarises gender gaps in key indicators of employment outcomes for APEC countries for which cross-national data was available: labour force participation; employment-to-population-ratios; full-time equivalent employment-to-population-ratios; temporary contracts as a proportion of permanent contracts; time spent in unpaid work and median earnings. Table A2.2 presents the male and female levels used to calculate the gaps as presented in Table A2.1.

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

	Labour force participation rate (persons aged 15-64)	Employment to population ratio (persons aged 15+)	Employment to population ratio - full-time equivalent <sup>1</sup>	Temporary employment as a proportion of dependent employment <sup>2</sup>	Average minutes of unpaid work per day <sup>3</sup>	Median earnings <sup>4</sup>
	2009* <i>Female gap to male (male-female)/male</i>	2009* <i>Female gap to male (male-female)/male</i>	2009** <i>Female gap to male (male-female)/male</i>	2009*** <i>Male gap to female (female-male)/female</i>	1999-2009**** <i>Male gap to female (female-male)/female</i>	2008 <i>Female gap to male (male-female)/male</i>
OECD Average	+18	+24	+32	+15	+50	+16
APEC Average	+23	+25	-	-	-	-
Australia	+15	+19	+36	+34	+45	+12
Brunei Darussalam	+20	+21	-	-	-	-
Canada	+10	+12	+26	+12	+41	+20
Chile	+40	+44	+50	-	-	-
China	+12	+14	-	-	+61	-
Hong Kong, China	+23	+23	-	-	-	-
Indonesia	+39	+40	-	-	-	-
Japan	+27	+33	-	+78	+78	+31
Korea	+27	+30	+35	+40	+80	+39
Malaysia	+43	+44	-	-	-	-
Mexico	+45	+46	+60	-116	+70	-
New Zealand	+15	+18	+34	-	+46	+8
Papua New Guinea	+3	+4	-	-	-	-
Peru	+20	+23	-	-	-	-
Philippines	+37	+37	-	-	-	-
Russian Federation	+9	+17	-	-44	-	-
Singapore	+26	+30	-	-	-	-
Thailand	+17	+19	-	-	-	-
United States	+15	+17	-	-1	+40	+20
Viet Nam	+8	+11	-	-	-	-

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 the unweighted average for the OECD countries for which data is available.

The APEC average is the unweighted average for the APEC countries for which data is available. The APEC average is only presented for indicators for which data are available for more than 2/3<sup>rd</sup> of the member countries (14 countries or more).

**Notes:**

(1) Full-time equivalent employment rates are calculated by multiplying the employment-to-population ratio by the average weekly hours worked by all employees divided 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, Japan, Korea and Mexico 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](http://www.oecd.org/employment/outlook).

\* 2007 for Chile, China, Indonesia and the Russian Federation. Data refers to those aged 16-64 for the United States.

\*\* 2007 for Chile; 2006 for Canada; 2004 for Mexico.

\*\*\* 2004 for Mexico; 2005 for the United States; 2008 for the Russian Federation.

\*\*\*\* Australia: 2006; Canada: 2005; China: 2008; Japan: 2006; Korea: 2009; Mexico: 2009; New Zealand: 1998-99; United States: 2008

Source: ILO LABORSTA database, retrieved July 2011; OECD Employment Outlook (2010e), [www.oecd.org/employment/outlook](http://www.oecd.org/employment/outlook); OECD Employment Database, 2010, [www.oecd.org/employment/database](http://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 (persons aged 15-64)		Employment to population ratio (persons aged 15+)		Employment to population ratio - full-time equivalent <sup>1</sup>		Temporary employment as a proportion of dependent employment <sup>2</sup>		Average minutes of unpaid work per day <sup>3</sup>	
	2009*		2009*		2009**		2009***		1999-2009****	
	Male	Female	Male	Female	Male	Female	Male (25-54)	Female (25-54)	Male	Female
OECD Average	79	65	63	48	78	52	9	11	138	280
APEC Average	81	63	71	53	-	-	-	-	-	-
Australia	83	70	68	55	81	52	4	7	172	311
Brunei Darussalam	78	62	72	57	-	-	-	-	-	-
Canada	83	75	66	58	78	58	9	10	146	248
Chile	78	47	67	37	82	41	-	-	-	-
China	85	74	76	65	-	-	-	-	91	234
Hong Kong, China	78	61	65	50	-	-	-	-	-	-
Indonesia	87	53	80	48	-	-	-	-	-	-
Japan	84	62	68	46	-	-	4	20	59	269
Korea	76	55	69	49	95	62	14	23	45	227
Malaysia	82	47	76	43	-	-	-	-	-	-
Mexico	84	46	76	41	100	40	22	10	113	373
New Zealand	85	72	71	58	86	56	-	-	158	294
Papua New Guinea	75	73	73	69	-	-	-	-	-	-
Peru	78	62	70	54	-	-	-	-	-	-
Philippines	80	51	73	46	-	-	-	-	-	-
Russian Federation	76	69	64	53	-	-	17	12	-	-
Singapore	82	60	72	50	-	-	-	-	-	-
Thailand	85	70	80	65	-	-	-	-	-	-
United States	80	68	64	54	-	-	3	3	154	258
Viet Nam	81	74	74	66	-	-	-	-	-	-

Data on levels of median earnings are not provided as the gap is calculated from hourly, weekly, monthly or annual wages for individual countries based on the data collection system. As such the earnings levels are not comparable between countries. The OECD average is the unweighted average for the OECD countries for which data is available.

The APEC average is the unweighted average for the APEC countries for which data is available. The APEC average is only presented for indicators for which data are available for more than 2/3<sup>rd</sup> of the member countries (14 countries or more).

**Notes:**

(1) Full-time equivalent employment rates are calculated by multiplying the employment to population ratio 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, Japan, Korea and Mexico 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 Chile, China, Indonesia and the Russian Federation. Data refers to those aged 16-64 for the United States.

\*\* 2007 for Chile; 2006 for Canada; 2004 for Mexico.

\*\*\* 2004 for Mexico; 2005 for the United States; 2008 for the Russian Federation.

\*\*\*\* Australia: 2006; Canada: 2005; China: 2008; Japan: 2006; Korea: 2009; Mexico: 2009; New Zealand: 1998-99; United States: 2008

Source: ILO LABORSTA database, retrieved July 2011; OECD Employment Outlook (2010e), [www.oecd.org/employment/outlook](http://www.oecd.org/employment/outlook); OECD Employment Database, 2010, [www.oecd.org/employment/database](http://www.oecd.org/employment/database); Miranda (2011), "Cooking, Caring and Volunteering: Unpaid Work Around the World"; and OECD (2010f), "Tackling 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

#### *Summary and main findings: building the cross-national dataset to strengthen evidence-based policy development in entrepreneurship*

103. 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 of 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.



**Box 3.1: Selected lessons for gender equality in entrepreneurship**

*Presented at the Meeting of the OECD Council at Ministerial level, Paris 25-26 May 2011 (OECD 2011a)*

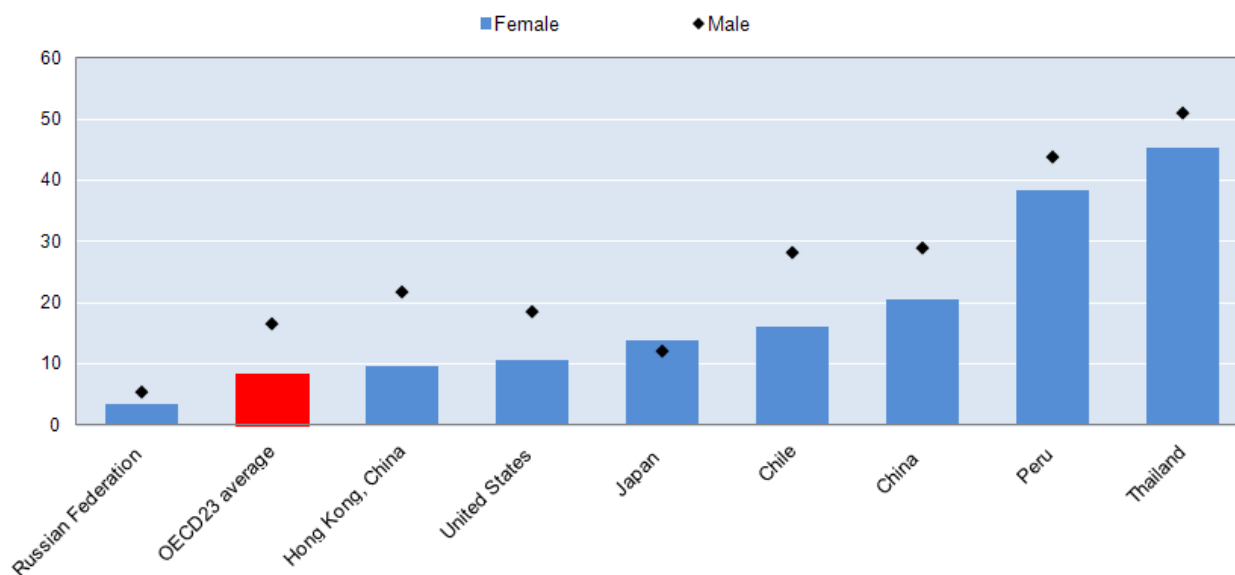
Selected lessons for OECD countries	Selected lessons from the MENA OECD Investment programme
<p><b>Relevant policy issues for gender differences in entrepreneurship include, but are not limited to:</b></p> <ul style="list-style-type: none"> <li>• Improving access to finance, including usage of various forms of finance for business start-up and growth.</li> <li>• Supporting innovation for women-owned enterprises.</li> <li>• Increasing representation of women-owned enterprises in high-growth sectors; and impact of institutional framework on business creation by women.</li> </ul>	<p><b>Allow the use of moveable assets as collateral for bank loans</b> to facilitate women’s access to finance.</p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>
<p><b>To design better evidence-based policies, improve data collection and analysis.</b></p> <ul style="list-style-type: none"> <li>• Collect valid and internationally comparable indicators to explain the gender gaps in entrepreneurship.</li> <li>• Business registers are a sustainable data source for the analysis of gender differences in business activity.</li> <li>• 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.</li> </ul>	<p><b>Improve credit information systems</b> by:</p> <ul style="list-style-type: none"> <li>• Establishing credit bureaus that can serve as vehicles for reducing information asymmetries between creditors and lenders.</li> <li>• Collecting credit history information – microfinance institutions inclusive – to help business-owners obtain larger credits.</li> </ul>
<p><b>Provide an accurate and systematic description of gender differences in business demographics;</b> 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.</p>	<p><b>Foster women entrepreneurs’ access to international markets and business networks, including through the use of web technologies.</b> 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.</p>

**3.1 Gender inequality in entrepreneurship**

104. 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. In all, men are more likely to own a business than women (Chart 3.1).

**Chart 3.1: Men are generally more likely than women to own a business**

Overall business ownership rate by gender, 2007



Source: Data taken from the Global Entrepreneurship Monitor 2007 ([www.gemconsortium.org](http://www.gemconsortium.org)) as in OECD (2011), *Entrepreneurship at a Glance 2010*.

105. 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, 2011f). 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.

106. 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 fewer 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.

107. 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.

108. 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).

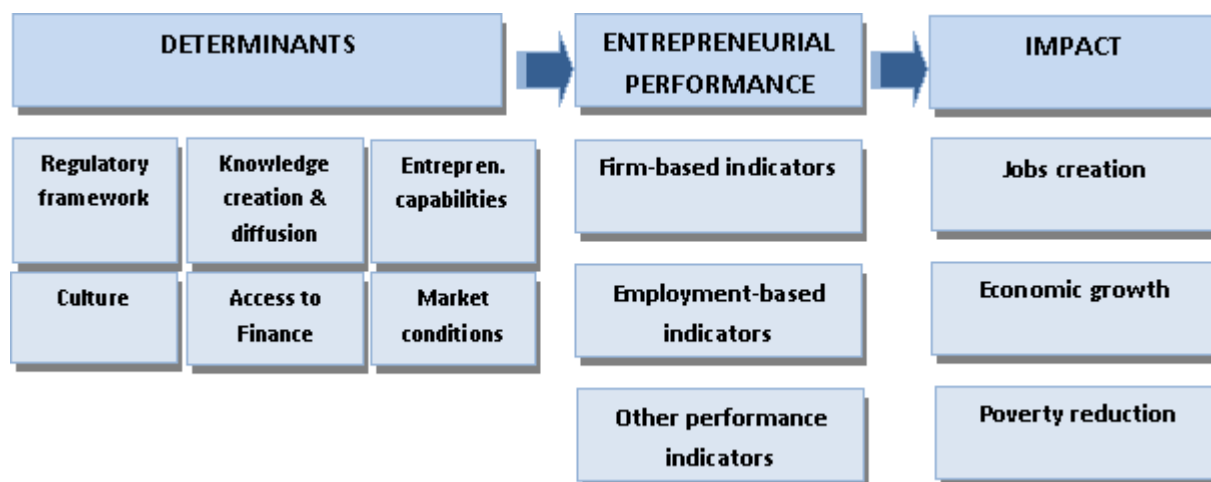
109. There is still a lack of knowledge on the role of women's entrepreneurship in the society and the economy, as well as on the specific obstacles met by women entrepreneurs. This is mainly because the analytical activity has been relying mainly on qualitative data and case-based cross country analysis, 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.

### **3.2. A gender-relevant framework for entrepreneurship indicators**

110. 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. To move forward in this area; it is proposed to adjust existing frames of indicators so they become best suited for capturing gender issues in entrepreneurship. The existing OECD–EUROSTAT Entrepreneurship Indicators Programme (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 and [www.oecd.org/document/58/0,3746,en\\_2649\\_44392116\\_44441658\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/58/0,3746,en_2649_44392116_44441658_1_1_1_1,00.html)). The key to progress is thus to develop a “gender-focused” version of the EIP framework, with indicators that are relevant to measuring the gender dimension of entrepreneurial activity.

111. The EIP frame 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 3.2). 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 3.2: The OECD-Eurostat EIP Conceptual Framework



Source: Ahmad and Hoffman (2008)

112. 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. Table 3.1 Panels A and B present a non-exhaustive list of indicators. The work on entrepreneurship within the OECD Gender Initiative will focus on such indicators.

113. Table 3.1, Panel A 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 right 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.

114. Table 3.2, Panel B 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.

**Table 3.1: Entrepreneurship: some key entrepreneurial determinants and performance indicators**

Entrepreneurial determinants

CATEGORY	DESCRIPTION
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
Provision of childcare and after-school care facilities	Information on childcare fees; child care benefits, and tax benefits.
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).
Collateral requirements	Collateral value as percentage of loan.
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).
Building Credit*	Identifies minimum loan thresholds in private credit bureaus and public credit registries
Venture Capital	Share of venture capital invested in women-owned businesses
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
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
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.
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.
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
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
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
Risk for Business Failure (by gender)	Survey responses to: being willing to start a business if a risk exists that it might fail.
Business owner's relatives also own a business (by gender)	Survey: family of self-employed or not

Performance Indicators (collected by sector and size-class)

CATEGORY	DESCRIPTION
Share of enterprises by business-owner	Proportion of female and male-owned enterprises ( including information on sector, size and ownership type)
Entrepreneur profile	Profile of the majority owner of the enterprise (including (age, education level, type of ownership)
Employer enterprise birth rates	An employer enterprise birth refers to the birth of an enterprise with at least one employee.
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.
Survival rates of employer enterprises	Survival rate reflects the number of enterprises of a specific birth cohort that have survived over different years.
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.
Export Performance	Including information on exporting enterprises, for instance by employment size class of enterprises or value of trade.
Innovation performance	Including details on patents, R&D, product, process, marketing or organisational innovation.

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.

115. Some OECD 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.
- Optimise the exploitation of existing national data (Annex 3, Table A3.1), possibly from administrative sources, in particular by linking different types of data, e.g. business register data with registers of data on individuals.
- Use international databases (Annex 3, Table A3.2), when available and relevant, as sources of information on the determinants of women entrepreneurship, in order to facilitate comparisons across countries.
- Always integrate a gender dimension in business surveys that are conducted on a regular or ad-hoc basis.

## ANNEX TO CHAPTER 3: SOME 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)
AUSTRALIA	<b>Australian Business of Statistics</b>	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 )
CANADA	<b>Statistics Canada</b> <i>Survey on Financing of Small and Medium Enterprises</i>	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.
	<b>Statistics Canada</b> <i>Foreign Affairs and International Trade Canada</i>	Survey data	overview report	Facts & Figures on women-owned enterprises
UNITED STATES	<b>KFS, Kauffman Firm Survey</b>	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.
	<b>PSED I &amp; II</b>	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.
	<b>Census SBO, Survey of Business Owners</b>	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: Available Women Entrepreneurship Data at International Level**

Survey	Source	Type of data	Period covered	Country coverage
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
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



## REFERENCES

- AAUW (2010), “Why So Few? Women in Science, Technology, Engineering, and Mathematics”, American Association of University Women, Washington, DC
- Ahmad, N. and A. Hoffman (2008), “A Framework for Addressing and Measuring Entrepreneurship”, OECD Statistics Working Papers, 2008/2, OECD, Paris
- Ahmed, M. and M. Ahmed (2002), *Bangladesh education sector overview*, Japan Bank for International Cooperation (JBIC), Tokyo.
- Angel B., S. de la Rica, and J. Dolado (2011), “The Effect of Public Sector Employment on Women’s Labour Market Outcomes”, mimeo, *forthcoming*.
- Banbeis (2003), “Statistical Profile on Education in Bangladesh” Bangladesh Bureau of Educational Information and Statistics, Dhaka.
- Chen, M, J. Vanek and M. Carr (2004), “Mainstreaming Informal Employment and Gender in Poverty Reduction: A Handbook for Policy-Makers and Other Stakeholders ”, The Commonwealth Secretariat, London.
- Eurofound, *European Quality of Life Survey, 2007*
- FAO (2011), “The State of Food and Agriculture 2010-2011: Women in agriculture, Closing the gender gap for development”, Food and Agriculture Organisation of the United Nations, FAO
- Finnie, R., and M. Frenette (2003); “Earning differences by major field of study: evidence from three cohorts of recent Canadian graduates”, *Economics of Education Review*, Vol. 22, pp. 179–192
- Flabbi, L. (2011), “Gender Differentials in Education, Career, Choices and Labour Market Outcomes on a Sample of OECD Countries”, mimeo, *forthcoming*.
- ILO (2010), “Women in labour market: Measuring progress and identifying challenges”, ILO, Geneva
- Mavriplis C., R. Heller, C. Beil, K. Dam, N. Yassinskaya, M. Shaw, and C. Sorensen (2010), “Mind the Gap: Women in STEM Career Breaks”, *Journal of Technology Management and Innovation*, 5(1), pp. 140-151.
- Minniti, M. (2009), “Gender Issues in Entrepreneurship”, *Foundations and Trends in Entrepreneurship*, 5 (7-8), 497-621.
- Miranda V. (2011), "Cooking, Caring and Volunteering: Unpaid Work around the World", *Social, Employment and Migration Working Paper*, No. 116, OECD Publishing, Paris.

- Observa (2010), “Anuario Ciencia e Societá 2010”, Observa- Science in Society.
- OECD (2000), *Women Entrepreneurs in SMEs: Realising the Benefits of Globalisation and the Knowledge-based Economy*, OECD, Paris
- OECD (2002), *Employment Outlook 2002*, OECD, Paris
- OECD (2004), *Women’s Entrepreneurship: Issues and Policies*, OECD, Paris
- OECD (2005), *Recommendations on Principles and Good Practices for Financial Awareness*, OECD, Paris.
- OECD (2007a), *Education at a Glance 2007*, OECD, Paris
- OECD (2007b), *Babies and Bosses: Reconciling Work and Family Life, A Synthesis of Findings for OECD countries*, OECD, Paris
- OECD (2008a), *Growing Unequal? Income Distribution and Poverty in OECD Countries*, OECD, Paris
- OECD (2008b), *Employment Outlook 2008*, OECD, Paris
- OECD (2009a), *Is Informal Normal?*, Edited by Johannes P. Jütting and Juan R. de Laiglesia, OECD Development Center Studies, Paris
- OECD (2009b), *Government at a Glance*, OECD, Paris.
- OECD (2009c), *Fostering Diversity in the Public Service*, OECD, Paris.
- OECD (2009d), *Measuring Entrepreneurship, OECD–EUROSTAT Entrepreneurship Indicators Programme*, OECD, Paris.
- OECD (2010a), *Education at a Glance 2010*, OECD, Paris
- OECD (2010b), *Strong Performers and Successful Reformers*, OECD, Paris
- OECD (2010c), *PISA 2009 at a Glance*, OECD, Paris
- OECD (2010d), *PISA 2009 Results: What Students Know and Can Do – Student Performance in Reading, Mathematics and Science (Volume I)*, Paris, OECD
- OECD (2010e), *Employment Outlook 2010*, OECD Publishing, Paris
- OECD (2010f), *Tacking Inequalities in Brazil, China, India and South Africa - The Role of Labour Market and Social Policies*, OECD Publishing, Paris
- OECD (2010g), *Progress in Public Management in the Middle East and North Africa*, OECD, Paris.
- OECD (2011a), "Report on the Gender Initiative: Gender Equality in Education, Employment, and Entrepreneurship", Meeting of the OECD Council at Ministerial Level Paris, 25-26 May 2011, OECD, Paris, [www.oecd.org/gender](http://www.oecd.org/gender).
- OECD (2011b), *Doing Better for Families*, OECD, Paris

OECD (2011c), *Help Wanted, Providing and paying for Long-term Care*, OECD, Paris.

OECD (2011d), *Government at a Glance 2011*, OECD, Paris.

OECD (2011e), “Women’s Economic Empowerment: Issues Paper”, prepared by the DAC Network on Gender Equality.

OECD (2011f), “Draft Report of Women’s Access to Finance in the Middle East and North Africa (MENA) Region”, OECD Workshop on Policies for SME and Entrepreneurship Finance, 20 April 2011, Paris

OECD Development Centre (2010), "Gender Inequality and the MDGs: What are the Missing Dimensions?", Issues Brief, OECD, Paris

OECD, *OECD DAC Statistics*, Paris, [www.oecd.org/dac/stats](http://www.oecd.org/dac/stats)

OECD, *OECD Employment Database*, Paris, [www.oecd.org/employment/database](http://www.oecd.org/employment/database)

OECD, *OECD Family Database*, Paris, [www.oecd.org/els/social/family/database](http://www.oecd.org/els/social/family/database)

OECD, *OECD PISA Database*, Paris, <http://pisa2009.acer.edu.au/>

OECD/UNESCO (2004), “Education for All Global Monitoring Report”, UNESCO, Paris

Research Council of Canada (2010), “Women in Science and Engineering in Canada”, Ottawa.

Sikora, J. and A. Pokropek (2011), “Gendered Career Expectations of Students, Perspectives from Pisa 2006”, *OECD Education Working Paper*, No. 57, OECD, Paris.

UN (2009a), *Millennium Development Indicators Progress Report*, United Nations, New York

UN (2009b), *World Survey on the Role of Women in Development*, United Nations, New York

UN (2010), *The Millennium Development Goals Report 2009*, United Nations, New York

UNDG (2010), “Thematic paper on MDG3”, United Nations, New York.

UNESCO Institute for Statistics (2010), *Global Education Digest, Comparing Education Statistics across the World*, Montreal,

UNESCO Institute for Statistics, *Beyond 20/20 WDS Indicators*, [www.uis.unesco.org](http://www.uis.unesco.org)

U.S. Small Business Administration, Office of Women’s Business Ownership, “Women’s Business Center Program”, USA

World Bank (2008), *Girls’ Education in the 21st Century*, The World Bank, Washington DC, USA

World Bank (2010), *Women, Business and the Law*, The World Bank, Washington DC, USA