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PIAAC Thematic Report on Adult Learning

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This working paper has been authorised by Andreas Schleicher, Director of the Directorate for Education and Skills, OECD.

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Abstract

This report focuses on the adult learning data that was collected as part of the OECD Survey of Adult Skills between 2012 and 2016, which has been a core activity of the ongoing OECD Programme for the International Assessment of Adult Competencies (PIAAC). The objectives are to: present the data on adult learning made available by PIAAC; provide an international and comparative overview of the extent of adult learning of different types along with trends, where possible, for countries and economies that have so far participated in PIAAC; reveal international and comparative patterns on the distribution of adult learning within participating countries and economies, focusing on who is and who is not participating in terms of the types of jobs they work in as well as their socio-demographic profile; assess empirically the relationship between some types of adult learning and economic as well as social outcomes; discuss systemic features of adult learning systems and their relationship with selected economic and social policy instruments; and to draw out implications of the results in relation to the continued measurement of adult learning.

Résumé

Ce rapport présente les données liées à l'apprentissage des adultes qui ont été collectées entre 2012 et 2016 dans le cadre de l'Évaluation des compétences des adultes de l'OCDE. Cette initiative a constitué une activité centrale du Programme pour l'évaluation internationale des compétences des adultes (PIAAC) de l'OCDE. Les objectifs du rapport sont les suivants : présenter les données liées à l'apprentissage des adultes qui ont été collectées dans le cadre du PIAAC ; fournir une analyse internationale comparative du niveau d'apprentissage des adultes selon le type d'apprentissage et montrer, si possible, son évolution dans les pays et économies ayant participé jusqu'à présent au PIAAC ; déceler des tendances au sein des différents pays et économies participants en termes de répartition de l'apprentissage des adultes, en mettant l'accent sur la participation ou non des adultes à une formation selon le type d'emploi et le milieu socio-démographique ; évaluer de façon empirique la relation entre certains types d'apprentissage des adultes et les retombées tant économiques que sociales ; étudier les caractéristiques structurelles propres aux systèmes d'apprentissage des adultes ainsi que leur lien avec certains instruments de politique sociale et économique ; et tirer les conclusions des résultats pour continuer à évaluer l'apprentissage des adultes.

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1. Introduction

Investment in adult learning is an issue of considerable strategic importance for nations, governments, civil society, firms and individuals. Engaging in continued adult learning of all kinds over the lifespan can be important to develop capacity to cope with and adjust to change; and, not least help to coordinate solutions to problems that emerge in the public and private realms, capitalise on technological development and other opportunities, foster sustainable development and improve standards of living. Such added capacities are critical to the well-being of nations, well-functioning economies and successful enterprises, but they are also critical for communities, families and individuals. This implies that equitable access to a diverse range of learning opportunities that serve different needs and aspirations is equally as important as adult learning that can serve to enhance competencies for employment, productivity and growth. To be sure, adult learning is a means to assist individuals and communities in their everyday actions to secure their own well-being and to foster active citizenship. The centrality of adult learning and competencies to human functioning cannot be overstated. It is from this perspective that the OECD pursues the understanding and measurement of adult learning and competencies for policy purposes.

This report focuses on the adult learning data that were collected as part of the OECD Survey of Adult Skills between 2012 and 2016, which has been a core activity of the ongoing OECD Programme for the International Assessment of Adult Competencies (PIAAC). The objectives are to:

- present the data on adult learning made available by PIAAC
- provide an international and comparative overview of the extent of adult learning of different types along with trends, where possible, for countries and economies that have so far participated in PIAAC
- reveal international and comparative patterns on the distribution of adult learning within participating countries and economies, focusing on who is and who is not participating in terms of the types of jobs they work in as well as their socio-demographic profile
- assess empirically the relationship between some types of adult learning and economic as well as social outcomes
- discuss systemic features of adult learning systems and their relationship with selected economic and social policy instruments
- draw out implications of the results in relation to the continued measurement of adult learning.

The remainder of this chapter situates the analysis to be presented in relation to past OECD efforts including the lifelong learning agenda in the 1990s, the 1998-2003 OECD Thematic Reviews of Adult Learning and the recent OECD Skills Strategy. The concept of Adult Learning Systems (ALS) that is used in this report is introduced by drawing out contrasts to Lifelong Learning Systems, emphasising links to the concept of organised learning including formal and non-formal education, and more specific types of adult education such as adult basic education, second chance education, continuing vocational education and training and adult higher education. Specifically, a typology

of different types of adult learning which includes the concepts of Adult Basic and General Education (ABE/AGE), Adult Higher Education (AHE), Adult Vocational Education (AVE) and Adult Liberal Education (ALE) is defined and discussed in the context formal and non-formal types of learning.

1.1. The lifelong learning agenda, PIAAC and the OECD skills strategy

The OECD along with the United Nations Educational, Scientific and Cultural Organization (UNESCO) has played a pivotal role in shaping the concept of lifelong learning starting already in the 1960s. While the lifelong learning paradigm offers a master concept for thinking about the whole of education and training systems including all learning from early childhood education and care, initial formal education, higher education, vocational education and training, and other adult education, a core purpose is to draw attention to the importance of continued learning by adults throughout their lifespan, or alternatively, adult education.

The ongoing elaboration of the lifelong learning paradigm can be seen to relate to the emergence of several educational and social related concerns and issues over the last five decades. Starting in the late 1960s, concerns about the rapid expansion of education, the relevance of education to the surrounding society and the link between educational and social inequalities became core issues of interest for the OECD Centre for Educational Research and Innovation (CERI) which was formally established in 1968. Notably, educational equality became a central issue at the OECD throughout the 1970s alongside the role of education in promoting sustained economic growth. Already by that time, access to education was linked to equality of opportunity and specifically to a call for more open and flexible educational systems where individuals have rights to come back after initial education and use educational services for the rest their lives. Moreover, adult learning and education came to be increasingly recognised as being important in the context of a learning society where every individual must be able to keep learning throughout their lives. Such ideas and concerns were stressed throughout the 1960s under the banner of lifelong education, '*éducation permanente'* and lifelong learning by a range of actors and institutions as early as the 1960 UNESCO International Conference on Adult Education in Montreal and later in seminal reports by UNESCO and the OECD promoting their respective agenda on lifelong learning [i.e. (Faure, 1972[1]); (OECD, 1973[2])]. The emphasis on the 'lifelong' aspect effectively meant that business, industrial and agricultural firms should have extensive educational functions, and that the gap between educational institutions and workplaces needed to be bridged.

By the early 1970s, the OECD introduced a planning strategy known as *recurrent education* which emphasised the link between education and work over the lifespan. It elaborated extensively on a vision for lifelong education systems in terms of implications for the labour market and coherent strategies, both education and non-educational strategies (financing policies, educational leave and measures on the labour market and inside industry) to be adopted to implement objectives. The essence of the strategy was to distribute education over the lifespan of the individual in a recurring way, in alternation with other activities, principally with work, but also with leisure and retirement. Students were to be able to take up and leave study throughout their lives. The idea was that education should be lifelong and not just front-loaded. It was never implemented as a consistent strategy but some of the changes advocated, did become part of education policy and practices in many OECD countries, although in a piecemeal fashion. For example, post-compulsory education structures have indeed become more

flexible in many countries, as evidenced by the high rates of participation of adults in higher education structures (discussed in Chapter 2). Among the reasons why the strategy was never implemented consistently, many OECD economies slowed in the 1970s giving rise to other concerns and priorities. The strategy also required a major transformation of formal education systems for which the sector was not ready in most countries. It also required a coordinated approach with other policies – labour, employment, social welfare, and income transfer policies but legislation was insufficient. Not least, it introduced a financial burden that was not adequately worked out, and one that ultimately relied exclusively on the public purse. Another more cynical view for the notion not being taken up is that it was perceived as fanciful, irrational and inefficient to imagine that formal educational participation would not be concentrated at the early stages of the lifecycle.

The notion that the human factor is fundamental to economic activity re-emerged by the late 1980s and throughout the 1990s, which brought wider recognition of the centrality and importance of education to the OECDs range of core activities. Greater emphasis on market liberalisation and international trade arising out of the 1980s effectively boosted the significance of education and training as economic policy tools because these were and continue to be crucial not only for promoting sustained economic growth but also national competitiveness. There were other major structural changes including rapid technological change and the growth of knowledge and information-oriented jobs which related to the importance of continued learning over the lifespan of workers (OECD, 1989[3]). Accordingly, a renewed emphasis on the need to continually invest in learning throughout the lifespan to keep up and enhance employment, productivity, innovation, entrepreneurship, growth and overall well-being re-emerged under the banner of lifelong learning for all (OECD, 1996[4]).

The new agenda diverged from recurrent education promoted in the 1970s in several ways. First, there was greater emphasis on *learning* rather than *education*. Specifically, learning opportunities were considerably broadened to include all kinds of learning in diverse settings, emphasising particularly the recognition and importance of non-formal learning. Moreover, learning of all kinds was promoted as being continuous and seamless, combining the non-formal and informal in a variety of settings, at home, at work, and in the community. It also emphasised core concepts such as *learning to learn,* and other characteristics required for subsequent learning, including motivation and capacity such as *foundation skills*. This contrasts with recurrent education which had focused on *education* by providing a strategy to spread formal education opportunities over the lifespan to mitigate the consequences of a lengthening of front-loaded education. Further, the idea of alternating work with formal education on a cyclical basis was replaced by strategies to promote *learning while working* and *working while learning*. Second, there was greater emphasis on individual and shared responsibility. This reflected an increased reliance on the responsibilities of employers and individual learners to finance, manage and organise continued learning over the lifespan which is consistent with the rise of market liberalisation and other concepts such as choice and accountability since the early 1980s. In contrast, by focusing on the redistribution of formal education over the lifespan, the recurrent education agenda reflected a greater emphasis on public responsibility since governments played the primary role in organising, managing and financing formal education systems in the 1970s and largely continue to do so in most OECD countries.

Several of the ideas, principles and concepts that were encapsulated in the OECD's lifelong learning framework in the 1990s were taken up and continue to be featured in

policy documents, initiatives and programmes of many OECD governments. For example, the distinction between formal, non-formal and informal learning continue to be widely used despite its limited usefulness in practice. Not least, the European Union is highly committed to the principle of lifelong learning, and the European Commission (EC) plays a crucial role in encouraging EU countries to implement the idea into national policies. Specifically, the EU encourages its Member States to set all of their education and training policy and provision within the framework of a national Lifelong Learning Strategy. A focus on widespread participation in continuing learning throughout adult life is a key aspect of this. The first principle of the European Pillar of Social Rights asserts "*the right to quality and inclusive education, training and life-long learning in order to maintain and acquire skills that enable them to participate fully in society and manage successfully transitions in the labour market"*.

Following the lifelong learning for all agenda, the OECD embarked on a Thematic Review of Adult Learning (TRAL) systems in 17 countries between 1998-2002 which resulted in number of useful publications on adult education [e.g. (OECD, 2003[5]); (OECD, 2005[6]); (OECD, 2010[7])]. Since then, the programme of work on adult skills and competencies has deepened, both in terms of the complex governance of skill formation systems as reflected in the OECD Skills Strategy (OECD, 2012[8]) and the comparative measurement of foundation skills as reflected by the Programme for the International Assessment of Adult Competencies (PIAAC). In 2018, as part of its Getting Skills Right project, the OECD launched an extensive review of the future readiness of adult learning systems across OECD and partner countries in the context of the ongoing changes in the world of work. This project used PIAAC data extensively and resulted in several cross-country publications (OECD, 2019[9]); (OECD, 2019[10]); (OECD, 2019[11]); (OECD, 2019[12]); (OECD, 2020[13]) and country reports (OECD, 2019[14]); (OECD, 2020[15]); (OECD, 2018[16]); (OECD, 2019[17]); (OECD, 2020[18]); (OECD, 2020[19]); (OECD, 2019[20]) as well as the interactive Priorities for Adult Learning Dashboard (www.oecd.org/employment/skills-and-work/adult-learning/dashboard.htm). A study of the returns to different forms of training, accounting for informal learning was also published in 2019 (Fialho, Quintini and Vandeweyer, 2019[21]).

The focus on foundation skills, a key principle embedded in the lifelong learning paradigm, continues to be prominent. Many studies since the 1990s have sought to measure foundation skills and many governments have made it a priority to identify adults with low skills, and to design targeted initiatives and programmes that seek to raise their skills. The International Adult Literacy Survey (IALS) conducted in the 1990s is one example of such a study, which focused on the international comparative measurement of core foundation skills thought to be critical for adults to engage in learning throughout their lives. This study has since evolved into a major programme of work at the OECD, namely PIAAC. The first product of PIAAC is the OECD Survey of Adult Skills which collected detailed information on a range of education and training activities undertaken by adults in the 12 months preceding the interview including formal education programmes and other non-formal learning activities such as workshops, seminars, on-the-job training as well as leisure and civic-related courses. It also collected data on the age at which adults completed their highest qualification which can be used to discern whether their highest qualification was attained by following a 'traditional' or exclusively 'front-loaded' path (i.e. the most direct and shortest possible path that could be associated with a qualification), or whether it was attained at an older age because the shortest possible path was not possible given

individual circumstances, or they decided, for whatever reason, to return later to complete a qualification. In the latter case, these adults are often referred to as 'mature students', or alternatively 'non-traditional students' which is the term used in this report. Importantly, provisions enabling non-traditional students to attain qualifications are considered and defined as different types of formal adult education. As mentioned, this report focuses on the adult learning data included in the OECD Survey of Adult Skills, namely on formal education attained by adults who did not follow the front-loaded path (i.e. formal adult education), as well as non-formal learning activities undertaken by adults aged 16 to 65.

1.2. An adult learning system perspective

One of the underlying purposes of the lifelong learning concept has been to draw attention to the scope and importance of adult learning and education. In this sense, it is a master concept for thinking critically about the role of initial and front-loaded education within the context of a systemic view of learning over the entire lifespan. However, the holistic nature of the concept makes it equally relevant for thinking about reforms to front-loaded education such as learning to learn, foundation skills, transversal competencies etc. In other words, it is entirely possible for various stakeholders relevant to either the regular formal system or adult learning provisions to adopt ideas from the lifelong learning paradigm, but this may not necessarily translate into any substantive or structural changes to education and training systems, at least ones that would reflect a more systemic view of learning over the entire lifespan. This may in part explain why in many OECD countries, policy makers and practitioners remain undeterred from focusing on a front-loaded or narrow approach to formal education – that is, a view that formal education systems are primarily for traditional students who follow the most direct and shortest possible path that could be associated with a qualification, either for reasons of efficiency and rationality or simply that this reflects the preference of the majority of students and families. Similarly, it may in part explain why in many OECD countries, few links exist between different types of adult learning and formal qualifications.

For these reasons, it can be useful to highlight an Adult Learning System (ALS) perspective, which ensures greater focus on adult learning more generally but also the structural relationship between learning undertaken by non-traditional students, whether formal or non-formal, and the regular education and training system that has traditionally served students that follow a front-loaded path which reflects the most direct and shortest possible path that could be associated with a qualification. It is also practical since this report focuses on adult learning, not lifelong learning; and, the data collected by PIAAC is designed for such a focus.

The distinction between formal and non-formal are well delineated within the lifelong learning framework. It is therefore not surprising that the distinction has wide appeal, particularly from a policy perspective. Indeed, purposeful learning activities are oft distinguished as *formal*, *non-formal*, and *informal* [e.g. (European Commission, 2001[22])], which constitutes the so called *lifewide* spectrum which spans the *lifelong* dimension as highlighted within the lifelong learning framework. This distinction however provides limited usefulness in practice for distinguishing the degree of recognition of different forms of adult learning, by whom and for what purpose, as well as the relationship between non-formal and formal types of learning. The formal vs non-formal divide is not very useful in a cross-national setting since systems now vary

greatly in the extent to which they feature links between otherwise non-formal activities and formal qualifications.

Different forms of adult learning provisions are perceived as valid or recognised to varying degrees by different sets of stakeholders (i.e. state, market, civil society), and consequently draw different levels of resources and policy attention. This depends on the historical and ongoing development of negotiated political settlements among stakeholders in different countries. By extension, the degree of recognition of different forms of adult learning, by whom and for what purpose, or how the different forms relate to each other, if at all, reflects the existence and effectiveness of institutions underlying the governance, provision and financing of adult learning. In this sense, Adult Learning Systems (ALS) refer to the mass of organised learning opportunities available to adults along with their underlying structures and stakeholders that shape their organisation and governance. This helps to move well beyond the simple distinction of formal and non-formal by focusing on actual structures that relate to adult learning. Pinpointing the significance or meaning of different provisions, or categorising and comparing them in consistent ways is therefore, not an easy task, primarily because of contextual differences across countries and changes over time. PIAAC however, enables some focus on actual structures beyond the formal vs non-formal divide.

In this report, the primary focus is on organised learning undertaken by adults beyond the age of compulsory schooling (i.e. 16 or older), specifically formal and non-formal types which are organised in some form in the sense that an instructor or facilitator is involved in preparing and overseeing the learning activity. However, young adults who are undertaking formal qualifications at an age corresponding to the shortest and most direct path associated with a particular qualification are considered traditional students who are in their regular cycle of studies and are excluded as adult learners. In contrast, for the purposes of this report, adults who are undertaking formal qualifications at an older age are considered non-traditional (or mature) students and to be undertaking formal Adult Education (AE). Non-traditional students are thus defined as adults who did not follow the front-loaded path which reflects the shortest and most direct path associated with a qualification. The age thresholds that distinguish between traditional and non-traditional students in formal education are defined in Chapter 2. The decision regarding the exact age threshold to use by level of qualification is difficult to establish in an international comparative perspective. The approach in this report has focused on the ages corresponding to the shortest and most direct path associated with particular qualifications plus an additional two to three years to account for cross-country variations with a conservative margin of error. Therefore, the exact threshold can vary by country and can affect the precision of the estimates, but it generally does not alter the comparative overview of results and main analytical insights.

There is less focus on informal learning in this report, although there are a few indicators that are briefly considered. While informal learning is more relevant than ever, and it is possible to conceive of certain types of informal learning as being organised and intentional such as self-directed learning, many such activities are not easily related to actual learning structures or ALS as discussed above, and thus policy. There are exceptions such as mentoring activities and work-related practices which involve significant levels of informal learning and are dependent on choices at the organisational level, but these remain difficult to capture in a study like PIAAC. Nevertheless, the OECD Survey of Adult Skills collected some data on daily practices that are indeed important in terms of learning such as reading and information and communications technologies related (ICTs) practices at work and outside work, which are considered

as informal types of adult learning in this report. Similarly, the survey asked respondents the extent to which they had opportunities to learn at work which probably includes the extent of informal learning opportunities associated with one's job and this is considered in one indicator in Chapter 3.

The following introduces more specific types of adult education in the context of formal and non-formal types of learning, namely Adult Basic Education (ABE), Adult General Education (AGE), Adult Higher Education (AHE), Adult Vocational Education (AVE) and Adult Liberal Education (ALE). More formal types of adult learning typically lead to a qualification awarded by an education or training institution that is supported and recognised by the state as well as other stakeholders. These include general and vocational oriented formal education *undertaken by* non-traditional (or mature) students at all levels. In contrast, non-formal types are also structured (in terms of learning objectives, learning time or learning support), and may or may not lead to widely recognised qualifications.

Adult Basic Education (ABE) and Adult General Education (AGE) reflect many forms of compensatory, second chance, or remedial education. These are the most widely recognised as formal Adult Education (AE) across most high-income countries, but can also be considered non-formal, particularly in many low- and middle-income countries. While they are undertaken by non-traditional students, they are formal to the extent that they may be widely recognised and lead to qualifications that are equivalent to UNESCO's 1997 International Standard Classification of Education (ISCED) Levels 1, 2 or 3 (i.e. secondary education or lower). Some provisions for basic skills may be considered non-formal but can eventually be connected to lower and/or upper secondary equivalencies (i.e. ISCED 2 or 3).

Adult Higher Education (AHE) typically involves formal education undertaken by non-traditional students which correspond to ISCED 5 or 6 (i.e. tertiary education). Qualifications attained via this path may be distinguishable or indistinguishable from regular higher education depending on the country which can affect their extent of recognition and valorisation. Even if the form or content experienced by younger or older participants may be indistinguishable, there are often adaptations to the provision that enable and support older adults to participate which should not be taken for granted since this is not the case in many OECD countries. Moreover, such provisions can be directly targeted to older adults and be linked to *Continuing Education* for professionals such as certificate programmes, or graduate degrees for adults (ISCED 5a), and may have a vocational orientation such as provisions via vocational colleges, polytechnics or other professional schools (ISCED 5a, 5b).

Adult Vocational Education (AVE) can involve formal education undertaken by non-traditional students which correspond to ISCED 3b, 3c, 4, or 5b (i.e. vocationally oriented secondary and post-secondary education), but also non-formal education that has no links to the formal qualification system. Non-formal AVE is typically aligned with market related stakeholders involving job-related training or other forms of work-based learning. Nevertheless, through complex institutional frameworks, which may in part constitute ALS, non-formal provision may lead to formal recognition by equivalency or modularisation of qualifications. The extent of formal vs non-formal AVE is the source of greatest variation in provision across countries and in terms of terminology. For example, in some countries there is little to no distinction between traditional vs non-traditional students in Vocational Education and Training (VET) structures. Moreover, in some countries there may be widely held views that such

provisions do not entail adult education as defined in this report or as reported from data that are collected in studies such as PIAAC or the EU Adult Education Survey. Alternative labels that relate to AVE to the extent that students are non-traditional include Continuing Education (CE), Continuing Technical and Vocational Education and Training (CTVET) or work-based learning. In this report, the concept adult education includes job-related training. While this can vary considerably by country, this is because adults are undertaking diverse forms of learning for job-related reasons and employers are supporting diverse forms of learning including formal qualifications in the regular system of education and in some cases even those undertaken for non-job-related reasons (see Chapter 2). Thus, it is important to note that organised learning undertaken by adults that is job-related and/or employer-supported cannot be reduced to the concept of training.

Adult Liberal Education (ALE) which is often also referred to as Popular Education is typically non-formal and includes sport, hobby and other leisure-oriented provisions. ALE is typically more aligned with civil society related stakeholders such as through the activities of various organisations and groups. In some countries with highly flexible systems, such provisions may be connected to basic skills training and/or lead to formal recognition by equivalency or modularisation of qualifications.

In general, connecting various provisions to qualifications reflects the notion of open and flexible educational systems where individuals have opportunities that enable them to return to education after initial education or an extended absence from education and use educational services to their benefit. This is far from a reality in most countries, although there are a few who feature effective policies and institutions in this regard which has been found to be connected to sharply higher rates of participation in adult education. The degree of openness of the formal education system to non-traditional students as well as the level of integration between ABE-AGE-AVE-AHE and ALE is a distinguishing factor among ALS of different countries.

1.3. Organisation of this report

The remainder of this report is organised as follows:

- Chapter 2 provides an overview of a range of stock and flow measures related to adult education as revealed by PIAAC. Different types of AE are considered as well as the reason for participation and the source of support.
- Chapter 3 involves an analysis of the unadjusted and adjusted (multivariate) relationship between a variety of work-related factors and AE. The emphasis is on learning for the economy and within the economy. It includes an analysis of the relationship between formal AE and employment rates as well as earnings differentials.
- Chapter 4 involves an analysis of the unadjusted and adjusted (multivariate) relationship between a variety of socio-demographic factors and AE. The focus is on the distribution of AE with an emphasis on the unequal distribution of who participates and who receives employer sponsorship. Contrasts in the relationship between various social outcomes and having attained qualifications at younger and older ages are provided.
- Chapter 5 relates systemic features of AE that can be revealed based on the PIAAC data with several policy and practice issues related to AE. It draws out

several implications of PIAAC results in relation to the coordination of Adult Learning Systems.

- The conclusion focuses on possible directions for PIAAC in relation to the measurement of Adult Learning Systems.

2. The extent of adult learning in OECD countries

This chapter shows the extent of adult learning among the adult populations of the countries and economies participating in the OECD Survey of Adult Skills. It provides an overview of a range of measures related to adult learning including the flow and volume of Adult Education (AE) occurring in the year preceding the date of the survey. Different types of AE are considered as well as the reason for participation and the source of support. Estimates of past AE activity that led to qualifications are provided as well as estimates of expected lifetime participation. The growth of AE activity is assessed based on comparisons between data collected by the OECD Survey of Adult Skills between 2012-2016 and data collected by the International Adult Literacy Survey (IALS) in the 1990s.

2.1. The stock, flow and growth of qualifications attained via formal adult education

In several countries, there is now a substantial proportion of adults who move in and out of the education system and the labour market, making it difficult to identify who is in the first cycle of studies and who is an adult learner. The difficulty stems in part from the nature and characteristics of different Adult Learning Systems (ALS) discussed in Chapter 1. Specifically, formal educational structures are more *open* and *flexible* to non-traditional students in some countries compared to others.

Students who are in their first cycle of studies – i.e. following a front-loaded path which reflects the most direct and shortest possible path that could be associated with a qualification – are referred to as *traditional students*. In contrast, older students who return to formal education or delay completion, because the shortest possible path was not possible given individual circumstances, are referred to as *non-traditional students*. In many cases, there is little distinction between learning opportunities taken up by traditional and non-traditional students. That is, the same qualification can be earned by traditional or non-traditional students with little to no distinction other than the age at which the qualification is being undertaken or was attained. This is the case for many higher education degree programmes in several OECD countries such as in Sweden or the United States. In other cases, the form or content of a programme may be adjusted to meet the needs of older adults or working professionals, but these occur in the same institutions with little distinction to the type of qualification earned. This is commonly the case at the master's level. Such variations make it difficult to identity what counts as AE, especially from an internationally comparative perspective. However, regardless of whether there is a distinction in the type of qualifications earned at younger or older ages, adults over the age of 25 who are in formal programmes of study are typically considered to be adult learners who are undertaking formal AE. As discussed in Chapter 1, examples of formal AE can include adult basic education (ABE), upper secondary education for adults (AGE) and adult higher education (AHE) such as continuing professional education, all of which constitute opportunities for adult learners to return to formal education so as to acquire recognised qualifications. This is how adult education statistics are conceived and reported in many OECD countries such as through the EU Adult Education Survey. Exceptions are often made for the attainment

of second level higher degrees such as master's and advanced research (PhD) degrees, for example, by increasing the age of attainment to over the age of 30 for such activity to be considered formal AE.

For the purposes of the analysis in this report, adults who reported being in a programme of study in the 12 months preceding the survey and are over a certain age associated with a specific qualification are considered to be in formal AE as follows:

- ISCED 2 (lower secondary) or lower at age 19 or older (referred to as Adult Basic Education)
- ISCED 3 (upper secondary) at age 21 or older (referred to as Adult General Education or formal Adult Vocational Education)
- ISCED 4 (post-secondary, non-tertiary) at age 21 or older (referred to as formal Adult Vocational Education)
- ISCED 5b (tertiary type-B) or 5a (tertiary type-A) at age 26 or older (referred to as Adult Higher Education)
- ISCED 5a/6 (master/advanced degree) or higher at age 30 or older (referred to as Adult Higher Education).

The threshold ages distinguishing between traditional and non-traditional students are defined according to criteria reflecting a front-loaded path, or alternatively, the shortest and most direct route typically associated with the attainment of a qualification. An alternative method to define thresholds could be based on average ages by qualifications for each country but since the averages are directly affected by the prevalence of non-traditional students who completed their qualification at older ages, it defeats the purpose and renders it an unreliable method for defining the thresholds in a comparative analysis of adult learning. As defined, the thresholds allow for a conservative margin of error since the typical front-loaded path varies somewhat by country. For example, ISCED 2 typically corresponds to nine years of schooling and most individuals in most countries are about 15-16 years old upon completion. Therefore, allowing for a margin of error, most adults who complete ISCED 2 at age 19 or older do so by pursuing programmes that are adapted for older or non-traditional students. Similarly, ISCED 3 typically corresponds to 12 years of schooling and most individuals are about 18-19 years old upon completion if they followed the front-loaded path. Completing upper secondary at age 21 or older is thus usually accomplished through a programme adapted for adults (i.e. second chance or remedial programmes for upper secondary). ISCED 4 was treated similarly to ISCED 3 in this analysis but it varies the most across countries, and for this reason is most difficult to compare. The threshold ages used to define non-traditional students in ISCED 5a and 5b also follow a front-loaded logic by adding 4-5 years plus a conservative margin of error to the age of upper secondary completion that would be expected if one were to follow the shortest and most direct path to completion.

It is important to note that it is not possible to establish with certainty on the basis of the PIAAC data whether adults beyond the specified ages (or non-traditional students) followed the same formal programme as traditional students, or whether they followed a formal AE programme adapted to the needs of older adults. Nevertheless, the proportion of adults completing ISCED 1, 2 or 3 beyond the specified ages can be safely interpreted as reflecting the prevalence of formal AE programmes corresponding to those levels. However, it is more difficult to make this assumption at the ISCED 4,

ISCED 5a and 5b levels. As mentioned in Chapter 1, qualifications attained at these higher levels may be distinguishable or indistinguishable from regular education intended for traditional students depending on the country or situation. In many cases, the qualifications attained in higher education reflect programmes targeting professionals who are adults beyond the specified ages (e.g. continued professional training for teachers, principals and nurses which correspond to ISCED 5a at the Master's level in some OECD countries). However, even if the form or content experienced by younger or older participants may be indistinguishable, there are often adaptations to the provision that enable and support older adults to participate which should not be taken for granted since this is not the case in many OECD countries. Collecting additional data to enable better the above distinctions is an area for improvement in PIAAC.

Moreover, adults may have been in the above described situations when they completed their highest qualification but not in the 12 months preceding the survey. That is, they had already attained their highest qualification more than one year preceding the survey but did so at an older age. This is a type of past AE activity that is rarely acknowledged. However, data on this type of activity are important since they reflect the extent to which formal educational structures are open and flexible to non-traditional students as well as the extent to which they play a role in concert with labour markets to promote development of competencies in early, mid and late career, improve labour market attachment and produce other favourable associated economic outcomes (discussed further in Chapter 3). Not least, they reflect the extent to which formal educational structures enable older adults the possibility to add to a country's stock of qualifications. From this perspective, formal educational structures that enable this type of AE activity form an important part of Adult Learning Systems. As mentioned, this is more evident for types of AE that are associated with second chances to obtain a qualification such as ABE or AGE, but in the case of AVE and AHE, this is less evident and is often taken for granted in countries with open and flexible post-secondary systems that have many older adults enrolled. Notwithstanding, there are often complementary structures or initiatives involving stakeholders beyond the regular education system involved in enabling adults to return and access education services to attain higher qualifications (e.g. Active Labour Market Policies). In contrast, there are many other countries that continue to have higher education systems which are primarily reserved for traditional students and accordingly there are few opportunities for non-traditional students to attain higher qualifications via formal AE in those countries.

It is important to recognise that adults may have started their qualification when they were already at an older age (i.e. non-traditional students) although it is still possible according to the definition used here that they might have started out as traditional students, but then took a long break in their studies before returning to complete their highest qualification. This is an important limitation to the analysis; however, the data provide an indication of the extent to which formal educational structures are flexible in terms of permitting older adults to complete their qualifications. In the context of higher education, an alternative perspective is that the data indicate the degree of inefficiency of higher education system to produce qualifications in a way that follows the most direct and shortest possible path. It is not clear the extent to which this latter perspective is relevant however, since countries with high rates of non-traditional graduates are also the countries that tend to feature larger overall stocks of qualification suggesting that openness and flexibility of higher education systems is an effective way to expand provision and enable the production of more qualifications. This makes sense since

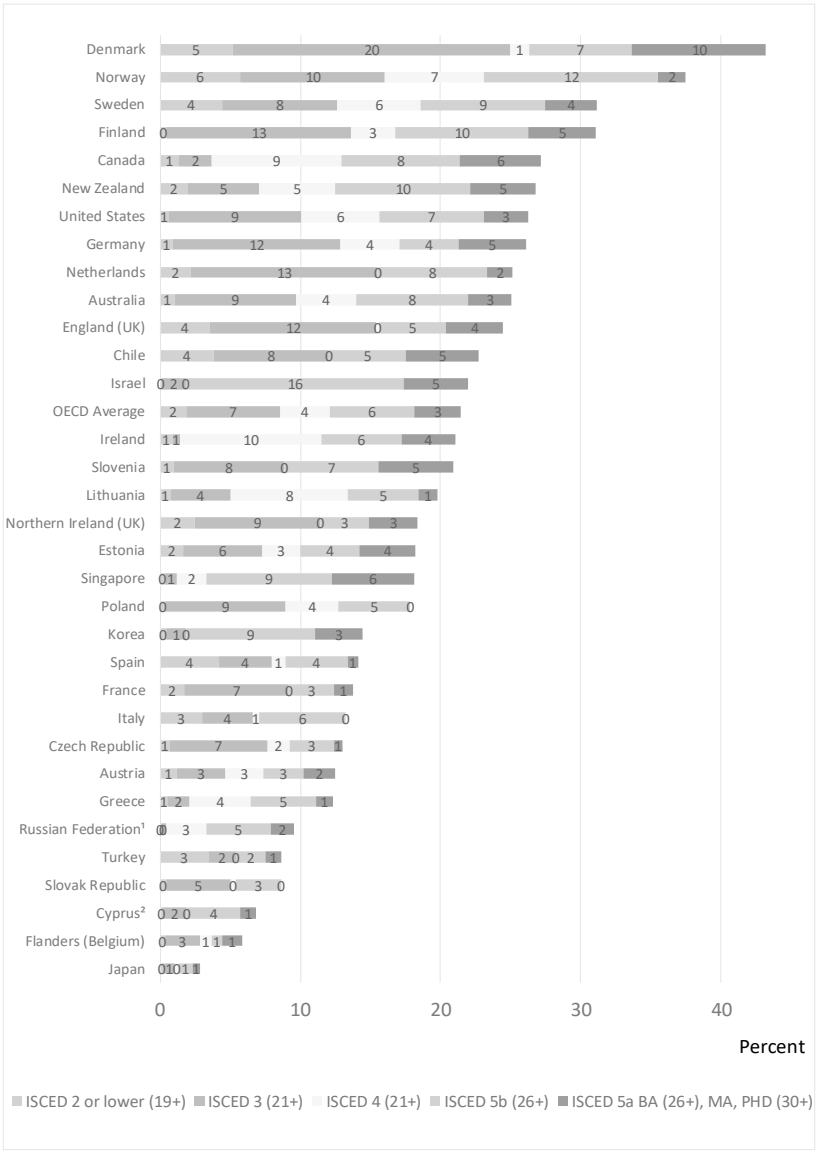
higher education systems may not be in position to easily accommodate greater numbers of students as they follow the front-loaded path (e.g. limited capacity in terms of space and resources), and not all students can realistically be expected to follow front-loaded path given their diverse life circumstances.

Data that indicate the proportion of adults who participated in a programme of study in the 12 months preceding the survey provide a flow measure of formal AE activity. In contrast, data that indicate the proportion of adults who attained their highest qualification at an age older than if they had followed the front-loaded and shortest possible path associated with that qualification provide a stock measure of formal AE activity. The OECD Survey of Adult Skills collected data which allows for both types of indicators. Figure 2.1 provides an indication on the stock of qualifications attained via formal AE while Figure 2.2 provides an indication of the recent annual flow of formal AE.

It can be seen from results presented in Figure 2.1 that several countries feature high proportions of adults who completed their highest qualification at older ages. Denmark has the highest percentage with about 43% having completed their highest qualification at older ages as defined above. Norway follows with well over one-third of adults up to the age of 65 having attained their qualification via formal AE. This is also the case for approximately one-third of the adult population in Sweden and Finland. Australia, Canada, England (United Kingdom), Germany, the Netherlands, New Zealand and the United States feature about one-quarter of their adult populations who have done the same. Flanders (Belgium) and Japan feature the lowest proportions with only 3-6% of adults attaining their highest qualification via AE. A more conservative threshold age for defining adult higher education for levels ISCED 5b, 5a/6, which adds an additional five years, reduces the estimates for these higher levels by a little over 50%, on average across countries, and as high as 70% in countries and economies where very few older adults have the opportunity to undertake higher education such as in Japan, Italy, Belgium (Flanders), Spain and Korea, but the overall cross-country pattern remains very similar (for a sensitivity analysis with higher threshold ages, [see (Desjardins, R. & Lee, J., 2016[23])].

Overall, these results can be taken as an indicator of the extent of *openness* of formal education structures to non-traditional students. It can equally serve as an indicator of the demand among adults to take up qualifications at later ages, but the former is nevertheless critical to accommodate this demand. Given that this is a stock measure, the results point not only to the status of formal educational structures in relation to non-traditional students but also historical aspects in terms of the length of time those structures have been adapted to meet the needs of adult learners.

Figure 2.1. Stock of qualifications attained via formal adult education



[1] The sample for the Russian Federation does not include the population of the Moscow municipal area. The data published, therefore, do not represent the entire resident population aged 16-65 in the Russian Federation but rather the population of the Russian Federation excluding the population residing in the Moscow municipal area. More detailed information regarding the data from the Russian Federation as well as that of other countries can be found in the *Technical Report of the Survey of Adult Skills, Second Edition.*

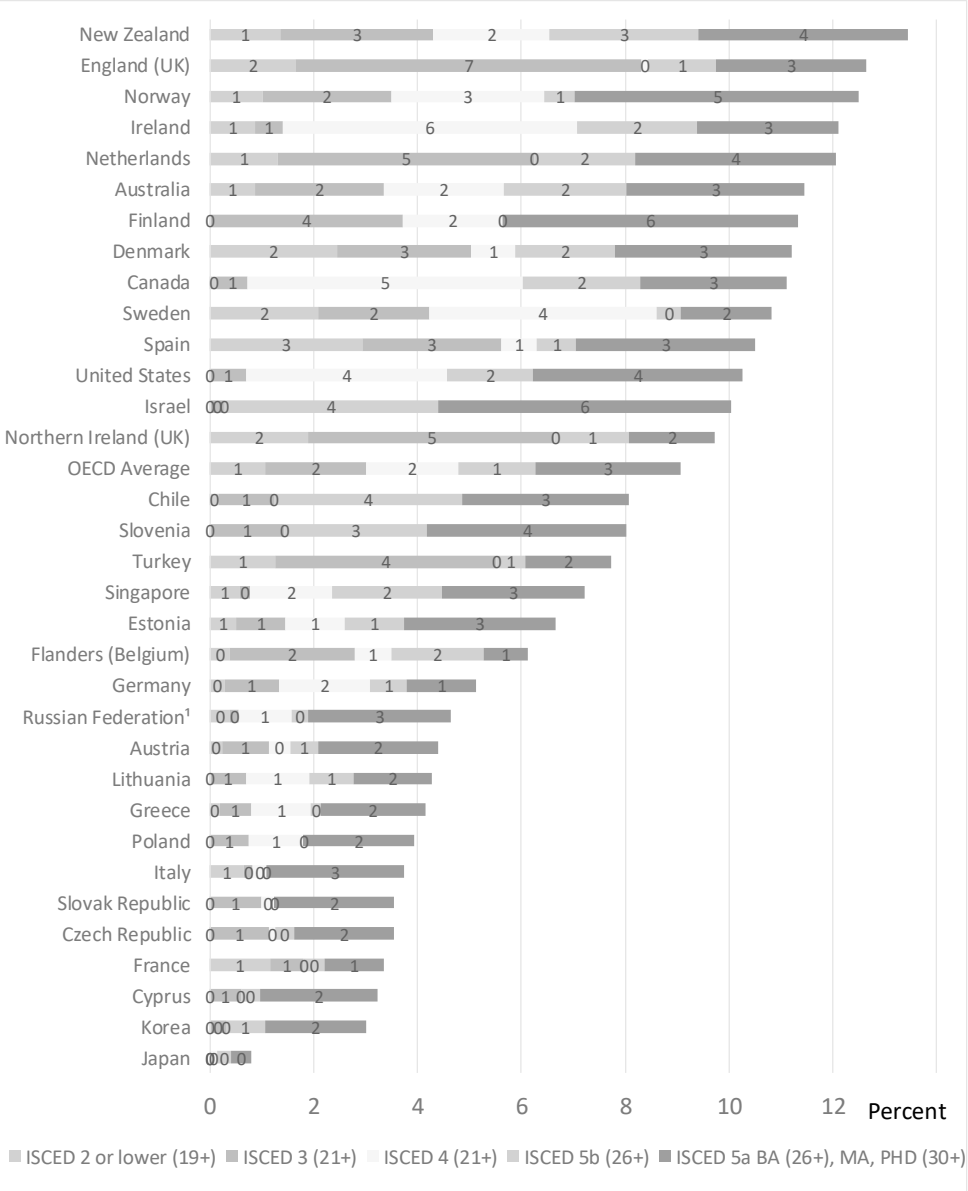
[2] *Note by Turkey*: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 2.2 presents results that focus on the recent annual flow of qualifications being undertaken by adult learners. Countries above the average all had about 10% or more of adults who did not follow the front-loaded path which is the shortest and most direct but were nevertheless undertaking a programme leading to a formal qualification in the year preceding the survey. This suggests that formal AE structures have the potential to add to these countries' stock of qualifications at a rapid pace.

Figure 2.2. Annual flows of formal adult education

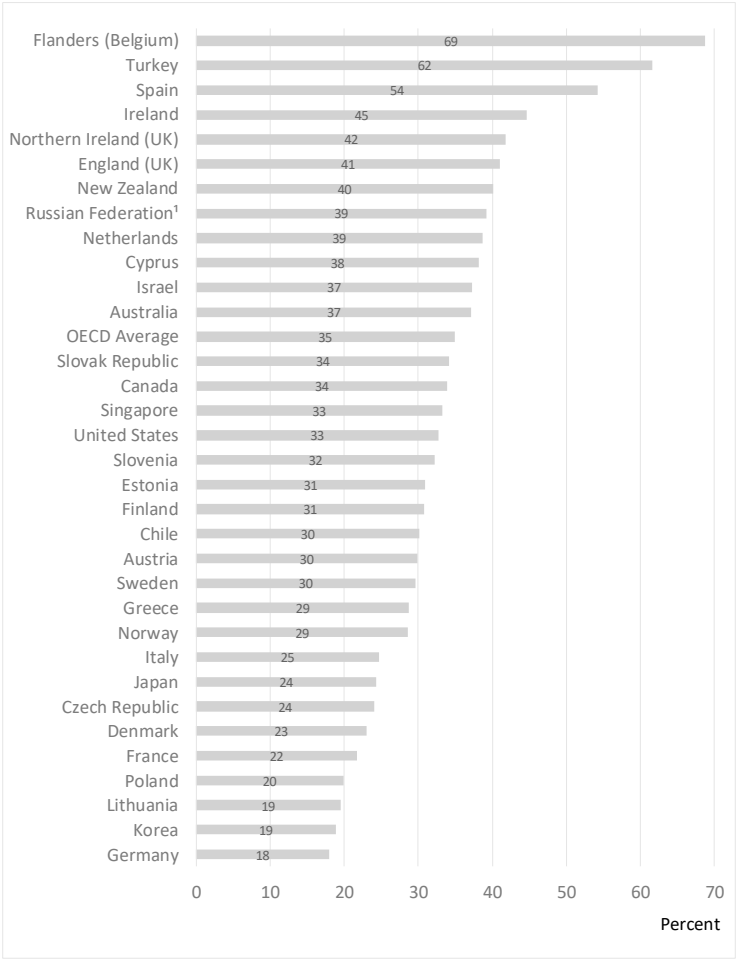


[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

In fact, it can be surmised that countries that feature high annual flows of formal AE (as seen in Figure 2.2) relative to the stock of qualifications attained via formal AE (as seen

in Figure 2.1) are those that have recently invested heavily in AE initiatives designed to raise skills, boost qualifications and in some cases accelerated the adaptation of the regular system to the needs of adult learners. Figure 2.3 offers a comparison of flow rates to stock rates by estimating the recent growth of qualifications attained via formal AE. The growth is estimated by dividing the annual flow by the average expected change in stock, which assumes that the qualifications reported as being undertaken at the time of the survey have now been completed. The results suggest that Flanders (Belgium), Turkey, Spain, Ireland, the United Kingdom (England and Northern Ireland) as well as New Zealand and the Netherlands have rapidly expanded the formal education opportunities that are made available to adults.

Figure 2.3. Estimate of recent growth of qualifications via formal adult education



Note: Growth rate is calculated by dividing the annual flow by the average expected change in stock. Assumption that adults who reported undertaking a qualification at time of survey have now completed that qualification.

[1] See note 1 in Figure 2.1.

Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

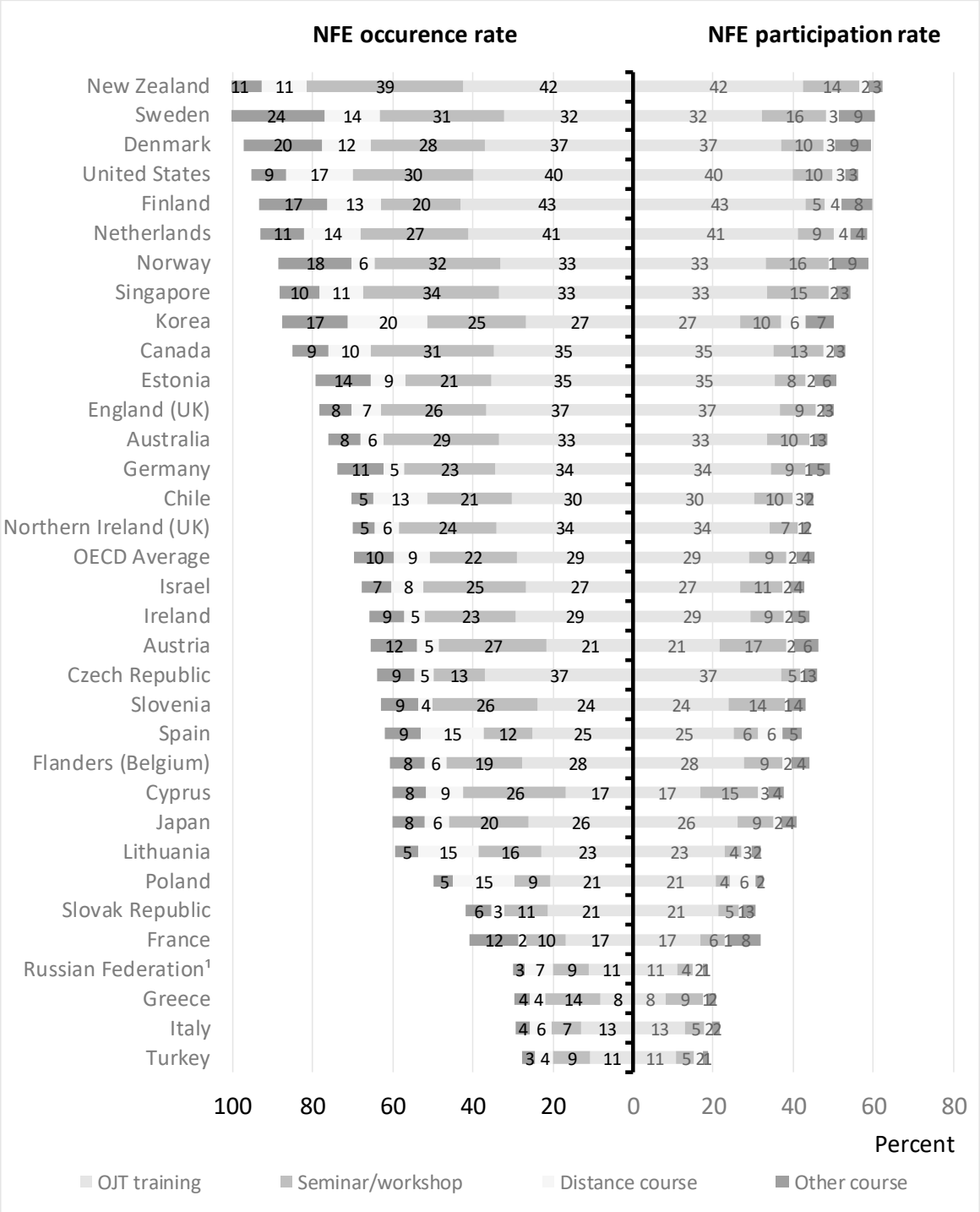
2.2. The flow of non-formal adult education and its expected accumulated volume over the lifespan of adults

Non-formal AE is not necessarily directly related to qualifications, although in many advanced ALS, such activity may contribute to a qualification at some point in the future. For example, one-off courses may be taken in specific contexts for a specific purpose but may be flexibly combined using a modular approach to eventually contribute to the acquisition of a qualification, at some later point in time. The prevalence of tools and procedures that recognise prior learning is perhaps the most pertinent for illustrating the potential for such possibilities (OECD, 2010[7]).

Figure 2.4 shows the annual flow of non-formal AE among countries and economies. The data help to confirm that most adult learning across the OECD is non-formal, at least in terms of incidence since many non-formal learning occurrences can be short in duration. Types of non-formal AE activities that are distinguishable among the data collected are: on-the-job training, seminar or workshop, distance education, and all other courses[1]. The left panel in Figure 2.4 displays the *occurrence rate* which adds the proportion of adults who undertook each kind of activity. This is a good indicator of the extent of non-formal AE activity, but participation may be concentrated on few adults. This is because many adults often take up more than one non-formal learning activity in a 12-month period which is why the sum can be greater than 100%. For this reason, the right panel in Figure 2.4 displays the proportion of adults who participated in at least one of these activities which is referred to as the *participation rate*. In reporting the participation rate by type of activity, the overlap is removed by giving priority in sequential order to: on-the-job training, seminar or workshop, distance education, and all other courses. In other words, adults who participated in 'on-the-job training' may have also participated in 'other courses', but not the other way around. Results show that countries featuring the lowest annual flows of non-formal AE have participation rates ranging from as low as 20% in Greece, Italy, and Turkey to a little over 30% in France, Lithuania, Poland the Slovak Republic. Those with the highest annual flows feature rates that are 2 to 3 times higher. The Nordic countries including Denmark, Finland, Norway and Sweden, as well as New Zealand, the Netherlands and the United States feature the highest annual flows of non-formal AE, reaching participation rates near 60%.

[1] As per the PIAAC background questionnaire (B_12g), all other courses include courses or private lessons not already reported. This can refer to any course, regardless of the purpose (work or non-work).

Figure 2.4. Annual flows of non-formal adult education



[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

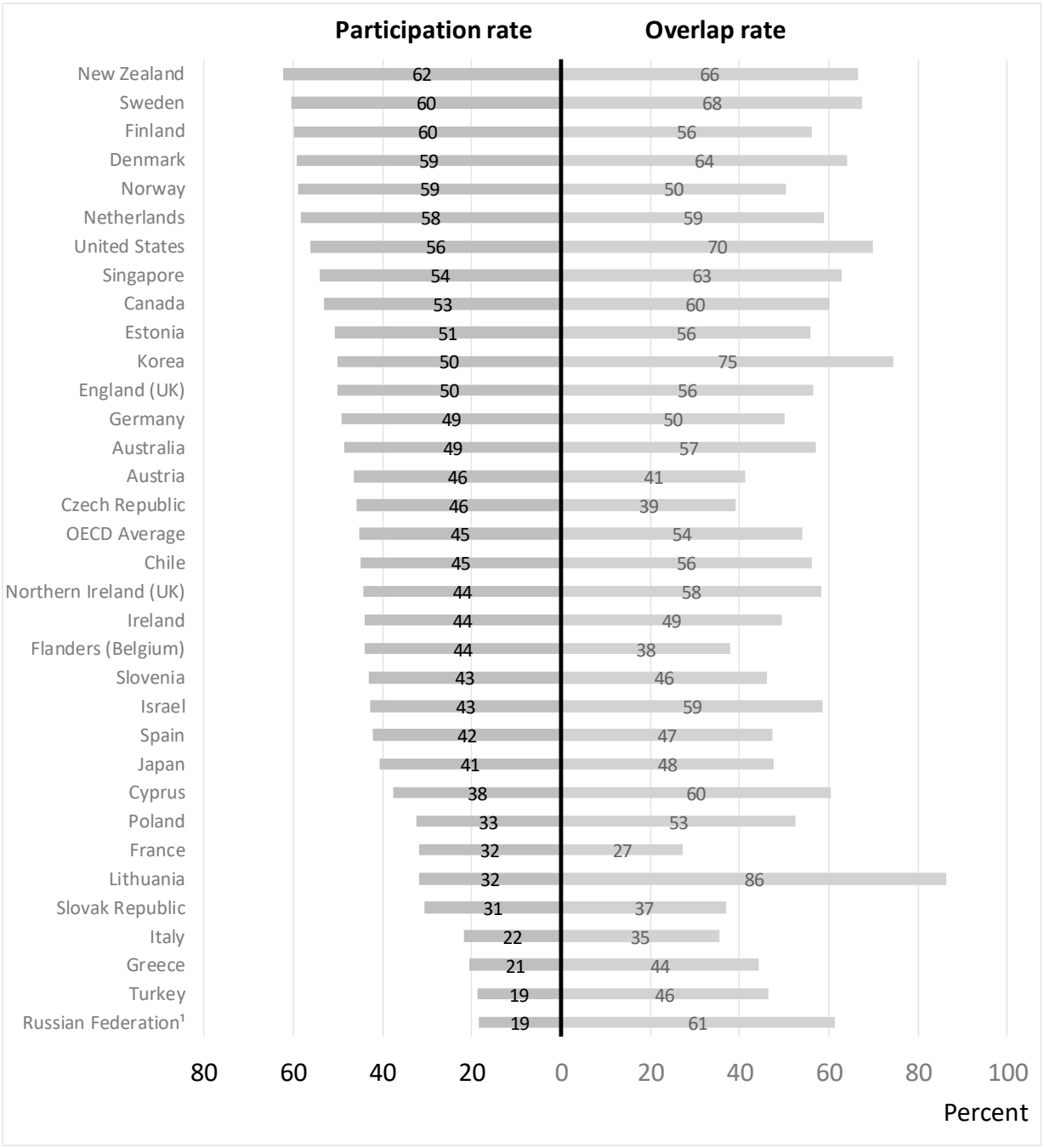
Overall, countries with the highest and lowest occurrence rates are also those with the highest and lowest participation rates, respectively. However, some countries feature a

relatively high rate of activity (occurrence) that is spread among fewer adults (participation) when compared to other countries. Figure 2.5 provides an indication of the degree to which non-formal activity is concentrated on adult learners who have already participated in at least one activity. On average across participating countries and economies, approximately 58% of adults who participated in non-formal education, participated in more than one non-formal education activity. In Korea, this estimate is as high as three-quarters of participants. The overlap rate is also high in Denmark, Sweden and the United States, but in these countries, the overall volume of non-formal activity is extended to a wider proportion of the population when compared to Korea as indicated by the participation rate in the left panel. Cyprus and Poland display the highest levels of concentration of non-formal activities among the fewest adults.

Not all adults have equal chances to take up non-formal AE over their lifespan. For example, adults who are in certain types of jobs or who are associated with socio-demographic characteristics that are traditionally advantaged or disadvantaged may have higher or lower chances, respectively, to take up learning activities more regularly. The distribution of participation in adult learning is considered in detail in Chapters 3 and 4 but Figure 2.6 provides a preview of the unequal chances to participate that are associated with adults' formal educational attainment. Results show that the expected volume[2] of both job- and non-job-related non-formal AE over the course of an adults' working life is considerably higher for those who have already attained higher levels of qualifications. The right panel of Figure 2.6 shows that the average adult, across participating countries and economies, aged 25 to 65 who has attained a qualification higher than upper secondary education is expected to undertake about 1.1 Full-Time Equivalent (FTE) years of job-related and non-job-related non-formal AE over their working life. In contrast, the average adult who has attained upper secondary or less is expected to undertake less than one-third as much, which reflects an average high-to-low educated ratio of expected volume of about 3 to 1. Thus, adults with lower levels of education are expected to have highly reduced chances of receiving opportunities to participate in non-formal AE over their lifespan compared to adults with higher levels of education. The chances for the lower educated are highest in Austria, Denmark, Finland, Flanders (Belgium), Germany, the Netherlands, New Zealand, Norway and Sweden, where the difference are less than three times but it remains close to or more than double in all of them. The ratio is lowest in Norway where higher educated adults are likely to undertake about 1.7 times more volume of non-formal education than lower educated adults. In contrast, it is highest in Greece, Italy, Poland, the Slovak Republic and Turkey where higher educated adults are likely to undertake about 8 to 13 times more volume than lower educated adults over the course of their lifespan.

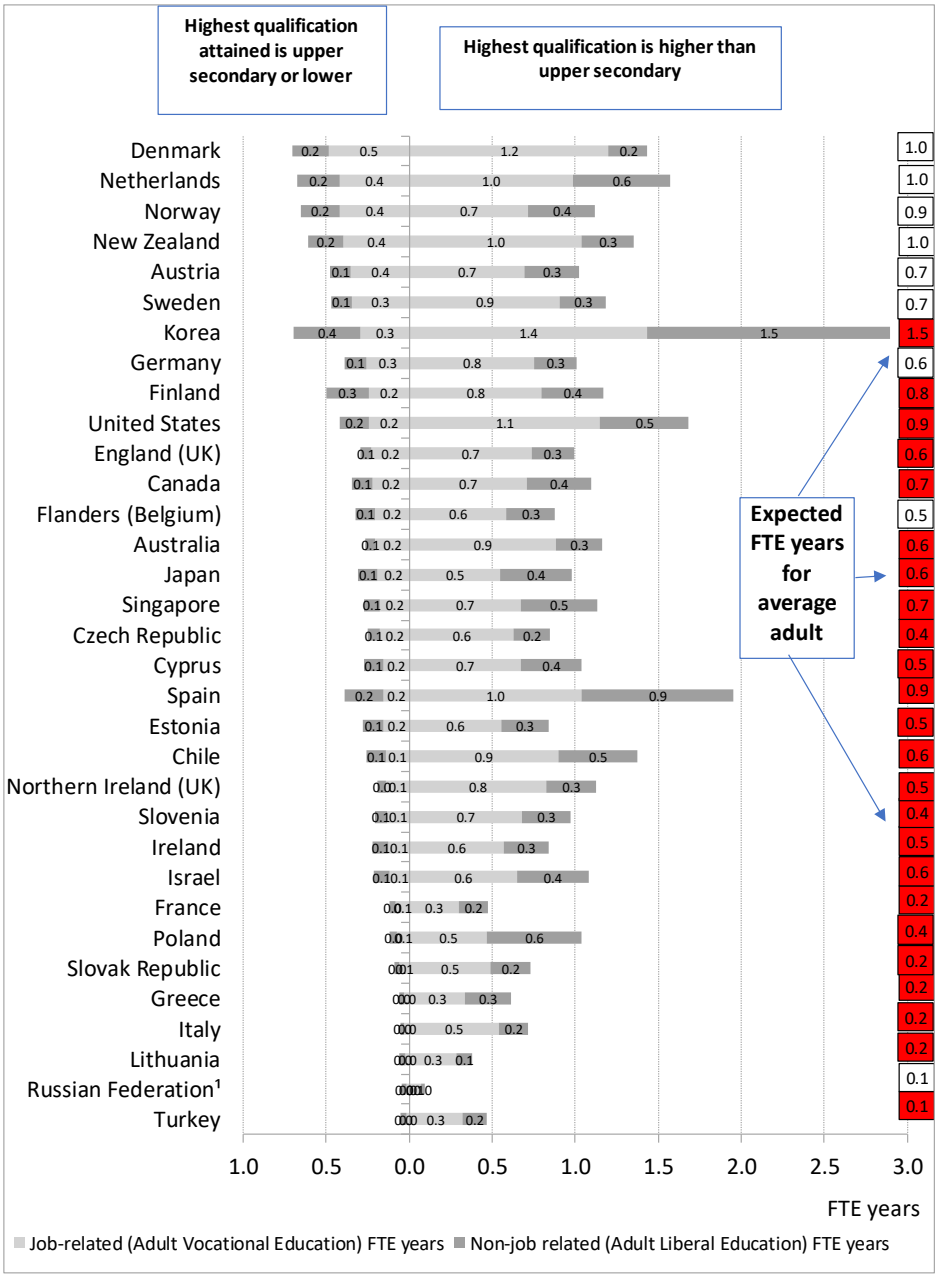
[2] Expected volume is estimated by multiplying the participation rate of a given age cohort by the average volume undertaken by that cohort and sums up the results for all cohorts.

Figure 2.5. The proportion of participants who undertook more than one type of non-formal adult education activity



[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 2.6. Expected accumulated volume of participation in non-formal adult education over the lifespan of adults



Notes: Shaded squares in right column of chart reflect a high-to-low educated ratio of 3 or higher which means that adults with post secondary education degrees are expected to take up three times more volume of non-formal education over their lifespan compared to adults who did not attain a post-secondary degree. Expected volume is estimated by multiplying the participation rate of a given age cohort by the average volume undertaken by that cohort and sums up the results for all cohorts.

[1] See note 1 in Figure 2.1.

Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

2.3. Overview of total adult learning effort

2.3.1. Incidence of overall participation in adult education by reason and source of support[3]

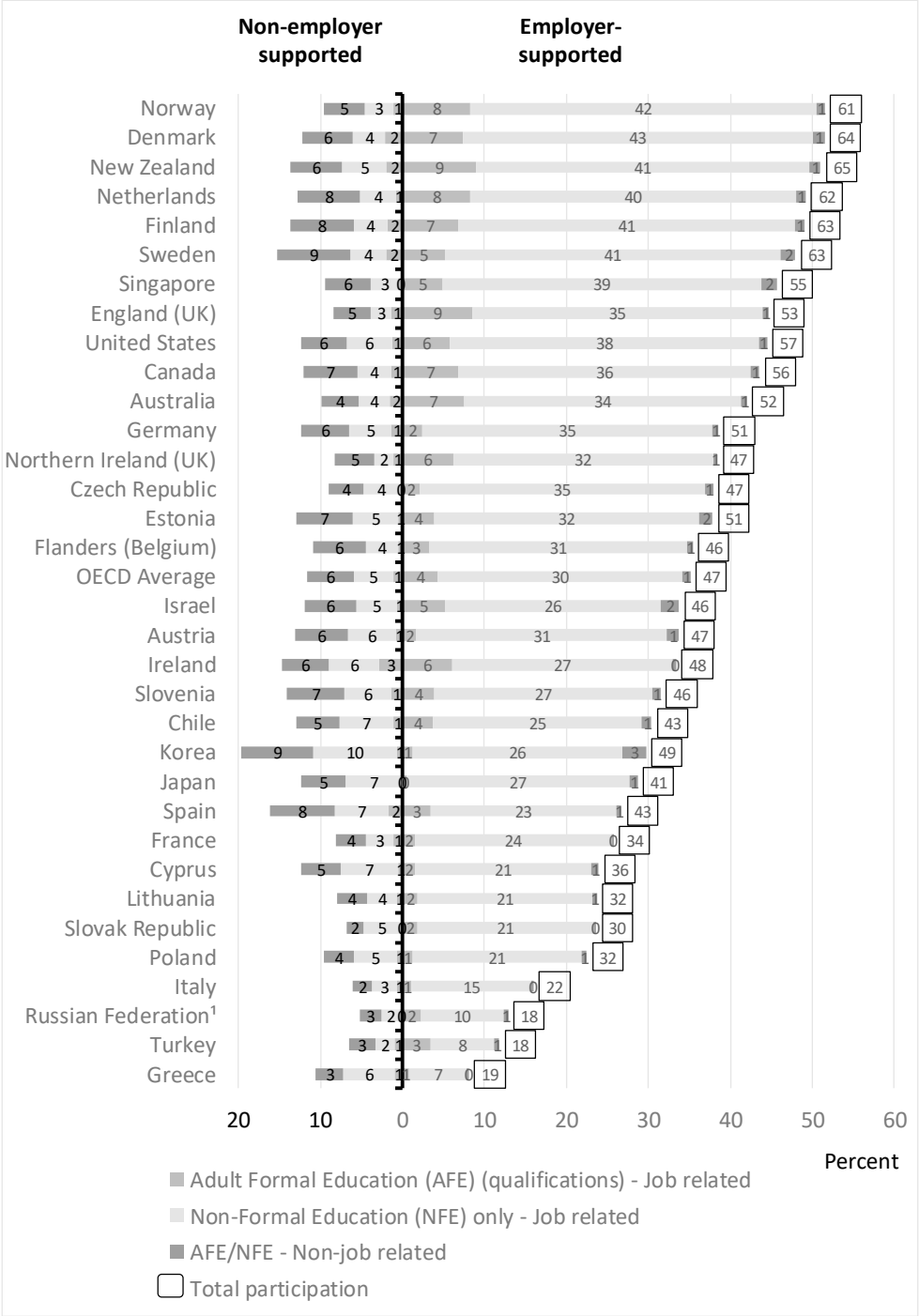
Results shown so far have focused on the extent to which adults participate in either formal or non-formal AE, and to some extent whether it is for job or non-job-related reasons. Figure 2.7 summarises these data into an overall participation rate while preserving an overview on whether the type of participation was formal or non-formal, job-related or non-job-related and adds whether it was employer- or non-employer-supported. From this data, it can be discerned that most AE in nearly all countries is job-related, employer-supported and non-formal. Moreover, countries with the highest levels of employer support also tend to be the ones with the highest overall rates of participation in AE. Notably, in several countries, employers are supporting participation in formal programmes that lead to qualifications at a high rate reaching as high as 7-9% in Australia, Canada, Denmark, England (United Kingdom), Finland, the Netherlands, New Zealand and Norway. Not surprisingly, these are also the countries that feature overall rates of participation that reach over 50%. In contrast, there is very little employer support for formal AE among countries with overall participation rates lower than 40%.

2.3.2. Incidence by more specific types of adult education

As was discussed in Chapter 1, the distinction between formal and non-formal AE is widely used but this is not very useful in relation to more specific AE structures that exist in different countries. Figure 2.7 offers a couple key insights in this regard by providing an overview of participation by more specific types of AE while preserving whether it was undertaken for job- or non-job-related reasons. It can again be seen that formal AE is primarily undertaken for job-related reasons in most countries. Another key insight is that the countries that feature high rates of formal AE are those with well diversified and well-developed provision at all levels. For example, New Zealand has substantive proportions of its adult population in Adult Basic Education (toward ISCED 1 or 2), Adult General Education (toward ISCED 3), formal Adult Vocational Education (toward ISCED 4), Adult Higher Education (toward ISCED 5b and 5a or higher) as well as in non-formal Adult Vocational Education and Adult Liberal Education. Furthermore, in several countries, formal AE opportunities mostly occur at the post-secondary level. For example, Canada, Ireland, Singapore and the United States feature comparatively low rates of participation in Adult Basic and General Education which can count toward the attainment of ISCED 3 or lower qualifications, but at the same time have comparatively high participation rates at the post-secondary level.

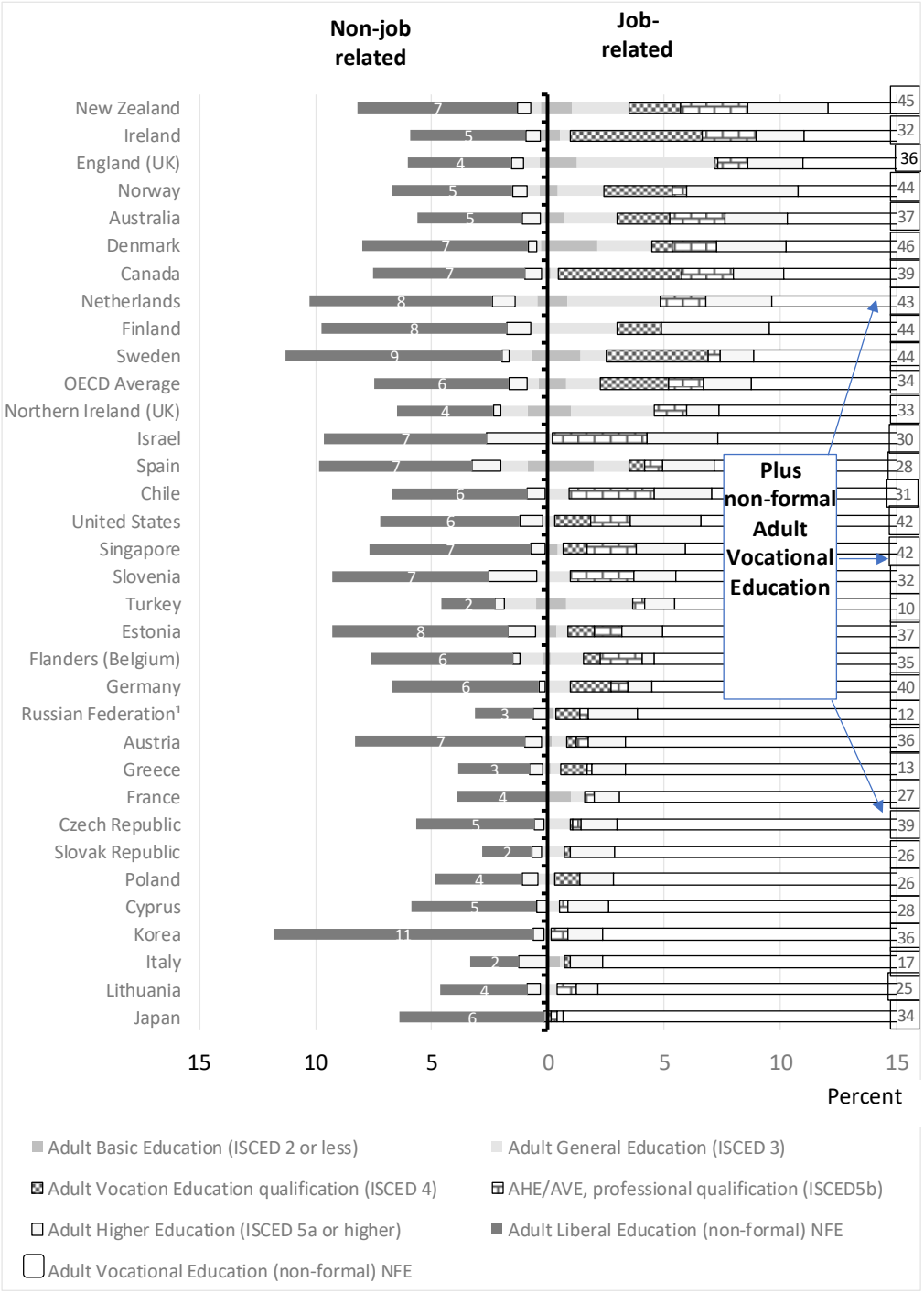
[3] The concept of employer-support may include some or all of the learning activity taking place during working hours meaning that the working hours are used to attend the activity instead of working and/or partial or whole payment for tuition or registration, exam fees, expenses for books or other costs resulting from participating in the activity.

Figure 2.7. Participation in overall adult education by reason and source of support



[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 2.8. Participation in overall adult education by more specific types



Note: The estimate for Adult Vocational Education (non-formal) is presented on the right side of the figure.
[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

2.3.3. Incidence of select informal learning practices

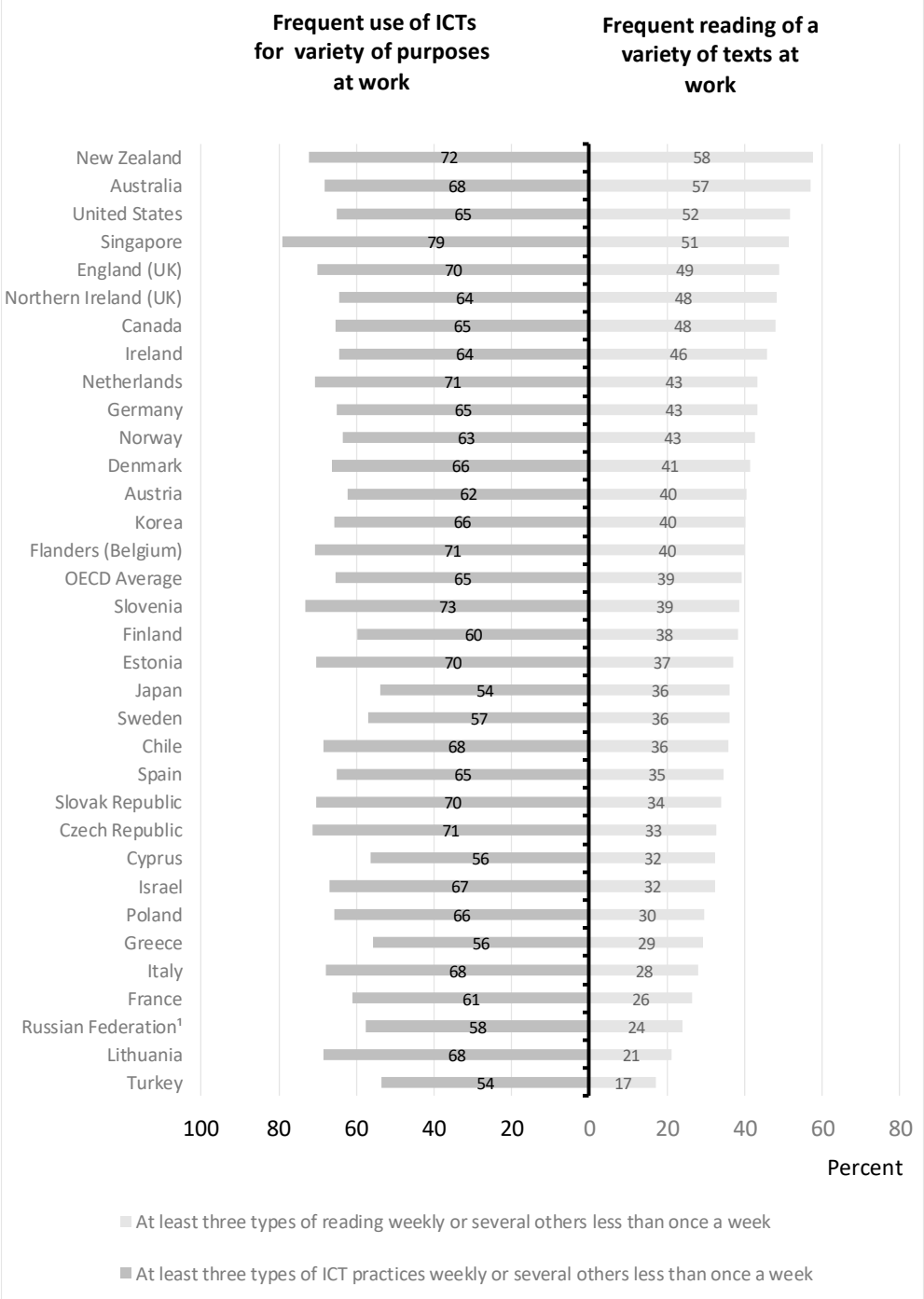
Adult learning is not limited to organised forms of learning but also includes informal types. In the context of knowledge societies and the information age, a particularly potent type of informal learning involves the daily processing of information, especially the reading of different types of text-based materials either in print or digital formats. Processing text-based information is increasingly embedded in everyday practices including cultural, social and work-related practices. Specifically, with the rise of knowledge and information-oriented jobs relative to manual labour, these types of practices at work are becoming more important for many adults aged 16 to 65.

Such practices may significantly condition the need for organised adult learning but in of themselves they are an increasingly important form of adult learning that may lead to concrete outcomes such as sustained cognitive functioning into older ages (Desjardins and Warnke, 2012[25]). Accordingly, Figure 2.9 presents an overview of the extent of this type of informal learning and how it varies across countries and economies. With few exceptions using ICTs regularly at work for a variety of purposes is widespread reaching over 60% of the working age population in nearly all countries. Reading a variety of texts regularly for work purposes however varies considerably among countries. Notably, countries with a higher incidence of the requirement to read at work tend to be those who feature the highest rates of participation in organised forms of adult learning. This can suggest that formal and non-formal types of adult learning along with informal modes of learning such as reading are mutually reinforcing. The relationship makes sense since processing and interpreting text requires skills as well as contextual knowledge – two aspects that organised learning is often designed to enhance.

2.3.4. The growth of adult learning systems

It is difficult to ascertain trends in AE with a high degree of precision even where data are available. Difficulties arise because of small design differences over time, non-sampling errors which are difficult to evaluate across studies, and in some cases, there are too few data points. For example, it is possible to compare participation rates in the 2012-16 OECD Survey of Adult Skills with those from the 1994-1998 International Adult Literacy Survey (IALS), but these are only two data points and there are potential sources of bias such as slightly different wordings to the relevant questions. For this reason, Table 2.1 provides estimates of the annualised growth rate of AE since the 1990s based on IALS and PIAAC but compares results with estimates produced from the EU Labour Force Survey (LFS) where possible. The latter is based on multiple data points based on the same question which were collected annually. While there are differences between the two sets of estimates, such as the fact that participation rates in the EU LFS are based on 4-week reference period whereas those in IALS and PIAAC are based on 52-week period, and the reference years are not identical, the trend overtime from the two sources concur in nearly all cases, which adds credence to the interpretation of the trend from IALS and PIAAC.

Figure 2.9. Percent of adults reading a variety of texts and using ICTs for a variety of purposes frequently at work



[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

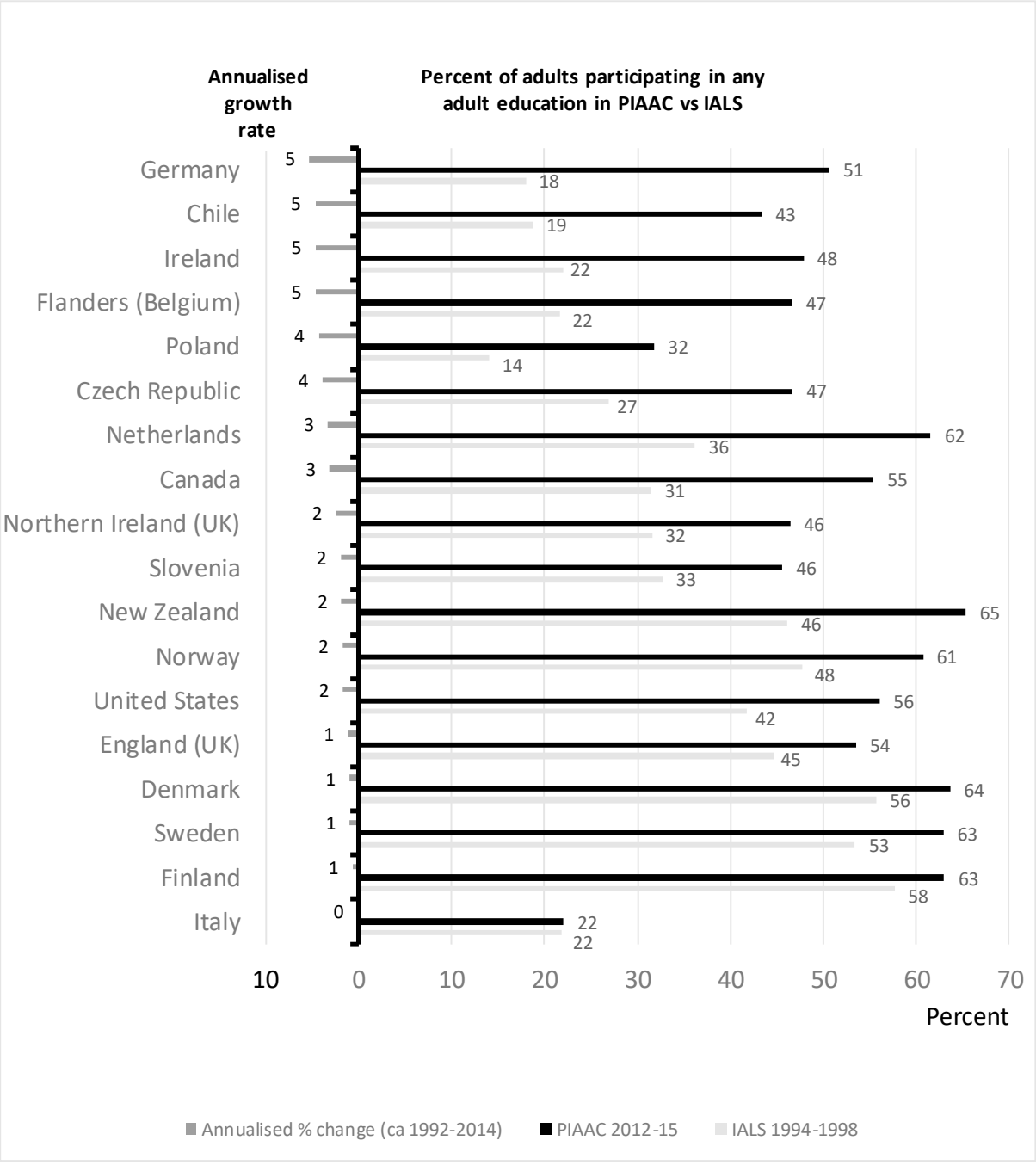
Table 2.1. Annualised growth rate of adult education since the 1990s

	Participation trends from EU LFS				Participation trends from IALS to PIAAC				
	Reference years	Participation rate (LFS 1992-2002)	Participation rate (LFS 2012-2014)	LFS annualised % change (ca 1992-2014)	Reference years	Participation rate (IALS 1994-1998)	Participation rate (PIAAC 2012)	PIAAC-IALS annualised % change (ca 1995-2012)	Minimum rate
Estonia	1997-2014	4.3	11.5	5.4					5.4
Spain	1992-2014	3.4	9.8	4.4					4.4
Belgium	1992-2014	2.3	7.1	4.6	1996-2012	21.6	48.0	4.2	4.2
Czech Republic	2002-2014	5.6	9.3	4.1	1998-2012	26.8	48.3	4.1	4.1
France	1992-2012	2.9	5.7	3.3					3.3
Austria	1995-2014	7.7	14.2	3.1					3.1
Ireland	1992-2014	3.4	6.7	3.0	1996-2012	22.0	50.0	4.9	3.0
Canada					1994-2012	37.0	57.1	2.4	2.4
US					1994-2012	41.7	58.9	1.9	1.9
Germany	1996-2014	5.7	7.9	1.8	1994-2012				1.8
Netherlands	1994-2014	13.6	17.8	1.3	1996-2012	36.2	64.0	3.1	1.3
Denmark	1992-2014	16.2	31.7	2.9	1998-2012	55.7	65.9	1.2	1.2
UK	1992-2014	12.5	15.8	1.1	1996-2012	44.7	55.0	1.3	1.1
Norway	1996-2014	16.5	19.7	1.0	1998-2012	47.8	63.9	2.1	1.0
Finland	1996-2014	16.3	25.1	2.4	1998-2012	57.6	64.9	0.9	0.9
Italy	1998-2012	4.8	6.6	2.3	1998-2012	21.9	23.9	0.6	0.6
Sweden	1996-2014	26.5	28.9	0.5	1994-2012	53.4	64.8	1.1	0.5
Poland	2001-2012	4.3	4.5	0.4	1994-2012	14.0	34.4	4.7	0.4
Slovak Republic	2002-2014	3.7	3.0	-1.7					-1.7

Sources: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019); EU Labour Force Survey (LFS), https://ec.europa.eu/eurostat/web/microdata/european-union-labour-force-survey; and International Adult Literacy Survey (IALS) (1994-1998), www.statcan.gc.ca.

Results shown in Figure 2.10 suggest that organised adult learning is on a sharp upward trend since the 1990s in most countries. Belgium and Ireland display high annualised growth rates of 5% which is consistent with the estimate of recent growth of qualifications attained via formal AE shown in Figure 2.3. Poland had one of the lowest participation rates in the 1990s but the comparison over time suggests rapid growth at an annualised rate of 4%. The Czech Republic and the Netherlands have also experienced rapid growth. Countries that already had comparatively high rates of participation in the 1990s show lower annualised growth rates even if many of them continue to have the highest rates of participation. For example, Sweden shows one of the lowest annualised growth rates of AE, but it already had the highest participation rate in the 1990s. Countries that have caught up to Sweden in terms of participation rates include Denmark, Finland and Norway which featured a higher growth rate since the 1990s. Similarly, Canada and the United States show relatively high growth rates surpassing those of the Nordic countries, which is consistent with them closing the gap with the Nordic countries. In contrast, Italy displays a low growth rate which is consistent with relatively low rates of participation both in the 1990s and in 2012.

Figure 2.10. Annualised growth rate of overall adult education between PIAAC (2012-15) and IALS (1990s)

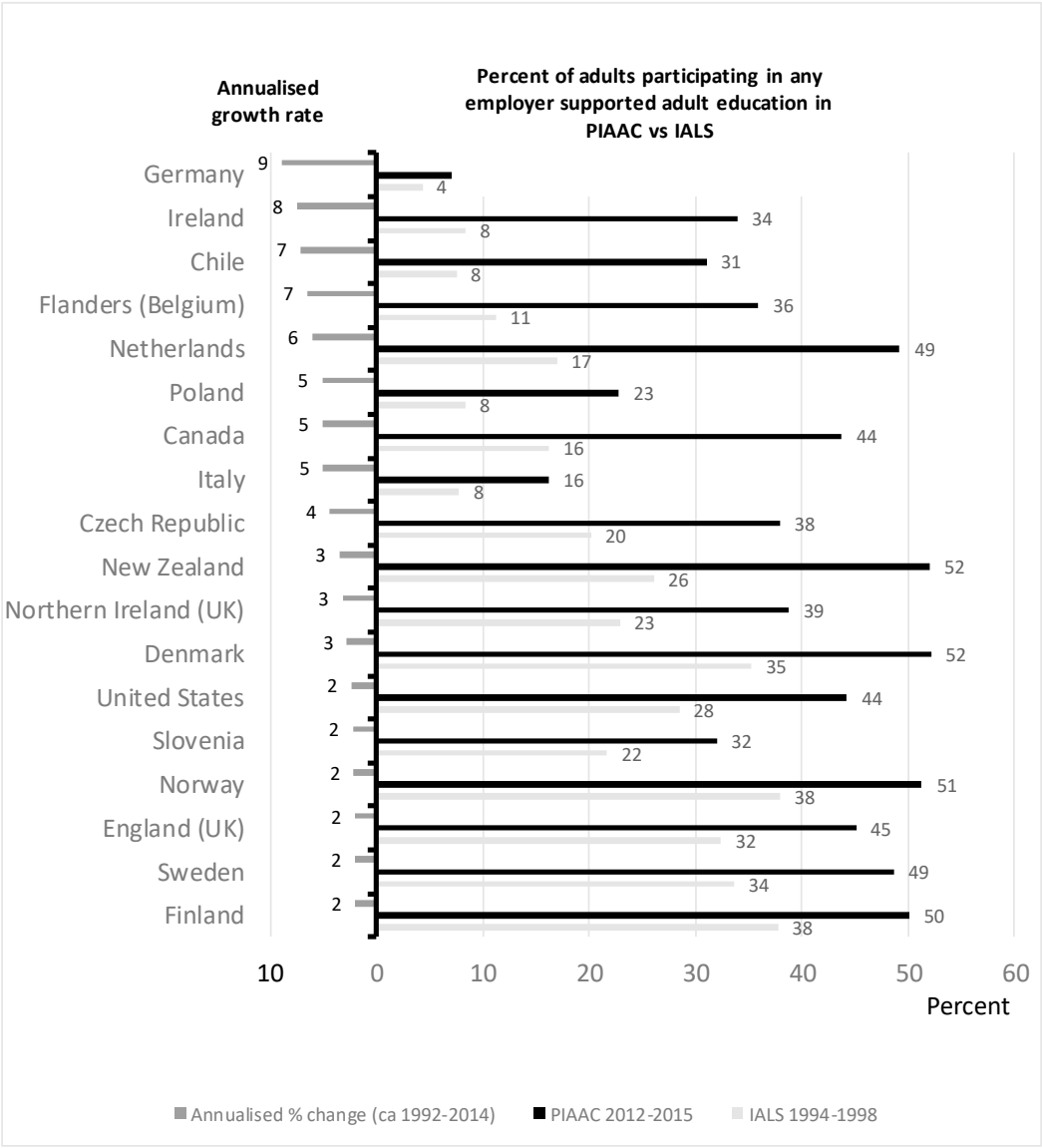


Sources: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019) and International Adult Literacy Survey (IALS), www.statcan.gc.ca.

Much of the increase in AE since the 1990s can be attributed to an interest by employers to invest in AE. Figure 2.11 summarises the change in employer-supported participation and corresponding growth rates for countries and economies with available data. In most cases, the growth of employer-supported AE outpaces the growth of overall AE. Who gets employer support to participate in AE? thus becomes an important policy issue,

particularly since unequal chances to participate may exacerbate social inequalities of various kinds. This is considered in detail in the following chapter.

Figure 2.11. Annualised growth rate of employer-supported adult education between PIAAC (2012-15) and IALS (1990s)



Sources: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019) and International Adult Literacy Survey (IALS), www.statcan.gc.ca.

2.3.5. Summary

The proportion of adults who complete qualifications without having followed the front-loaded path, which reflects the shortest and most direct possible path associated with those specific qualifications, is now substantial in several OECD countries. This is an indication of the extent of openness of formal educational structures to non-traditional students as well as the extent of demand among adults to take up qualifications at later ages. In some case, this may simply reflect more flexible admission criteria in terms of

age but in others this is associated with policies and practices that enable and support older students to access educational systems, and successfully complete higher-level qualifications at older ages. Furthermore, a high and more recent flow of formal AE can be detected in several countries which suggests a potentially substantial boost to the stock of qualifications in the short term for those countries. While formal AE is on the rise in several countries, the most common type of AE across all countries is of the non-formal type, job-related and employer-supported. Overall, organised adult learning including both formal AE and non-formal AE are on a sharp upward trend since the 1990s in most countries and economies for which there is data available.

3. Adult learning in the economy

This chapter shows the extent and distribution of adult learning in the economy by focusing on the probabilities of participating in Adult Education (AE) by a range of job-related characteristics, namely, firm size, type of sector, type of occupation, job content and skill use. Separately, the relationship between formal AE and economic outcomes is discussed based on an analysis of employment rates and earnings differentials associated with adults who completed their qualifications at younger or older ages.

3.1. Job-related and employer-supported adult education in the economy

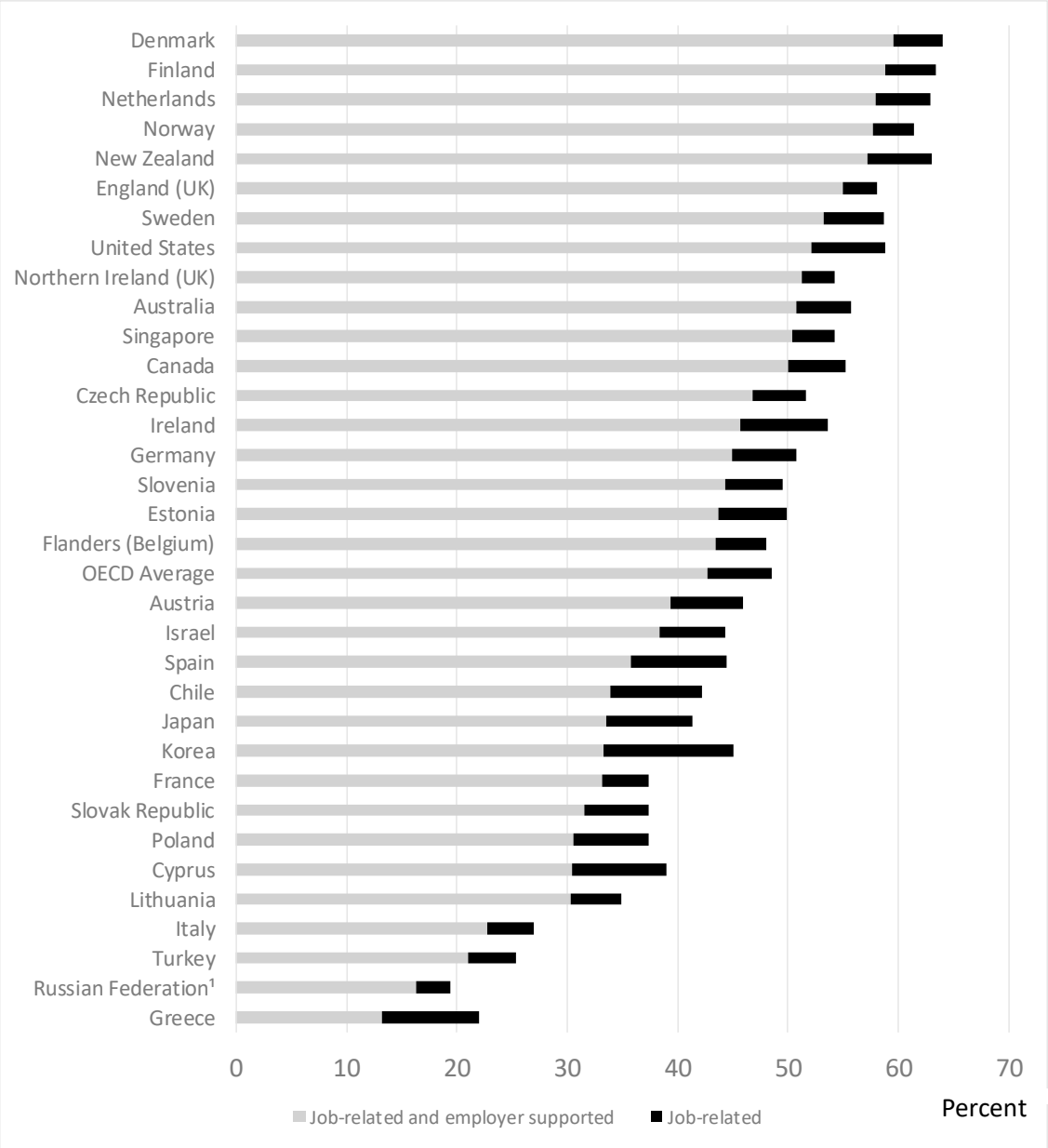
It was seen in Chapter 2 that most AE is undertaken for job-related reasons and is employer-supported. Figure 3.1 provides an overview of this type of AE among participating countries and economies. It shows that in most countries, approximately 85-95% of AE that is undertaken for job-related reasons is employer-supported. Moreover, it can be discerned that the countries with the highest overall rates of participation are also those where employer-support is highest. In Denmark, Finland, the Netherlands, New Zealand and Norway employer-support reaches nearly 60% of the working age population. In contrast, among countries with the lowest participation rates, employer support reaches only 25-30% of the working age population.

Given that employer support is driving the rapid overall growth of AE in many countries and economies since the 1990s as was seen in Chapter 2, who gets employer support and who does not become important questions. For example, is support narrowly concentrated on certain types of jobs or on workers with specific characteristics? This is important because not all sectors of the economy may be investing in AE equally and not all workers may have equal chances of receiving employer support, which has consequences for the distribution of the concomitant outcomes associated with investing in adult learning as well as productivity in different sectors of the economy.

The following presents results of an analysis of the distribution of job-related and employer-supported AE. Adjusted models were estimated to provide an overview of the relative significance of the main factors involved in the distribution of participation. The models include a range of job-related factors and socio-demographic factors which were fitted using the binary logistic regression procedure. Estimates of the log odds were used to calculate adjusted probabilities (alternatively known as predicted probabilities) which are deemed to be simpler to interpret and to compare across variables than log odds. The job-related factors, which are discussed in this chapter, include firm size, type of sector, type of occupation, job content and skill use. The socio-demographic factors, which are discussed in Chapter 4, are gender, age, immigrant and language status, highest level of educational attainment, literacy proficiency and parents' highest level of education. A key focus are the factors related to the distribution of participation in job-related and employer-supported AE. Results for this type of AE are summarised in Table A.1. A separate model was estimated in which the dependent variable is whether any job-related

AE was undertaken which is more relevant in certain cases such as for workers who were unemployed or outside the labour force at the time of the survey.

Figure 3.1. Participation in job-related and employer-supported adult education



[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

3.1.1. Labour force status

Adults who were unemployed or outside the labour force at the time of the survey are much less likely to have received employer-supported AE in the 12-months preceding the survey. For the same reason, if they were unemployed, they are more likely to have

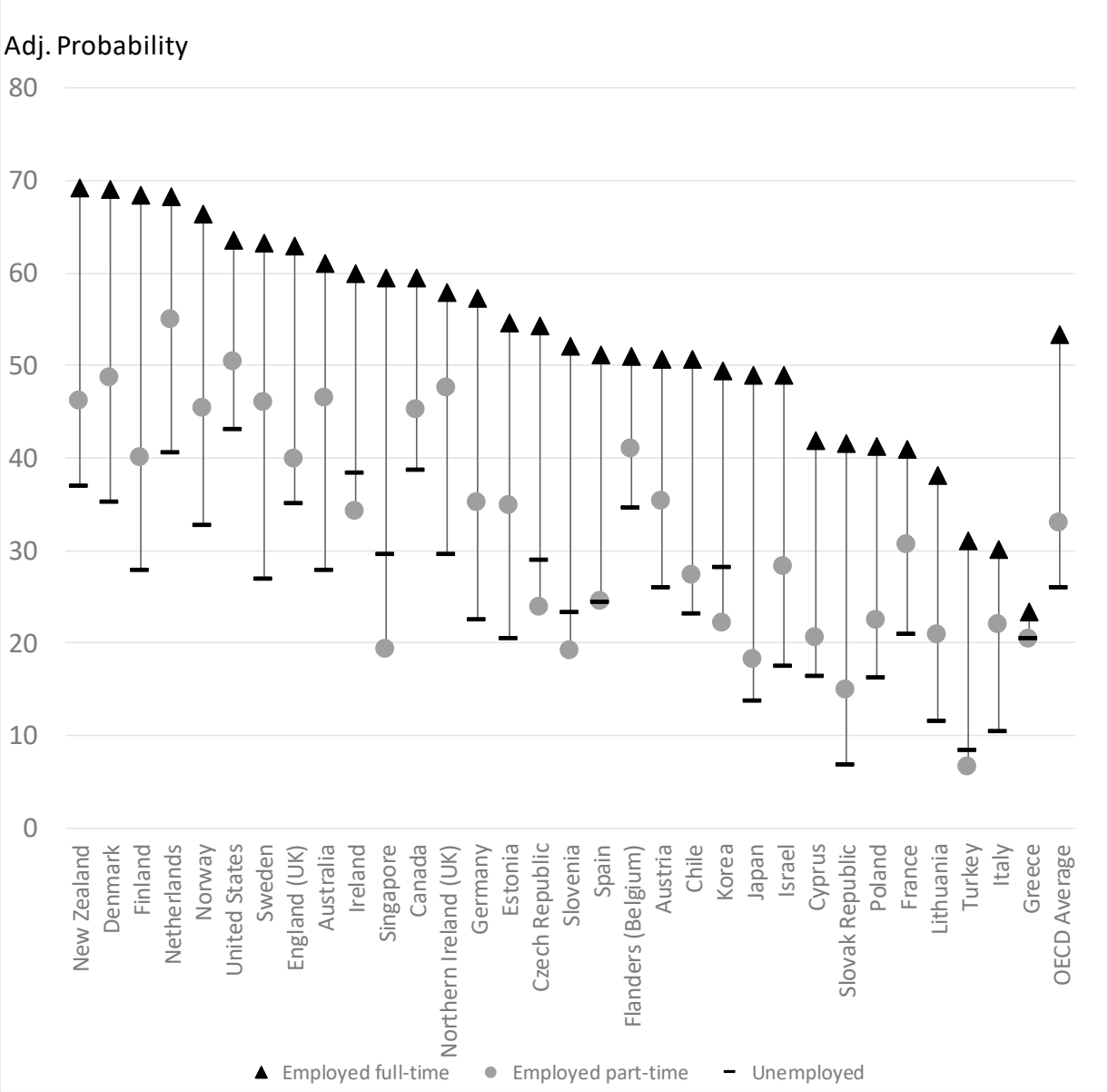
received some type of government support such as through active labour market policies or to have exclusively self-supported their job-related participation. Unfortunately, the OECD Survey of Adult Skills did not collect data to help discern the type of non-employer support received, if any. Nevertheless, a significant proportion of non-employer-supported AE, which is still job-related, is expected to be related to active labour market policies, especially in countries where these policies are more common.

Figure 3.2 provides an overview of the adjusted probabilities associated with having participated in job-related AE by labour force status. Adults who were employed full-time are associated with the greatest probabilities of having participated in all countries and economies. Note that most participation by the fully-employed is employer-supported (see Table A.1). Remarkably, in Denmark, Finland, the Netherlands and New Zealand, simply having a full-time job, regardless of other factors, is associated with a probability of 0.7 of participating in any job-related AE. In contrast, the probability is as low as around 0.3 to 0.4 in countries with lower overall participation rates. Part-time workers have significantly lower probabilities of investing in AE or receiving support to do so in all countries. In a few countries, namely Denmark, the Netherlands, and the United States, the probability remains near 0.5, but in most other countries the probability falls below 0.4 and is as low as 0.15 such as in Japan, Turkey and the Slovak Republic. Similarly, the unemployed have significantly lower probabilities of investing in AE or receiving support to do so. The unemployed have the highest chances of participating in job-related AE in Denmark and the Netherlands which is consistent with the extensive use of active labour market policies in those countries. However, Canada, England (United Kingdom), Ireland and the United States show similarly high chances for the unemployed, but they are less associated with active labour market policies. As mentioned, it is not possible to ascertain from the survey data the degree to which the unemployed may have benefited from public support or whether they exclusively self-supported their participation which was not employer-supported.

3.1.2. Firm size

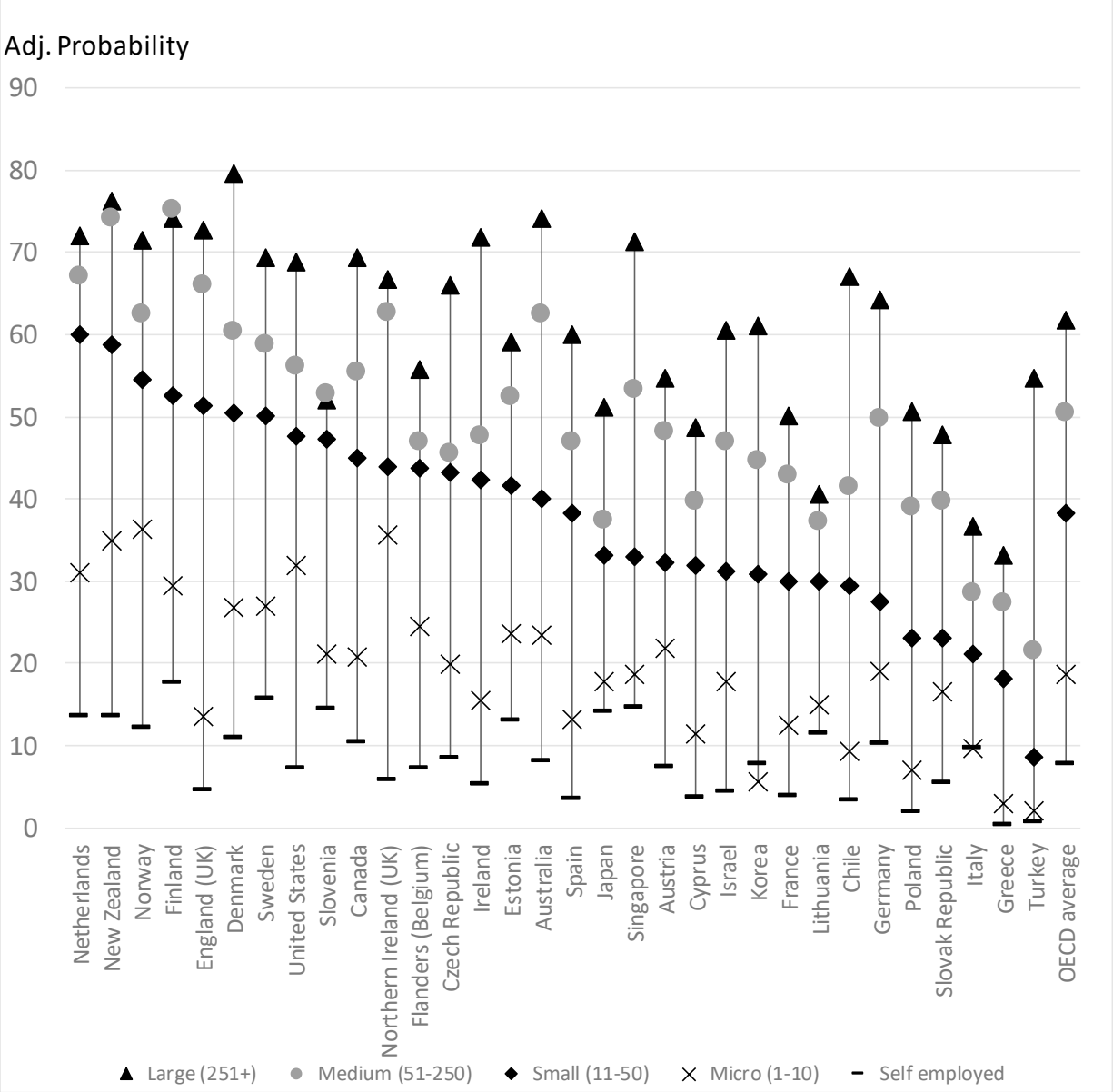
Adults who work in larger firms, regardless of other factors, are much more likely to receive employer-supported AE. Results in Figure 3.3 show the adjusted probabilities of receiving employer-support by the size of the firm in which respondents work. In several countries, working in large firms (251 employees or more) is associated with very high probabilities (0.7) of receiving employer-support. Even in medium sized firms (51-250 employees), workers in Australia, Denmark, England (United Kingdom), Finland, the Netherlands, New Zealand, and Norway have probabilities of 0.6 or higher of receiving employer-support. Notably, in countries with comparatively high overall rates of participation, workers in small firms (11-50 employees) have probabilities close to or above .5. In other countries, however, workers in small firms have much lower probabilities of participating ranging between 0.2 to 0.4. In all cases, adults who work in micro-sized firms (1-10 employees) as well as those who are self-employed have significantly lower probabilities of participating in AE ranging between 0.1 and 0.2, although it can reach up to 0.3 for workers in micro-sized firms in most of the countries with the highest overall rates.

Figure 3.2. Adjusted probabilities of participating in job-related adult education by labour force status



Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 3.3. Adjusted probabilities of participating in job-related and employer-supported adult education by firm size



Note: See Table A.1 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

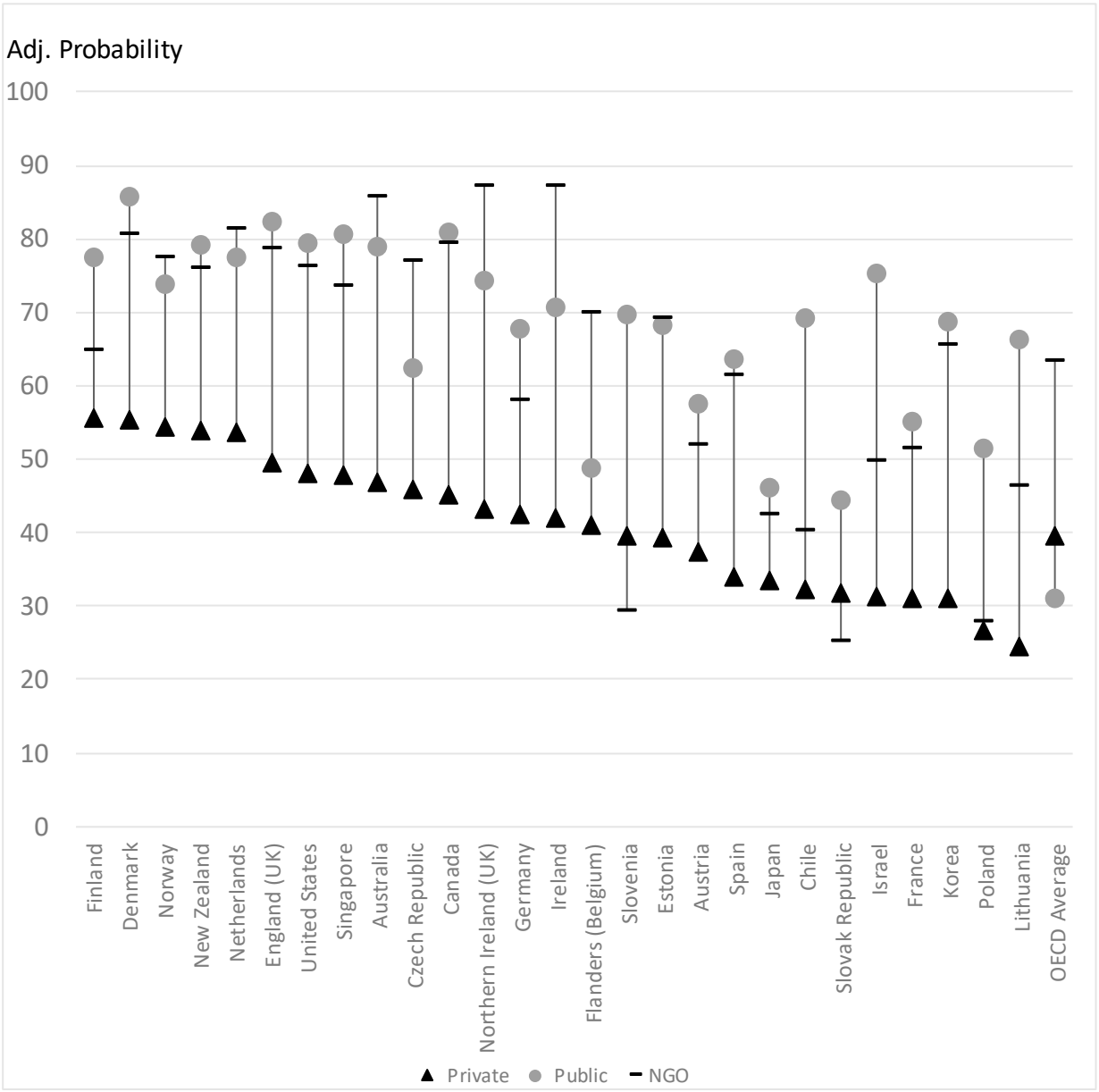
3.1.3. Type of sectors

Significant differences in participation rates are observed between adults who work in the public and private sectors. Figure 3.4 shows the probabilities of participating in employer-supported AE by type of sector in which respondents are employed. In all countries, workers in the public sector have significantly higher chances of receiving

employer-supported AE. Similarly, with few exceptions workers in the non-governmental (NGO) sector have significantly higher chances to participate and receive employer support than those who work in the private sector. In several countries including the Australia, Canada, England (United Kingdom), the Nordic countries, the Netherlands, New Zealand, Singapore and the United States, adults who work in the public sector have probabilities of receiving employer-support approaching 0.75 to 0.8 in a 12-month period, which reveals a remarkable commitment by the public sectors in those countries to invest in AE. In contrast, public sector employees have probabilities ranging between 0.45 to 0.6 in several other countries which shows that the public sector has not embraced AE to same extent in all participating countries. Although employees in the private sector are less likely to receive employer-support in most countries, probabilities are close to or over 0.5 in several countries including England (United Kingdom), the Nordic countries, the Netherlands, New Zealand and the United States. This falls to as low as 0.3 or lower in Chile, France, Israel, Korea, Lithuania, Poland and the Slovak Republic which shows that the private sector is more reluctant in those countries to share the expenses involved in investing in AE, and combined with the lower commitment by the public sector, overall rates of participation tend to be much lower in those countries.

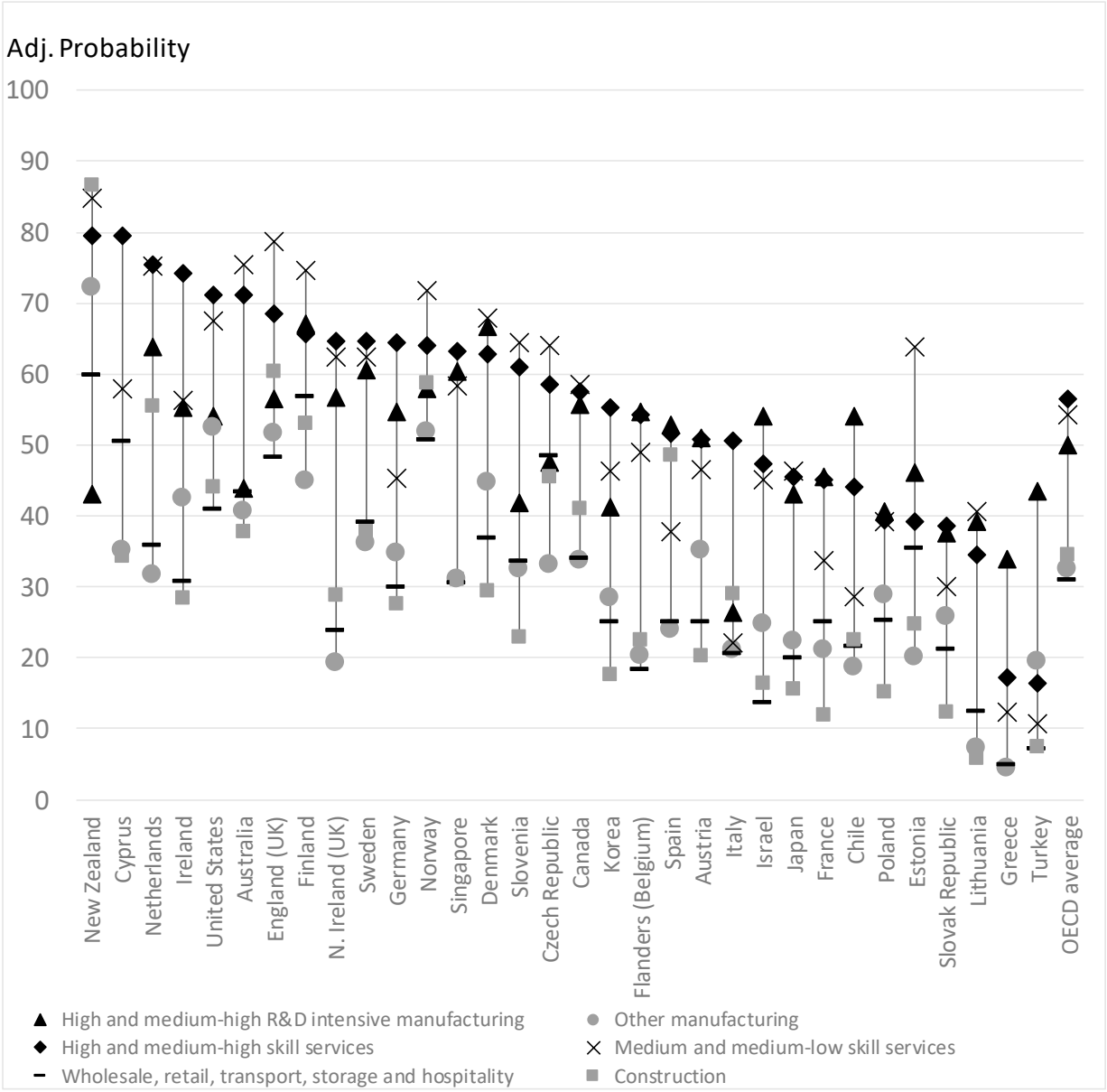
Regardless of whether they are public or private, enterprises in the high and medium-high skill services and manufacturing sectors are in most cases seen to invest more in AE, compared to the low-skill service and manufacturing sectors, as well as the construction, wholesale, transport, storage and hospitality sectors. Figure 3.5 shows the probabilities associated with receiving employer-support by industrial sector. In a few countries, namely Finland, Norway, England (United Kingdom) and the United States, workers in the lower skill sectors have noticeably higher probabilities of receiving employer-support, ranging between 0.4 and 0.5. In Germany, Sweden, and Denmark, the probabilities associated with these industries tends to be lower, ranging between 0.3 and 0.4, and in most other countries it is less than 0.3. In contrast, workers in higher-skilled industries in England (United Kingdom), Ireland, Germany, the Nordic countries, the Netherlands, New Zealand, Singapore and the United States are associated with probabilities of receiving support that reach close to or above 0.6.

Figure 3.4. Adjusted probabilities of participating in job-related and employer-supported adult education by type of sector



Note: See Table A.1 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 3.5. Adjusted probabilities of participating in job-related and employer-supported adult education by industrial sectors



Note: See Table A.1 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

3.1.4. Type of occupations

With few exceptions, working in higher-skilled job is associated with a higher level of investment in AE that is supported by employers. In contrast, it can be seen from Figure 3.6 that those who are in elementary occupations tend to be associated with the lowest probability of receiving employer-supported AE in nearly all participating

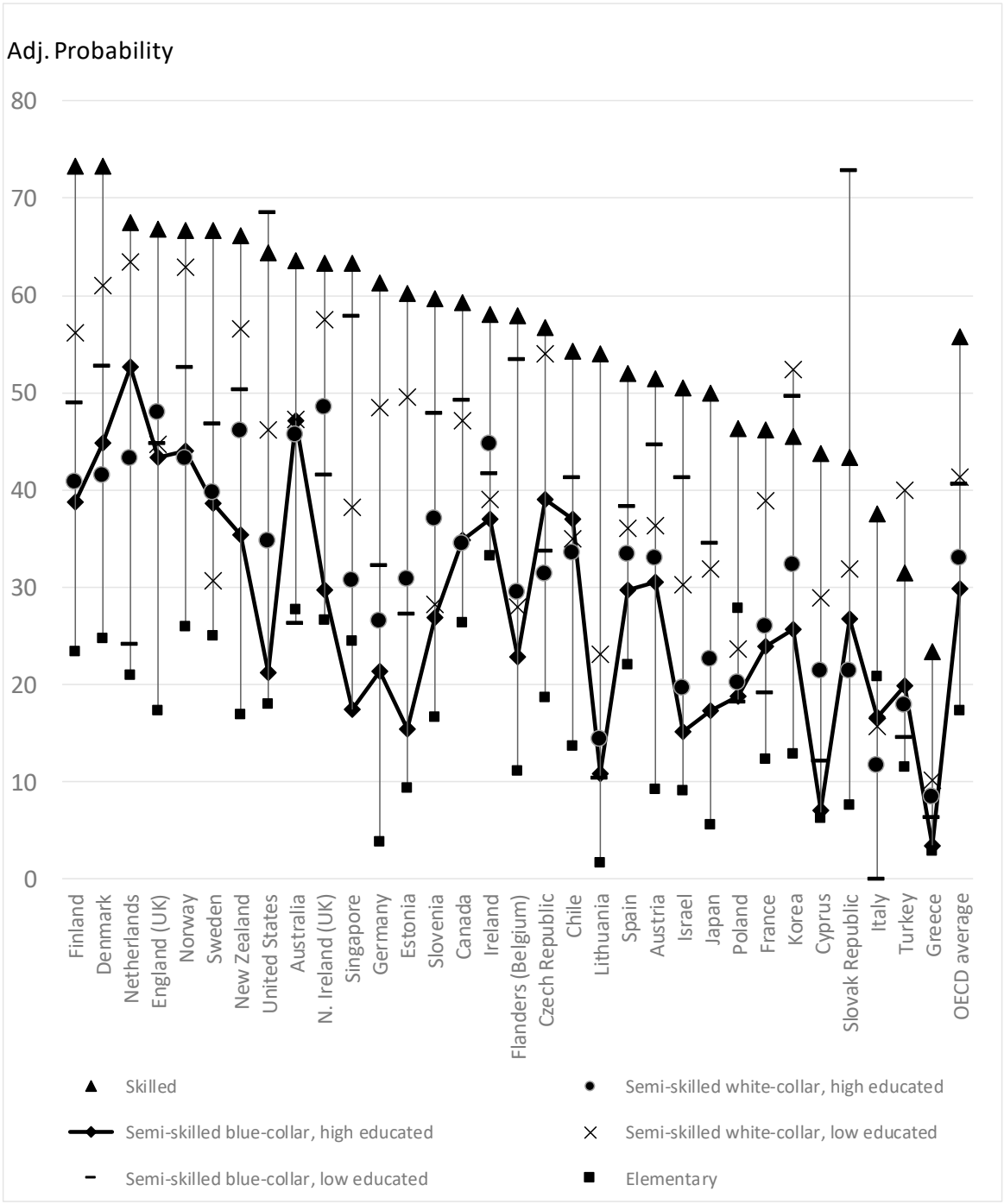
countries and economies. Semi-skilled workers are somewhere in between. A distinction is made between semi-skilled workers who have high and low levels of education and whether they are in white- or blue- collar type jobs. The patterns among these different types of workers are mixed but a few insights emerge. First, in many of the countries considered, semi-skilled white-collar workers with post-secondary education tend to show a higher probability of receiving employer-supported AE compared to other semi-skilled workers. Second, in most countries, differences in the probability of receiving employer support are either small or insignificant whether blue-collar workers have some post-secondary education or not (i.e. high or low levels of education). Third, blue-collar workers (e.g. tradesmen, skilled craftsmen and plant operators) are in all cases associated with substantially lower probabilities of receiving employer-supported AE than skilled workers (e.g. managers, professionals and associate professionals). Notably, blue-collar workers have the highest probabilities (over 0.4) of receiving employer-supported AE in Australia, England (United Kingdom), Ireland, the Nordic countries, and the Netherlands.

3.1.5. Job content, skill use and informal learning in the economy

Even among skilled, semi-skilled or unskilled jobs, differences arise in terms of specific work practices such as the extent and use of reading, ICTs and learning as part of regular work activity as well as the degree of task discretion enjoyed by different workers. Although imperfect, these are all indicators that reflect the level of autonomy of workers and need to cope with non-routine matters at work, for example, the need to learn, adjust, and adapt to changing conditions and tasks. Workers who are in these more dynamic situations appear to receive most employer-supported AE.

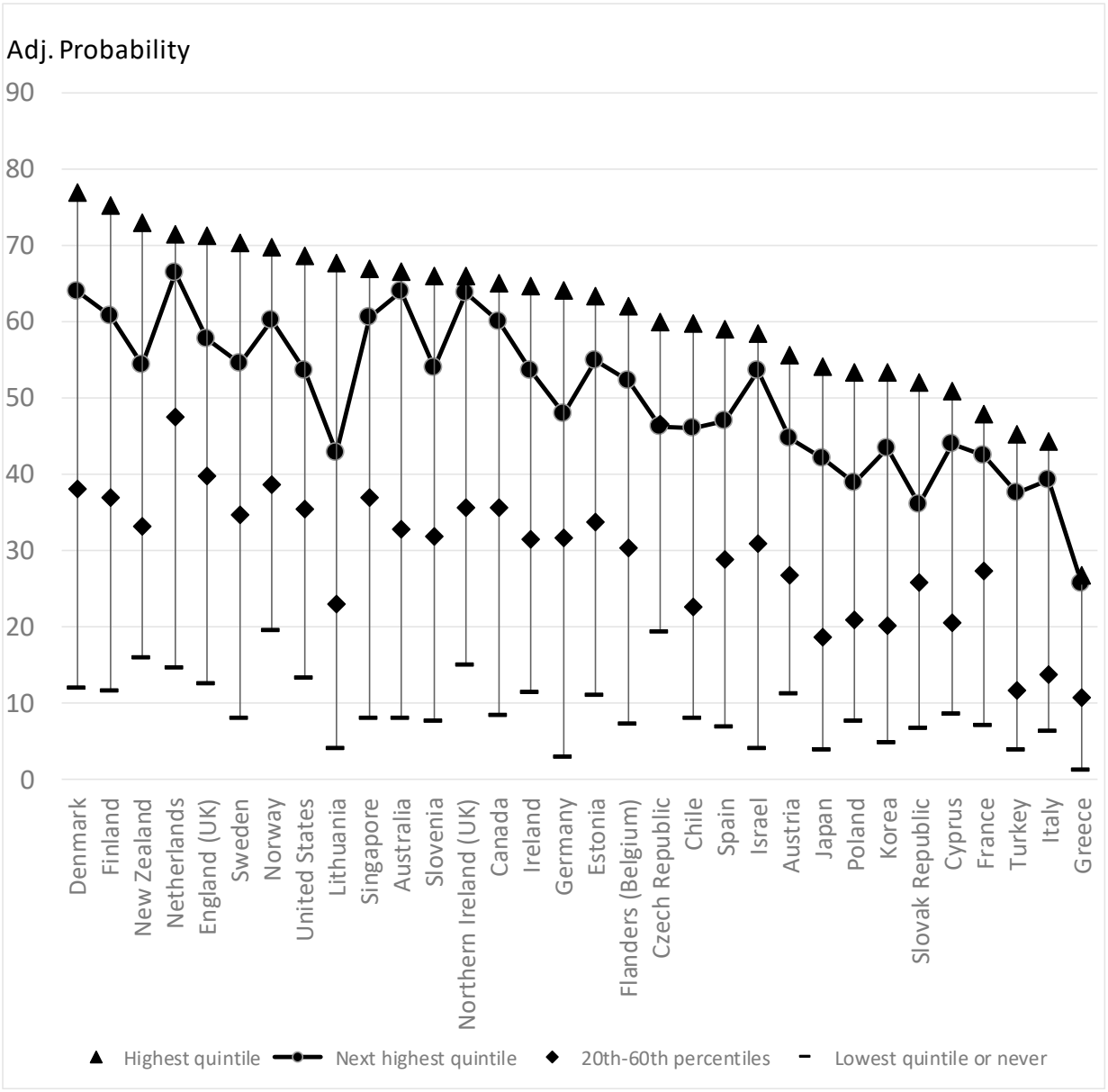
Figure 3.7 reveals that regardless of all other factors, the extent to which reading is a regular activity at work has a very strong relationship with employer-supported AE. In all countries, workers who read the most as part of their jobs are much more likely to receive employer support. For most countries above the cross-country average, the top 40% of readers within each country have probabilities of receiving support that exceed 0.5. In contrast, in most countries, those who read little or never as part of their job have a probability that is less than 0.1. The pattern is very similar in terms of the use of ICTs at work and respondents' self-report on the degree to which they have opportunities to learn at work as can be seen from Figures 3.8 and 3.9. The pattern in terms of task discretion at work is more compressed as can be seen in Figure 3.10. In other words, workers with little to no discretion at work in terms of how they organise or sequence their work are associated with significantly lower probabilities of participation in employer-supported AE compared to workers who have some to a lot of task discretion.

Figure 3.6. Adjusted probabilities of participating in job-related and employer-supported adult education by occupational type



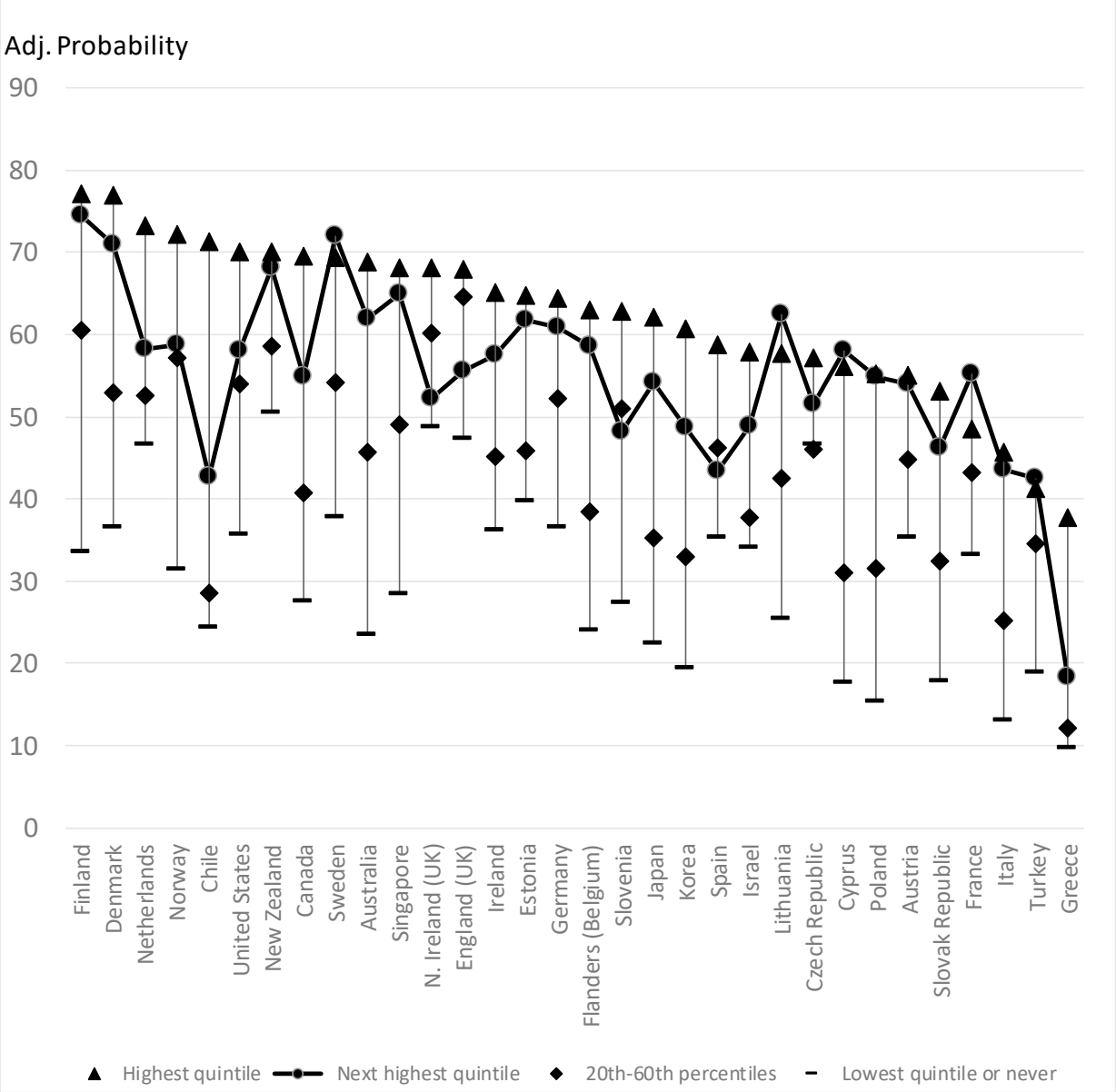
Note: See Table A.1 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 3.7. Adjusted probabilities of participating in job-related and employer-supported adult education by intensity of reading at work



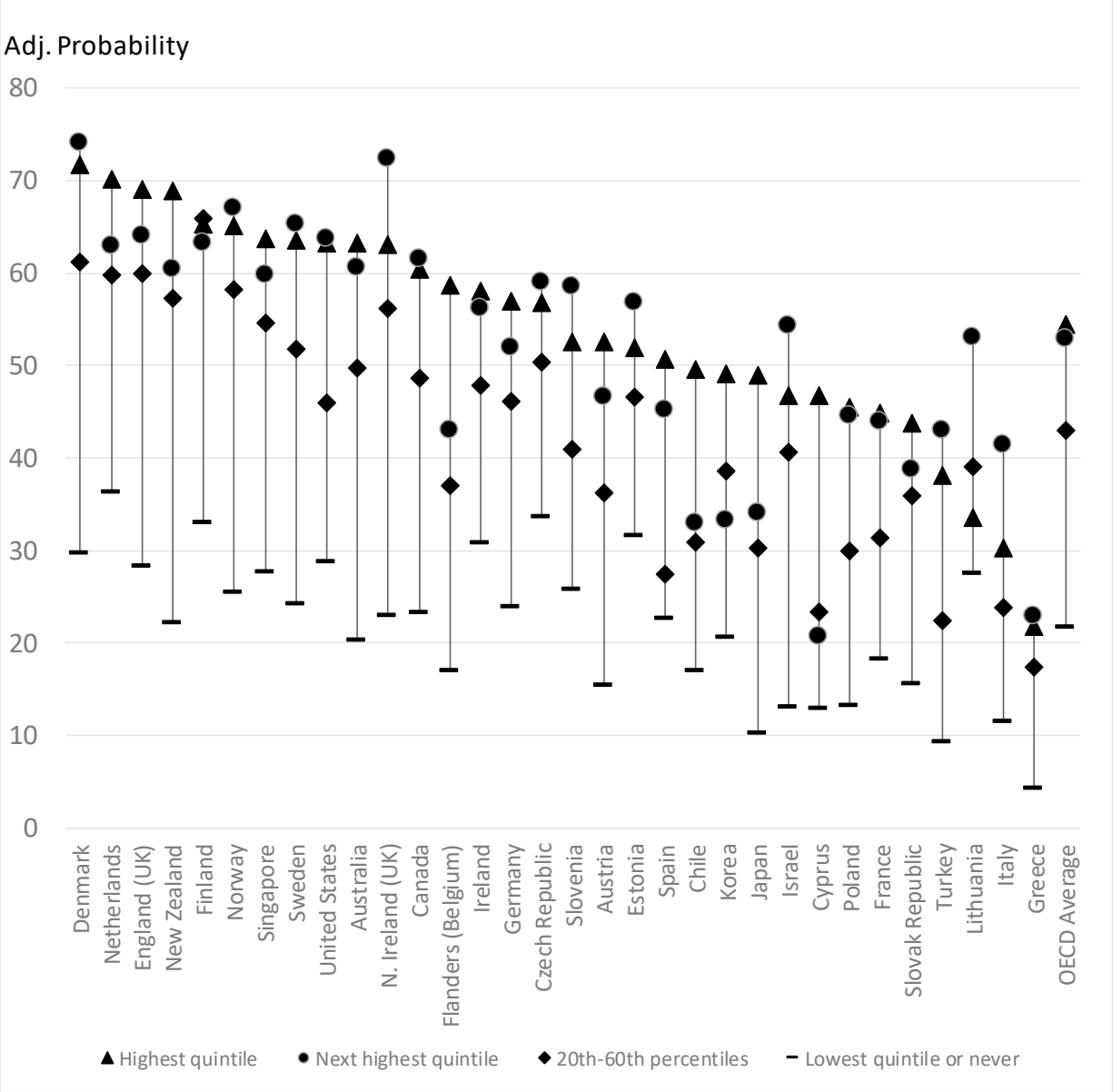
Note: See Table A.1 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 3.8. Adjusted probabilities of participating in job-related and employer-supported adult education by intensity of ICT use at work



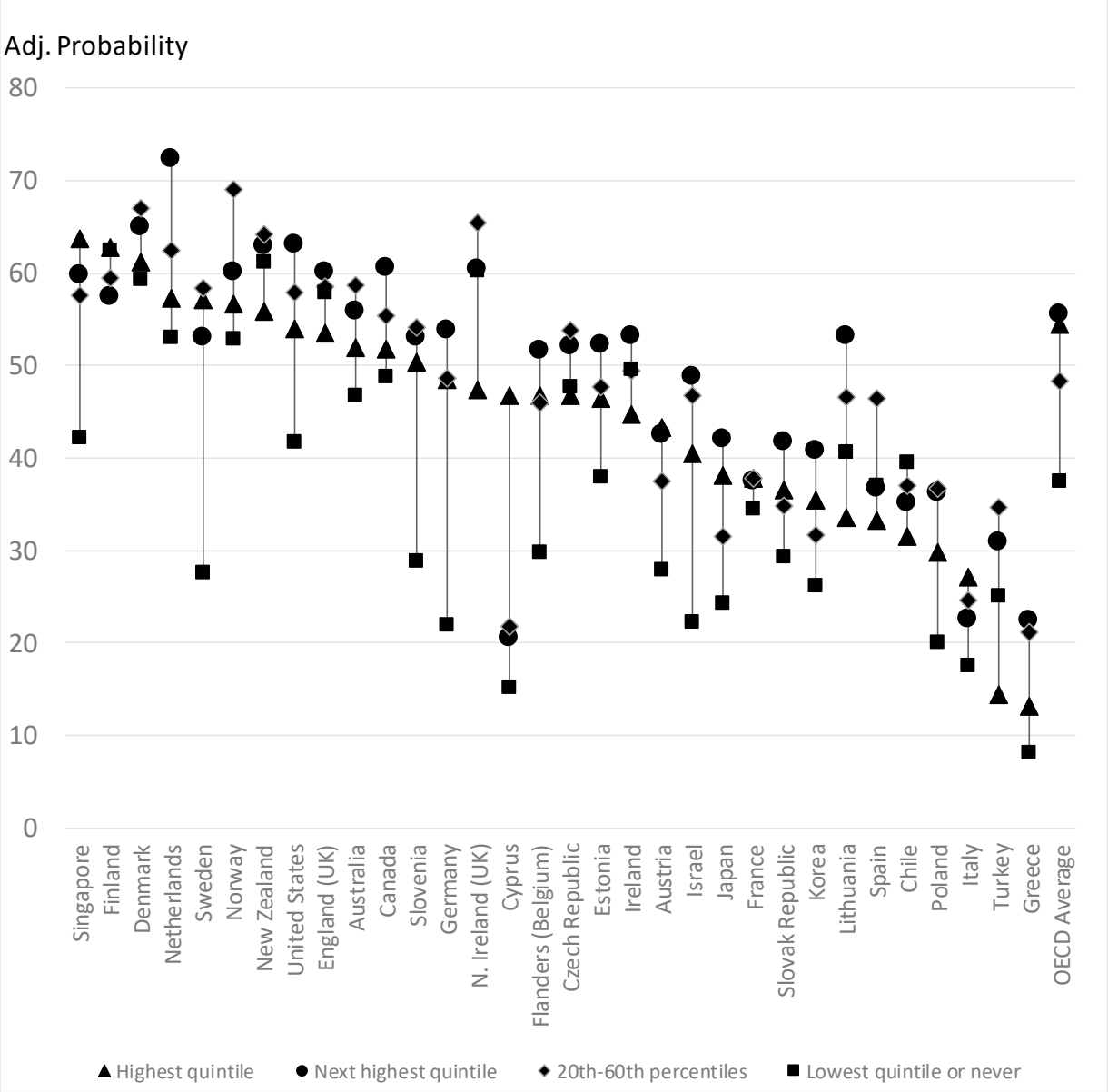
Note: See Table A.1 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 3.9. Unadjusted probabilities of participating in job-related and employer-supported adult education by an index of self-reported opportunities to learn at work



Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 3.10. Unadjusted probabilities of participating in job-related and employer-supported adult education by an index of self-reported task discretion at work



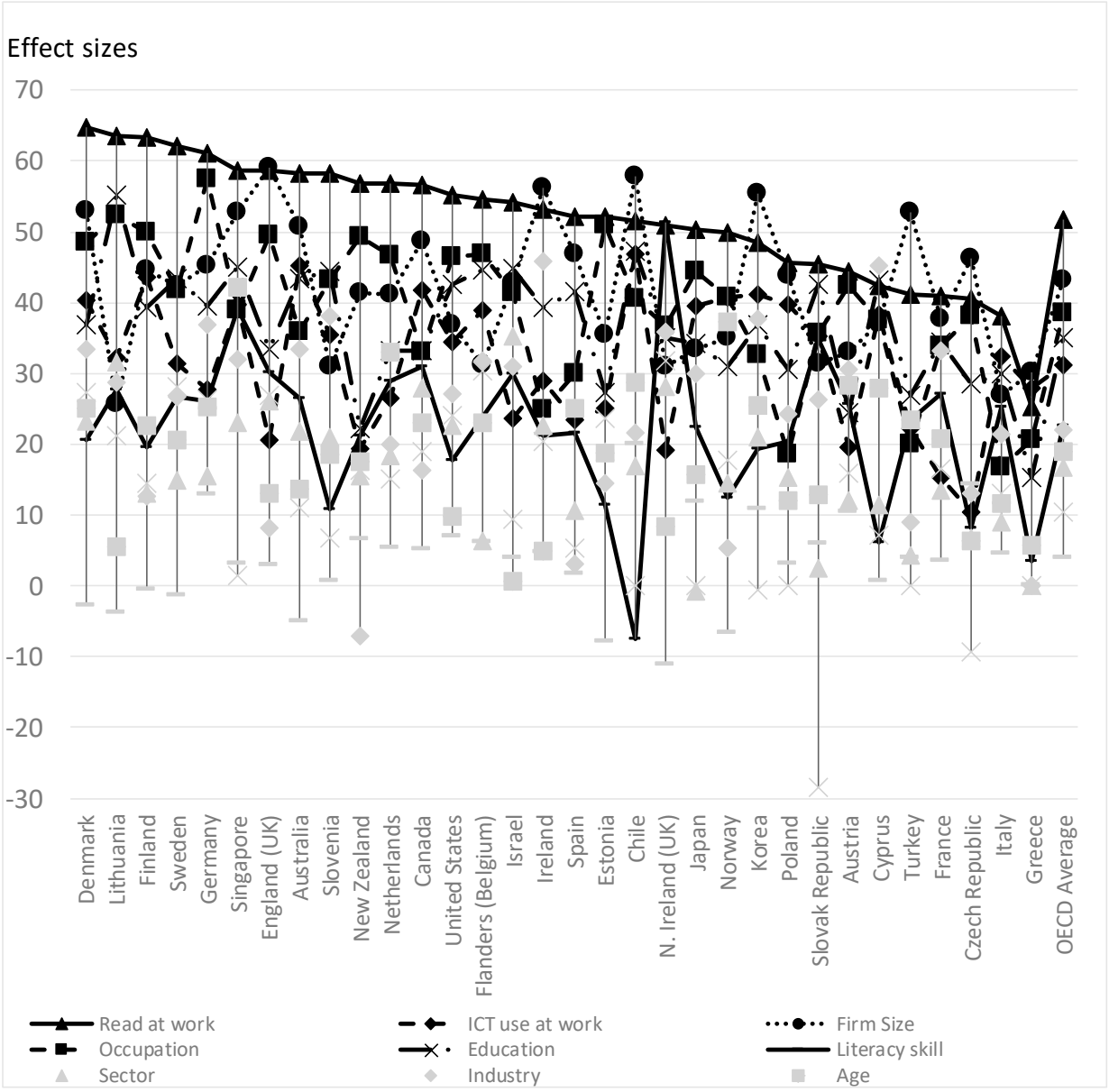
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

3.1.6. Summary of job-related factors related to employer-supported AE

This chapter so far has provided an overview of the relationship of a range of job-related factors and employer-supported AE. Figure 3.11 summarises the effect sizes associated with each factor considered in the analysis to provide an overview of the strongest factors that relate to employer-supported AE. Effects sizes are calculated as the

difference in adjusted probabilities between two contrast categories associated with a single variable (e.g. difference in adjusted probabilities between the largest and smallest firms). Consistent with the finding that the relationship between reading at work and employer-supported AE is very strong as discussed above, results show that in nearly all countries, reading at work is one of the most important variables predicting participation in employer-supported AE. The pattern across countries regarding other factors are more mixed but it can be discerned that in most countries, job-related factors are more important than socio-demographic factors or alternatively individual characteristics in predicting employer-supported AE. While results for the socio-demographic factors included in the analysis are discussed later in Chapter 4, they are included here to provide an overview of the relative significance of all factors included in the analysis. Educational attainment and literacy proficiency tend to be the most important individual characteristics related to employer-supported AE, but the pattern shows that in most countries, these are intertwined with a range of job-related factors as being the most important including reading at work, ICT use at work, firm size and type of occupation.

Figure 3.11. Summary of effect sizes of a range of work-related variables predicting participation in job-related and employer-supported adult education



Note: Effect sizes are expressed as the difference in the predicted probabilities associated with contrast categories for each of the independent variables included in the multivariate analysis.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

3.2. Labour market returns to formal adult education

Most adult learning is undertaken for job-related reasons, either to obtain a job, a better job, to be promoted or some other reason related to improvement of performance or betterment in some way at the individual and/or firm level. Much of it is employer-supported but individuals and governments pay for this too. Thus, it is important to

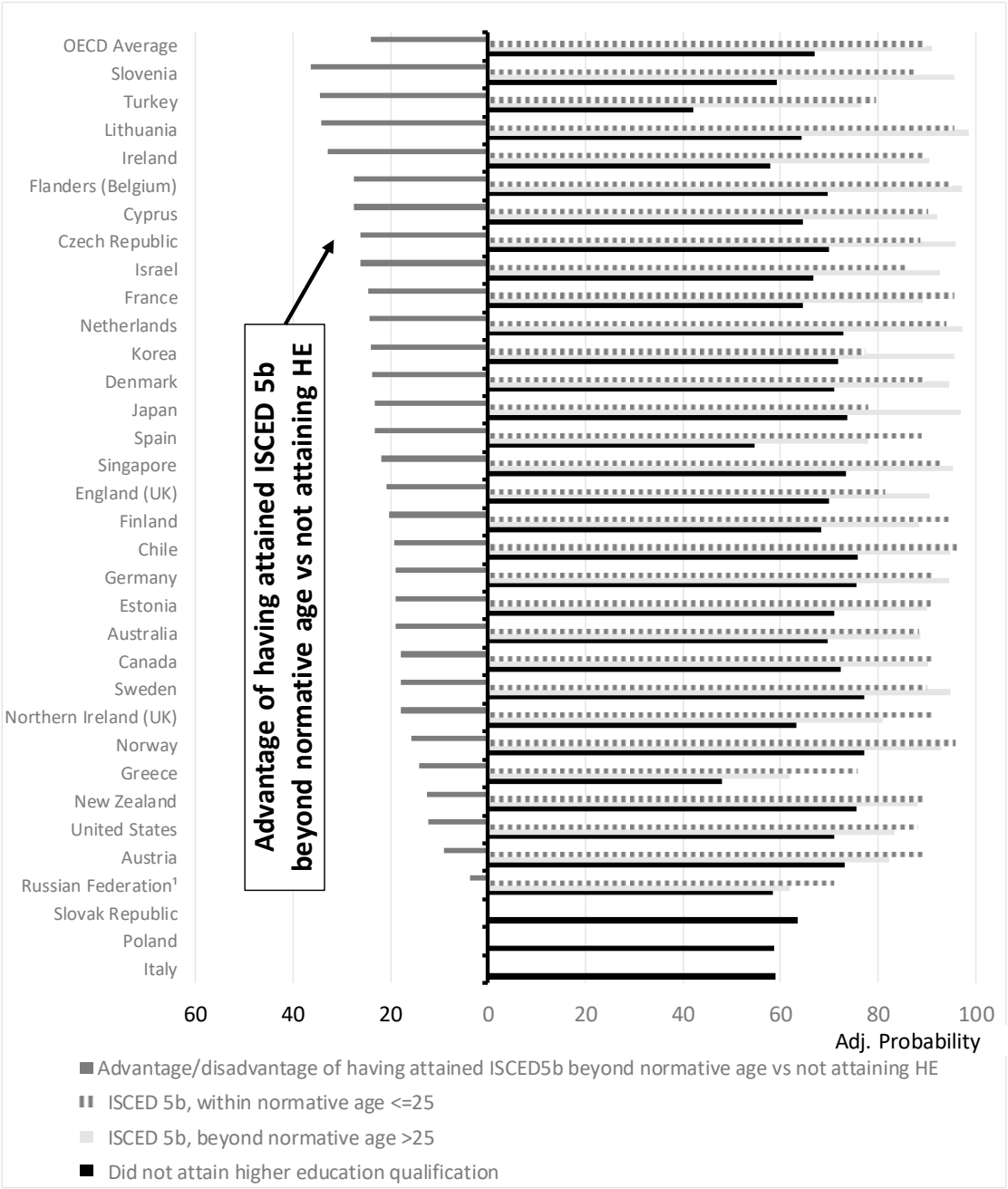
consider some of the ways in which this investment in adult learning might be paying off. Although there are studies that examine the impact of training on performance and productivity, it is generally difficult to establish the impact of one-off training incidents, which is an important form of non-formal AE, since it is difficult to account for complexities surrounding interactive and dynamic effects such as the fact that learning has cumulative effects over one's lifespan and interacts with the development of competencies. In contrast, analyses of the relationship between qualifications and outcomes are more straightforward because they reflect an accumulation of past activity and their value is often widely recognised in the labour market. Given the increasing significance of formal AE and thus the fact that qualification systems are becoming more open and flexible to non-traditional students in many OECD countries, it is important to consider the relationship between adults who completed their qualification as traditional vs non-traditional students and selected labour market outcomes.

The following considers some of the potential benefits associated with formal education structures that are more open and flexible. Table A.2 summarises the results of an analysis that produced the adjusted probabilities of being employed by level of qualification which was attained either as a traditional or non-traditional student. Only gender is adjusted for in this analysis since labour market participation rates vary considerably by gender among the countries considered. Similarly, Table A.3 summarises results of an analysis that estimated the earnings premiums associated with attaining higher level qualifications whether they were attained at younger or older ages. These results are adjusted for the degree of labour market attachment as measured by the intensity of working time, as well as age, gender, and immigrant and language status.

3.2.1. Returns to adult higher education (AHE)

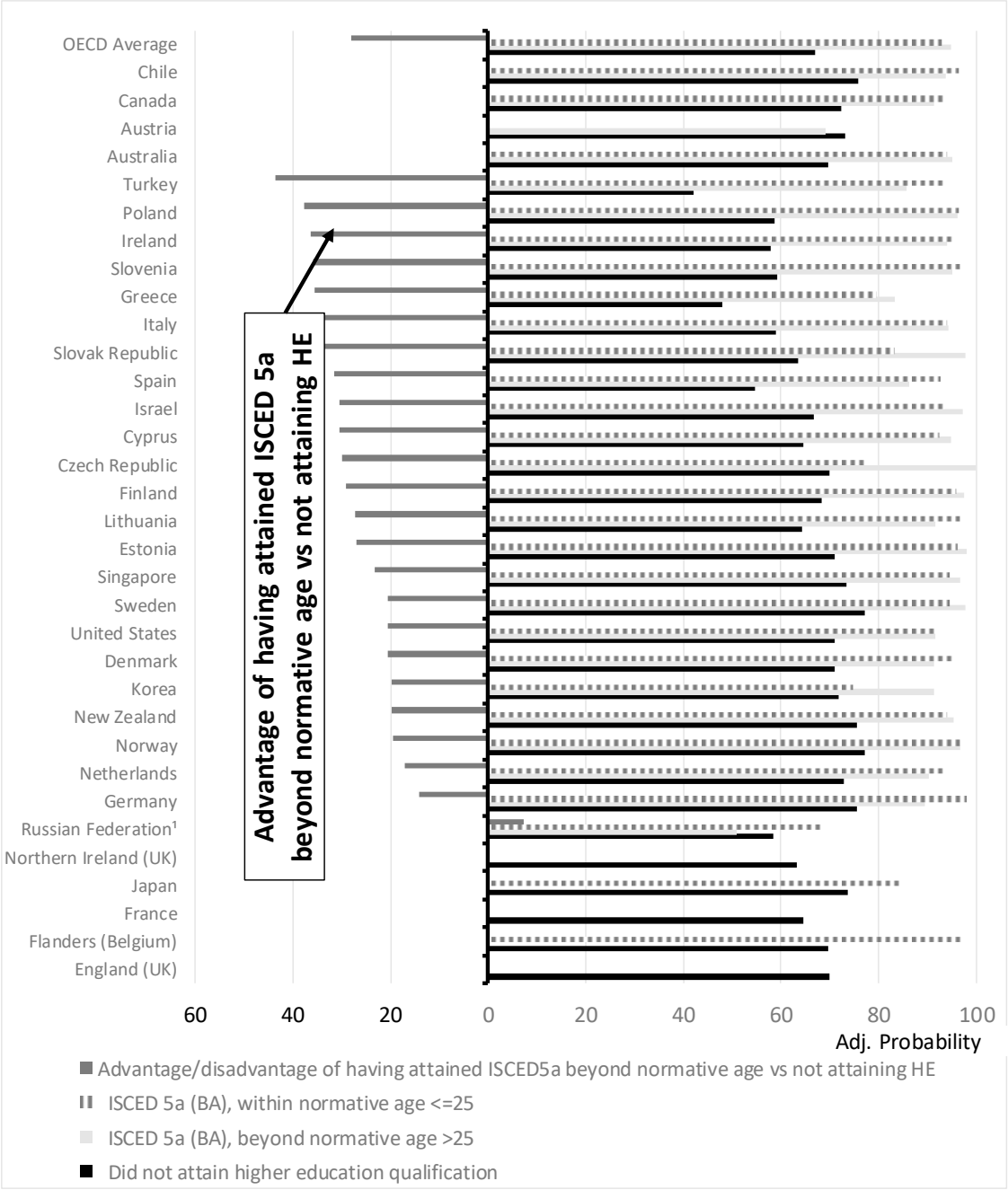
Attaining a higher education degree is strongly associated with a higher probability of employment regardless of whether the qualification was attained following the front-loaded path or at an older age. Figures 3.12 and 3.13 compares the adjusted probabilities associated with having completed, respectively, a post-secondary professional degree (ISCED 5b) or bachelor's degree (ISCED 5a), as traditional or non-traditional students with adults who did not attain any higher education qualification. The pattern across countries is mixed in terms of whether attaining the higher qualification at younger or older ages is associated with the highest probability of being employed with some countries showing an advantage for those who completed within the shortest and most direct path and others showing an advantage for those who completed at an older age. The results however, show that in nearly all countries adults who completed their higher education qualification at an older age are associated with a substantially higher probability of being employed compared to adults who did not attain any higher education qualification. A sensitivity analysis adding an additional five years to the threshold age distinguishing traditional and non-traditional students reveals similar results [see (Desjardins, R. & Lee, J., 2016[23])].

Figure 3.12. Adjusted probability of employment for adults 26 to 65 who attained a post-secondary professional degree (ISCED 5b) as traditional or non-traditional students vs those who did not attain any higher education



Note: See Table A.2 for data.
[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 3.13. Adjusted probability of employment for adults 26 to 65 who attained a bachelor's degree (ISCED 5a) as traditional or non-traditional students vs those who did not attain any higher education

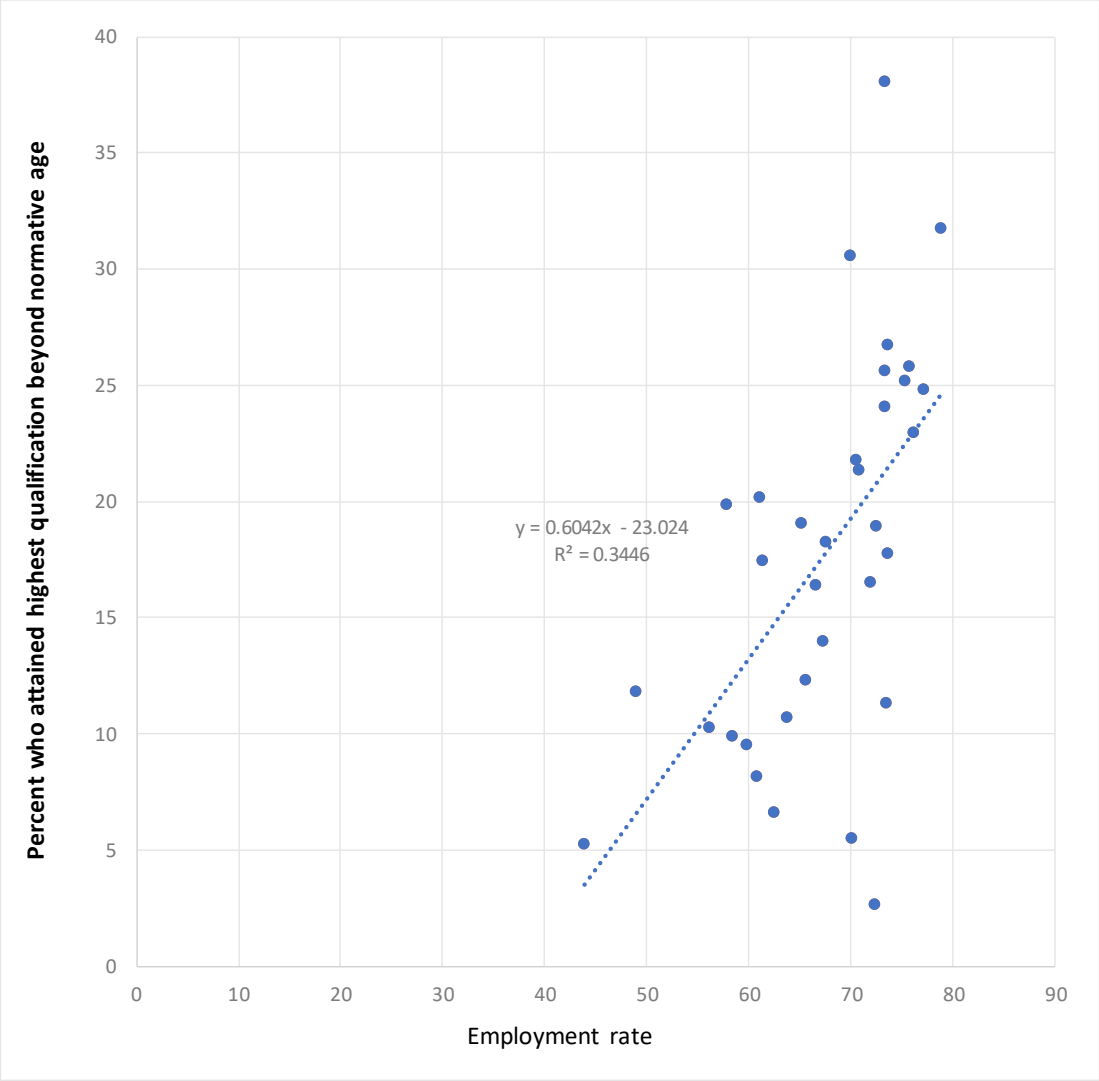


Note: See Table A.2 for data.
[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

The results suggest the possibility that more open and flexible higher education systems promote employability and labour market attachment among adult populations. In fact,

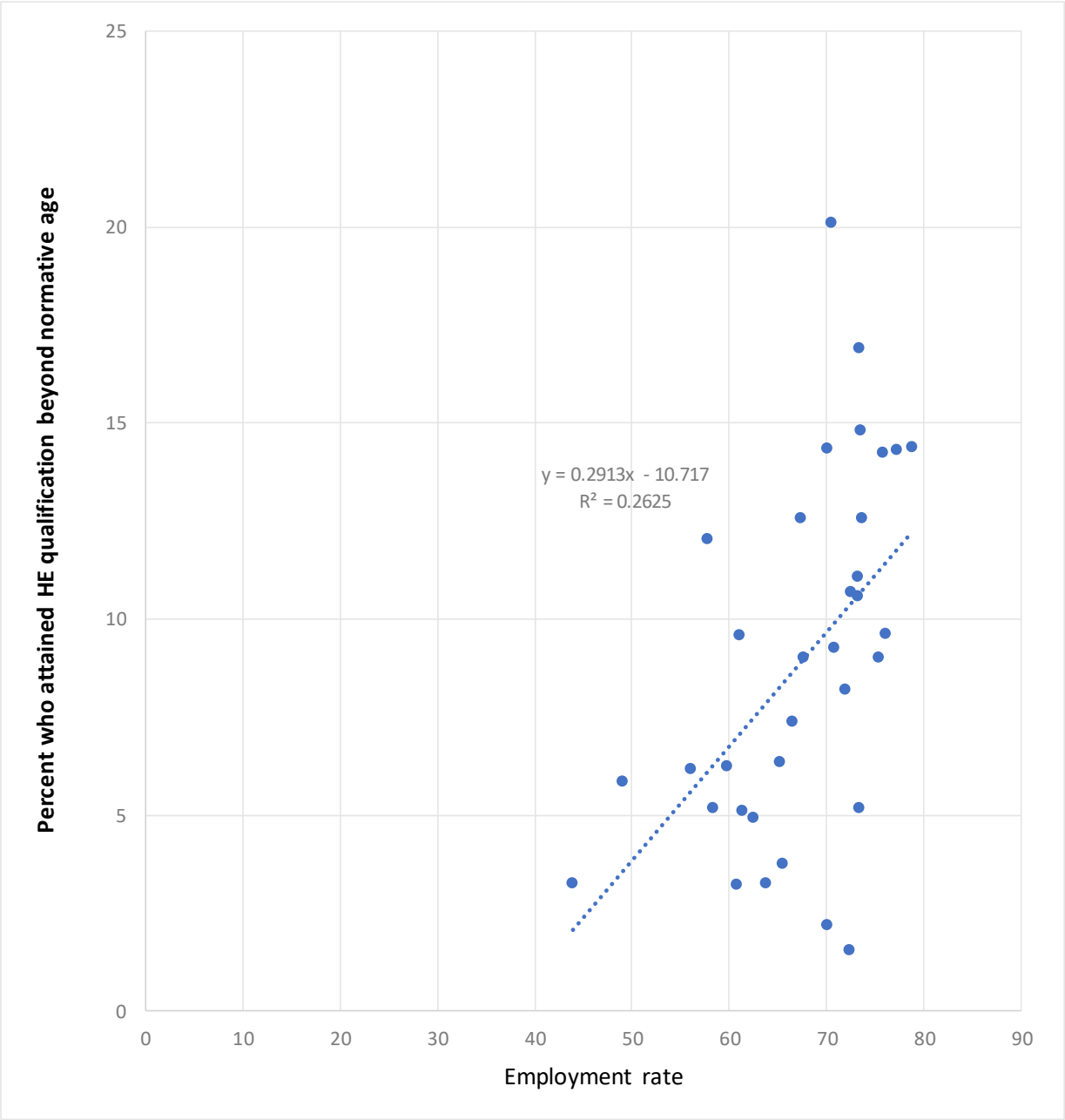
more open and flexible higher education systems as well as more generally formal education systems, appear to be strongly correlated with the employment rate across countries. Figures 3.14 and 3.15 display the relationship between the overall employment rate and the proportion of the adult population who, respectively, attained their highest qualification or higher education qualification at an older age. Results show a very strong correlation which suggests the possibility that open and flexible qualification systems may play a strong role in fostering employment in the economy.

Figure 3.14. Openness of formal education systems to non-traditional students and employment rate



Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 3.15. Openness of higher education systems to non-traditional students and employment rate

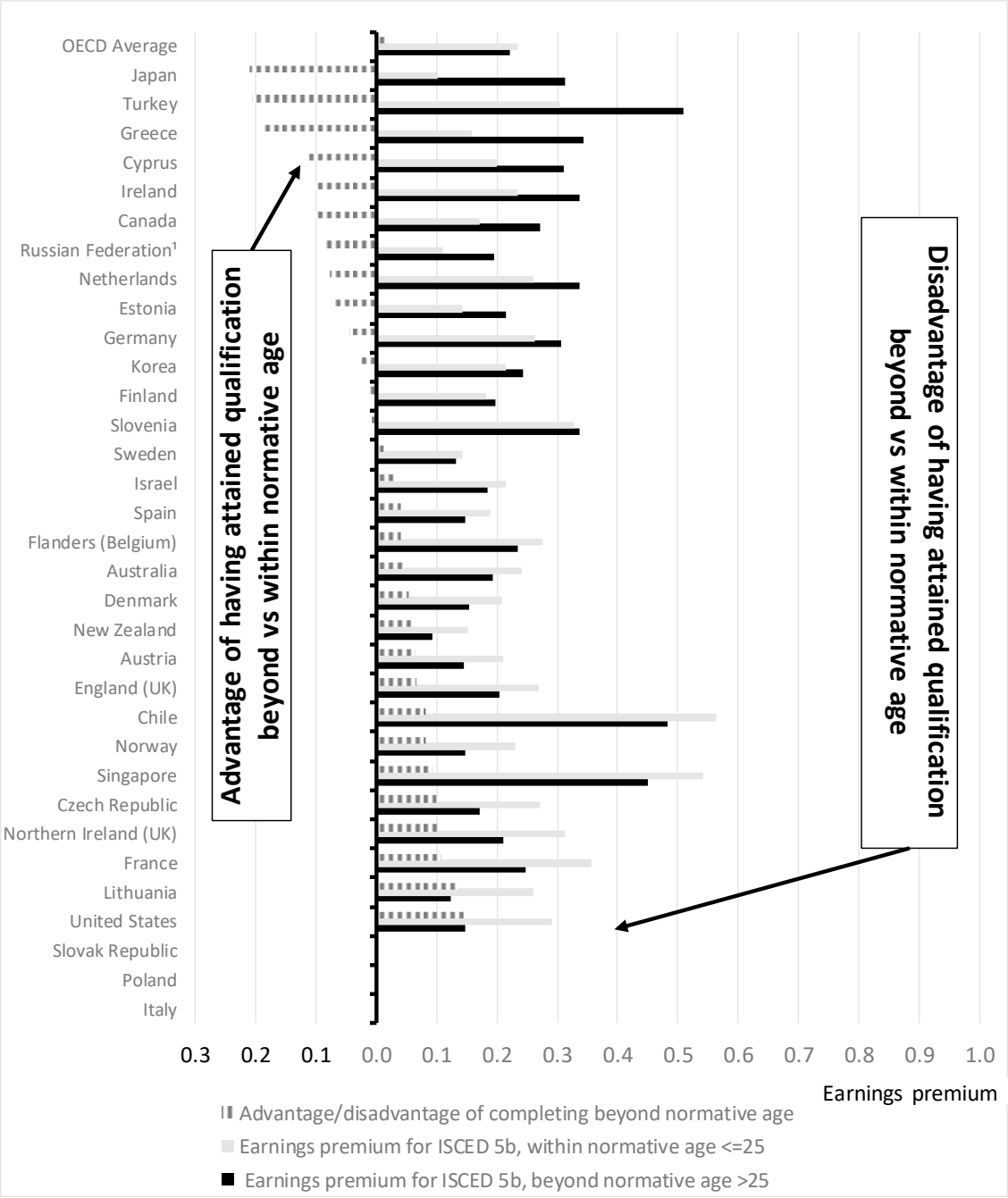


Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Regardless of the age at which adults complete a higher education degree, they are on average expected to earn a premium compared to those who do not attain a higher education degree. Figures 3.16 and 3.17 show the earnings premiums for adults who completed, respectively, a post-secondary professional degree (ISCED 5b) or bachelor's

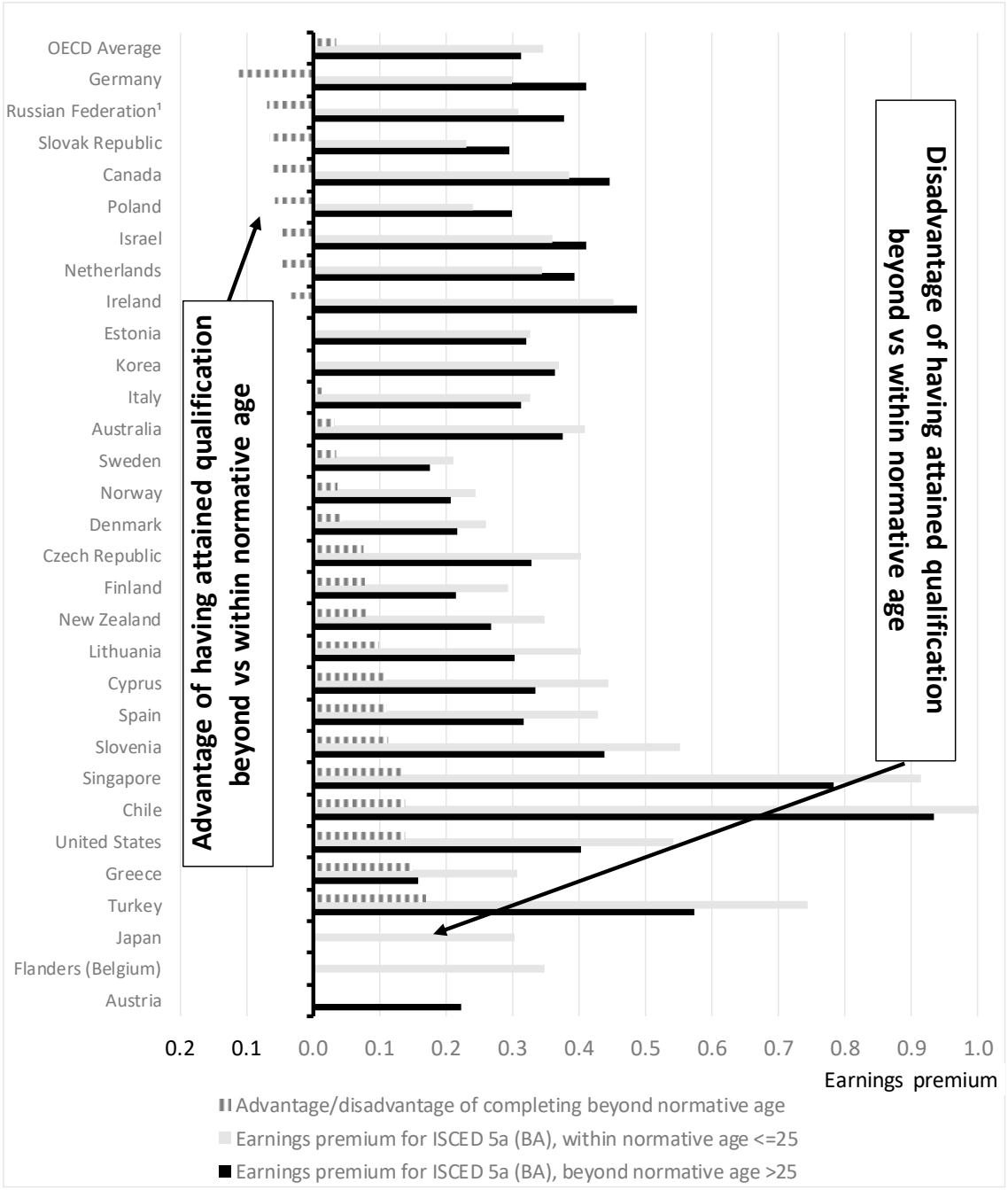
degree (ISCED 5a). Premiums are generally higher for adults who attained a bachelor's degree or equivalent (ISCED 5a) but in nearly all countries premiums are significant regardless of degree or whether it was attained at younger or older ages. Attaining a professional degree (ISCED 5b) as a non-traditional student as opposed to traditional student provides an earnings advantage in a few countries such as Canada, Greece, the Netherlands and Ireland, and in a few others, it provides an earnings disadvantage such as in France and the United States. Similarly, this is the case for a bachelor's degree (ISCED 5a) but the pattern among countries varies depending upon the specific context related to the prevalence and valuation of different degrees, selection effects associated with different educational structures as well as norms surrounding the attainment of education without having followed the front-loaded path reflecting the shortest and most direct path. A sensitivity analysis adding an additional five years to the threshold age distinguishing traditional and non-traditional students reveals similar results [see (Desjardins, R. & Lee, J., 2016[23])].

Figure 3.16. Earnings premium for adults 26 to 65 who attained a post-secondary professional degree (ISCED 5b) as traditional or non-traditional students vs those who did not any higher education



Note: See Table A.3 for data.
[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 3.17. Earnings premium for adults 26 to 65 who attained a bachelor's degree (ISCED 5a) as traditional or non-traditional students vs those who did not any higher education



Note: See Table A.3 for data.
[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

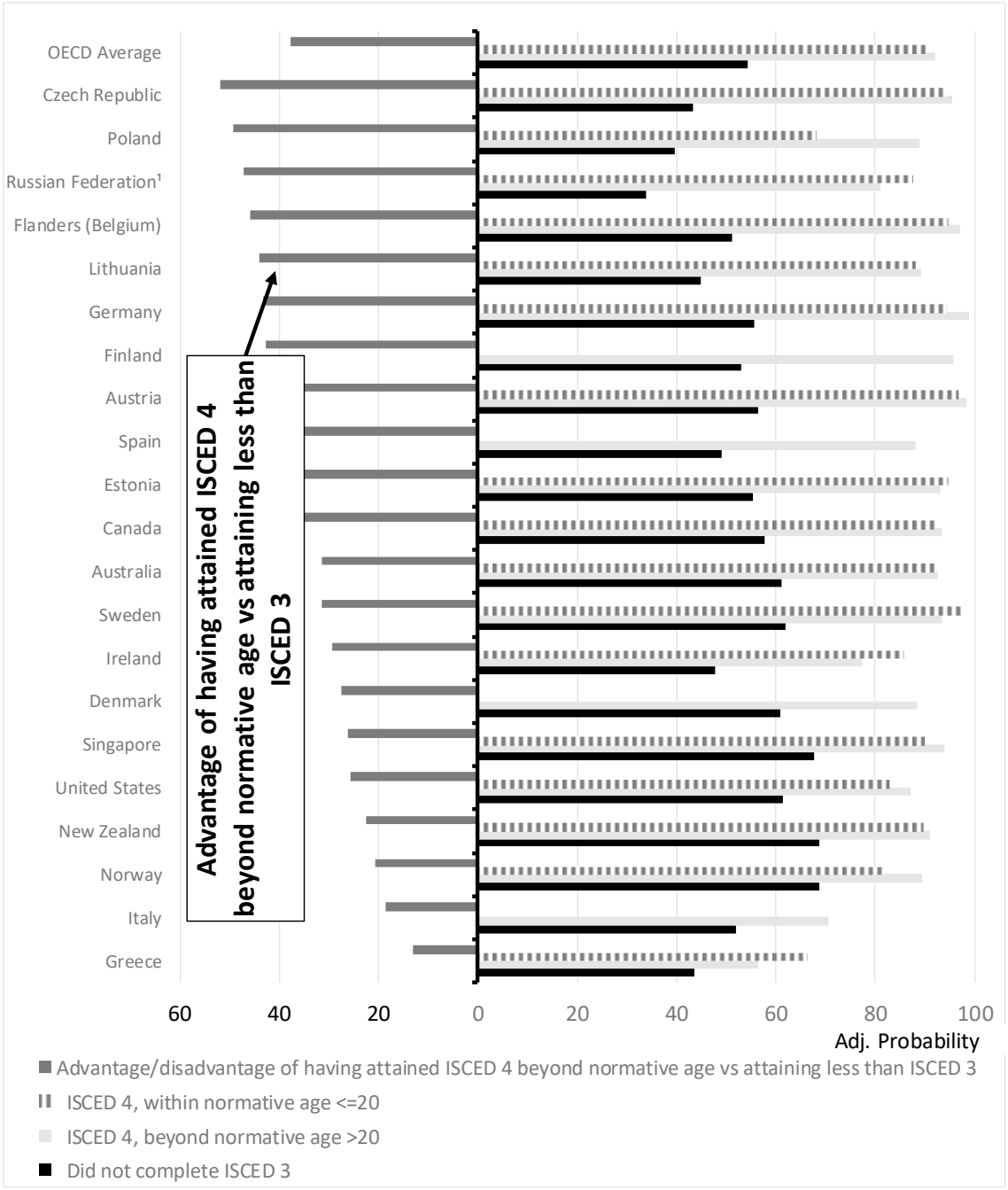
3.2.2. Returns to adult vocational education (AVE) and second chance education (AGE)

Although there is country to country variations, the overall patterns relating to the attainment of vocational or upper secondary education, which correspond to ISCED Levels 3 and 4, as traditional or non-traditional students, are generally like those discussed above for higher education. In this regard, open and flexible formal educational structures at all levels are in nearly all cases associated with substantive labour market benefits.

Figures 3.18 and 3.19 show the probabilities of employment for adults who attained a vocational oriented qualification or equivalent (ISCED 4) and upper secondary qualification or equivalent (ISCED 3), respectively, as traditional or non-traditional students. Figures 3.20 and 3.21 compares the corresponding earnings premiums.

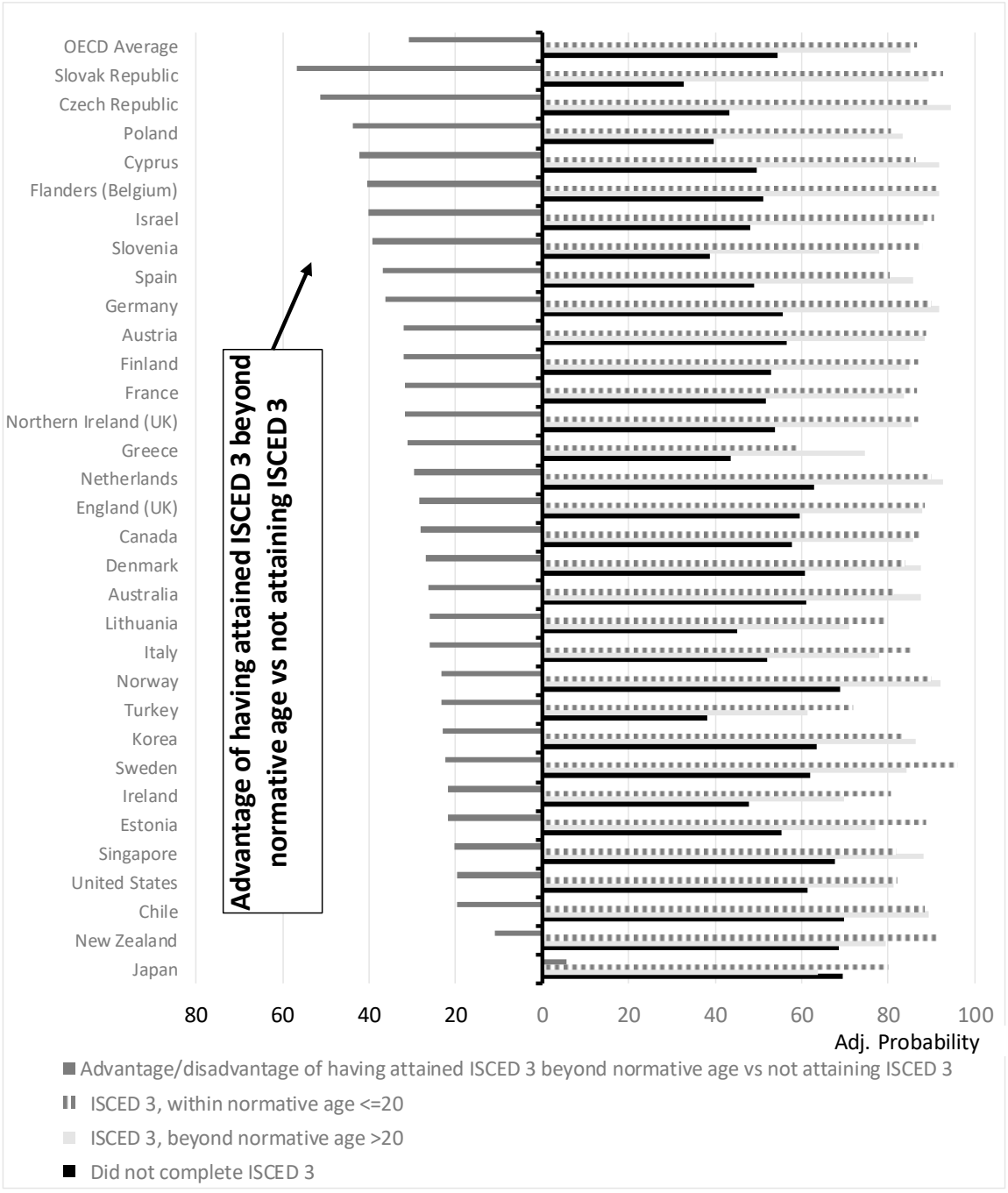
In nearly all cases, there is a substantial boost in the probability of employment as well as earnings that are associated with the fact that adults were permitted to complete their qualification at an older age. In some countries, many of these adults participated in the regular system of education where there is little distinction between traditional and non-traditional students. In other countries, many adults would have been unable to complete their qualification at an older age had it not been for provisions that were developed specifically for this purpose. In Finland, for example, although few adults in practice choose to attend regular upper secondary education, they may do so if they choose to, or alternatively, they may pursue provisions designated for non-traditional students. Many other countries have night schools that provide adults with second chances to complete their upper secondary qualifications. The data in Figures 3.18 and 3.19 suggest that these efforts are strongly associated with higher probabilities of employment. Similarly, the data in Figures 3.20 and 3.21 show that there is pay off to doing so in terms of earning more than if they had not attained their qualification at an older age.

Figure 3.18. Adjusted probability of employment for adults 26 to 65 who attained a vocationally oriented qualification (ISCED 4) as traditional or non-traditional students vs those who attained ISCED 3 or less



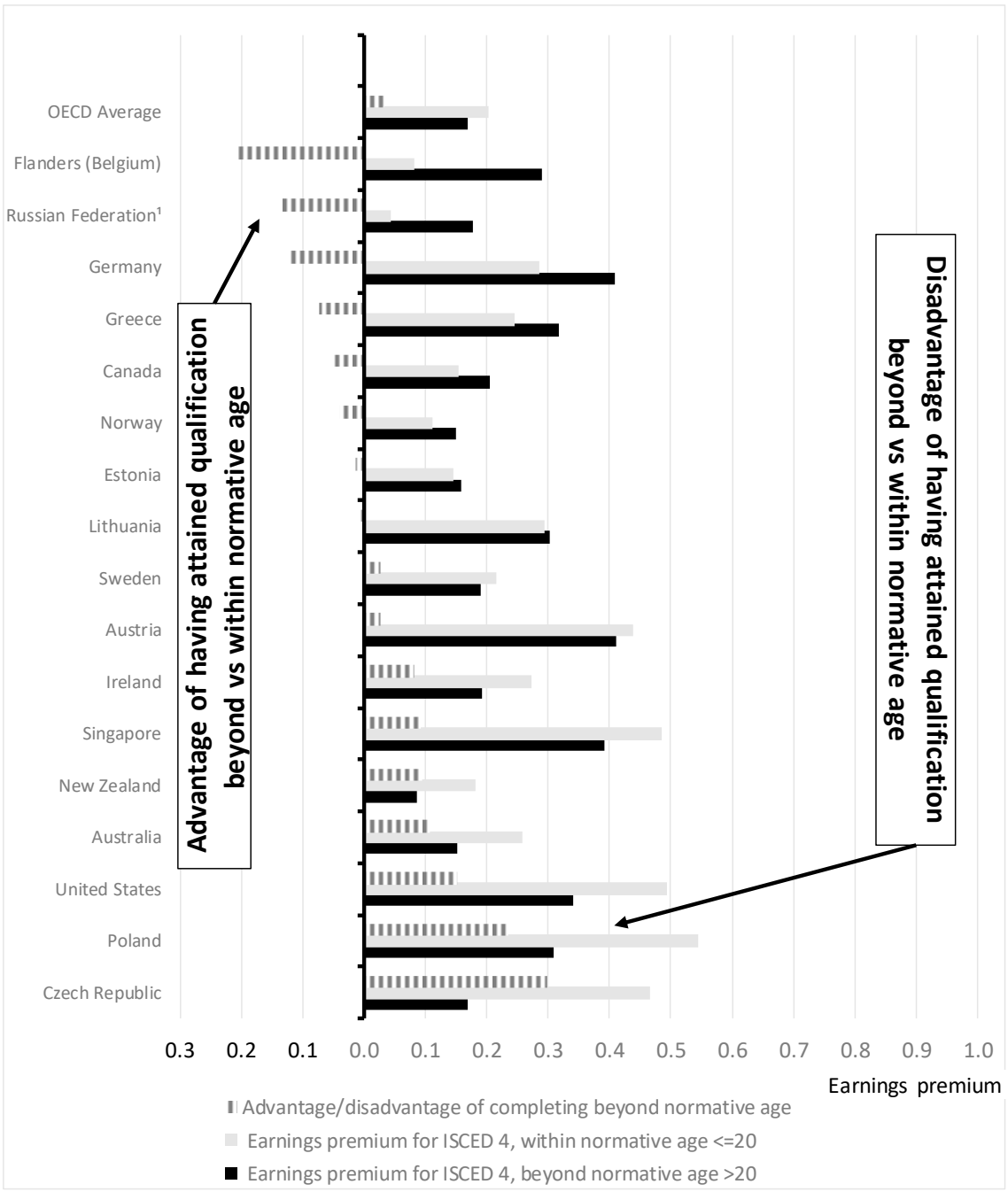
Note: See Table A.2 for data.
[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 3.19. Adjusted probability of employment for adults 26 to 65 who attained an upper secondary qualification (ISCED 3) as traditional or non-traditional students vs those who attained less



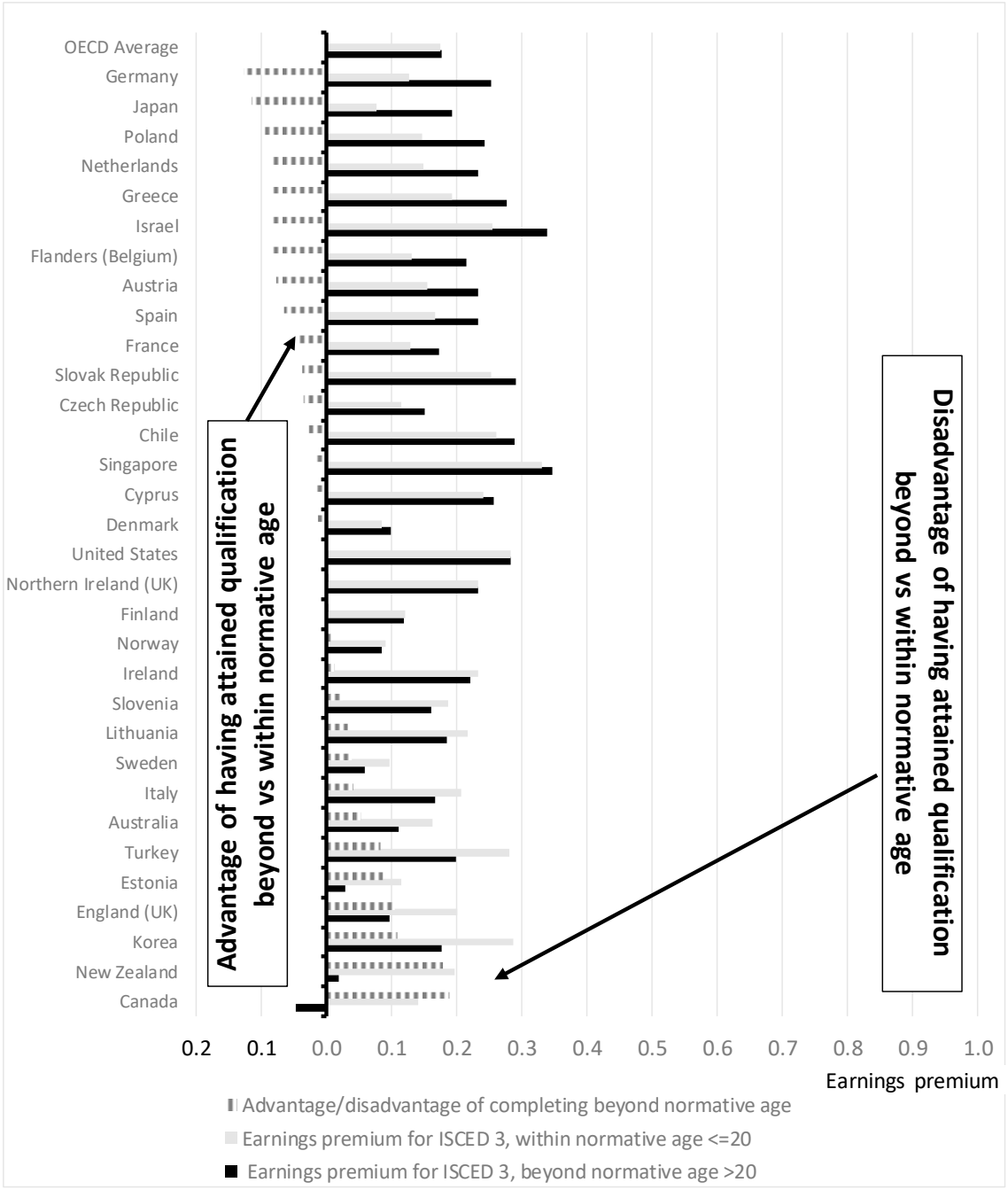
Note: See Table A.2 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 3.20. Earnings premium for adults 26 to 65 who attained a vocationally oriented qualification (ISCED 4) as traditional or non-traditional students vs those who attained ISCED 3 or less



Note: See Table A.3 for data.
[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 3.21. Earnings premium for adults 26 to 65 who attained an upper secondary qualification (ISCED 3) as traditional or non-traditional students vs those who attained less



Note: See Table A.3 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

3.2.3. Summary

This chapter provided an overview of the relationship of a range of job-related factors and employer-supported AE. Results show that in nearly all countries, reading at work is one of the most important variables predicting participation in employer-supported AE. The pattern across countries regarding other factors are more mixed but it can be discerned that in most countries, job-related factors are more important than socio-demographic factors or alternatively individual characteristics in predicting employer-supported AE. Educational attainment and literacy proficiency tend to be the most important individual characteristics related to employer-supported AE, but the pattern shows that in most countries, these are intertwined with a range of job-related factors as being the most important including reading at work, ICT use at work, firm size and type of occupation. Given the increasing significance of formal AE and thus the fact that qualification systems are becoming more open and flexible to non-traditional students in many OECD countries, this chapter also considered the relationship between adults who completed their qualification as traditional vs non-traditional students and selected labour market outcomes. Results overall suggest a strong positive correlation between open ad flexible qualification systems, which enable adults to complete qualifications at older ages, and a range of labour market outcomes such as the probability of being employed and working in higher paying jobs.

4. Adult learning and social inequality

This chapter shows the extent and distribution of adult learning by focusing on the probabilities of participating in Adult Education (AE) by a range of socio-demographic characteristics, namely parents' highest level of educational attainment, income, educational attainment, gender, literacy proficiency, immigrant and language status and age. The impact of the rapid growth of employer-supported AE since the 1990s on the socio-demographic distribution of participation is also considered. Separately, the relationship between formal AE and social outcomes is discussed based on an analysis of trust, political efficacy, volunteering and health outcomes associated with adults who completed their qualifications as traditional or non-traditional students.

4.1. Socio-demographic distribution of participation

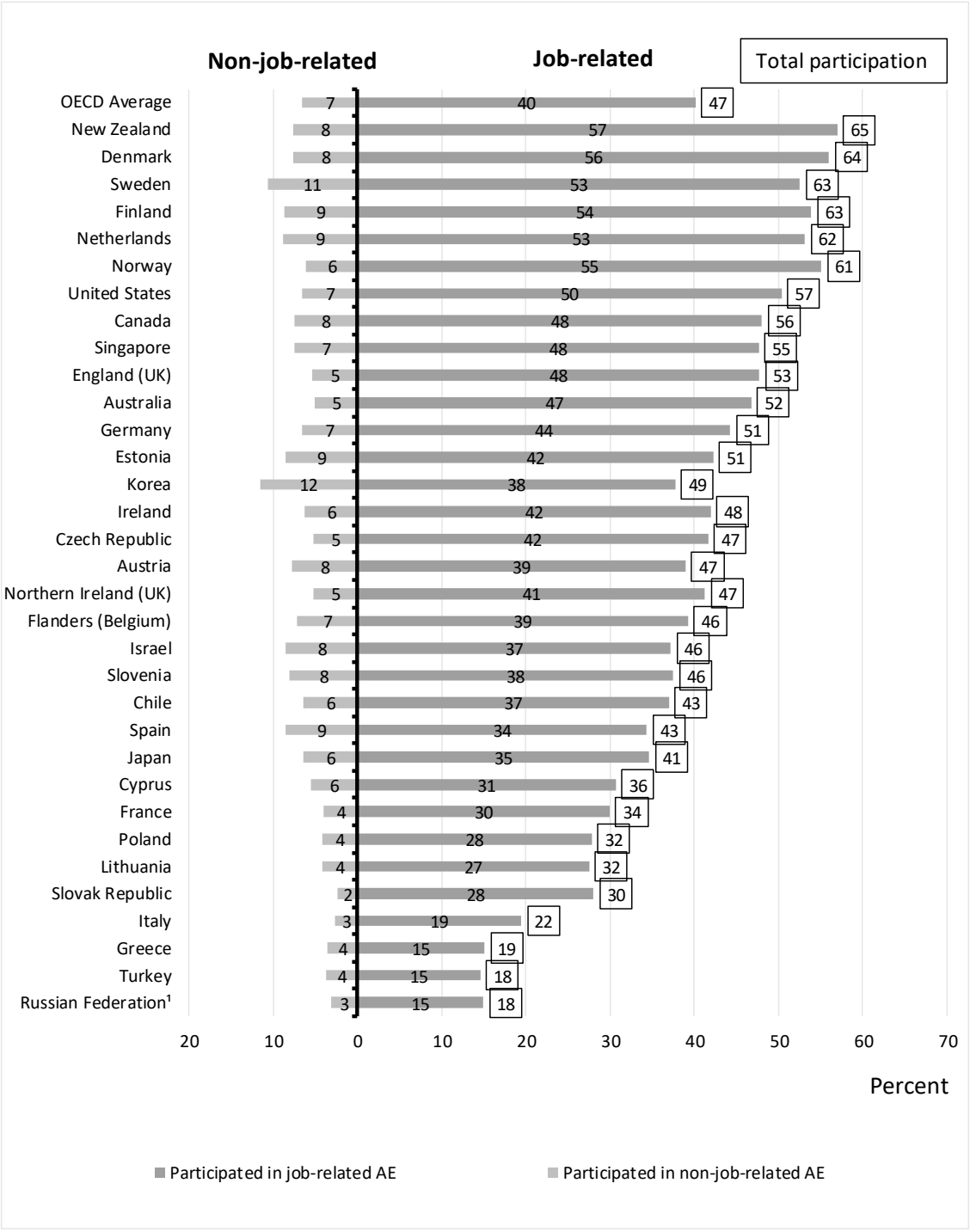
The data collected by the OECD Survey of Adult Skills on adult learning suggests that most AE is undertaken for job-related reasons. However, many adults undertake AE for both job-related and non-job-related reasons. In many cases, there are multiple reasons for undertaking a single activity, but otherwise adults who do participate tend to do so in more than one activity, each of which can be associated with different reasons. Unfortunately, it is not possible to discern the multiple reasons for undertaking AE because there was only a distinction between taking AE undertaken for job- or non-job-related reasons. Moreover, details on AE activities such as the motivation or source of support were collected only for one activity, and in choosing the activity, priority was given to job-related AE such as on-the-job training and seminars and workshops. These shortcomings are important to note for future rounds of PIAAC because AE research suggests that adults' motivations for participation are complex, often with multiple reasons such as job, personal, social and civic-related reasons intermixed and not easily distinguishable (Rubenson, 1999[26]). Furthermore, participating in all kinds of AE for different reasons can be productive in terms of forming competencies that are relevant for the labour market even if this is not always the explicit or primary intention. This is particularly pertinent for developing basic skills because this can be done in a variety of settings in ways that cater to different aspirations and motivations. Hopefully, future rounds of PIAAC will take this into account because it is desirable to understand better the underlying motivations for participation. For example, this information can be helpful for designing better initiatives and programmes, particularly ones that target low-skill adults. Specifically, more information on whether the AE activities undertaken relate to basic skills programmes will be collected given that one of the major focus of PIAAC is literacy and numeracy skills.

With this as a backdrop, it is important to note that while Figure 4.1 shows the extent of participation for job-related vs non-related reasons, the estimate of the latter somewhat underestimates the extent of AE undertaken for non-job-related reasons. Specifically, the data in Figure 4.1 on the extent of AE undertaken for non-job-related reasons relates to adults who only undertook AE for this reason and did not take any for job-related

reasons. However, many adults who undertook AE for job-related reasons, also did so for non-job-related reasons but this cannot be estimated accurately given the way the data was collected. It can be seen from Figure 4.1 that the proportion of adults who undertook AE exclusively for non-job-related reasons is highest in Korea and Sweden (12 and 11%, respectively). A comparable estimate is as low as 2 to 4% in France, Greece, Italy, Lithuania, Poland, Turkey, and the Slovak Republic which are also the countries with the lowest overall rates of participation.

While the emphasis in Chapter 3 was exclusively on job-related and employer-supported AE, this chapter considers participation in any AE. As mentioned, this is because AE undertaken for any reason can be important and relate to the development of competencies and other outcomes that are valuable at the individual, community or firm level. Accordingly, the following presents results of analyses of the distribution of any AE as well as employer-supported AE. Table A.4 presents results from an adjusted model that was estimated to provide an overview of the relative significance of major socio-demographic factors in predicting participation in any AE. The socio-demographic factors are labour force status, gender, age, immigrant and language status, educational attainment, literacy proficiency, parents' highest level of education and income from earnings. As in Chapter 3, the model was fitted using the binary logistic regression procedure and log odds were converted to adjusted probabilities which are easier to interpret. Some of the results presented in Table A.1 which focused on employer-supported AE are also presented in this chapter as each socio-demographic factor is considered in turn.

Figure 4.1. Participation in job- and non-job-related adult education



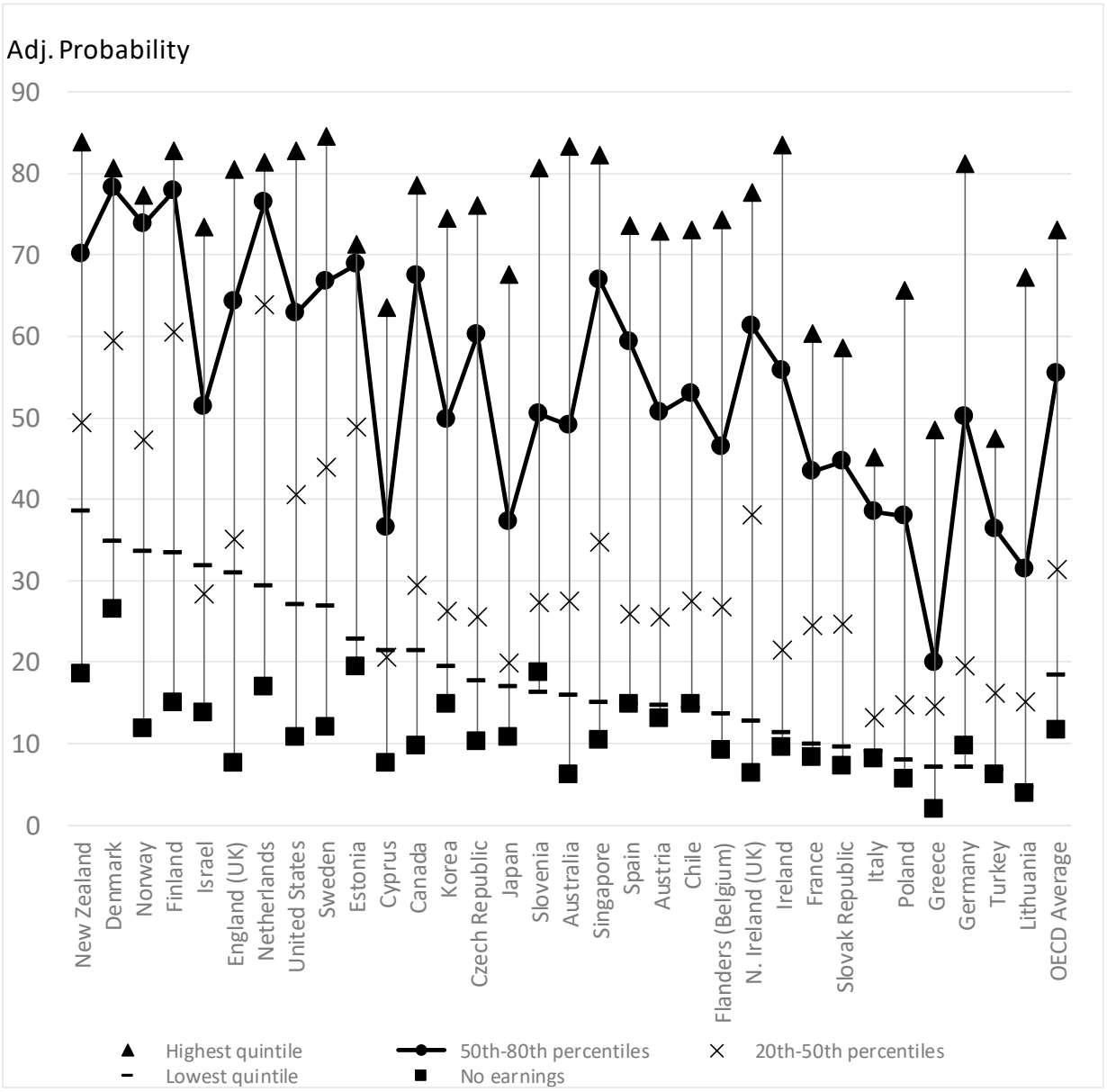
[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

4.1.1. Socio-economic disadvantage

Socio-economic disadvantage can be an important barrier to the take up of adult learning opportunities. Two indicators that reflect socio-economic disadvantage are respondents' current earnings and their parents' highest level of education. Figure 4.2 shows the adjusted probabilities of participating in any AE by level of income from wages or salary. The pattern across countries is clear. Adults who earn more are much more likely to participate, which is consistent with the findings in Chapter 3, since most of these adults are likely to be in the highest skilled jobs which tend to be associated with high earnings and high rates of participation in AE. In countries with the highest overall rates, the top 20% of earners are virtually guaranteed to participate with probabilities in excess of 0.8 in some countries. Remarkably, in Denmark, Finland, Norway and the Netherlands, the top 50% of earners have probabilities of participating near 0.8. With few exceptions, the top 20% of earners show probabilities of at least 0.6 in most countries, even in ones with low overall participation rates such as France and Poland. Probabilities, however, drop off sharply in nearly all countries for the bottom 20% of earners as well as those with no earnings. In countries with high overall rates of participation, the lowest 20% of earners show higher probabilities around 0.3, but in most other countries adults who earn little are associated with very low chances of participating in any AE. In Italy, Poland and Turkey, the probability of participation is sharply divided by the level of earnings, with those who earn in the lower half of the distribution or not at all showing probabilities around 0.1. These results suggest that income can be a binding constraint to participation in AE for adults who earn the least in any society.

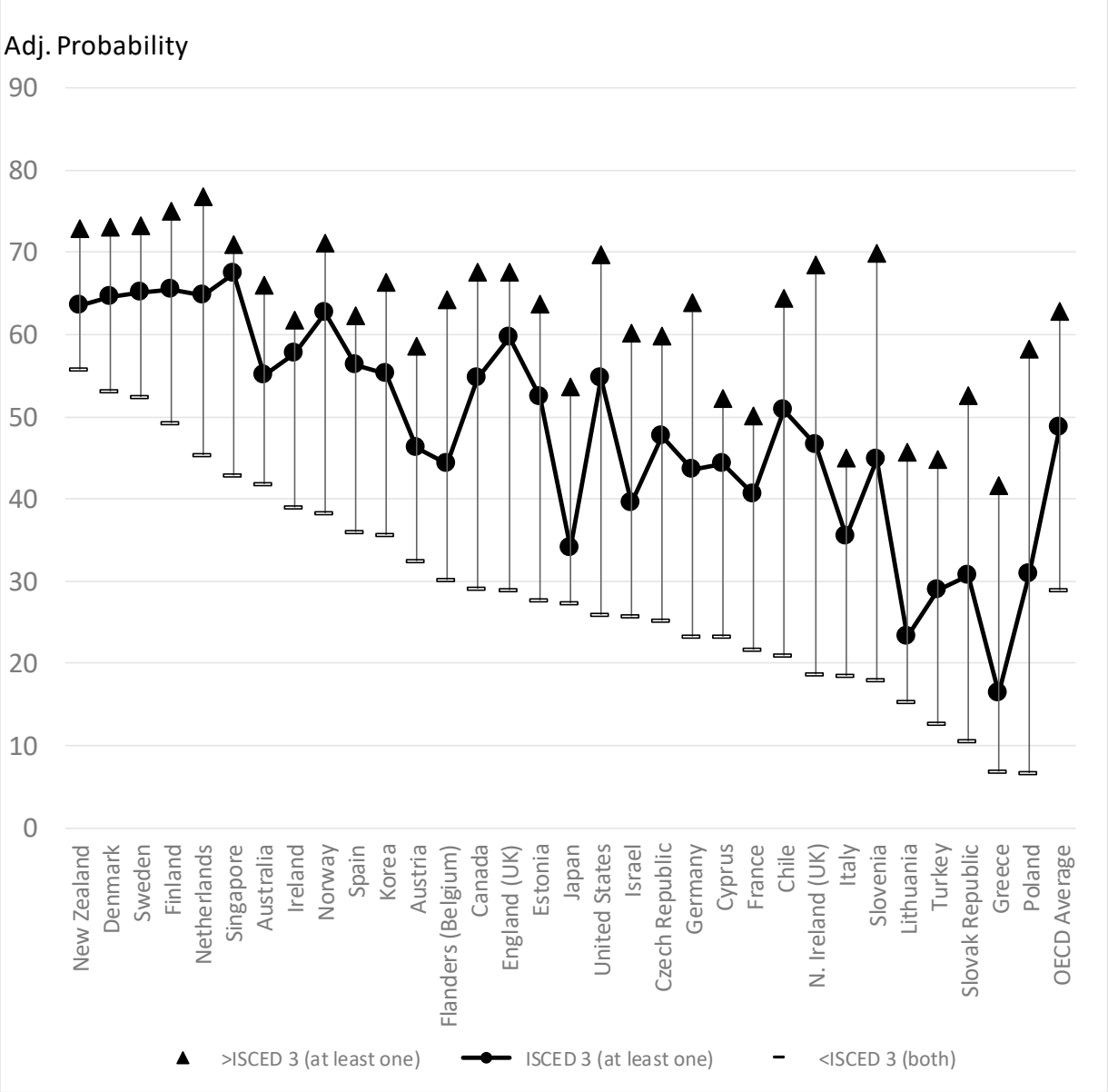
Parents' level of education is a good indicator of the respondent's Socio-Economic Status (SES) background because most research shows that education is a good predictor of educational attainment and occupational status which are in turn associated higher levels of SES. Figure 4.3 shows the probabilities associated with participation in any AE by parents' highest level of education. In all countries, there is a clear relationship between this indicator of SES and the probability of participation. Adults from high SES backgrounds (i.e. at least one parent attained post-secondary education) have significantly higher chances of participation than adults from low SES backgrounds (i.e. both parents did not attain upper secondary education). The difference in probabilities between these two contrast groups (i.e. effect size), however, varies substantially across countries. The effect sizes are highest in Northern Ireland (United Kingdom), Poland, Slovenia, the Slovak Republic and the United States, and lowest in Denmark, New Zealand and Sweden. Results suggest that SES plays a strong role in predicting human capital formation throughout the lifespan in all countries, but that some countries are more successful at mitigating this tendency, for example, through broader redistributive measures but also by designing AE initiatives that target the lowest skilled (discussed further in Chapter 5).

Figure 4.2. Adjusted probabilities of participating in any adult education by earnings



Note: See Table A.4 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 4.3. Adjusted probabilities of participating in any adult education by parents' level of education



Note: See Table A.4 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

4.1.2. Educational attainment

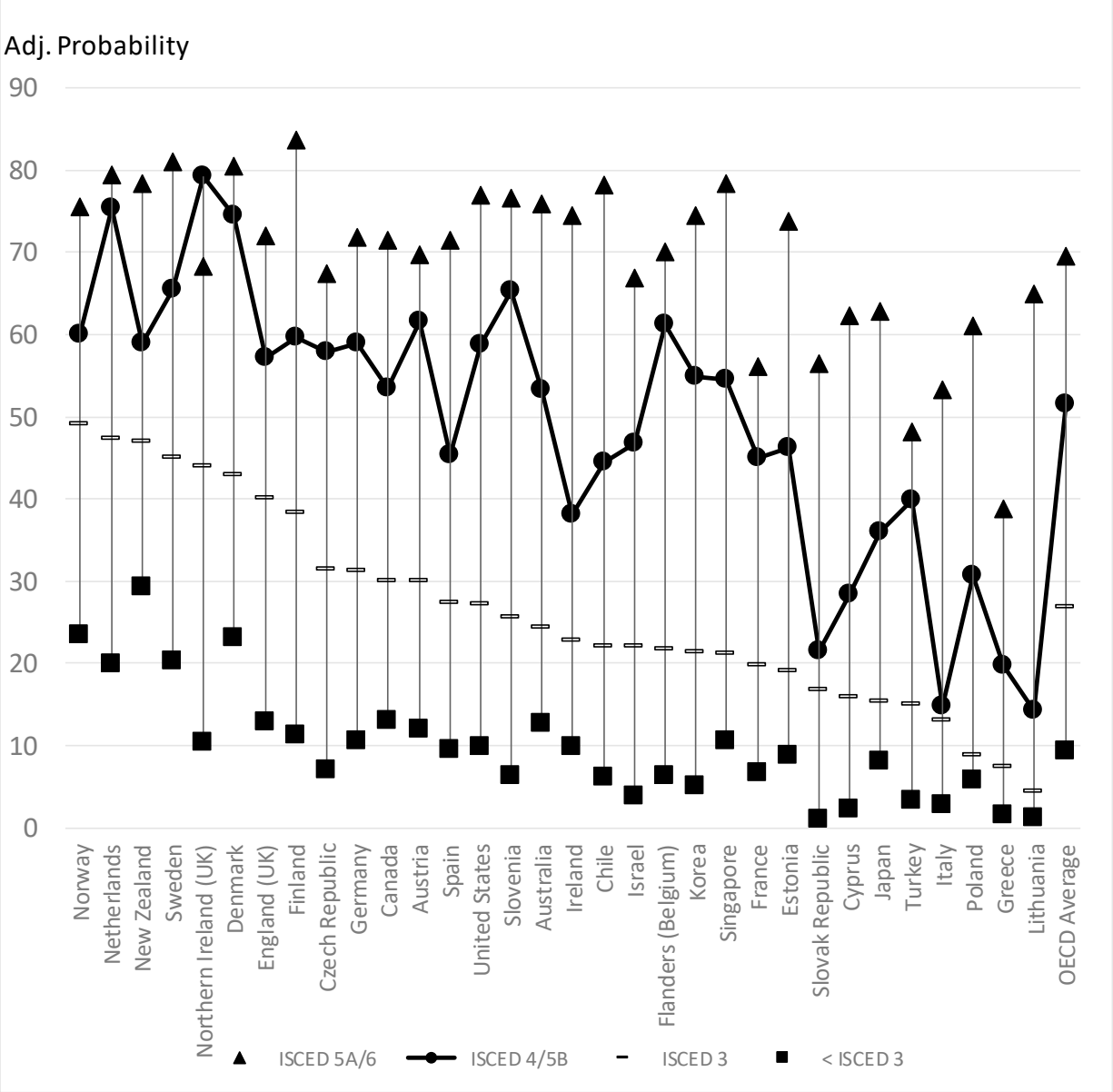
The observation that education begets education by fostering learning throughout the lifespan is a well-established fact in the research literature. Adults with higher levels of

education have been found to be more intrinsically motivated to continue learning as part of their daily lives as well as to attract support from their employers. The latter is related to the fact that their jobs tend to require it but also because the higher educated are seen to be more likely to have capacity to learn and thus be more efficient learners. One aspect however, that is rarely acknowledged is that from a lifespan perspective and through accumulation, AE itself can directly lead to higher educational attainment. This depends on how well-developed the adult learning systems are in different countries. As was seen in Chapter 2, in many countries, formal AE is playing an increasingly important role in contributing to educational attainment or the stock of qualifications. In some cases, non-formal AE can also eventually contribute to higher levels of educational attainment, depending on the nature and flexibility of qualification systems, for example, the adaptation of the recognition of prior learning.

Figure 4.4 shows the probabilities associated with participation in any AE by educational attainment. Not surprisingly, regardless of income, educational attainment can be seen to be a very strong predictor of continued learning in all countries. Remarkably, in Denmark and the Netherlands, having attained any kind of post-secondary education is associated with probabilities over 0.7 and near 0.8. This is similarly the case in a range of countries for adults who attained higher education. Differences however, between adults who attain more academically oriented credentials (ISCED 5a/6) vs vocationally oriented ones (i.e. ISCED 4/5b), are significant in some countries, particularly Chile, Japan, Ireland, Italy, Poland and the Slovak Republic. Adults who have not completed upper secondary are associated with the lowest probabilities of around 0.1 in most countries, but is near or over 0.2 in Denmark, the Netherlands, New Zealand, Norway and Sweden. For the latter countries, this is associated with well-developed and targeted opportunities for adults with low levels of education.

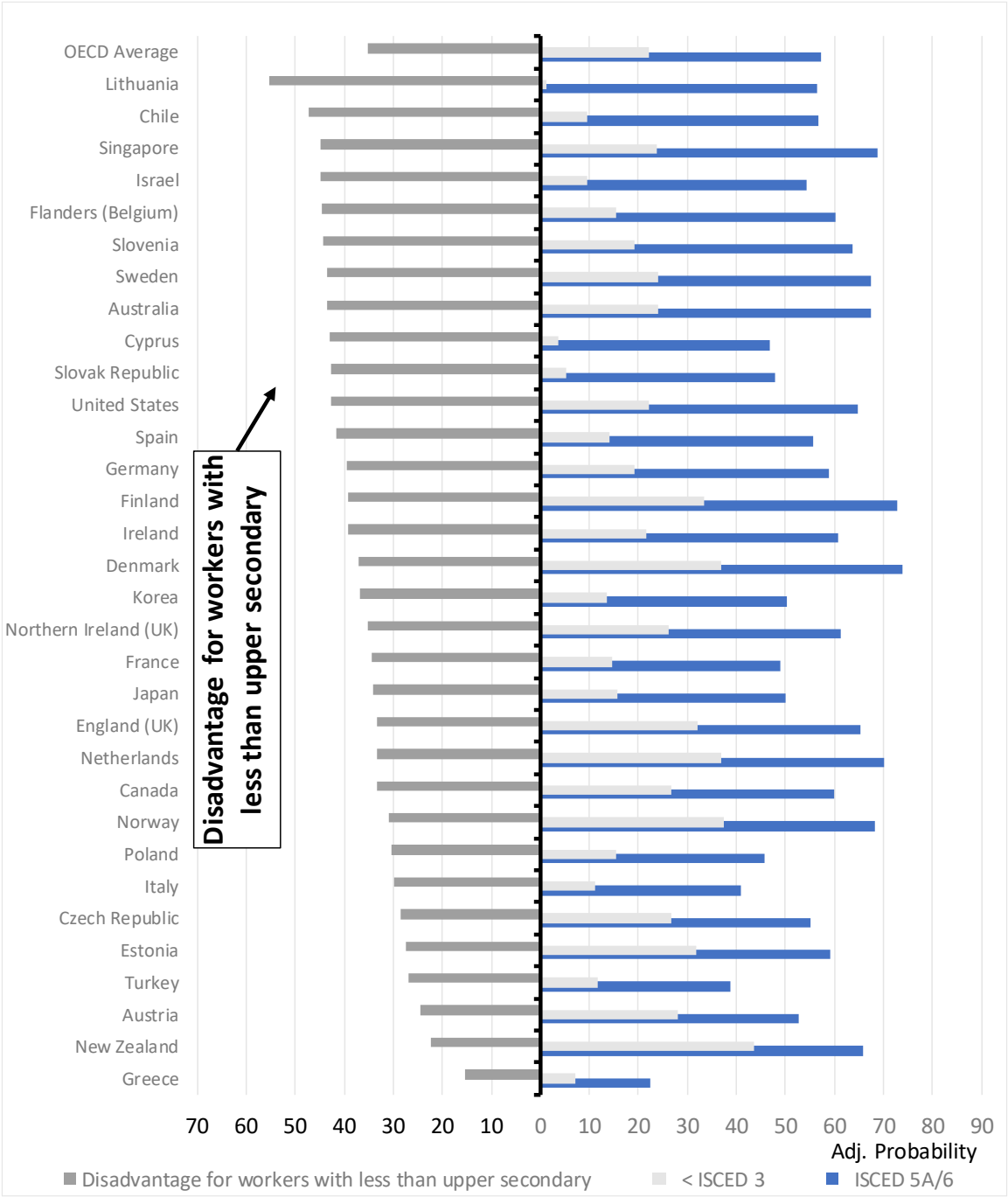
Adults with low levels of education are also at a considerable disadvantage in receiving employer-supported AE. Figure 4.5 contrasts the probabilities of receiving employer-supported AE associated with the highest and lowest levels of attainment. While Denmark, the Netherlands, New Zealand and Norway are most successful at extending employer-support to the lowest educated, they are also the countries where the highest educated are associated with the highest probabilities of receiving support. The highest differences between the lowest and highest educated are in Chile and Lithuania whereas they are the lowest in Austria, Greece and New Zealand. In Chile, France, Greece, Japan, Israel, Italy, Korea, Lithuania, Poland, Turkey, and the Slovak Republic, the lowest educated have very low probabilities of receiving employer-supported AE.

Figure 4.4. Adjusted probabilities of participating in any adult education by educational attainment



Note: See Table A.4 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 4.5. Adjusted probabilities of participating in job-related and employer-supported adult education by educational attainment



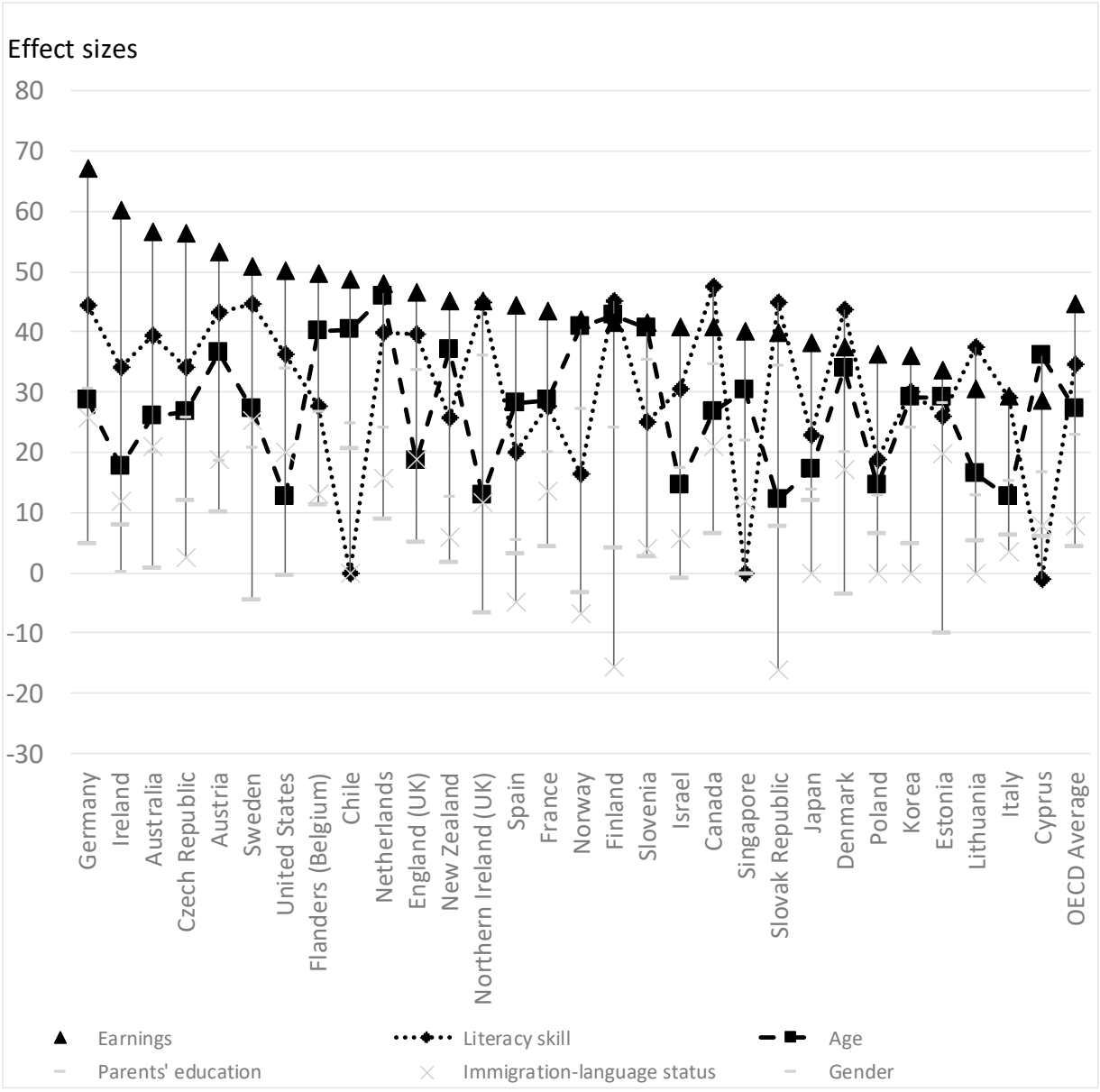
Note: See Table A.1 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Given the significance of educational attainment in predicting participation, it is useful to consider the variation among the lower educated more closely to see which factors are most related to participation among this group. Figure 4.6 presents a summary

overview of the effect sizes for a range of socio-demographic variables predicting participation in any job-related AE among adults which did not attain any post-secondary education. In most cases, it is question of one's own finances or level of employer support. Adults with lower levels of education are more likely to participate in job-related training if they earn more. Indeed, these adults are in higher paying jobs than would otherwise be predicted by their level of education, and accordingly many receive employer support for doing so because often these jobs have a closer association to adult learning as was seen in Chapter 3. Some of the other significant characteristics predicting participation among the lowest educated are a high level of literacy proficiency and being a younger adult. In other words, adults who have no post-secondary education, earn little, have low literacy proficiency and are older have the lowest chances of participating in job-related AE. But if lower educated adults have any one of these characteristics in their favour then their probability of participation increases substantially.

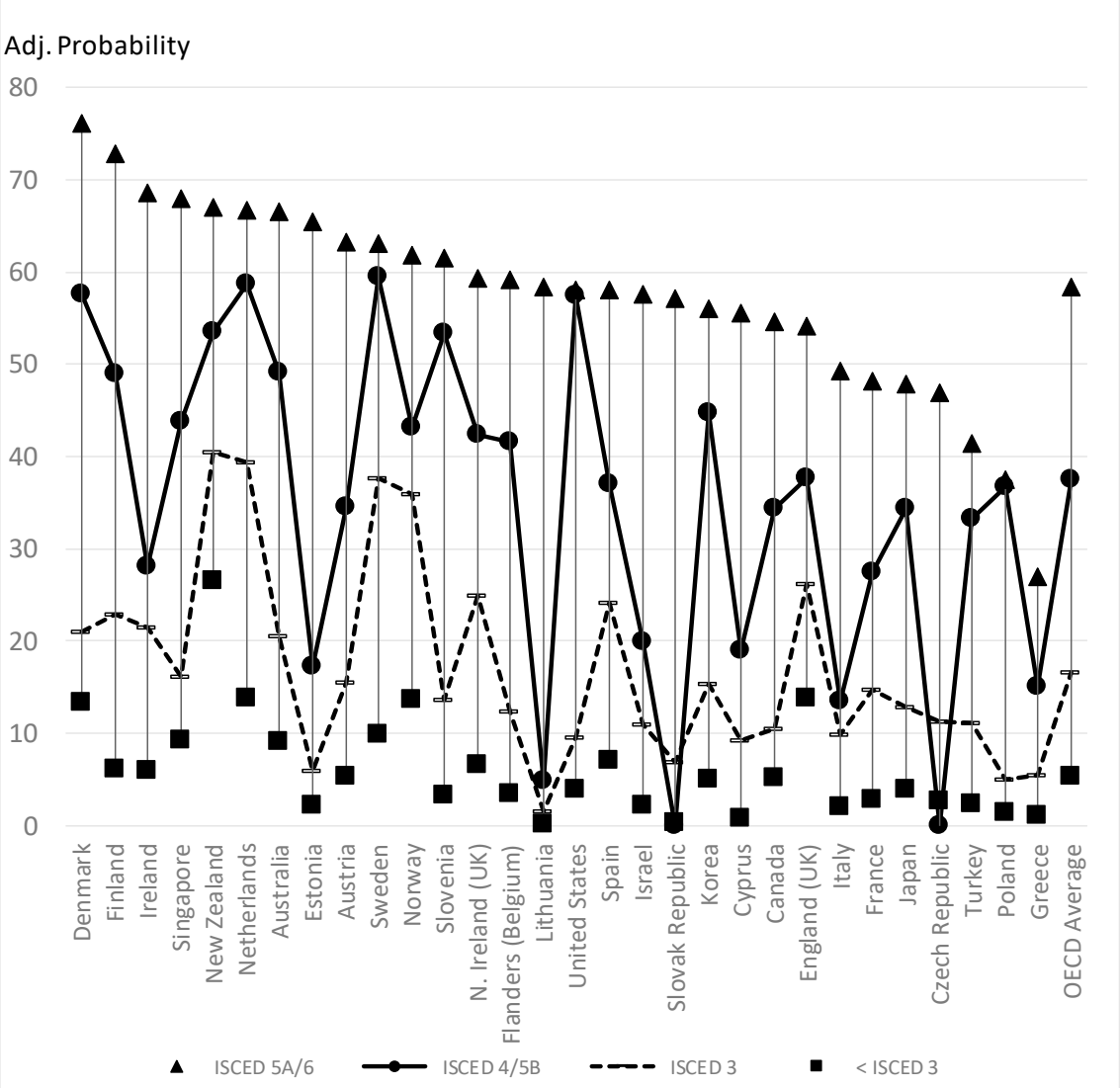
According to the results shown in Figure 4.6, SES is seen to have little impact, primarily because most adults who have not attained any post-secondary also have parents' who did not attain upper secondary education. For this reason, Figure 4.7 narrows in on the adjusted probabilities of participating in any AE among adults from lower status origins by level of education. The results show conclusively that adults from lower status origins who attain any post-secondary education are associated with relatively high probabilities of participation in AE in all countries and economies. This suggests that regardless of social class or origins, access to post-secondary education boosts learning throughout the lifespan and is a key means to break the intergenerational transmission of social disadvantage in terms of human capital formation over the lifespan.

Figure 4.6. Summary of effect sizes of a range of socio-demographic variables predicting participation in job-related adult education among adults who did not attain any post-secondary education



Note: Effect sizes are expressed as the difference in the predicted probabilities associated with contrast categories for each of the independent variables included in the multivariate analysis.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 4.7. Adjusted probabilities of participating in any adult education among adults from lower status origins by level of education



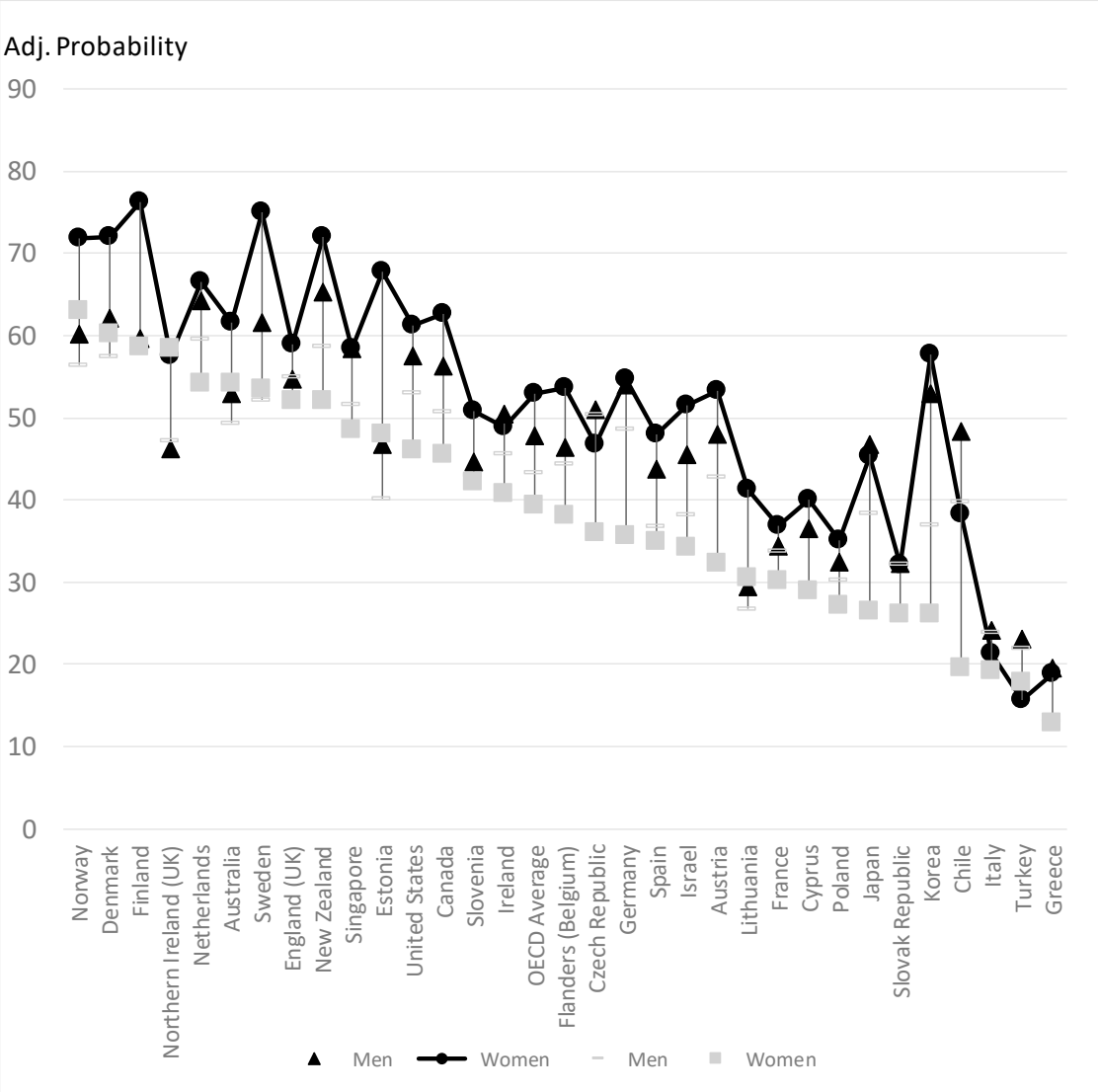
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

4.1.3. Gender

On average, differences in probabilities of participation are either very small or insignificant between men and women. However, it is interesting to point out that the slight advantage or disadvantage over the other gender reverses itself when comparing participation in any AE vs participation in employer-supported AE. Figure 4.8 shows the probabilities associated with participating in any AE as well as employer-supported AE by gender. Results indicate that women tend show an advantage over men when it comes to any AE, and with few exceptions women tend show a disadvantage over men when it comes to employer-supported AE. Figure 4.9 focuses on gender differences in terms of employer-supported AE. Men show an advantage in more than half the countries, but it is only significant in a handful of countries including the Austria, Czech

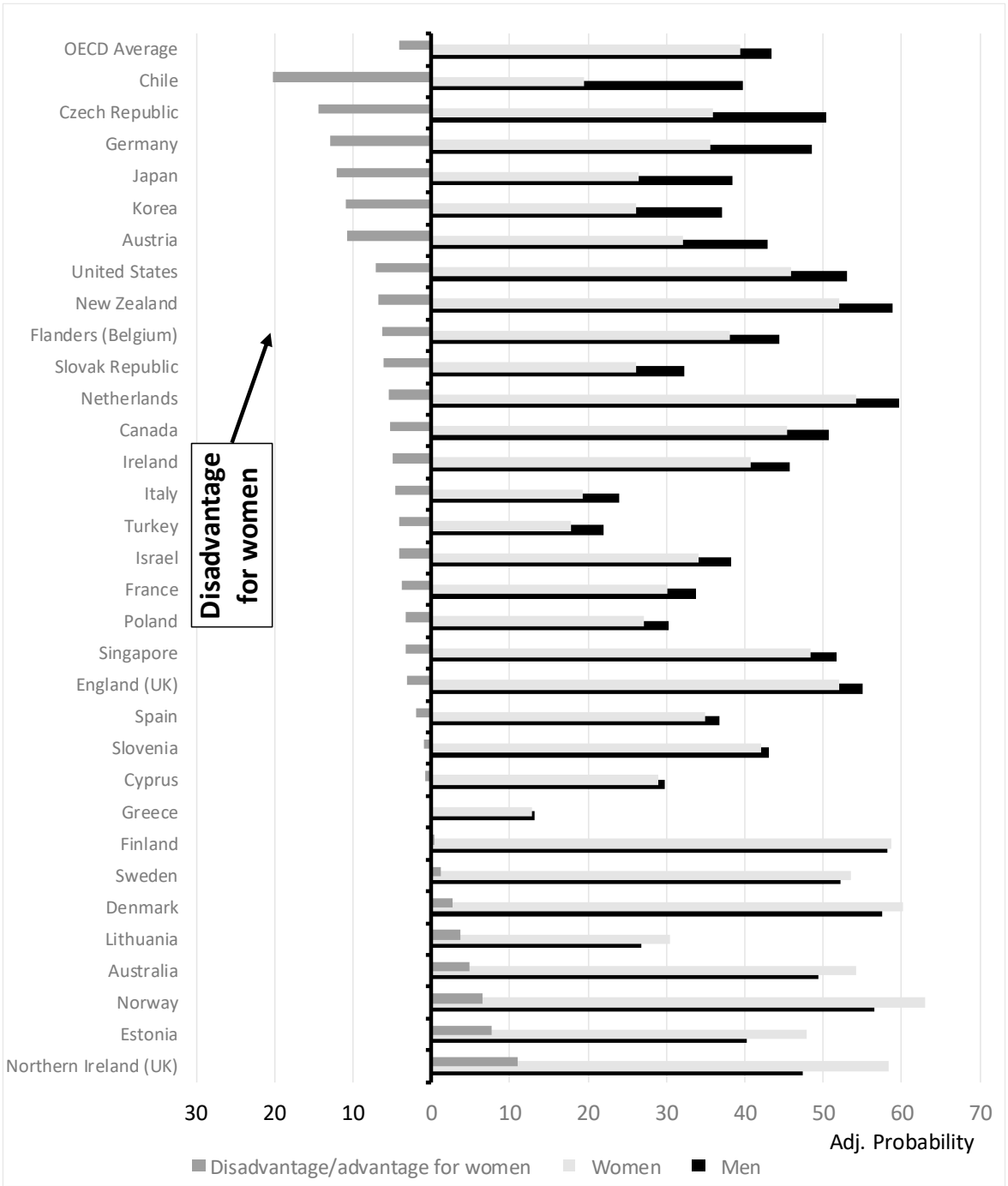
Republic, Germany, Japan, and Korea. In Australia, the Nordic countries, Northern Ireland (United Kingdom) as well as Estonia, the pattern is reversed but only significant in Estonia, Norway and Northern Ireland (United Kingdom).

Figure 4.8. Adjusted probabilities of participating in any vs employer-supported adult education by gender



Note: See Tables A.1 and A.4 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 4.9. Adjusted probabilities of participating in job-related and employer-supported adult education by gender



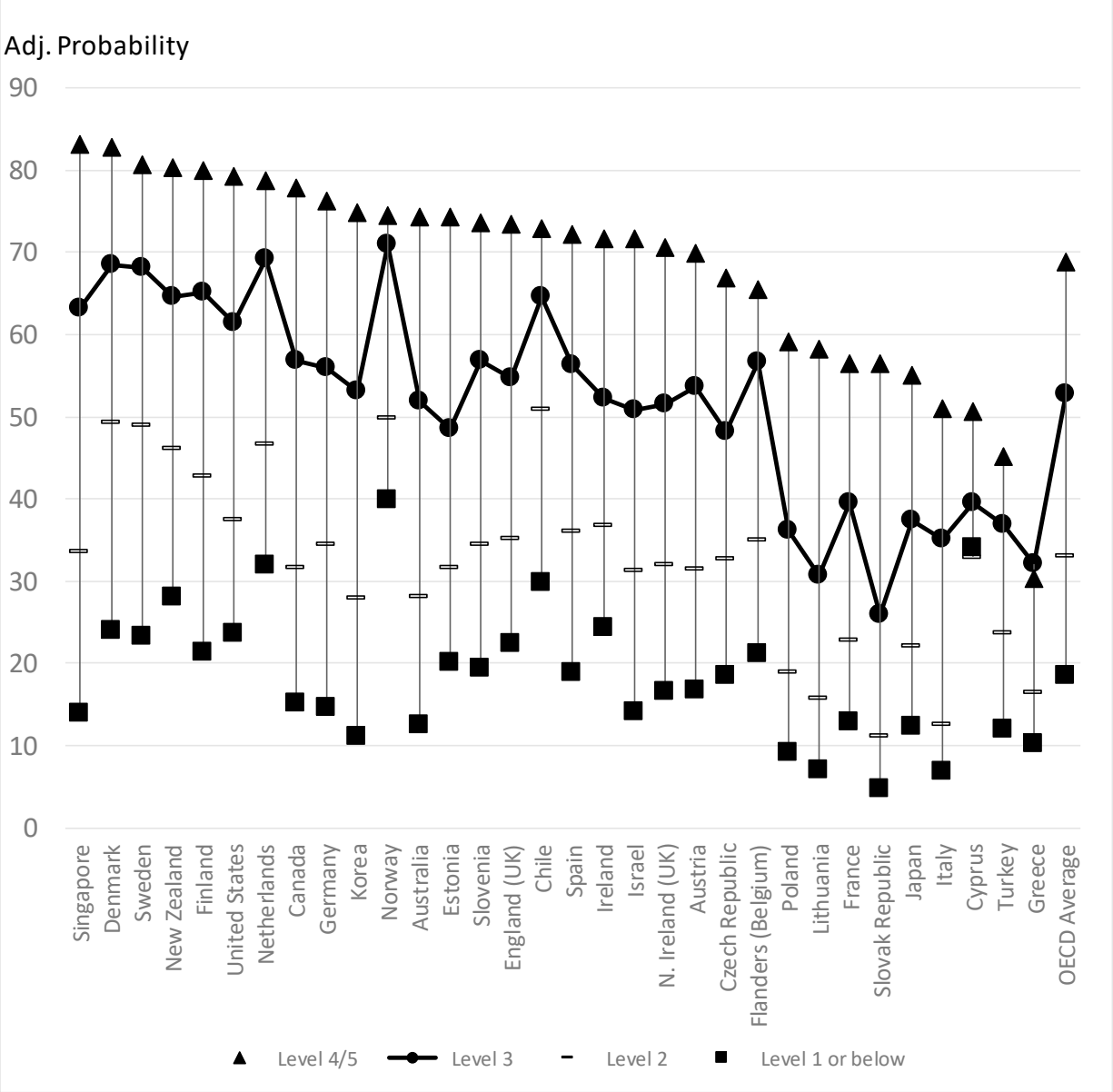
Note: See Table A.1 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

4.1.4. Adults with low literacy proficiency

Adults with low literacy proficiency are at a considerable disadvantage when it comes to participating in AE. Many adults with low proficiency are not interested to learn in organised settings, either because they are hesitant due to their low skills, experience other barriers such as time or financial constraints or most importantly because they do not see the purpose or value (Rubenson, K., & Desjardins, R., 2009[27]). Experience shows that well-designed targeted initiatives are necessary to get adults with low proficiency to participate in any AE. Figure 4.10 shows the probabilities of participating in any AE by literacy proficiency. The pattern is similar in all countries, showing that adults with higher proficiencies are associated with higher probabilities of participation. In Denmark, Finland, New Zealand, Singapore, Sweden and the United States, adults with the highest proficiency (Level 4 or 5) are associated with probabilities of participation that are over 0.8. In several other countries, the probability for the most literate remains over 0.7 but it drops off to near 0.5 in countries with the lowest overall participation rates. In most countries, adults with the lowest proficiency (Level 1 or below) are associated with probabilities near 0.2, but for most countries with low overall participation it is closer to 0.1. Adults with Level 2 proficiency are associated with the highest probability of participation in countries that have well-developed provisions for low-skill adults ranging from about 0.45 in the Netherlands, New Zealand, Norway and Sweden to near 0.5 in Chile and Denmark.

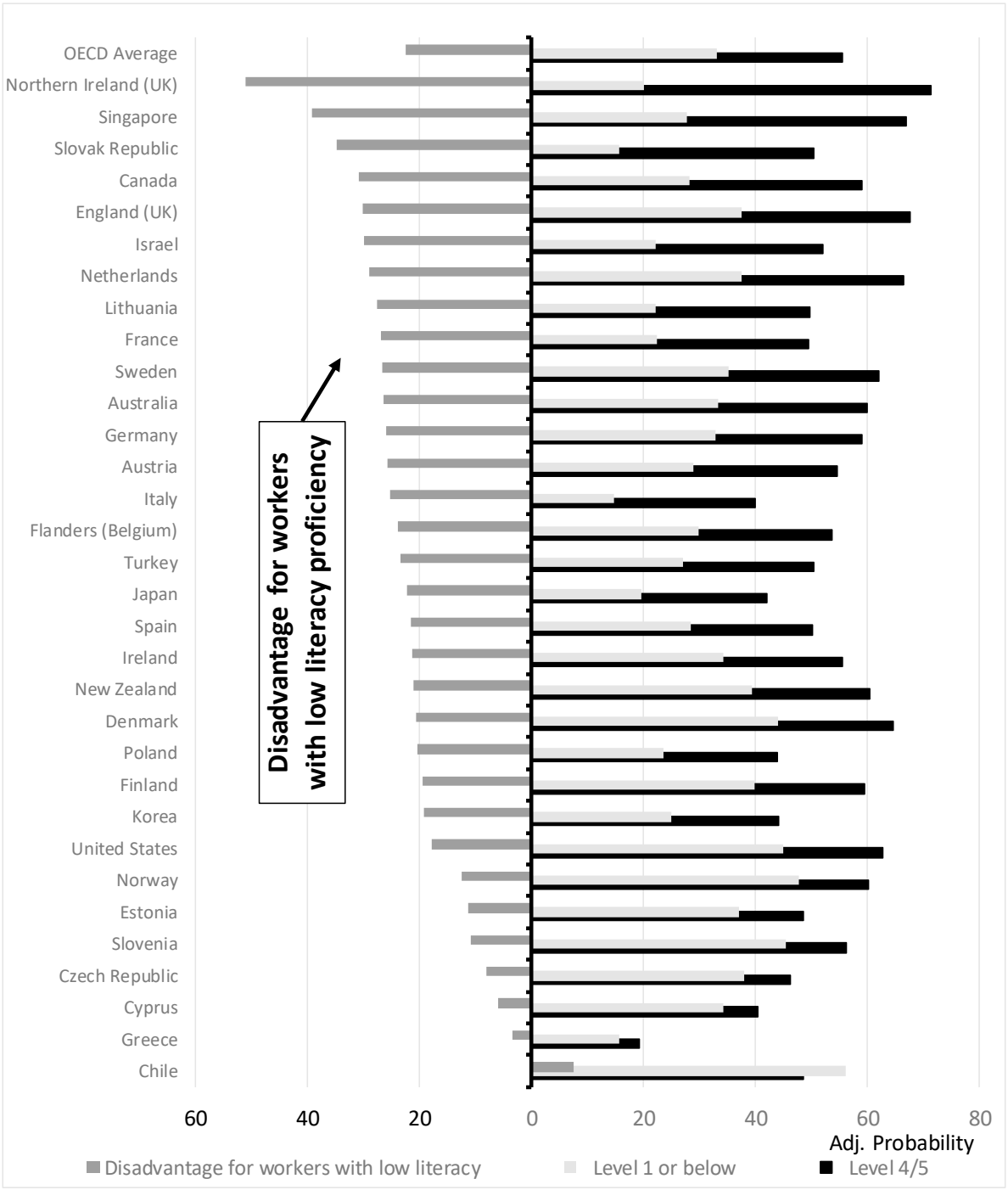
Significant differences in probabilities between adults with the highest and lowest levels of proficiency is partly related to employer support for AE. Figure 4.11 shows the probabilities of participating in employer-supported AE by level of literacy proficiency. The most literate adults have significantly higher chances of receiving support in most countries than the least literate. Differences in probabilities between the most and least literate are near or over 0.40 in Northern Ireland (United Kingdom) and Singapore. Adults with the lowest literacy proficiency are associated with highest probabilities of receiving employer support in Chile, Denmark, Finland, Norway, Slovenia and the United States.

Figure 4.10. Adjusted probabilities of participating in any adult education by literacy proficiency



Note: See Table A.4 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 4.11. Adjusted probabilities of participating in job-related and employer-supported adult education by literacy proficiency



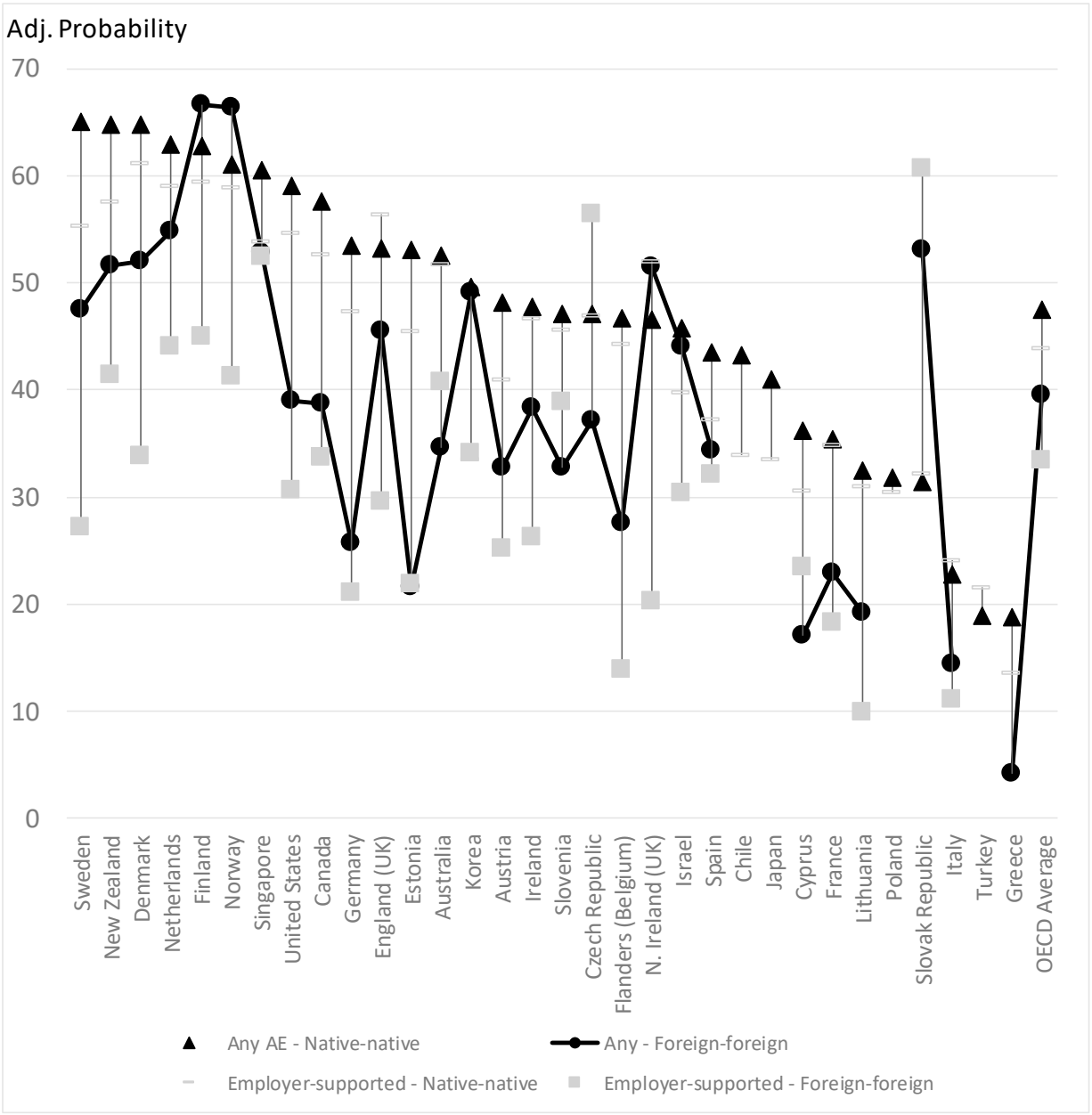
Note: See Table A.1 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

4.1.5. Immigrants

Foreign-born adults are less likely to participate in any AE compared to native-born adults, particularly when it comes to receiving employer-support. Figure 4.12 shows the probabilities of participating in any AE as well as employer-supported AE by immigration and language status. Two contrast categories focus on native-born adults whose first language is the same as the native language (native-native) and foreign-born adults whose first language is different than the native language (foreign-foreign). The latter group can be seen to signify first-generation immigrants. Native-born and native-speaking adults tend to be associated with higher probabilities of participation in any AE as well as higher probabilities of receiving employer-support in most countries. In contrast, first-generation immigrants tend to be associated with lower probabilities, particularly in terms of receiving employer-support. In countries with substantive integration programmes designed for immigrants, participation in AE among first-generation immigrants reaches over 0.5 in Denmark, the Netherlands, New Zealand and Sweden, and over 0.6 in Finland and Norway. In fact, in Finland and Norway, first-generation immigrants are near as likely or more to participate in AE than native-born and native-speaking adults.

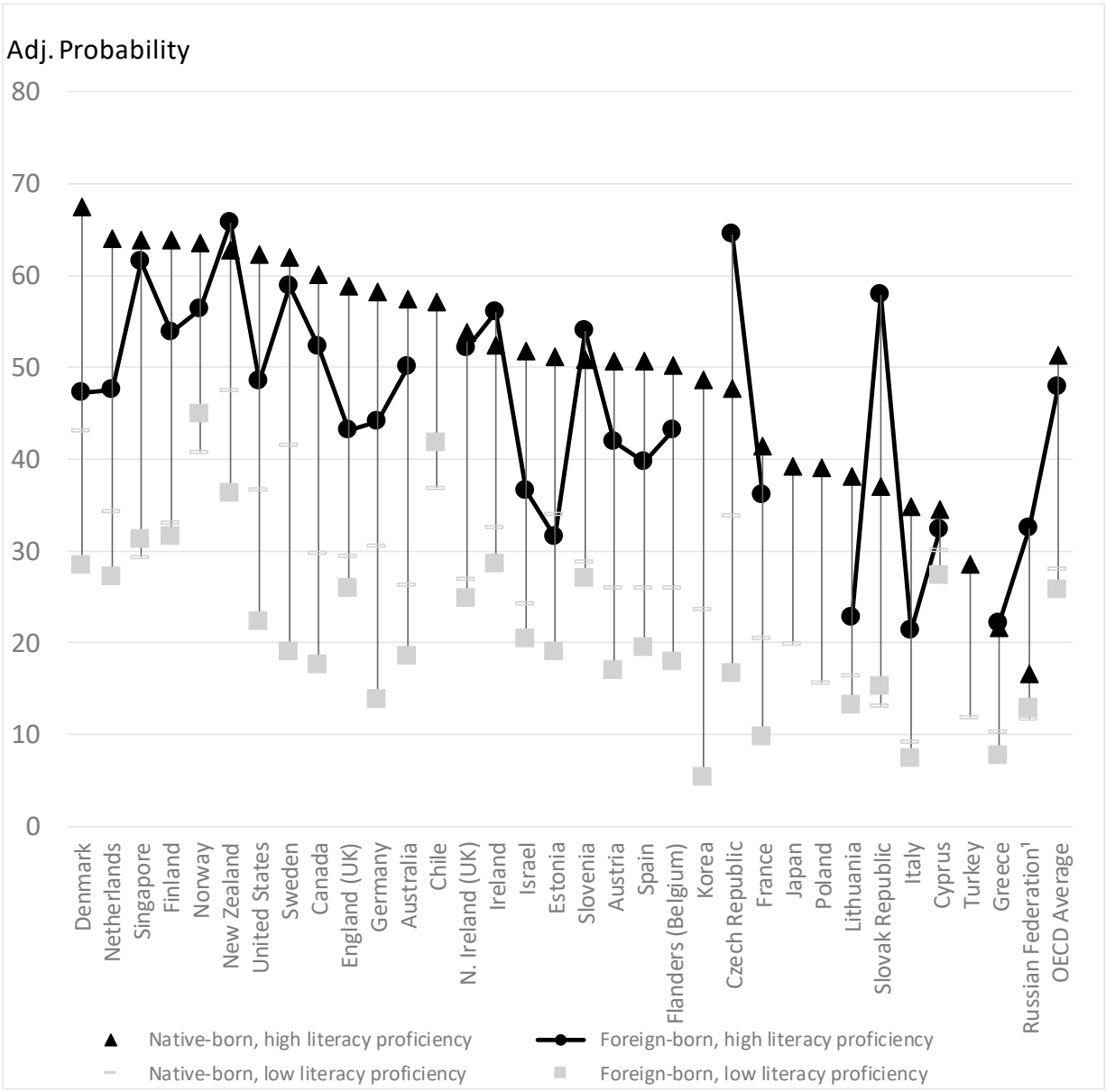
Whether immigrants have higher or lower levels of literacy proficiency is significantly related with their probability of participating in job-related AE. Figure 4.13 shows the probabilities of participating in job-related AE by immigration status and level of literacy proficiency. In several countries and economies, foreign-born adults who display higher levels of literacy proficiency (Level 3 or higher) are as likely or more likely to participate in AE than native-born adults who display lower levels of proficiency (Level 2 or below). This is particularly the case in Ireland, Northern Ireland (United Kingdom), New Zealand, Singapore and Sweden.

Figure 4.12. Adjusted probabilities of participating in any vs employer-supported adult education by immigration and language status



Note: See Tables A.4 and A.1 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 4.13. Adjusted probabilities of participating in job-related adult education by immigration status and literacy proficiency



[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

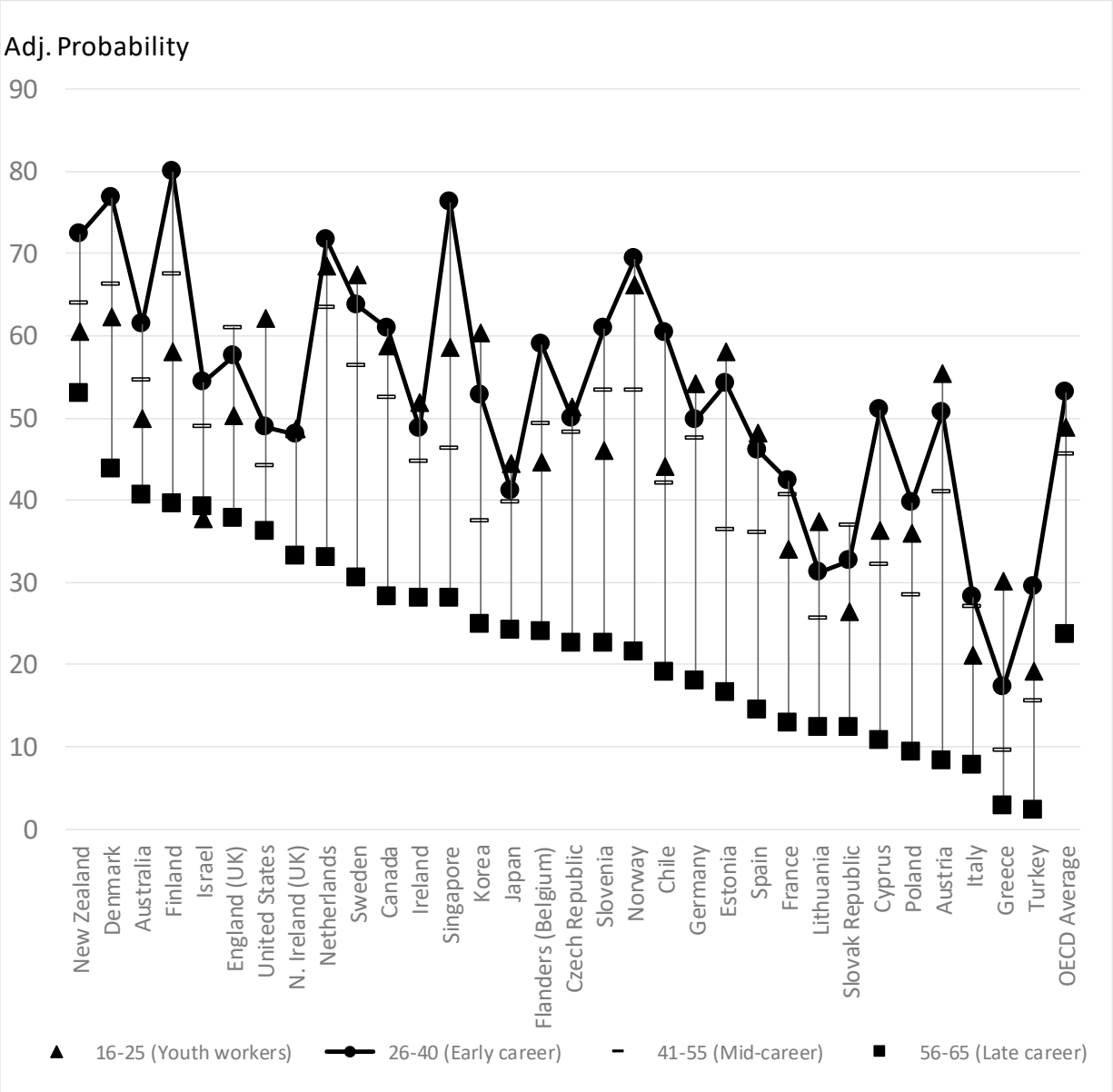
4.1.6. Older adults

Older adults are in a much more precarious situation in terms of opportunities if they have not succeeded in attaining higher levels of education and securing gainful employment by the time they become older. Figure 4.14 shows the probabilities of participation in any AE by age. In all countries, older adults aged 56-65 are associated

with the lowest probabilities of participating. Probabilities are as low as 0.1 in most of the countries with low overall participation such as France, Greece, Italy, Lithuania, Poland, the Slovak Republic and Turkey, but also Austria which has an overall rate closer to the cross-country average. In contrast, probabilities for this age group range between 0.3 and 0.4 for most of the countries with high overall participation such as Australia, Finland, England (United Kingdom), the Netherlands, Sweden and the United States. The probability of participation for older adults is highest in Denmark at over 0.4 and New Zealand at over 0.5. The pattern among younger as well as early- and mid-career aged is mixed, but overall early career aged (26 to 40) adults are more likely to participate in AE. This is particularly the case in Denmark, Finland, New Zealand and Singapore but in Austria, Korea, Sweden and the United States, youth aged (16 to 25) adults participate more, and in England (United Kingdom) it is mid-career aged (41 to 55) adults who participate the most.

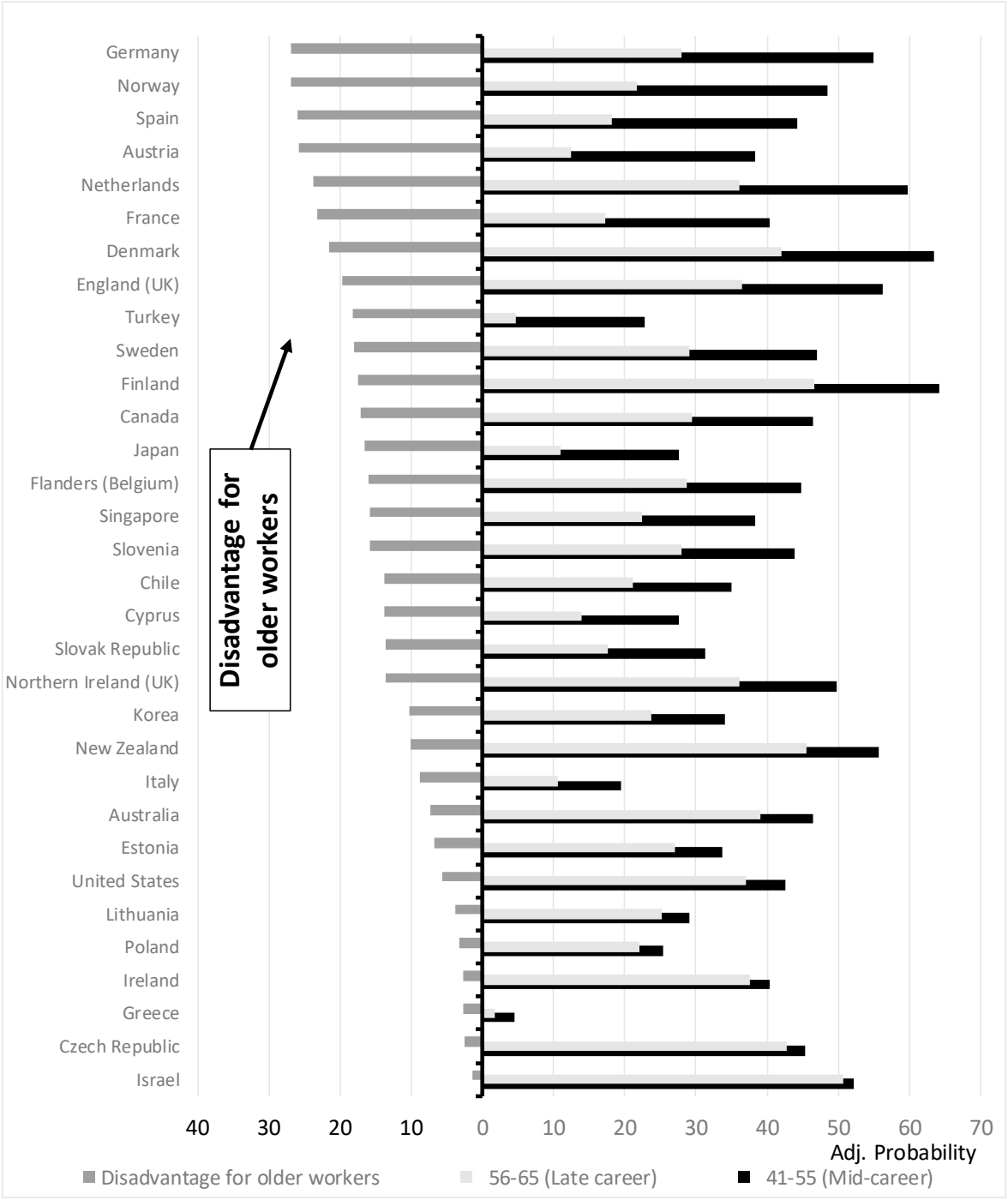
Older workers are at a substantial disadvantage in terms of receiving employer-supported AE in most countries. Figure 4.15 contrasts the probabilities of receiving employer-support for late-career (56-65) workers with those of mid-career (41-55) workers. The disadvantage is substantial in several countries, reflecting a difference of over 20 percentage points in the participation rate between the two age groups in Austria, Denmark, France, Germany, the Netherlands, Norway and Spain. In contrast, the difference is marginal in the Czech Republic, Greece, Ireland, Israel, Lithuania and Poland. Older workers have the highest chances of receiving employer-support in the Czech Republic, Denmark, Finland, Israel and New Zealand reaching a probability of over 0.4. In Austria, Greece, Italy and Japan and Turkey the probability is as low as 0.1.

Figure 4.14. Adjusted probabilities of participating in any adult education by age



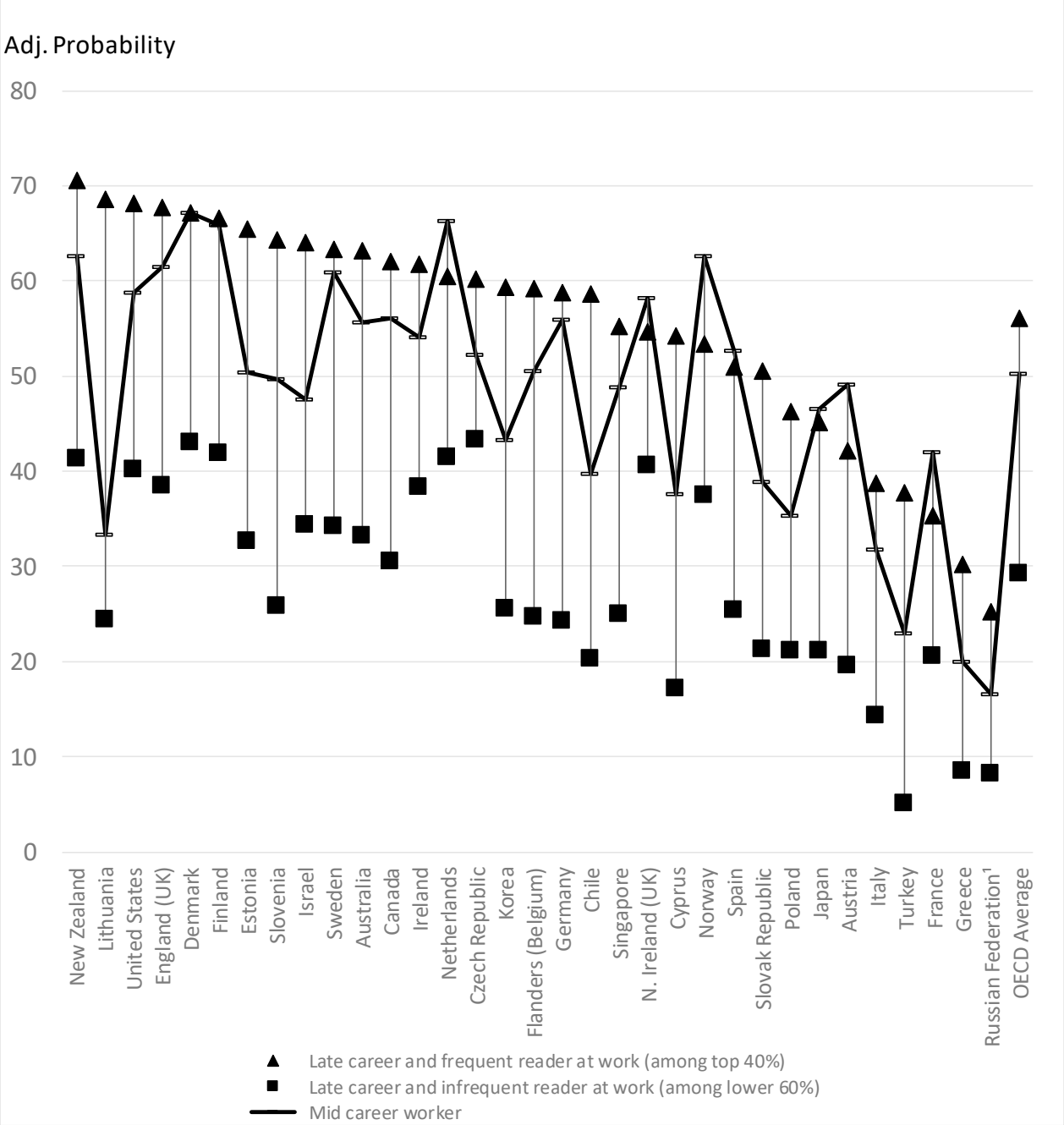
Note: See Table A.4 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 4.15. Adjusted probabilities of participating in job-related and employer-supported adult education by age



Note: See Table A.1 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 4.16. Unadjusted probabilities of participating in job-related adult education among older adults by active vs non-active agers



[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

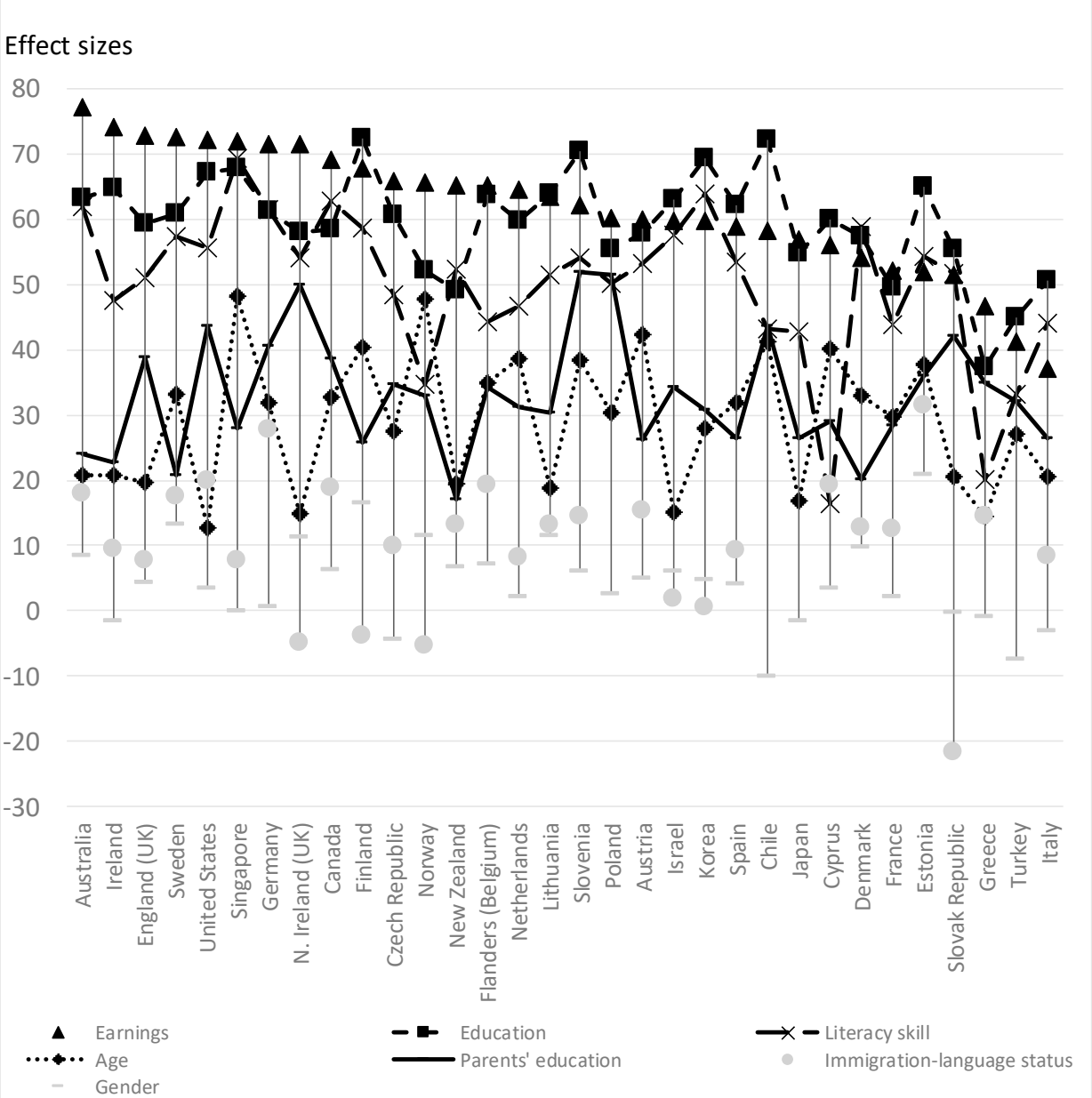
Research suggests that important differences can emerge between older adults who are more and less active in terms mental, social and physical activity [for a review see (Desjardins and Warnke, 2012[25])]. Part of this relates to the type of job that adults are employed in as they age. Figure 4.16 shows the probabilities of participating in job-

related AE among older adults who work in jobs that require more frequent reading compared to those in jobs requiring less reading which is also an indicator of cognitive activity into older ages. Results show that older adults who are among the top 40% of most frequent readers at work participate just as much as any mid-career aged worker and in many countries, show a significantly higher probability. In contrast, older workers who read very little as part of their job are associated with significantly lower probabilities of participation compared to mid-career aged workers. This is an indication that workers in high-skill jobs requiring higher levels of cognitive activity continue to be associated with comparatively higher probabilities of participation into older ages.

4.1.7. Summary of socio-demographic factors related to AE

Results presented in this chapter so far have shown that socio-demographic characteristics can have a strong relationship with participation in AE. Figure 4.17 summarises the effect sizes associated with each socio-demographic factor discussed above. In most countries, earnings show the strongest relationship to the probability of participating in AE where very large differences are observed between adults who earn the most and those who earn little to no money on the labour market. This is consistent with the finding that most AE is job-related and much of it is connected to higher skill jobs. It is also consistent with the fact that AE can be a resource intensive activity in terms of time and money. The pattern across countries regarding other factors are more mixed but it can be discerned that in most countries, educational attainment and literacy proficiency are also substantial factors predicting participation. This highlights the tendency that those who already have higher levels of human capital tend to invest more in developing it further over their lifespan, which provides them with considerable advantage over adults who have lower levels of human capital. SES and age follow as the next set of socio-demographic factors that relate significantly to AE. The significance of SES depends in large part on the extent of measures taken in different countries to mitigate the intergenerational transmission of social inequality. Similarly, the significance of age depends on the extent and diversity of provision made available to older adults in different countries but also employer behaviour in directing support for AE. The two remaining factors are gender and immigration status which are not as substantially significant in their relationship to AE compared to the other factors, although immigration can be substantial depending on the country specific situation in terms of the extent of immigration as well as AE related programmes that target immigrants.

Figure 4.17. Summary of effect sizes of a range of socio-demographic variables predicting participation in any adult education



Note: Effect sizes are expressed as the difference in the predicted probabilities associated with contrast categories for each of the independent variables included in the multivariate analysis.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

4.2. Socio-demographic distribution of growth of adult education

Employer-supported AE has grown rapidly since the 1990s. In fact, it was seen in Chapter 2 that the growth in employer-supported AE outpaced the growth in overall AE in most countries. Chapter 3 as well as the analysis so far in this chapter has considered in detail who gets employer-support and under which types of working conditions, but

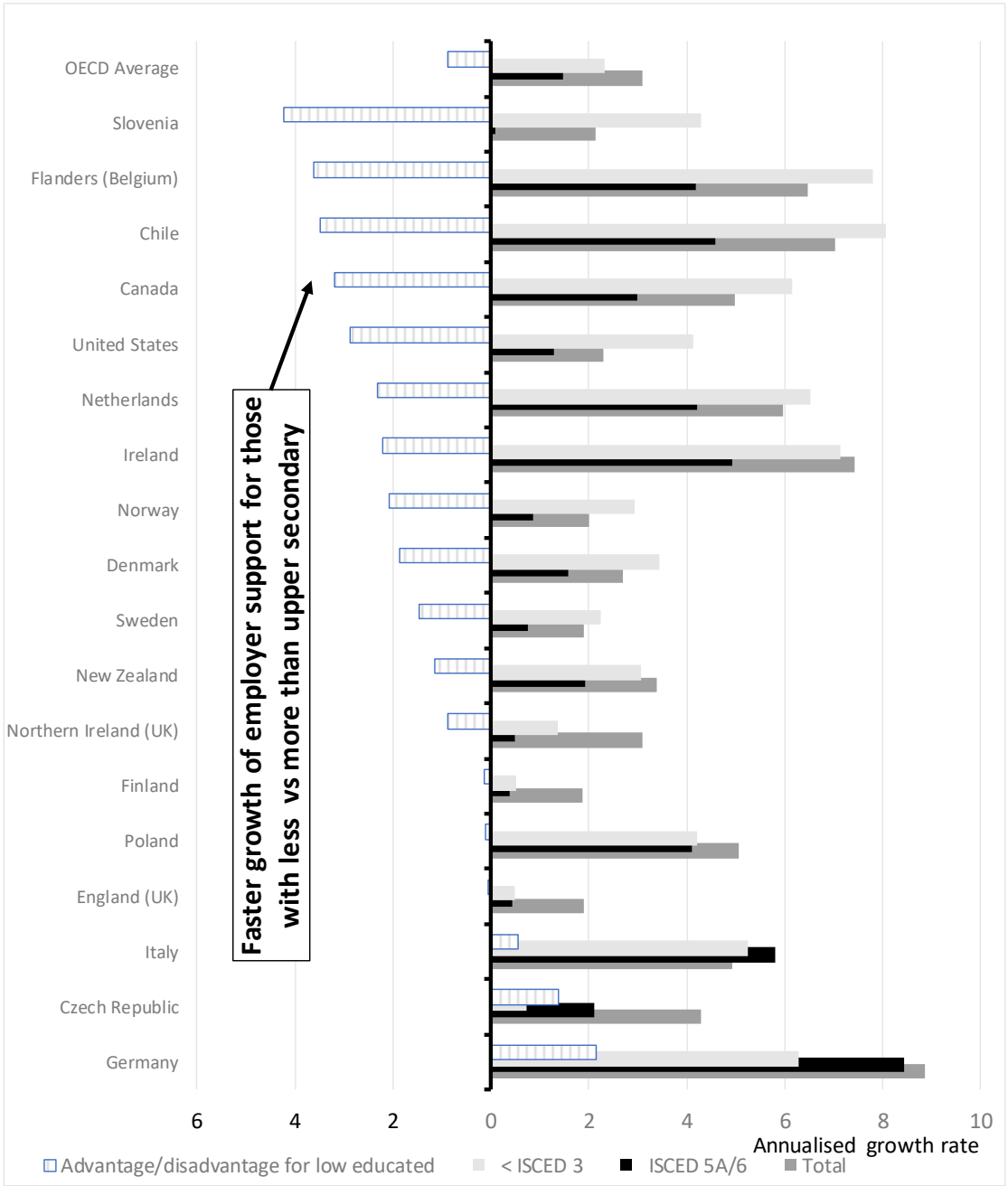
this was for the most recent data collection in between 2012-2016. How has the distribution of employer support changed since the 1990s? Is the growth of employer support concentrated on certain kinds of workers in certain types of jobs? This is an important question because inequality in the distribution of participation by various socio-demographic and job-related factors may become exacerbated over time as employers invest more on AE for certain types of workers. The following considers the distribution of that growth according to a few selected socio-demographic factors, namely educational attainment, literacy proficiency and age as well as by type of occupation.

It was discussed above that adults with less than upper secondary education (i.e. < ISCED 3) have a substantial disadvantage over adults with some type of post-secondary education, particularly at the higher education level (i.e. ISCED 5a/6) in all countries. Figure 4.18 shows the growth rate of employer-supported AE for these two contrasting levels of education. Results show that although employer support increased for adults with both lower and higher levels of education, the growth was higher for adults with lower levels of education in about half of the countries. Specifically, employers in Canada, Chile, Denmark, Flanders (Belgium), Ireland, the Netherlands, Norway, Slovenia and the United States directed their increased support to lower educated adults at a higher rate than higher educated adults. In contrast, it was the opposite in the Czech Republic and Italy, although only significantly so in the Czech Republic. In England (United Kingdom), Finland and Poland, the increased employer support was equally distributed between the highest and lowest educated adults.

Like differences between the higher and lower educated, adults with lower literacy proficiency continue to be at a substantial disadvantage over adults with higher proficiency in securing support from their employers. Figure 4.19 shows how this disadvantage has evolved since the 1990s. Employer support increased for adults with both lower and higher proficiency, but the growth was higher for adults with lower proficiency in nearly all countries. Italy's growth in employer support favoured somewhat adults who have the highest levels of proficiency, but the difference is not statistically significant. Therefore, according to the data, employer-support does not seem to have exacerbated inequality in terms of those who have high vs low levels of literacy skills. Instead, it seems to have mitigated it in several countries.

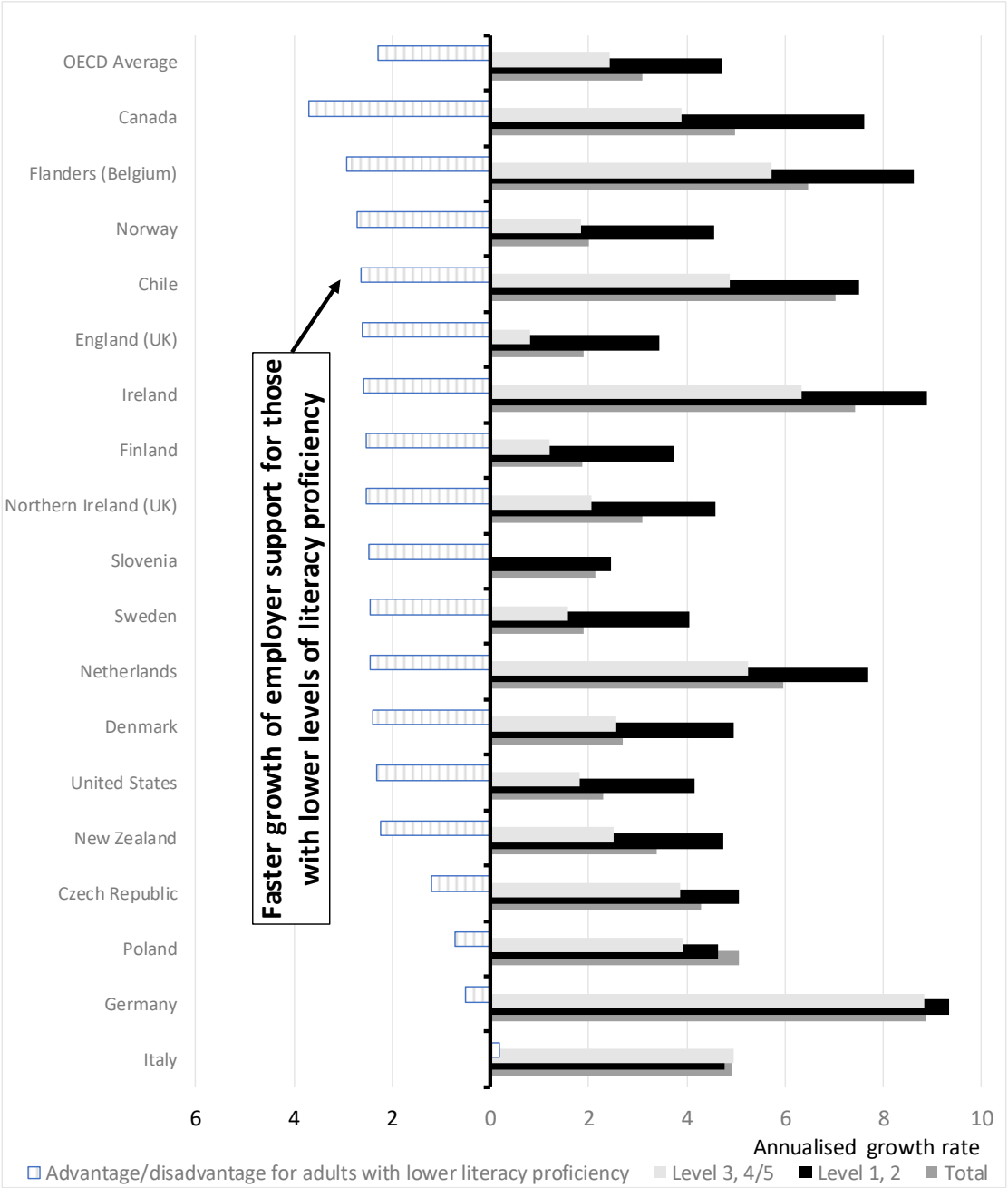
Early-career aged (26-40) adults continue to have a substantial advantage over late-career aged (56-65) adults in most countries but the growth of employer-support since the 1990s has also mitigated this inequality. Figure 4.20 contrasts the growth rate of employer-supported AE for early- and late- career aged adults. In all the countries and economies considered, employer support grew at a faster pace for older workers than for younger ones, although it is not significant in Sweden.

Figure 4.18. Growth of job-related and employer-supported adult education by level of educational attainment



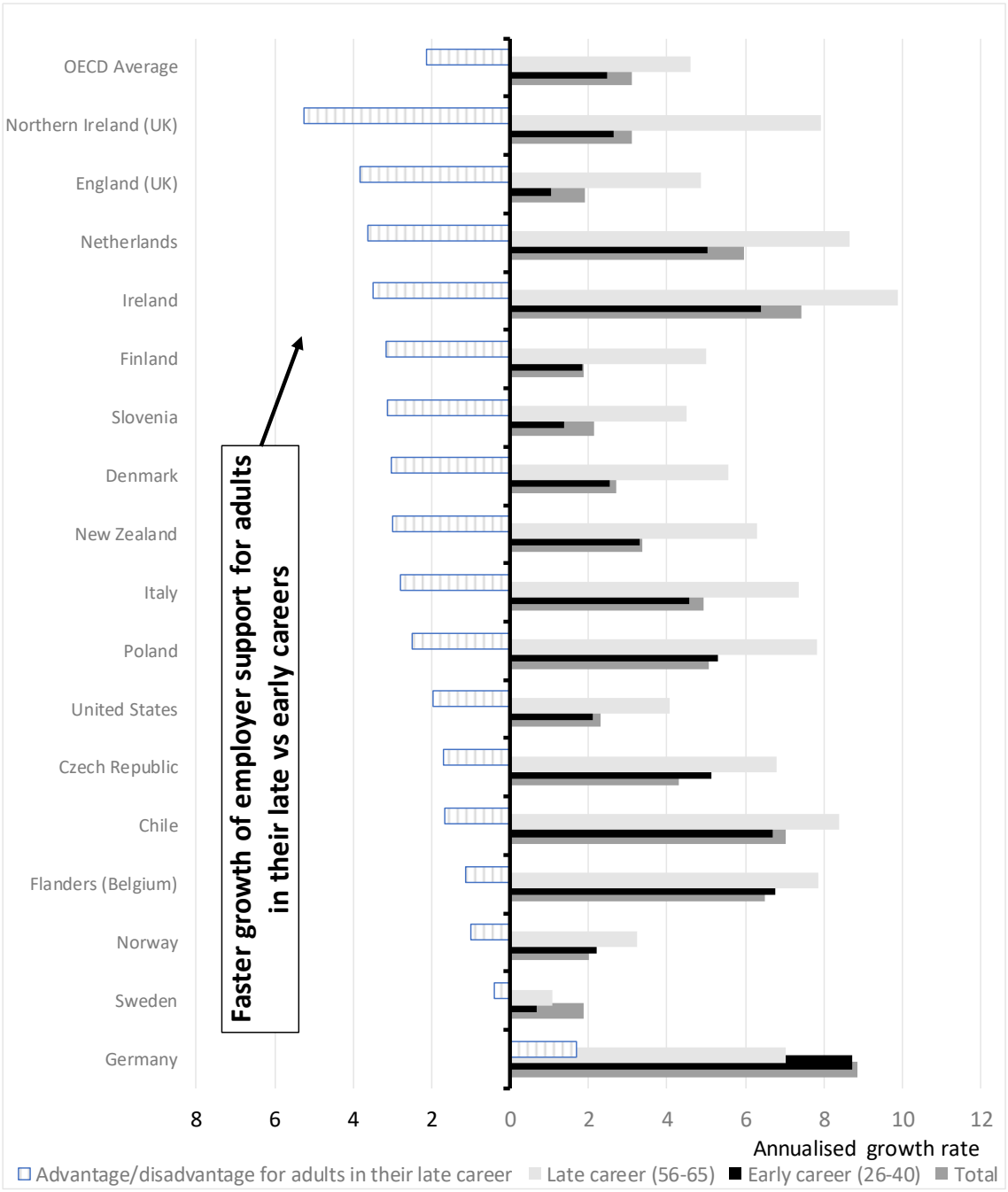
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 4.19. Growth of job-related and employer-supported adult education by level of literacy proficiency



Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 4.20. Growth of job-related and employer-supported adult education by stage of career

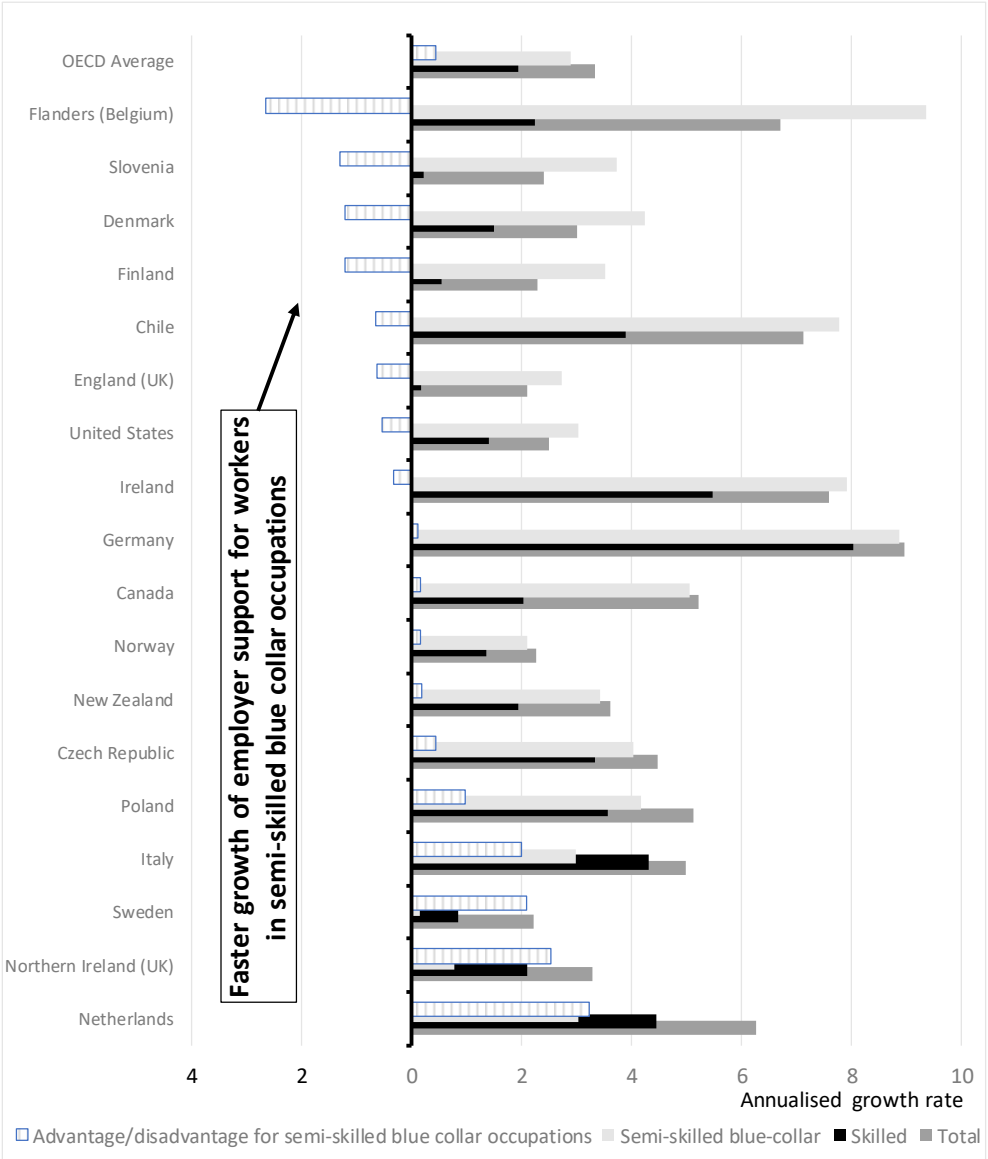


Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Adults in low-skill jobs are at a substantial disadvantage in terms of participating in AE but the growth in employer-supported AE since the 1990s has been directed toward the entire skill spectrum which may reflect a general skill-oriented upgrade of all jobs over this timeframe. In a few countries, the growth of support for lower-skilled jobs outpaced

the growth directed toward higher-skilled jobs. Figure 4.21 shows that some of growth in employer support was directed in favour of semi-skilled blue-collar occupations in less than half the countries, although it is only substantial in Flanders (Belgium).

Figure 4.21. Growth of job-related and employer-supported adult education among workers in the low-skill vs high-skill sectors of the economy



Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

4.3. Social outcomes associated with formal adult education

Chapter 3 considered some of the potential benefits associated with formal education structures that are more open and flexible in terms of labour market outcomes. The following does the same but focuses on selected social outcomes, namely trust, political efficacy, volunteering and health outcomes. Tables A.5-A.8 summarise the probabilities

of experiencing favourable social outcomes by level of qualification which was attained either as a traditional or non-traditional student. The adjusted results control for the degree of labour market attachment as measured by the intensity of working time, as well as gender, immigrant and language status, parents' education, literacy proficiency and earnings. In nearly all cases, results suggest that having attained a higher qualification via formal AE is associated an increased probability of experiencing a favourable social outcome as compared to not having attained that qualification. For this reason, only the results pertaining to ISCED 5b and 5a are presented and discussed in more detail.

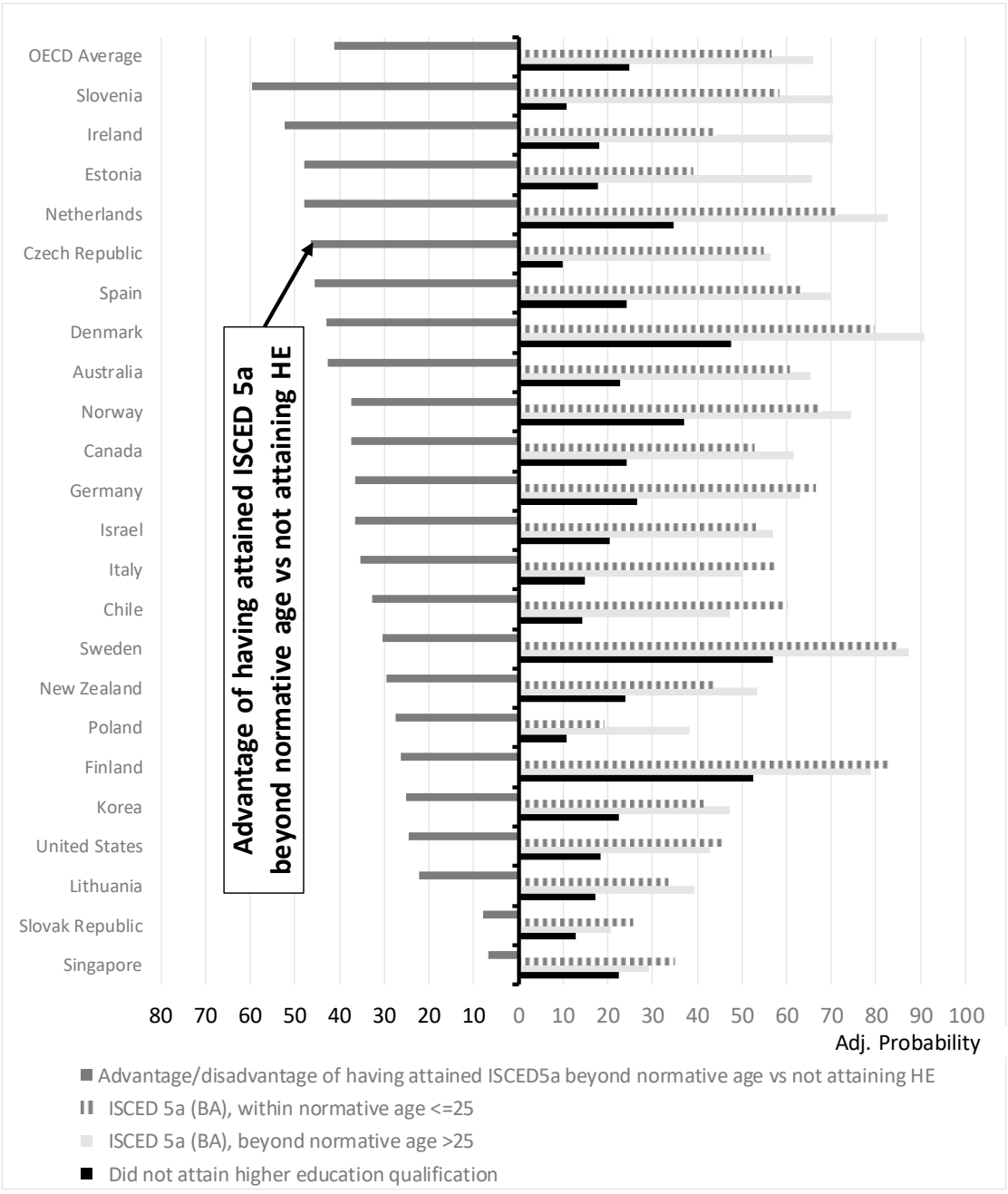
4.3.1. Trust

In most countries, attaining a higher education degree is strongly associated with a higher probability of reporting trust in others regardless of whether this was done as a traditional or non-traditional student. Figure 4.22 contrasts the probability of reporting trust in others between those who completed a bachelor's degree (ISCED 5a) as a traditional or non-traditional student as well as with those who did not attain any higher qualification. In all countries, completing the degree at an older age, which is a type of formal AE, is associated with a higher probability of reporting a favourable trust outcome, although this is not significant in Singapore and the Slovak Republic. In several countries, the probability of trusting others is higher for those who completed the degree at an older age. The pattern is similar with respect to a professional degree (ISCED 5b) (see Table A.5) but completing the degree at older ages is not significant in Korea Greece, Singapore or the United States, and there is no effect in the Czech Republic, Japan Lithuania or Spain.

4.3.2. Political efficacy

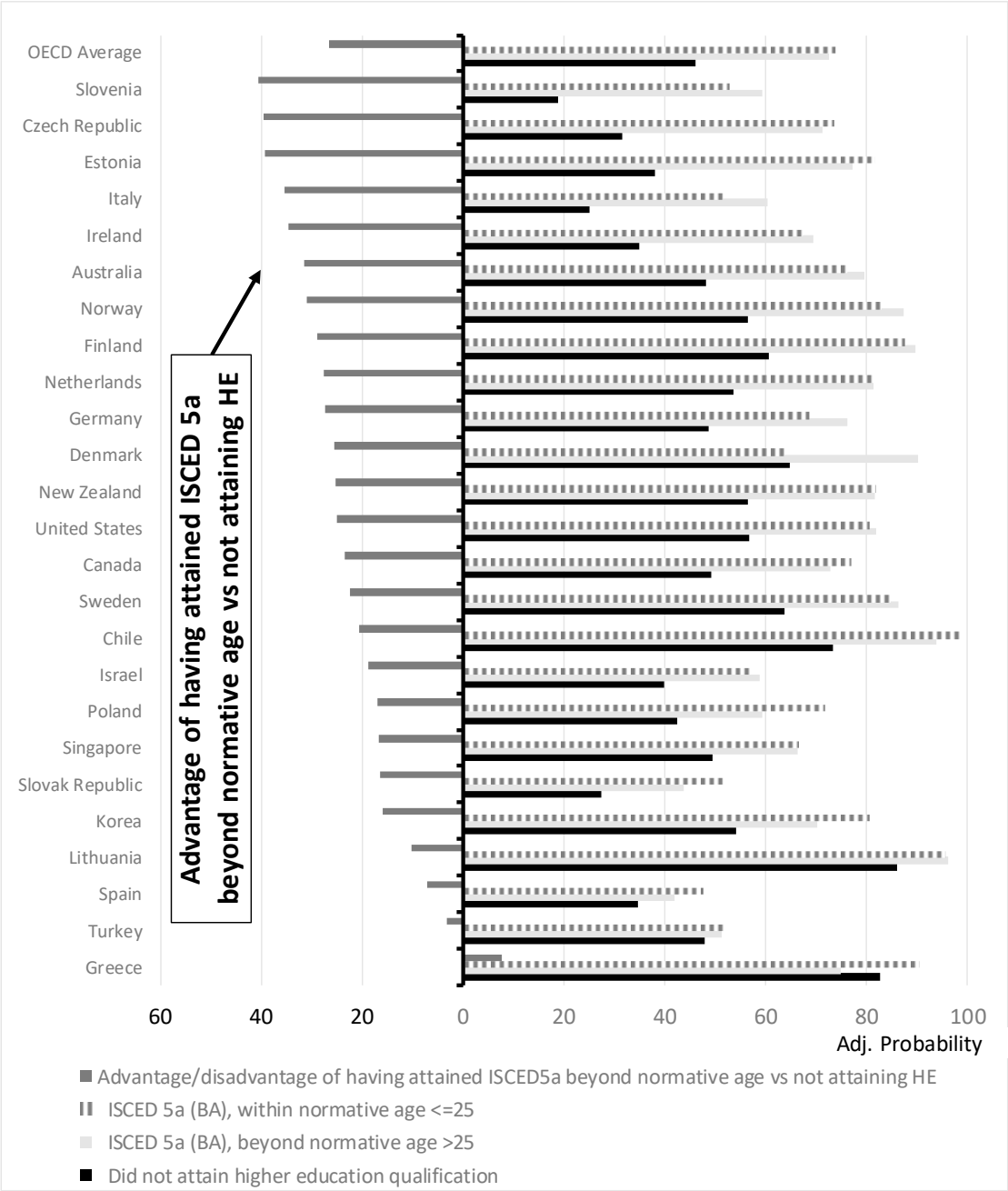
Adults who attain a higher education degree as traditional or non-traditional students tend to be associated with a higher probability of reporting that they feel they have a say about what the government does, which is an indication of greater political efficacy. Figure 4.23 compares the probability of reporting greater political efficacy for adults who completed a bachelor's degree (ISCED 5a) as a traditional or non-traditional student with those who did not attain any higher qualification. While the advantage of having attained the degree at an older age compared to no degree at all is insignificant a couple of countries, namely Greece, Spain and Turkey, it is significant in all other countries. Attaining a professional degree (ISCED 5b) at an older age is associated with a similar pattern in all countries except the Czech Republic and Singapore where it is the opposite and Greece where the difference is insignificant (see Table A.6).

Figure 4.22. Adjusted probabilities of reporting trust in others for adults who attained a bachelor's degree (ISCED 5a) as traditional or non-traditional students



Note: See Table A.5 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 4.23. Adjusted probabilities of reporting political efficacy for adults who attained a bachelor's degree (ISCED 5a) as traditional or non-traditional students



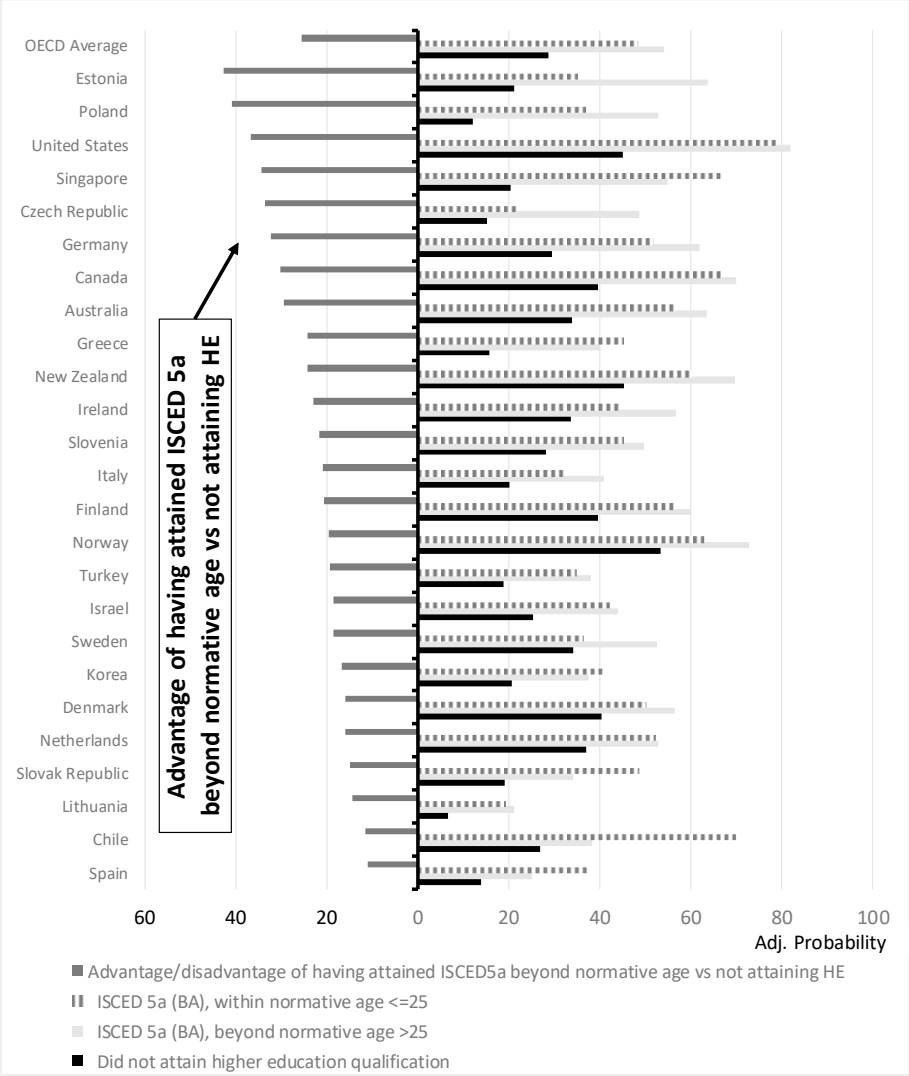
Note: See Table A.6 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

4.3.3. Volunteering

Higher education is positively associated with volunteering in charity or non-profit organisations. Figure 4.24 shows the probabilities associated with volunteering by level of qualification and whether the higher degree was attained as a traditional or non-

traditional student. The difference in probability associated with a completing a degree or not is as high as 40 percentage points in Estonia and Poland for adults who completed beyond the age. The pattern is similar for most countries and also when considering a professional degree (ISCED 5b) (see Table A.7).

Figure 4.24. Adjusted probabilities of reporting that they volunteered for adults who attained a bachelor's degree (ISCED 5a) as traditional or non-traditional students



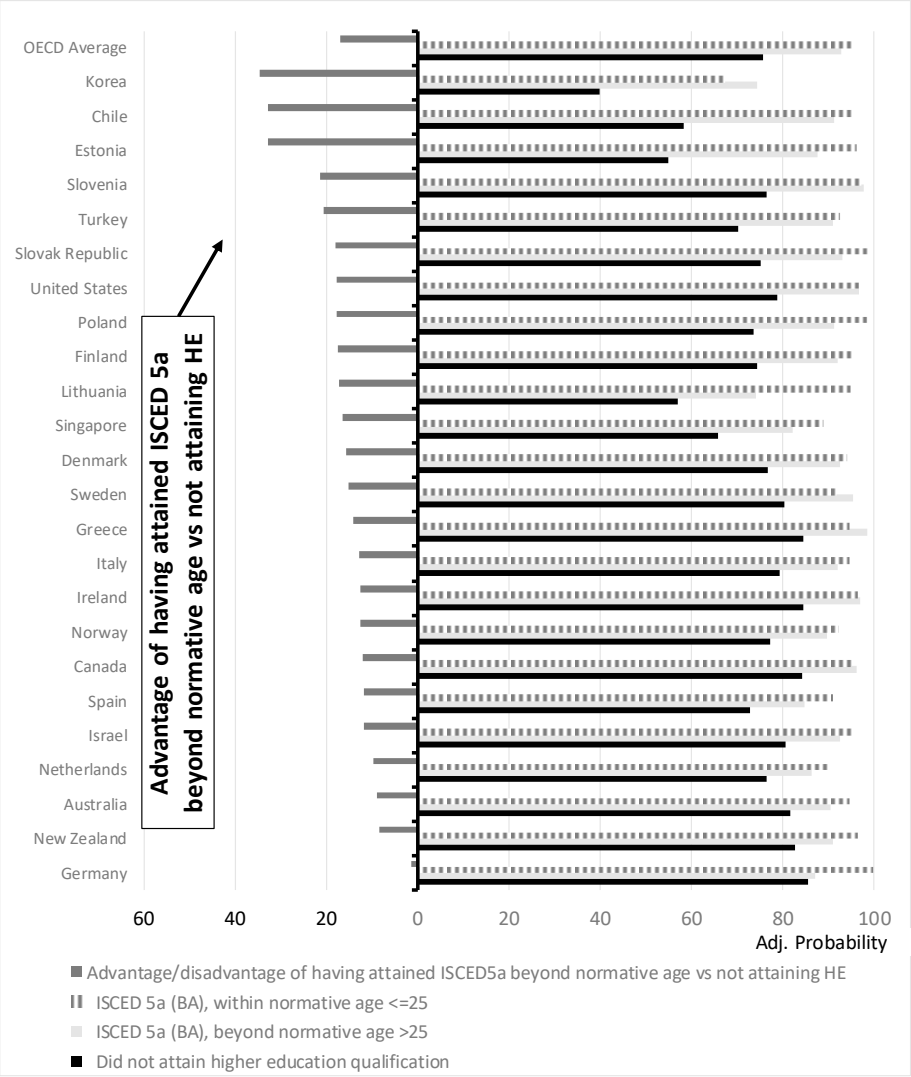
Note: See Table A.7 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

4.3.4. Health

Good health is also associated with a bachelor's degree (ISCED 5a) in most countries and this is the case whether the degree was attained as a traditional or non-traditional student. Figure 4.25 shows that the relationship is significant in all but one country, namely Germany. Health differences are noticeably lower for those who complete a professional degree (ISCED 5b) whether at younger or older ages in most countries,

although it is still substantial in Chile, Estonia Lithuania and Japan, and to some extent in Denmark, Greece, the Netherlands, Slovenia and Turkey (see Table A.8).

Figure 4.25. Adjusted probabilities of reporting good health outcomes for adults who attained a bachelor's degree (ISCED 5a) as traditional or non-traditional students



Note: See Table A.8 for data.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

4.3.5. Summary

This chapter provided an overview of the relationship of a range of socio-demographic characteristics and participation in AE. It was found that in most countries, earnings show the strongest relationship to the probability of participating in AE where very large differences are observed between adults who earn the most and those who earn little to no money on the labour market. This is consistent with the finding that most AE is job-related and much of it is connected to higher skill jobs. It is also consistent with the fact that AE can be a resource intensive activity in terms of time and money. The pattern

across countries regarding other factors are more mixed but it can be discerned that in most countries, educational attainment and literacy proficiency are also substantial factors predicting participation. This highlights the tendency that those who already have higher levels of human capital tend to invest more in developing it further over their lifespan, which provides them with considerable advantage over adults who have lower levels of human capital. While socio-economic origins can be important, their significance depends in large part on the extent of measures taken in different countries to mitigate the intergenerational transmission of social inequality. Similarly, the significance of age depends on the extent and diversity of provision made available to older adults in different countries but also employer behaviour in directing support for AE. Gender and immigration status are not as substantially significant in their relationship to AE compared to the other factors, although immigration can be substantial depending on the country specific situation in terms of the extent of immigration as well as AE related programmes that target immigrants. This chapter also considered the relationship between adults who completed their qualification as traditional vs non-traditional students and selected social outcomes. Results overall suggest a strong positive correlation between open and flexible qualification systems, which enable adults to complete qualifications at older ages, and a range of social outcomes including trust, political efficacy, volunteering and health outcomes.

5. Coordinating Adult Learning Systems

The demand for AE has grown rapidly in several countries since the 1990s but the supply has not necessarily kept up with the growing demand. Many adults want to participate but cannot for a variety of reasons. Often, this is because the supply is not available, too costly or not flexible enough to accommodate the busy lives of most adults, particularly those who are disadvantaged and face daily challenges to make ends meet. In fact, many disadvantaged adults such as those with low levels of education and skills are not interested to invest in AE because barriers such as time and money are too high, and their perception of the associated value is too low. In some other countries, low overall demand for AE remains pervasive. Low or no interest in investing in AE is perhaps the most difficult barrier for adults to overcome and for policy makers to design effective policies that help incentivise citizens to acquire competencies and improve their standard of living. An individual's decision to forego investment in further learning can be seen as preference and rational decision, but this is not independent of the structural conditions surrounding the decision-making process which act as a barrier (Giddens, 1984[28]). This is particularly the case in contexts where the structure of the economy is relatively low-skilled because incentives to invest in AE remain low. The extent of barriers that adults experience in relation to participation and whether they can overcome these barriers is to a large extent related to how well Adult Learning Systems (ALS) are coordinated, and in turn the extent demand is stimulated and the extent to which provisions are available, affordable and flexible.

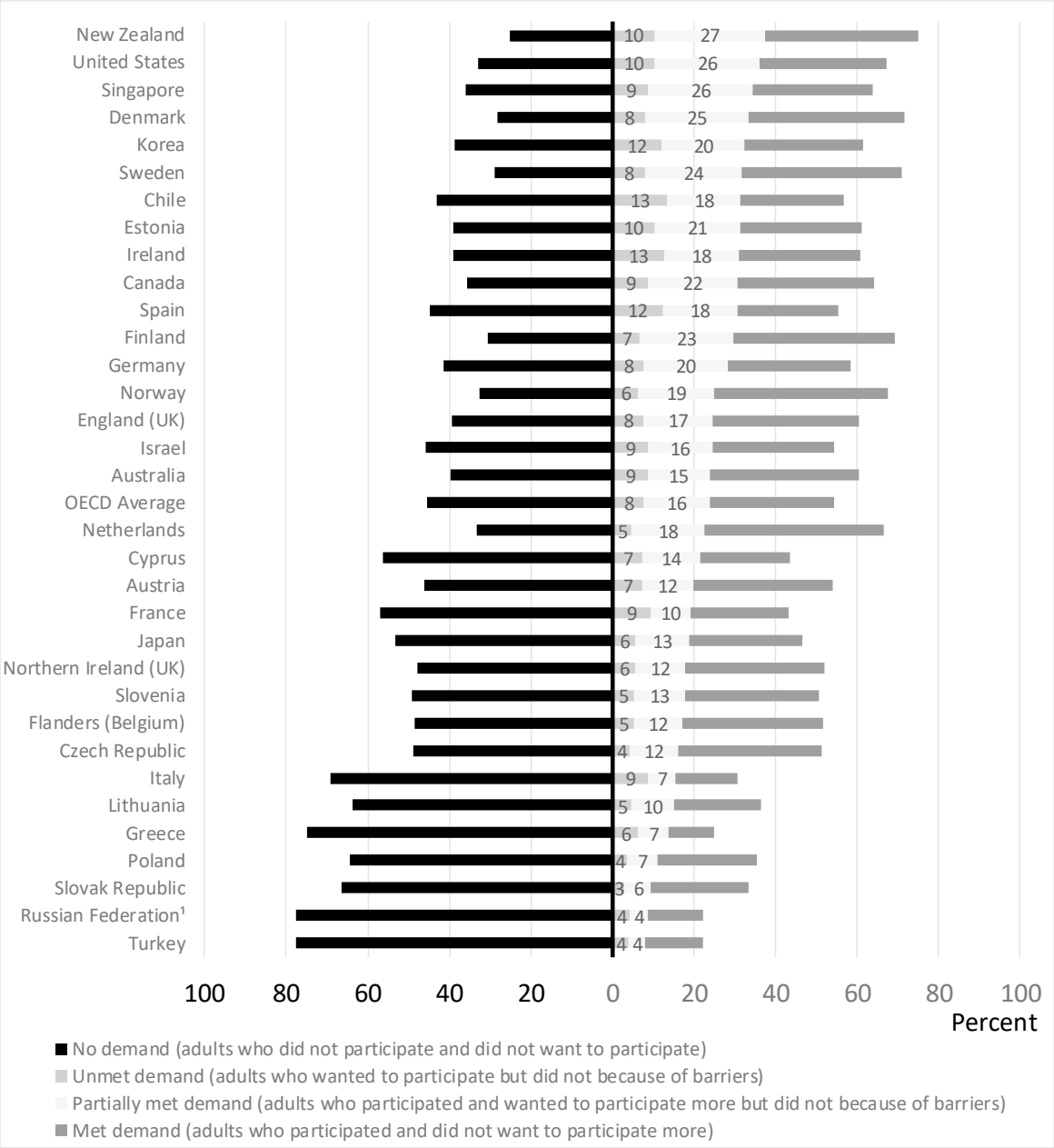
This chapter considers the relationship between AE and aspects related to the policy and institutional environment as well as the structure of the economy. It discusses the extent of demand and supply of AE, how this relates to barriers as well as to AE related governance, financing and provision structures. The role of different economic and social policy instruments involved in the coordination of ALS is also considered.

5.1. Demand and supply of AE

The level of demand for, and supply of, AE in different countries can be discerned from Figure 5.1. Supply is reflected by the overall incidence of participation. In nearly all countries, it can be surmised that demand is higher than the actual participation rate, because some adults wanted to participate or participate more but did not due to barriers. From this perspective, four categories of demand can be derived: adults who did not participate and did not want to participate (no demand); adults who wanted to participate but did not because of barriers (unmet demand); adults who participated and wanted to participate more but did not because of barriers (partially met demand); and, adults who participated and did not want to participate more (met demand). Results in Figure 5.1 show that the demand for AE is highest in the Nordic countries (Denmark, Finland, Norway and Sweden), the Netherlands, New Zealand and the United States. It is lowest in Greece, Italy, Lithuania, Poland, the Slovak Republic and Turkey. In all countries, there is some demand that is not met but this is highest in a mix of countries that have either already the highest rates of participation (New Zealand and the United States) or rates of participation closer to or below the average (Korea, Chile, Ireland and Spain). Countries with the lowest overall rates of participation such as Greece, Italy, Lithuania,

Poland, the Slovak Republic and Turkey tend to have high proportions of adults who do not want to participate.

Figure 5.1. Demand and unmet demand for adult education

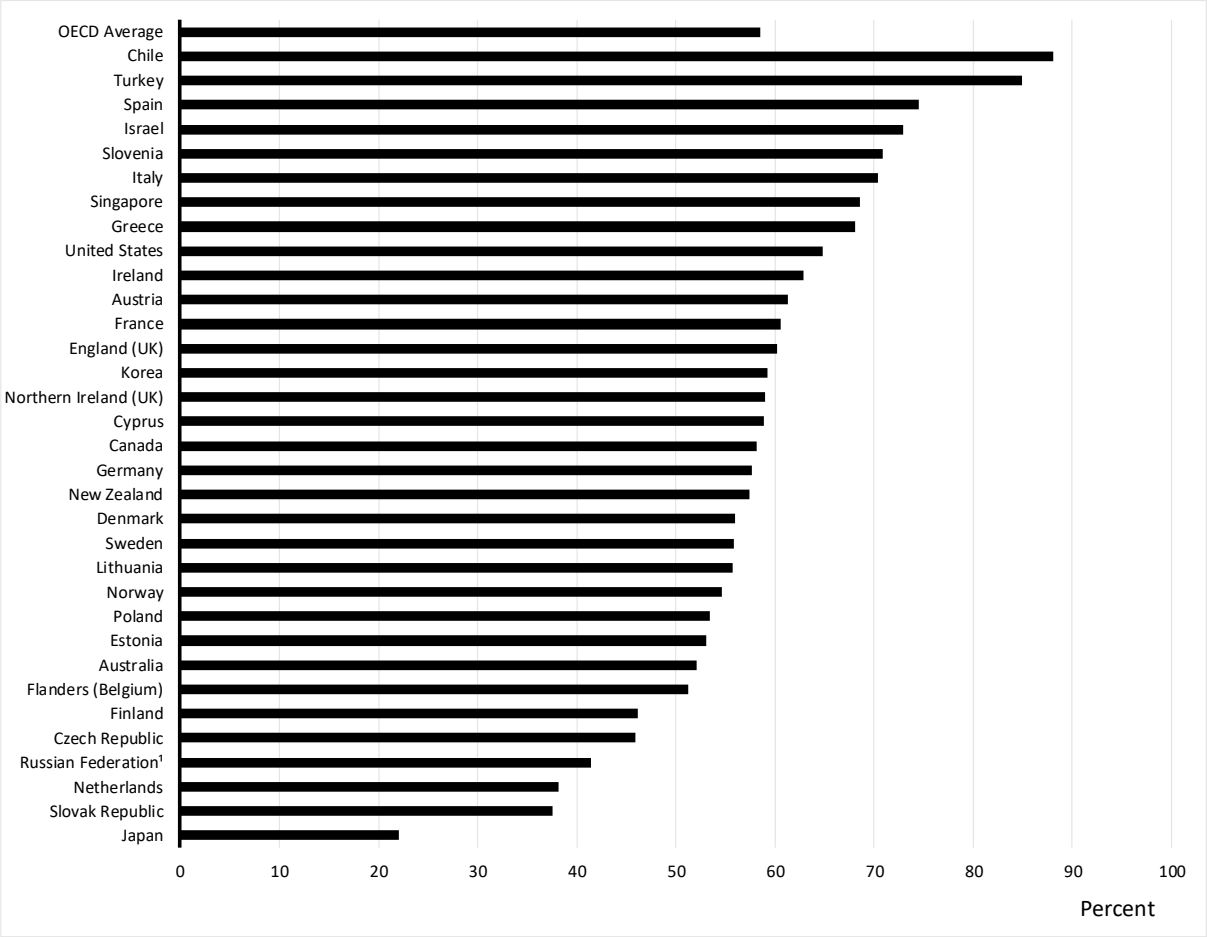


[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Remarkably, in New Zealand and the United States, there is about 10% of the adult population who want to participate but do not because of barriers, and an additional 26-27% who would like to participate more but do not because of barriers. In Chile, Ireland, Korea and Spain there is 12-13% of the adult population who want to participate but do

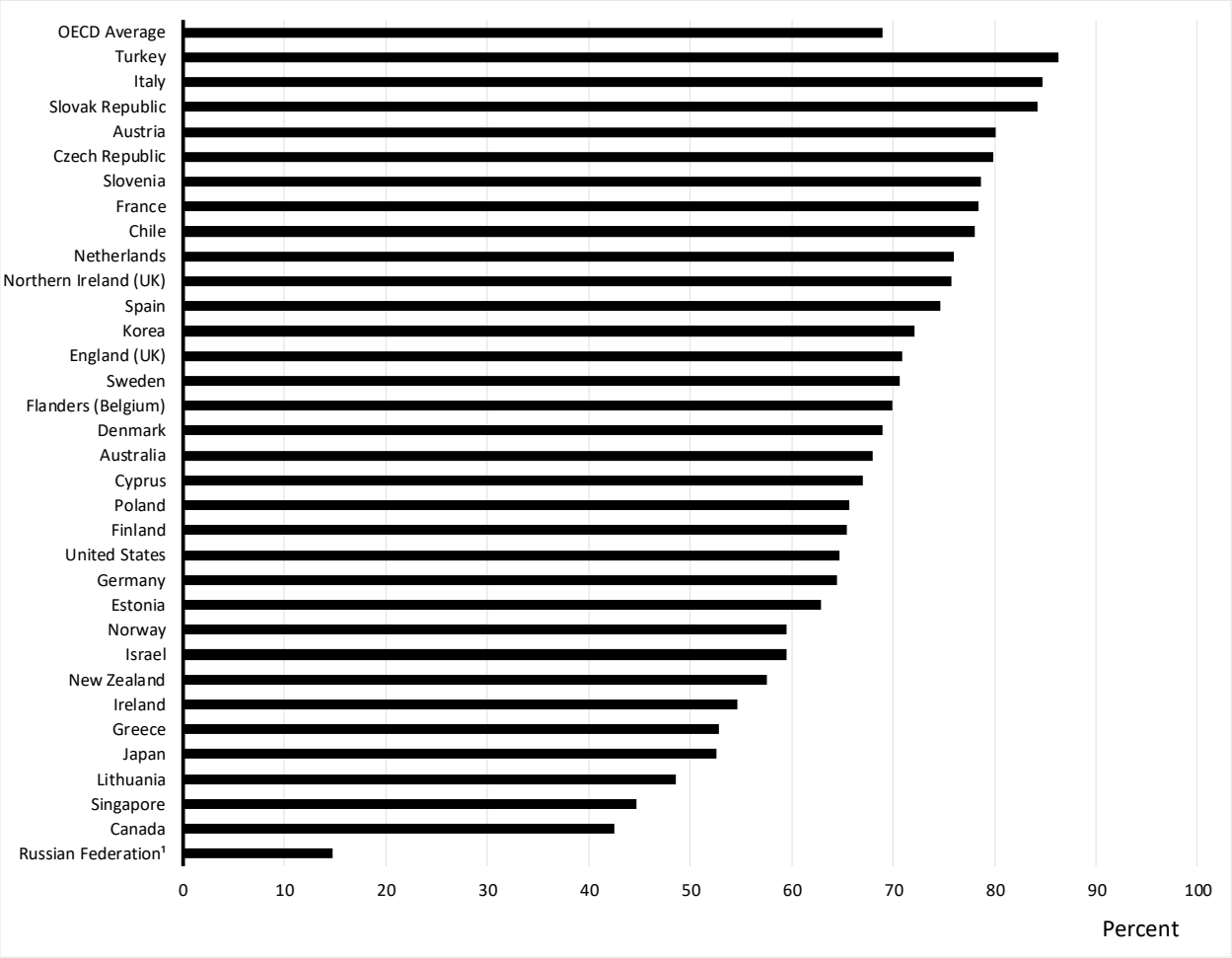
not because of barriers, which is the highest among the countries considered. Thus, investing more in AE and devising policies and programmes that could help citizens overcome these barriers could substantially boost participation rates in these countries. Figures 5.2 and 5.3 shows the proportion of unmet demand for those adults who scored at lower levels of literacy proficiency, namely Levels 2 or below, and who have upper secondary or less, respectively. Results indicate that in most countries unmet demand is predominantly among the lowest-skilled adults. This is indication that there is insufficient investment in provisions that cater to the needs and aspirations of the lowest skilled.

Figure 5.2. Unmet demand for adult education among adults with lower literacy proficiency



[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 5.3. Unmet demand for adult education among adults with lower education



[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

5.2. AE related governance, financing and provision structures

The extent and distribution of AE in a country is the product of structural and public policy frameworks that surround the provision, governance and financing of AE. These frameworks underlie Adult Learning Systems (ALS) but are deeply embedded in societies because they are linked to a diverse range of stakeholders and types of opportunities. Accordingly, their effectiveness, coherence, or even existence cannot be taken for granted. ALS are complex and lie at the intersection of a variety of other systems including education and training systems, labour market and employment systems and other welfare state and social policy measures. Such complexity poses a major challenge to the development and governance of effective and coherent ALS. Unlike regular schooling from kindergarten to grade 12, AE opportunities are rarely under the authority of a single entity such as the Ministry of Education, nor do they share a unified purpose or even groups of stakeholders. With this comes a lack of a common language or understanding, a core as well as boundaries as to what constitutes ALS.

Given the potential consequences for well-being, however, coordination of organised adult learning opportunities is a worthy undertaking. Indeed, many countries who feature high and widely distributed levels of organised adult learning have well-developed: governance structures that foster coordination among stakeholders; financing structures that align incentives and foster co-investment; and provision structures that enable open, flexible and targeted opportunities that are designed to mitigate barriers to participation. Policy makers thus have at their disposal several tools to help citizens overcome barriers to participation, ranging from broad social policies to economic and labour market policies that foster skilled work to AE policies that incentivise learning and institutionalise provision.

The remainder of this chapter considers some of the main instruments that can foster high and widely distributed levels of AE. It discusses the role of qualification systems and the relationship between other selected economic and social policy instruments and macro level features of AE that can be discerned from the OECD Survey of Adult Skills. Further system level data and analysis on strategies, policies and programmes associated with structures related to AE in different countries is needed in the future as part of PIAAC to enhance policy learning in an international setting. The OECD's Thematic Review of Adult Learning (TRAL) in 17 countries between 1998-2002 was important in this regard, but this needs to be revisited given the rapid growth of AE in many countries since the 1990s.

5.3. The role of qualification systems

Integration of adults into the regular system of education where possible or access to equivalent qualifications which can enable a return to the regular system at higher levels of attainment is important. AE activity that can be linked to qualifications is motivating for adults, whether the undertaking is formal or non-formal, because they communicate value among stakeholders, and thus enhance the labour market value of investing in AE (Singh, 2015[29]) (Singh and Duvekot, 2013[30]). The extent to which adults can attain qualifications at older ages reflects an openness as well as flexibility of formal education structures in catering to the needs of non-traditional students which is good for boosting participation and extending skills to a larger proportion of the population. It was seen in Chapter 2 that this is now substantial in several countries at all levels including basic and second chance education (ISCED 3 or lower), adult higher education (ISCED 5 or above) and many vocationally oriented opportunities (ISCED 4 or 5b) which accommodate non-traditional students. In several countries (Denmark, Norway, Sweden, Finland, Canada, New Zealand and the United States), more than a quarter of the population attained their highest qualification as an adult student, which also tend to be the countries with the highest overall rates of participation in AE. Moreover, there is a direct relation between higher levels of qualifications and continued learning throughout the lifespan including non-formal and informal types of learning.

How AE opportunities relate to national qualifications frameworks can have important implications. Enabling the attainment of qualifications at an older age in ways that are indistinguishable from those intended for traditional students, particularly at the higher levels can be important since creating a parallel system instead of providing equivalence that links back to the regular system of education can have negative implications. For example, creating parallel non-formal systems or lower tier tracks can have adverse effects on individual benefits and in turn individual motivation if they are associated with low esteem. From a system level perspective, parallel systems may still boost

participation and skills and can be crucial for meeting the needs of industry and the labour market, but these can lead to disincentives by both individuals and employers because they carry lower status and stigma.

The extent to which non-formal AE activity can be linked to qualifications, for example via the Recognition of Prior Learning (RPL) mechanisms, is also important. Non-formal activity allows for much greater flexibility to cater to the needs of diverse groups in society by enabling customisation, targeting and outreach. Developing the linkages between a highly diversified and flexible set of provisions back to the regular system of education and hence to formally recognised education and learning of all kinds is a key feature of more advanced ALS. The recognition of learning provides valuable information to learners and providers to aid in coordinating AE efforts, enables flexibility, and is helpful for customisation and catering provision to actual needs. It is also crucial for incentivising learners to take up AE because recognition affects motivations and aspirations of individuals (OECD, 2010[7]). Countries that continually develop their AE provision structures in terms of seamlessly connecting AE of all kinds to formal qualifications are more successful in boosting participation, skills, and enhancing the value of AE in relation to labour market outcomes. Moreover, the level of institutionalisation that allows for openness and flexibility with respect to policies, national qualifications frameworks and existence of RPL mechanisms helps to give structure and quality-assurance to the plethora of programmes across the ABE, AHE, AVE and ALE spectrum.

5.4. Economic and social policy instruments

There are several broad policy instruments that can play a role in fostering high and widely distributed levels of participation in AE. The following focuses on three policy instruments: public support for education, active labour market policies and programmes that target socially disadvantaged adults.

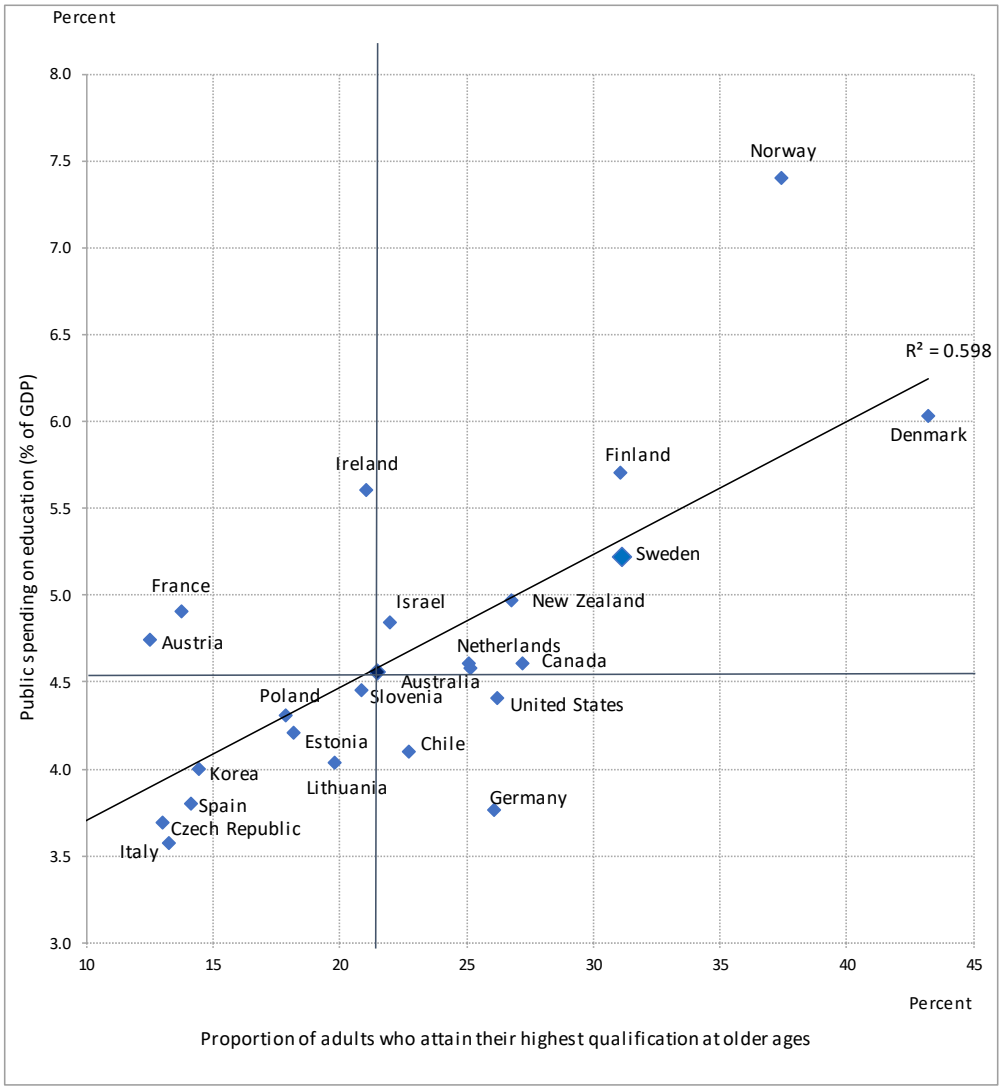
It can be surmised that the overall level of welfare state expenditures is not uniformly related to success in boosting participation rates or extending AE opportunities to the most disadvantaged adults. However, a closer look at the composition of welfare spending in a way that distinguishes between categories that are deemed to be more *proximal* or *distal* to AE is revealing. Indeed, more proximal categories like public spending on education and Active Labour Market Programmes (ALMPs) show a stronger relationship with AE related outcomes. Specific initiatives that target socially disadvantaged adults such as those with low levels of education and skills are also related to good AE related outcomes.

5.4.1. Public support for education combined with open and flexible educational structures

The relationship between overall public spending on education and AE related outcomes is not straightforward. Specifically, the level of public spending on education tends to be related to higher and more widely distributed levels of AE on the condition that formal systems are more 'open and flexible' to adults. Figure 5.4 shows the relationship between public spending on education and the probability of participation in AE of adults with the lowest educated parents. New Zealand, Denmark, Finland, Norway and Sweden spend the most on education and are also among the most successful in terms of extending AE opportunities to the most disadvantaged adults. In contrast, while France and Israel are above average spenders on public education, this does not

necessarily translate into higher rates of participation in AE among the most disadvantaged. This might be related to the fact that the formal education systems in those countries are much less open to older adults as was shown in Chapter 2 (Figure 2.1). Similarly, Australia, Canada, and the Netherlands spend similar or a little more on public education compared to Poland and Slovenia and a range of other countries, but the latter are less successful in extending opportunities to the most disadvantaged. Again, the educational structures in Australia, Canada and the Netherlands are more open and flexible in catering to the needs and aspirations of older adults enabling more disadvantaged adults second chances to attain higher degrees later on in life.

Figure 5.4. Public spending on education and probability of participation of adults with lowest educated parents



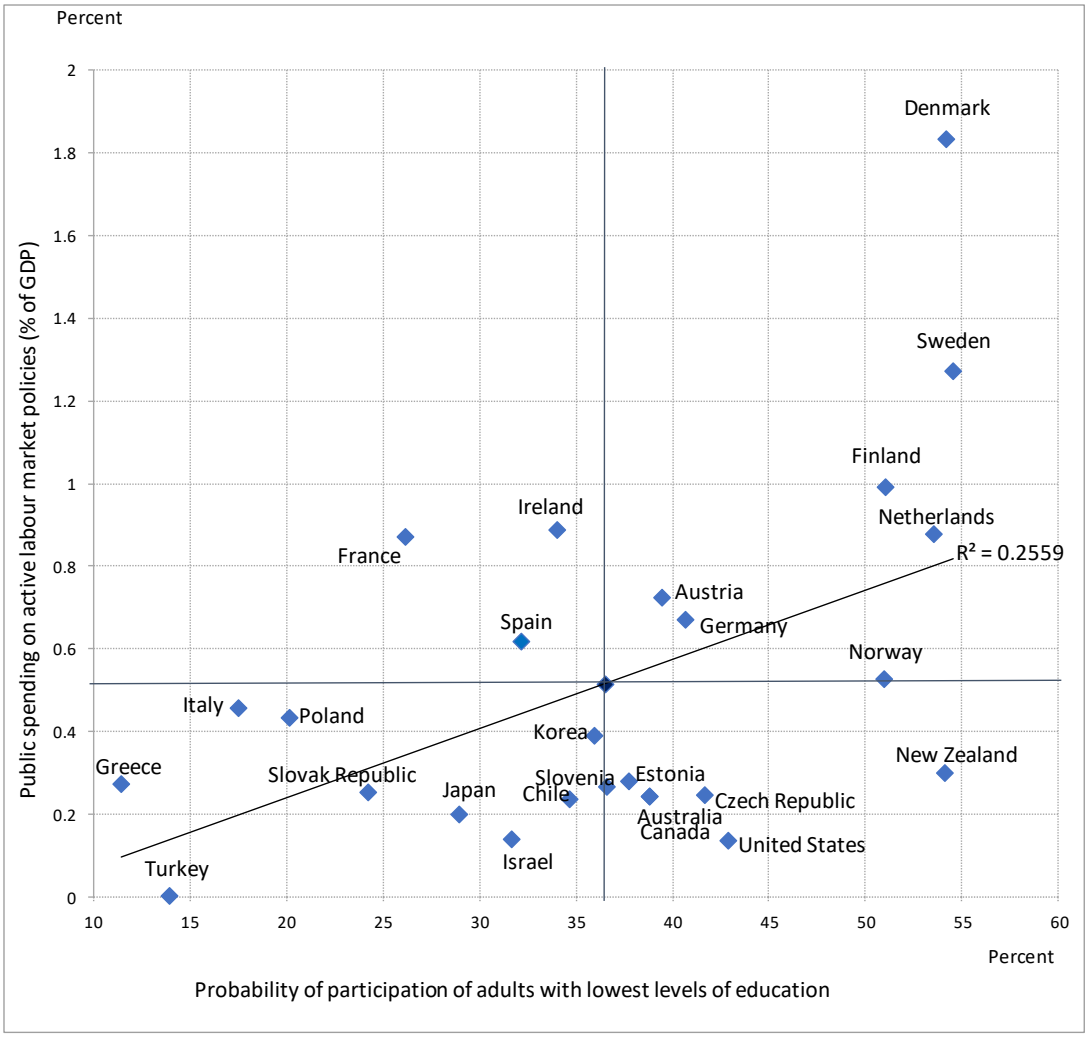
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

5.4.2. Active labour market policies

Active Labour Market Policies (ALMPs) interact with AE and are specifically designed to boost employment. As was seen in Chapter 3, adults who have participated in formal AE to attain a higher qualification are much more likely to be employed than adults who remain at any lower level of qualification. In some cases, ALMPs underlie this phenomenon by encouraging adults to attain a higher qualification, but this depends on how they are designed. In their most basic form, ALMPs typically comprise of public employment services including job centres and labour exchanges, which improve job searching efforts. Such employment services may simply help with developing skills to obtain a job such as interview skills or writing curriculum vitae. But they may also be connected more directly to AE by offering training schemes, such as courses or apprenticeships, or other formal programmes, to boost employability. As such, depending on how they are operationalised, ALMPs may form an important part of Adult Learning Systems (ALS) and help to boost employment. In contrast, ALMPs can also involve employment subsidies to create short-term jobs that maintain people's attachment to the labour market in adverse times and may be limited in their relationship to AE, especially if there are limited AE related structures that are called upon to play a role in the ALMPs. Some countries like Denmark, Finland, Sweden and the Netherlands provide public support for the unemployed to participate in AE provisions that already exist and as such, ALMPs of this kind form an important part of ALS. The relative success of ALMPs therefore depend on the characteristics of ALS and how well developed they are for catering to the needs of disadvantaged adults such as those who have weak attachment to the labour market.

As can be seen in Figure 5.5, not all spending on ALMPs seems to be equally effective in boosting participation, particularly among adults with the lowest levels of education. Results show that France, Ireland and Spain are above average spenders on ALMPs, but this does not necessarily lead to success in boosting participation among those with lower levels of education, especially when compared to Australia, Canada, the Czech Republic, the United States and New Zealand who spend relatively little on these programmes, but feature above average levels of participation among those with lower levels of education. A key point is that ALMPs do not necessarily relate to participation in AE because it depends on the prevalence of AE related provision structures, including how open and flexible they are to adults who are in precarious situations such as having low qualifications, low skills and weak attachment to the labour market. It also depends on how ALMP is targeted, i.e., whether it is for low-skilled, medium skilled or higher-skilled workers.

Figure 5.5. Public spending on active labour market programmes and probability of participation of adults with ISCED 3 or below



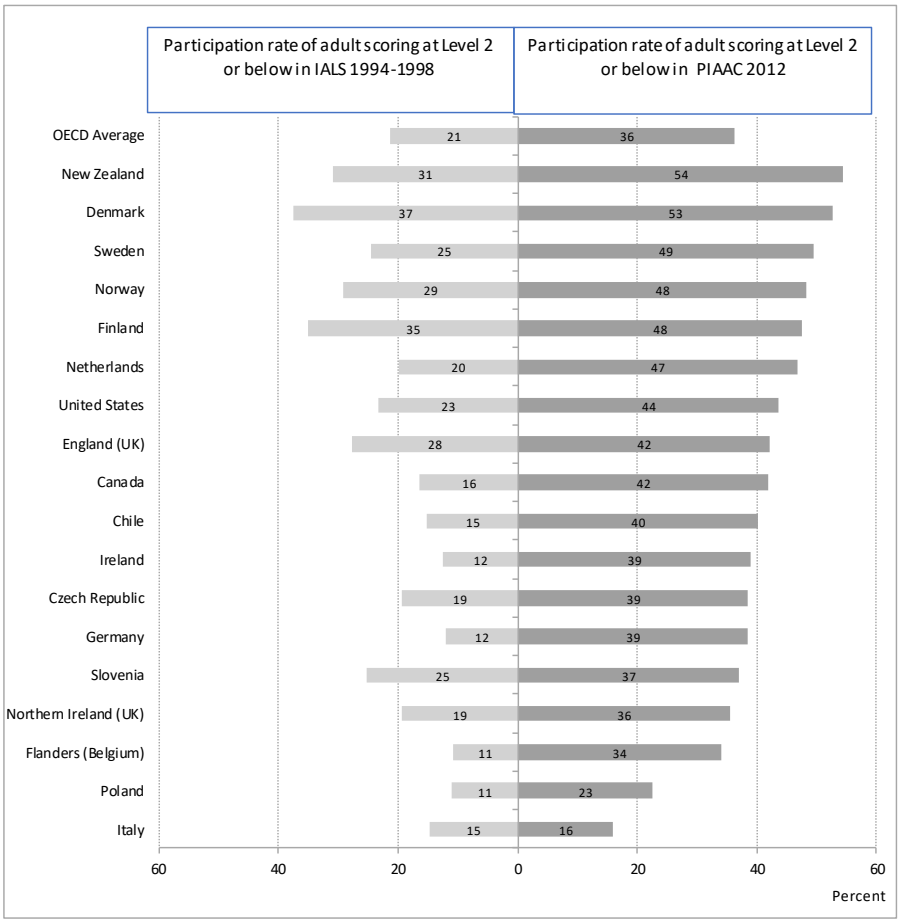
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

5.4.3. Targeting

Policies related to customisation, targeting and outreach are an indication of active AE related policy making that seeks to boost the level and equitable distribution of AE based on more nuanced understandings of interests and needs. Targeting and outreach, especially for adults with little or no qualifications, must be flexible by encouraging any kind of learning and development, focusing on relevance, needs, recognition of prior individual experiences, and other individual or organisational aspirations. Often these are designed with an understanding of the importance of AE and its implications for the level and distribution of outcomes associated with AE, but also with the aim of increasing consistency of policies and practices with socio-political goals related to equity and social justice. Customisation and targeting are crucial tools because these are key for tackling inequality and disadvantage. These imply non-market-based solutions, based on state aims, not necessarily market or narrow stakeholder interests.

Figure 5.6 shows some evidence of targeting of AE among lower-skilled adults for nearly all countries who participated in both the IALS and PIAAC studies. Results show the increase in the proportion of adults scoring at Level 2 or below vs Level 3 or higher who participated in AE since the 1990s. While participation rates jumped across the skill spectrum, the ratio between adults with low- vs high-skills narrowed in nearly all countries, which is an indication of targeting but also of a general tendency to invest in AE across the skill spectrum, including among employers. Some countries already had relatively high rates of participation in AE among the lower skilled in the 1990s, but others have experienced a greater relative boost in participation among the lower skilled. For example, in Canada, Chile, Flanders (Belgium), Ireland, the Netherlands and Germany, participation rates in AE increased substantially among the lower skilled.

Figure 5.6. Changes in participation among lowest-skilled adults since the 1990s



Sources: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019), and International Adult Literacy Survey (IALS), www.statcan.gc.ca.

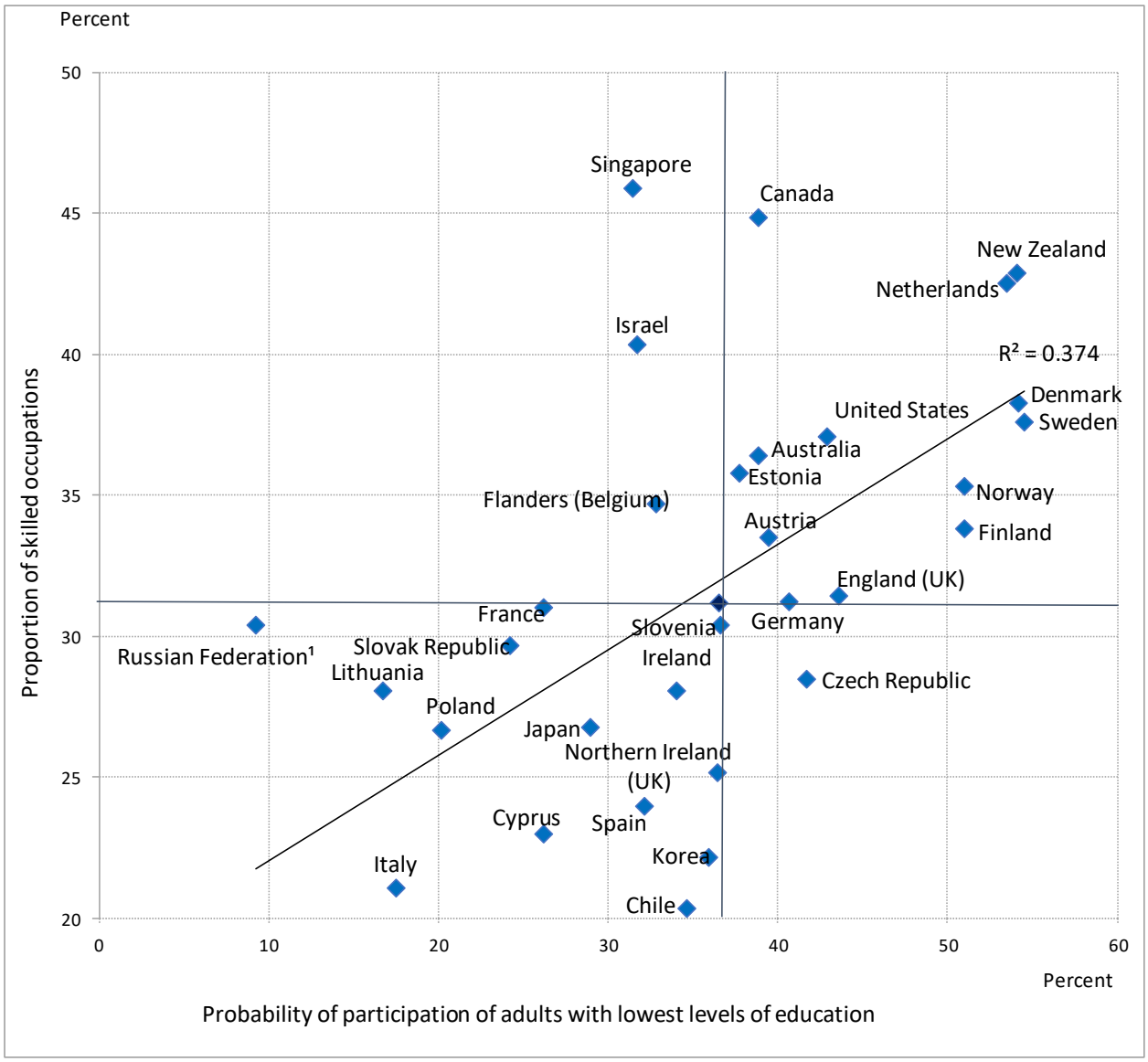
5.4.4. Stimulating 'quality' jobs

Labour market and employment systems have become more integral to the nature and functioning of ALS. This is evidenced by the impressive growth of employer-supported AE since the 1990s. Furthermore, much of AE is undertaken for job-related reasons. It is easy to see how continued investment in learning can play a crucial role in the high-skills sectors since it seeks productivity growth by enhancing the value of goods and

services. Indeed, the high-skills sector is strongly associated with high levels of investment in AE as was seen in Chapter 3. Firms in this sector tend to follow quality-based competition strategies as opposed to price-based competition strategies. This is because the value of goods and services is driven up by quality enhancements, or by moving into new fields through the process of innovation. As discussed in the OECD Skills Strategy (2012), several studies have linked product-market and competition strategies to skill supply and skill demand at the local level. Policy makers thus need to be mindful of taking a balanced approach to fostering both the skill supply and skill demand in local markets.

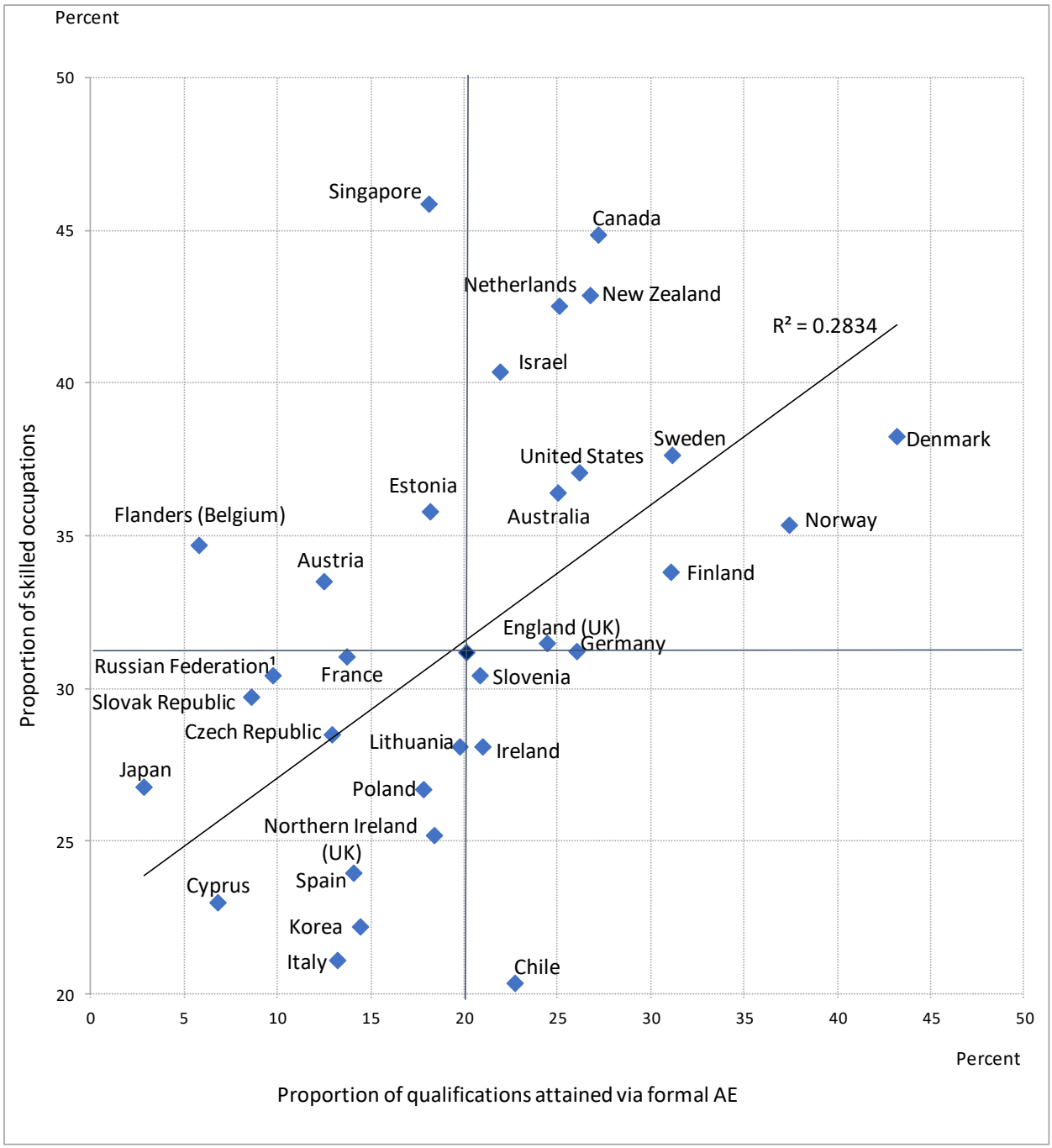
Interestingly, the extent and size of the high-skills sector appears to be related to the extent that employers are interested to invest in AE among the lower-skilled workers. Results in Figure 5.7 show a strong relationship (correlation=0.75) between the proportion of workers in high-skilled occupations and the probability of participating in AE among the lowest educated. In other words, investing in the high-skill sector may have cumulative effects that lead to general upskilling. A key point is that the structure of skill demand in the economy has important implications for the extent and distribution of AE. It is also strongly related (correlation=0.56) to the structure of formal AE where countries with a larger proportion of high-skill occupations have more open and flexible educational structures. Figure 5.8 shows the relationship between the extent of skilled occupations and proportion of qualifications attained via formal AE. A strong correlation makes sense since many high-skilled workers continue to attain higher levels of qualifications over their lifespan, but evidently it is easier to do so in countries where educational structures are more open and flexible. Recall that this is also related to the increased labour market attachment of a larger share of the population as was seen in Chapter 3.

Figure 5.7. Participation among most disadvantaged and proportion of skilled occupations



[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Figure 5.8. Proportion of qualifications attained via formal adult education and structure of the economy



[1] See note 1 in Figure 2.1.

Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

6. Conclusion

This chapter summarises the main points arising out of the analysis by focusing on the cross-national patterns presented in this report. It also provides reflections on the measurement Adult Learning Systems (ALS) and discusses some implications for the OECD Programme for the International Assessment of Competencies (PIAAC).

6.1. Measuring Adult Learning Systems

Adult Learning Systems (ALS) are not easy to pinpoint even at a national level let alone at a cross-national level. The concept is not neat or clear cut because different systems organise and govern learning opportunities in different ways. In some countries, adult learning is more organised and made to be more purposeful than in others, for example, in relation to qualifications. This is either for cultural or historical differences, or simply differences in the structure of the economy and level of development. Different forms of provisions are thus perceived as valid or recognised to varying degrees by different sets of stakeholders. It is thus difficult to pinpoint the significance or meaning of different provisions, or to categorise and compare them in consistent ways. In relation to governance and financing, ALS are even more complex because the related structures are deeply embedded in society and lie at the intersection of a variety of other systems including education and training systems, employment and labour market systems, as well as other welfare and social policy related measures. For this reason, AE is rarely understood or approached as a system as done in this report. A master concept like lifelong learning has been deployed in international settings for nearly five decades to promote a more coherent and holistic perspective of related phenomena, and while it has been taken up in many countries' policy frameworks, the reality in practice is that the pieces of the system related to AE remain fragmented in most countries. For example, the mass of organised learning opportunities serves multiple purposes and are governed by multiple groups of stakeholders who often do not share a common understanding or language to reflect some of the broader challenges which could be coordinated in a more coherent fashion.

Despite the challenges, PIAAC is a large scale and cross-national undertaking that provides high quality measures related to adult learning. While PIAAC is primarily designed as an international comparative assessment of selected skills, its core analytic goals are to provide information that helps understand: the antecedents and outcomes of proficiency in information processing skills; and, the practices that are associated with the development and maintenance of proficiency. There is little doubt that education and learning throughout the lifespan is one of most substantial antecedents of the skills measured in PIAAC. In other words, ALS are key for supporting skills and capabilities among adult populations. Accordingly, a significant portion of the background questionnaire was designed to collect data from respondents on their educational experience including adult learning.

The following considers in more detail what PIAAC measures and does not measure as it pertains to AE. This report has sought to exploit the data on adult learning made available by PIAAC. Most of what is measured specifically in terms of organised adult

learning in the OECD Survey of Adult Skills is reported in Chapter 2. It is possible to discern several aspects related to AE but there are also several limitations. It is worthwhile to note some of these limitations because small improvements could considerably improve the analytic value of PIAAC instruments in terms of policy analysis in the future.

6.1.1. Distinctions between formal education and non-formal education activity

It can be surmised that the survey instruments were primarily designed to capture the incidence of organised adult learning in the 12 months preceding the survey according to a succinct understanding of formal vs non-formal AE related activities. Specifically, distinctions can be drawn between activities that were undertaken toward a formal programme (i.e. formal AE), and those undertaken as one-off incidences such as a course, seminar or private lesson (i.e. non-formal AE). This is useful but it would be productive to capture slightly more complexity. For example, it is not possible to establish based on the data whether there are any dynamic or interactive links between non-formal and formal activities. For example, it is unknown whether the motivation for taking a non-formal activity is a prerequisite to a formal programme or may count towards it, which is now the case in many countries. In other words, along the continuum of formal to non-formal activities, there is little distinction on the extent of non-formality, which is becoming more important as all kinds of non-formal learning activities are on the rise in many OECD countries, and some of them are being integrated into qualification systems.

Separately, some data was collected to help discern the volume of non-formal AE, but no attempt was made to capture past AE related activity or expected activity in the future. Moreover, it is not possible to ascertain with precision the volume related to formal activities, for example, intensity of study or whether it is combined with work on a full or part- time basis, or the length of time that adults may have been in the programme.

6.1.2. The role of AE in attaining past qualifications

Little to no data was collected regarding past AE related activity or expected activity in the future. However, because the age in which the highest qualification was attained was collected, it is somewhat possible to ascertain past AE activity that led to a respondent's highest qualification (i.e., formal AE) as was done in Chapter 2. However, there was no data collected regarding adults' experiences as non-traditional students such as reasons for delaying attainment, or any barriers and enablers encountered. Moreover, no data was collected on whether AE was involved in attaining prior qualifications which may have been used to re-enter the regular system of education. It would not be possible to capture the entire history of AE activities of every respondents, but a few additional instruments could be helpful to ascertain key aspects that are relevant for policy. One priority is to distinguish between the increasing mass of non-formal activities, particularly in terms of contributing toward qualifications.

6.1.3. Motivations and sources of support

It is possible to discern from data collected whether motivations for undertaking the AE activity were job-related, such as to find a job, to get promoted, obtain a better job etc. but it is not possible to discern whether it was for developing basic skills, language or

ICT related reasons, or for more advanced professional purposes. This can be important for understanding better the role of employer vs government support for AE. Moreover, other reasons for undertaking AE which are known to be powerful motivators such as for personal, social, or civic-related reasons cannot be discerned. It is known from AE research that motivations are complex and inter-related, and that learning for any reason can be important for developing core competencies that are relevant to the labour market. Thus, broadening the remit to non-economic forms of adult learning should be considered a priority. This is particularly the case given that basic skills programmes which relate to the direct measures of skills in PIAAC, are not undertaken only for job-related reasons but are a high priority for many governments.

The data collected provide an indication whether respondents received at least some kind of support from their employer to participate, but not whether there was any government support of any kind. This makes it difficult to ascertain the extent to which government related initiatives may be playing a role, for example, in reaching the most disadvantaged adults.

6.1.4. Barriers

Some data was collected on barriers, but this did not reflect the state of the art. Insufficient information was collected to discern the range of barriers that individuals face in investing in AE, ranging from dispositional, situational, institutional, informational and financial. Research shows that time and money are among the most common barriers, but these are difficult to interpret for policy purposes since time and money are not endless resources, and for many people mentioning lack of time or lack of money is as much a statement of the value they ascribe to education and the expected outcome of such an activity which is related to other policy relevant barriers such as dispositional or informational ones (Rubenson, K., & Desjardins, R., 2009[27]). Moreover, data on barriers was only collected from people who wanted to participate or participate more but did not. However, adults who participated in an activity also experience barriers, even if they could overcome them. It is important to understand why some people may overcome the barriers they experience while others do not which is helpful for evaluating and designing policy initiatives that seek to mitigate barriers. Moreover, it is crucial to also ask adults who did not participate why this was so, because this might be due to substantive barriers.

6.1.5. System level features

PIAAC is an individual level survey, but because the data are representative at the national level for most countries, it is possible to derive several measures at an aggregate level on the extent and distribution of AE which provides valuable information at a systemic level. Aside from the EU Adult Education Survey, there have been very few to no studies that provide data on systemic features of ALS at an international and comparative level. In this sense, it is important to recognise PIAAC as a highly valuable instrument for research-based policy analysis related to AE.

However, further studies are needed to build in links for using such microdata in comparative policy and institutional analysis in an international setting to enhance policy learning. AE related structures have evolved rapidly in many OECD countries. Thus, more current reviews and studies of these structures are needed to develop typologies of system level features which reflect actual state of AE related structures in different OECD countries. This is important for at least two reasons which are highly

inter-related. First, it is essential to interpret better the data that arises from PIAAC. Second, it is essential to develop and refine measurement better instruments as PIAAC evolves over time. The OECD's Thematic Review of Adult Learning (TRAL) in 17 countries between 1998-2002 was important in this regard, but this needs to be revisited given the rapid growth of AE in many countries since the 1990s.

6.2. Understanding cross-national patterns associated with Adult Learning Systems

Adult Learning Systems (ALS) are of considerable strategic importance in today's complex and diverse world. They help adult populations cope with and respond to major political, economic, social, and even natural forces affecting the globe. The capacity of nations to adjust to, and cope with, change, improve standards of living, and capitalise on technological change, depends in large part on the effectiveness of ALS to enable communication among citizens and to foster the development and maintenance of their competencies over their whole lifespan. It is thus important to view ALS not only as means to enhance productivity, but also to assist individuals in their everyday actions and promote active citizenship. The negative consequences of failing to develop an effective ALS are many including the exacerbation of divisions among socio-economic and ethnic groups and the marginalisation of large segments of the population.

6.2.1. Advancedness of ALS

Evidence in this report suggest that ALS are growing at a rapid pace in the world's most advanced economies. The growing importance is made clear by the data suggesting a very rapid growth in employer sponsored AE over the past two decades in nearly all countries. Countries with most advanced ALS are those who sustain high and widely distributed levels of AE.

An important factor distinguishing advanced ALS is the level of integration among major alternative types of Adult Education (AE) [i.e. Adult Basic and General Education (ABE and AGE), Adult Higher Education (AHE), Adult Vocational Education (AVE) and Adult Liberal Education (ALE)], for example via qualification systems. This in large part depends on a broad conceptualisation of AE and the interaction of a broad base of stakeholders. To be sure, ALS revolve around educational opportunities that extend well beyond the initial years of education and are deeply entwined in a wide range of economic and social institutions that come into interaction with the different ages and stages of our lifespan. Thus, they are a product of the interconnectedness or lack thereof of a range of economic and social institutions that affect the opportunity structure of adults as they age.

6.2.2. Coordination of ALS

While ALS are at the centre of the opportunity structure of citizens, they are complex and thus difficult to coordinate. A wide range of stakeholders are involved but they do not necessarily share a common understanding or broad conceptualisation of AE. Thus, their development and effectiveness depend to a large extent on the exchange of information, expectations and needs among diverse stakeholders on an ongoing basis. This involves broad based stakeholder governance that extends well beyond exchanges via the market mechanism. This is necessary for developing shared understanding, consensus and in turn active policy making that continuously adjusts ALS to foster the opportunity structure of citizens in ways that are consistent national goals and

aspirations. Not least, this is essential for coordinating the needs of a dynamic market economy as well as for devising social policy that enables citizens to overcome the barriers they encounter in realizing what it is that matters to them.

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Annex A. Statistical annex

Table A.1. Adjusted and unadjusted probabilities of participating in job-related and employer-supported adult education

	Gender				Age							
	Men		Women		16-25 (Youth workers)		26-40 (Early career)		41-55 (Mid-career)		56-65 (Late career)	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies												
Australia	49.3	49.3	52.7	54.1	46.0	46.0	55.1	52.8	50.7	46.4	44.2	39.0
Austria	42.9	42.9	35.6	32.2	40.7	40.7	42.3	40.8	40.5	38.2	22.4	12.4
Canada	50.8	50.8	49.2	45.4	45.8	45.8	55.0	52.3	51.1	46.5	39.4	29.4
Chile	39.8	39.8	26.6	19.6	28.6	28.6	41.5	50.0	32.3	35.0	22.8	21.2
Czech Republic	50.5	50.5	42.2	36.0	45.1	45.1	48.5	49.3	46.4	45.4	43.1	42.8
Denmark	57.6	57.6	61.7	60.2	45.3	45.3	63.9	67.1	62.6	63.5	50.1	41.9
England (UK)	55.1	55.1	54.9	52.0	52.2	52.2	56.5	49.6	58.2	56.2	45.1	36.5
Estonia	40.2	40.2	47.2	47.9	41.5	41.5	49.3	45.8	42.1	33.7	35.6	27.0
Finland	58.2	58.2	59.4	58.6	44.2	44.2	63.8	69.3	62.1	64.1	49.0	46.6
Flanders (Belgium)	44.4	44.4	42.3	38.1	35.8	35.8	47.8	51.8	43.8	44.7	34.4	28.7
France	33.8	33.8	32.6	30.1	25.5	25.5	36.3	38.1	36.1	40.4	21.3	17.2
Germany	48.6	48.6	40.6	35.6	37.9	37.9	48.0	53.4	48.3	55.0	32.8	28.0
Greece	13.1	13.1	13.4	12.9	17.4	17.4	15.2	7.5	12.1	4.5	6.9	1.7
Ireland	45.7	45.7	45.6	40.8	41.9	41.9	48.5	42.4	45.5	40.3	39.0	37.5
Israel	38.3	38.3	38.5	34.2	22.8	22.8	42.1	51.5	41.6	52.1	38.6	50.7
Italy	23.9	23.9	20.9	19.2	17.9	17.9	24.9	22.2	22.8	19.5	16.8	10.6
Japan	38.5	38.5	27.3	26.5	35.7	35.7	37.4	26.7	36.5	27.5	21.0	10.9
Korea	37.0	37.0	28.1	26.0	29.3	29.3	42.2	49.2	29.9	34.0	20.7	23.7
Netherlands	59.7	59.7	56.0	54.2	52.9	52.9	64.5	69.1	59.3	59.8	43.6	36.1
New Zealand	58.8	58.8	55.5	52.0	50.4	50.4	61.9	63.1	58.0	55.7	51.8	45.6
Northern Ireland (UK)	47.3	47.3	55.8	58.3	48.4	48.4	52.7	44.5	53.2	49.8	43.3	36.1
Norway	56.5	56.5	59.0	63.0	56.8	56.8	63.3	58.9	59.9	48.5	42.0	21.6
Poland	30.4	30.4	30.7	27.1	25.8	25.8	34.9	34.2	28.5	25.3	23.9	22.0
Slovak Republic	32.2	32.2	30.7	26.1	27.3	27.3	33.9	30.3	32.8	31.2	22.6	17.5
Slovenia	43.0	43.0	45.8	42.1	33.7	33.7	46.8	46.6	44.7	43.9	34.8	28.1
Spain	36.8	36.8	34.4	34.9	25.2	25.2	38.4	43.2	38.6	44.2	23.2	18.2
Sweden	52.2	52.2	54.3	53.5	48.6	48.6	56.8	49.7	56.0	47.1	44.1	29.1
Turkey	22.0	22.0	18.4	17.8	16.1	16.1	25.3	28.0	19.9	22.9	7.4	4.7
United States	53.1	53.1	51.2	46.0	50.5	50.5	54.4	46.9	52.2	42.6	48.7	37.0
OECD Average	43.4	43.4	41.7	39.4	37.6	37.6	46.6	46.4	43.7	42.2	33.4	27.3

	Gender				Age							
	Men		Women		16-25 (Youth workers)		26-40 (Early career)		41-55 (Mid-career)		56-65 (Late career)	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners												
Cyprus	29.8	29.8	31.1	28.9	24.3	24.3	37.4	41.8	28.4	27.6	18.1	13.9
Lithuania	26.8	26.8	33.7	30.5	26.3	26.3	32.6	30.8	29.9	29.1	29.2	25.3
Russian Federation[1]	13.4	m	19.4	m	22.9	m	18.6	m	14.6	m	8.1	m
Singapore	51.7	51.7	48.9	48.4	50.3	50.3	63.5	64.7	45.3	38.4	32.2	22.5

	Immigration-language status							
	Native-native		Native-foreign		Foreign-native		Foreign-foreign	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies								
Australia	51.7	51.7	47.5	43.5	52.5	49.9	45.8	40.6
Austria	41.0	41.0	32.5	29.7	44.4	45.6	27.2	25.1
Canada	52.6	52.6	52.8	50.4	44.5	35.9	41.1	33.7
Chile	34.0	34.0	21.2	16.0	33.3	32.8	.	.
Czech Republic	46.9	46.9	.	.	40.1	30.9	48.9	56.4
Denmark	61.2	61.2	75.8	77.0	39.9	21.8	44.4	33.8
England (UK)	56.4	56.4	56.2	49.0	55.0	55.9	40.3	29.5
Estonia	45.4	45.4	43.8	42.5	33.6	28.1	29.2	21.9
Finland	59.5	59.5	56.8	51.9	63.4	69.3	46.5	45.0
Flanders (Belgium)	44.2	44.2	56.2	62.7	43.5	40.9	20.1	13.9
France	34.8	34.8	39.9	51.8	22.8	16.9	20.3	18.3
Germany	47.4	47.4	43.0	44.0	36.5	35.3	26.2	21.1
Greece	13.6	13.6	.	.	17.5	27.1	.	.
Ireland	46.6	46.6	49.4	52.9	48.7	50.0	34.1	26.3
Israel	39.7	39.7	36.4	33.0	30.7	27.6	36.8	30.4
Italy	24.1	24.1	8.2	3.3	21.4	22.4	12.8	11.1
Japan	33.5	33.5	.	.	77.5	97.7	.	.
Korea	33.5	33.5	40.8	42.0	.	.	24.9	34.1
Netherlands	59.1	59.1	55.2	58.4	54.5	48.6	48.1	44.1
New Zealand	57.6	57.6	56.8	56.6	61.1	59.6	51.6	41.3
Northern Ireland (UK)	52.0	52.0	.	.	54.0	53.3	32.8	20.2
Norway	59.0	59.0	50.9	55.9	56.1	44.6	49.4	41.3
Poland	30.5	30.5	34.9	39.2	.	.	.	.
Slovak Republic	32.2	32.2	17.1	9.2	28.4	25.4	40.8	60.6
Slovenia	45.6	45.6	41.5	36.2	46.0	50.3	33.5	38.8
Spain	37.3	37.3	43.0	44.9	23.3	18.9	28.7	32.0
Sweden	55.3	55.3	58.8	60.7	50.1	44.5	39.1	27.2
Turkey	21.6	21.6	9.2	7.4	.	.	.	.
United States	54.7	54.7	45.9	39.5	47.0	42.1	37.1	30.7
OECD Average	43.8	43.8	43.0	41.9	43.3	50.8	35.8	33.4
Partners								
Cyprus	30.5	30.5	.	.	33.0	27.5	25.2	23.4
Lithuania	31.0	31.0	26.2	26.8	31.6	27.7	16.5	9.8
Russian Federation[1]	m	m	m	m	m	m	m	m
Singapore	53.9	53.9	48.0	48.8	59.0	57.7	52.1	52.4

	Education							
	ISCED 5a/6		ISCED 4/5b		ISCED 3		< ISCED 3	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies								
Australia	67.5	67.5	58.1	61.2	43.1	32.6	35.3	24.0
Austria	52.7	52.7	49.4	52.6	37.1	38.2	25.0	28.1
Canada	59.8	59.8	53.6	57.7	39.8	37.8	28.3	26.6
Chile	56.8	56.8	45.6	40.1	33.8	27.7	17.1	9.5
Czech Republic	55.1	55.1	49.9	48.6	46.2	50.9	28.1	26.7
Denmark	73.8	73.8	70.9	70.7	53.7	53.0	41.2	36.8
England (UK)	65.4	65.4	60.4	62.2	53.5	52.8	39.0	32.1
Estonia	59.1	59.1	49.5	51.0	34.2	33.0	27.8	31.7
Finland	72.8	72.8	66.0	67.1	51.4	54.4	36.3	33.4
Flanders (Belgium)	60.2	60.2	54.8	55.1	34.7	29.0	21.8	15.5
France	49.1	49.1	44.5	46.9	29.8	28.1	18.3	14.6
Germany	58.8	58.8	53.7	58.8	40.2	50.9	18.8	19.3
Greece	22.5	22.5	17.1	20.5	11.8	13.9	4.4	7.1
Ireland	60.8	60.8	46.5	47.9	40.4	33.4	30.1	21.6
Israel	54.2	54.2	40.3	39.8	29.3	29.1	13.5	9.5
Italy	41.0	41.0	35.6	37.1	25.2	21.2	14.0	11.0
Japan	50.0	50.0	35.5	33.1	25.6	22.2	17.8	15.8
Korea	50.4	50.4	43.1	44.8	26.7	25.5	14.1	13.5
Netherlands	70.1	70.1	65.3	62.9	57.3	55.3	41.6	36.8
New Zealand	65.9	65.9	59.4	60.7	51.7	50.4	45.2	43.6
Northern Ireland (UK)	61.2	61.2	67.8	81.4	53.2	61.1	30.9	26.1
Norway	68.4	68.4	61.5	62.9	53.0	51.7	41.4	37.5
Poland	45.8	45.8	40.0	51.8	21.9	18.9	16.4	15.3
Slovak Republic	48.0	48.0	42.6	36.0	28.8	29.8	9.1	5.4
Slovenia	63.6	63.6	59.0	57.7	39.5	38.3	22.7	19.2
Spain	55.6	55.6	43.7	46.0	35.6	27.6	21.4	14.1
Sweden	67.6	67.6	57.9	56.9	50.5	48.4	33.5	24.1
Turkey	38.8	38.8	37.7	53.5	25.6	28.7	13.2	11.8
United States	64.8	64.8	57.9	59.8	45.8	48.1	24.9	22.2
OECD Average	57.2	57.2	50.6	53.4	38.6	38.0	25.2	22.1
Partners								
Cyprus	46.8	46.8	33.0	26.5	26.7	23.2	8.8	3.7
Lithuania	56.6	56.6	29.1	29.1	15.8	11.7	4.9	1.4
Russian Federation[1]	23.1	m	14.4	m	6.7	m	m	m
Singapore	68.8	68.8	53.6	51.8	36.6	31.9	24.1	23.8

	Literacy skill								Labour Force Status					
	Level 4/5		Level 3		Level 2		Level 1 or below		Employed full-time		Employed part-time		Unemployed	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies														
Australia	59.9	59.9	54.2	52.7	45.7	41.2	37.9	33.4	57.5	57.5	43.4	35.9	20.2	12.2
Austria	54.7	54.7	44.9	41.5	36.4	33.0	34.5	28.9	45.0	45.0	32.1	27.2	15.3	10.7
Canada	59.1	59.1	52.1	52.6	41.5	39.0	32.6	28.2	55.6	55.6	37.3	31.2	30.6	29.3
Chile	48.6	48.6	43.6	54.6	41.5	60.9	37.4	56.2	44.7	44.7	18.8	11.3	15.6	7.2
Czech Republic	46.1	46.1	48.3	53.7	41.9	44.0	40.6	37.9	50.1	50.1	22.6	10.4	26.3	22.7
Denmark	64.6	64.6	64.2	64.4	58.5	60.5	43.7	43.9	66.1	66.1	51.4	42.2	27.3	18.1
England (UK)	67.6	67.6	58.1	57.4	52.0	50.8	40.8	37.5	61.0	61.0	43.3	32.5	32.2	19.2
Estonia	48.6	48.6	44.8	46.7	41.2	43.5	35.5	37.1	49.2	49.2	32.0	22.6	15.2	4.5
Finland	59.5	59.5	60.7	62.5	54.2	55.9	42.7	39.9	65.1	65.1	43.9	30.4	23.9	8.3
Flanders (Belgium)	53.7	53.7	47.4	52.6	40.7	46.2	26.7	29.7	46.7	46.7	39.8	37.1	18.5	12.6
France	49.4	49.4	38.6	35.8	32.2	28.0	23.9	22.4	37.9	37.9	26.0	22.8	11.8	5.4
Germany	58.9	58.9	50.0	51.9	40.4	42.3	31.2	32.9	52.2	52.2	36.2	30.7	19.3	12.2
Greece	19.2	19.2	20.0	29.1	13.9	21.9	10.3	15.7	15.7	15.7	5.6	2.4	6.9	1.9
Ireland	55.5	55.5	45.3	45.8	43.7	43.9	37.7	34.2	53.8	53.8	32.8	24.1	24.5	15.2
Israel	52.0	52.0	37.9	32.5	33.2	25.5	29.7	22.1	43.2	43.2	28.0	22.1	17.5	13.6
Italy	40.0	40.0	37.1	38.0	22.9	17.0	18.4	14.6	26.1	26.1	19.3	18.5	5.9	1.5
Japan	42.0	42.0	32.3	30.5	27.0	25.4	17.5	19.6	41.7	41.7	16.4	9.9	9.6	4.0
Korea	44.1	44.1	36.2	35.5	31.5	31.9	27.1	24.9	38.5	38.5	15.7	9.3	15.9	9.4
Netherlands	66.5	66.5	62.2	64.4	53.1	52.3	39.7	37.5	64.7	64.7	54.4	43.3	39.9	39.7
New Zealand	60.4	60.4	56.8	55.0	53.9	52.4	43.8	39.2	65.5	65.5	45.2	33.5	31.6	17.2
Northern Ireland (UK)	71.3	71.3	54.9	46.0	52.5	42.6	32.9	20.0	55.9	55.9	45.4	38.1	23.0	7.2
Norway	60.1	60.1	59.4	61.0	52.6	54.5	43.7	47.6	63.2	63.2	49.3	41.5	24.8	11.7
Poland	44.0	44.0	31.7	31.1	29.2	27.3	28.0	23.5	35.2	35.2	19.5	13.0	11.7	5.4
Slovak Republic	50.5	50.5	32.6	26.3	24.2	16.1	22.5	15.7	35.6	35.6	13.5	7.0	6.9	3.2
Slovenia	56.3	56.3	50.1	54.8	46.4	50.9	42.0	45.4	48.0	48.0	26.1	15.0	10.9	2.6
Spain	50.0	50.0	42.4	43.6	38.6	38.1	32.8	28.3	43.5	43.5	24.2	16.8	17.8	8.7
Sweden	62.0	62.0	55.7	60.9	51.1	58.9	32.7	35.2	58.9	58.9	46.7	39.0	15.8	6.1
Turkey	50.4	50.4	32.6	37.1	28.9	31.4	24.8	26.9	26.7	26.7	8.7	5.0	7.8	3.6
United States	62.7	62.7	51.2	50.7	47.8	50.9	40.4	44.9	58.3	58.3	41.1	37.2	31.6	24.7
OECD Average	55.6	55.6	46.8	48.1	40.9	41.9	33.2	33.0	48.5	48.5	31.7	23.5	19.3	10.7
Partners														
Cyprus	40.4	40.4	27.5	25.4	28.8	28.8	30.8	34.3	34.0	34.0	14.3	7.7	13.4	6.3
Lithuania	49.7	49.7	36.0	31.6	33.2	29.7	27.6	22.0	33.7	33.7	22.3	16.1	10.2	6.3
Russian Federation[1]	19.5	m	19.7	m	14.0	m	17.5	m	18.4	m	9.9	m	3.0	m
Singapore	66.8	66.8	53.2	48.3	47.0	39.9	36.6	27.6	56.2	56.2	22.9	13.4	33.6	26.1

	Firm Size										Sector			
	Large (251+)		Medium (51-250)		Small (11-50)		Micro (1-10)		Self employed		Private		Public and NGO	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies														
Australia	74.1	74.1	65.7	62.5	53.9	40.0	42.1	23.4	31.0	8.2	46.8	46.8	61.2	68.6
Austria	54.8	54.8	50.1	48.2	40.2	32.3	32.5	21.8	24.6	7.5	37.3	37.3	44.4	49.3
Canada	69.4	69.4	59.1	55.4	54.2	44.9	38.4	20.7	31.2	10.6	45.1	45.1	60.0	73.0
Chile	67.1	67.1	52.6	41.5	45.4	29.4	23.6	9.2	17.0	3.4	32.3	32.3	38.2	49.3
Czech Republic	66.1	66.1	54.4	45.5	54.7	43.2	39.6	19.9	33.0	8.6	45.8	45.8	49.2	52.7
Denmark	79.6	79.6	69.7	60.3	63.7	50.4	47.7	26.7	39.5	11.0	55.3	55.3	65.5	78.5
England (UK)	72.7	72.7	68.8	66.0	61.2	51.4	36.8	13.6	27.2	4.6	49.4	49.4	66.4	75.5
Estonia	59.1	59.1	54.5	52.5	48.1	41.6	36.0	23.6	33.6	13.2	39.3	39.3	53.2	58.3
Finland	74.2	74.2	74.2	75.3	63.5	52.6	48.7	29.5	44.4	17.7	55.7	55.7	63.7	68.7
Flanders (Belgium)	55.7	55.7	49.8	46.9	46.9	43.7	35.2	24.5	27.4	7.3	40.9	40.9	48.6	47.3
France	50.2	50.2	44.9	42.8	37.3	30.0	23.6	12.4	17.5	4.1	31.0	31.0	37.8	44.5
Germany	64.2	64.2	53.2	49.7	41.7	27.5	33.4	19.1	33.5	10.4	42.4	42.4	51.1	57.9
Greece	33.2	33.2	29.4	27.2	24.2	18.0	9.4	2.9	4.3	0.4	11.8	11.8	16.4	11.9
Ireland	71.9	71.9	57.2	47.6	53.5	42.4	33.8	15.5	24.9	5.3	42.0	42.0	52.9	64.6
Israel	60.6	60.6	50.7	46.9	41.1	31.2	29.0	17.8	19.1	4.5	31.4	31.4	49.7	66.7
Italy	36.7	36.7	31.0	28.5	26.1	21.2	16.6	9.7	20.7	9.9	22.0	22.0	24.7	31.0
Japan	51.2	51.2	39.6	37.3	35.2	33.1	24.7	17.8	25.3	14.2	33.4	33.4	34.2	32.6
Korea	61.0	61.0	51.2	44.7	41.4	30.8	19.3	5.6	23.2	7.8	31.0	31.0	42.0	52.1
Netherlands	72.1	72.1	67.9	67.0	63.3	60.0	45.9	31.0	41.0	13.8	53.8	53.8	65.8	72.1
New Zealand	76.2	76.2	72.2	74.1	64.0	58.8	49.8	34.9	39.9	13.8	53.9	53.9	64.2	69.5
Northern Ireland (UK)	66.6	66.6	62.0	62.7	53.1	43.9	46.7	35.6	24.0	5.9	43.2	43.2	62.9	71.3
Norway	71.5	71.5	65.5	62.5	60.3	54.6	49.2	36.4	34.1	12.3	54.5	54.5	62.6	69.0
Poland	50.7	50.7	45.0	39.0	35.4	23.1	18.5	7.0	12.5	2.1	26.6	26.6	38.2	42.0
Slovak Republic	47.9	47.9	41.9	39.7	32.6	23.1	26.8	16.5	19.9	5.6	31.7	31.7	31.2	34.3
Slovenia	52.1	52.1	54.0	52.7	49.8	47.2	34.4	21.1	32.7	14.5	39.6	39.6	53.6	60.6
Spain	60.0	60.0	52.4	46.8	47.0	38.3	27.9	13.1	19.8	3.6	34.1	34.1	39.1	44.7
Sweden	69.4	69.4	63.5	58.8	58.3	50.1	43.5	27.0	37.8	15.8	50.7	50.7	56.9	65.5
Turkey	54.7	54.7	37.3	21.5	25.6	8.5	11.8	2.0	8.9	0.9	20.4	20.4	22.8	24.7
United States	68.8	68.8	59.8	56.1	55.5	47.7	45.1	31.9	27.6	7.4	48.0	48.0	60.9	70.6
OECD Average	61.8	61.8	54.4	50.5	47.5	38.2	33.5	18.6	26.7	7.8	39.6	39.6	48.9	56.4
Partners														
Cyprus	48.6	48.6	43.9	39.6	39.1	31.9	23.2	11.5	14.8	3.8	28.0	28.0	34.9	39.3
Lithuania	40.6	40.6	37.6	37.1	33.1	29.9	22.6	14.9	21.1	11.6	24.4	24.4	41.5	56.1
Russian Federation[1]	29.8	m	21.7	m	14.6	m	8.6	m	5.2	m	13.5	m	19.9	m
Singapore	71.3	71.3	61.6	53.3	46.7	32.9	34.1	18.6	34.4	14.7	47.9	47.9	58.2	70.9

	Industry													
	High and medium-high R&D intensive manufacturing		Other manufacturing		High and medium-high skill services		Medium and medium-low skill services		Wholesale, retail, transport, storage and hospitality		Construction		Primary and utilities	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies														
Australia	43.9	43.9	39.7	40.6	61.6	71.2	63.5	75.5	40.3	43.5	34.9	37.7	52.5	63.0
Austria	51.0	51.0	38.3	35.1	50.4	50.9	45.6	46.6	31.1	25.3	28.7	20.2	30.4	28.3
Canada	55.6	55.6	39.7	33.7	57.5	57.5	57.6	58.6	38.7	34.1	40.8	41.0	55.0	60.6
Chile	54.1	54.1	30.2	18.7	50.9	44.1	37.1	28.7	29.3	21.7	30.5	22.5	33.8	31.7
Czech Republic	47.6	47.6	38.3	33.2	50.3	58.5	53.4	64.0	42.2	48.6	41.0	45.5	57.0	72.5
Denmark	66.7	66.7	51.9	44.7	67.9	62.8	67.9	67.9	47.5	37.0	39.1	29.4	53.4	51.1
England (UK)	56.5	56.5	48.3	51.5	60.1	68.6	64.6	78.6	41.5	48.4	44.2	60.3	54.8	74.7
Estonia	46.1	46.1	28.9	20.2	48.0	39.3	59.9	63.8	40.5	35.5	30.7	24.7	33.2	29.2
Finland	67.1	67.1	50.1	44.9	67.1	65.8	65.7	74.6	51.8	56.9	47.8	53.0	44.8	45.8
Flanders (Belgium)	54.6	54.6	33.2	20.2	57.1	54.2	49.8	49.1	30.7	18.4	31.2	22.5	34.2	27.5
France	45.5	45.5	26.8	21.1	45.7	45.2	36.3	33.7	28.8	25.1	19.6	12.0	27.0	27.0
Germany	54.6	54.6	39.0	34.6	60.7	64.4	46.8	45.3	33.6	30.1	32.2	27.5	52.9	63.8
Greece	33.8	33.8	9.7	4.5	26.5	17.3	18.4	12.4	10.1	4.9	.	.	3.7	1.6
Ireland	55.4	55.4	42.6	42.4	63.2	74.3	52.3	56.2	34.1	30.8	30.9	28.5	29.7	25.3
Israel	54.0	54.0	29.7	24.8	47.1	47.4	44.9	45.2	21.7	13.8	19.1	16.4	49.6	59.6
Italy	26.5	26.5	19.2	21.1	41.0	50.5	23.9	22.1	17.9	20.7	21.0	29.1	14.5	12.0
Japan	43.1	43.1	26.3	22.4	46.8	45.6	39.7	46.3	24.6	20.1	24.0	15.7	25.3	27.1
Korea	41.3	41.3	29.4	28.4	49.0	55.3	40.4	46.2	24.7	25.2	23.1	17.6	25.9	33.9
Netherlands	63.7	63.7	42.0	31.7	68.9	75.5	66.2	75.3	42.9	36.0	52.7	55.6	62.9	73.3
New Zealand	43.1	43.1	54.8	72.1	62.2	79.5	66.2	84.8	46.9	60.1	61.3	86.5	45.3	63.3
N. Ireland (UK)	56.8	56.8	32.7	19.2	63.7	64.6	62.7	62.5	35.3	24.0	33.3	28.8	26.8	14.4
Norway	57.9	57.9	47.5	51.9	61.2	64.0	62.9	71.7	48.7	50.8	51.3	58.7	61.2	73.9
Poland	40.6	40.6	28.6	28.8	40.2	39.5	39.5	39.2	25.8	25.3	19.2	15.1	19.8	18.4
Slovak Republic	37.5	37.5	30.0	25.7	44.1	38.6	35.2	30.1	26.9	21.2	19.0	12.3	30.4	24.9
Slovenia	41.8	41.8	34.7	32.6	56.7	60.9	57.6	64.4	36.7	33.8	27.0	22.8	40.4	45.5
Spain	52.9	52.9	29.2	23.8	50.6	51.6	41.9	37.7	28.0	25.1	35.8	48.5	20.5	18.7
Sweden	60.6	60.6	42.8	36.2	62.4	64.6	59.1	62.5	43.7	39.2	40.6	37.9	49.9	55.6
Turkey	43.5	43.5	26.8	19.4	31.8	16.4	27.2	10.7	17.6	7.3	15.3	7.5	12.8	7.3
United States	54.1	54.1	47.7	52.4	63.0	71.2	58.6	67.4	39.9	41.1	37.3	44.1	49.6	64.5
OECD Average	50.0	50.0	35.8	32.5	53.6	56.5	49.8	54.3	33.8	31.1	33.3	34.5	37.8	42.1
Partners														
Cyprus	.	.	19.8	35.1	49.0	79.5	34.0	57.9	26.0	50.7	17.3	34.3	26.4	51.5
Lithuania	39.2	39.2	16.9	7.2	50.4	34.6	46.3	40.5	23.9	12.6	14.7	5.8	21.2	14.1
Russian Federation[1]	13.4	m	9.9	m	25.5	m	22.9	m	12.7	m	6.5	m	14.0	m
Singapore	60.4	60.4	38.6	31.1	62.7	63.1	56.6	58.3	35.6	30.7	39.2	31.1	62.5	68.9

	Occupation											
	Skilled		Semi-skilled white-collar, high educated		Semi-skilled blue-collar, high educated		Semi-skilled white-collar, low educated		Semi-skilled blue-collar, low educated		Elementary	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies												
Australia	63.6	63.6	42.0	45.7	38.1	47.2	53.2	47.3	39.9	26.4	28.5	27.7
Austria	51.5	51.5	34.6	33.0	30.1	30.5	41.0	36.3	40.5	44.7	15.1	9.2
Canada	59.3	59.3	34.8	34.4	32.9	34.8	47.4	47.1	47.6	49.3	28.2	26.3
Chile	54.3	54.3	31.0	33.5	29.4	37.0	36.2	35.0	36.5	41.3	15.3	13.7
Czech Republic	56.7	56.7	41.3	31.4	42.4	39.1	52.5	54.0	37.5	33.8	26.6	18.6
Denmark	73.3	73.3	49.9	41.5	44.9	44.9	63.5	61.1	54.9	52.8	31.9	24.7
England (UK)	66.8	66.8	51.4	47.9	45.3	43.3	55.9	44.7	50.1	44.8	29.6	17.3
Estonia	60.3	60.3	38.9	30.8	24.8	15.4	50.6	49.6	34.3	27.3	18.0	9.4
Finland	73.3	73.3	50.3	40.8	43.6	38.8	62.1	56.1	49.8	49.0	35.3	23.4
Flanders (Belgium)	58.0	58.0	33.0	29.5	25.8	22.8	40.1	28.0	47.0	53.4	16.9	11.1
France	46.1	46.1	27.8	25.9	22.6	24.0	39.9	39.0	24.8	19.2	15.2	12.3
Germany	61.3	61.3	37.1	26.4	33.9	21.4	51.3	48.4	39.9	32.3	9.8	3.8
Greece	23.4	23.4	10.6	8.4	4.5	3.5	15.6	10.2	8.7	6.4	5.0	2.9
Ireland	58.1	58.1	38.7	44.7	29.9	37.0	44.1	39.0	39.9	41.8	32.4	33.3
Israel	50.5	50.5	22.7	19.6	18.4	15.2	33.1	30.3	36.8	41.4	12.4	9.1
Italy	37.5	37.5	15.2	11.6	15.9	16.6	24.9	15.7	.	.	15.3	20.9
Japan	50.0	50.0	24.0	22.5	20.0	17.3	35.2	31.9	32.7	34.6	9.6	5.6
Korea	45.5	45.5	26.2	32.3	22.7	25.7	46.2	52.4	42.0	49.6	13.7	12.9
Netherlands	67.6	67.6	50.1	43.2	48.5	52.6	63.7	63.5	35.5	24.2	28.7	21.0
New Zealand	66.2	66.2	50.6	46.0	43.5	35.4	56.6	56.6	53.9	50.4	28.6	17.0
N. Ireland (UK)	63.4	63.4	50.9	48.5	31.3	29.7	61.5	57.5	45.9	41.6	32.6	26.6
Norway	66.7	66.7	47.5	43.2	45.5	44.0	61.7	62.9	51.2	52.6	33.6	25.9
Poland	46.3	46.3	21.4	20.2	18.5	18.8	32.6	23.7	23.6	18.2	21.2	27.8
Slovak Republic	43.4	43.4	23.8	21.4	24.4	26.8	40.0	31.8	57.7	72.9	11.4	7.6
Slovenia	59.7	59.7	38.9	37.0	29.2	26.9	39.6	28.3	43.6	47.9	22.6	16.6
Spain	52.0	52.0	30.0	33.4	24.9	29.7	43.9	36.0	41.9	38.3	19.5	22.1
Sweden	66.7	66.7	45.5	39.8	39.8	38.6	42.8	30.7	45.8	46.8	27.9	24.9
Turkey	31.5	31.5	15.9	17.8	20.0	19.8	40.2	39.9	27.5	14.6	13.4	11.5
United States	64.4	64.4	43.2	34.7	32.5	21.2	51.4	46.2	60.8	68.6	27.5	18.0
OECD Average	55.8	55.8	35.4	32.9	30.5	29.8	45.8	41.4	41.1	40.6	21.6	17.3
Partners												
Cyprus	43.7	43.7	24.9	21.4	12.3	7.0	33.7	28.9	18.7	12.1	11.3	6.2
Lithuania	54.0	54.0	17.8	14.3	12.8	10.8	30.7	23.2	16.9	10.4	6.2	1.7
Russian Federation[1]	25.9	m	10.0	.	.	m	11.6	m	10.7	m	.	.
Singapore	63.3	63.3	31.8	30.7	21.8	17.5	45.2	38.2	47.2	57.9	22.0	24.4

	Reading at work							
	Highest quintile		Next highest quintile		20th-60th percentiles		Lowest quintile or never	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies								
Australia	66.5	66.5	62.8	64.0	43.3	32.9	20.8	8.2
Austria	55.6	55.6	49.0	44.7	37.9	26.8	21.6	11.2
Canada	65.1	65.1	62.2	59.9	46.8	35.7	21.8	8.4
Chile	59.7	59.7	49.4	45.9	32.8	22.7	18.1	8.1
Czech Republic	60.0	60.0	51.2	46.3	49.7	46.5	32.6	19.5
Denmark	76.8	76.8	69.3	63.8	54.8	38.2	30.0	12.0
England (UK)	71.3	71.3	63.9	57.7	52.7	39.7	29.3	12.7
Estonia	63.3	63.3	58.0	54.8	42.1	33.7	22.6	11.2
Finland	75.2	75.2	67.7	60.8	52.1	37.0	27.0	11.8
Flanders (Belgium)	62.0	62.0	56.8	52.2	42.9	30.4	19.9	7.4
France	48.0	48.0	45.7	42.5	35.6	27.3	16.8	7.1
Germany	64.1	64.1	55.8	48.0	44.4	31.7	14.2	3.1
Greece	26.7	26.7	24.9	25.6	15.4	10.8	4.6	1.4
Ireland	64.6	64.6	56.7	53.5	43.8	31.5	25.5	11.5
Israel	58.4	58.4	56.7	53.5	42.6	30.8	15.0	4.2
Italy	44.4	44.4	39.7	39.2	22.5	13.7	13.1	6.4
Japan	54.2	54.2	46.9	42.0	28.8	18.7	11.7	4.0
Korea	53.3	53.3	46.4	43.3	29.8	20.3	13.8	4.9
Netherlands	71.5	71.5	67.9	66.3	57.2	47.6	31.7	14.6
New Zealand	73.0	73.0	63.5	54.2	49.9	33.3	31.9	16.1
Northern Ireland (UK)	66.0	66.0	63.4	63.7	49.3	35.7	28.8	15.1
Norway	69.7	69.7	63.7	60.2	50.7	38.6	31.6	19.7
Poland	53.4	53.4	43.6	38.8	28.7	21.0	16.5	7.8
Slovak Republic	52.1	52.1	41.9	36.0	33.6	25.9	15.4	6.8
Slovenia	66.1	66.1	59.2	54.0	45.1	31.9	22.0	7.8
Spain	59.1	59.1	51.1	47.0	39.9	28.8	19.9	6.9
Sweden	70.3	70.3	61.5	54.5	48.3	34.7	23.4	8.1
Turkey	45.2	45.2	40.8	37.5	23.2	11.8	12.8	3.9
United States	68.5	68.5	60.3	53.6	47.5	35.5	26.8	13.3
OECD Average	60.8	60.8	54.5	50.5	41.1	29.8	21.4	9.0
Partners								
Cyprus	51.0	51.0	45.5	44.0	30.2	20.6	18.0	8.6
Lithuania	67.7	67.7	55.6	42.9	39.4	23.0	13.5	4.2
Russian Federation[1]	35.0	m	30.2	m	17.4	m	5.9	m
Singapore	66.9	66.9	64.1	60.5	48.5	36.9	19.4	8.2

	ICT at work							
	Highest quintile		Next highest quintile		20th-60th percentiles		Lowest quintile or never	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies								
Australia	68.8	68.8	66.7	61.9	54.9	45.7	36.9	23.6
Austria	55.0	55.0	55.0	53.9	48.8	44.7	40.6	35.4
Canada	69.5	69.5	63.2	54.9	53.7	40.7	41.4	27.6
Chile	71.3	71.3	55.9	42.8	43.9	28.5	38.5	24.5
Czech Republic	57.2	57.2	56.1	51.5	51.9	46.0	52.6	46.7
Denmark	77.0	77.0	74.6	70.9	64.1	53.0	51.8	36.7
England (UK)	68.0	68.0	63.5	55.6	64.1	64.6	49.2	47.4
Estonia	64.8	64.8	63.7	61.8	53.7	45.9	45.2	39.8
Finland	77.2	77.2	75.6	74.4	66.4	60.6	47.5	33.7
Flanders (Belgium)	63.1	63.1	61.5	58.7	49.4	38.4	36.7	24.2
France	48.6	48.6	51.5	55.2	42.9	43.1	34.0	33.3
Germany	64.3	64.3	63.4	60.9	56.6	52.3	43.8	36.6
Greece	37.8	37.8	24.7	18.2	19.7	12.1	16.7	9.8
Ireland	65.1	65.1	60.6	57.5	53.1	45.2	44.8	36.3
Israel	57.8	57.8	55.4	48.9	46.4	37.7	35.1	34.2
Italy	45.7	45.7	42.4	43.5	31.1	25.3	20.8	13.2
Japan	62.2	62.2	56.6	54.2	44.4	35.2	32.0	22.6
Korea	60.7	60.7	53.7	48.8	42.0	33.0	28.2	19.6
Netherlands	73.3	73.3	67.8	58.2	62.3	52.6	52.0	46.7
New Zealand	70.1	70.1	68.8	68.1	60.7	58.7	51.1	50.6
Northern Ireland (UK)	68.1	68.1	61.0	52.3	61.9	60.2	51.0	48.9
Norway	72.3	72.3	65.2	58.8	63.1	57.2	46.0	31.5
Poland	55.2	55.2	54.9	54.9	41.4	31.5	28.9	15.4
Slovak Republic	53.2	53.2	50.6	46.2	41.3	32.4	30.5	18.0
Slovenia	62.8	62.8	56.6	48.1	55.7	51.1	37.9	27.5
Spain	58.8	58.8	53.4	43.4	51.8	46.2	41.2	35.4
Sweden	69.3	69.3	70.0	72.0	58.7	54.2	44.5	37.9
Turkey	41.2	41.2	43.0	42.5	34.3	34.6	22.1	19.0
United States	70.1	70.1	64.3	58.1	58.9	54.0	44.6	35.7
OECD Average	62.4	62.4	58.6	54.5	50.9	44.2	39.5	31.2

	ICT at work							
	Highest quintile		Next highest quintile		20th-60th percentiles		Lowest quintile or never	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners								
Cyprus	56.2	56.2	54.9	58.1	39.0	31.0	28.7	17.8
Lithuania	57.8	57.8	61.6	62.5	50.0	42.5	32.2	25.5
Russian Federation[1]	34.8	m	27.0	m	29.1	m	21.7	m
Singapore	68.1	68.1	65.6	64.9	54.9	49.1	37.6	28.5

[1] See note 1 in Figure 2.1.

Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Table A.2. Adjusted and unadjusted probabilities of employment for adults 26 to 65 who attained qualifications as traditional or non-traditional students vs those who did not

	Age of highest qualification									
	Did not complete ISCED 3		ISCED 3, beyond normative age >20		ISCED 3, within normative age <=20		ISCED 4, beyond normative age >20		ISCED 4, within normative age <=20	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	61.2	61.2	78.3	87.6	73.7	81.4	81.6	92.7	80.9	92.1
Austria	56.5	56.5	76.3	88.4	76.7	88.9	90.1	98.4	86.2	96.8
Canada	57.7	57.7	73.8	85.8	74.8	87.2	81.2	93.4	79.1	92.0
Chile	69.8	69.8	81.8	89.5	80.5	88.4	.	.	.	.
Czech Republic	43.4	43.4	79.5	94.6	72.8	89.2	80.5	95.4	78.9	94.3
Denmark	60.9	60.9	77.4	87.7	74.4	83.9	77.3	88.4	.	.
England (UK)	59.6	59.6	77.0	88.0	77.0	88.5	.	.	.	.
Estonia	55.4	55.4	67.1	77.2	75.6	88.9	79.9	93.2	81.8	94.6
Finland	53.1	53.1	71.4	85.0	73.4	86.9	83.5	95.7	.	.
Flanders (Belgium)	51.2	51.2	77.9	91.7	76.9	91.1	85.1	97.2	81.5	94.8
France	51.9	51.9	70.5	83.7	73.0	86.9	.	.	.	.
Germany	55.7	55.7	79.3	91.8	77.3	90.0	91.3	98.9	82.6	94.5
Greece	43.5	43.5	61.0	74.5	50.9	59.2	49.1	56.5	54.9	66.4
Ireland	47.8	47.8	58.4	69.7	65.5	80.5	63.5	77.3	69.0	85.8
Israel	48.2	48.2	72.9	88.3	73.9	90.8	.	.	.	.
Italy	52.0	52.0	67.9	78.0	70.7	85.6	59.0	70.5	.	.
Japan	69.5	69.5	68.4	63.9	74.5	80.0	.	.	82.9	92.5
Korea	63.5	63.5	76.6	86.5	75.8	83.7	.	.	.	.
Netherlands	63.0	63.0	82.5	92.7	79.8	90.1	.	.	.	.
New Zealand	68.7	68.7	73.8	79.5	82.8	91.3	83.5	91.1	82.7	89.9
Northern Ireland (UK)	53.9	53.9	72.5	85.5	73.9	87.1	.	.	.	.
Norway	68.8	68.8	83.7	92.3	81.9	90.0	81.5	89.4	76.5	82.0
Poland	39.7	39.7	64.0	83.5	61.4	80.6	65.7	88.9	49.5	68.2
Slovak Republic	32.9	32.9	66.8	89.5	71.6	92.7	.	.	.	.
Slovenia	38.7	38.7	60.4	78.0	68.5	87.8	.	.	.	.
Spain	49.0	49.0	70.1	85.8	66.2	80.3	72.7	88.2	.	.
Sweden	62.0	62.0	74.2	84.3	86.6	96.1	82.9	93.4	89.7	97.7
Turkey	38.2	38.2	52.8	61.5	56.8	71.9	.	.	.	.
United States	61.4	61.4	72.1	81.2	73.0	82.3	76.1	87.1	72.8	82.8
OECD Average	54.4	54.4	72.0	85.4	73.1	86.8	77.0	92.2	74.2	90.3

	Age of highest qualification									
	Did not complete ISCED 3		ISCED 3, beyond normative age >20		ISCED 3, within normative age <=20		ISCED 4, beyond normative age >20		ISCED 4, within normative age <=20	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners										
Cyprus	49.6	49.6	76.3	91.7	71.2	86.6	.	.	.	.
Lithuania	45.0	45.0	59.2	71.2	64.0	79.3	71.1	89.1	71.0	88.3
Russian Federation[1]	34.0	34.0	.	.	63.3	86.0	59.8	81.2	64.8	87.7
Singapore	67.8	67.8	77.9	88.2	74.6	81.9	86.5	94.1	81.9	89.9

	Age of highest qualification									
	ISCED 5b, beyond normative age >25		ISCED 5b, within normative age <=25		ISCED 5a (BA), beyond normative age >25		ISCED 5a (BA), within normative age <=25		ISCED 5a (MA), beyond normative age >29	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	80.6	91.5	79.1	91.2	86.4	96.3	84.9	95.6	85.5	95.3
Austria	78.7	90.7	82.9	94.6	71.6	82.2	.	.	89.0	98.0
Canada	83.0	94.9	83.8	95.5	84.0	95.6	86.0	96.8	87.2	97.2
Chile	88.1	96.2	89.6	97.2	87.6	95.5	90.0	97.4	98.1	99.9
Czech Republic	87.1	98.5	80.3	95.5	97.8	100.0	74.5	90.3	56.9	67.6
Denmark	86.4	96.5	81.5	93.1	83.4	94.2	87.9	97.1	86.6	96.3
England (UK)	81.8	93.8	75.9	87.3	.	.	.	.	.	.
Estonia	81.9	94.9	82.6	95.3	91.3	99.0	88.7	98.1	90.0	98.6
Finland	79.9	93.6	86.2	97.3	89.9	98.7	87.5	97.8	93.0	99.4
Flanders (Belgium)	90.2	98.8	86.6	97.7	.	.	89.4	98.6	.	.
France	79.4	93.3	86.0	97.4	.	.	.	.	.	.
Germany	88.6	97.7	85.1	96.2	84.3	95.4	92.6	99.2	92.9	99.2
Greece	56.3	66.5	62.2	79.3	68.7	86.0	64.4	82.8	92.5	99.5
Ireland	78.0	93.9	77.0	93.0	82.1	96.2	84.1	97.2	86.5	98.0
Israel	83.3	96.8	76.9	93.4	89.1	98.8	83.1	97.2	89.2	98.9
Italy	.	.	.	.	82.5	95.9	80.8	95.7	.	.
Japan	89.8	97.6	73.0	82.0	.	.	81.4	87.4	.	.
Korea	88.8	96.9	74.8	82.4	87.6	93.7	71.4	80.2	89.2	96.5
Netherlands	90.9	98.3	86.4	96.2	83.6	93.6	85.9	95.7	88.2	97.0
New Zealand	82.8	91.3	83.7	92.3	88.2	96.6	87.3	95.7	87.6	95.9
Northern Ireland (UK)	72.5	86.2	80.6	93.8	.	.	.	.	.	.
Norway	86.9	95.3	89.9	97.3	90.7	97.8	90.7	97.8	88.8	96.7
Poland	.	.	.	.	85.7	98.4	85.6	98.5	84.7	98.4
Slovak Republic	.	.	.	.	88.9	99.4	73.2	94.5	93.1	99.8
Slovenia	84.4	98.0	75.1	94.1	83.5	97.7	85.7	98.5	93.3	99.7
Spain	66.5	81.7	75.8	91.1	73.2	88.8	79.0	94.2	82.8	96.2
Sweden	88.7	97.5	84.2	94.9	92.0	98.9	87.8	97.2	90.7	98.5
Turkey	61.7	78.9	62.8	81.7	71.1	87.3	75.1	94.1	.	.
United States	77.1	88.8	80.7	92.3	83.3	94.6	84.0	94.8	87.2	96.9
OECD Average	81.3	94.8	80.2	93.8	85.3	97.8	83.5	96.4	86.0	98.3
Partners										
Cyprus	82.8	95.7	79.6	94.7	85.8	97.3	81.7	95.8	98.1	100.0
Lithuania	91.8	99.4	86.2	98.1	81.0	96.2	88.0	98.6	90.8	99.3
Russian Federation[1]	58.3	82.6	64.0	87.6	53.5	75.0	62.7	86.1	66.5	88.5
Singapore	88.7	96.5	85.7	94.4	90.5	97.5	87.2	95.8	91.9	98.3

	Age of highest qualification									
	ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	91.4	98.6	89.7	97.5	.	.	.	.	.	.
Austria	90.7	98.6	.	.	92.1	99.0	.	.	.	.
Canada	87.2	97.4	89.0	98.1	91.0	98.6	.	.	.	.
Chile	.	.	.	.	.	.	.	.	.	.
Czech Republic	85.3	97.6	88.4	98.3	77.6	93.2	.	.	.	.
Denmark	92.4	98.9	95.5	99.7	96.9	99.8	.	.	.	.
England (UK)	.	.	.	.	.	.	82.8	94.1	86.3	96.4
Estonia	89.6	98.5	.	.	.	.	.	.	.	.
Finland	88.2	98.1	87.7	97.8	.	.	.	.	.	.
Flanders (Belgium)	91.3	99.0	.	.	.	.	.	.	.	.
France	.	.	.	.	.	.	83.3	95.7	83.4	96.0
Germany	88.7	97.9	97.0	99.8	94.1	99.5	.	.	.	.
Greece	84.3	97.4	.	.	.	.	.	.	.	.
Ireland	84.6	97.3	.	.	.	.	.	.	.	.
Israel	91.0	99.3	.	.	.	.	.	.	.	.
Italy	85.8	97.7	.	.	.	.	.	.	.	.
Japan	93.9	98.6	.	.	.	.	.	.	.	.
Korea	85.5	93.9	92.8	98.2	.	.	.	.	.	.
Netherlands	92.2	98.7	.	.	.	.	.	.	.	.
New Zealand	88.0	96.4	88.2	96.0	.	.	.	.	.	.
Northern Ireland (UK)	.	.	.	.	.	.	83.2	95.5	88.5	98.1
Norway	95.2	99.4	97.7	99.9	.	.	.	.	.	.
Poland	89.4	99.3	.	.	.	.	.	.	.	.
Slovak Republic	85.7	98.7	.	.	.	.	.	.	.	.
Slovenia	83.5	97.6	.	.	.	.	.	.	.	.
Spain	85.0	97.3	.	.	.	.	.	.	.	.
Sweden	91.1	98.5	.	.	.	.	.	.	.	.
Turkey	79.0	96.6	.	.	.	.	.	.	.	.
United States	89.1	97.8	.	.	83.9	93.9	.	.	.	.
OECD Average	88.7	98.3	c	c	c	c	c	c	c	c
Partners										
Cyprus	93.0	99.5	.	.	.	.	.	.	.	.
Lithuania	86.6	98.2	.	.	.	.	.	.	.	.
Russian Federation[1]	72.2	94.0	.	.	.	.	.	.	.	.
Singapore	87.7	95.9	.	.	.	.	.	.	.	.

	Age of highest qualification									
	Did not attain higher education qualification		ISCED 5b, beyond normative age >25		ISCED 5b, within normative age <=25		ISCED 5a (BA), beyond normative age >25		ISCED 5a (BA), within normative age <=25	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	69.7	69.7	80.6	88.7	79.1	88.4	86.4	95.0	84.9	94.1
Austria	73.1	73.1	78.7	82.3	82.9	89.6	71.6	69.1	.	.
Canada	72.4	72.4	83.0	90.3	83.8	91.3	84.0	91.5	86.0	93.8
Chile	75.8	75.8	88.1	94.9	89.6	96.2	87.6	94.0	90.0	96.5
Czech Republic	69.9	69.9	87.1	96.0	80.3	88.7	97.8	99.9	74.5	77.2
Denmark	71.0	71.0	86.4	94.7	81.5	89.9	83.4	91.5	87.9	95.6
England (UK)	69.9	69.9	81.8	90.7	75.9	81.5	.	.	.	.
Estonia	71.0	71.0	81.9	90.0	82.6	90.8	91.3	98.0	88.7	96.2
Finland	68.3	68.3	79.9	88.5	86.2	95.0	89.9	97.5	87.5	96.0
Flanders (Belgium)	69.8	69.8	90.2	97.4	86.6	95.2	.	.	89.4	97.1
France	64.7	64.7	79.4	89.3	86.0	95.7	.	.	.	.
Germany	75.5	75.5	88.6	94.5	85.1	91.4	84.3	89.6	92.6	98.0
Greece	47.9	47.9	56.3	62.0	62.2	75.8	68.7	83.5	64.4	79.8
Ireland	57.9	57.9	78.0	90.7	77.0	89.4	82.1	94.2	84.1	95.6
Israel	66.6	66.6	83.3	92.8	76.9	85.7	89.1	97.2	83.1	93.6
Italy	59.1	59.1	.	.	.	.	82.5	94.5	80.8	94.1
Japan	73.6	73.6	89.8	97.0	73.0	77.9	.	.	81.4	84.3
Korea	71.8	71.8	88.8	95.8	74.8	77.4	87.6	91.5	71.4	74.7
Netherlands	73.0	73.0	90.9	97.3	86.4	94.2	83.6	90.2	85.9	93.3
New Zealand	75.7	75.7	82.8	88.3	83.7	89.6	88.2	95.4	87.3	94.1
Northern Ireland (UK)	63.3	63.3	72.5	81.1	80.6	91.2	.	.	.	.
Norway	77.2	77.2	86.9	93.0	89.9	95.9	90.7	96.7	90.7	96.7
Poland	58.7	58.7	.	.	.	.	85.7	96.3	85.6	96.5
Slovak Republic	63.5	63.5	.	.	.	.	88.9	97.9	73.2	83.3
Slovenia	59.3	59.3	84.4	95.6	75.1	87.7	83.5	95.1	85.7	96.7
Spain	54.6	54.6	66.5	78.0	75.8	89.0	73.2	86.3	79.0	92.8
Sweden	77.1	77.1	88.7	95.0	84.2	90.1	92.0	97.8	87.8	94.5
Turkey	42.0	42.0	61.7	76.5	62.8	79.6	71.1	85.7	75.1	93.3
United States	71.1	71.1	77.1	83.4	80.7	88.3	83.3	91.6	84.0	92.0
OECD Average	67.0	67.0	81.3	91.2	80.2	89.8	85.3	95.0	83.5	93.0
Partners										
Cyprus	64.6	64.6	82.8	92.1	79.6	90.4	85.8	95.0	81.7	92.4
Lithuania	64.4	64.4	91.8	98.7	86.2	95.8	81.0	91.8	88.0	96.9
Russian Federation[1]	58.3	58.3	58.3	62.1	64.0	71.0	53.5	51.0	62.7	68.3
Singapore	73.4	73.4	88.7	95.4	85.7	92.7	90.5	96.7	87.2	94.5

	Age of highest qualification											
	ISCED 5a (MA), beyond normative age >29		ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies												
Australia	85.5	93.6	91.4	98.1	89.7	96.6	.	.	.	.	.	.
Austria	89.0	95.9	90.7	97.2	.	.	92.1	97.9	.	.	.	.
Canada	87.2	94.6	87.2	94.9	89.0	96.3	91.0	97.2	.	.	.	.
Chile	98.1	99.9	.	.	.	.	.	.	.	.	.	.
Czech Republic	56.9	43.4	85.3	93.7	88.4	95.5	77.6	83.3	.	.	.	.
Denmark	86.6	94.5	92.4	98.4	95.5	99.5	96.9	99.7	.	.	.	.
England (UK)	.	.	.	.	.	.	.	.	82.8	91.1	86.3	94.5
Estonia	90.0	97.2	89.6	97.0	.	.	.	.	.	.	.	.
Finland	93.0	98.8	88.2	96.4	87.7	96.0	.	.	.	.	.	.
Flanders (Belgium)	.	.	91.3	97.9	.	.	.	.	.	.	.	.
France	.	.	.	.	.	.	.	.	83.3	.	83.4	93.6
Germany	92.9	98.1	88.7	95.2	97.0	99.6	94.1	98.8	.	.	.	.
Greece	92.5	99.4	84.3	96.9	.	.	.	.	.	.	.	.
Ireland	86.5	97.0	84.6	95.9	.	.	.	.	.	.	.	.
Israel	89.2	97.3	91.0	98.3	.	.	.	.	.	.	.	.
Italy	.	.	85.8	96.9	.	.	.	.	.	.	.	.
Japan	.	.	93.9	98.2	.	.	.	.	.	.	.	.
Korea	89.2	95.3	85.5	91.8	92.8	97.6	.	.	.	.	.	.
Netherlands	88.2	95.4	92.2	98.0	.	.	.	.	.	.	.	.
New Zealand	87.6	94.4	88.0	95.1	88.2	94.5	.	.	.	.	.	.
N. Ireland (UK)	.	.	.	.	.	.	.	.	83.2	93.5	88.5	97.3
Norway	88.8	95.1	95.2	99.2	.	.	.	.	.	.	.	.
Poland	84.7	96.2	89.4	98.3	.	.	.	.	.	.	.	.
Slovak Republic	93.1	99.2	85.7	95.6	.	.	.	.	.	.	.	.
Slovenia	93.3	99.3	83.5	94.8	.	.	.	.	.	.	.	.
Spain	82.8	95.2	85.0	96.6	.	.	.	.	.	.	.	.
Sweden	90.7	97.0	91.1	97.0	.	.	.	.	.	.	.	.
Turkey	.	.	79.0	96.1	.	.	.	.	.	.	.	.
United States	87.2	95.1	89.1	96.6	.	.	83.9	90.7	.	.	.	.
OECD Average	86.0	96.5	88.7	96.7	c	c	c	c	c	c	c	c

	Age of highest qualification											
	ISCED 5a (MA), beyond normative age >29		ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners												
Cyprus	98.1	99.9	93.0	99.0	.	.	.	.	.	.	.	.
Lithuania	90.8	98.4	86.6	96.1	.	.	.	.	.	.	.	.
Russian Federation[1]	66.5	73.0	72.2	84.5	.	.	.	.	.	.	.	.
Singapore	91.9	97.7	87.7	94.6	.	.	.	.	.	.	.	.

[1] See note 1 in Figure 2.1.

Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Table A.3. Earnings premium for adults 26 to 65 who attained qualifications as traditional or non-traditional students vs those who did not

	Age of highest qualification (reference is no ISCED 3)											
	ISCED 3, beyond normative age >20			ISCED 3, within normative age <=20			ISCED 4, beyond normative age >20			ISCED 4, within normative age <=20		
	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value
OECD countries and economies												
Australia	0.111	(0.0)	0.004	0.163	(0.0)	0.000	0.151	(0.0)	0.001	0.258	(0.1)	0.000
Austria	0.232	(0.1)	0.000	0.154	(0.0)	0.000	0.411	(0.1)	0.000	0.439	(0.0)	0.000
Canada	-0.048	(0.1)	0.412	0.140	(0.0)	0.000	0.206	(0.0)	0.000	0.153	(0.0)	0.001
Chile	0.289	(0.0)	0.000	0.261	(0.1)	0.000	.	.	.	.	.	.
Czech Republic	0.150	(0.1)	0.005	0.114	(0.0)	0.001	0.168	(0.1)	0.007	0.466	(0.0)	0.000
Denmark	0.099	(0.0)	0.000	0.084	(0.0)	0.001	0.221	(0.0)	0.000	.	.	.
England (UK)	0.096	(0.0)	0.024	0.200	(0.0)	0.000	0.175	(0.2)	0.318	.	.	.
Estonia	0.029	(0.1)	0.589	0.115	(0.0)	0.003	0.157	(0.1)	0.026	0.145	(0.1)	0.024
Finland	0.118	(0.0)	0.001	0.120	(0.0)	0.002	0.298	(0.0)	0.000	.	.	.
Flanders (Belgium)	0.214	(0.0)	0.000	0.130	(0.0)	0.000	0.289	(0.1)	0.000	0.082	(0.1)	0.230
France	0.172	(0.0)	0.000	0.129	(0.0)	0.000	.	.	.	.	.	.
Germany	0.253	(0.0)	0.000	0.126	(0.1)	0.016	0.408	(0.1)	0.000	0.287	(0.1)	0.002
Greece	0.276	(0.1)	0.000	0.192	(0.0)	0.000	0.318	(0.1)	0.000	0.246	(0.1)	0.006
Ireland	0.220	(0.1)	0.015	0.232	(0.0)	0.000	0.192	(0.1)	0.000	0.274	(0.0)	0.000
Israel	0.338	(0.1)	0.000	0.254	(0.0)	0.000	.	.	.	.	.	.
Italy	0.166	(0.0)	0.000	0.206	(0.0)	0.000	0.114	(0.2)	0.529	.	.	.
Japan	0.192	(0.1)	0.092	0.077	(0.0)	0.048	.	.	.	0.135	(0.1)	0.044
Korea	0.177	(0.1)	0.039	0.287	(0.0)	0.000	.	.	.	.	.	.
Netherlands	0.233	(0.0)	0.000	0.148	(0.0)	0.000	.	.	.	.	.	.
New Zealand	0.018	(0.0)	0.692	0.196	(0.0)	0.000	0.086	(0.0)	0.073	0.181	(0.1)	0.008
Northern Ireland (UK)	0.232	(0.0)	0.000	0.233	(0.0)	0.000	.	.	.	.	.	.
Norway	0.085	(0.0)	0.001	0.091	(0.0)	0.001	0.150	(0.0)	0.000	0.111	(0.1)	0.034
Poland	0.243	(0.1)	0.001	0.147	(0.1)	0.014	0.310	(0.1)	0.000	0.545	(0.1)	0.000
Slovak Republic	0.291	(0.1)	0.000	0.252	(0.0)	0.000	.	.	.	.	.	.
Slovenia	0.161	(0.0)	0.000	0.186	(0.0)	0.000	.	.	.	.	.	.
Spain	0.233	(0.0)	0.000	0.167	(0.0)	0.000	0.186	(0.1)	0.051	.	.	.
Sweden	0.058	(0.0)	0.039	0.096	(0.0)	0.000	0.190	(0.0)	0.000	0.216	(0.0)	0.000
Turkey	0.198	(0.1)	0.109	0.281	(0.0)	0.000	.	.	.	.	.	.
United States	0.282	(0.0)	0.000	0.282	(0.0)	0.000	0.341	(0.1)	0.000	0.493	(0.1)	0.000
OECD Average	0.176	(0.0)	0.000	0.175	(0.0)	0.000	0.169	(0.0)	0.000	0.203	(0.0)	0.000

	Age of highest qualification (reference is no ISCED 3)											
	ISCED 3, beyond normative age >20			ISCED 3, within normative age <=20			ISCED 4, beyond normative age >20			ISCED 4, within normative age <=20		
	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value
Partners												
Cyprus	0.256	(0.1)	0.000	0.240	(0.0)	0.000	.	.	.	.	.	.
Lithuania	0.184	(0.1)	0.083	0.216	(0.1)	0.001	0.303	(0.1)	0.000	0.293	(0.1)	0.000
Russian Federation[1]	.	.	.	0.035	(0.2)	0.820	0.177	(0.1)	0.226	0.043	(0.1)	0.734
Singapore	0.348	(0.1)	0.003	0.331	(0.0)	0.000	0.393	(0.1)	0.000	0.485	(0.0)	0.000

	Age of highest qualification (reference is no post-secondary education)														
	ISCED 5b, beyond normative age >25			ISCED 5b, within normative age <=25			ISCED 5a (BA), beyond normative age >25			ISCED 5a (BA), within normative age <=25			ISCED 5a (MA), beyond normative age >29		
	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value
OECD countries and economies															
Australia	0.194	(0.0)	0.000	0.241	(0.0)	0.000	0.377	(0.0)	0.000	0.410	(0.0)	0.000	0.512	(0.1)	0.000
Austria	0.146	(0.1)	0.032	0.210	(0.0)	0.000	0.224	(0.1)	0.053	.	.	.	0.365	(0.1)	0.000
Canada	0.271	(0.0)	0.000	0.171	(0.0)	0.000	0.447	(0.0)	0.000	0.386	(0.0)	0.000	0.609	(0.0)	0.000
Chile	0.483	(0.1)	0.000	0.565	(0.1)	0.000	0.934	(0.1)	0.000	1.072	(0.0)	0.000	0.932	(0.1)	0.000
Czech Republic	0.171	(0.1)	0.012	0.271	(0.1)	0.000	0.328	(0.1)	0.000	0.404	(0.0)	0.000	0.119	(0.1)	0.295
Denmark	0.154	(0.0)	0.000	0.208	(0.0)	0.000	0.217	(0.0)	0.000	0.260	(0.0)	0.000	0.338	(0.0)	0.000
England (UK)	0.203	(0.0)	0.000	0.269	(0.0)	0.000	.	.	.	.	.	.	.	.	.
Estonia	0.214	(0.0)	0.000	0.142	(0.0)	0.000	0.321	(0.1)	0.000	0.327	(0.0)	0.000	0.513	(0.1)	0.000
Finland	0.196	(0.0)	0.000	0.183	(0.0)	0.000	0.216	(0.0)	0.000	0.294	(0.0)	0.000	0.439	(0.0)	0.000
Flanders(Belgium)	0.235	(0.0)	0.000	0.276	(0.0)	0.000	.	.	.	0.349	(0.0)	0.000	.	.	.
France	0.247	(0.1)	0.000	0.356	(0.0)	0.000	.	.	.	.	.	.	.	.	.
Germany	0.307	(0.0)	0.000	0.264	(0.0)	0.000	0.411	(0.1)	0.001	0.299	(0.0)	0.002	0.539	(0.1)	0.000
Greece	0.343	(0.1)	0.001	0.157	(0.1)	0.010	0.158	(0.1)	0.088	0.307	(0.0)	0.000	0.447	(0.1)	0.000
Ireland	0.337	(0.0)	0.000	0.235	(0.0)	0.000	0.488	(0.0)	0.000	0.452	(0.0)	0.000	0.629	(0.1)	0.000
Israel	0.184	(0.0)	0.000	0.214	(0.0)	0.000	0.411	(0.0)	0.000	0.360	(0.0)	0.000	0.672	(0.1)	0.000
Italy	.	.	.	.	.	.	0.312	(0.1)	0.000	0.326	(0.0)	0.000	.	.	.
Japan	0.312	(0.1)	0.000	0.101	(0.0)	0.001	.	.	.	0.304	(0.0)	0.000	.	.	.
Korea	0.243	(0.1)	0.000	0.215	(0.0)	0.000	0.364	(0.0)	0.000	0.370	(0.0)	0.000	0.673	(0.1)	0.000
Netherlands	0.337	(0.0)	0.000	0.260	(0.1)	0.002	0.394	(0.0)	0.000	0.344	(0.0)	0.000	0.578	(0.1)	0.000
New Zealand	0.092	(0.0)	0.021	0.151	(0.0)	0.000	0.269	(0.0)	0.000	0.348	(0.0)	0.000	0.559	(0.1)	0.000
N. Ireland (UK)	0.211	(0.1)	0.014	0.314	(0.1)	0.000	.	.	.	.	.	.	.	.	.
Norway	0.148	(0.0)	0.001	0.231	(0.0)	0.000	0.207	(0.0)	0.000	0.244	(0.0)	0.000	0.274	(0.0)	0.000
Poland	.	.	.	.	.	.	0.299	(0.1)	0.000	0.241	(0.0)	0.001	0.495	(0.0)	0.000
Slovak Republic	.	.	.	.	.	.	0.296	(0.1)	0.000	0.231	(0.1)	0.082	0.402	(0.1)	0.000
Slovenia	0.336	(0.0)	0.000	0.328	(0.0)	0.000	0.438	(0.0)	0.000	0.552	(0.0)	0.000	0.593	(0.1)	0.000
Spain	0.147	(0.1)	0.072	0.188	(0.0)	0.000	0.316	(0.1)	0.000	0.428	(0.0)	0.000	0.369	(0.1)	0.000
Sweden	0.131	(0.0)	0.000	0.143	(0.0)	0.000	0.176	(0.0)	0.000	0.211	(0.0)	0.000	0.225	(0.0)	0.000
Turkey	0.510	(0.1)	0.000	0.305	(0.1)	0.000	0.574	(0.1)	0.000	0.745	(0.0)	0.000	.	.	.
United States	0.147	(0.1)	0.032	0.291	(0.1)	0.000	0.403	(0.1)	0.000	0.542	(0.0)	0.000	0.681	(0.1)	0.000
OECD Average	0.222	(0.0)	0.032	0.235	(0.0)	0.000	0.313	(0.0)	0.000	0.347	(0.0)	0.000	0.472	(0.0)	0.000
Partners															
Cyprus	0.312	(0.1)	0.000	0.200	(0.0)	0.000	0.335	(0.0)	0.000	0.444	(0.0)	0.000	0.760	(0.1)	0.000
Lithuania	0.124	(0.1)	0.073	0.261	(0.1)	0.000	0.304	(0.0)	0.000	0.404	(0.0)	0.000	0.620	(0.1)	0.000
Russian Federation[1]	0.195	(0.1)	0.182	0.111	(0.0)	0.006	0.378	(0.1)	0.000	0.310	(0.0)	0.000	0.443	(0.1)	0.000
Singapore	0.450	(0.0)	0.000	0.542	(0.0)	0.000	0.783	(0.0)	0.000	0.916	(0.0)	0.000	1.199	(0.1)	0.000

	Age of highest qualification (reference is no post-secondary education)														
	ISCED 5a (MA), within normative age <=29			ISCED 6 (PhD), beyond normative age >29			ISCED 6 (PhD), within normative age <=29			ISCED 5a/6, beyond normative age >28 - FRANCE/UK only			ISCED 5a/6, within normative age <='28' - FRANCE/UK only		
	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value
OECD countries and economies															
Australia	0.475	(0.1)	0.000	0.576	(0.1)	0.000	.	.	.	.	.	.	.	.	.
Austria	0.476	(0.0)	0.000	.	.	.	0.631	(0.1)	0.000	.	.	.	.	.	.
Canada	0.523	(0.0)	0.000	0.824	(0.1)	0.000	0.813	(0.1)	0.000	.	.	.	.	.	.
Chile	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Czech Republic	0.363	(0.1)	0.000	0.421	(0.1)	0.000	0.669	(0.1)	0.000	.	.	.	.	.	.
Denmark	0.434	(0.0)	0.000	0.540	(0.1)	0.000	0.563	(0.1)	0.000	.	.	.	.	.	.
England (UK)	.	.	.	.	.	.	.	.	.	0.452	(0.0)	0.000	0.547	(0.0)	0.000
Estonia	0.486	(0.0)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Finland	0.510	(0.0)	0.000	0.753	(0.0)	0.000	.	.	.	.	.	.	.	.	.
Flanders(Belgium)	0.493	(0.0)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
France	.	.	.	.	.	.	.	.	.	0.419	(0.0)	0.000	0.508	(0.0)	0.000
Germany	0.649	(0.0)	0.000	0.932	(0.1)	0.000	1.090	(0.1)	0.000	.	.	.	.	.	.
Greece	0.437	(0.1)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Ireland	0.531	(0.0)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Israel	0.419	(0.1)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Italy	0.441	(0.1)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Japan	0.532	(0.0)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Korea	0.536	(0.1)	0.000	0.803	(0.1)	0.000	.	.	.	.	.	.	.	.	.
Netherlands	0.622	(0.0)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
New Zealand	0.550	(0.0)	0.000	0.767	(0.1)	0.000	.	.	.	.	.	.	.	.	.
N. Ireland (UK)	.	.	.	.	.	.	.	.	.	0.487	(0.1)	0.000	0.535	(0.0)	0.000
Norway	0.381	(0.0)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Poland	0.549	(0.0)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Slovak Republic	0.512	(0.0)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Slovenia	0.582	(0.1)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Spain	0.529	(0.0)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Sweden	0.320	(0.0)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Turkey	0.762	(0.1)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
United States	0.766	(0.1)	0.000	.	.	.	0.916	(0.1)	0.000	.	.	.	.	.	.
OECD Average	0.482	(0.0)	0.000	0.672	(0.0)	0.000	0.633	(0.0)	0.000	.	.	.	.	.	.

	Age of highest qualification (reference is no post-secondary education)														
	ISCED 5a (MA), within normative age <=29			ISCED 6 (PhD), beyond normative age >29			ISCED 6 (PhD), within normative age <=29			ISCED 5a/6, beyond normative age >28 - FRANCE/UK only			ISCED 5a/6, within normative age <='28' - FRANCE/UK only		
	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value	ß	S.E	P-value
Partners															
Cyprus	0.534	(0.0)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Lithuania	0.508	(0.0)	0.000	.	.	.	.	.	.	.	.	.	.	.	.
Russian Federation[1]	0.224	(0.1)	0.001	.	.	.	.	.	.	.	.	.	.	.	.
Singapore	1.151	(0.1)	0.000	.	.	.	.	.	.	.	.	.	.	.	.

[1] See note 1 in Figure 2.1.

Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Table A.4. Adjusted and unadjusted probabilities of participating in any adult education

	Labour Force Status													
	Employed full-time		Employed part-time		Unemployed		Student/apprentice/intern		Homemaker		Retired		Other	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies														
Australia	64.5	64.5	54.6	53.3	30.3	23.5	77.8	93.4	17.9	5.9	20.4	8.8	42.6	35.0
Austria	56.8	56.8	50.2	53.2	42.6	44.6	85.5	97.4	20.3	6.5	11.0	3.7	30.3	18.9
Canada	65.1	65.1	54.3	55.1	40.7	41.0	91.5	99.3	25.5	12.7	22.0	12.5	28.3	17.5
Chile	54.0	54.0	38.5	30.0	31.5	22.8	71.4	86.8	18.2	8.1	21.7	15.3	30.5	24.2
Czech Republic	59.8	59.8	42.9	35.0	33.2	23.2	c	c	20.3	5.3	8.5	1.1	10.5	2.0
Denmark	74.2	74.2	62.8	56.9	52.4	45.6	87.3	97.2	33.0	9.0	21.0	5.3	47.9	30.6
England (UK)	66.5	66.5	53.7	47.4	38.0	41.3	65.5	81.6	19.0	7.3	22.0	11.0	19.3	8.2
Estonia	61.9	61.9	51.5	45.3	33.3	20.7	86.1	96.8	30.0	8.3	8.3	1.1	16.8	4.8
Finland	75.0	75.0	62.8	59.9	37.3	23.6	91.8	99.0	43.8	12.4	20.9	7.6	25.1	8.5
Flanders (Belgium)	55.4	55.4	50.2	52.1	30.0	27.3	53.7	70.2	19.0	10.6	20.4	13.9	19.2	10.9
France	43.4	43.4	35.9	39.0	23.0	18.2	60.2	85.3	7.3	1.7	11.0	5.9	16.1	9.1
Germany	61.9	61.9	49.1	50.3	30.8	24.2	81.0	96.2	20.5	7.6	16.1	7.0	26.4	15.3
Greece	25.8	25.8	23.7	27.1	14.3	19.0	59.9	c	6.6	6.1	5.7	4.4	11.6	12.0
Ireland	63.5	63.5	47.4	48.0	35.2	28.9	87.9	98.5	16.4	4.5	22.0	9.0	22.2	11.1
Israel	55.1	55.1	46.2	40.7	17.0	6.4	74.8	89.9	12.5	3.4	29.4	20.8	24.1	14.2
Italy	31.6	31.6	26.0	26.0	12.5	6.3	82.5	98.1	3.5	0.5	5.5	1.8	11.0	4.7
Japan	53.2	53.2	32.2	20.9	23.1	10.5	70.1	85.2	14.5	2.8	28.4	20.4	28.9	18.6
Korea	58.1	58.1	40.2	30.6	38.7	29.5	79.3	93.3	27.9	11.8	39.1	32.5	31.0	21.1
Netherlands	73.7	73.7	69.0	66.4	45.1	38.9	90.4	98.4	27.5	11.2	23.4	9.5	25.2	9.5
New Zealand	74.3	74.3	62.8	55.4	44.8	37.0	78.8	89.9	39.6	20.9	25.6	8.9	38.5	26.3
Northern Ireland (UK)	61.4	61.4	55.8	63.0	26.4	18.0	69.8	90.7	18.8	7.7	11.8	2.2	9.5	1.7
Norway	71.1	71.1	59.0	55.1	46.9	41.2	84.9	96.0	28.7	8.5	10.7	2.3	15.8	4.2
Poland	45.0	45.0	33.2	29.6	20.3	16.0	60.9	84.0	12.3	4.4	6.9	2.2	8.7	2.9
Slovak Republic	43.7	43.7	25.4	19.7	9.0	2.7	c	c	25.4	21.0	4.1	0.6	6.7	1.0
Slovenia	57.9	57.9	38.2	26.5	35.2	23.8	71.7	84.8	19.4	6.1	16.2	5.0	22.4	c
Spain	55.3	55.3	39.5	34.0	37.0	35.8	76.9	92.5	16.3	6.1	16.4	8.1	25.8	17.1
Sweden	71.7	71.7	64.1	62.9	40.4	32.9	91.8	99.1	33.1	14.9	23.4	12.0	35.0	20.1
Turkey	32.5	32.5	17.1	14.0	13.9	7.5	c	c	6.2	1.6	6.7	2.5	8.3	2.9
United States	67.5	67.5	58.9	59.0	36.2	31.2	80.6	94.9	32.4	18.8	30.1	16.9	31.5	18.9
OECD Average	57.9	57.9	46.4	43.4	31.7	25.0	75.8	94.2	21.2	8.3	17.5	7.8	23.1	12.0

	Labour Force Status													
	Employed full-time		Employed part-time		Unemployed		Student/apprentice/intern		Homemaker		Retired		Other	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners														
Cyprus	45.4	45.4	33.3	27.2	22.9	17.9	37.6	53.6	13.3	7.6	15.3	12.3	24.9	c
Lithuania	41.9	41.9	31.0	33.6	10.1	4.0	45.3	75.5	14.1	4.8	4.3	0.7	12.0	6.2
Russian Federation[1]	24.2	m	16.2	m	3.4	m	67.0	m	13.1	m	2.8	m	12.7	m
Singapore	65.0	65.0	39.8	31.9	33.2	20.5	62.1	65.5	17.1	5.5	28.9	c	44.0	39.9

	Gender				Age							
	Men		Women		16-25 (Youth workers)		26-40 (Early career)		41-55 (Mid-career)		56-65 (Late career)	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies												
Australia	53.0	53.0	50.6	61.6	50.0	50.0	58.1	61.5	53.1	54.8	39.0	40.6
Austria	48.1	48.1	45.4	53.2	55.4	55.4	55.6	50.6	50.2	41.1	19.8	8.1
Canada	56.3	56.3	54.9	62.6	58.7	58.7	64.0	60.9	57.2	52.5	38.6	28.2
Chile	48.3	48.3	38.5	38.3	44.0	44.0	53.7	60.3	41.0	42.2	25.9	19.0
Czech Republic	50.9	50.9	42.7	46.7	51.4	51.4	53.9	50.0	51.9	48.3	26.4	22.5
Denmark	62.2	62.2	65.1	72.1	62.2	62.2	73.3	76.9	66.5	66.3	46.5	43.8
England (UK)	54.6	54.6	51.6	59.0	50.3	50.3	58.1	57.5	57.4	61.0	38.2	37.7
Estonia	46.8	46.8	54.5	67.8	58.1	58.1	61.0	54.2	50.8	36.5	30.8	16.5
Finland	59.6	59.6	65.8	76.3	58.0	58.0	74.8	79.9	67.4	67.7	43.0	39.4
Flanders (Belgium)	46.3	46.3	46.5	53.7	44.7	44.7	56.1	58.9	49.8	49.3	28.9	23.9
France	34.4	34.4	33.4	36.8	34.0	34.0	41.1	42.4	37.6	40.7	17.1	12.7
Germany	54.1	54.1	47.6	54.8	54.2	54.2	55.8	49.7	55.3	47.7	33.1	17.9
Greece	19.5	19.5	17.8	18.8	30.2	30.2	24.3	17.3	17.0	9.6	7.5	2.8
Ireland	50.4	50.4	46.0	48.9	51.9	51.9	53.3	48.7	48.1	44.9	33.4	28.0
Israel	45.4	45.4	45.9	51.5	37.7	37.7	51.8	54.3	46.7	49.0	37.9	39.1
Italy	24.1	24.1	20.0	21.2	21.2	21.2	27.4	28.2	24.0	27.1	10.0	7.6
Japan	46.8	46.8	35.4	45.3	44.5	44.5	45.2	41.0	44.5	39.9	29.3	24.1
Korea	52.9	52.9	45.7	57.7	60.4	60.4	59.1	52.8	46.3	37.6	30.6	24.7
Netherlands	64.2	64.2	59.7	66.6	68.5	68.5	71.6	71.7	65.1	63.6	41.5	33.0
New Zealand	65.4	65.4	64.0	72.1	60.6	60.6	70.0	72.4	65.7	64.0	56.8	53.0
Northern Ireland (UK)	46.1	46.1	47.0	57.5	48.8	48.8	53.5	48.0	47.1	47.7	30.5	33.1
Norway	60.3	60.3	62.2	71.8	66.2	66.2	71.8	69.3	62.9	53.4	38.8	21.4
Poland	32.5	32.5	31.6	35.1	35.9	35.9	42.0	39.6	31.8	28.5	13.6	9.3
Slovak Republic	32.2	32.2	28.7	32.1	26.4	26.4	35.1	32.7	35.5	37.1	15.3	12.2
Slovenia	44.7	44.7	46.5	50.9	46.0	46.0	56.5	60.8	49.0	53.5	23.9	22.5
Spain	43.7	43.7	42.2	47.9	48.2	48.2	51.1	46.1	43.8	36.2	24.7	14.3
Sweden	61.5	61.5	64.9	75.0	67.4	67.4	70.4	63.8	66.1	56.5	46.7	30.5
Turkey	23.1	23.1	13.4	15.7	19.2	19.2	24.5	29.3	15.6	15.6	4.7	2.1
United States	57.6	57.6	56.2	61.2	62.1	62.1	60.2	48.8	57.0	44.3	48.5	36.1
OECD Average	47.8	47.8	45.7	52.9	48.8	48.8	54.3	53.2	48.4	45.7	30.4	23.7
Partners												
Cyprus	36.4	36.4	36.1	40.1	36.2	36.2	47.2	50.9	34.9	32.2	17.8	10.8
Lithuania	29.5	29.5	33.7	41.2	37.4	37.4	37.9	31.2	31.6	25.7	19.1	12.3
Russian Federation[1]	14.7	m	21.2	m	30.7	m	23.1	m	16.2	m	6.3	m
Singapore	58.3	58.3	51.9	58.4	58.6	58.6	71.4	76.2	50.3	46.4	34.1	27.9

	Immigration-language status							
	Native-native		Native-foreign		Foreign-native		Foreign-foreign	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies								
Australia	52.5	52.5	53.7	54.2	55.7	53.5	44.7	34.6
Austria	48.1	48.1	37.5	30.4	49.9	47.3	38.0	32.7
Canada	57.6	57.6	58.6	60.4	55.8	51.8	47.0	38.7
Chile	43.2	43.2	34.7	43.4	49.4	47.9	c	c
Czech Republic	47.0	47.0	c	c	37.1	30.6	42.2	37.1
Denmark	64.7	64.7	73.1	75.1	45.9	26.2	56.3	52.0
England (UK)	53.2	53.2	54.4	58.7	55.3	56.8	49.7	45.4
Estonia	53.1	53.1	49.3	46.7	39.2	33.7	31.9	21.6
Finland	62.8	62.8	52.3	43.5	73.7	81.0	62.0	66.7
Flanders (Belgium)	46.7	46.7	54.0	58.9	50.6	52.0	31.6	27.6
France	35.3	35.3	40.0	52.6	25.8	22.8	23.8	22.9
Germany	53.4	53.4	46.6	45.1	45.6	41.2	33.4	25.6
Greece	18.7	18.7	c	c	28.1	34.9	10.0	4.2
Ireland	47.8	47.8	41.3	40.0	54.1	58.4	44.3	38.4
Israel	45.7	45.7	54.2	68.1	34.5	24.5	47.4	44.0
Italy	22.7	22.7	9.7	4.2	29.1	37.3	16.1	14.4
Japan	41.0	41.0	c	c	c	c	c	c
Korea	49.6	49.6	c	c	17.8	5.6	42.6	49.0
Netherlands	62.9	62.9	68.0	76.5	60.8	57.8	54.2	54.7
New Zealand	64.7	64.7	62.2	67.6	70.8	72.4	59.4	51.5
Northern Ireland (UK)	46.5	46.5	c	c	51.2	52.8	51.4	51.5
Norway	61.0	61.0	60.7	63.0	60.5	50.2	62.7	66.4
Poland	31.8	31.8	48.5	65.8	c	c	c	c
Slovak Republic	31.4	31.4	15.4	10.0	23.5	25.4	37.0	53.0
Slovenia	47.1	47.1	44.9	38.7	51.4	57.5	32.9	32.7
Spain	43.6	43.6	49.2	56.1	38.6	34.6	37.0	34.4
Sweden	65.0	65.0	70.4	75.2	61.7	60.0	52.5	47.5
Turkey	18.9	18.9	6.9	3.2	c	c	c	c
United States	59.0	59.0	49.5	45.9	52.7	46.9	44.5	39.0
OECD Average	47.4	47.4	47.9	50.3	47.5	46.0	42.1	39.6
Partners								
Cyprus	36.3	36.3	c	c	42.6	37.6	29.4	17.1
Lithuania	32.4	32.4	26.7	23.6	30.4	30.0	22.4	19.2
Russian Federation[1]	m	m	m	m	m	m	m	m
Singapore	60.5	60.5	51.8	51.6	68.7	68.3	56.6	52.9

	Education							
	ISCED 5a/6		ISCED 4/5b		ISCED 3		< ISCED 3	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies								
Australia	75.9	75.9	62.0	53.4	45.1	24.5	31.3	12.6
Austria	69.7	69.7	63.1	61.5	44.3	30.1	26.8	12.0
Canada	71.5	71.5	59.4	53.4	44.8	30.2	27.9	13.0
Chile	78.3	78.3	60.0	44.4	43.6	22.2	23.2	6.1
Czech Republic	67.4	67.4	60.0	57.9	45.3	31.5	19.7	6.9
Denmark	80.6	80.6	76.0	74.5	59.7	43.0	44.2	23.2
England (UK)	72.1	72.1	61.8	57.1	52.7	40.2	30.0	12.8
Estonia	73.7	73.7	58.3	46.3	41.0	19.1	28.3	8.7
Finland	83.7	83.7	70.1	59.6	57.5	38.5	33.9	11.2
Flanders (Belgium)	70.0	70.0	63.3	61.3	38.4	21.8	19.8	6.3
France	56.2	56.2	49.8	44.9	31.6	19.8	16.8	6.6
Germany	71.8	71.8	63.0	58.9	44.4	31.3	25.4	10.5
Greece	38.8	38.8	25.8	19.7	16.4	7.5	6.3	1.6
Ireland	74.6	74.6	52.5	38.1	42.4	22.9	27.8	9.9
Israel	66.9	66.9	52.1	46.7	36.8	22.2	14.8	3.9
Italy	53.3	53.3	29.8	14.8	27.4	13.2	11.3	2.7
Japan	62.8	62.8	45.2	35.9	31.1	15.5	21.6	8.0
Korea	74.5	74.5	63.3	54.9	42.8	21.4	21.2	5.0
Netherlands	79.5	79.5	76.9	75.4	62.8	47.5	41.6	19.8
New Zealand	78.3	78.3	66.8	59.0	61.0	47.2	47.5	29.3
Northern Ireland (UK)	68.3	68.3	68.4	79.2	49.6	44.1	23.4	10.3
Norway	75.5	75.5	63.8	59.9	59.2	49.2	40.8	23.5
Poland	61.1	61.1	38.9	30.6	21.3	8.9	14.1	5.7
Slovak Republic	56.5	56.5	38.2	21.5	29.3	16.9	5.6	1.1
Slovenia	76.5	76.5	67.8	65.2	43.0	25.8	20.1	6.2
Spain	71.6	71.6	56.9	45.4	45.2	27.5	26.9	9.4
Sweden	81.1	81.1	72.3	65.5	61.2	45.2	40.0	20.2
Turkey	48.2	48.2	39.9	39.8	25.3	15.1	10.5	3.4
United States	76.9	76.9	65.4	58.7	47.0	27.3	27.9	9.9
OECD Average	69.5	69.5	57.6	51.5	43.1	27.0	25.1	9.4
Partners								
Cyprus	62.2	62.2	43.2	28.4	32.2	16.0	12.7	2.2
Lithuania	65.0	65.0	30.6	14.2	17.9	4.5	10.5	1.1
Russian Federation[1]	26.5	m	15.6	m	9.8	m	m	m
Singapore	78.3	78.3	62.2	54.5	38.7	21.4	24.7	10.5

	Literacy skill								Parents' Education					
	Level 4/5		Level 3		Level 2		Level 1 or below		>ISCED 3 (at least one)		ISCED 3 (at least one)		<ISCED 3 (both)	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies														
Australia	74.4	74.4	58.8	51.9	42.0	28.2	26.1	12.4	66.0	66.0	56.1	55.0	45.5	41.8
Austria	69.9	69.9	57.3	53.6	40.4	31.6	27.6	16.7	58.7	58.7	49.6	46.2	35.6	32.4
Canada	77.8	77.8	65.0	56.9	48.2	31.8	32.2	15.1	67.5	67.5	58.4	54.8	40.1	29.0
Chile	72.8	72.8	65.6	64.5	52.7	51.0	33.8	29.7	64.4	64.4	53.0	50.8	31.2	20.9
Czech Republic	66.8	66.8	53.3	48.1	41.7	32.8	30.0	18.4	59.8	59.8	48.1	47.6	31.0	25.1
Denmark	82.8	82.8	72.9	68.5	59.5	49.5	40.2	23.9	73.1	73.1	64.4	64.7	55.3	53.0
England (UK)	73.4	73.4	60.8	54.7	46.2	35.3	34.2	22.3	67.6	67.6	59.4	59.6	38.2	28.8
Estonia	74.3	74.3	57.1	48.5	44.3	31.8	33.0	20.1	63.7	63.7	55.2	52.4	35.9	27.7
Finland	80.0	80.0	68.7	65.1	52.5	42.9	36.1	21.3	75.1	75.1	68.3	65.6	54.4	49.2
Flanders (Belgium)	65.5	65.5	55.4	56.6	38.2	35.1	25.4	21.2	64.3	64.3	50.7	44.3	36.4	30.1
France	56.5	56.5	43.6	39.6	30.1	22.9	19.8	12.8	50.0	50.0	39.6	40.6	25.6	21.6
Germany	76.2	76.2	62.1	56.0	45.4	34.6	27.6	14.6	63.9	63.9	50.2	43.6	31.6	23.3
Greece	30.2	30.2	26.6	32.1	17.0	16.5	11.8	10.2	41.6	41.6	25.1	16.3	13.1	6.8
Ireland	71.7	71.7	56.6	52.3	43.4	36.9	31.3	24.2	61.8	61.8	55.8	57.8	40.8	39.0
Israel	71.6	71.6	59.4	50.8	44.5	31.4	27.8	14.0	60.1	60.1	46.9	39.6	33.5	25.8
Italy	50.9	50.9	36.5	35.1	18.7	12.6	12.3	6.9	45.0	45.0	34.7	35.4	18.1	18.5
Japan	55.0	55.0	42.2	37.5	29.5	22.1	20.8	12.2	53.7	53.7	39.8	34.1	32.6	27.2
Korea	74.9	74.9	60.9	53.1	42.6	28.0	24.4	11.1	66.4	66.4	58.2	55.2	41.4	35.5
Netherlands	78.7	78.7	69.2	69.2	51.8	46.7	39.4	31.9	76.7	76.7	67.8	64.7	54.6	45.4
New Zealand	80.2	80.2	69.9	64.6	58.2	46.2	43.8	28.0	72.8	72.8	66.6	63.6	59.7	55.8
Northern Ireland (UK)	70.6	70.6	57.1	51.5	40.9	32.2	26.8	16.5	68.5	68.5	54.3	46.5	33.3	18.6
Norway	74.4	74.4	68.6	70.9	52.5	50.0	42.7	39.8	71.2	71.2	64.1	62.7	46.7	38.3
Poland	59.2	59.2	41.3	36.1	26.7	19.0	16.3	9.0	58.2	58.2	37.4	30.8	14.7	6.7
Slovak Republic	56.5	56.5	37.7	25.9	23.4	11.2	12.4	4.7	52.6	52.6	34.8	30.7	16.0	10.6
Slovenia	73.6	73.6	60.3	56.9	43.0	34.5	29.2	19.4	69.9	69.9	51.6	44.7	29.9	18.0
Spain	72.3	72.3	58.5	56.3	42.0	36.2	27.1	18.8	62.4	62.4	55.6	56.3	38.5	36.0
Sweden	80.6	80.6	70.3	68.0	55.8	49.1	37.1	23.2	73.3	73.3	67.5	65.2	55.8	52.4
Turkey	45.1	45.1	32.6	36.9	21.8	23.8	12.2	11.9	44.8	44.8	33.6	28.9	16.3	12.7
United States	79.2	79.2	67.2	61.4	50.2	37.5	36.0	23.5	69.7	69.7	58.2	54.8	35.9	25.9
OECD Average	68.8	68.8	56.4	52.7	41.5	33.1	28.2	18.4	62.9	62.9	51.9	48.6	35.9	28.9
Partners														
Cyprus	50.5	50.5	39.9	39.5	33.1	33.0	28.8	34.1	52.3	52.3	45.5	44.2	29.5	23.3
Lithuania	58.3	58.3	41.1	30.7	26.7	15.7	15.5	6.9	45.8	45.8	27.8	23.2	19.9	15.3
Russian Federation[1]	21.9	m	20.2	m	16.0	m	14.1	m	24.6	m	19.2	m	12.2	m
Singapore	83.1	83.1	72.2	63.1	52.8	33.6	31.3	13.8	70.9	70.9	65.1	67.4	46.4	42.9

	Earnings									
	Highest quintile		50th-80th percentiles		20th-50th percentiles		Lowest quintile		No earnings	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	83.3	83.3	66.1	49.0	53.5	27.4	45.8	16.0	26.4	6.1
Austria	72.9	72.9	61.0	50.6	47.2	25.5	38.5	14.7	28.6	13.0
Canada	78.6	78.6	72.2	67.4	52.1	29.5	47.9	21.4	31.7	9.6
Chile	73.0	73.0	57.7	53.0	41.0	27.5	30.2	14.4	30.3	14.8
Czech Republic	76.1	76.1	67.5	60.1	48.2	25.6	41.6	17.8	26.0	10.1
Denmark	80.6	80.6	77.7	78.2	67.6	59.4	54.7	35.0	41.6	26.5
England (UK)	80.5	80.5	70.6	64.3	54.7	35.1	51.1	31.0	28.0	7.6
Estonia	71.2	71.2	69.4	68.8	58.1	48.9	42.0	22.8	32.6	19.4
Finland	82.8	82.8	79.4	77.8	71.4	60.5	57.9	33.4	35.4	15.0
Flanders (Belgium)	74.4	74.4	59.6	46.4	48.1	26.7	37.1	13.6	26.9	9.2
France	60.3	60.3	49.3	43.4	37.3	24.5	25.6	10.0	18.4	8.1
Germany	81.2	81.2	64.7	50.1	47.2	19.5	34.0	7.1	30.6	9.6
Greece	48.6	48.6	30.9	19.9	26.5	14.7	20.0	7.2	11.2	1.9
Ireland	83.5	83.5	69.4	55.7	49.9	21.5	39.8	11.5	31.1	9.4
Israel	73.5	73.5	59.6	51.4	44.4	28.4	45.4	31.9	29.7	13.7
Italy	45.2	45.2	39.5	38.5	23.0	13.1	18.8	9.1	13.6	8.0
Japan	67.5	67.5	52.1	37.2	39.0	19.9	33.7	17.0	22.7	10.7
Korea	74.5	74.5	61.2	49.8	46.8	26.2	39.8	19.4	32.9	14.7
Netherlands	81.4	81.4	77.3	76.5	70.6	63.9	52.2	29.4	36.0	16.8
New Zealand	83.8	83.8	76.3	70.0	65.9	49.4	60.2	38.6	42.7	18.5
Northern Ireland (UK)	77.7	77.7	67.5	61.2	55.7	38.0	39.7	12.7	20.5	6.2
Norway	77.3	77.3	75.3	73.8	62.9	47.3	53.7	33.7	29.8	11.7
Poland	65.6	65.6	48.1	38.0	30.8	14.8	22.1	8.0	16.6	5.5
Slovak Republic	58.5	58.5	48.7	44.6	35.5	24.7	22.0	9.7	13.4	7.1
Slovenia	80.7	80.7	63.6	50.4	47.5	27.3	37.4	16.4	33.8	18.6
Spain	73.6	73.6	63.8	59.3	43.2	25.9	34.9	15.0	31.1	14.7
Sweden	84.6	84.6	76.0	66.8	65.4	44.0	57.1	26.9	39.1	12.0
Turkey	47.4	47.4	38.4	36.3	23.8	16.2	15.1	6.8	10.7	6.0
United States	82.8	82.8	71.8	62.9	58.1	40.6	51.6	27.1	34.4	10.7
OECD Average	73.1	73.1	62.6	55.4	48.8	31.3	39.7	18.4	27.8	11.6

	Earnings									
	Highest quintile		50th-80th percentiles		20th-50th percentiles		Lowest quintile		No earnings	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners										
Cyprus	63.4	63.4	48.7	36.6	38.0	20.6	37.3	21.5	21.5	7.5
Lithuania	67.2	67.2	46.5	31.4	32.5	15.1	20.6	4.8	13.1	3.7
Russian Federation[1]	38.6	m	29.5	m	19.5	m	20.8	m	11.6	m
Singapore	82.3	82.3	73.3	66.9	52.9	34.8	34.9	15.2	29.6	10.3

[1] See note 1 in Figure 2.1.

Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Table A.5. Adjusted and unadjusted probabilities of experiencing positive social outcomes by participation in formal adult education (Trust in others)

	Age of highest qualification									
	Did not complete ISCED 3		ISCED 3, beyond normative age >20		ISCED 3, within normative age <=20		ISCED 4, beyond normative age >20		ISCED 4, within normative age <=20	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	19.9	19.9	21.2	22.0	26.1	32.0	23.7	25.4	27.3	33.2
Austria	20.6	20.6	25.3	28.4	25.7	28.3	42.1	59.5	40.1	53.6
Canada	19.2	19.2	23.2	25.4	25.3	28.4	26.4	29.7	29.0	35.1
Chile	15.9	15.9	14.5	13.0	12.8	9.4	c	c	c	c
Czech Republic	7.5	7.5	14.0	21.2	9.5	10.6	18.7	36.7	18.2	31.4
Denmark	38.8	38.8	51.5	59.5	52.9	61.7	58.8	67.9	c	c
England (UK)	15.4	15.4	21.9	28.2	23.5	30.7	c	c	c	c
Estonia	17.1	17.1	17.2	16.6	17.8	16.4	21.8	22.5	15.3	12.3
Finland	40.9	40.9	55.4	65.4	56.2	66.7	63.3	77.4	c	c
Flanders (Belgium)	22.6	22.6	31.4	37.7	27.3	29.5	46.7	66.5	35.3	44.3
France	19.9	19.9	22.2	22.7	23.2	24.1	c	c	c	c
Germany	19.2	19.2	30.6	39.2	24.0	25.1	48.7	66.1	45.4	60.8
Greece	12.1	12.1	7.0	3.7	13.6	14.3	16.6	20.7	14.9	17.1
Ireland	14.6	14.6	c	c	20.0	24.3	20.1	24.3	21.5	27.7
Israel	15.0	15.0	21.3	25.5	22.3	26.6	c	c	c	c
Italy	10.4	10.4	28.2	54.2	20.5	33.6	c	c	c	c
Japan	57.6	57.6	c	c	65.5	70.1	c	c	66.6	70.4
Korea	17.7	17.7	23.1	28.3	24.7	31.7	c	c	c	c
Netherlands	27.8	27.8	39.9	47.5	39.9	47.1	c	c	c	c
New Zealand	20.9	20.9	19.1	15.1	29.5	33.5	23.3	22.0	27.5	31.7
Northern Ireland (UK)	14.8	14.8	18.0	19.1	19.6	22.6	c	c	c	c
Norway	31.5	31.5	40.0	44.8	40.1	45.1	45.0	53.5	29.0	26.0
Poland	12.5	12.5	13.1	12.5	9.4	6.6	15.2	15.3	14.7	14.4
Slovak Republic	12.3	12.3	11.0	10.3	13.2	14.9	c	c	c	c
Slovenia	9.8	9.8	9.7	8.0	11.3	9.7	c	c	c	c
Spain	20.8	20.8	30.7	41.5	31.7	42.9	23.7	25.4	c	c
Sweden	51.5	51.5	53.2	48.5	59.6	57.6	66.1	67.9	56.4	49.4
Turkey	10.8	10.8	15.1	c	9.7	c	c	c	c	c
United States	12.0	12.0	18.8	24.7	19.1	25.9	24.3	38.3	18.6	23.6
OECD Average	21.0	21.0	26.6	30.7	26.7	30.2	33.9	44.2	34.8	45.3
Partners										
Cyprus	c	c	c	c	c	c	c	c	c	c
Lithuania	18.0	18.0	c	c	16.6	16.5	18.8	20.3	17.1	17.2
Russian Federation[1]	22.5	22.5	6.0	c	24.4	c	23.6	c	20.2	c
Singapore	26.0	26.0	13.3	6.3	20.6	17.1	13.6	7.5	21.5	19.7

	Age of highest qualification									
	ISCED 5b, beyond normative age >25		ISCED 5b, within normative age <=25		ISCED 5a (BA), beyond normative age >25		ISCED 5a (BA), within normative age <=25		ISCED 5a (MA), beyond normative age >29	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	34.4	49.0	29.2	37.1	45.1	68.5	43.0	64.3	51.2	77.5
Austria	34.5	45.2	43.5	62.1	c	c	44.7	62.9	48.6	68.2
Canada	32.2	41.6	31.5	40.0	44.4	65.0	39.9	56.4	51.1	76.4
Chile	24.7	31.7	14.6	12.4	29.7	41.5	34.4	54.5	40.1	65.0
Czech Republic	3.3	1.1	5.4	2.6	29.6	61.3	28.7	59.6	33.2	68.9
Denmark	80.4	93.9	75.8	89.6	78.5	92.6	67.7	83.5	77.7	91.6
England (UK)	32.2	48.8	25.9	36.0	c	c	c	c	c	c
Estonia	27.0	32.9	22.4	23.7	44.6	63.9	31.8	37.4	42.4	62.3
Finland	60.4	72.2	62.9	75.4	70.1	84.6	72.7	87.6	72.4	86.6
Flanders (Belgium)	39.2	49.8	43.0	56.9	c	c	49.5	69.4	39.8	50.2
France	37.5	51.5	39.3	53.5	c	c	c	c	c	c
Germany	41.6	58.5	40.8	55.7	48.6	68.1	49.6	71.3	52.7	72.1
Greece	14.7	17.2	16.6	20.7	15.5	17.4	20.6	29.9	30.5	53.4
Ireland	28.3	41.2	30.4	47.0	45.7	74.3	33.1	49.2	44.9	71.2
Israel	32.6	49.9	25.2	32.0	40.6	61.7	39.4	58.0	49.6	75.6
Italy	c	c	c	c	33.0	62.2	36.7	69.5	25.3	39.8
Japan	55.3	46.5	70.5	75.7	c	c	72.5	81.1	83.0	93.2
Korea	27.2	36.9	23.9	29.3	34.8	54.8	32.9	48.6	39.7	63.3
Netherlands	45.9	54.1	54.5	71.5	65.5	85.4	58.3	75.6	70.0	88.6
New Zealand	30.7	34.9	37.2	49.4	41.5	54.5	36.9	45.0	47.8	63.5
Northern Ireland (UK)	31.8	50.0	24.6	31.3	c	c	c	c	c	c
Norway	55.1	68.7	55.5	70.5	61.0	77.2	57.3	71.1	69.0	87.4
Poland	c	c	c	c	23.4	32.4	16.0	15.7	17.4	16.9
Slovak Republic	c	c	c	c	16.3	22.7	18.9	28.0	23.4	40.2
Slovenia	23.1	31.3	20.9	26.9	40.9	67.0	34.5	54.4	39.5	63.7
Spain	26.8	29.4	32.2	42.5	49.3	74.4	46.2	68.4	52.6	77.4
Sweden	68.8	72.0	65.7	67.1	79.2	86.6	76.8	84.2	76.0	83.7
Turkey	11.8	c	9.7	c	17.2	c	18.6	c	3.9	c
United States	23.0	32.7	23.4	34.2	31.9	52.4	33.7	55.2	40.8	69.3
OECD Average	35.3	46.3	34.7	44.6	46.1	69.0	42.1	60.2	47.0	69.8
Partners										
Cyprus	c	c	c	c	c	c	c	c	c	c
Lithuania	16.9	15.0	25.1	32.4	28.9	39.8	26.4	33.9	44.3	70.6
Russian Federation[1]	14.0	c	19.7	c	c	c	29.0	c	14.1	c
Singapore	22.6	21.9	24.0	23.7	25.0	25.6	28.2	30.9	33.3	41.2

	Age of highest qualification									
	ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	47.5	73.4	52.3	79.9	c	c	c	c	c	c
Austria	56.2	78.6	c	c	54.7	77.9	c	c	c	c
Canada	43.3	63.7	52.9	78.8	42.6	63.7	c	c	c	c
Chile	c	c	c	c	c	c	c	c	c	c
Czech Republic	33.6	69.3	29.3	63.0	21.6	41.8	c	c	c	c
Denmark	79.2	92.1	86.8	97.1	76.1	88.6	c	c	c	c
England (UK)	c	c	c	c	c	c	42.9	70.7	38.4	61.5
Estonia	37.8	53.2	c	c	c	c	c	c	c	c
Finland	73.0	87.1	74.5	89.4	c	c	c	c	c	c
Flanders(Belgium)	c	c	c	c	c	c	c	c	c	c
France	c	c	c	c	c	c	57.6	83.7	52.5	74.7
Germany	55.1	75.2	65.6	87.7	c	c	c	c	c	c
Greece	24.5	37.1	c	c	c	c	c	c	c	c
Ireland	41.5	66.3	c	c	c	c	c	c	c	c
Israel	39.6	60.6	c	c	c	c	c	c	c	c
Italy	c	c	c	c	c	c	c	c	c	c
Japan	c	c	c	c	c	c	c	c	c	c
Korea	35.7	54.7	c	c	c	c	c	c	c	c
Netherlands	71.3	89.6	c	c	c	c	c	c	c	c
New Zealand	44.8	59.5	57.2	79.4	c	c	c	c	c	c
N. Ireland (UK)	c	c	c	c	c	c	42.0	68.1	33.9	50.1
Norway	60.8	75.0	68.0	85.8	c	c	c	c	c	c
Poland	24.8	32.0	c	c	c	c	c	c	c	c
Slovak Republic	20.0	30.3	c	c	c	c	c	c	c	c
Slovenia	38.1	57.8	c	c	c	c	c	c	c	c
Spain	53.2	77.7	c	c	c	c	c	c	c	c
Sweden	76.6	83.5	73.8	76.4	c	c	c	c	c	c
Turkey	c	c	c	c	c	c	c	c	c	c
United States	31.3	47.7	53.0	85.1	c	c	c	c	c	c
OECD Average	46.6	67.8	c	c	c	c	c	c	c	c
Partners										
Cyprus	c	c	c	c	c	c	c	c	c	c
Lithuania	38.4	58.9	c	c	c	c	c	c	c	c
Russian Fed.[1]	29.5	c	c	c	c	c	c	c	c	c
Singapore	31.6	37.4	c	c	c	c	c	c	c	c

	Age of highest qualification									
	Did not attain higher education qualification		ISCED 5b, beyond normative age >25		ISCED 5b, within normative age <=25		ISCED 5a (BA), beyond normative age >25		ISCED 5a (BA), within normative age <=25	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	22.7	22.7	34.4	45.6	29.2	34.0	45.1	65.3	43.0	60.8
Austria	26.3	26.3	34.5	40.5	43.5	57.2	c	c	44.7	57.7
Canada	24.3	24.3	32.2	38.2	31.5	36.6	44.4	61.6	39.9	52.8
Chile	14.4	14.4	24.7	36.4	14.6	14.8	29.7	47.2	34.4	60.2
Czech Republic	10.0	10.0	3.3	0.9	5.4	2.2	29.6	56.3	28.7	54.9
Denmark	47.7	47.7	80.4	92.2	75.8	87.1	78.5	90.7	67.7	79.9
England (UK)	19.9	19.9	32.2	42.7	25.9	30.5	c	c	c	c
Estonia	17.7	17.7	27.0	34.6	22.4	25.1	44.6	65.7	31.8	39.2
Finland	52.6	52.6	60.4	64.3	62.9	68.0	70.1	79.0	72.7	82.9
Flanders (Belgium)	26.8	26.8	39.2	46.6	43.0	53.6	c	c	49.5	66.5
France	21.9	21.9	37.5	50.7	39.3	52.6	c	c	c	c
Germany	26.6	26.6	41.6	53.1	40.8	50.4	48.6	63.1	49.6	66.6
Greece	13.1	13.1	14.7	16.6	16.6	20.0	15.5	16.7	20.6	28.8
Ireland	18.0	18.0	28.3	36.6	30.4	42.1	45.7	70.3	33.1	44.0
Israel	20.4	20.4	32.6	45.1	25.2	28.0	40.6	56.9	39.4	53.0
Italy	14.8	14.8	c	c	c	c	33.0	50.1	36.7	57.8
Japan	63.9	63.9	55.3	42.0	70.5	72.3	c	c	72.5	78.2
Korea	22.4	22.4	27.2	30.6	23.9	23.8	34.8	47.4	32.9	41.4
Netherlands	34.7	34.7	45.9	49.0	54.5	67.4	65.5	82.6	58.3	71.6
New Zealand	24.0	24.0	30.7	34.0	37.2	48.3	41.5	53.4	36.9	43.8
Northern Ireland (UK)	17.0	17.0	31.8	47.7	24.6	29.3	c	c	c	c
Norway	37.1	37.1	55.1	65.4	55.5	67.3	61.0	74.4	57.3	67.8
Poland	10.8	10.8	c	c	c	c	23.4	38.2	16.0	19.3
Slovak Republic	12.9	12.9	c	c	c	c	16.3	20.7	18.9	25.8
Slovenia	10.7	10.7	23.1	34.7	20.9	30.0	40.9	70.4	34.5	58.3
Spain	24.1	24.1	26.8	25.3	32.2	37.5	49.3	69.8	46.2	63.1
Sweden	56.9	56.9	68.8	73.4	65.7	68.5	79.2	87.3	76.8	85.1
Turkey	10.7	10.7	11.8	c	9.7	c	17.2	c	18.6	c
United States	18.2	18.2	23.0	25.0	23.4	26.2	31.9	42.8	33.7	45.5
OECD Average	24.8	24.8	35.3	42.7	34.7	41.2	46.1	66.0	42.1	56.8
Partners										
Cyprus	3.7	3.7	7.8	c	7.6	c	12.9	c	9.4	c
Lithuania	17.2	17.2	16.9	14.8	25.1	32.1	28.9	39.4	26.4	33.5
Russian Federation[1]	22.4	22.4	14.0	c	19.7	c	c	c	29.0	c
Singapore	22.5	22.5	22.6	25.0	24.0	27.0	25.0	29.2	28.2	34.9

	Age of highest qualification											
	ISCED 5a (MA), beyond normative age >29		ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies												
Australia	51.2	74.8	47.5	70.4	52.3	77.3	c	c	c	c	c	c
Austria	48.6	63.1	56.2	74.4	c	c	54.7	73.7	c	c	c	c
Canada	51.1	73.6	43.3	60.2	52.9	76.2	42.6	60.2	c	c	c	c
Chile	40.1	70.2	c	c	c	c	c	c	c	c	c	c
Czech Republic	33.2	64.6	33.6	64.8	29.3	58.1	21.6	36.9	c	c	c	c
Denmark	77.7	89.4	79.2	90.0	86.8	96.3	76.1	85.5	c	c	c	c
England (UK)	c	c	c	c	c	c	c	c	42.9	65.0	38.4	55.1
Estonia	42.4	64.1	37.8	55.2	c	c	c	c	c	c	c	c
Finland	72.4	81.5	73.0	82.1	74.5	85.1	c	c	c	c	c	c
Flanders(Belgium)	c	c	60.8	81.7	c	c	c	c	c	c	c	c
France	c	c	c	c	c	c	c	c	57.6	83.3	52.5	74.1
Germany	52.7	67.1	55.1	70.5	65.6	84.7	c	c	c	c	c	c
Greece	30.5	52.1	24.5	35.8	c	c	c	c	c	c	c	c
Ireland	44.9	66.6	41.5	61.4	c	c	c	c	c	c	c	c
Israel	49.6	71.7	39.6	55.7	c	c	c	c	c	c	c	c
Italy	c	c	39.4	60.5	c	c	c	c	c	c	c	c
Japan	c	c	75.8	83.6	c	c	c	c	c	c	c	c
Korea	39.7	56.1	35.7	47.1	c	c	c	c	c	c	c	c
Netherlands	70.0	86.3	71.3	87.3	c	c	c	c	c	c	c	c
New Zealand	47.8	62.4	44.8	58.3	57.2	78.6	49.5	63.0	c	c	c	c
N. Ireland (UK)	c	c	c	c	c	c	c	c	42.0	66.0	33.9	47.5
Norway	69.0	85.7	60.8	71.9	68.0	83.7	c	c	c	c	c	c
Poland	17.4	20.8	24.8	37.7	c	c	c	c	c	c	c	c
Slovak Republic	23.4	37.6	20.0	27.9	c	c	c	c	c	c	c	c
Slovenia	39.5	67.3	38.1	61.6	c	c	c	c	c	c	c	c
Spain	52.6	72.8	53.2	73.0	c	c	c	c	c	c	c	c
Sweden	76.0	84.6	76.6	84.4	73.8	77.6	c	c	c	c	c	c
Turkey	c	c	18.8	c	c	c	c	c	c	c	c	c
United States	40.8	60.4	31.3	38.1	53.0	79.5	c	c	c	c	c	c
OECD Average	47.0	67.0	46.6	64.4	c	c	c	c	c	c	c	c

	Age of highest qualification											
	ISCED 5a (MA), beyond normative age >29		ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners												
Cyprus	11.9	c	18.1	c	c	c	c	c	c	c	c	c
Lithuania	44.3	70.2	38.4	58.4	c	c	c	c	c	c	c	c
Russian Federation[1]	14.1	c	29.5	c	c	c	c	c	c	c	c	c
Singapore	33.3	45.7	31.6	41.8	c	c	c	c	c	c	c	c

Notes: Adjusted for labour force status, gender, immigrant and language status, parents' education, literacy proficiency and earnings. Models cannot be computed for Cyprus and Turkey.
[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Table A.6. Adjusted and unadjusted probabilities of experiencing positive social outcomes by participation in formal adult education (Political efficacy)

	Age of highest qualification									
	Did not complete ISCED 3		ISCED 3, beyond normative age >20		ISCED 3, within normative age <=20		ISCED 4, beyond normative age >20		ISCED 4, within normative age <=20	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	42.8	42.8	47.1	50.1	54.4	62.6	48.7	50.5	59.2	69.7
Austria	30.5	30.5	33.1	34.9	37.5	44.0	46.5	59.5	48.5	62.0
Canada	41.9	41.9	40.8	36.2	53.7	60.0	53.3	58.1	46.3	45.1
Chile	67.4	67.4	75.6	79.5	78.6	83.7	c	c	c	c
Czech Republic	28.8	28.8	27.5	22.1	32.6	32.5	31.5	30.1	38.5	38.9
Denmark	57.1	57.1	69.2	77.1	68.5	75.9	67.0	71.9	c	c
England (UK)	40.6	40.6	44.5	44.5	50.5	54.9	c	c	c	c
Estonia	34.6	34.6	39.6	44.6	39.1	40.2	40.8	41.9	35.8	35.5
Finland	49.9	49.9	61.8	69.3	65.2	74.8	72.1	83.9	c	c
Flanders (Belgium)	33.5	33.5	43.0	49.5	41.1	46.4	56.1	74.1	46.3	54.7
France	26.1	26.1	27.5	28.3	28.4	30.4	c	c	c	c
Germany	38.1	38.1	47.3	49.2	49.5	55.1	70.0	83.5	65.4	75.8
Greece	80.2	80.2	78.3	74.8	84.3	86.4	88.1	92.0	88.3	92.4
Ireland	26.0	26.0	c	c	38.6	50.9	45.1	63.9	41.3	56.8
Israel	37.0	37.0	38.3	38.9	41.2	44.5	c	c	c	c
Italy	20.0	20.0	40.0	60.0	31.9	41.5	c	c	c	c
Japan	41.3	41.3	c	c	43.1	43.1	c	c	49.6	55.0
Korea	51.5	51.5	50.1	44.7	55.8	55.0	c	c	c	c
Netherlands	45.0	45.0	60.3	69.2	60.3	69.0	c	c	c	c
New Zealand	50.7	50.7	55.4	56.3	63.6	69.6	57.8	59.1	59.6	64.4
Northern Ireland (UK)	28.7	28.7	38.8	47.4	40.2	49.8	c	c	c	c
Norway	49.9	49.9	59.3	64.8	58.8	63.4	65.5	74.6	57.8	65.2
Poland	36.6	36.6	46.1	54.4	41.9	46.4	53.9	68.3	56.0	71.3
Slovak Republic	21.3	21.3	28.4	33.0	29.0	34.2	c	c	c	c
Slovenia	16.4	16.4	18.5	20.2	20.0	22.8	c	c	c	c
Spain	33.2	33.2	32.3	30.7	39.2	44.8	39.2	45.5	c	c
Sweden	55.1	55.1	66.3	72.2	67.3	72.0	69.7	73.6	63.0	61.5
Turkey	47.4	47.4	51.3	55.8	50.1	53.3	c	c	c	c
United States	49.4	49.4	64.6	73.5	56.1	58.6	57.7	59.6	60.2	65.9
OECD Average	40.7	40.7	47.7	54.5	49.0	54.8	53.7	63.1	53.9	64.7

	Age of highest qualification									
	Did not complete ISCED 3		ISCED 3, beyond normative age >20		ISCED 3, within normative age <=20		ISCED 4, beyond normative age >20		ISCED 4, within normative age <=20	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners										
Cyprus	87.3	87.3	94.0	97.7	87.4	86.2	c	c	c	c
Lithuania	77.0	77.0	c	c	85.9	90.7	91.0	96.2	87.5	92.4
Russian Federation[1]	51.3	51.3	76.3	c	60.7	c	70.1	c	65.9	c
Singapore	43.8	43.8	49.3	52.9	51.9	58.7	53.6	63.4	57.3	67.6

	Age of highest qualification									
	ISCED 5b, beyond normative age >25		ISCED 5b, within normative age <=25		ISCED 5a (BA), beyond normative age >25		ISCED 5a (BA), within normative age <=25		ISCED 5a (MA), beyond normative age >29	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	60.9	73.1	58.6	68.6	68.7	82.4	66.8	79.2	72.2	85.9
Austria	55.6	76.5	50.2	66.7	c	c	48.9	62.2	67.7	88.7
Canada	56.3	62.3	54.6	58.8	65.7	75.6	68.3	79.6	69.1	79.9
Chile	89.9	96.0	85.5	92.1	89.9	95.2	94.9	98.9	89.1	93.8
Czech Republic	27.1	20.7	49.2	61.1	53.8	70.4	55.5	72.9	35.8	36.6
Denmark	79.3	88.9	74.9	83.0	82.3	92.5	64.8	69.8	78.4	88.6
England (UK)	55.3	61.8	56.0	64.3	c	c	c	c	c	c
Estonia	47.7	55.7	42.2	44.7	64.6	78.2	67.8	82.5	56.7	67.2
Finland	76.4	89.0	71.2	81.8	80.8	92.5	79.3	91.0	80.6	91.2
Flanders (Belgium)	52.3	64.9	57.4	74.2	c	c	64.2	83.1	72.2	89.6
France	34.5	43.1	33.4	39.3	c	c	c	c	c	c
Germany	67.6	81.8	58.6	67.5	67.4	80.1	61.8	73.4	71.7	84.8
Greece	85.2	86.8	86.6	89.1	81.4	77.5	88.7	91.7	95.9	98.7
Ireland	52.1	74.2	49.3	70.0	56.2	78.5	55.0	76.9	61.6	83.9
Israel	47.4	56.6	43.8	49.3	50.9	61.5	49.8	59.7	50.4	59.6
Italy	c	c	c	c	45.7	67.4	42.1	59.4	43.4	57.3
Japan	50.9	54.4	51.3	58.5	c	c	63.1	76.3	51.9	56.0
Korea	67.2	74.6	64.3	69.2	64.6	69.6	72.3	80.2	69.2	76.7
Netherlands	74.4	86.9	67.4	79.0	72.6	85.0	72.7	85.0	79.6	91.8
New Zealand	61.7	64.8	67.9	75.6	74.7	83.5	74.8	83.6	74.6	81.6
Northern Ireland (UK)	49.9	68.1	50.5	67.9	c	c	c	c	c	c
Norway	75.1	86.6	63.2	68.6	77.8	89.4	74.7	85.5	81.9	93.4
Poland	c	c	c	c	52.5	65.0	59.6	76.4	65.0	83.5
Slovak Republic	c	c	c	c	36.4	49.3	41.3	57.1	46.0	67.9
Slovenia	31.2	47.3	25.5	34.4	39.3	62.7	35.9	56.4	44.3	73.6
Spain	41.3	49.4	44.2	55.0	38.8	43.9	41.4	49.7	50.0	65.1
Sweden	78.0	86.3	69.1	70.7	80.7	88.3	79.3	86.9	80.6	89.1
Turkey	52.2	56.7	45.4	43.1	50.8	52.7	50.6	53.6	63.5	74.8
United States	67.7	76.3	65.6	72.7	73.4	84.1	73.3	83.1	78.6	89.7
OECD Average	60.6	100.0	56.0	65.6	63.0	76.5	63.3	77.5	66.5	82.3
Partners										
Cyprus	89.5	88.6	92.7	95.2	90.2	89.9	92.3	94.1	92.6	93.4
Lithuania	96.9	99.5	85.7	88.8	93.4	97.7	93.2	97.4	95.8	99.1
Russian Federation[1]	67.9	c	69.5	c	c	c	74.5	c	83.4	c
Singapore	46.4	46.9	56.2	63.7	61.4	72.1	62.8	72.4	78.3	92.0

	Age of highest qualification									
	ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	67.2	79.2	68.6	81.5	c	c	c	c	c	c
Austria	58.1	76.5	c	c	54.9	71.4	c	c	c	c
Canada	65.5	74.3	72.7	83.8	69.7	80.3	c	c	c	c
Chile	c	c	c	c	c	c	c	c	c	c
Czech Republic	57.3	75.1	42.0	46.8	51.5	64.2	c	c	c	c
Denmark	77.0	86.6	82.3	92.6	56.4	50.7	c	c	c	c
England (UK)	c	c	c	c	c	c	64.7	75.3	68.8	81.0
Estonia	57.9	69.8	c	c	c	c	c	c	c	c
Finland	89.3	97.5	75.1	82.1	c	c	c	c	c	c
Flanders(Belgium)	c	c	c	c	c	c	c	c	c	c
France	c	c	c	c	c	c	35.8	45.4	42.3	57.1
Germany	73.7	87.1	76.6	89.4	c	c	c	c	c	c
Greece	90.8	92.9	c	c	c	c	c	c	c	c
Ireland	59.4	82.1	c	c	c	c	c	c	c	c
Israel	50.6	59.6	c	c	c	c	c	c	c	c
Italy	c	c	c	c	c	c	c	c	c	c
Japan	c	c	c	c	c	c	c	c	c	c
Korea	66.8	69.4	c	c	c	c	c	c	c	c
Netherlands	78.5	90.3	c	c	c	c	c	c	c	c
New Zealand	73.7	80.4	62.2	57.0	c	c	c	c	c	c
N. Ireland (UK)	c	c	c	c	c	c	60.4	81.4	56.0	74.9
Norway	83.9	94.4	87.3	96.8	c	c	c	c	c	c
Poland	68.3	86.5	c	c	c	c	c	c	c	c
Slovak Republic	47.8	69.3	c	c	c	c	c	c	c	c
Slovenia	46.6	73.6	c	c	c	c	c	c	c	c
Spain	51.2	67.8	c	c	c	c	c	c	c	c
Sweden	76.7	82.6	81.9	89.5	c	c	c	c	c	c
Turkey	c	c	c	c	c	c	c	c	c	c
United States	82.1	92.6	70.1	76.3	c	c	c	c	c	c
OECD Average	67.0	82.0	c	c	c	c	c	c	c	c
Partners										
Cyprus	92.2	93.2	c	c	c	c	c	c	c	c
Lithuania	95.2	98.7	c	c	c	c	c	c	c	c
Russian Fed.[1]	80.2	c	c	c	c	c	c	c	c	c
Singapore	67.6	78.8	c	c	c	c	c	c	c	c

	Age of highest qualification									
	Did not attain higher education qualification		ISCED 5b, beyond normative age >25		ISCED 5b, within normative age <=25		ISCED 5a (BA), beyond normative age >25		ISCED 5a (BA), within normative age <=25	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	48.2	48.2	60.9	69.7	58.6	65.0	68.7	79.7	66.8	76.2
Austria	36.9	36.9	55.6	71.5	50.2	60.5	c	c	48.9	55.7
Canada	49.4	49.4	56.3	59.0	54.6	55.4	65.7	72.8	68.3	77.1
Chile	73.4	73.4	89.9	95.2	85.5	90.4	89.9	94.0	94.9	98.5
Czech Republic	31.6	31.6	27.1	21.3	49.2	61.9	53.8	71.2	55.5	73.6
Denmark	64.8	64.8	79.3	85.8	74.9	78.8	82.3	90.4	64.8	63.8
England (UK)	45.3	45.3	55.3	59.9	56.0	62.6	c	c	c	c
Estonia	38.0	38.0	47.7	54.4	42.2	43.4	64.6	77.3	67.8	81.7
Finland	60.8	60.8	76.4	85.4	71.2	76.2	80.8	89.7	79.3	87.7
Flanders (Belgium)	39.5	39.5	52.3	60.3	57.4	70.2	c	c	64.2	80.1
France	27.5	27.5	34.5	41.5	33.4	37.7	c	c	c	c
Germany	48.8	48.8	67.6	78.2	58.6	62.4	67.4	76.2	61.8	68.7
Greece	82.9	82.9	85.2	85.2	86.6	87.8	81.4	75.0	88.7	90.6
Ireland	35.0	35.0	52.1	65.0	49.3	59.8	56.2	69.6	55.0	67.4
Israel	40.0	40.0	47.4	54.0	43.8	46.7	50.9	58.9	49.8	57.0
Italy	25.2	25.2	c	c	c	c	45.7	60.5	42.1	51.7
Japan	43.0	43.0	50.9	54.0	51.3	58.1	c	c	63.1	75.9
Korea	54.3	54.3	67.2	75.2	64.3	69.8	64.6	70.3	72.3	80.7
Netherlands	53.7	53.7	74.4	83.7	67.4	74.7	72.6	81.4	72.7	81.4
New Zealand	56.4	56.4	61.7	62.3	67.9	73.5	74.7	81.8	74.8	81.9
Northern Ireland (UK)	34.2	34.2	49.9	63.0	50.5	62.7	c	c	c	c
Norway	56.4	56.4	75.1	84.4	63.2	64.5	77.8	87.5	74.7	83.0
Poland	42.6	42.6	c	c	c	c	52.5	59.5	59.6	71.9
Slovak Republic	27.4	27.4	c	c	c	c	36.4	43.8	41.3	51.6
Slovenia	18.8	18.8	31.2	44.0	25.5	31.5	39.3	59.4	35.9	53.0
Spain	34.7	34.7	41.3	47.6	44.2	53.1	38.8	41.9	41.4	47.6
Sweden	63.9	63.9	78.0	84.2	69.1	67.2	80.7	86.4	79.3	84.9
Turkey	48.1	48.1	52.2	55.5	45.4	42.0	50.8	51.3	50.6	52.0
United States	56.7	56.7	67.7	73.4	65.6	69.6	73.4	81.9	73.3	80.7
OECD Average	46.1	46.1	60.6	69.9	56.0	61.6	63.0	72.8	63.3	74.0
Partners										
Cyprus	87.6	87.6	89.5	c	92.7	c	90.2	c	92.3	c
Lithuania	86.1	86.1	96.9	99.2	85.7	82.7	93.4	96.3	93.2	95.7
Russian Federation[1]	61.9	61.9	67.9	c	69.5	c	c	c	74.5	c
Singapore	49.6	49.6	46.4	40.6	56.2	57.5	61.4	66.3	62.8	66.6

	Age of highest qualification											
	ISCED 5a (MA), beyond normative age >29		ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies												
Australia	72.2	83.6	67.2	76.1	68.6	78.5	c	c	c	c	c	c
Austria	67.7	85.6	58.1	70.8	c	c	54.9	65.1	c	c	c	c
Canada	69.1	77.4	65.5	71.3	72.7	81.6	69.7	77.7	c	c	c	c
Chile	89.1	92.1	c	c	c	c	c	c	c	c	c	c
Czech Republic	35.8	37.4	57.3	75.8	42.0	47.7	51.5	65.0	c	c	c	c
Denmark	78.4	85.3	77.0	82.8	82.3	90.4	56.4	43.2	c	c	c	c
England (UK)	c	c	c	c	c	c	c	c	64.7	73.8	68.8	79.7
Estonia	56.7	66.1	57.9	68.7	c	c	c	c	c	c	c	c
Finland	80.6	87.9	89.3	96.5	75.1	76.2	c	c	c	c	c	c
Flanders(Belgium)	c	c	70.8	86.5	c	c	c	c	c	c	c	c
France	c	c	c	c	c	c	c	c	35.8	43.9	42.3	55.5
Germany	71.7	81.4	73.7	84.1	76.6	86.7	c	c	c	c	c	c
Greece	95.9	98.5	90.8	91.7	c	c	c	c	c	c	c	c
Ireland	61.6	76.3	59.4	73.8	c	c	c	c	c	c	c	c
Israel	50.4	56.8	50.6	56.9	c	c	c	c	c	c	c	c
Italy	c	c	50.6	65.7	c	c	c	c	c	c	c	c
Japan	c	c	67.8	80.6	c	c	c	c	c	c	c	c
Korea	69.2	77.3	66.8	70.1	c	c	c	c	c	c	c	c
Netherlands	79.6	89.6	78.5	87.5	c	c	c	c	c	c	c	c
New Zealand	74.6	79.6	73.7	78.3	62.2	53.9	95.2	99.4	c	c	c	c
N. Ireland (UK)	c	c	c	c	c	c	c	c	60.4	77.4	56.0	69.8
Norway	81.9	92.1	83.9	93.2	87.3	96.1	c	c	c	c	c	c
Poland	65.0	79.9	68.3	83.4	c	c	c	c	c	c	c	c
Slovak Republic	46.0	62.9	47.8	64.3	c	c	c	c	c	c	c	c
Slovenia	44.3	70.8	46.6	70.7	c	c	c	c	c	c	c	c
Spain	50.0	63.1	51.2	65.8	c	c	c	c	c	c	c	c
Sweden	80.6	87.4	76.7	80.0	81.9	87.8	c	c	c	c	c	c
Turkey	c	c	39.0	27.4	c	c	c	c	c	c	c	c
United States	78.6	88.1	82.1	91.4	70.1	73.3	c	c	c	c	c	c
OECD Average	66.5	79.0	67.0	78.5	c	c	c	c	c	c	c	c

	Age of highest qualification											
	ISCED 5a (MA), beyond normative age >29		ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners												
Cyprus	92.6	c	92.2	c	c	c	c	c	c	c	c	c
Lithuania	95.8	98.4	95.2	97.8	c	c	c	c	c	c	c	c
Russian Federation[1]	83.4	c	80.2	c	c	c	c	c	c	c	c	c
Singapore	78.3	89.7	67.6	73.7	c	c	c	c	c	c	c	c

Note: Adjusted for labour force status, gender, immigrant and language status, parents' education, literacy proficiency and earnings.
[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Table A.7. Adjusted and unadjusted probabilities of experiencing positive social outcomes by participation in formal adult education (Volunteering)

	Age of highest qualification									
	ISCED 5b, beyond normative age >25		ISCED 5b, within normative age <=25		ISCED 5a (BA), beyond normative age >25		ISCED 5a (BA), within normative age <=25		ISCED 5a (MA), beyond normative age >29	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	42.0	50.6	42.3	51.6	51.8	67.0	48.2	60.7	59.6	79.5
Austria	51.3	68.2	52.7	73.5	c	c	35.2	47.7	48.2	64.2
Canada	52.1	63.0	48.1	55.3	59.0	72.6	56.8	69.6	73.2	90.2
Chile	38.6	50.1	39.8	54.7	35.4	41.3	50.7	72.8	56.6	78.5
Czech Republic	19.3	31.4	26.4	48.2	31.1	60.0	19.9	30.8	20.8	36.2
Denmark	49.8	59.2	46.5	54.1	50.5	61.6	46.3	55.6	53.6	65.0
England (UK)	43.3	69.8	27.6	37.5	c	c	c	c	c	c
Estonia	36.8	66.8	26.0	41.1	43.3	73.7	30.5	46.3	45.7	78.5
Finland	50.8	63.7	48.3	58.3	51.5	63.9	49.7	60.3	55.4	68.6
Flanders (Belgium)	50.8	74.0	41.7	56.6	c	c	26.2	25.9	44.4	56.6
France	29.9	43.1	33.8	50.3	c	c	c	c	c	c
Germany	42.4	61.2	39.2	56.2	48.0	72.2	41.7	63.2	45.1	64.6
Greece	26.3	44.5	19.2	26.0	27.7	47.5	30.3	52.8	52.2	87.0
Ireland	48.8	67.3	43.3	59.9	48.5	65.0	42.1	53.2	58.2	79.5
Israel	44.6	68.8	29.0	35.8	35.5	46.3	33.9	44.6	51.3	76.1
Italy	c	c	c	c	32.3	45.6	28.6	36.5	36.2	50.4
Japan	31.9	38.0	33.6	44.1	c	c	38.6	51.1	42.9	60.9
Korea	32.6	43.4	23.5	24.2	30.5	37.1	31.9	40.3	50.9	74.1
Netherlands	56.3	74.4	51.7	66.4	46.5	56.1	45.9	55.6	59.1	78.6
New Zealand	57.2	66.9	58.2	68.8	59.7	70.2	54.8	61.0	69.4	83.5
Northern Ireland (UK)	43.9	68.5	37.1	56.7	c	c	c	c	c	c
Norway	60.2	66.7	58.7	64.9	66.3	77.1	61.0	68.3	64.9	75.0
Poland	c	c	c	c	30.2	69.2	23.6	54.1	37.5	80.3
Slovak Republic	c	c	c	c	27.1	45.6	33.1	60.4	35.6	64.7
Slovenia	43.6	67.4	39.1	60.0	40.4	60.8	37.7	56.5	48.2	75.0
Spain	25.3	44.3	21.7	34.6	21.3	31.8	26.5	45.6	31.5	55.9
Sweden	37.0	41.3	45.4	60.4	46.3	59.1	38.0	42.7	44.8	58.5
Turkey	36.9	56.2	30.6	46.0	32.1	42.5	29.7	39.8	39.1	50.1
United States	60.7	76.2	61.9	77.8	69.4	86.9	68.2	84.6	77.6	93.5
OECD Average	42.8	58.9	39.4	53.7	42.8	61.2	39.6	55.5	50.1	74.0

	Age of highest qualification									
	ISCED 5b, beyond normative age >25		ISCED 5b, within normative age <=25		ISCED 5a (BA), beyond normative age >25		ISCED 5a (BA), within normative age <=25		ISCED 5a (MA), beyond normative age >29	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners										
Cyprus	32.2	35.4	29.1	31.8	42.6	57.3	34.9	43.2	55.0	77.2
Lithuania	8.6	9.2	13.0	19.6	13.5	20.3	12.7	18.5	18.0	32.3
Russian Federation[1]	16.3	c	16.2	c	c	c	18.0	c	22.9	c
Singapore	30.9	48.6	34.0	52.6	40.3	64.9	47.2	75.3	53.0	82.4

	Age of highest qualification									
	ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	44.0	54.5	66.6	88.1	c	c	c	c	c	c
Austria	38.6	46.5	c	c	49.1	64.4	c	c	c	c
Canada	55.2	67.3	63.3	77.9	41.8	39.5	c	c	c	c
Chile	c	c	c	c	c	c	c	c	c	c
Czech Republic	23.4	40.7	18.6	24.2	15.2	18.3	c	c	c	c
Denmark	46.3	50.1	68.5	86.7	57.3	69.6	c	c	c	c
England (UK)	c	c	c	c	c	c	49.2	77.9	42.3	65.4
Estonia	36.9	63.2	c	c	c	c	c	c	c	c
Finland	54.1	66.1	56.4	69.1	c	c	c	c	c	c
Flanders(Belgium)	c	c	c	c	c	c	c	c	c	c
France	c	c	c	c	c	c	40.7	66.6	37.5	57.0
Germany	47.0	68.5	38.2	48.8	c	c	c	c	c	c
Greece	47.6	81.6	c	c	c	c	c	c	c	c
Ireland	46.4	62.7	c	c	c	c	c	c	c	c
Israel	34.2	48.7	c	c	c	c	c	c	c	c
Italy	c	c	c	c	c	c	c	c	c	c
Japan	c	c	c	c	c	c	c	c	c	c
Korea	29.1	31.3	c	c	c	c	c	c	c	c
Netherlands	50.8	64.9	c	c	c	c	c	c	c	c
New Zealand	62.7	74.8	84.1	96.7	c	c	c	c	c	c
N. Ireland (UK)	c	c	c	c	c	c	54.7	82.7	48.8	74.0
Norway	62.3	69.1	62.2	69.9	c	c	c	c	c	c
Poland	30.9	68.5	c	c	c	c	c	c	c	c
Slovak Republic	34.9	62.6	c	c	c	c	c	c	c	c
Slovenia	38.9	55.1	c	c	c	c	c	c	c	c
Spain	31.0	55.0	c	c	c	c	c	c	c	c
Sweden	46.8	59.7	32.3	28.8	c	c	c	c	c	c
Turkey	c	c	c	c	c	c	c	c	c	c
United States	76.2	92.2	74.7	90.7	c	c	c	c	c	c
OECD Average	43.5	63.1	c	c	c	c	c	c	c	c
Partners										
Cyprus	45.8	64.5	c	c	c	c	c	c	c	c
Lithuania	16.5	26.5	c	c	c	c	c	c	c	c
Russian Fed.[1]	25.2	c	c	c	c	c	c	c	c	c
Singapore	49.4	77.9	c	c	c	c	c	c	c	c

	Age of highest qualification									
	Did not attain higher education qualification		ISCED 5b, beyond normative age >25		ISCED 5b, within normative age <=25		ISCED 5a (BA), beyond normative age >25		ISCED 5a (BA), within normative age <=25	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	34.0	34.0	42.0	46.9	42.3	47.9	51.8	63.4	48.2	56.8
Austria	33.5	33.5	51.3	64.3	52.7	69.8	c	c	35.2	43.0
Canada	39.7	39.7	52.1	60.2	48.1	52.3	59.0	70.0	56.8	66.9
Chile	27.0	27.0	38.6	47.3	39.8	51.8	35.4	38.4	50.7	70.2
Czech Republic	15.3	15.3	19.3	22.5	26.4	37.0	31.1	48.8	19.9	22.1
Denmark	40.5	40.5	49.8	53.9	46.5	48.9	50.5	56.4	46.3	50.4
England (UK)	23.3	23.3	43.3	61.4	27.6	29.2	c	c	c	c
Estonia	21.2	21.2	36.8	56.2	26.0	30.9	43.3	63.9	30.5	35.3
Finland	39.6	39.6	50.8	60.1	48.3	54.5	51.5	60.2	49.7	56.5
Flanders (Belgium)	28.0	28.0	50.8	70.7	41.7	52.5	c	c	26.2	22.8
France	21.5	21.5	29.9	34.6	33.8	41.4	c	c	c	c
Germany	29.6	29.6	42.4	49.5	39.2	44.5	48.0	61.9	41.7	51.9
Greece	15.8	15.8	26.3	37.5	19.2	20.9	27.7	40.2	30.3	45.3
Ireland	33.7	33.7	48.8	59.7	43.3	51.6	48.5	56.7	42.1	44.3
Israel	25.4	25.4	44.6	66.8	29.0	33.8	35.5	44.0	33.9	42.3
Italy	20.3	20.3	c	c	c	c	32.3	41.0	28.6	32.1
Japan	30.9	30.9	31.9	30.8	33.6	36.6	c	c	38.6	43.2
Korea	20.8	20.8	32.6	43.7	23.5	24.5	30.5	37.5	31.9	40.7
Netherlands	36.9	36.9	56.3	71.9	51.7	63.5	46.5	52.8	45.9	52.3
New Zealand	45.5	45.5	57.2	66.3	58.2	68.2	59.7	69.7	54.8	60.4
Northern Ireland (UK)	24.7	24.7	43.9	61.6	37.1	48.9	c	c	c	c
Norway	53.4	53.4	60.2	61.5	58.7	59.6	66.3	72.8	61.0	63.1
Poland	12.1	12.1	c	c	c	c	30.2	53.0	23.6	37.0
Slovak Republic	19.2	19.2	c	c	c	c	27.1	34.2	33.1	48.8
Slovenia	28.3	28.3	43.6	57.1	39.1	49.4	40.4	49.9	37.7	45.4
Spain	14.1	14.1	25.3	36.9	21.7	28.0	21.3	25.1	26.5	37.3
Sweden	34.3	34.3	37.0	35.4	45.4	54.4	46.3	52.7	38.0	36.6
Turkey	18.7	18.7	36.9	52.1	30.6	42.0	32.1	38.0	29.7	34.9
United States	45.1	45.1	60.7	68.6	61.9	70.5	69.4	81.9	68.2	78.8
OECD Average	28.7	28.7	42.8	52.8	39.4	47.6	42.8	54.1	39.6	48.5
Partners										
Cyprus	29.5	29.5	32.2	c	29.1	c	42.6	c	34.9	c
Lithuania	6.7	6.7	8.6	9.7	13.0	20.7	13.5	21.2	12.7	19.4
Russian Federation[1]	15.2	15.2	16.3	c	16.2	c	c	c	18.0	c
Singapore	20.4	20.4	30.9	39.0	34.0	42.6	40.3	54.9	47.2	66.7

	Age of highest qualification											
	ISCED 5a (MA), beyond normative age >29		ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies												
Australia	59.6	76.7	44.0	50.4	66.6	86.3	c	c	c	c	c	c
Austria	48.2	59.5	38.6	41.4	c	c	49.1	59.6	c	c	c	c
Canada	73.2	89.1	55.2	64.5	63.3	75.6	41.8	36.4	c	c	c	c
Chile	56.6	76.2	c	c	c	c	c	c	c	c	c	c
Czech Republic	20.8	26.5	23.4	30.2	18.6	16.5	15.2	12.3	c	c	c	c
Denmark	53.6	59.8	46.3	44.5	68.5	83.9	57.3	64.5	c	c	c	c
England (UK)	c	c	c	c	c	c	c	c	49.2	70.4	42.3	55.9
Estonia	45.7	69.8	36.9	51.9	c	c	c	c	c	c	c	c
Finland	55.4	64.9	54.1	62.3	56.4	65.3	c	c	c	c	c	c
Flanders(Belgium)	c	c	46.9	59.4	c	c	c	c	c	c	c	c
France	c	c	c	c	c	c	c	c	40.7	58.6	37.5	48.0
Germany	45.1	53.0	47.0	57.3	38.2	36.8	c	c	c	c	c	c
Greece	52.2	83.0	47.6	75.9	c	c	c	c	c	c	c	c
Ireland	58.2	73.0	46.4	53.7	c	c	c	c	c	c	c	c
Israel	51.3	74.3	34.2	46.4	c	c	c	c	c	c	c	c
Italy	c	c	42.0	58.1	c	c	c	c	c	c	c	c
Japan	c	c	39.0	42.0	c	c	c	c	c	c	c	c
Korea	50.9	74.4	29.1	31.7	c	c	c	c	c	c	c	c
Netherlands	59.1	76.2	50.8	61.5	c	c	c	c	c	c	c	c
New Zealand	69.4	83.2	62.7	74.3	84.1	96.6	55.9	56.7	c	c	c	c
N. Ireland (UK)	c	c	c	c	c	c	c	c	54.7	77.4	48.8	66.9
Norway	64.9	70.4	62.3	63.7	62.2	64.5	c	c	c	c	c	c
Poland	37.5	67.0	30.9	51.7	c	c	c	c	c	c	c	c
Slovak Republic	35.6	53.3	34.9	50.8	c	c	c	c	c	c	c	c
Slovenia	48.2	65.6	38.9	43.7	c	c	c	c	c	c	c	c
Spain	31.5	47.0	31.0	45.9	c	c	c	c	c	c	c	c
Sweden	44.8	52.3	46.8	53.3	32.3	23.5	c	c	c	c	c	c
Turkey	c	c	44.3	62.4	c	c	c	c	c	c	c	c
United States	77.6	90.7	76.2	88.8	74.7	86.9	c	c	c	c	c	c
OECD Average	50.1	68.1	43.5	55.9	c	c	c	c	c	c	c	c

	Age of highest qualification											
	ISCED 5a (MA), beyond normative age >29		ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners												
Cyprus	55.0	c	45.8	c	c	c	c	c	c	c	c	c
Lithuania	18.0	33.5	16.5	27.6	c	c	c	c	c	c	c	c
Russian Federation[1]	22.9	c	25.2	c	c	c	c	c	c	c	c	c
Singapore	53.0	75.4	49.4	69.7	c	c	c	c	c	c	c	c

Note: Adjusted for labour force status, gender, immigrant and language status, parents' education, literacy proficiency and earnings.
[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).

Table A.8. Adjusted and unadjusted probabilities of experiencing positive social outcomes by participation in formal adult education (Healthy)

	Age of highest qualification									
	ISCED 5b, beyond normative age >25		ISCED 5b, within normative age <=25		ISCED 5a (BA), beyond normative age >25		ISCED 5a (BA), within normative age <=25		ISCED 5a (MA), beyond normative age >29	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	78.7	73.0	91.5	95.9	88.8	91.6	91.7	95.5	92.4	96.1
Austria	87.4	92.7	83.6	85.6	c	c	95.0	98.5	92.2	96.1
Canada	88.8	91.7	91.5	95.5	93.5	97.2	93.0	96.5	94.8	98.0
Chile	81.0	92.5	83.6	95.0	86.3	95.1	89.9	97.6	92.5	98.6
Czech Republic	82.7	79.6	93.0	96.5	100.0	c	97.0	99.4	81.3	81.7
Denmark	87.8	93.3	88.1	94.2	89.2	94.4	89.7	95.4	89.7	94.7
England (UK)	86.7	90.2	86.3	90.9	c	c	c	c	c	c
Estonia	70.7	83.2	66.2	75.9	79.8	89.0	88.3	96.8	71.3	78.7
Finland	82.0	87.0	86.8	92.5	89.2	93.4	91.9	96.3	91.9	96.4
Flanders (Belgium)	85.0	83.7	89.0	92.1	c	c	88.4	91.7	95.7	c
France	83.8	87.6	90.1	95.4	c	c	c	c	c	c
Germany	89.2	88.3	88.3	88.7	88.6	87.5	99.0	99.9	95.1	97.1
Greece	97.9	99.8	91.1	96.4	95.7	99.3	91.9	97.2	96.8	99.5
Ireland	92.9	96.4	91.6	94.3	94.7	97.7	94.2	97.3	95.3	98.2
Israel	86.3	93.3	84.4	92.7	91.0	96.2	92.3	97.7	92.8	97.6
Italy	c	c	c	c	88.5	94.2	90.5	96.3	89.4	95.5
Japan	92.4	98.5	76.4	83.2	c	c	77.6	84.9	81.6	89.6
Korea	49.3	64.3	53.8	73.9	63.0	83.1	56.3	77.7	66.4	87.6
Netherlands	91.3	95.9	82.6	86.8	84.4	88.2	87.4	91.8	91.9	97.0
New Zealand	86.2	88.2	91.6	95.6	89.4	91.6	93.4	96.7	93.6	97.0
Northern Ireland (UK)	77.2	76.9	88.8	95.1	c	c	c	c	c	c
Norway	84.3	88.9	87.9	92.3	87.6	91.9	88.8	94.0	89.9	95.3
Poland	c	c	c	c	87.8	94.4	94.9	99.1	86.1	92.9
Slovak Republic	c	c	c	c	90.1	95.9	95.5	99.4	89.0	95.5
Slovenia	90.3	95.6	86.4	92.4	94.3	98.4	93.7	98.1	88.2	91.8
Spain	72.0	64.6	82.5	86.3	82.6	85.8	86.8	91.7	89.9	95.1
Sweden	84.9	88.0	91.4	96.9	91.9	96.9	89.0	94.3	89.8	95.2
Turkey	81.3	89.1	86.1	94.0	84.8	92.6	86.6	94.1	89.1	96.2
United States	85.7	89.4	95.6	99.1	93.2	97.6	93.7	97.7	91.5	94.7
OECD Average	84.3	100.0	85.2	92.2	88.5	100.0	89.9	96.7	89.2	96.4

	Age of highest qualification									
	ISCED 5b, beyond normative age >25		ISCED 5b, within normative age <=25		ISCED 5a (BA), beyond normative age >25		ISCED 5a (BA), within normative age <=25		ISCED 5a (MA), beyond normative age >29	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners										
Cyprus	86.7	91.4	91.1	97.1	92.8	97.8	94.5	98.9	99.0	100.0
Lithuania	74.4	72.9	83.6	89.5	69.9	64.9	86.4	92.4	85.8	91.0
Russian Federation[1]	24.6	c	53.8	c	c	c	54.2	c	57.3	c
Singapore	75.3	83.1	77.9	85.9	78.8	86.8	83.6	91.9	86.4	94.8

	Age of highest qualification									
	ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	94.2	97.7	100.0	c	c	c	c	c	c	c
Austria	92.8	96.3	c	c	95.5	98.6	c	c	c	c
Canada	93.6	97.1	97.4	99.4	97.0	99.3	c	c	c	c
Chile	c	c	c	c	c	c	c	c	c	c
Czech Republic	98.8	99.9	97.6	99.6	90.9	96.0	c	c	c	c
Denmark	93.4	97.6	90.2	94.2	95.8	98.7	c	c	c	c
England (UK)	c	c	c	c	c	c	87.4	89.4	92.2	96.4
Estonia	73.7	83.5	c	c	c	c	c	c	c	c
Finland	93.2	97.4	85.8	89.4	c	c	c	c	c	c
Flanders(Belgium)	c	c	c	c	c	c	c	c	c	c
France	c	c	c	c	c	c	80.9	82.2	90.6	95.7
Germany	93.6	95.6	97.6	99.2	c	c	c	c	c	c
Greece	96.5	99.3	c	c	c	c	c	c	c	c
Ireland	96.8	99.1	c	c	c	c	c	c	c	c
Israel	83.0	88.9	c	c	c	c	c	c	c	c
Italy	c	c	c	c	c	c	c	c	c	c
Japan	c	c	c	c	c	c	c	c	c	c
Korea	63.9	84.1	c	c	c	c	c	c	c	c
Netherlands	91.2	95.4	c	c	c	c	c	c	c	c
New Zealand	94.9	97.8	86.7	85.6	c	c	c	c	c	c
N. Ireland (UK)	c	c	c	c	c	c	88.1	92.9	94.2	98.0
Norway	93.8	97.8	90.0	91.5	c	c	c	c	c	c
Poland	93.2	98.0	c	c	c	c	c	c	c	c
Slovak Republic	91.4	97.4	c	c	c	c	c	c	c	c
Slovenia	86.3	87.3	c	c	c	c	c	c	c	c
Spain	89.0	93.8	c	c	c	c	c	c	c	c
Sweden	92.0	96.3	93.0	96.4	c	c	c	c	c	c
Turkey	c	c	c	c	c	c	c	c	c	c
United States	95.5	98.5	94.7	97.7	c	c	c	c	c	c
OECD Average	90.5	97.3	c	c	c	c	c	c	c	c
Partners										
Cyprus	96.9	99.5	c	c	c	c	c	c	c	c
Lithuania	77.9	75.6	c	c	c	c	c	c	c	c
Russian Fed.[1]	64.2	c	c	c	c	c	c	c	c	c
Singapore	95.9	99.5	c	c	c	c	c	c	c	c

	Age of highest qualification									
	Did not attain higher education qualification		ISCED 5b, beyond normative age >25		ISCED 5b, within normative age <=25		ISCED 5a (BA), beyond normative age >25		ISCED 5a (BA), within normative age <=25	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies										
Australia	81.7	81.7	78.7	70.3	91.5	95.4	88.8	90.5	91.7	94.8
Austria	80.7	80.7	87.4	90.3	83.6	81.1	c	c	95.0	97.9
Canada	84.3	84.3	88.8	89.1	91.5	94.0	93.5	96.2	93.0	95.2
Chile	58.4	58.4	81.0	87.6	83.6	91.7	86.3	91.2	89.9	95.5
Czech Republic	85.7	85.7	82.7	67.8	93.0	93.6	100.0	c	97.0	99.0
Denmark	76.9	76.9	87.8	91.3	88.1	92.4	89.2	92.7	89.7	94.1
England (UK)	80.9	80.9	86.7	87.6	86.3	88.5	c	c	c	c
Estonia	54.9	54.9	70.7	81.4	66.2	73.5	79.8	87.6	88.3	96.4
Finland	74.5	74.5	82.0	84.6	86.8	90.9	89.2	92.0	91.9	95.5
Flanders (Belgium)	81.6	81.6	85.0	81.2	89.0	90.8	c	c	88.4	90.3
France	75.8	75.8	83.8	85.2	90.1	94.4	c	c	c	c
Germany	85.6	85.6	89.2	87.9	88.3	88.4	88.6	87.1	99.0	99.9
Greece	84.6	84.6	97.9	99.7	91.1	93.6	95.7	98.6	91.9	94.7
Ireland	84.5	84.5	92.9	95.6	91.6	92.9	94.7	97.1	94.2	96.5
Israel	80.8	80.8	86.3	87.9	84.4	86.8	91.0	92.7	92.3	95.5
Italy	79.3	79.3	c	c	c	c	88.5	92.0	90.5	94.7
Japan	68.6	68.6	92.4	98.2	76.4	80.6	c	c	77.6	82.5
Korea	39.9	39.9	49.3	52.0	53.8	63.3	63.0	74.5	56.3	67.6
Netherlands	76.6	76.6	91.3	95.3	82.6	84.9	84.4	86.3	87.4	90.4
New Zealand	82.7	82.7	86.2	87.4	91.6	95.3	89.4	91.0	93.4	96.4
Northern Ireland (UK)	76.6	76.6	77.2	71.8	88.8	93.7	c	c	c	c
Norway	77.2	77.2	84.3	86.1	87.9	90.4	87.6	89.7	88.8	92.3
Poland	73.6	73.6	c	c	c	c	87.8	91.3	94.9	98.6
Slovak Republic	75.3	75.3	c	c	c	c	90.1	93.2	95.5	99.0
Slovenia	76.5	76.5	90.3	94.1	86.4	90.0	94.3	97.8	93.7	97.4
Spain	73.0	73.0	72.0	63.0	82.5	85.5	82.6	84.9	86.8	91.1
Sweden	80.3	80.3	84.9	83.3	91.4	95.6	91.9	95.4	89.0	91.9
Turkey	70.2	70.2	81.3	87.1	86.1	92.9	84.8	90.9	86.6	92.7
United States	79.0	79.0	85.7	85.8	95.6	98.7	93.2	96.7	93.7	96.7
OECD Average	75.8	75.8	84.3	88.7	85.2	90.0	88.5	92.8	89.9	95.5
Partners										
Cyprus	82.1	82.1	86.7	c	91.1	c	92.8	c	94.5	c
Lithuania	57.0	57.0	74.4	80.8	83.6	93.0	69.9	74.2	86.4	95.0
Russian Federation[1]	47.2	47.2	24.6	c	53.8	c	c	c	54.2	c
Singapore	65.9	65.9	75.3	78.0	77.9	81.3	78.8	82.3	83.6	88.9

	Age of highest qualification											
	ISCED 5a (MA), beyond normative age >29		ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
OECD countries and economies												
Australia	92.4	95.5	94.2	97.4	100.0	c	c	c	c	c	c	c
Austria	92.2	94.6	92.8	94.8	c	c	95.5	97.9	c	c	c	c
Canada	94.8	97.2	93.6	96.0	97.4	99.2	97.0	99.0	c	c	c	c
Chile	92.5	97.3	c	c	c	c	c	c	c	c	c	c
Czech Republic	81.3	70.3	98.8	99.8	97.6	99.2	90.9	92.8	c	c	c	c
Denmark	89.7	92.9	93.4	96.8	90.2	92.3	95.8	98.2	c	c	c	c
England (UK)	c	c	c	c	c	c	c	c	87.4	86.5	92.2	95.2
Estonia	71.3	76.4	73.7	81.6	c	c	c	c	c	c	c	c
Finland	91.9	95.5	93.2	96.8	85.8	87.2	c	c	c	c	c	c
Flanders (Belgium)	c	c	92.5	95.0	c	c	c	c	c	c	c	c
France	c	c	c	c	c	c	c	c	80.9	79.1	90.6	94.8
Germany	95.1	97.0	93.6	95.4	97.6	99.2	c	c	c	c	c	c
Greece	96.8	99.0	96.5	98.4	c	c	c	c	c	c	c	c
Ireland	95.3	97.7	96.8	98.8	c	c	c	c	c	c	c	c
Israel	92.8	95.3	83.0	79.9	c	c	c	c	c	c	c	c
Italy	c	c	96.4	99.2	c	c	c	c	c	c	c	c
Japan	c	c	73.9	74.7	c	c	c	c	c	c	c	c
Korea	66.4	80.6	63.9	75.4	c	c	c	c	c	c	c	c
Netherlands	91.9	96.4	91.2	94.5	c	c	c	c	c	c	c	c
New Zealand	93.6	96.7	94.9	97.6	86.7	84.5	96.8	99.1	c	c	c	c
N. Ireland (UK)	c	c	c	c	c	c	c	c	88.1	90.7	94.2	97.4
Norway	89.9	94.0	93.8	97.1	90.0	89.1	c	c	c	c	c	c
Poland	86.1	89.0	93.2	96.8	c	c	c	c	c	c	c	c
Slovak Republic	89.0	92.6	91.4	95.7	c	c	c	c	c	c	c	c
Slovenia	88.2	88.9	86.3	82.9	c	c	c	c	c	c	c	c
Spain	89.9	94.6	89.0	93.3	c	c	c	c	c	c	c	c
Sweden	89.8	93.1	92.0	94.6	93.0	94.6	c	c	c	c	c	c
Turkey	c	c	95.0	99.1	c	c	c	c	c	c	c	c
United States	91.5	92.6	95.5	97.9	94.7	96.8	c	c	c	c	c	c
OECD Average	89.2	94.8	90.5	96.0	c	c	c	c	c	c	c	c

	Age of highest qualification											
	ISCED 5a (MA), beyond normative age >29		ISCED 5a (MA), within normative age <=29		ISCED 6 (PhD), beyond normative age >29		ISCED 6 (PhD), within normative age <=29		ISCED 5a/6, beyond normative age >28 - FRANCE/UK only		ISCED 5a/6, within normative age <='28' - FRANCE/UK only	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Partners												
Cyprus	99.0	c	96.9	c	c	c	c	c	c	c	c	c
Lithuania	85.8	94.1	77.9	82.9	c	c	c	c	c	c	c	c
Russian Federation[1]	57.3	c	64.2	c	c	c	c	c	c	c	c	c
Singapore	86.4	92.7	95.9	99.3	c	c	c	c	c	c	c	c

Note: Adjusted for labour force status, gender, immigrant and language status, parents' education, literacy proficiency and earnings.
[1] See note 1 in Figure 2.1.
Source: (OECD, 2015[24]), Survey of Adult Skills (PIAAC) (2012, 2015) Database (accessed in February 2019).