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# What Do Students Expect to Do After Upper Secondary School?

This chapter identifies the factors that shape 15-year-old students' expectations of further education, including academic performance, the structural particularities of the education system, gender and socio-economic background. It also compares students' expectations across countries and economies, and by the type of education programme in which students are enrolled. The problems associated with a misalignment between expectations and actual performance are discussed, as are students' expectations of social mobility.



Students' expectations of further education not only reflect academic success and students' skills, but also creates the conditions that promote academic excellence and skills acquisition. In particular, students who expect to complete a university degree are more likely to choose more demanding courses and invest greater effort in school than students who expect to complete their studies with lower qualifications. Similarly, students who hold high expectations are more likely than those who do not to complement their school work by engaging in academically oriented activities during their free time. Students' expectations function, in part, as self-fulfilling prophecies, as the effort students invest to meet their expectations pays off. When comparing students of similar socio-economic backgrounds and academic achievement, students who expect to graduate from university are more likely to complete these degrees than their peers who do not hold such high expectations (Campbell, 1983; Carbonaro et al., 2011; Morgan, 2005; Perna, 2000; Sewell et al., 2003).

While students' expectations and aspirations are closely linked, they are conceptually distinct. Aspirations of further education represent an upper limit of what students perceive will be their future, given that they reflect the educational level students *would like* to attain, regardless of their ability to do so and of any institutional, social and economic constraints they may face (Hanson, 1994; Saha, 1997). Expectations, on the other hand, reflect more realistic assessments of students' future opportunities because they take into account students' self-perceptions of their underlying abilities and potential, as well as the actual circumstances in which they operate (Goyette, 2008). Thus, even though all students may aspire to attain a university degree, not all will expect to receive that degree because expectations consider the likelihood of earning it.

Academic performance is intrinsically linked with expectations of further education: students who are proficient feel confident that they will be able to succeed in further academic studies. At the same time, students who expect to complete a university degree are more likely to put greater effort in their studies and be confident that they can master material while at school. As a result, they become more academically proficient.

Although this may be the general trend, the findings in this report indicate that not all high-performing students hold equally ambitious expectations; and that some low-performing students may have higher expectations than their better-performing peers. Most important, this report finds that institutional, social and economic constraints as well as education policies may help shape students' expectations of further education. For example, high-performing students who have positive relations with their teachers and positive attitudes towards school are especially likely to expect to pursue further studies and complete a university degree.

Other factors that shape students' expectations include people close to the student, such as peers, family members and teachers, past academic achievement, the degree of selectivity of tertiary education institutions, the direct financial and opportunity costs of attending tertiary education, access to credit or other forms of financial resources, the returns associated with different educational choices and the rigidity of the education system, which may restrict access to some educational opportunities to only those students who have followed a particular path through their education. The variety of these factors helps to explain how and why the expectations of 15-year-old students vary so considerably both within and across countries (Buchmann and Dalton, 2002; Mateju et al., 2007; Sewell et al., 2003).

A study of students' expectations reveals patterns in students' decision making and in their eventual participation, or non-participation, in higher education (Morgan, 2005). The link between expectations and student performance helps policy makers to formulate policy and direct resources not only towards developing skills but also towards providing information and incentives so that the stock of potential skills is fully realised and effectively used. Countries where large proportions of poorly performing students hold high expectations should capitalise on the willingness of students to improve their skills; and education systems should consequently ensure that these students leave upper secondary school with the tools to benefit from opportunities to enrol in higher education. On the other hand, countries with large proportions of high-performing students who do not expect to complete a university degree could suffer a loss of talent and should thus ensure, through their education policies, that these students are offered help in exploiting their skills. This help can be in the form of in-school information campaigns on education and career opportunities and of promoting the development of students' non-cognitive skills, motivation and attitudes towards learning (Hanson, 1994).

If expectations help to motivate students to invest more in learning, a study of inequalities in expectations is also a study of the inequalities underlying the motivations to learn and achieve. The results from this report can thus be used to develop measures to reduce inequalities in educational opportunities related to gender and socio-economic background before they become actual inequalities in performance and achievement.

Education systems not only have a duty to provide learning opportunities to all students, promote civic values, disseminate a common knowledge base, and help students to fulfil their full potential, they also play a crucial role in channelling skills and talent into the labour market and helping young people make the transition from adolescence into adulthood. By effectively managing students' education and career aspirations and expectations through the institutional, social and economic conditions that shape them, education systems can ensure that students' skills and interests find a suitable match in the economy. School systems must strike a careful balance between creating high expectations to motivate students and meet the demands of an economy that needs an increasingly skilled workforce and ensuring that students have the skills and competencies required to fulfil such expectations. Better matches between



students' expectations and their ability to meet them will reduce the social and personal costs associated with unfulfilled expectations, whether those of low-performing students who expect to complete a university degree or those of talented students who do not expect to do so (Baird et al., 2008; Kerckhoff, 1976). Education systems can also promote social mobility and greater gender equality, although teachers, school principals and educators are often so concentrated on the core aim of helping students to learn, that they may forget their equally important task of helping students to develop a fair assessment of their future opportunities.

Performance is only one of many factors that shape students' expectations. Cross-national research has identified some characteristics of education systems that motivate students so that they hold high expectations about their futures or that tamp those expectations (Kerckhoff, 1995).

The most effective way through which education systems can influence student expectations is by creating structural mechanisms that make it easy or difficult for students to pursue different education pathways. Education systems can also channel expectations by providing information on the different opportunities available and the expected labour-market consequences of choosing a particular pathway. Mateju (2007), Buchmann and Dalton (2002) and Kerckhoff (1995; 2000), for example, illustrate how education systems that provide clear "institutional information" to students about their prospects in further education succeed in creating more realistic aspirations and expectations, and ensure that there is a solid link between students' performance and their expectations of further education. An example of institutional information is the separation of students into different educational institutions or different classes through tracking or streaming policies. In these cases, students' paths through education are clearly determined by the type of institution or class to which students were allocated, largely on the basis of their academic record. The literature on the subject suggests that students in stratified systems are more likely to have concrete information about the opportunities available to them and are much more likely to hold realistic expectations about their futures in education because the opportunities available to students follow the type of track, stream or ability group to which students are allocated.

Other forms of institutional information that education systems may provide to students to help them form realistic expectations are standardised tests and assessments that base their scales on students' likelihood of being able to advance along different educational paths. Although these forms of institutional information reduce the influence of peers, parents, teachers and background in forming expectations, inequalities in expectations may remain if access to this information and placement in different tracks vary by background characteristics (Buchmann and Dalton, 2002; Buchmann and Park, 2009; McDaniel, 2010; Morgan, 2005; Useem, 1992). Results from this report show that tracking or streaming, as a form of information, is a strong predictor of student expectations. This is not the case, however, for standardised testing.

School systems should ensure that all students are ready and able to make the most of their skills when they finish compulsory schooling. They can do so by creating conditions so that students develop expectations that are high enough to maintain student motivation to learn, but that are also realistic enough so that students avoid pursuing careers that are not aligned with their abilities. Similarly, school systems should allow talent to flourish, so that the highest-achieving students consider university-level education as a viable opportunity. Promoting expectations should be a two-step process: first, ensure that students are academically ready to pursue high-level education careers; then, once students are university-ready, strive to raise their expectations. School systems should also provide attractive and viable alternative pathways for those students who, as a result of their academic potential or their interests, prefer to end their educational careers after finishing upper secondary school (see Box 1.1 for the definitions of university and upper secondary educational expectations used in this report).

## EDUCATIONAL EXPECTATIONS ACROSS COUNTRIES AND ECONOMIES

Enrolment in tertiary education increased dramatically during the 20th century. In 1900, fewer than 1% of university-age people around the world were enrolled in higher education; by 2010 around 20% of people in that age group were enrolled, and many industrialised countries have enrolment rates above 50% (OECD, 2011a; Schofer and Meyer, 2005). Furthermore, a tertiary degree has become an important antecedent for access to prestigious occupations and high social status. The expansion of the knowledge-based economy and technological progress have created a large market of highly paid jobs for those individuals who have the required high levels of skills (Arum and Roksa, 2011; Autor et al., 2003; Brand and Xie, 2010; Labaree, 1997; Rosenbaum and Kariya, 1989; Torche, 2010). Yet although enrolment in tertiary education has increased dramatically, many students still do not enrol in tertiary education nor expect to complete a university degree; instead, they expect to enter the labour force after finishing their upper secondary studies. This group of students benefits the most when their schools give them the tools to smooth their transition into the labour market.

For students to access the benefits of a tertiary education, they must first aspire to attain such a degree and, more important, expect one. Yet these benefits are by no means assured: social prestige is not accessible to all, and an economy cannot function only on the basis of high-skilled jobs. An economy may waste valuable resources in overeducating its population or in educating those who are less likely to obtain a university degree because it is training its people for an economy that is not ready or able to receive them (Collins, 1979). Conversely, many students expect to finish their education in upper secondary school, and an education system may lose talent if high-performing students are not encouraged to continue their education after completing compulsory education (Hanson, 1994).



This section analyses the distribution of expectations across the 21 countries and economies that implemented the PISA 2009 Educational Career questionnaire (ECQ) to evaluate whether student expectations are aligned with their academic potential and explore whether, within countries and economies, those students who expect to complete a university degree are those most likely to do so. The analyses developed in the following sections shed new light on whether some school systems fail to mobilise their full human potential, whether some students hold expectations that do not match their academic performance, as measured by their scores in standardised assessments, and whether disparities in expectations may prevent or promote social mobility and equity in the labour market. They also identify those students who expect to enter the labour force upon finishing their upper secondary schooling.

More concretely, the following sections answer the question: which students expect to earn a university degree and which students do *not* hold that expectation? To answer this question, students' academic characteristics, including their proficiency in reading and mathematics and their current educational standing, as well as background characteristics, such as gender and socio-economic status, are considered. This report acknowledges that information is crucial for students to form realistic expectations and recognises that schools and education systems play a key role in providing students with accurate information about their choices.

From the perspective of the education system, the report asks: are those who expect to attend university more likely to be accepted into and enrol in higher education and eventually graduate? By comparing the distribution of expectations across education systems, this chapter examines policies that can improve the likelihood that students hold realistic expectations about their futures in education. Results suggest that all countries examined report some misalignment between students' expectations and the opportunities available to them, although the degree of that misalignment varies widely.

### Box 1.1 **What are university and upper secondary school expectations?**

This report focuses on students' expectations to complete a university degree and their expectations to end their formal schooling after completing upper secondary school. The terms "university" and "upper secondary school" are used to refer to the more formal and internationally comparable International Standard Classification of Education (ISCED) of ISCED level 5A or 6 and ISCED level 3 A/B/C, respectively (OECD, 1999).

ISCED level 5A programmes are tertiary education programmes (normally requiring the successful completion of ISCED level 3A, 3B or 4) that have a cumulative theoretical duration of at least four years, are theory- or research-based, and provide access to high-skilled professions. ISCED level 6 programmes are devoted to advanced study and original research and lead to the award of an advanced research classification. In this report, the completion of ISCED level 5A or 6 are referred to as completing a "university degree".

This report also focuses on students who expect to finish their educational careers after the completion of ISCED level 3 (of type A, B or C). ISCED level 3 degrees correspond to upper secondary education, and entrance into this level typically requires some nine years of full-time education, beginning with primary education (ISCED level 1), and the successful completion of lower secondary education (ISCED level 2). In this report, the completion of ISCED level 3 is referred to as completing an "upper secondary degree". Because students are asked to report on the education level they expect to complete, in certain countries completing ISCED 3 may be achieved by completing upper secondary school or by passing free examinations without school-attendance requirements.

Annex A provides the questionnaire about expectations that was disseminated among students. Each country that distributed the Educational Career questionnaire replaced each ISCED category with the local name of the level. For ISCED 5A or 6, for example, Mexico used "Licenciatura, Maestría o Doctorado" and Singapore used "University education and beyond".

Source: OECD (1999).

## **Expectations of completing a university degree**

Individuals receive substantial economic benefits from attending university. On average, individuals who hold university degrees have better prospects in the labour market than their less-educated peers. They command higher wages and are less likely to suffer from unemployment, particularly long-term unemployment. Students reported on their expectations in the middle of the 2008 financial and economic crisis. At that time, unemployment rates in OECD countries increased dramatically among those with no higher than an upper secondary education, while the risk of unemployment was comparatively low among those with a university degree. In addition, university-educated individuals could expect to earn over 50% more than individuals with only an upper secondary education (OECD, 2011a).



Higher education not only benefits those individuals who attend, but also society more widely (Rosenbaum and Kariya, 1989). This is why, in many countries, public funds and incentives have been put in place to promote participation in tertiary education. In 2009, the European Commission estimated that towards 2020, job creation will be concentrated in the service sector, with losses expected in the manufacturing and primary sectors. The proportion of jobs requiring high levels of education should rise from about a quarter of all available jobs to about one-third, an increase that will be matched by a sharp decline in the share of jobs requiring low levels of education. Projections highlight the importance of ensuring that students are willing and able to attend university so that the growing demand for high-level skills can be met (Commission of the European Communities, 2009).

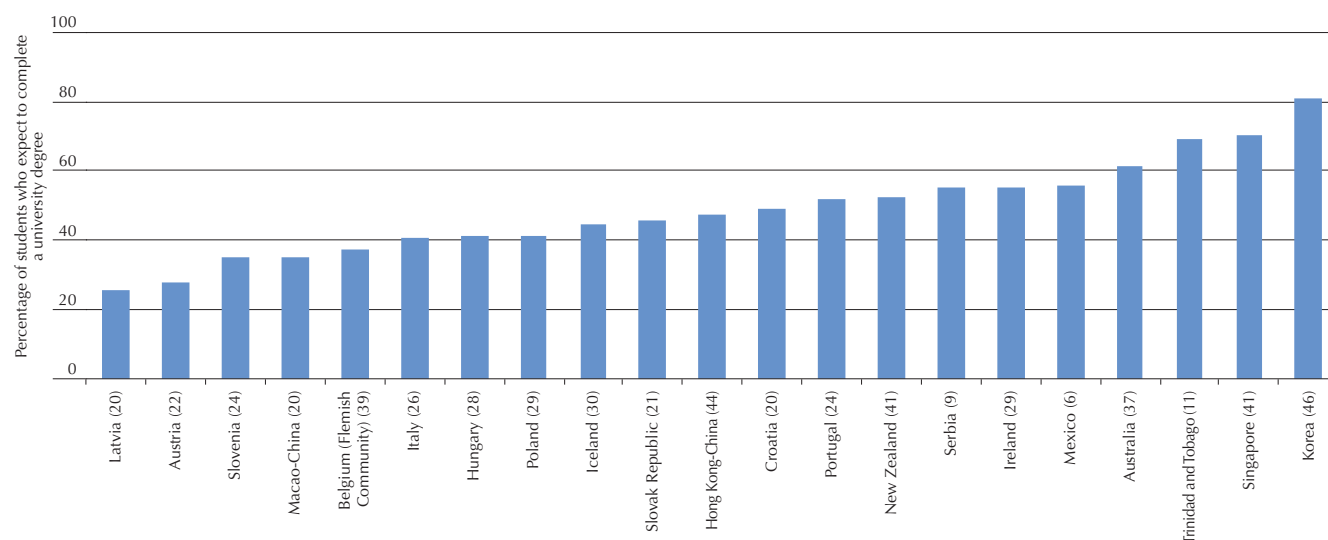
Although the proportion of university graduates has increased considerably over the past few decades and is bound to increase further in the coming decades, not all students are willing and able to enter tertiary education. Education systems must strike a careful balance between encouraging students to have high expectations for themselves, to maintain their motivation to strive for excellence, and being realistic about the likelihood that individual students will fulfil those expectations. Most important, school systems must ensure that those students who hold high expectations are “university-ready”, to minimise costs associated with remedial education and failure to complete a degree. In the United States, for example, at least 30% of students who enter higher education must take remedial courses so that they can continue to pursue a university education (Bettinger and Long, 2009; Wiley et al., 2010). Also, systems must ensure that there are attractive pathways into the labour market for students who do not expect to continue in education after finishing their upper secondary degrees.

In 2009, students in 21 PISA-participating countries and economies were asked whether they expected to complete a university degree. University degrees include liberal arts and professional degrees, but not degrees from technical or vocational tertiary education institutions.<sup>1</sup> These expectations can be compared over time as students who took part in the PISA 2003 survey were asked similar questions.

Countries and economies, and regions within countries, vary in the percentage of students who expect to complete a university degree. Whereas in Latvia relatively few – one in four – 15-year-old students expect to complete a university degree, in Korea the great majority of students – four out of five – expect to do so. Of the 21 countries and economies that distributed the ECQ in 2009, in 9 of them over 50% of 15-year-old students expected to complete a university degree. These expectations are highest in Korea (81%) and exceed 60% in Australia, Singapore and Trinidad and Tobago. They are lowest in Latvia (25%) and lower than 40% in Austria, Belgium (Flemish Community), Macao-China and Slovenia (Figure 1.1). Since 2003, Austria, Iceland, Mexico, New Zealand and Poland have recorded a statistically significant increase in student expectations of completing a university degree.<sup>2</sup> The growth is especially strong in New Zealand and Poland (14 and 11 percentage points, respectively), and statistically significant, but smaller in size (less than 10 percentage points) in Austria, Iceland and Mexico (Figure 1.2). Students’ expectations of completing a university degree did not change in Australia, Belgium (Flemish Community), Ireland, Korea, Latvia, Portugal and the Slovak Republic, and have declined in Hong Kong-China, Hungary, Italy and Macao-China.

Figure 1.1

### Percentage of students who expect to complete a university degree



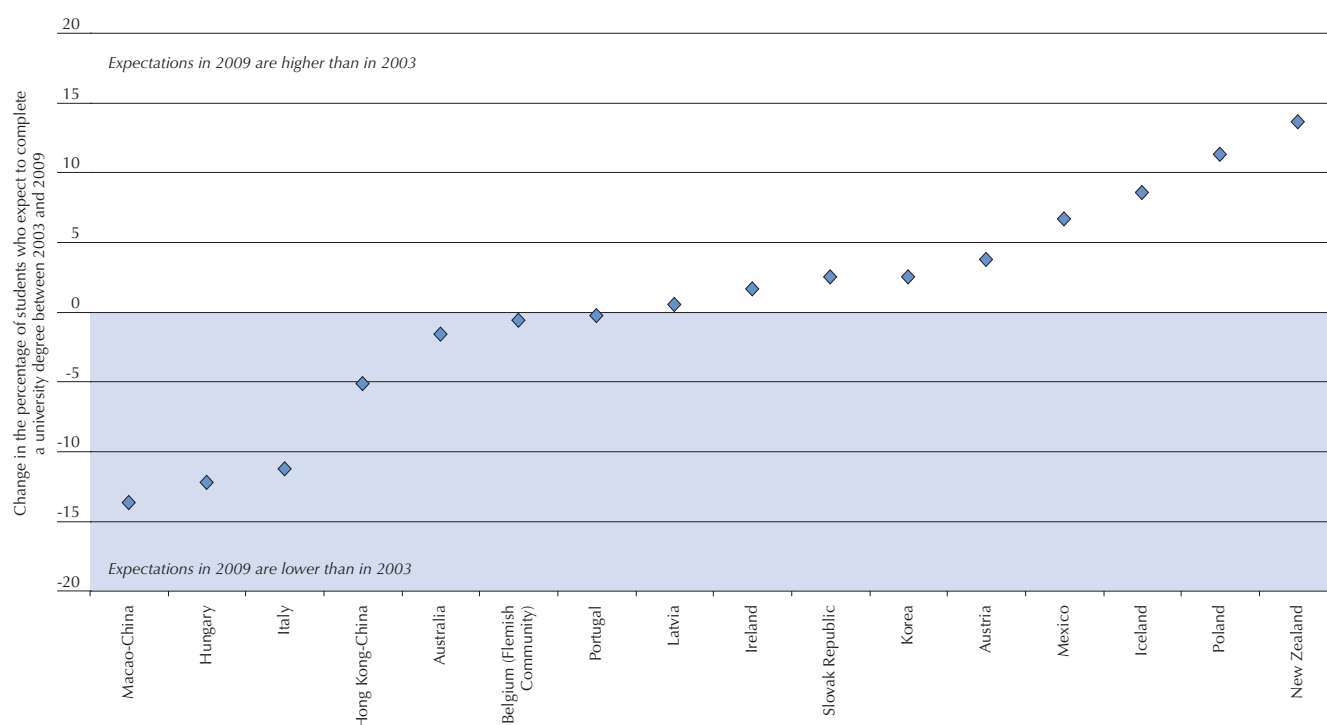
Note: The number indicated between brackets is the percentage of students performing at or above proficiency Level 4 in reading literacy. Countries are sorted in ascending order of the percentage of students expecting to complete a university degree.

Source: Table B1.1.

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Figure 1.2

**Change in the percentage of students who expect to complete a university degree between 2003 and 2009**

Countries are sorted in ascending order of the change in the percentage of students expecting to complete a university degree between 2003 and 2009.

Source: Table B1.1.

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The percentage of students who expect to complete a university degree must be interpreted in the context of who these students are. Ideally, these should be the students who are most likely to fulfil this expectation, so that students who are highly proficient expect to attain a university education and not end their schooling at a lower level. The next sections contextualise expectations of further education and illustrate the strong association between students' expectations and their academic performance. They also identify countries and economies in which sizeable proportions of students expect to complete a university degree despite poor performance in school, and countries and economies where sizeable proportions of high-achieving students do not expect to complete a university degree. By doing so, the report aims to identify some policy levers countries can use to ensure that all students' skills are developed and used effectively.

### University expectations by reading performance

Because of the selective nature of tertiary education and its academic demands, students with higher academic achievement in lower and upper secondary school are more likely to gain access to, enrol in and later succeed in higher education; in other words, "university-ready" students are those most likely to succeed in higher education (Carbonaro et al., 2011; Hanson, 1994; OECD, 2010a; Sewell et al., 2003). School systems looking to improve the alignment of their students' expectations and the likelihood of meeting those expectations should make sure that students who expect to complete university have the skills that are required to do so. Equally, school systems should promote high expectations among high-performing students to reduce the loss of talent that can result when highly proficient students do not complete university.

In general, in all countries and economies, students who expect to complete a university degree show significantly better performance in mathematics and reading than students who do not expect to complete such a degree. The difference in reading performance is most pronounced – greater than 90 points – in Australia, Austria, Belgium (Flemish Community), Croatia, Hungary and the Slovak Republic. This difference is smaller – yet still marked and corresponding to more than 50 score points in the reading assessment – in Hong Kong-China and Macao-China (Table B1.2).<sup>3</sup>

In all countries and economies that offer both ISCED A and ISCED B/C programmes to 15-year-old students, differences in performance between the students who do and do not expect a university degree capture the differences between ISCED A and ISCED B/C students. In most countries and economies, the differences in performance between those who do and do not expect a university degree are attenuated within ISCED programme categories (Table B1.2).



In Austria, Belgium (Flemish Community), Croatia and Hungary, among students in ISCED B/C programmes there is no significant difference in performance between the students who expect a university degree and those who do not. Although these are countries where few ISCED B/C students expect to attend university, this signals that the information provided by academic performance does not influence the expectations of students in B/C type programmes and that students in these programmes take other elements into account when setting their expectations. Other school-related factors that may influence students' expectations of attending university include the information they receive in school regarding their performance, such as school marks (these issues are discussed in further detail in Chapter 3).

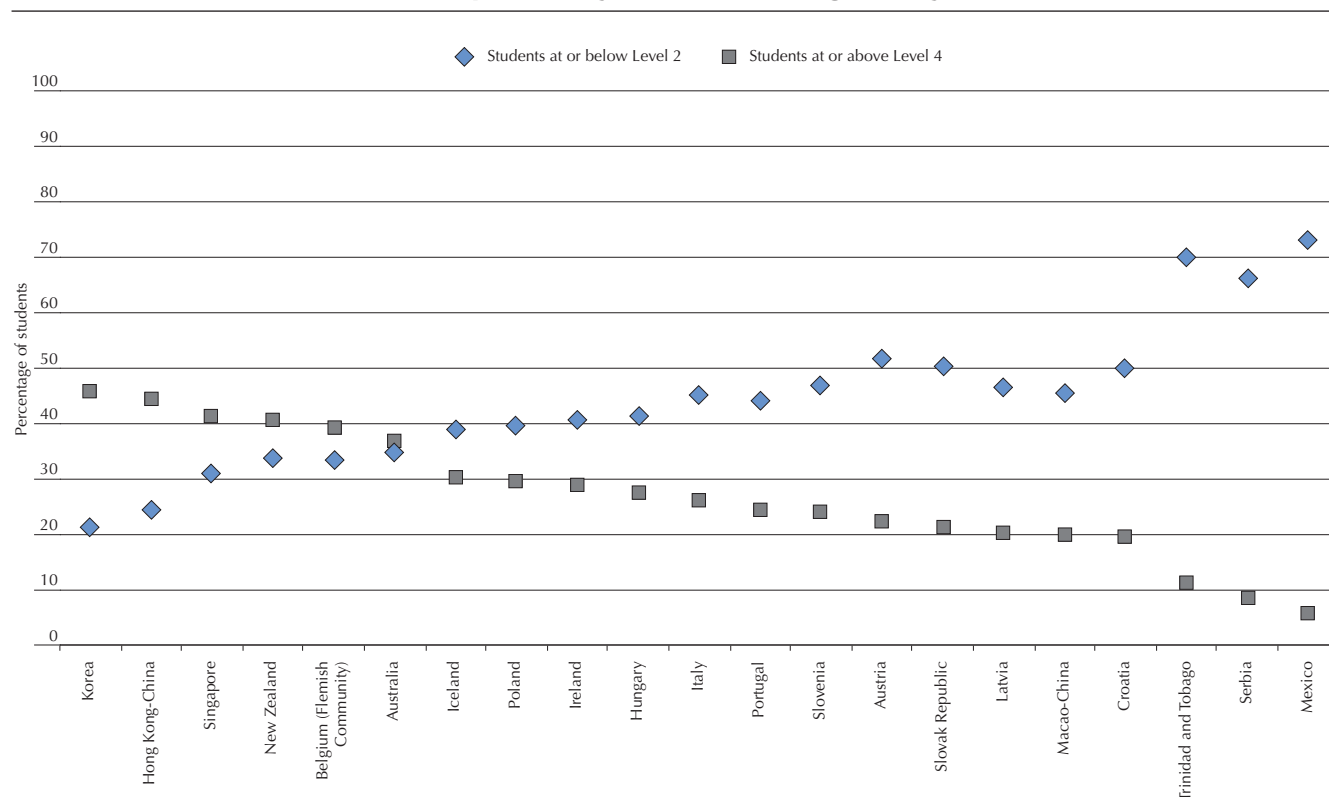
However, in many countries and economies, a large proportion of poor-performing students expects to complete a university degree. PISA classifies student performance according to several proficiency levels, based on the complexity of the tasks they are able to complete in reading, mathematics and science. Students who expect to complete a university degree should be able to perform complex tasks; students unable to perform more than the baseline tasks would probably find it difficult to succeed in university (for a description of the competencies related to each proficiency level, see Box 1.2).

In the context of this report, low-performing students are students who score at or below PISA proficiency Level 2 in reading and mathematics. Level 2 is the level at which students begin to demonstrate literacy in reading or mathematics. Countries vary in the proportion of students who do not have this baseline proficiency. Because of their poorer performance, these students have a lower-than-average likelihood of entering university and ultimately succeeding in it, compared to students who perform at higher proficiency levels. Countries and economies that have a sizeable proportion of low-performing students who, nonetheless, hold high expectations, may incur high economic and social costs as these students try to follow a very difficult path for which they are not adequately equipped. More important, the economy and society pay a high price if a significant percentage of students enters university but fails to earn a degree or learn new skills. Employers in such countries may be unable to find the vocational or technical skills needed for jobs that do not require university-level qualifications.

Conversely, students who perform at PISA proficiency Level 4 or above in reading or mathematics can handle complex literacy tasks and will have comparatively less difficulty in succeeding in university. Countries and economies vary in the proportion of students who can handle the kinds of complex tasks that are commonly part of a university education (Figure 1.3).

Figure 1.3

**Percentage of students at or below PISA proficiency Level 2 and students at or above PISA proficiency Level 4 in reading literacy**



Countries are sorted in descending order of the percentage of students at or above proficiency Level 4 in reading literacy.

Source: Table B1.4.

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### Box 1.2 Proficiency levels in the PISA 2009 reading assessment

PISA provides an overall reading literacy scale which has a mean of 500 and a standard deviation of 100 for OECD countries in 2000. To help in interpreting what students' scores mean in substantive terms, the scale is divided into proficiency levels, and descriptions are generated based on the skills and knowledge required to complete the tasks at each level. In 2009, seven levels of reading proficiency were generated: Level 1b is the lowest described level, then Level 1a, Level 2, Level 3 and so on up to Level 6, which describes readers at the highest level identified by PISA.

#### Level 2 – Baseline proficiency level

Students proficient at Level 2 on the reading literacy scale are capable of tasks such as locating information that meets several conditions, making comparisons or contrasts around a single feature, working out what a well-defined part of a text means, even when the information is not prominent, and making connections between the text and personal experience. Some tasks at this level require students to locate one or more pieces of information which may need to be inferred and may need to meet several conditions. Others require recognising the main idea in a text, understanding relationships, or construing meaning within a limited part of the text when the information is not prominent and the reader must make low-level inferences. Tasks at this level may involve comparisons or contrasts based on a single feature in the text. Typical reflective tasks at this level require students to make a comparison or several connections between the text and outside knowledge, by drawing on personal experience and attitudes. Level 2 can be considered a baseline level of proficiency at which students begin to demonstrate the reading literacy competencies that will enable them to participate effectively and productively in life.

Across OECD countries, more than four in five students (81%) are proficient at Level 2 or higher.

#### Level 4 – Good level of proficiency

Students proficient at Level 4 on the reading literacy scale are capable of difficult reading tasks, such as locating embedded information, construing meaning from nuances of language, and critically evaluating a text. Tasks at this level that involve retrieving information require students to locate and organise several pieces of embedded information; some tasks require interpreting the meaning of nuances of language in a section of text by taking into account the text as a whole. Other interpretative tasks require understanding and applying categories in an unfamiliar context. Reflective tasks at this level require readers to use formal or public knowledge to hypothesise about or critically evaluate a text. Readers must demonstrate an accurate understanding of long or complex texts whose content or form may be unfamiliar.

Across OECD countries, 28% of PISA 2009 students are proficient at Level 4 or higher.

For more detailed definitions of PISA proficiency levels, see OECD (2010), *PISA 2009 Results: What Students Know and Can Do (Volume I)*, PISA, OECD Publishing, pp. 49-53.

Source: OECD (2010b).

The percentage of low-performing students who expect to complete a university degree is relatively high in Australia, Ireland, Korea, Mexico, Serbia, Singapore and Trinidad and Tobago. In Korea, for example, 52% of students who performed at or below proficiency Level 2 in the PISA 2009 reading assessment expect to complete a university degree. In Mexico and Singapore, around 45%, and in Trinidad and Tobago as much as 60%, of low-performing students expect to complete a university degree. In Australia and Ireland, around one in three students who perform poorly expects to earn a university degree (Figure 1.4).

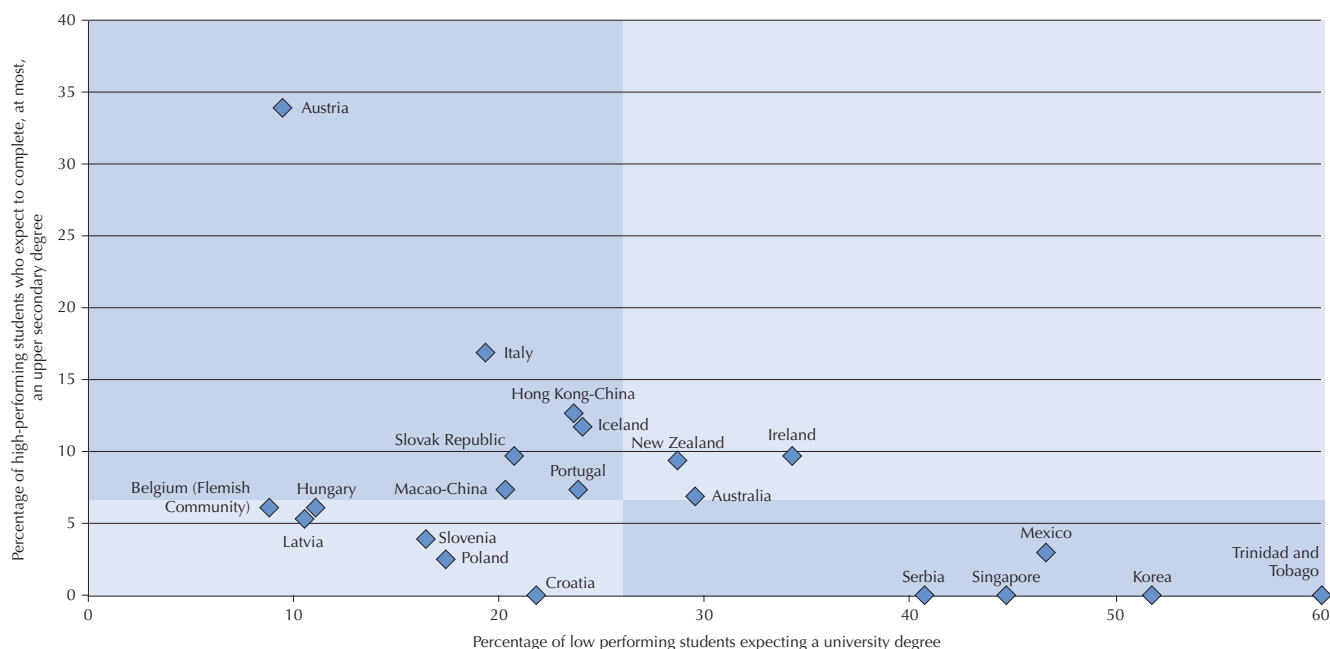
Another sign of misaligned expectations are high-performing students who do not expect to complete a university degree. These students are likely to succeed in completing earning this degree and their low expectations may result in a loss of talent for an economy (Hanson, 1994; OECD, 2012a). These are students who perform at or above proficiency Level 4 in the PISA 2009 reading assessment but do not expect to continue their education after finishing upper secondary education. This group is relatively large in Austria, Hong Kong-China, Iceland and Italy where more than 10% of students who perform at above proficiency Level 4 do not expect to continue in schooling after graduating from upper secondary education. As will be discussed below, Austria has a school system that differentiates students at an early age in academic or vocational programmes in secondary education. In Austria, high-performing students with low expectations may be enrolled in ISCED B/C programmes and thus dissuaded from completing a university degree. For high-performing students with low expectations who are enrolled in ISCED A programmes at the secondary level, such as those in Iceland and Italy, their low expectations may be the result of a lack of information about their own potential, or they may have vocational interests that lead them away from a university degree. This kind of loss of talent is relatively rare in Croatia, Korea, Mexico, Poland, Serbia, Singapore, Slovenia and Trinidad and Tobago, where fewer than 5% of students who perform at proficiency Level 4 do not expect to continue on to post-secondary education.





Figure 1.4

### Percentage of low-performing students who expect to complete a university degree and percentage of high-performing students who expect to complete at most an upper secondary level degree




Notes: High-performing students are those at or above proficiency Level 4 in reading performance.

Low-performing students are those at or below proficiency Level 2 in reading performance.

Lines dividing the quadrants are the country/economy averages.

Estimates for Croatia, Korea, Serbia, Singapore and Trinidad and Tobago are not distinguishable from zero.

Source: Table B1.4.

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Combining the percentage of low-performing students who expect to complete a university degree and the percentage of high-performing students who do not expect to do so can be used as an indicator of the overall level of misalignment between students' expectations and abilities in a country or economy. Belgium (Flemish Community), Hungary and Latvia have the lowest levels of misalignment. In these countries, fewer than 20% of low- and high-performing students hold expectations of further education that do not match their reading and mathematics skills.

The different quadrants in Figure 1.4 highlight different policy challenges for countries and economies. School systems with a high percentage of low-performing students who expect to complete a university education (lower right quadrant) need to improve student performance among low-performing ambitious students so that all students who expect to pursue a university education have a good chance of succeeding at that level of education. These are the school systems of Korea, Mexico, Serbia, Singapore and Trinidad and Tobago. They should capitalise on students' motivation and their intention to continue on to higher education. In most countries and economies, student engagement is a good predictor of whether low-performing students can improve their reading performance. Similarly, higher expectations among poor performers, which are implicit when these students follow an academically-oriented curriculum, are also related to improvements in performance (Table B1.6). Thus, countries that seek to capitalise on their students' high expectations can do so by promoting students' engagement with school; and schools can encourage higher expectations among their students by providing them with more demanding and academically oriented courses.

School systems with a comparatively large proportion of high-performing students who expect to complete, at most, an upper secondary degree (upper left quadrant) should provide opportunities for these students to raise their expectations. These countries include, most notably, Austria and Italy, where more than 30% and 15% of high-performing students, respectively, expect to finish their education at upper secondary school. These school systems can promote higher expectations among their high-performing students by improving these students' engagement with school and ensuring that placement in academic or vocational programmes is based on merit (Table B1.7). Promoting higher expectations among high-performing students is particularly important considering that it is these students who are most likely to succeed in higher education (Box 1.3).



### Box 1.3 How PISA students do ten years after the assessment

Canada is one of the few countries that implemented a longitudinal follow-up among students who participated in PISA in 2000. Canadian data can therefore be used to examine the education and labour-market outcomes of students performing at different proficiency levels in PISA 2000. The most striking result is that students who performed at high levels when they were 15 were substantially more likely to enter and graduate from university than students who performed at lower levels in the PISA test.

Results from the Canadian follow-ups of the PISA 2000 student cohort also reveal how educational attainment is strongly associated with improvements in reading proficiency. Participation in some form of formal post-secondary education is consistently and substantially related to improvements in reading skills between the ages of 15 and 24. Because Canada is an education system that is highly flexible and allows students to enter university after they have had work experience, students who may be poor performers at age 15 but have the motivation and will to improve their skills can enter university and improve their skills later on in their lives (OECD, 2012b).

Source: OECD (2012b).

### Expectations of completing a university degree across ISCED types and levels

Education systems are organised and structured around different criteria that generally match the society's values, ideals and traditions. One key feature that distinguishes education systems is whether they separate students at an early age into vocational or academic schools, or whether they have a comprehensive approach to education in which all students receive similar instruction, at least until they are 15 years old (*PISA 2009 Results: What Makes a School Successful* [OECD, 2010c] includes a comprehensive discussion of the rationale and modes of differentiation across school systems; see, in particular, Chapter 3). The countries and economies that distributed the ECQ in 2009 can be classified into three groups, defined according to the kinds of differentiation policies they adopt. In Austria, Belgium, Hungary, Singapore, the Slovak Republic and Trinidad and Tobago, differentiation into different types of schools occurs before students are 13 years old. Differentiation occurs between the ages of 13 and 15 in Croatia, Italy, Korea and Slovenia. The remaining set of countries and economies, which includes Australia, Hong Kong-China, Iceland, Ireland, Latvia, Macao-China, Mexico, New Zealand, Poland and Portugal, has a more comprehensive approach to education, whereby they do not differentiate students across different programmes, or do so at age 15 or later (see Table IV.3.2a in OECD, 2010c).

Education systems that separate students into different types of programmes generally create explicit paths that lead students to specific education outcomes. In these systems, students who attend academically-oriented schools receive an education that aims to prepare them for university. Students in vocational schools, on the other hand, not only do not receive such an education, but their secondary school degree may not allow them to continue their studies into higher education, either because this transition is not legally possible or because it is difficult and discouraged in practice. Tracking or streaming systems give students a strong, reliable and credible signal about their expected paths through education and their career prospects, strongly influencing their expectations and aspirations. In fact, differentiation is the most important school-level factor influencing student expectations. In education systems that separate students into different types of schools, students' expectations are more realistic than in systems that have a comprehensive approach to schooling at the primary and lower secondary levels (Buchmann and Dalton, 2002; Buchmann and Park, 2009; Kerckhoff, 2000; Mateju et al., 2007; McDaniel, 2010; Rosenbaum, 2001; Turner, 1960).

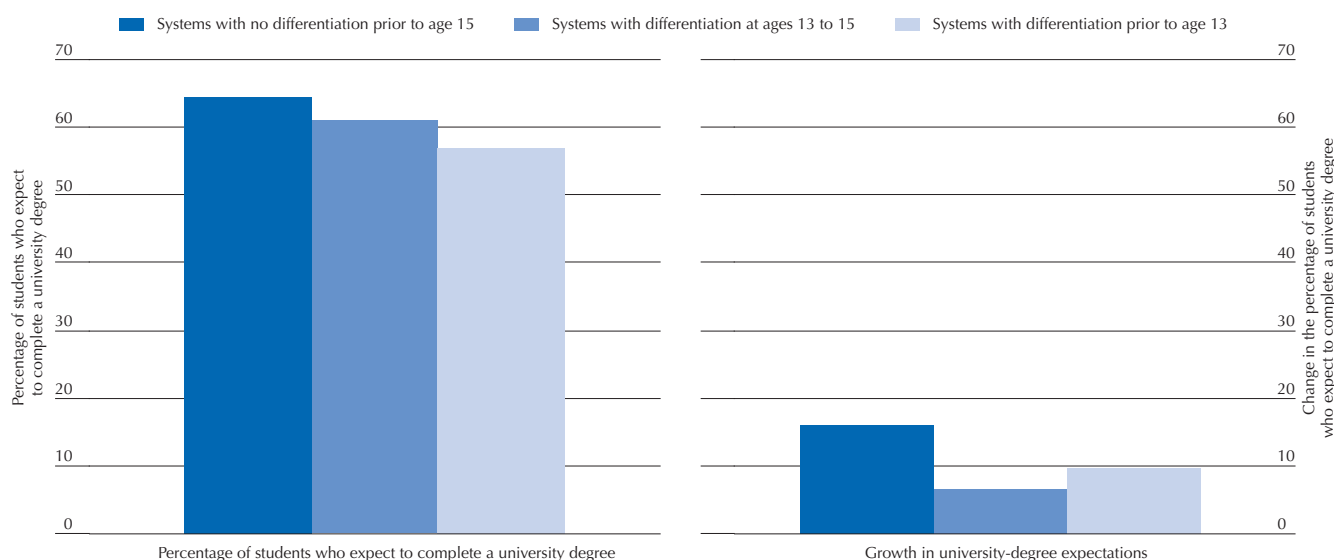
On average, countries that do not use differentiation have a higher percentage of students who expect to complete a university degree, and expectations have grown at a faster pace than in countries that stream students onto different pathways through education (Figure 1.5). After accounting for long-term trends in enrolment, the overall level of expectations is almost 8 percentage points lower in countries that stream students before the age of 13 and 3 percentage points lower in countries that differentiate students before the age of 15, when compared to countries with more comprehensive approaches to schooling. Similarly, in countries that differentiate students before the age of 13, expectations have risen at a slower rate (around 7 percentage points between 2003 and 2009), as have expectations in education systems that separate students before the age of 15 (by around 9 percentage points), than in countries with comprehensive systems.<sup>4</sup> Similarly, education systems that use differentiation also have, on average, lower graduation rates from ISCED 5A programmes.

In almost all of the subset of countries and economies that differentiate programmes according to their academic or non-academic orientation, either within or between schools (that is, school systems in which at least 8% of students are in ISCED A or ISCED B/C-type programmes<sup>5</sup>), students in academic programmes are significantly more likely to expect to complete a university degree. This difference is most marked in Croatia, where there is a 57 percentage-point difference between the expectations of earning a



Figure 1.5

### Average percentage of students who expect to complete a university degree in school systems with and without horizontal differentiation



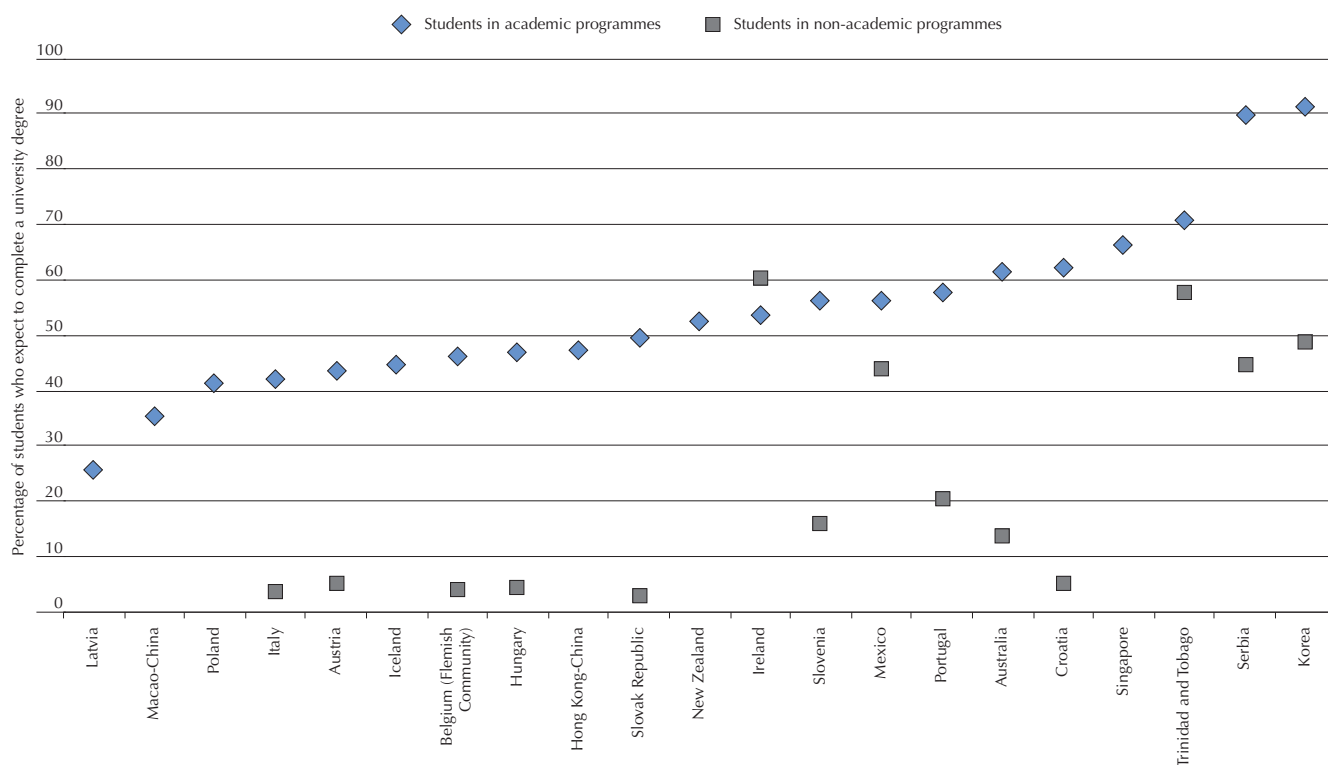
Note: Predicted values are estimated from an OLS regression at the school-system level predicting the percentage of students who expect to complete a university degree and the change in this expectation between 2003 and 2009, and controlling for changes in gross enrolment ratios from 1980 to 2009 and dummy indicators for Korea and Latvia.

Source: Table B1.5.

StatLink <http://dx.doi.org/10.1787/888932733355>

Figure 1.6

### Percentage of students in ISCED A and ISCED B/C programmes who expect to complete a university degree



Note: Latvia, Macao-China, Poland, Iceland, Hong Kong-China, New Zealand and Singapore either do not offer non-academic programmes or have too small a sample in these programmes to provide reliable estimates.

Countries are sorted in ascending order of the percentage of students in academic programmes expecting to complete a university degree.

Source: Table B1.1.

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university degree among students in academic and non-academic programmes. The difference is also significant in Belgium (Flemish Community), Hungary, Korea, Serbia and the Slovak Republic, at 40 percentage points or more. In these countries, students who attend non-academically oriented programmes tend to realise the difficulty of entering university and adjust their expectations accordingly. In Trinidad and Tobago, the difference between the expectations of students in different programmes is less pronounced, at 13 percentage points. In Ireland, students in ISCED B/C-type programmes are *more* likely to expect to complete a university degree (Figure 1.6).

For students attending non-academic programmes, a university degree may be a difficult goal to reach because of the nature of their academic training or because there are structural impediments to doing so. These students are thus particularly likely to face the potential frustration – and financial cost – of not achieving this goal. Expectations of completing university among students in these programmes are highest in Ireland, Korea, Serbia and Trinidad and Tobago, where more than 40% of students in non-academic programmes expect to complete a university degree. Considering the total number of students who hold expectations that would be hard to meet (those students in non-academic programmes who expect to earn a university degree), over a third of all students in Serbia and more than 10% of all students in Ireland and Korea have expectations that are structurally difficult for them to meet.

By contrast, in Austria, Belgium (Flemish Community), Croatia, Hungary and the Slovak Republic, fewer than 5% of students in non-academically oriented programmes expect to complete a university degree. In these countries, being in this type of programme dissuades students from holding high expectations about completing a university degree. Although these systems provide for more realistic expectations, if differentiation into various programmes is not based entirely on merit, these systems may lead to a loss in talent (e.g. academically able students who attend these programmes are discouraged from pursuing a university degree, even though they might be able to complete one, given their academic performance) or reinforce social inequalities if separating students favours some groups over others (Buchmann and Dalton, 2002).

Fifteen-year-old students who are in lower or upper secondary schools, may have different expectations about their future. In most countries and economies that distributed the Educational Career questionnaire, students in upper secondary schools are more likely to expect to complete a university degree. This may be the case because upper secondary education may not be mandatory in some systems, so students interested in pursuing further education have already been selected at that level. Also, lower secondary education may have a greater proportion of students who have repeated a grade because of low performance and a larger share of students from socio-economically disadvantaged backgrounds who are, in turn, less likely to graduate from university and so have adjusted their expectations accordingly. A third explanation for the difference in expectations by ISCED level is that upper secondary students are closer to the time they graduate and are more likely to see the benefits of a university education (Table B1.1).

## Expectations of ending formal education at the upper secondary level

When examining students' expectations of further education, the focus is generally on whether students expect to attend and complete university because tertiary education offers a pathway to upward social mobility and greater earnings. However, in many countries, a majority of students do not expect to attain a university education, and the choices and opportunities available to these students – whether to continue on to vocationally oriented post-secondary programmes (ISCED 4 and 5B programmes), drop out before completing upper secondary education, or finish their formal education with an upper secondary degree, will shape not only their individual futures but also the type of workforce countries will be able to tap in the coming decades.

These students are known as *the forgotten half*, largely because scholars and policy makers have paid scant attention to them (Rosenbaum, 2001). This section focuses on these students because their needs are different than those of students who expect to continue their education and training in institutions of higher education. The former group expects to enter the labour market sooner, and thus requires schools to provide them with the skills that better prepare them to enter the labour market and adulthood.

Students who expect to finish their formal schooling at the end of upper secondary school generally plan to enter the labour market immediately afterwards. Although most school systems are committed to expanding access to tertiary education, education systems must not forget the large number of students who do not expect to avail themselves of that access. These students still must acquire the skills needed for a smooth transition into the labour market. For most countries, this remains a challenge: unemployment rates are high among persons with at most an upper secondary degree, and they are especially high among 15-24 year-olds. The unemployment rate among adults in OECD countries rose to 7% in 2011; but among workers aged 15-25, the unemployment rate was 17% (OECD, 2011a; OECD, 2011b). As the demand for high-skilled workers increases, meeting this challenge becomes ever more important (Box 1.4).

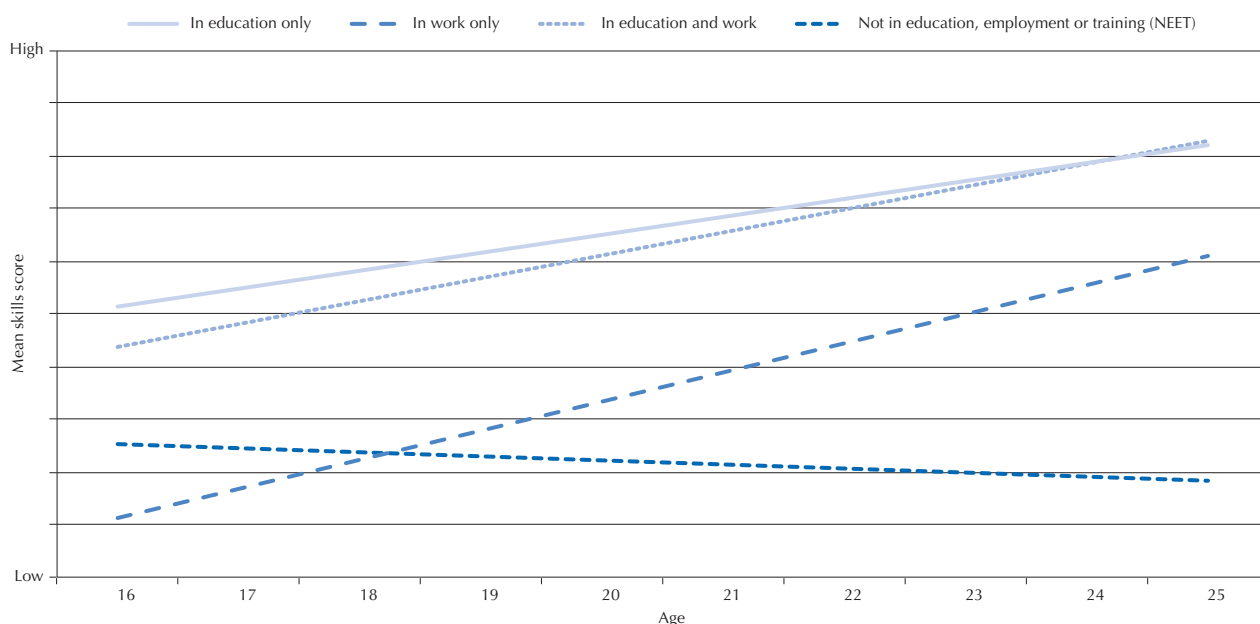
Countries have various strategies for ensuring a smooth transition into the labour market for students who expect to finish their formal education in upper secondary school. Germany and Japan, for example, encourage and promote linkages between schools and businesses while maintaining incentives for students to perform well. In the United States, on the other hand, schools are not expected to establish close ties with industry and potential employers (Rosenbaum and Kariya, 1989; Rosenbaum et al., 1990; Rosenbaum, 2001; Shavit and Müller, 1998). Because students are encouraged to expect to complete a university degree, policies



### Box 1.4 The NEET challenge (Not in Employment, Education or Training)


The traditional indicators for labour-market participation are frequently criticised for their limited relevance to young people. Basic unemployment and employment statistics do not accurately capture the situation of young people because many students are classified as being out of the labour force. Many young people who do not study are also not captured by official unemployment statistics as they may choose not to enter the labour force and not look for a job because they are engaged in irregular employment or in domestic unpaid work, or because they are inactive. Since the number of young people who are not in education, employment or training is large in many countries, new measures have been developed to assess the size of this group, the challenges these young people face, their labour-market prospects, and life outcomes more generally. A young person is considered as not in education, employment or training (NEET) if he or she has left the school system and is neither employed nor in continuing education.

#### Skills score of young people, by participation in education and work



Note: This figure is based on results of the OECD Survey of Adult Skills field trial, a product of the Programme for the International Assessment of Adult Competencies (PIAAC). It is not based on representative samples and is therefore only illustrative.

Source: Figure 1.3 in OECD (2012), *Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies*, OECD Publishing.

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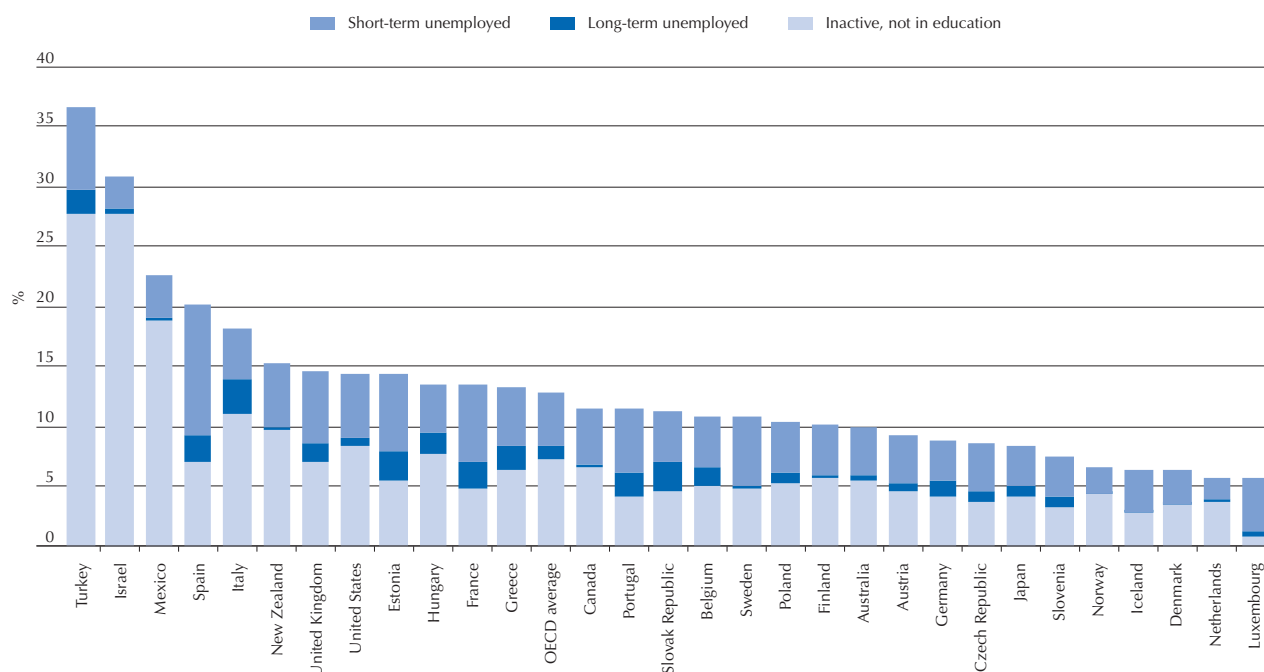
In 2009, the latest year for which data for this indicator are available, an average of 12% of young people in OECD countries were NEET. Denmark, Iceland, Luxembourg, the Netherlands and Norway had the lowest NEET rates in 2009 (between 5% and 7%), while the share of young NEETs was the highest in Turkey and Israel, at 37% and 31%, respectively. Among NEET youth, two in three were outside the labour market either because they had been unemployed for more than a year or because they were inactive and were not seeking employment.

On average in OECD countries, the NEET rate among 15-24 year-olds in 2009 also differs markedly by socio-demographic characteristics. Young women have a higher NEET rate than young men (14% and 12%, respectively), while the NEET rate for teenagers is less than half that of young adults (8% and 18%, respectively), partly because education is compulsory at least until the age of 16 on average across OECD countries. A lack of qualifications implies a much higher risk of being NEET (34%). In 2009, Turkey recorded the highest NEET rates among young people without an upper secondary education, and one of the highest rates among young people with upper secondary qualifications.

A smoother transition from school to the workplace or higher education, and resulting lower NEET rates, are found in countries that differentiate their school systems (Eurofound, 2012).


Sources: Eurofound (2012); OECD (2010d); OECD (2012a).

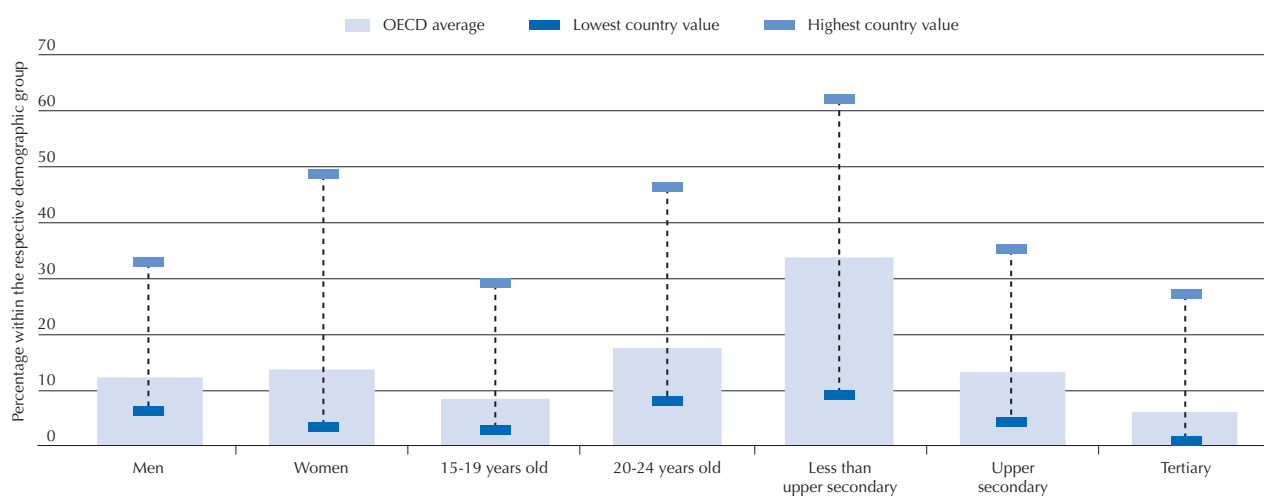


Box 1.4 **The NEET challenge (Not in Employment, Education or Training)** (continued)**Not in Education, Employment or Training (NEET) rates, by labour-force status**


Note: NEET rates for each country are expressed as a percentage over youth population aged 15-24. Data for 2009. Countries are sorted in descending order by the total NEET rate.

Source: OECD Education Database, data for 2009.

StatLink  <http://dx.doi.org/10.1787/888932733678>

**Not in Education, Employment or Training (NEET) rates, by demographic status and educational attainment**

Source: OECD Education Database, 2009 OECD average.

StatLink  <http://dx.doi.org/10.1787/888932733697>



that would ease the transition from education into the labour market at the upper secondary level may have the undesired effect of lowering students' expectations, especially among minorities and students from disadvantaged backgrounds. In this sense, Australia offers an interesting example as it has developed attractive vocational education and training (VET) programmes in the context of a comprehensive education system and maintains a high proportion of top performers (Box 1.5). Also, Finland and Denmark actively promote on-the-job training programmes (OECD, 2010d; OECD, 2010e).

### Box 1.5 Vocational education and training systems

Vocational education and training (VET) can play a central role in preparing young people for work, developing the skills of adults, and responding to labour-market needs. Despite this role, VET has been often neglected and marginalised in policy discussions, usually overshadowed by the increasing emphasis on general academic education and the role of schools in preparing students for university education. It has also often been perceived by both students and the general public as having a "second class" status behind academically oriented programmes. As a result, comparative policy analysis is underdeveloped, and there are very limited data available, especially data that can be reliably compared across countries.

Increasingly, however, countries are recognising that good initial vocational education and training can make a major contribution to economic competitiveness. Many of the unskilled jobs that existed in OECD countries a generation ago are fast disappearing, either because they have been replaced by technology or because OECD countries cannot compete with less-developed countries on labour costs. Instead, OECD countries need to compete on the quality of goods and services they provide. That requires a well-skilled labour force with a range of mid-level trade, technical and professional skills alongside those high-level skills associated with a university education. More often than not, those skills are delivered through vocational programmes. At the same time, VET systems face major challenges. Vocational programmes for young people, often rooted in educational institutions, tend to develop their own dynamic, and can be too separated from the fast-changing world of modern economies.

The OECD reviews *Learning for Jobs* (2010e) and *Better Skills, Better Jobs, Better Lives* (2012a) aim to capture how the gap between learning and jobs can be closed and illustrate promising examples of countries and institutions that have been able to make initial vocational education and training for young people respond better to labour-market requirements. These publications offer concrete advice on policy reforms that enable students who only expect to complete upper secondary education to be well-prepared to enter the labour market, remain employable and continue to acquire skills throughout their lives.

VET could better help meet labour-market demands by:

- providing a mix of programmes that reflect both students' preferences and employers' needs through apprenticeship systems;
- sharing the costs among government, employers and individual students, according to the benefits obtained by each actor organising or taking part in taking part in VET beyond secondary level; cost-sharing would create incentives and motivation for both employers and individual students to make the most of participation in VET;
- engaging employers and unions in curriculum development and ensuring that the skills taught correspond to those needed in the workplace; and
- providing young people with the foundation skills to support occupational mobility and lifelong learning, and with the specific skills that meet employers' immediate needs.

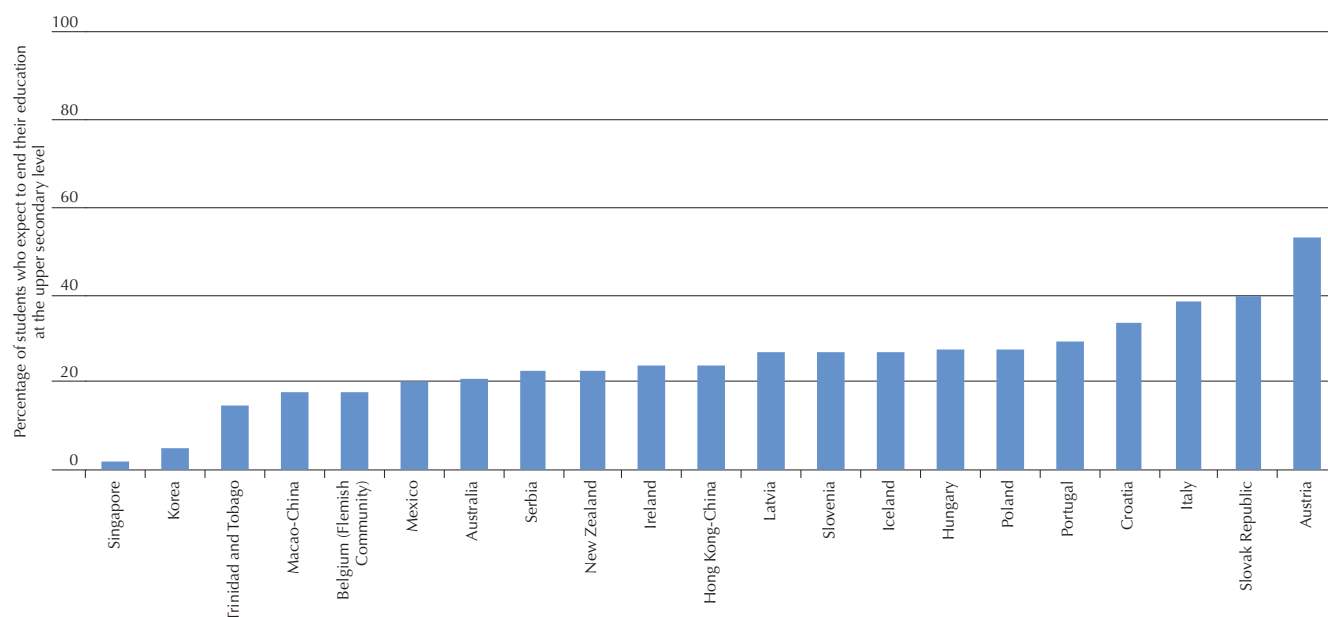
For further country-specific information and a more extensive review of vocational education and training, see [www.oecd.org/edu/learningforjobs](http://www.oecd.org/edu/learningforjobs).

Sources: OECD (2010e); OECD (2012a).

On average across the countries and economies that distributed the ECQ, one of every four students expects to complete his or her studies at the upper secondary level and, presumably, enter the labour force upon graduation. This proportion is highest in Austria, at 53%, and is also high in the Slovak Republic (40%), Italy (39%) and Croatia (34%). Students' expectations of ending their education at the upper secondary level are lowest in Singapore (2%) and Korea (5%) (Figure 1.7).

■ Figure 1.7 ■

### Percentage of students who expect to end their educational careers at the upper secondary level



Countries are sorted in ascending order of the percentage of students expecting to end their educational careers at the upper secondary level.

Source: Table B1.8.

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Of the four countries with the highest proportion of students expecting to finish their formal education upon acquiring an upper secondary degree, Austria, Croatia and the Slovak Republic are characterised by early differentiation of students into ISCED B/C and ISCED A-type programmes and by having a comparatively large proportion of students in ISCED B/C programmes. In fact, education systems that separate students into different ISCED programmes are more likely to have a larger number of students who expect an upper secondary degree as their highest qualification (Table B1.5).

The percentage of students who expect, at most, an upper secondary degree has increased significantly since 2003 in Australia, Hungary, Ireland, Italy, Portugal and the Slovak Republic. This increase is moderate in most of these countries; only in Hungary and Ireland was the increase larger than five percentage points. In most of these education systems, the increase in the percentage of students expecting to complete, at most, an upper secondary education is coupled with an increase or no significant change in expectations of completing university. Such is the case in Austria, Ireland, Portugal and the Slovak Republic, where the increase in expectations of ending formal education at the upper secondary level comes as a result of a reduction in the percentage of students who do not expect to attain an upper secondary degree (i.e. drop out). In Hungary and Italy, the increase in expectations of attaining an upper secondary degree is coupled with a decrease in expectations of attending university, signalling that many students who, in 2003, would have expected to graduate from university may have lowered their expectations of attaining only an upper secondary degree.

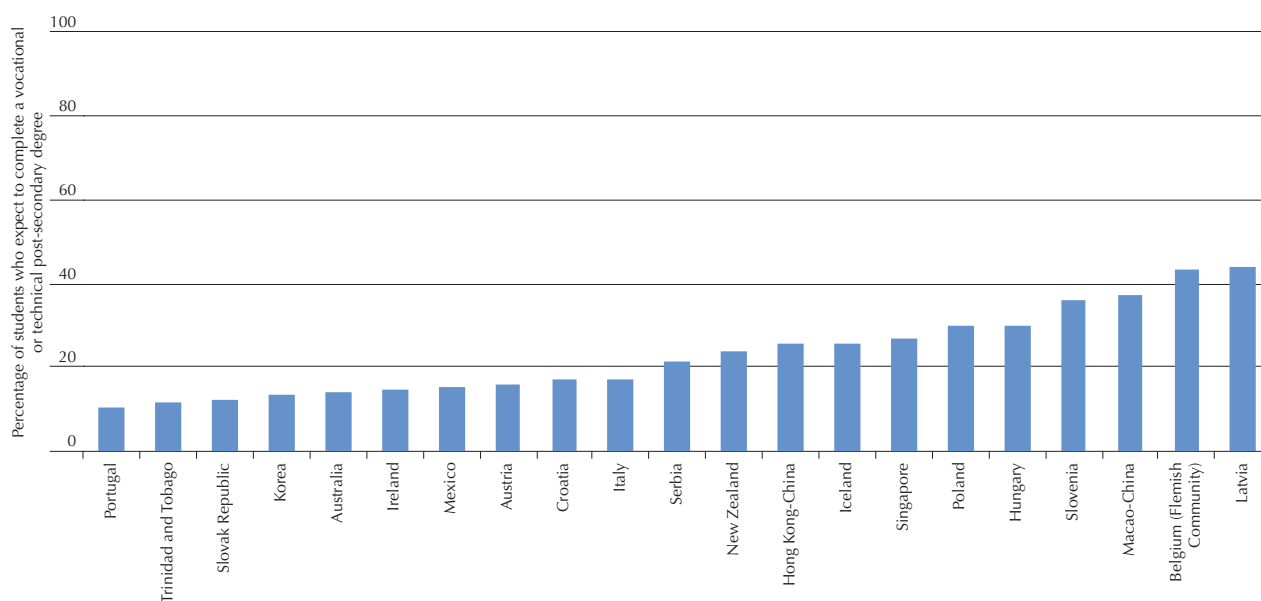
Between 2003 and 2009, the percentage of students expecting to end their education in upper secondary school decreased significantly in Hong Kong-China, Iceland, Macao-China, Mexico and New Zealand. In Iceland, Mexico and New Zealand, this decrease is mirrored by an increase in the proportion of students expecting to graduate from university – that is, a smaller proportion of students expect to drop out before finishing upper secondary school or a smaller proportion of students choose to pursue vocationally oriented post-secondary degrees (see Boxes 1.6 and 1.7 describing the percentage of students who expect to pursue vocational degrees and to drop out of school). Macao-China is an interesting case. This Asian economy showed a simultaneous decrease in the percentage of students expecting to complete a university degree and in the percentage of those expecting to complete an upper secondary degree, at most – both at a similar rate to the observed fall in enrolment rates between 2003 and 2009 (Tables B1.1, B1.8 and B1.16).



### Box 1.6 Students who expect to pursue vocational post-secondary studies

Students who do not expect to complete a university degree may opt to continue their education in the form of vocational or technical post-secondary education (ISCED levels 5B or 4). The development of these skills is crucial for the well-being of an economy, as these workers sustain high-skill and technology-intensive industries. Many students in the countries and economies that distributed the Educational Career questionnaire expect to follow these educational paths, particularly in Latvia (44%), the Flemish Community of Belgium (44%), Macao-China (37%) and Slovenia (36%).

#### Percentage of students who expect to complete a vocational or technical post-secondary degree



Note: Vocational or technical post-secondary degrees are ISCED Level 4 or ISCED Level 5B degrees.

Countries are sorted in ascending order of the percentage of students expecting to complete a vocational or technical post-secondary degree.

Source: Table B1.9.

StatLink  <http://dx.doi.org/10.1787/888932733716>

#### Expectations of ending formal education at the upper secondary level, by ISCED programme and level

Just as ISCED B/C programmes may not offer a smooth transition into ISCED 5A programmes, as discussed earlier, ISCED A-type programmes in lower and upper secondary schools may not ease the transition into the labour market for those students who expect to finish their education at the upper secondary level. In lower and upper secondary levels, academically oriented programmes (ISCED A) provide a path towards continuing education in university. The skills set acquired by these students may not be aligned with what is required by employers looking for workers with an upper secondary degree. By contrast, students in ISCED B/C-type programmes in lower and upper secondary schools will be, at least in theory, better prepared to enter the labour market with the set of skills that is needed by employers.

As expected, in practically all countries with more than 8% of students in ISCED B/C-type programmes, these students are more likely than students in ISCED A-type programmes to expect to finish their formal schooling at the upper secondary level. This difference is the greatest – and mirrors the patterns observed for university expectations by ISCED programme – in Croatia (51 percentage points), Hungary (38 percentage points) and Slovenia (33 percentage points).

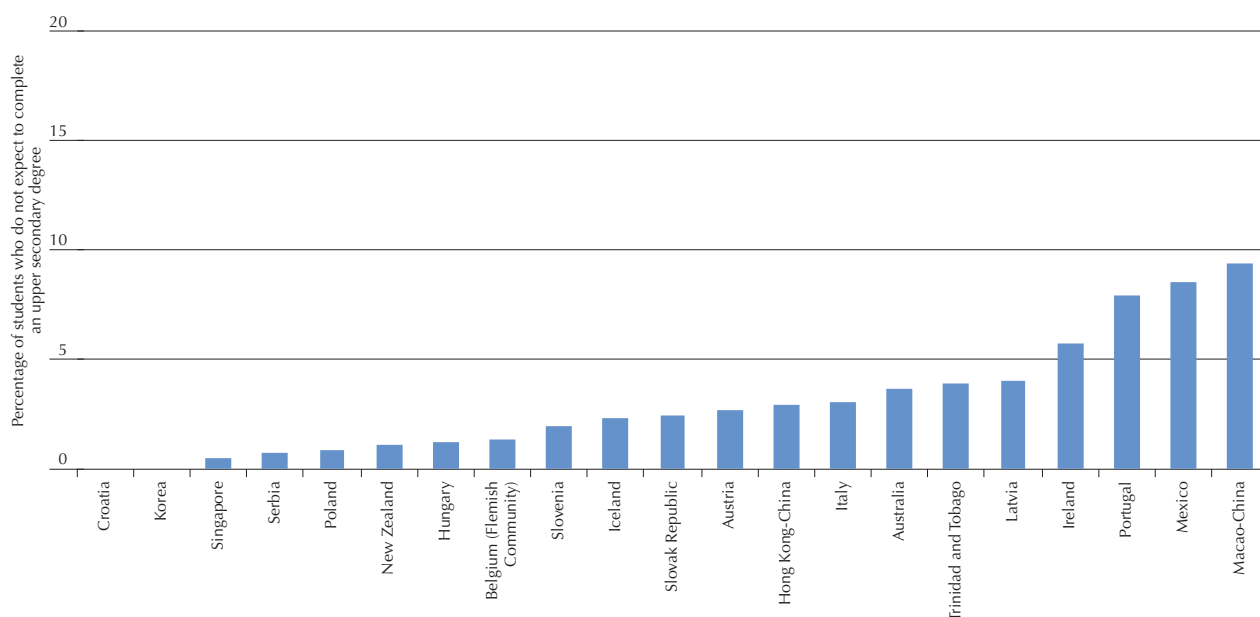
One signal of misaligned expectations is the percentage of students in ISCED A-type programmes who expect to finish their formal schooling at the upper secondary level. This percentage exceeds 25% in Austria (46%), the Slovak Republic (37%), Poland (28%) and Portugal (26%). This misalignment is particularly noticeable in Austria and the Slovak Republic because these two countries have a relatively large proportion of students in ISCED B/C-type programmes. Students in academic programmes may be considerably less prepared than their peers in non-academic programmes to enter and successfully navigate through the labour market immediately after finishing upper secondary school. By contrast, fewer than 3% of ISCED A-type students in Korea and Serbia expect to end their schooling at the upper secondary level, while 10% of students in Slovenia expect to do so. In these countries, students may determine the usefulness of finishing formal schooling at the upper secondary level based on the ISCED programme they attend.

### Box 1.7 Students who expect to end their education before completing upper secondary schooling

Although the majority of students expects to earn a university degree or end their formal education after finishing upper secondary school, students may also opt to end their education without an upper secondary degree and without a post-secondary degree. Students who fail to finish upper secondary school are less likely to find jobs; and if they do, those jobs are likely to be precarious and low-paid. Students who drop out of education with only basic qualifications may increase the cost to the economy and society in that they are usually less productive, and they are also more likely to have health problems, engage in criminal activity, and become dependent on welfare and other publicly funded social programmes (Belfield and Levin, 2007; Rumberger, 2011). Students who fail to finish upper secondary education have different profiles requiring different approaches to keep them in school or encourage them to return to school. Dropouts tend to be students who have difficulty keeping up academically or who have behaviour problems. The latter group needs a kind of support that often is beyond the current reach of schools (Marcotte, 2012).

Across the countries and economies that implemented the Educational Career questionnaire, 3.4% of students, on average, expect to end their formal education *without* an upper secondary degree. This percentage is especially high in Macao-China (9%), Mexico (9%) and Portugal (8%) and comparatively low, at less than 2%, in Belgium (Flemish Community), Croatia, Hungary, Korea, New Zealand, Poland, Serbia and Singapore.

**Percentage of students who do not expect to complete an upper secondary degree**



Countries are sorted in ascending order of the percentage of students expecting not to complete an upper secondary degree.

Source: Table B1.9.

StatLink  <http://dx.doi.org/10.1787/888932733735>

Sources: Belfield and Levin (2007); Marcotte (2012); Rumberger (2011).

## INEQUALITIES IN EXPECTATIONS

Educational expectations are one of the first signals of eventual educational attainment and occupational status. Students who do not expect to attain a university education, for example, are less likely to take the necessary steps to attend university and are also less likely to put forth the effort to succeed (Carbonaro et al., 2011). This section explores whether boys and girls hold similar expectations about their future educational attainment, and whether students from socio-economically disadvantaged backgrounds face barriers that lower their expectations. If so, these may contribute to disparities in actual attainment and, ultimately, in fewer opportunities for social mobility (Buchmann and Dalton, 2002).





Expectations may differ between student groups because not all students have the same opportunities to acquire skills and achieve their full potential while at school. Some education systems may have a perfect match between students' abilities and their expectations of future education, but may be highly unequal systems because students' opportunities to become proficient are determined, to a large extent, by their family's resources and background. For example, countries that sort students into different programmes – academically oriented and vocational – at an early age may reinforce inequalities in performance because the sorting may reflect students' social background rather than their underlying abilities. Moreover, students from socio-economically advantaged households have greater opportunities to learn outside of school and are therefore greatly over-represented in those academic tracks that are most likely to provide more and better opportunities to pursue university-level degrees. Inequalities in opportunities to learn (resulting, for example, from sorting into ISCED programmes) translate into inequalities in school performance that, in turn, lead to inequalities in expectations. While these expectations may be realistic, they are based on little more than the luck of the draw at birth if inequalities in sorting persist (Buchmann and Park, 2009; Kristen and Granato, 2007).

Findings in this report suggest that inequalities in expectations are present in practically all countries and economies that distributed the ECQ. In most school systems performance is only one of the factors that determine inequalities in expectations. Disadvantaged students hold lower expectations of further education even when they perform as well as students from advantaged backgrounds. This suggests that the limits to expectations of further education and social mobility may be set even more solidly than those related to educational achievement. Education systems that produce unequal expectations among students are complicit in building barriers to class and social mobility that span through generations. If inequality of expectations is related to inequalities of opportunities to learn, then countries may dismantle obstacles to upward mobility by offering disadvantaged students more and better opportunities to learn before any performance-based differentiation takes place.

Yet inequalities in expectations may persist even after accounting for students' opportunities to learn and their performance in mathematics and reading. In these cases, policies that provide equal opportunities to learn may not be enough to overcome the barriers to social and class mobility. Chapter 4 describes ways in which education systems may facilitate greater equality in expectations and ultimately establish solid foundations for greater equality in the labour market and beyond.

### **Inequalities in expectations by socio-economic status**

In all countries and economies that implemented the ECQ, students from disadvantaged backgrounds are less likely than their more advantaged peers to expect to complete a university degree. Students in the bottom third of the *PISA index of economic, social and cultural status* are, on average, 37 percentage points less likely to expect to complete a university degree than students in the top third of this scale. This difference is over 20 percentage points in every country and economy; it is largest in Hungary (at over 50 points) and smallest in Trinidad and Tobago (at 22 points).

Socio-economically advantaged students tend to perform better than their disadvantaged peers in all countries and economies (OECD, 2010f). After accounting for these differences, however, both groups of students should hold similar expectations, as they may have similar chances of succeeding in tertiary education. On average, around 40% of the difference in the odds of expecting to complete a university degree between advantaged and disadvantaged students is explained by the fact that disadvantaged students tend to show poorer reading and mathematics performance. In New Zealand and Trinidad and Tobago the difference in university expectations to complete a university degree as related to socio-economic status is the smallest – yet still statistically significant – after accounting for students' mathematics and reading performance. In these two countries, advantaged students are between 1.8 and 2.3 times more likely to expect to complete a university degree than a disadvantaged student with the same mathematics and reading scores (Figure 1.8).

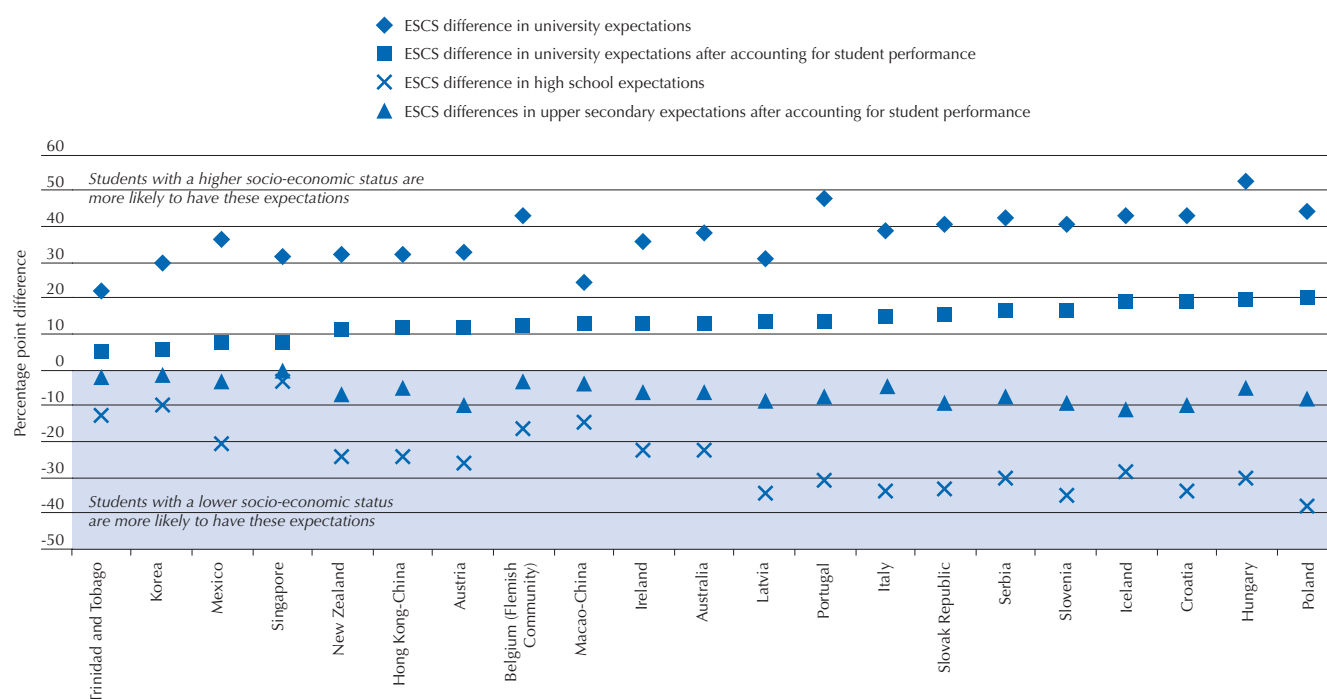
In most countries, however, there are still important differences in expectations related to socio-economic status even among students who perform equally well: students in the bottom third of the *PISA index of economic, social and cultural status* are significantly less likely to expect to complete a university degree than similarly performing students in the top third of the socio-economic status scale. In Croatia, Hungary, Iceland, Korea and Serbia, advantaged students who have the same reading and mathematics scores as disadvantaged students are over four times more likely to expect to complete a university degree than disadvantaged students. In Belgium (Flemish Community), Hungary, Portugal and the Slovak Republic, performance plays a particularly important role in shaping inequalities in university expectations related to socio-economic background. In these countries, students' mathematics and reading performance explains over half of the odds difference between advantaged and disadvantaged students in the likelihood that these groups would expect to complete a university degree.

The reverse is true when comparing students who expect to finish their educational careers after graduating from upper secondary school. Students in the bottom third of the *PISA index of economic, social and cultural status* – disadvantaged students – are more likely than students in the top third – advantaged students – to expect that their upper secondary degree will be their highest educational qualification. Although these differences are less pronounced than those related to university expectations, reading and mathematics performance also play a large role in shaping the inequality in these expectations. However, performance tells only part of the story.

Differences in expectations between students who have similar performance levels but who come from either advantaged or disadvantaged backgrounds is highest in Korea, Latvia, Poland, Serbia and Slovenia. In all these countries socio-economically advantaged students are four times less likely to expect to end their education after completing upper secondary school than disadvantaged students who perform equally well (Figure 1.8).

■ Figure 1.8 ■

### Socio-economic differences in expectations of completing a university and upper secondary degree, before and after adjusting for students' reading and mathematics performance



Note: ESCS differences depict differences in expectations between students with a high or low PISA index of economic, social and cultural status (ESCS) as defined by students who are in the top and bottom third of their country's distribution of socio-economic status.

Countries are sorted in ascending order of the difference in the percentage of students expecting a university degree by the PISA index of economic, social and cultural status after adjusting for students' mathematics and reading performance.

Source: Tables B1.10 and B1.11.

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The fact that differences in expectations related to socio-economic status remain after accounting for reading and mathematics performance signals that other factors influence students' expectations. The parents, peers and teachers of more advantaged students tend to have higher expectations for those students, which, in turn, shapes the students' own expectations (Buchmann and Dalton, 2002; Campbell, 1983; Sewell et al., 2003). According to the literature, another key factor is differentiation into vocational or academic programmes. As socio-economic status partly determines sorting into these programmes, disadvantaged students may be denied the possibility of expecting to, and eventually succeeding in, completing a university degree (Buchmann and Park, 2009; Mateju et al., 2007; Useem, 1992). Other kinds of information, which will be discussed in Chapters 2 and 3, also influence students' expectations. In the United States, for example, as a result of their social background, students tend to adopt certain expectations early on in their lives and adapt these expectations to changes in the information they receive about their career prospects (Andrew and Hauser, 2012; Morgan, 2005). This information includes the school marks students receive. As developed in Chapter 2, disadvantaged students are also more likely than their advantaged peers to receive lower marks, even after accounting for performance, learning habits and engagement with school.

### Inequalities in expectations by gender

Women today are attaining higher levels of education than men. As of 2009 and on average across the OECD, women show higher entry rates into both tertiary-type A and B programmes and higher graduation rates from these programmes (OECD, 2011a). By 2003, girls held equal or higher expectations of educational attainment in all OECD countries that participated in PISA 2003, with the exception of Japan. In fact, in 19 OECD countries, girls held expectations of significantly higher educational attainment than boys (McDaniel, 2010). In 2006, in almost all OECD countries girls expected to attain higher occupational status than boys in careers that require a post-secondary education (OECD, 2012c).



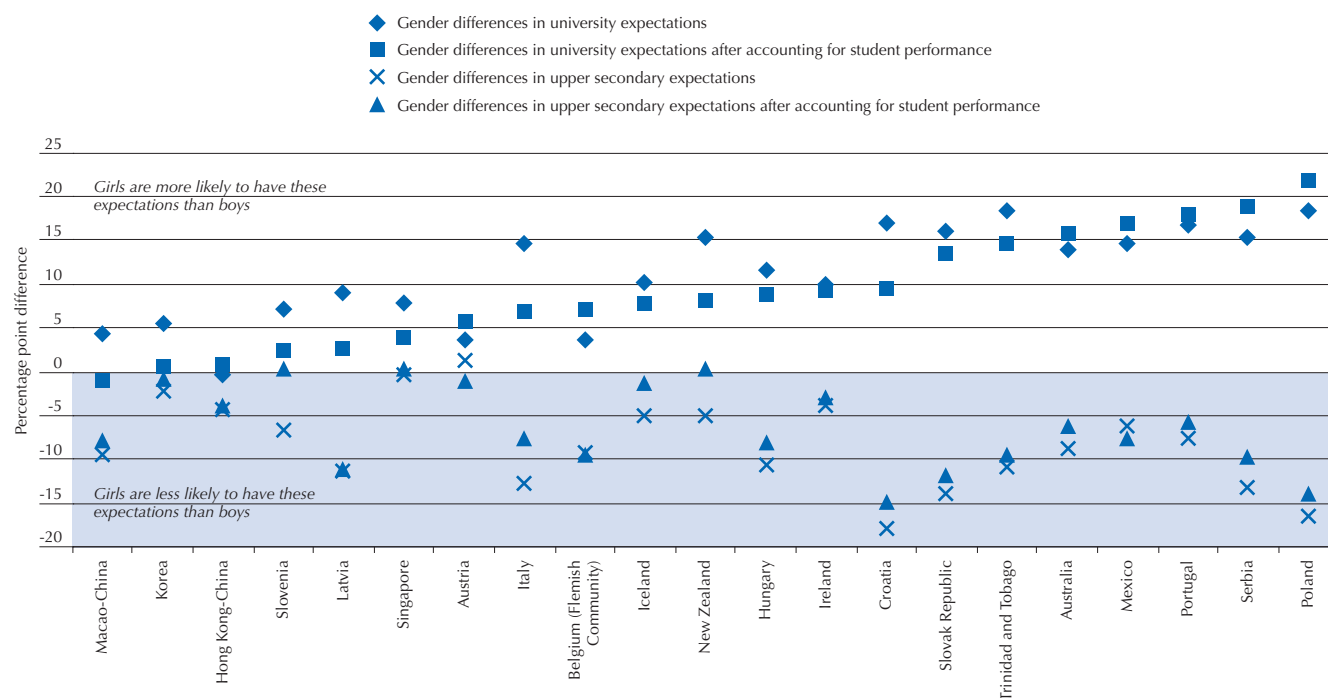
In 2009 among the countries that implemented the ECQ, an equal or greater number of girls than boys expected to complete a university degree. In 17 countries and economies, girls have higher expectations than boys; only in Austria, Belgium (Flemish Community), Hong Kong-China and Korea do girls and boys have similar odds of expecting to complete a university degree. The difference between girls' and boys' expectations of earning a university degree is highest in Poland and Trinidad and Tobago, where girls are more than twice as likely as boys to expect to complete a university degree. In these two countries, girls are over 18 percentage points more likely than boys to expect to complete a university degree.

In all countries and economies that participated in PISA 2009, girls do better than boys in reading; and in most countries and economies, they do not perform as well as boys in mathematics (OECD, 2010b). In Latvia, Macao-China and Slovenia, girls' better performance explains their higher expectations of further education, while in the remaining countries, even among boys and girls who perform equally well in reading and mathematics, girls are more likely than boys to expect to complete a university degree. In 16 countries and economies, a larger proportion of girls than boys who perform equally well expect to attain a university degree. In Mexico, Poland, Portugal, Serbia and Trinidad and Tobago, girls are at least twice as likely as boys with similar test scores to expect to complete a university degree, after accounting for their differences in performance.

Boys are significantly more likely to expect to end their formal education after completing their upper secondary degree in all but two countries: Austria and Singapore. In Iceland, Ireland, New Zealand and Slovenia, the greater likelihood that boys expect to end their formal education after completing upper secondary school is related to boys' poorer performance in reading and/or mathematics. The gender gap in expectations remains in 15 countries and economies even after comparing boys and girls who perform similarly. This means that boys are more likely than girls to expect to end their formal education in upper secondary school, even if they do just as well as girls on the PISA assessment (Figure 1.9).

Figure 1.9

### Gender differences in expectations of completing a university and upper secondary degree, before and after adjusting for student reading and mathematics performance



Countries are sorted in ascending order of the gender difference in the percentage of students expecting a university degree after adjusting for students' reading and mathematics performance.

Source: Table B1.12 and B1.13.

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## HOW GRADUATION AND ENROLMENT RATES ARE REFLECTED IN THE EXPECTATIONS OF 15-YEAR-OLDS

Student expectations of completing a university degree serve as an indication of the pressure the system of higher education will face in the future when compared to actual graduation rates. Countries and economies where more students expect to complete university than actually do so can expect high levels of competition in access to university because demand for higher education may eventually surpass supply. Because of the mismatch between the expected demand and the supply for university education, these countries and economies may need to consider alternatives for the large number of students who will not be able to earn a university degree even if they expect to.

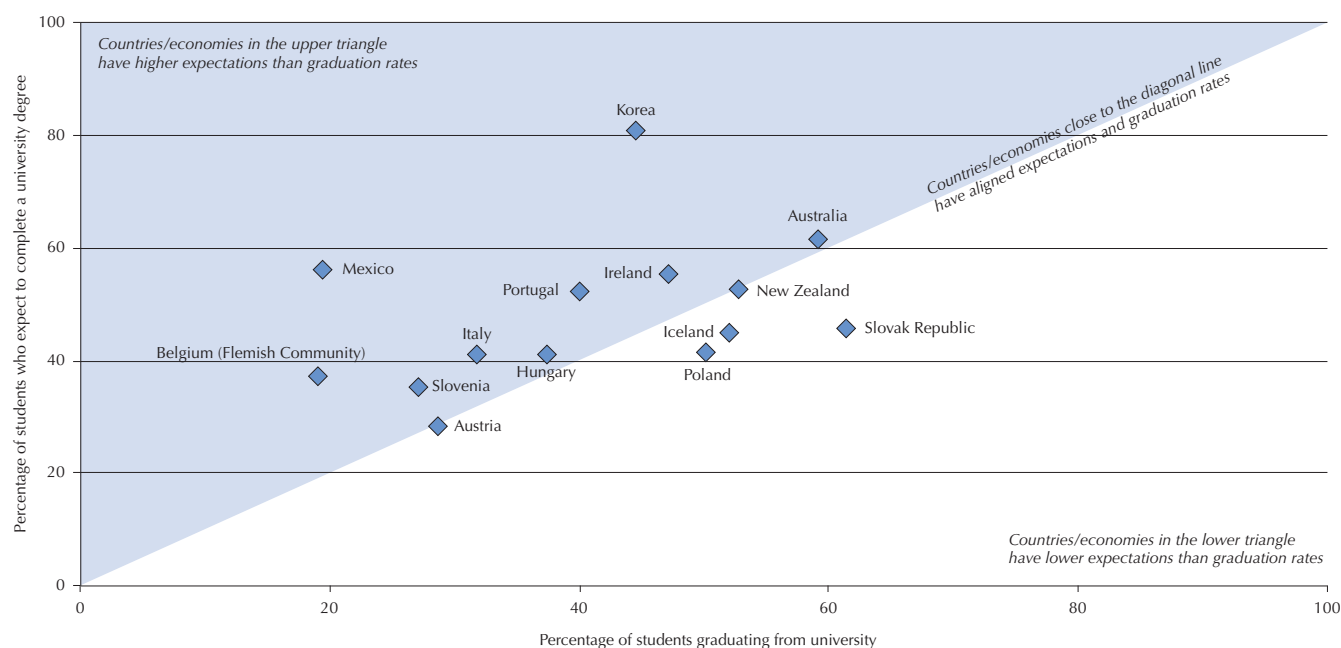
As discussed earlier, countries, and regions within countries, vary in the percentage of students who expect to complete a university degree. Whereas in Latvia relatively few – one in four – students expect to complete a university degree, in Korea the great majority of students – four out of five – expect to do so. Of the 21 countries and economies that distributed the ECQ in 2009, in nine of them over 50% of 15-year-old students expected to complete a university degree. These expectations are highest in Korea (81%) and exceed 60% in Australia, Singapore and Trinidad and Tobago. They are lowest in Latvia (25%) and lower than 40% in Austria, Belgium (Flemish Community), Macao-China and Slovenia.

Cross-country variations in students' expectations are not strongly related to actual graduation rates. *Education at a Glance 2011* (OECD, 2011a) provides figures on university graduation rates for 14 of the 21 countries that disseminated in the ECQ.<sup>6</sup> Among these, the correlation between the percentage of 15-year-old students who expect to complete a university degree and the actual graduation rates is 0.37. The mismatch between expectations and graduation rates is especially large (over 10 percentage points higher expectations than graduation rates) in the Flemish Community of Belgium, Korea, Mexico and Portugal, signalling inflated expectations. In Korea and Mexico, the difference between the percentage of students who expect to complete a university degree and the percentage who do is 36 percentage points; in other words, at least one out of three students will not fulfil his or her educational expectations if graduation rates remain relatively stable.

This misalignment between expectations and actual attainment takes various forms. In Mexico, for example, some students who expected to graduate from university will not do so; in Korea, some of the students who expected to graduate from university will

■ Figure 1.10 ■

### Percentage of students who expect to complete a university degree and university graduation rates



Notes: Percentage of students graduating from university as reported in Table A3.3, OECD (2011), *Education at a Glance 2011: OECD Indicators*, OECD Publishing. Data on the percentage of students graduating from university is not available for Croatia, Hong Kong-China, Latvia, Macao-China, Serbia, Singapore and Trinidad and Tobago.

Graduation rates for Belgium (Flemish Community) represent graduation rates for Belgium as a whole.

Source: Table B1.14.

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enter ISCED level 5B programmes instead.<sup>7,8</sup> The misalignment of expectations of completing a university degree is also apparent in the Flemish Community of Belgium. It is less marked than that seen in Korea, but follows a similar pattern: many students who expect to complete this degree will most likely continue their education in ISCED level 5B programmes. In fact, in Belgium, a greater number of students graduate from these programmes than from ISCED level 5A programmes (Figure 1.10 and Table B1.14).

In contrast, student expectations of completing a university degree are *lower* than the actual graduation rates in Iceland, Poland and the Slovak Republic. In the Slovak Republic, for example, student expectations of completing a university degree are 16 percentage points lower than the actual graduation rates; in Poland, the difference is 9 percentage points. In these two countries, the mismatch between expectations and graduation rates points to a potential loss of talent as students who expect to complete a university degree may not be working as hard as they could be in school given the potentially low levels of competition to enter university. Student expectations of completing university closely match the actual graduation rates in Australia, Austria, Hungary and New Zealand, signalling that in these countries there is a lower likelihood of misaligned expectations (see Box 1.8 for the importance of matching the supply and the demand of skills).

### Box 1.8 **Matching the demand for and the supply of skills**

Some workers are not well-matched with their current jobs: some are capable of handling more complex tasks and their skills are underused, while others lack the skills needed for their jobs. Although skills mismatch is difficult to measure, available indicators suggest that these two phenomena are widespread. Of course, such indicators need to be interpreted in context. For example, in low-skills equilibrium, people's skills are matched to their jobs, but at a very low level. And, as explained below, skills that are not used in an individual's current job may be used elsewhere, in other contexts, to the benefit of society as a whole.

The incidence of skills mismatch varies across groups of workers. Based on preliminary data from the OECD Survey of Adult Skills field trial, a product of the Programme for the International Assessment of Adult Competencies (PIAAC), a relatively high percentage of knowledge-economy workers are considered to have a "high-skills match", meaning that they have high literacy skills and that they use those skills at work. This group also shows a lower incidence of "low-skills match", meaning that fewer of these workers have low literacy skills that they use at work. In contrast, a relatively high percentage of non-knowledge-economy workers are considered to have a "low-skills match", meaning that they have low literacy skills and use those skills at work. A high proportion of these workers have high literacy skills, but they use those skills infrequently at work ("skills surplus"). Far fewer non-knowledge-economy workers enjoy a "high-skills match" as compared with those who work in the knowledge economy.

The mismatch between workers' skills and their tasks at work can also adversely affect economic and social outcomes. Over-skilling, or the under-use of skills, in specific jobs in the short to medium term can be a problem because it may lead to skills loss and a waste of the resources that were used to acquire those skills. Workers whose skills are under-used in their current jobs earn less than workers who are well-matched to their jobs and are often less satisfied at work. This situation tends to generate more employee turnover, which is likely to affect a firm's productivity. Under-skilling is also likely to affect productivity and, as with skills shortages, slow the rate at which more efficient technologies and approaches to work can be adopted. While there is evidence of skills imbalances, it is difficult to interpret for policy purposes primarily because of the complexity of the underlying causes. What is known suggests that there is scope for public policy interventions.

Source: OECD (2012a).

## **PERSPECTIVES ON SOCIAL MOBILITY**

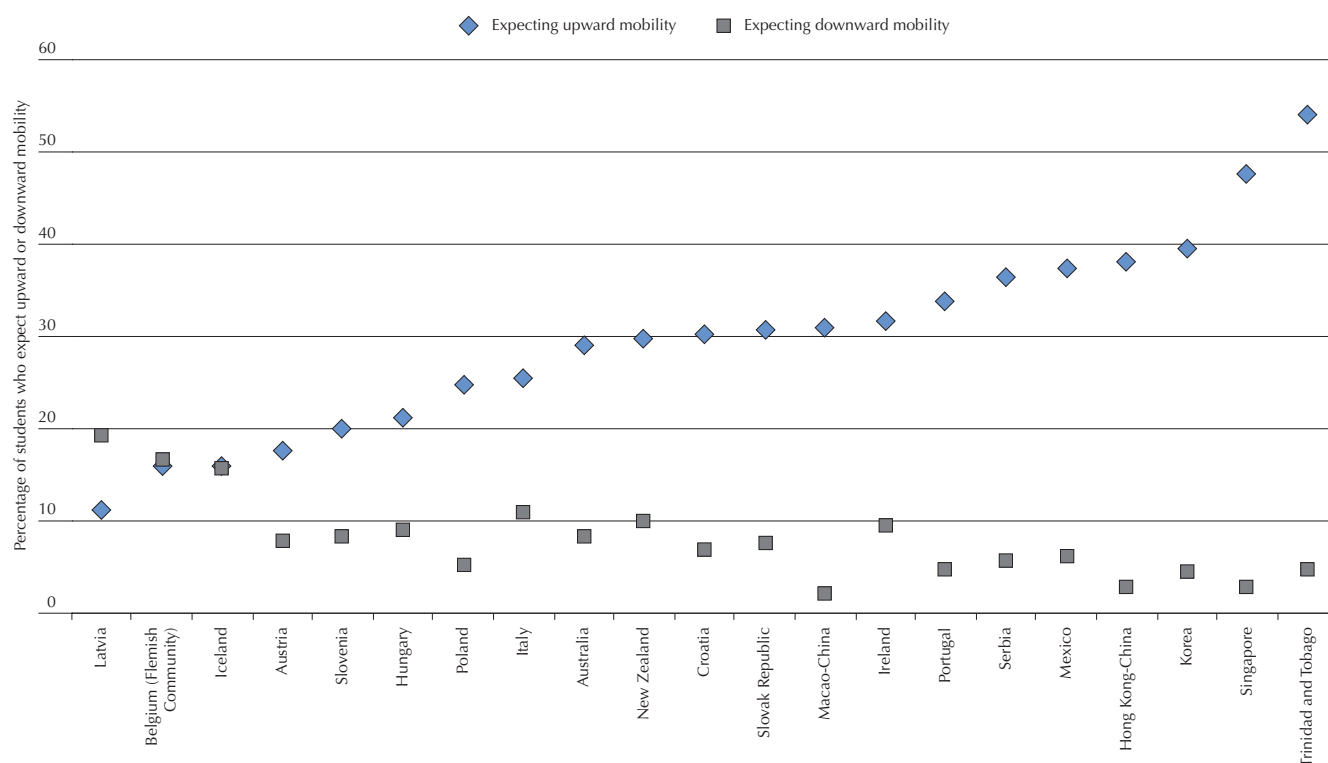
Students' expectations are an indication of their eventual educational attainment and occupational status; when compared with their parents' educational attainment, they also signal students' expectations of social mobility. Students who expect to attain a higher level of education than their parents expect upward mobility; students who expect to attain a lower level of education than their parents expect downward mobility.

In most countries and economies, more students expect upward mobility than downward mobility. On average across the countries that implemented the ECQ, 30% of students whose parents did not complete a university degree expect to complete one (upward mobility) and 8% of students whose parents do hold a university degree do not expect to complete one (downward mobility). Only in Belgium (Flemish Community), Iceland and Latvia is the percentage of students who expect upward mobility similar to or lower than the level of students expecting downward mobility. In Latvia, there is a higher percentage of students who expect to attain a lower educational level than their parents did. Expectations of upward mobility are especially prevalent in Hong Kong-China, Korea, Mexico, Portugal, Serbia, Singapore and Trinidad and Tobago, where more than a third of students whose parents do not hold a university degree expect to complete such a degree themselves (Figure 1.11).



Figure 1.11

## Percentage of students who expect upward or downward mobility



Note: Students expecting upward mobility are students who expect to complete a university degree and whose parents did not complete this degree. Students expecting downward mobility are students who do not expect to complete a university degree and at least one of whose parents did complete that degree. Countries are sorted in ascending order of the percentage of students expecting upward mobility.

Source: Table B1.15.

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The literature on social mobility distinguishes between structural mobility and exchange mobility. Structural mobility refers to improvements in intergenerational mobility that result from changes in the structure of available opportunities. Structural mobility leads to improvements in intergenerational mobility when, for example, there is a rapid expansion of tertiary education and one generation has more opportunities to improve its educational attainment than the previous generation did. Exchange mobility (circulation mobility or social fluidity), by contrast, refers to the extent to which parents' status determines the next generation's opportunities to acquire social status (Hout, 2004).

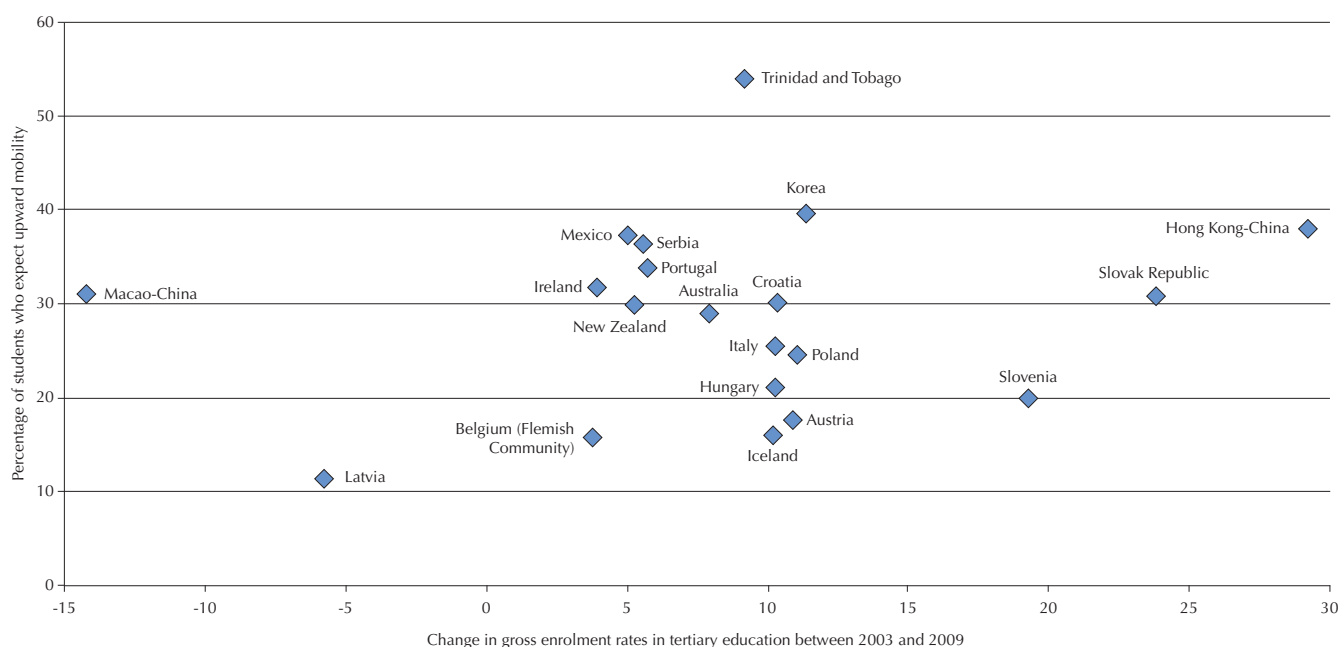
If expectations of social mobility are aligned to a system's opportunity structure, they should be higher in countries that have expanded access to tertiary education (because of the increase in opportunities for structural mobility) and in countries that have a weaker relationship between students' socio-economic status and their performance (because of the opportunities for exchange mobility).

Among the countries that participated in the ECQ, students' expectations of social mobility are only weakly related to the structure of opportunities available to them. Specifically, there is only a weak correlation between the increase in enrolment rates between 2003 and 2009 and the change in enrolments in higher education during that period (correlation coefficient of 0.16). Countries with the greatest expansion in tertiary education are not necessarily those with the highest levels of expectations of upward mobility. Similarly, there is a weak relationship between expectations of social mobility and the degree of socio-economic equity in student performance (exchange mobility). Countries with higher equity in performance tend to be those with a higher proportion of students who expect upward mobility; but the correlation is moderate (the correlation coefficient, at the country level, between the proportion of variance in reading performance explained by students' socio-economic background and the percentage of students expecting upward mobility is -0.20) (Figures 1.12 and 1.13).

Studies on social stratification that analyse trends in observed rates of educational mobility find that they have barely changed during the 20th century (Pfeffer, 2008; Shavit and Blossfeld, 1993). Yet although observed mobility has remained constant, in nine countries and economies there was an increase in expectations of upward mobility between 2003 and 2009. This increase was



Figure 1.12  
Relationship between students' expectations of upward mobility  
and change in enrolment in tertiary education

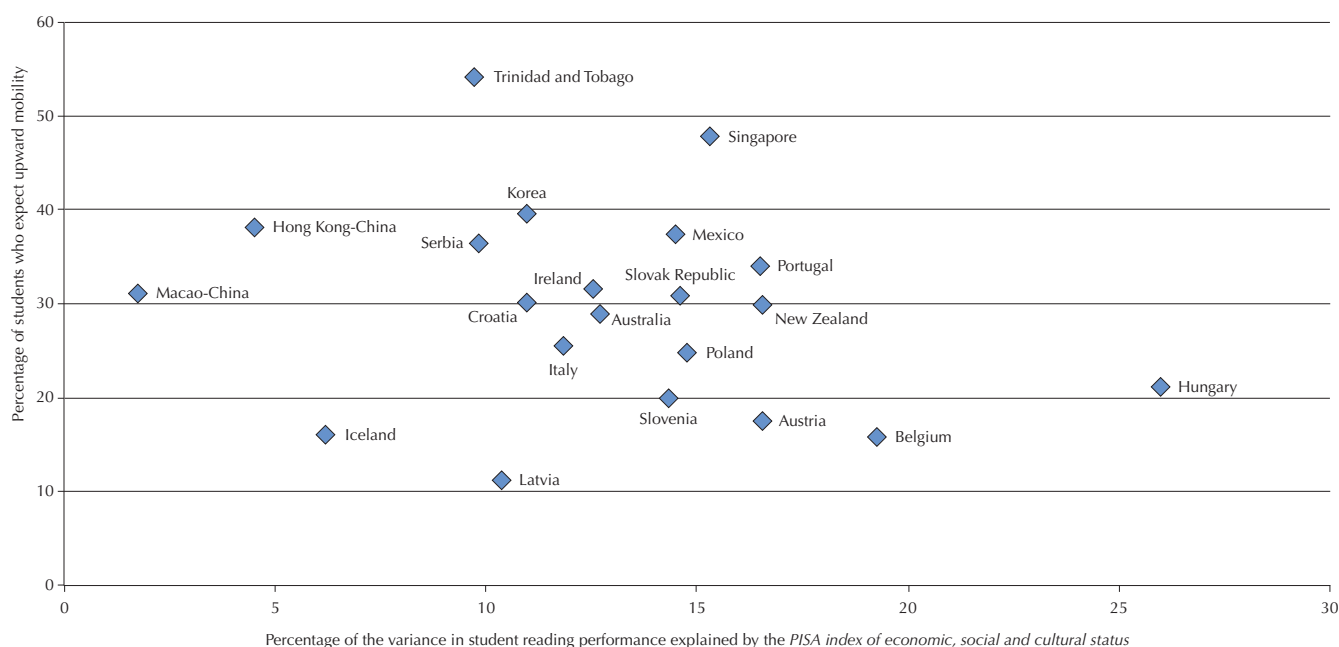


Notes: Students expecting upward mobility are students who expect to complete a university degree and whose parents did not complete this degree. Change in enrolment rates for Belgium (Flemish Community) represent data for Belgium as a whole.

Source: Table B1.14 and Table B1.15.

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Figure 1.13  
Relationship between students' expectations of upward mobility and equity in reading performance



Note: Students who expect upward mobility are students who expect to complete a university degree and whose parents did not complete this degree.

Source: Table B1.15 and Table II.1.2 in OECD (2010), *PISA 2009 Results: Overcoming Social Background (Volume II)*, PISA, OECD Publishing.

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greatest in Austria, Mexico, New Zealand and Poland, with an increase of more than seven percentage points. Expectations of upward social mobility have decreased significantly in Macao-China (by 13 percentage points) and in Hong Kong-China, Hungary and Korea.

Consistent with the general trend towards greater expectations of upward mobility, expectations of downward mobility decreased in 10 countries and economies between 2003 and 2009. Only in two countries – Hungary and Korea – did expectations of downward mobility increase in a statistically significant way; but the magnitude of this change is at or below two percentage points. The greatest decrease in expectations of downward mobility is observed in Austria and Latvia, where there was more than a 20 percentage-point reduction in expectations of downward mobility (Table B1.15).

## CONCLUSION

In most countries and economies, a sizeable proportion of high-performing students does not expect to continue on to upper secondary education, signalling a potential loss of talent for the education system and the labour market. These students lack the motivation or the interest to pursue university-level education. Conversely, there is also a sizeable proportion of low-performing students who expect to complete a university degree. These students lack the skills that are necessary to complete university level studies and are therefore unlikely to be able to fulfil their expectations. This may prove costly, both in financial and social terms, as these students will most likely be frustrated by not meeting their goals. School systems should strive to ensure that all students expecting to enter – and eventually to graduate – from university, will have the ability to do so. School systems should also provide sufficient incentives and information for those students who are unable or unwilling to upgrade their skills so that they can develop more realistic expectations about their future but they should also ensure that attractive alternatives are available to these students once they complete upper secondary schooling.

In all countries and economies some high-performing students do not expect to complete university degrees and some low-performing students do. Students in countries that offer different education programmes to their students – vocationally or academically-oriented programmes – tend to hold expectations that more closely reflect their abilities and possibilities. This is because education systems that stream students into different programmes also create clear education pathways and linkages between education levels and the workplace, allowing students in academic programmes to continue on to university, and students in vocational programmes to find work, because of linkages between schools and employers. Yet countries that provide these clear signals about students' futures in education are also those that show a more unequal distribution of expectations, because sorting students into different educational programmes is often related to students' background characteristics.

Countries and economies benefit from fostering realistic expectations among their students in several ways: educating a population that is likely to succeed in higher education is more efficient; students who hold realistic expectations are less likely to feel frustrated; and holding realistic expectations reduces the likelihood that high-performing students will not expect to complete a university degree and thus let their talent go to waste.

Countries and economies that use differentiation – and thus promote more realistic student expectations – should strive to disconnect sorting students into different programmes from students' background characteristics. This can be done by delaying selection and providing compensatory opportunities to disadvantaged students early on, thus allowing students who enter primary school with an academic disadvantage to catch up and compete on a level playing field with other students when differentiation occurs. Countries that adopt a comprehensive approach to schooling, offering all students a similar curriculum, should strive to provide students with more accurate and reliable information about students' further education and suggest pathways that smooth the transition to the labour market for students who choose this avenue.

Education systems should also not forget that a large number of students do *not* expect to attend university, much less complete a university degree. Education systems should give this “forgotten half” of students the tools and information they need to enter and navigate through the labour market after they leave upper secondary education. These education systems should also strive to create linkages between employers and schools to ease the transition to work for students who end their formal education after upper secondary school – and who are thus most likely to be unemployed. These linkages can help motivate students to work hard in school, regardless of their expectations, because they provide real employment opportunities for those students who do not intend to continue their education. These education systems should strive to promote on-the-job training, and offer incentives for employers to recruit and train young workers (OECD, 2010d).

The findings discussed in this chapter also indicate considerable disparities in expectations related to gender, performance and socio-economic background. Boys and socio-economically disadvantaged students are less likely than girls and advantaged students to expect to complete a university degree. They are also more likely to expect to complete their formal education at the upper secondary level and not obtain further qualifications. Performance differences, and the resulting sorting of students into different educational tracks or into different ability groupings, explain part of the observed differences in expectations related to gender and socio-economic status. The persistence of such inequalities after mathematics and reading performance is considered suggests that the limits to



expectations and social mobility may be more solidly set than those related to educational performance. These expectations are determined by a wider array of social, cultural and economic factors that may reinforce inequality, even after accounting for academic performance. Students' expectations of further education are an initial signal of eventual educational attainment, which, in turn, has important consequences not only for their entry into and success in the labour market, but also for their health, social participation and general well-being.

## Notes

1. Students are asked to respond to the question: "Which of the following do you expect to complete?" with answer categories ranging from ISCED level 2 to ISCED level 6. To enable cross-country comparisons, each national version of the questionnaire uses the country-specific denomination of each ISCED level. For the purposes of this report, ISCED level 5A or 6 degrees are considered university degrees. Because of their technical/vocational orientation, this report does not consider ISCED 5B degrees as university degrees. In PISA 2003 and PISA 2009 the qualifications "engineer and licentiate" were coded as ISCED 5B programmes; therefore students expecting to complete these qualifications were not counted as those who expect to complete "university". However, in the UNESCO/OECD/EUROSTAT (UOE) joint data collection system, these qualifications are counted as ISCED 5A. This difference in coding means that the proportion of students who expect to complete university as calculated by PISA is lower than the corresponding proportion calculated using the UOE classification. For countries such as Poland, where large numbers of students expect to attain these qualifications, the difference in results between the two methods of coding can be pronounced.
2. As Croatia, Serbia, Singapore, Slovenia and Trinidad and Tobago did not participate in the PISA 2003 cycle, there is no possibility of evaluating trends in their students' expectations.
3. Analyses that focus on the difference in mathematics performance between students who expect to complete a university degree and those who do not show similar results as those presented for reading performance (see Table B1.3).
4. Due to the relatively small number of countries in the analyses, these estimates are not statistically significant. Furthermore, due to their relatively high and low expectations, Korea and Latvia exert a disproportionate influence on the estimates. As such, the regression analyses for these results include dummy variables for Korea and Latvia (see Table B1.5).
5. In order of the percentage of students attending ISCED B/C-type programmes, the countries and economies with at least 8% of students in these programmes are: Serbia, Slovenia, Austria, Ireland, Korea, Croatia, Belgium (Flemish Community), Portugal, Hungary, Trinidad and Tobago and the Slovak Republic.
6. Of the 21 countries and economies that implemented the Educational Career questionnaire, *Education at a Glance 2011* does not provide information on 2009 graduation rates for Croatia, Hong Kong-China, Latvia, Macao-China, Serbia, Singapore and Trinidad and Tobago (OECD, 2011a).
7. After adding the graduation figures for ISCED 5A and ISCED 5B programmes, the total ISCED 5A and 5B graduation rates for Korea are roughly equal to the level of student expectations to complete a university degree. The Educational Career questionnaire and tertiary education graduation rates reported by *Education at a Glance 2011* (OECD 2011a), however, distinguish clearly from ISCED 5A and 5B programmes, and in this report "university expectations" do not include ISCED 5B programmes.
8. As there is a ten-year gap between the expectations of 15-year-old students as recorded in the PISA 2009 study and the graduation rates reported in *Education at a Glance 2011* (OECD, 2011a), it is possible that graduation rates in these countries will grow to meet the demands of their highly ambitious youth.

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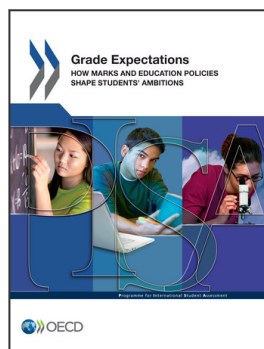


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