

Chapter 3. Labour market outcomes of youth, older workers and women in Chile

This chapter sheds further light on difference between socio-demographic groups. It looks at the role played by skills inequality in explaining wage differentials by gender and age. It looks at the how the relationship between wages and proficiency, field of study, experience and educational attainment varies along the life-cycle. It sheds light on the relationship between skills and NEET status.

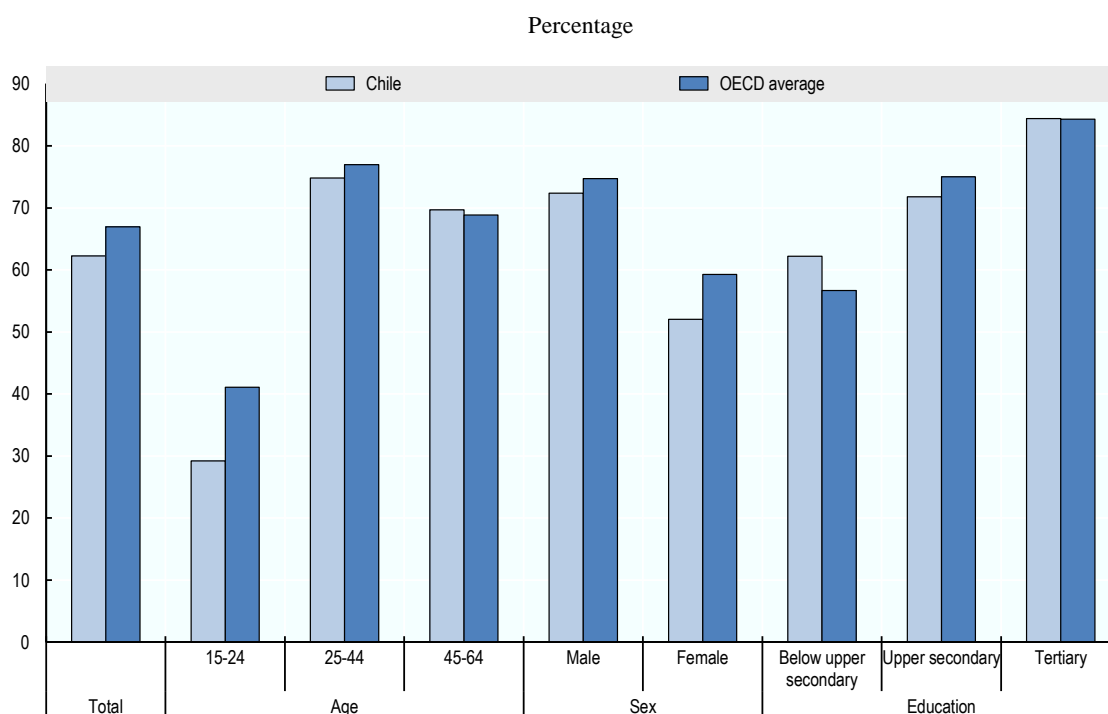
The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Labour market outcomes by socio-demographic characteristics

In Chile, as well as in the OECD on average, labour market outcomes vary significantly across socio-demographic groups (Figure 3.1). Both youth and women are less likely to be employed than in the OECD on average. Only 29% of youth are employed compared to 41% on average while the employment rate of women, at 52%, is 7 percentage points below the average. Chileans who have not completed high-school do relatively well in international comparison, but their employment rate is 24 percentage points below that of individuals with tertiary credentials.

On one side, educational attainment and skills proficiency vary by age and gender, as shown in Chapter 1. On the other, the relationship between skills and educational background and labour market outcomes may vary in sign and strength by socio-demographic characteristics. This can be explained by selection into different occupations as a result of gender stereotyping, more limited career opportunities because of difficulties reconciling work and family life, different labour market experience and soft skills for recent graduates, or discrimination against older workers and women, to cite a few.

Figure 3.1. Employment rates by age, gender and educational attainment, 2016



Note: OECD unweighted average.

Source: OECD Employment Database, www.oecd.org/employment/database.

Analysing labour market outcomes by age and gender helps to disentangle whether there are differences in the outcomes of different subgroup levels, and if there are, where to effectively target policy in order to improve their well-being in the labour market. Two indicators are used to assess how the youth (16-29 years old), older workers (50-65 years old), and women perform in the labour market in Chile: hourly wages for those that work,

and the likelihood of being neither in Employment nor in Education or Training (NEET). Examining the wages of those in work provides information on how much various skills are valued in the labour market, which no doubt influences the education and skill decisions made by workers. Additionally, the NEET status across ages – which captures both being out of work and not studying – is a better indicator of labour market distress, especially for the youth, than the unemployment rate taken on its own.

Skills and wage gaps

Wage ratios between groups and the role of skills

Simple wage ratios between different socio-demographic groups can give a first approximation of how youth, older workers and women compare to their prime-age and male counterparts in terms of hourly wages. The Survey of Adult Skills provides evidence that these wage gaps can be significant. For example, across the 22 countries covered by the 2015 Employment Outlook analysis, men's wages are 18.4% higher than women's, on average; and older workers (aged 50-65) have wages 36.1% higher than younger workers (aged 16-29). The key issue addressed in this chapter is how much of these wage gaps is related to skills: to the difference in the way skills are distributed between groups; and to the differences in the returns to skills between groups.

To assess the role of skills and their return on the labour market, alternative wage distributions are simulated for each of the groups of interest. For instance, the questions addressed in the case of gender differences are: how would the wage ratio change if women had the same numeracy skill distribution as men; and how would the wage ratio change if women's skills were rewarded in the same way as those of men.¹

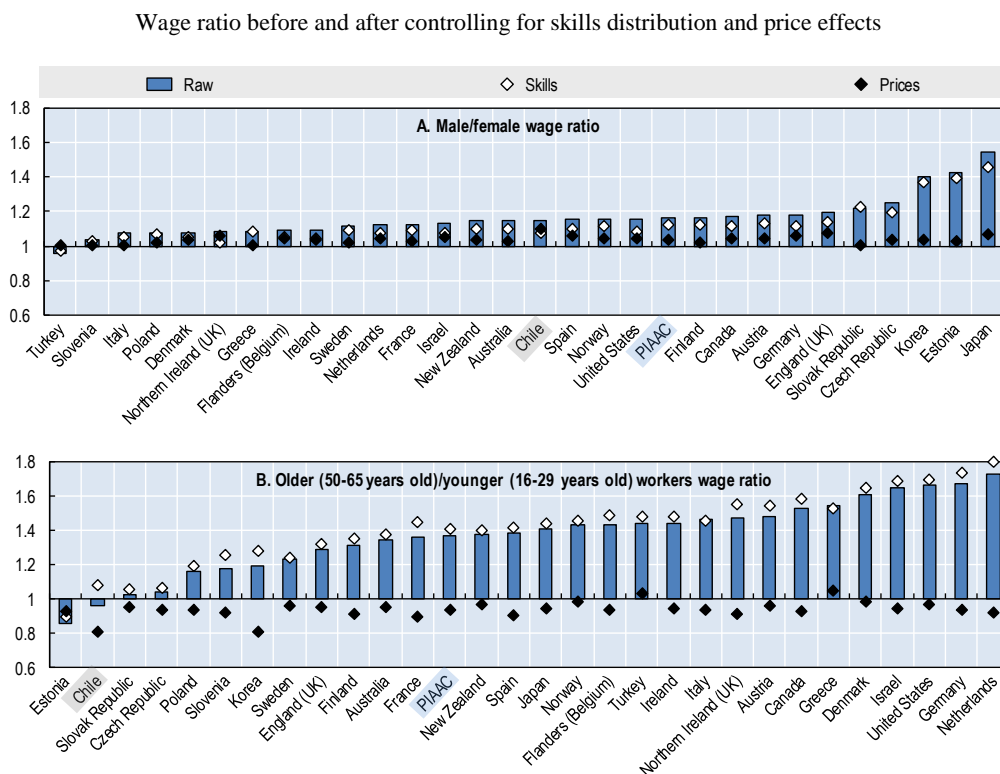
Figure 3.2 presents the results of this analysis. The bars represent the mean wage gaps between the groups of interest for each country. The white diamonds indicate how much these wage gaps would be reduced if the skills distribution (both level and dispersion) of the comparison group is adopted, while the black diamonds show how the wage gap would change if skills were rewarded in the same way as for the comparison group. The potential role of skills policies varies considerably depending on which of the wage gaps one would like to address.

In the case of the gender wage gap (Panel A), for example, observed differences in skills account for 23% of the observed wage gap across countries that participated in the Survey of Adult Skills (PIAAC), on average, and this share is relatively consistent across countries (OECD, 2015_[1]). In Chile, male workers receive a wage that is 15% bigger when compared to average wage of a female. The gap would be more than halved, decreasing to 7%, if women had the same skill distribution as men, and alternatively to 10% if the skills women possess were rewarded the same way as men. The fact that the gap still remains after accounting for an alternative distribution of skills, indicates that while skills policies could therefore play some role in reducing the difference in wages between men and women, other policy interventions will also be required, possibly fighting gender discrimination.

Panel B shows that younger workers would earn even less relative to older workers if they had the same numeracy skills as them. This is because, in general, younger workers tend to have higher skills than older generations (OECD, 2013_[2]). Moreover, in Chile, the raw wage gap is already in favour of youth, who earn 4% more on average, which is in line with the fact that they are not only more educated but also more proficient, compared to older adults. Most striking, however, is the extremely large difference in

how numeracy skills are rewarded for older adults across countries. In the case of Chile, if workers were rewarded equally, younger adults would earn even more than older adults.² This could be explained by the high likelihood of older workers being rewarded for other types of skills that are not captured by the PIAAC measure of numeracy skills.

Figure 3.2. Wage ratios between groups and the role of numeracy skills



Note: OECD refers to the simple, unweighted country average. Wage gaps are expressed as the ratio of the average wage for each population subgroup. Wage corresponds to the hourly wage.

The Survey of Adult Skills only covered Flanders (BEL) and England/Northern Ireland (GBR).

Source: Survey of Adult Skills (PIAAC) 2012, 2015.

Contribution of proficiency to variation of hourly wages

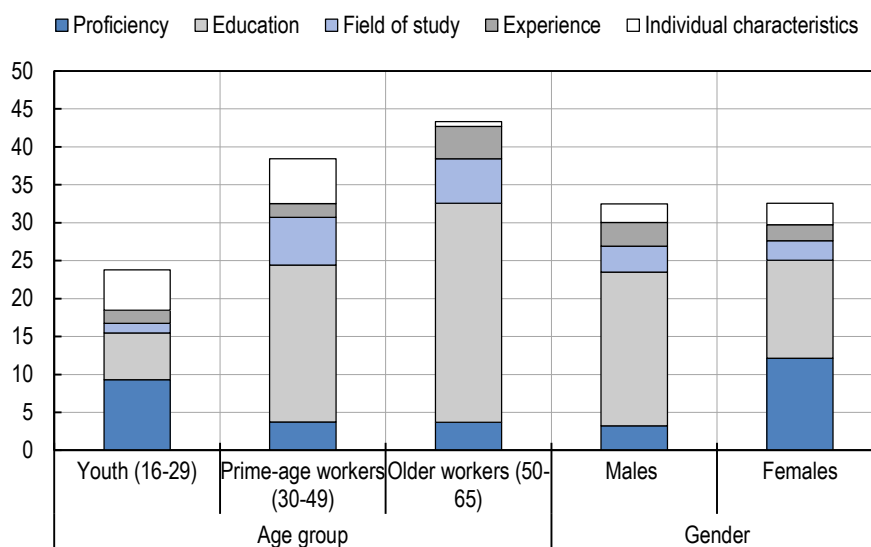
Given the wage differences observed by age and gender and the importance of proficiency on wages for Chile, it is important to address what role skills play in explaining wage outcomes for each population group. Figure 3.3 describes the contribution of each human capital component to the variation of hourly wages in Chile, disaggregated by age and gender. First, education, field of study and proficiency explain a larger share of the total variation in hourly wages for older workers (43%) than for other age groups and in the OECD average (see Figure 3.3), suggesting that human capital plays a key role for this age group in Chile. To support this conclusion, individual characteristics account for little variation of hourly wages when compared to other age groups, reflecting the high weight employers put on having a specific set of skills and knowledge to perform a job for older workers.

For prime-age and older workers, education makes the largest contribution to the respective explained variation in hourly wages. Educational attainment, either in itself or

expressed as years of education, represents a wider set of knowledge and skills, including job and domain-specific competencies, as well as personal attributes, than does proficiency in the domains assessed in the Survey of Adult Skills. Since it is more difficult for a prospective employer to assess skills than qualifications, the relative strength of the influence of years of education and proficiency on wages may also reflect the fact that wage negotiations that occur during hiring are based on the observable characteristics of individuals, i.e. formal qualifications, and have a lasting impact on wages. On the contrary for the youth, proficiency in information-processing skills explains a higher proportion of the variation of wages. This is opposite to what is found for the OECD average of countries, in which the contribution of information-processing skills grows in importance for prime-age and older workers, eventually exceeding the influence of education. This difference could be explained by the fact that younger workers are the most proficient group in the Chilean working population, as indicated in Chapter 1. Additionally, as the expansion of education opportunities increase for newer cohorts, younger workers enter the labour market with a similar level of educational attainment in Chile.

Figure 3.3. Chile: Contribution of education, literacy and numeracy to the variation of hourly wages, by age group and gender

Contribution of each factor to the percentage of the explained variance (R-squared) in hourly wages



Note: The dependant variable is the log of hourly wages, including bonuses, in PPP-adjusted USD (2012). The wage distribution was trimmed to eliminate the 1st and 99th percentiles. The factors are: years of work experience and a squared term; proficiency in literacy and numeracy; years of education; and demographic variables (gender, marital status, immigrant background and the language spoken at home).

Results obtained using regression-based decomposition through the formulae proposed by Fields (2003). Each bar summarises the results from one regression and the height of each bar represents the total R-squared for that regression. The subcomponents of each bar show the contribution of each factor (or set of regressors) to the R-squared. The Fields decomposition is explained in more detail in Box 5.4 of the OECD Employment Outlook 2014 (OECD, 2014_[3]).

Source: Survey of Adult Skills (PIAAC) (2012, 2015).

In terms of the extent to which different components account for wages conditional on gender, the contribution of human capital components in Chile indicates that proficiency in information-processing skills have a larger contribution in the variation of hourly

wages for women than for men, and education has a larger contribution to the wage variation men. This is also the opposite to what is found in the average of OECD countries. This difference in the explained variation could be that more males with different levels of educational attainment participate in the labour market in Chile, as opposed to women. On the contrary, participation rates tend to be much higher among women with high educational attainment.

Skills and probability of being NEET

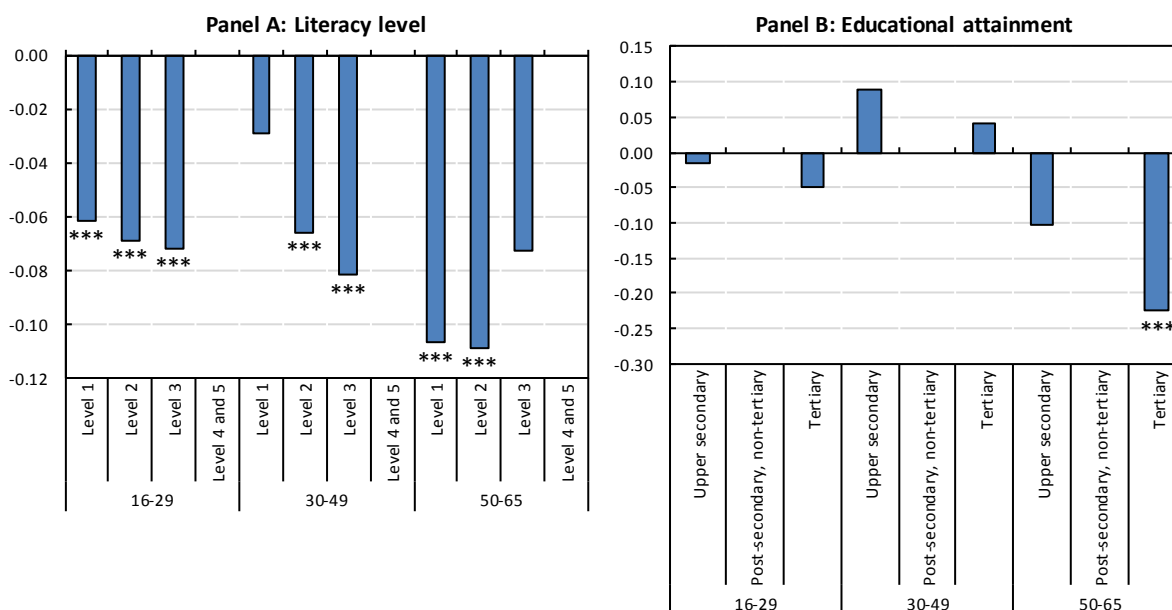
The Survey of Adult Skills shows that, on average, individuals with lower educational attainment and weaker information-processing skills are more likely to be neither in employment nor in education or training (NEET), and this association increases with age. This is also holds for Chile, but not for all age groups. The strongest association happens for proficiency in literacy, which is associated with a smaller probability of being NEET at every age.

Figure 3.4 shows the result of a multivariate analysis using a probit model to calculate the probability of being NEET in Chile, according to different levels of educational attainment and literacy proficiency. They all have independent and significant effects on the likelihood of being NEET, when included jointly, suggesting that they capture distinct skills.

Proficiency in literacy has a strong negative relationship with NEET status regardless of age, but especially for youth (Panel B). Youth scoring at Level 3 of the literacy scale are about 7% less likely to be NEET than those scoring below Level 1. Higher levels of literacy proficiency decrease the likelihood of being NEET by up to 11% in the case of older workers. Similarly, holding a tertiary degree decreases the likelihood of being NEET for older workers, when compared to having attained a below upper secondary level of education.

Figure 3.4. Chile: The relationship between the probability of being NEET, literacy proficiency (a) and educational attainment (b), by age group

Marginal effects from probit regressions (percentage points)



Note: ***, **, *: statistically significant at the 1%, 5% and 10% levels, respectively.

(a) Below Level 1 corresponds to the lowest level of literacy proficiency while Levels 4 and 5 are the two highest skills required to attain each level of proficiency, see Annex 5.A1). Similar results are obtained when numeracy proficiency is used instead of literacy.

(b) Probit regressions by country (results here only showed for Chile), with the probability of being NEET as the dependent variable and each skill area as the explanatory variable with additional controls for gender, marital status, migration status and language spoken at home. The omitted categories for each skill area are: Social Sciences for field of study; below Level 1 for literacy proficiency; and lower than upper secondary education for educational attainment.

Source: OECD calculations based on the Survey of Adult Skills (PIAAC) 2012.

Notes

1. The method is in essence a generalisation of the Oaxaca-Blinder decomposition of means to the full distributional case (Lemieux, 2002). As explained in (OECD, 2015_[1]), the original decomposition technique was modified to account for the full distribution of wages, rather than focusing only on group differences in the mean. In this framework, differences in the prices of skill will reflect a mixture of uncontrolled-for factors that also affect productivity and wages (e.g. unobserved skills, innate ability), as well as any discrimination in pay levels. Similar results are obtained when literacy scores are used instead of numeracy ones.
2. Note that these results do not depend on the definition of the age groups. In particular, one might be concerned that the younger age group (16-29) may include many individuals who have not yet completed education. Yet repeating the exercise for 25-29 year-olds only does not alter the conclusions reached.

References

- OECD (2013), *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264204256-en>. [2]
- OECD (2014), *OECD Employment Outlook 2014*, OECD Publishing, Paris, http://dx.doi.org/10.1787/empl_outlook-2014-en. [3]
- OECD (2015), *OECD Employment Outlook 2015*, OECD Publishing, Paris, http://dx.doi.org/10.1787/empl_outlook-2015-en. [1]



From:
Getting Skills Right: Chile

Access the complete publication at:
<https://doi.org/10.1787/9789264293151-en>

Please cite this chapter as:

OECD (2018), "Labour market outcomes of youth, older workers and women in Chile", in *Getting Skills Right: Chile*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264293151-6-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.