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Participation in adult education opportunities: Evidence from PIAAC and policy trends in selected countries

by Richard Desjardins

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PARTICIPATION IN ADULT EDUCATION OPPORTUNITIES: EVIDENCE FROM PIAAC AND POLICY TRENDS IN SELECTED COUNTRIES

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Abstract
This paper examines cross-country patterns of participation in adult education opportunities using comparative data made available by the OECD Survey of Adult Skills. Patterns are considered in relation to some of the mechanisms that drive unequal chances to participate, and some of the policy issues that surround the provision, governance and financing of different types of adult learning, as well as recent policy developments relevant to adult education in selected countries.

Introduction

The purpose of this paper is to examine with comparative data the level and distribution of participation in adult education opportunities among countries that participated in the OECD Survey of Adult Skills. Observed cross-country patterns are considered in relation to some of the mechanisms that drive unequal chances to participate, and some of the policy issues that surround the provision, governance and financing of different types of adult learning, as well as recent policy developments relevant to adult education in selected countries.

Definition of measure of participation in adult education opportunities using the OECD Survey of Adult Skills

For the purposes of this analysis, participation in adult education is defined as whether adults participated in some type of adult education in the 12 months preceding the interview.

The adult population is defined as adults aged 16-65. However, formal education undertaken by youths who were deemed to still be in their initial cycle of studies is not counted as adult education activity. Specifically, the analysis excludes youths aged 16-19 who were either in, completed or dropped formal education corresponding to upper secondary education or higher (ISCED 3 or higher) in the 12 months preceding the interview. It also excludes youths aged 16-24 who were either in, completed or dropped formal education corresponding to post-secondary or higher (ISCED 4 or higher) in the 12 months preceding the interview. This implies that youths 16-19 who were in formal education programmes corresponding to lower upper secondary or lower (ISCED 2 or lower) are as a consequence seen to have participated in adult education activity. Similarly, youths 20-24 who were in formal education programmes corresponding to ISCED 3 or lower are as a consequence seen to have participated in adult education activity. This also implies that adults aged 25 or over who participated in formal education are as a consequence seen to have participated in adult education activity.

Adult education activities thus include:

- Formal education programmes undertaken by non-traditional students. This includes second chance education for any adult to attain a secondary qualification or lower (i.e., ISCED 3 or lower), and adults 25 or older to attain a post-secondary qualification (i.e., ISCED 4 or higher)
- Non-formal education activities undertaken by any adult aged 16 to 65. This includes four distinct types:
    - *open or distance education* (includes courses which are similar to face-to-face courses, but take place via postal correspondence or electronic media, linking instructors/teachers/tutors or students who are not together in a classroom)
    - *on-the-job training or training by supervisors or co-workers* (Includes: planned periods of training, instruction or practical experience, using normal tools of work; usually organised by the employer to facilitate adaptation of (new) staff; may include general training about the company as well as specific job-related instructions (safety and health hazards, working practices); organised training or instructions by management, supervisors or coworkers to help the respondent to do his/her job better or to introduce him/her to new tasks, but can also take place in the presence of a tutor)
    - *seminars or workshops*
    - *courses or private lessons, not otherwise reported* (typically subject oriented and taught by persons specialised in the field(s) concerned; can take the form of classroom instruction or lectures; involves a teacher-student relationship with the respondent)

Formal education programmes correspond to recognized qualifications within different countries and correspond to different levels on the International Standardized Classification of Educational Systems (ISCED) qualification structure.

Furthermore, a distinction is made between formal and non-formal adult education undertaken for job-related and non-job related reasons.

Total participation rates include the proportion of adults deemed non-traditional students who participated in any formal education or any adult who participated in non-formal adult education in the 12 months preceding the survey.

Level of participation in adult education opportunities by individual characteristics using the OECD Survey of Adult Skills

The extent of adult education activity varies substantially across countries with some countries featuring much higher levels of participation in different forms of organized adult learning than others. The following lists country results by intervals (see Figure 1):

- Countries with overall participation rates **exceeding 60%**: Denmark (67), Finland (66), Sweden (66), Norway (65), Netherlands (65)
- Countries with overall participation rates **50-60%**: United States (59), Canada (58), United Kingdom (56), Germany (54), Estonia (53), Ireland (51), Korea (50)
- Countries with overall participation rates that fall into the **40-50% range**: Czech Republic (49), Austria (49), Belgium (48), Spain (46), Japan (42)
- Countries with overall participation rates between **30-40%**: Cyprus (38), France (36), Poland (35), Slovak Republic (33)
- Countries with overall participation rates between **20-30%**: Italy (24)
- Countries with overall participation rates **less than 20%**: Brazil (16), Vietnam (5-15).

Figure 1 distinguishes between the proportion of adults who participated in formal education, non-formal education, or both. It also distinguished between adults who participated for job-related reasons or non-job related reasons.

The proportion of adults who participate in formal education is found to be far lower than the proportion who participate in non-formal education. This helps to reveal the relative degree of openness of formal education institutions to *non-traditional students* in different countries. It also provides an indication of how well developed adult education is in different countries with regard to its linkages to recognized qualifications. Indeed, some countries have in recent years made extensive progress in linking organized adult learning to comprehensive qualification frameworks, which may have otherwise been considered as non-formal. Denmark, Finland and Norway and the UK have the highest proportion of adults participating in formal education.

The UK has over the last decade made substantial efforts to make formal education more flexible and accessible to non-traditional students. Policy efforts by the previously named UK Department for Education and Skills (DfES) sought in the early 2000s to develop an advanced qualifications framework in order to make it easier to link and provide recognition for separate and seemingly discontiguous modules within a coherent framework. With highly advanced adult learning systems as reflected by consistently featuring the highest rates of participation in adult education, the Nordic countries also reveal comparatively high participation rates in formal education.

The dominant reason for participation is job-related. Non-job related reasons play an important role too, however. In fact, it is difficult in practice to neatly distinguish the precise reasons why people engage in adult learning practices (Rubenson, 1999). Reasons often overlap with many adults reporting

personal reasons for taking up participation even if the activity is clearly relevant to working life. Accordingly, both sets of reasons are relevant and should be carefully considered even when dealing with the formation of skills relevant to the labour market. The data reveal that Sweden, the Netherlands and Finland have among the most developed provision for adult education opportunities that are both job- and non-job related. Korea, Estonia and Spain also have highly developed provision for non-job related reasons but overall participation is lower in those countries because provision for job-related reasons is not as developed, for example, as in the Nordic countries.

The level of adult education activity by country seems to correlate with a country's level of economic development as measured by per capita GDP (see Table A2 in Annex). That is, more prosperous countries tend to display higher rates of participation in adult education activities. However, it is important to note the relationship is not uniform. Nordic countries for example, are associated with higher participation rates than other countries with similar levels of per capita GDP such as Canada, US and Germany. Levels of functional literacy reveal a similar pattern.

Note that the data for Brazil are available from a survey carried out by two NGOs (UNESCO, 2008) which found that in 2007, 16 per cent had taken a non-formal education course in the last 12 months, 31 per cent had done so previously to this, and 52 per cent had never done so. The results confirm an earlier survey from 2001, so this would place Brazil in the lowest participation band of under 20 per cent. The data for Vietnam from the World Bank STEP study reveal 5% participations rate, but nationally available statistics can be used to estimate a participation rate closer to 15% (see discussion below on Vietnam).

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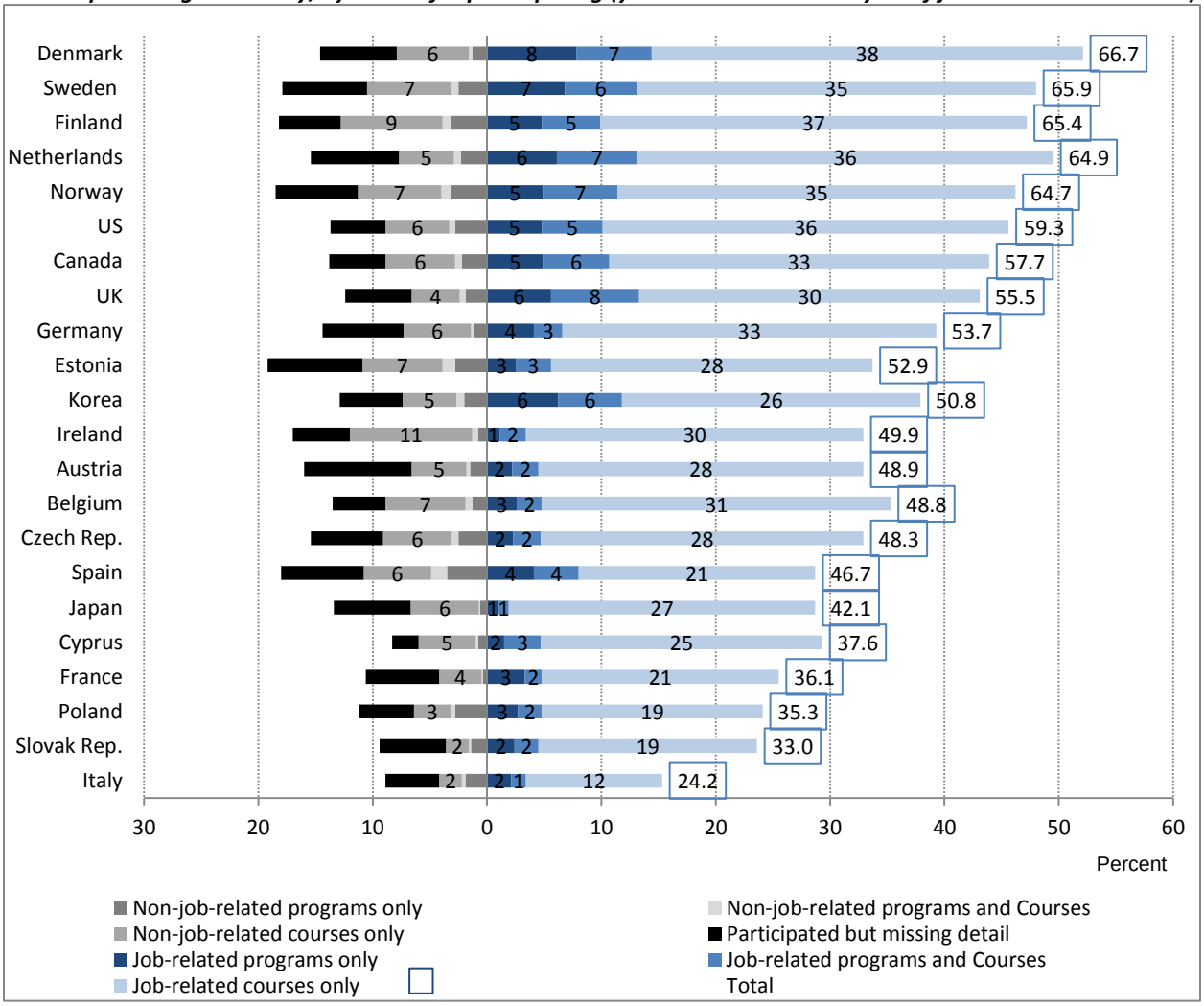
Figure 1. Percentage of adults aged 16 to 65 who participated in adult education programs and courses in the 12 months preceding the survey, by reason for participating (youths 16-24 in initial cycle of formal studies excluded)



Source: Author (Richard Desjardins) based on analysis of OECD Survey of Adult Skills database, 2013.
Note: See Table A1 in annex for all participation rates by types.

Distribution of participation in adult education opportunities by individual characteristics using PIAAC

Participation in adult education is unevenly distributed across the population. Among the most important socio-demographic characteristics revealing unequal distribution are age, the extent of education that adults have already attained, the level of literacy proficiency adults have attained, and adults' socioeconomic status as reflected by their parents' level of education[1].

[1] Information on the occupation of parents was collected in some countries. Thus, in the analysis of the full sample, socio-economic background is proxied by parental education only. Socio-economic background is a difficult concept to measure. While there is much socio-economic background information that is not captured in the Survey of Adult Skills (e.g., income, wealth, and occupation or parents), parents' educational background is one of the most important proxies for socio-economic background since education is an important predictor of income, wealth and occupation.

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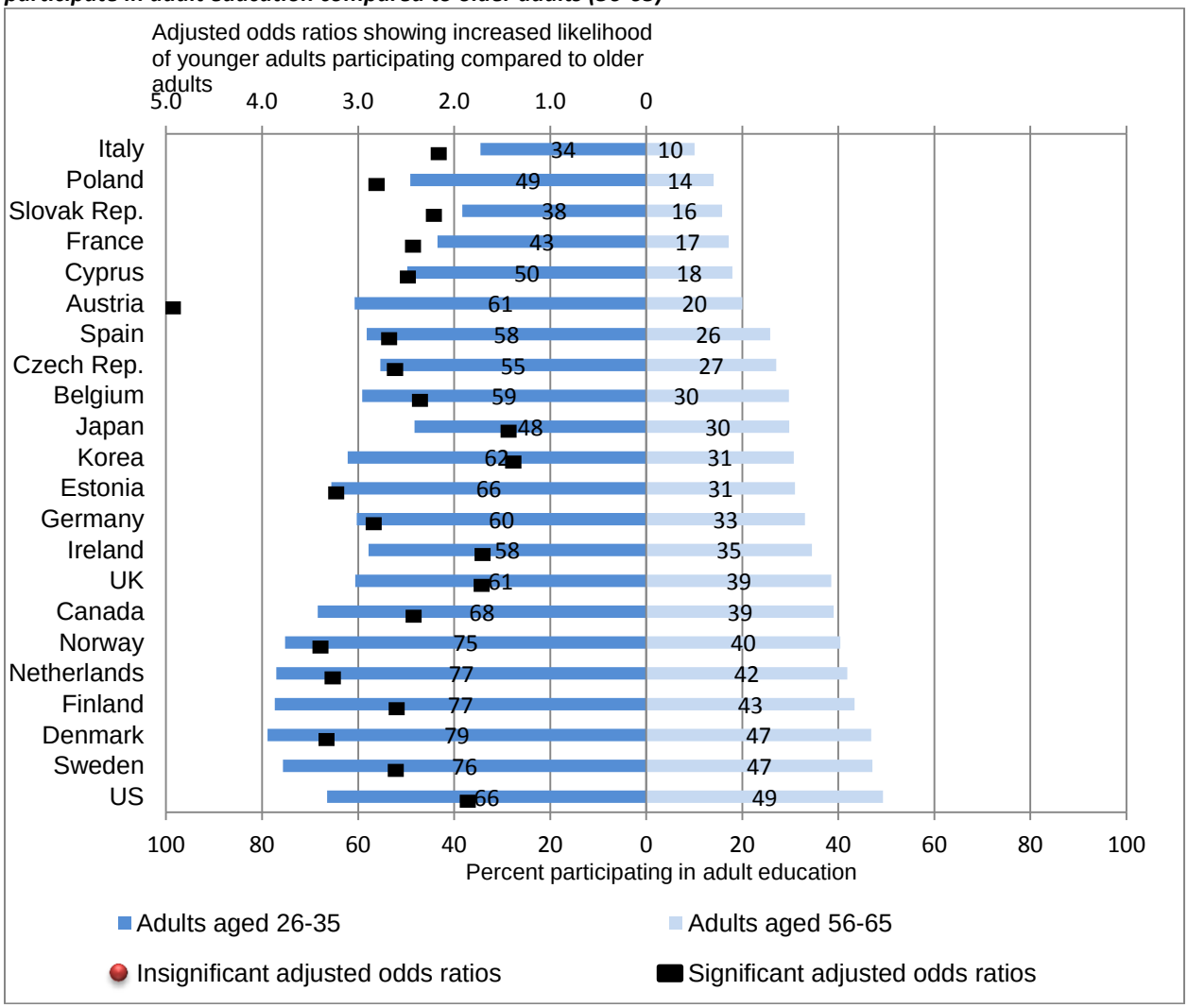
Figure 2. ***Percentage of adults aged 26 to 35 and 56 to 65 who participated in adult education in the 12 months preceding the survey, and adjusted odds ratio showing the increased likelihood of younger adults (26-35) to participate in adult education compared to older adults (56-65)***



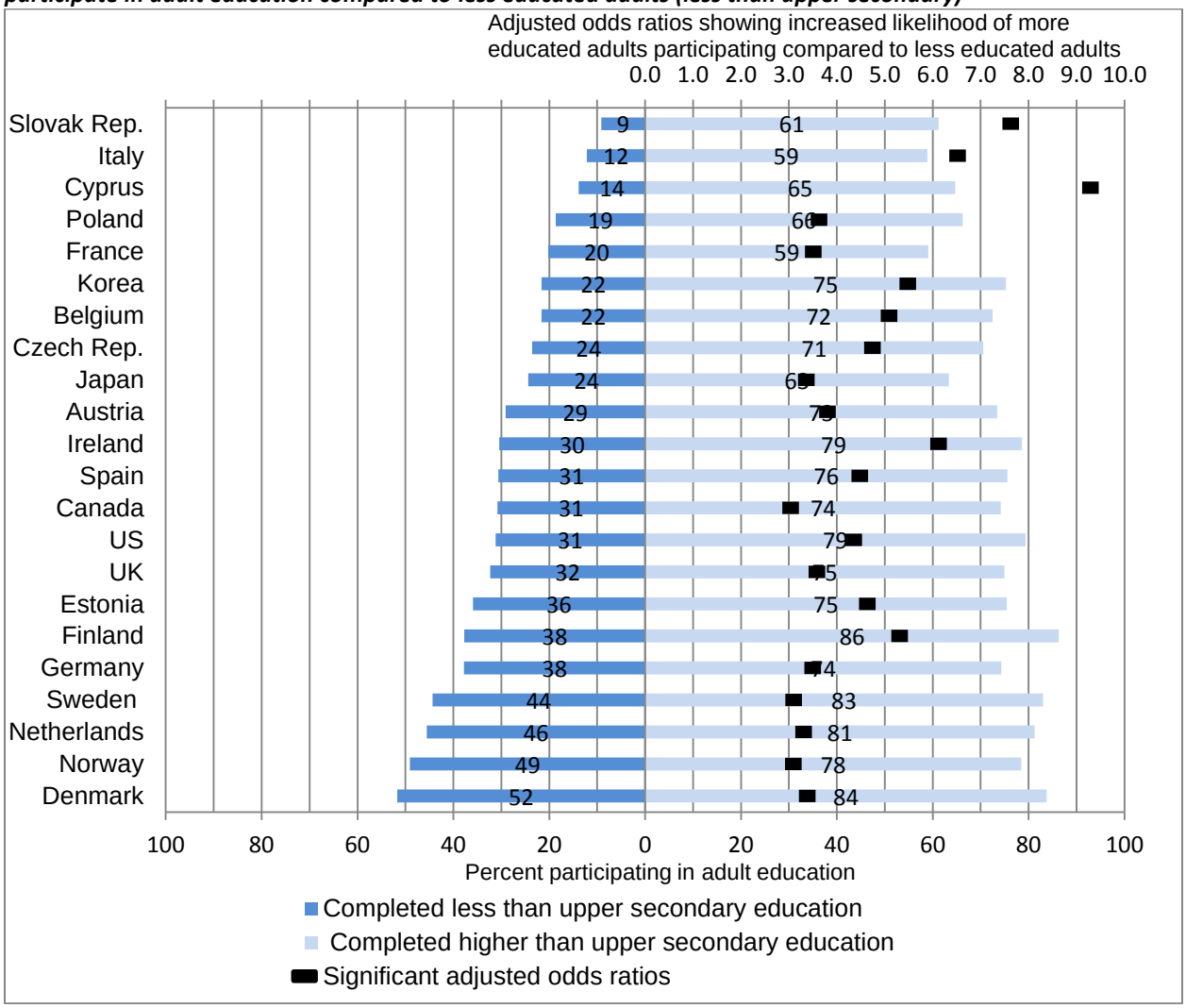
Countries are sorted by the participation rates of adults aged 56-65.
Source: Author (Richard Desjardins) based on analysis of OECD Survey of Adult Skills database, 2013.
Note: Odds ratios are adjusted for gender, parents' education, education, functional literacy, and immigration status. See Tables A3 and A4 in annex for more detailed results.

Figure 2 contrasts rates of participation in adult education activities between adults aged 26 to 35 and adults aged 56 to 65. The data confirm a systematic pattern observed in prior research, namely that older adults participate in adult education at much lower rates. Differences however vary sharply across countries. For example, younger adults in Austria, Italy and Poland display at least three times the probability of participating in adult education compared to older adults. In Vietnam the difference is over 10 times (see Figure 6). In contrast, Sweden and other Nordic countries, as well as the United States and the Netherlands are much more effective at extending adult education opportunities to older adults. Results for the latter are a reflection of more diversified provision able to cater to needs and aspirations of adults of different ages.

The higher probability of younger adults participating in adult education remains in all countries even after adjusting for a range of background variables including gender, education, parents' education,

functional literacy, and immigration status. Adjusted odds ratios displayed in Figure 2 help to reveal that younger adults aged 26 to 35 have over two times the odds of participating than older adults in 17 out of the 22 countries.

Figure 3. ***Percentage of adults aged 16 to 65 (youths 16-24 in initial cycle of formal studies excluded) who participated in adult education in the 12 months preceding the survey, by high and low levels of education, and adjusted odds ratio showing the increased likelihood of more educated adults (higher than upper secondary) to participate in adult education compared to less educated adults (less than upper secondary)***



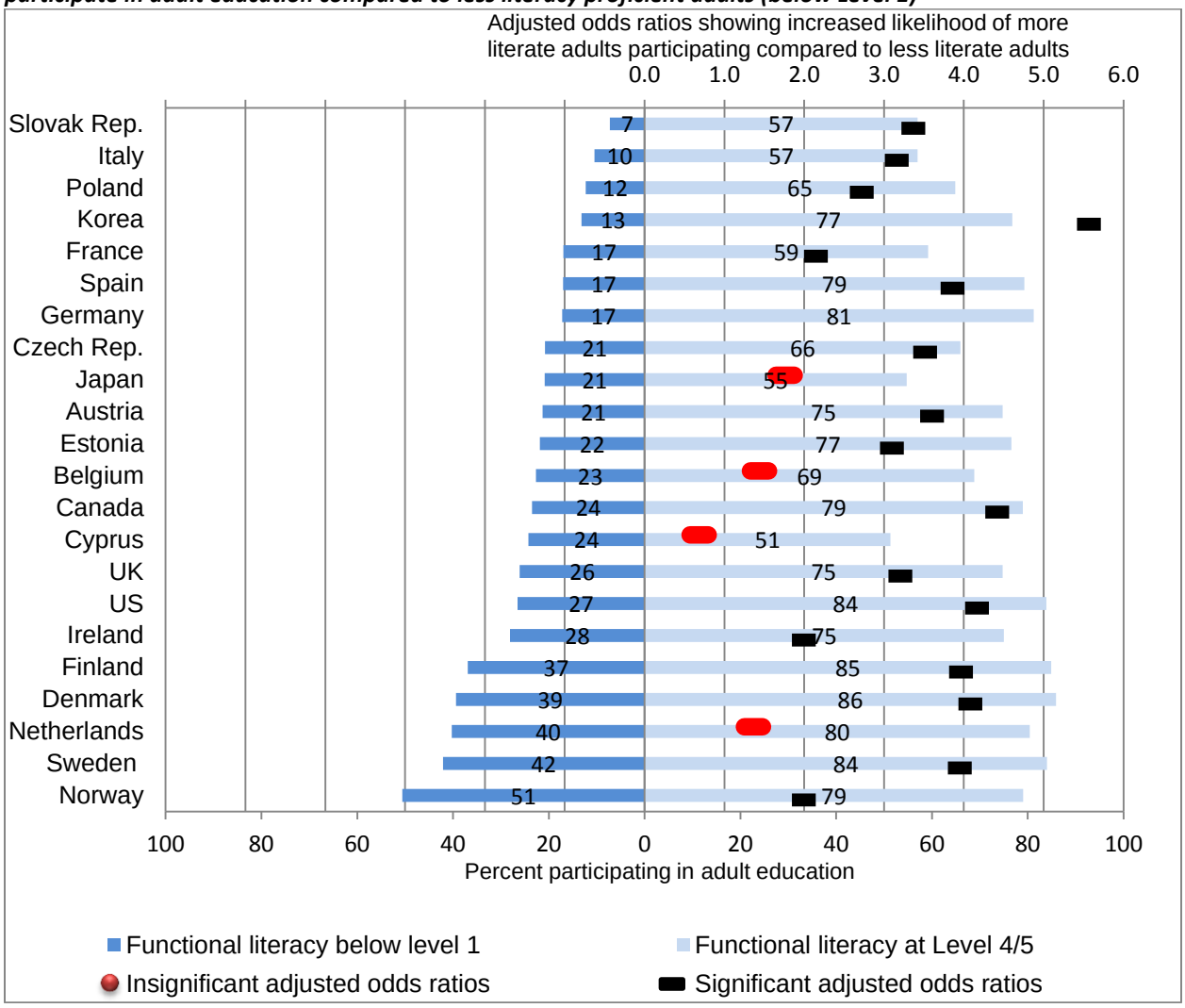
Countries are sorted by the participation rates of adults who did not complete upper secondary education.
Source: Author (Richard Desjardins) based on analysis of OECD Survey of Adult Skills database, 2013.
Note: Odds ratios are adjusted for age, gender, parents' education, functional literacy, and immigration status. See Tables A3 and A4 in annex for more detailed results.

Figure 3 contrasts rates of participation in adult education activities between adults who did not complete upper secondary education and those who completed higher than upper secondary education. Adults with high levels of initial education in the Slovak Republic have over six times the probability of participating in adult education than adults with low levels of initial education. In Vietnam, the difference is nearly four times (see Figure 6). While inequality in participation is present in all countries, results show that a number of countries are much more successful at extending adult learning

opportunities to those who initially had low levels of educational attainment. This is particularly the case among the Nordic countries, as well as the Netherlands and Germany.

The higher probability of more educated adults participating in adult education remains in all countries even after adjusting for a range of background variables including age, gender, parents' education, functional literacy, and immigration status. Figure 3 shows that in most countries more educated adults have about three to five time higher odds of participating than lower educated adults. In a few countries, such as Italy and the Slovak Republic, the odds are even higher.

Figure 4. ***Percentage of adults aged 16 to 65 (youths 16-24 in initial cycle of formal studies excluded) who participated in adult education in the 12 months preceding the survey, by high low levels of literacy proficiency, and adjusted odds ratio showing the increased likelihood of more literacy proficient adults (Level 4/5) to participate in adult education compared to less literacy proficient adults (below Level 1)***



Countries are sorted by the participation rates of adults scoring at very low levels of functional literacy (Below Level 1).
Source: Author (Richard Desjardins) based on analysis of OECD Survey of Adult Skills database, 2013.
Note: Odds ratios are adjusted for age, gender, parents' education, education, and immigration status. See Tables A3 and A4 in annex for more detailed results.

Figure 4 contrasts rates of participation in adult education activities between adults who display very low levels functional literacy (below Level 1) and adults who display the highest levels of functional literacy (Level 4/5). The patterns confirm the complementary nature of much adult education activities in advanced industrialised countries. Overall, adults who have already attained higher levels of education and higher levels of functional literacy are much more likely to participate than those who have not. The Nordic countries as well as the Netherlands appear to be the most successful in ensuring that adults with low literacy take up adult education opportunities. It can be seen from Figure 4 that 51% of adults with the lowest levels of literacy proficiency participated in some form of adult learning in the 12 months preceding the survey. Otherwise, in some Eastern and Southern European countries, the most literate can have over four to five times the probability of participating than adults with the lowest levels of functional literacy.

The higher probability of more literate adults participating in adult education remains in all countries even after adjusting for a range of background variables including age, gender, education, parents' education, and immigration status. Adjusted odds ratios shown in Figure 4 reveal that this is the case in 18 out of the 22 countries.

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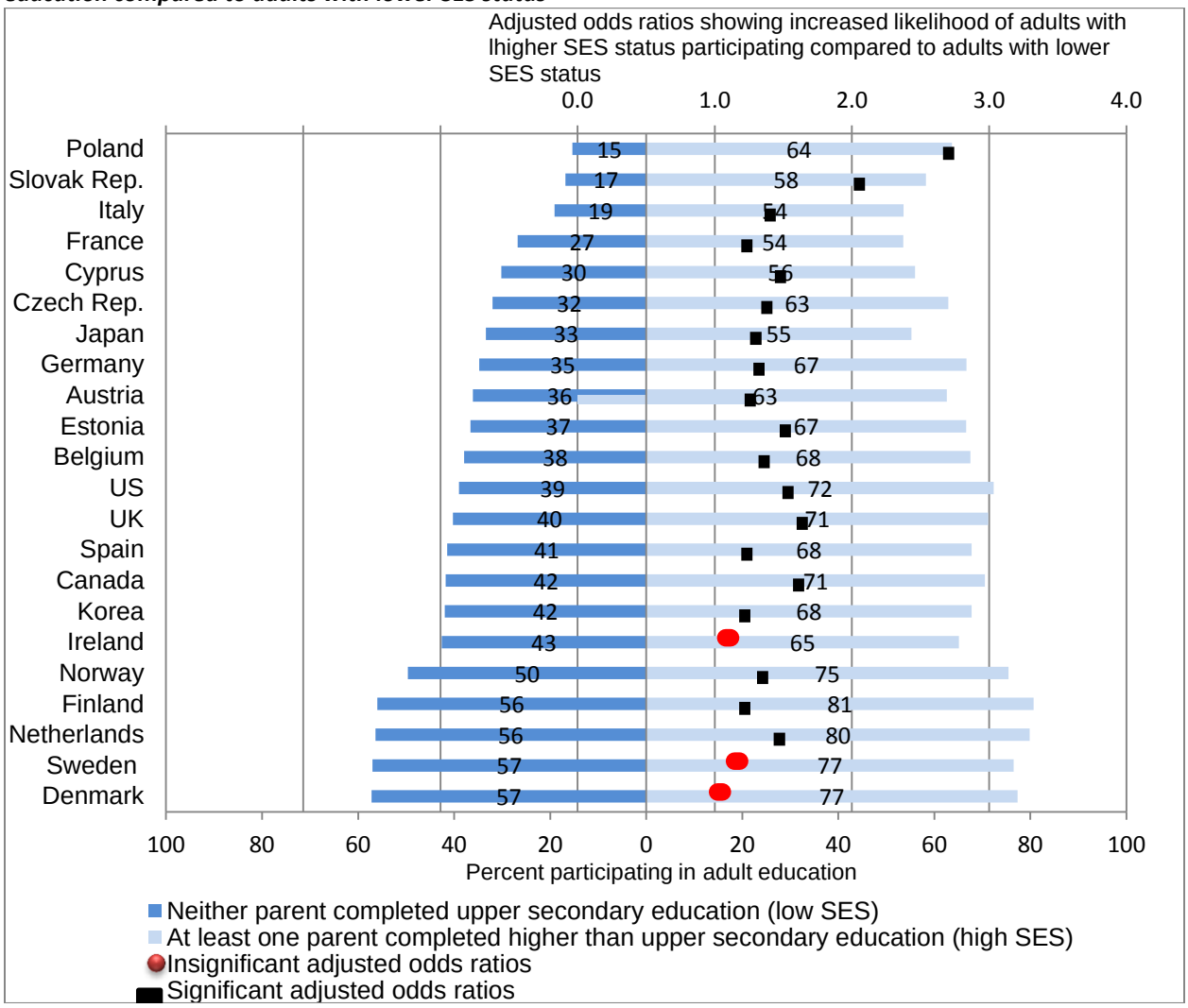
Figure 5. ***Percentage of adults aged 16 to 65 (youths 16-24 in initial cycle of formal studies excluded) who participated in adult education in the 12 months preceding the survey, by socio-economic status (SES)[1], and adjusted odds ratio showing the increased likelihood of adults with higher SES status to participate in adult education compared to adults with lower SES status***



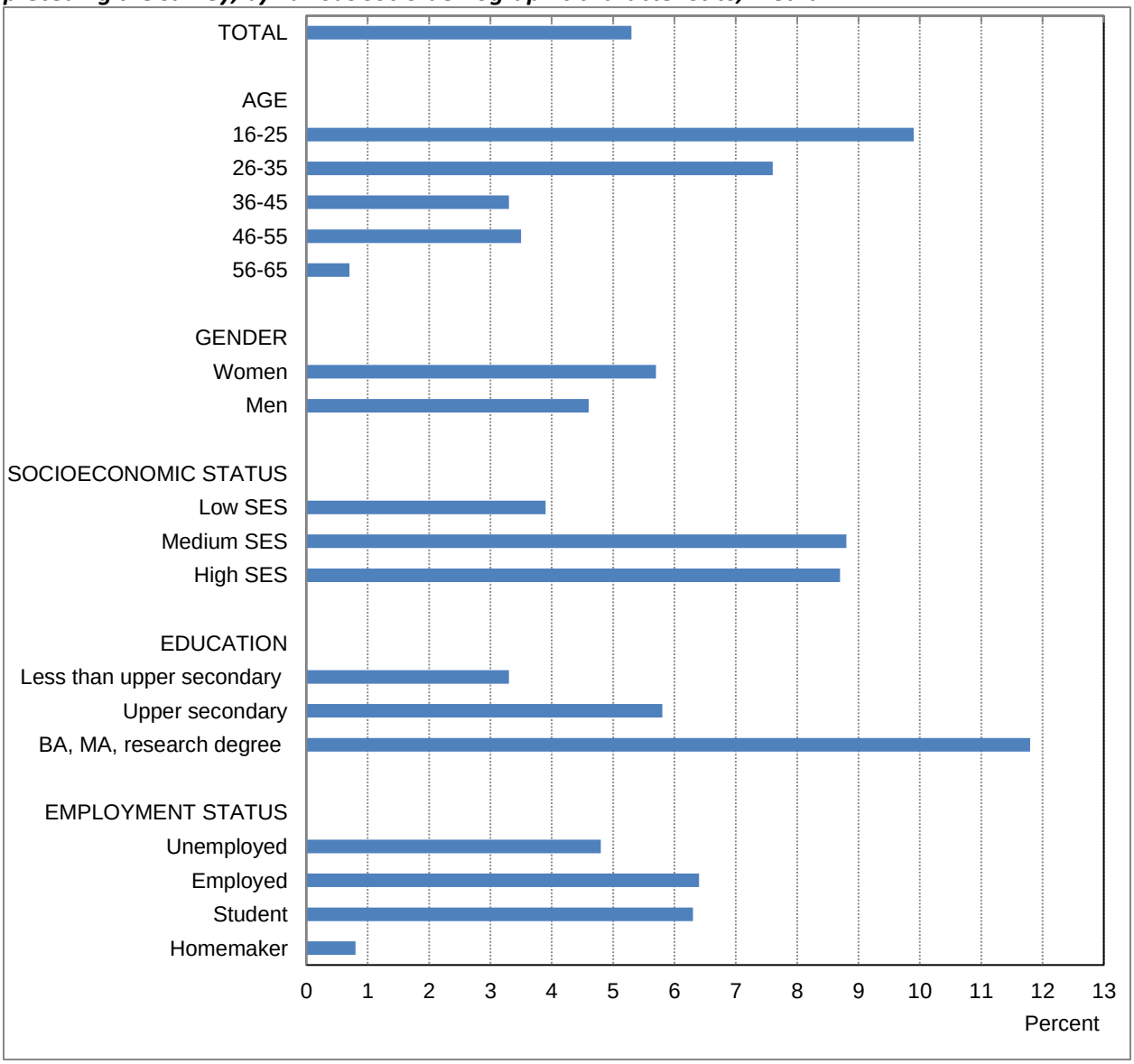
Countries are sorted by the participation rate of adults for whom neither parent completed upper secondary (low SES).
Source: Author (Richard Desjardins) based on analysis of OECD Survey of Adult Skills database, 2013.
Note: Odds ratios are adjusted for age, gender, education, functional literacy, and immigration status. See Tables A3 and A4 in annex for more detailed results.

Figure 5 contrasts rates of participation in adult education activities between adults for whom neither parent completed upper secondary education (an indication of low socio-economic status – SES) and adults for whom at least one parent completed higher than upper secondary education (an indication of high SES). The cross-country pattern is very similar to that of contrasts made between adults with high and low levels of initial education and functional literacy.

The higher probability of higher educated adults participating in adult education remains in most countries even after adjusting for a range of background variables including age, gender, education, functional literacy, and immigration, employment and occupational status. Adjusted odds ratios displayed in Figure 5 help to reveal that this is the case for about 19 out of the 22 countries. After

adjustment for these other socio-demographic characteristics, adults with lower SES status in Ireland, Sweden and Denmark are about as likely to participate as adults with higher SES status.

Figure 6. Percentage of adults aged 16 to 65 who participated in adult education in the 12 months preceding the survey, by various socio-demographic characteristics, Vietnam



Source: Author (Richard Desjardins) based on analysis of Vietnam World Bank STEP database, 2013.

In summary, most countries display unequal chances to participate in adult education by the major socio-demographic factors mentioned above. Figures 2 -5 displayed these patterns among contrast groups for selected key socio-demographic variables. More detailed results can be found in Annex Tables A3 and A4. Some countries however are much more effective at attenuating differences among otherwise disadvantaged groups and thus in the level of inequality. These tend to be the same countries that display the highest rates of adult education activity (i.e., the Nordic countries in Group 1.) Although various historical, social and cultural factors are behind this, the Nordic countries share a strong record of public policy that aims to promote adult education, foster favourable structural conditions, target

various barriers to participation, and ensure that disadvantaged groups have equal opportunity to take up adult education. Most notably, research findings help to reveal that major differences among countries are not necessarily the level of economic development, or the existence of barriers to participation but rather the conditions that allow persons and groups to overcome the diverse barriers that adults face in accessing adult education (Rubenson and Desjardins, 2009).

Trends in participation to adult education

Ascertaining trends of participation in adult education is very difficult even where comparative data exist. This is for a number of reasons including:

- Slight changes to study or collection designs including wording of questions from study to study over time can lead to non-sampling or administrative errors that cannot be accounted for using statistical or accounting methods
- Definitions referring to participation differ (e.g. different wording of questions may capture different types of adult education related activities)
- Reference periods differ across sources (e.g. participation in last 12 months vs last four weeks)
- Reference populations differ across sources (adults aged 16-65 excluding students in initial cycle vs adults aged 25-65)
- Reference years in which data is available differ
- Different sources do not necessarily concur in the direction of the trend.

Discrepancies and/or volatitility can thus be judged to be due to design differences or non-sampling errors that are too difficult to monitor and evaluate in large scale cross-national comparative studies.

With these caveats in mind, the following introduces trend data on participation in adult education from three different sources.

Comparing results from the 1994-1998 International Adult Literacy Survey (IALS) to the 2012 OECD Survey of Adult Skills (PIAAC) reveals an upward trend in participation in adult education in all countries that participated in both surveys over an approximate 15 year period (see Figure 7). Only Italy displays a marginal difference in the participation rate. In principle the questions relating to participation in IALS and PIAAC are nearly identical but a detailed comparison of the questions and their flow reveal discrepancies that may have led to a wider scope of activities being counted as adult education activity in PIAAC. See Desjardins, Rubenson and Milana (2006) for a similar discussion and detailed comparison of the comparable questions in the 1994-1998 International Adult Literacy Survey (IALS) and the 2003-2006 Adult Literacy and Lifeskills (ALL) survey.

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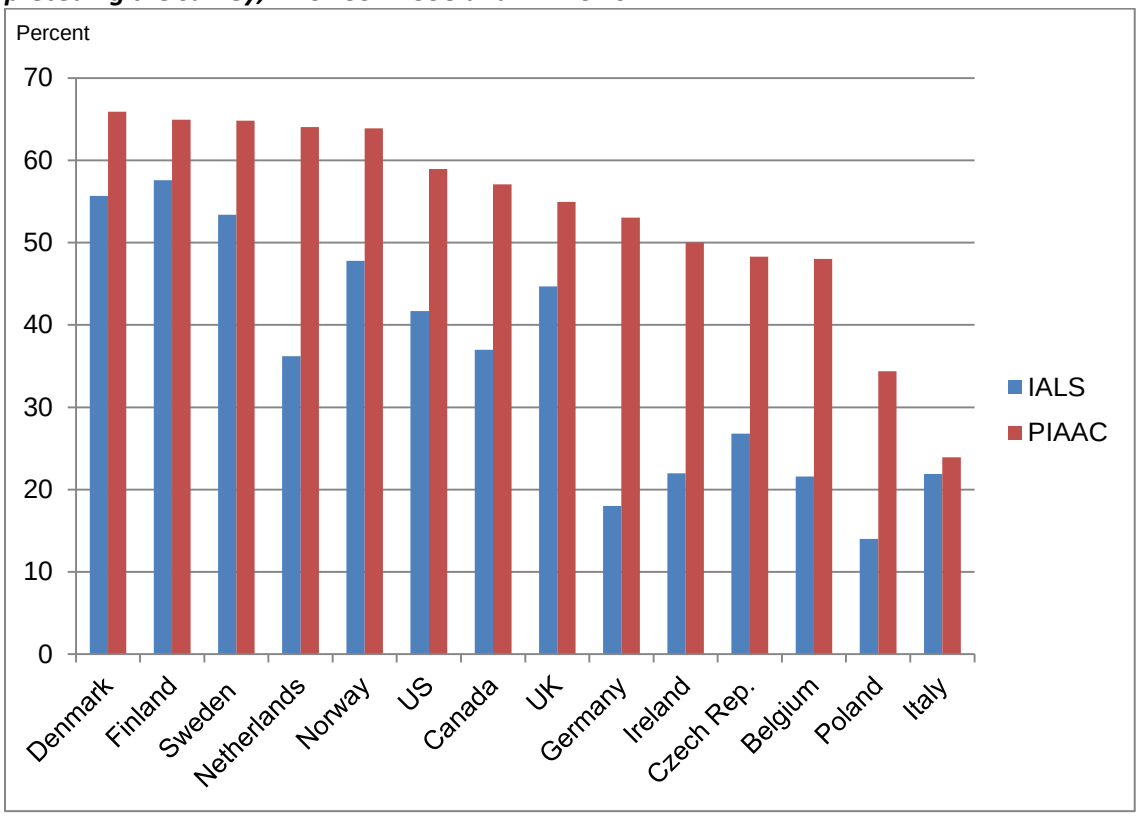
Figure 7. Percentage of adults aged 25 to 65 who participated in adult education in the <u>12 months</u> preceding the survey, IALS 1994-1998 and PIAAC 2012



Source: Author (Richard Desjardins) based on analysis of International Adult Literacy Survey (IALS), 1994-1998; and OECD Survey of Adult Skills database, 2013.

Comparing other EU sources with PIAAC does not necessarily reveal the same ranking of countries, trends or similar results (see Figures 7, 8 and 9). For example, the EU Adult Education Survey in France records a participation rate near 50% while in PIAAC it records a rate closer to 30%. Even when comparing two EU sources with the same reference years and similar reference populations does not yield discernable trends or results. On balance, the EU AES survey reveals a positive trend for 13 countries and a negative trend for 10 countries (see Figure 8). In contrast, the EU LFS reveals a positive trend for 15 countries and a negative trend for 8 countries (see Figure 9). However, the negative trend only concurs for three countries in both sources. In some cases, one source reveals a sharp positive trend for a given country while the other source reports no change or slight negative trend (e.g. Hungary).

In summary, the trend over a longer period ranging between 15-20 years is probably positive for nearly all countries, but given the volatility and discrepancies among available sources it is probably unwise to draw conclusive results on trends over shorter periods of time.

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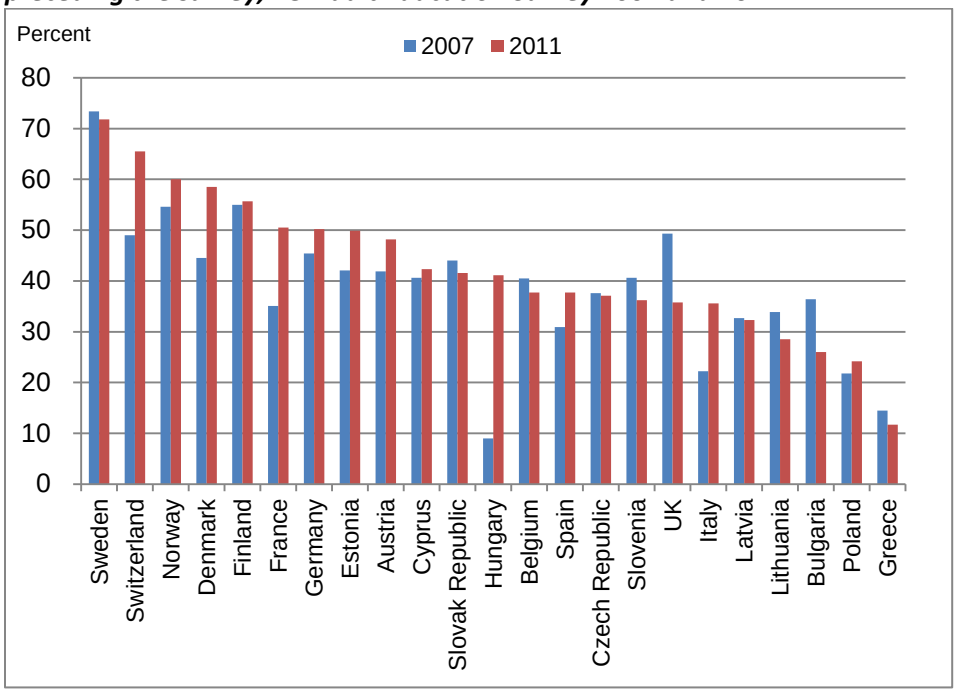
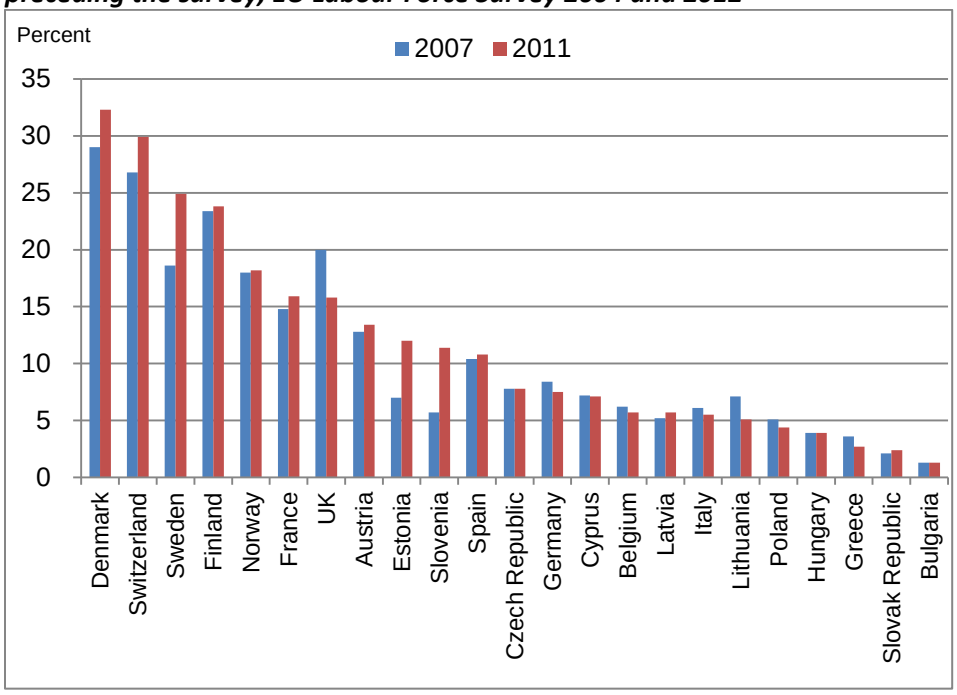
Figure 8. Percentage of adults aged 25 to 64 who participated in adult education in the <u>12 months</u> preceding the survey, EU Adult Education Survey 2007 and 2011



Source: Eurostat website.

Figure 9. Percentage of adults aged 25 to 64 who participated in adult education in the <u>four weeks</u> preceding the survey, EU Labour Force Survey 2004 and 2012



Source: Eurostat website.

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What drives investment in and unequal participation in adult education?

Call to action to address enablers and barriers to boosting investment and fostering equitable access

Policy makers and other stakeholders relevant to adult education must strive to understand better the barriers and enablers to boosting investment and fostering equitable access to adult education.
A diverse range of barriers lead to low supply of and low demand for adult education.

On the supply side, the institutions and governance mechanisms that underlie the provision and financing of adult education may be weak, left to the market, or in some cases absent altogether. An important tendency is to underinvest in adult education (OECD, 2005). This is especially the case when adult education activity is left to be coordinated by the market. This is because of poor availability of information in the marketplace to coordinate demand and supply, and also poor information on rewards, as well as generally misaligned incentives among the stakeholders involved (individuals, employers, government) (Desjardins and Rubenson, 2013).

On the demand side, the prevailing structural relations in society lead to many barriers faced by individuals, and hence their demand for adult education. For example, several policy domains and key structural relations seem to matter for adult education such as those between the State and individuals, families or households, as reflected by various social policies such as family, health, education and other welfare policies; or between employers and individuals, or between the State and employers, as reflected in labor market and social protection policies.

Most barriers to participation in adult education are embedded in the structuring of specific socio-economic and cultural contexts, which relate to the ways in which particular societies organise access to, and participation in, education and training. Unless consciously redressed by policy, formal educational systems tend to reinforce social inequalities (as classically described by Bourdieu & Passeron 1970). Patterns of inequality in adult education participation hence reflect broader structural social inequalities in income, educational attainment and more generally the distribution of qualifications. Such patterns tend to mirror the distribution of resources and power, and more precisely exemplify notions of justice, rights, responsibilities and entitlements prevailing in a particular country. Beyond addressing political issues surrounding inequalities in the distribution of resources and power in societies, and their concomitant redistributive and welfare policies, a key role for public policy is to ***foster governance and institutional structures*** relevant to adult education which seek to identify and resolve misaligned incentives among stakeholders, share information and not least, coordinate solutions which optimize the level, distribution and types of investments.

Policy makers have at their disposal both demand and supply side policies to boost investment and redress inequalities in access to adult education. These can impact the roles and behaviours of different stakeholders in relation to the provision and take up of adult education opportunities – individuals, employers, public institutions. Supply side policies, for example, include the targeting of subsidies directly to providers. Whereas, a demand side policy would target subsidies directly to individuals rather than providers such as training vouchers (e.g., Austria, Germany, Sweden). Not surprisingly, countries with low participation rates in adult education tend to lack an elaborated policy agenda, including both demand and/or supply side policies; or when the rhetoric exists, it is often not backed up with funds and active or effective institutions and governance structures.

Fostering demand for compensatory and complimentary forms of adult education

There are several types of adult education, but it is useful to distinguish between compensatory and complementary types. Compensatory types can include basic education, literacy programs, and second chance opportunities to attain formal qualifications. In contrast, complementary types can include on-the-job training, continuing vocational or professional training, and adult higher education. The two can overlap, for example, some forms of job-related training may be linked to basic or literacy education. While imperfect, the distinction is helpful for contextualizing the sharp differences in the level of investment in adult education among more and less developed countries.

In many countries, there is simply a problem of low demand among the adult population (see Figure 9). However, this is closely interconnected with the provision, financing and governance structures. Both the demand and the supply tend to go hand in hand. Accordingly, a key role for the stakeholders underlying active ***governance and institutional structures*** is to devise public policies that seek to ***incentivise and foster individual demand***. Examples of the broad kind of policy responses among others that may help to achieve this are to:

- Provide information on available opportunities
- Provide information on potential rewards and associated risks
- Pool risks to individuals with firms and government such as risk of unemployment and risk of skill mismatch
- Ensure recognition and valuation of prior learning
- Free-up time from family-related obligations (e.g., child care)
- Free-up time from job-related obligations (e.g., paid and unpaid leave)
- Mitigate financial constraints (e.g., loans, tax incentives)

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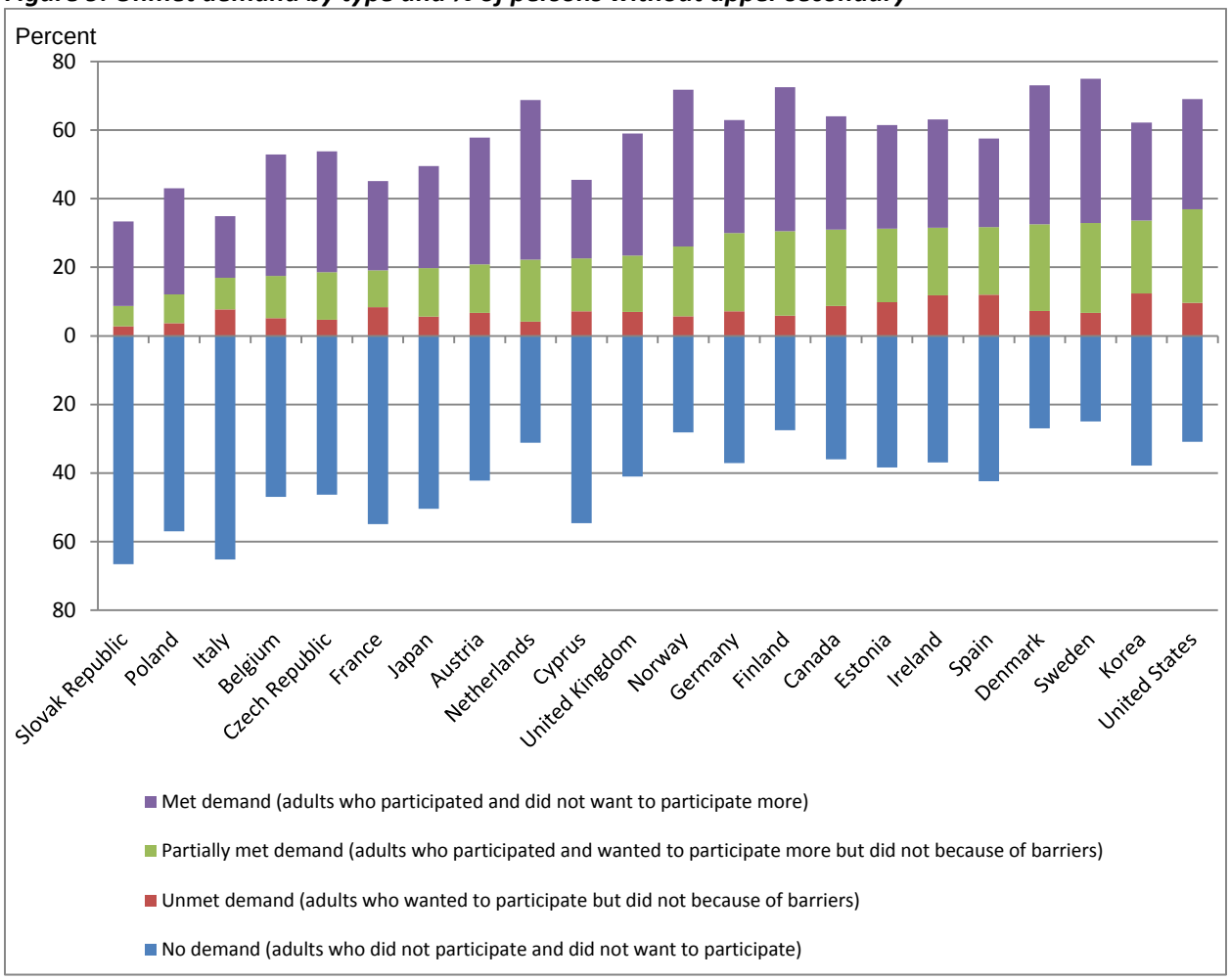
Figure 9. Unmet demand by type and % of persons without upper secondary



Countries are sorted by the combined proportion of unmet and partially met demand.
Source: Author (Richard Desjardins) based on analysis of OECD Survey of Adult Skills database, 2013.

Figure 9 shows the extent of unmet and only partially met demand for adult education in different countries for which there is available data. Unmet demand refers to adults who wanted to participate but did not because of barriers. Partially met demand refers to adults who participated and wanted to participate more but did not because of barriers. It can be seen that even in countries with already high levels of investment in adult education, there is significant proportion of unmet demand. In several countries led by the United States and Korea, up to one-third of adults reported that they wanted to participate in adult education but did not because of barriers. These data suggest a need for further policy attention to boost provision and a more effective agenda to redress the barriers underlying unmet demand. In many other countries, however, demand remains simply very low requiring policies to boost demand. In Italy and the Slovak Republic more than 65% of adults did not participate and did not want to participate. This is often also the case in many developing countries.

A key role for public policy vis-a-vis the above mentioned types of structurally-based barriers is to ***incentivise and foster employer demand*** as well as to ***incentivise and foster employer support*** for adult education. Examples of the kind of broad policy responses that may help to achieve this are to:

- Promote use of existing skills

- Avoid low skill equilibrium traps (Redding, 1996)
- Foster employer support (e.g., financing, time-off, flexible work arrangements)
- Promote the pooling of risks with other firms and stakeholders
- Promote coordination with stakeholders on skill needs (e.g., between providers, unions and other firms)

The growing importance of the world of work as a source of motivation and investment in AE

However, in more developed economies, adult education has indeed grown tremendously over the last three decades and this is primarily as a consequence of employer investment in adult education. This goes hand in hand with the rise of information and knowledge type occupations that increasingly rely on continuous learning over the lifespan of workers. It is also related to intensified competition on a global scale. The largest investors in adult education are large firms that compete on a global scale, continuously adapt and adjust to technologies, and are subject to innovation (OECD, 2005).

Consequently, policies that address only complimentary forms may boost overall levels of adult education activity but may also lead to high levels of inequality. Thus a key role for public policy is to ensure that public demand not aligned with employer demand is also met. Examples of the broad kind of policy responses that may help to achieve this are to:

- Foster a good skill base for knowledge-economies (e.g., computerization of public services)
- Foster flexible pathways (e.g., avoid dead-ends, promote non-traditional students, distance education)
- Foster relevant and responsive provision to individual, employer and public demand
- Foster flexible learning methods
- Foster community learning
- Foster active citizenship (e.g., involving social action)
- Foster active ageing

Four cases studies showcasing the evolution of adult education policies aimed at an equitable distribution of opportunities

The following considers some aspects of the evolving and recent policy setting surrounding adult education in selected countries, in relation to the level and distribution of adult education opportunities.

Norway

As revealed by the cross-country patterns of participation presented in Figures 1-5, Norway, alongside its Nordic neighbours (Finland, Denmark and Sweden) has one of the most advanced adult education systems in the world. The system is well developed and offers a diverse range of means and ends to encourage adults to improve their skills via different pathways for learning. The development of the system is rooted in a rich history and culture related to adult education practices but also very much related to an exceptionally strong public policy record on adult education and other social and welfare policies which affect participation in adult education. Access to education up to upper secondary levels and also access to higher education are now seen as rights which are enshrined in law, and adult education structures play an important role as a means to helping individuals to fulfill those rights. There is also a rich tradition for supporting adult education which is not directly for qualification purposes or job-related, but focused on personal development and the development of democracy (i.e., for non-job related reasons).

As recently as the 1990s, Norway initiated several institutional reforms to strengthen its already strong adult education system. These reforms have led to a dramatic boost in the level and distribution of adult education. In 1999, the competence reform provided a statutory right to adults born after 1978 to primary and secondary education, and introduced the option for adults aged 25 or older to access higher education on the basis of non-formal/informal competences being recognized. Reforms in 1999 also introduced legal rights to study leave for adults (Ministry of Education and Church Affairs, 2001). Specifically, the wider reforms mandated rights to educational leave which allowed adults who have been in the workforce for a period of three years or more, and at the same company for at least two years, to take up to three years off to attend an organized course of education on a part-time or full-time basis (Eurypedia, 2011; Nergaards, 2011).

In 2006, the government again promoted a major initiative (Program for Basic Competence in Working Life – BCWL). It was designed to channel funds to employers to implement courses for their employees with low levels of general such as literacy, numeracy and ICT and oral communication (UNESCO, 2012). This help to circumvent the market tendencies that exacerbate inequalities by fostering awareness and direct support for employees that would otherwise tend not to obtain support from their employers. The funds allocated to this initiative have since increased dramatically from 14 million NOK to 105 million NOK, with nearly 700 firms having received government financing from this initiative. To qualify, courses must be flexible and encourage motivation among participants, and teach basic skills in the context of job-related activities. The initiative is stakeholder based. Study associations are involved and help firms go through the application process to obtain funds. Special effort is made to channel funds to SMEs. The initiative has been highly successful with over 61% participants in 2012 being over the age of 40 helping to redress age related inequalities in access to adult education. Difficulties remain however. For example, evaluations show that firms with high numbers of employees with low skills tend to under use apply and participate in the program. However, there are indications that this is changing with firms in the construction and retail sector beginning to take advantage of the program.

An important aspect that makes adult education system in Norway advanced is the diversity of provision. Apart from a focus on the work environment such as through the above mentioned BCWL program, there is a variety of provision taking place outside the formal system (e.g. folk high schools, educational associations, language training centers for immigrants, and distance education) (EAEA, 2011). There is also a broader focus than on just skills for the workplace by including other ends such as cultural learning and persona/family development. This is especially important since key skills useful for the economy such as non-routine cognition and non-routine communication are not neatly distinguishable from similar skills used in civic society. Diverse provision is thus important for boosting demand because it helps to meet the needs and aspirations of a wider range of adults that would otherwise not be interested to participate.

Despite the advanced nature of the system, improvements are still necessary. Even with concerted policy efforts, effective initiatives and public financing, it remains particularly difficult to improve the completion rates among non-traditional students from disadvantaged populations. The motivation and incentives of adult learners from disadvantaged backgrounds remains a challenge. Overall, adults with weaker basic skills and lower levels of education as well as those with difficulties on the labour market, have a lower representation in the very initiative were created to benefit them. Targeted efforts to reduce institutional and financial barriers such as increasing flexibility and providing free courses, as well the diversification of provision and access to formal and non-formal opportunities, and work-sponsored training indeed boost the demand for adult education. However, in order to raise the demand further

and particularly among disadvantaged populations, earmarking of funds for specific groups is necessary, as is careful attention to address relevance and incentives among disadvantaged groups.

Korea

With an explicitly stated purpose to build a learning society, Korea has enacted a highly advanced institutional structure to govern and develop its adult education system. The revised 2007 Lifelong Education Act implemented a comprehensive governance structure designed to oversee policy planning, coordination, development and implementation of its adult education system, including a National Institute for Lifelong Education, Regional Institutes for Lifelong Education and Local Lifelong Learning Centers (MEST and KEDI, 2013). In addition to promotional activities designed to mobilize stakeholders such as a campaign to select and develop lifelong learning cities (MEST and KEDI, 2013), the annual lifelong learning festival (MEST and NILE, 2009), the government trains specialized personnel (lifelong education officers) to plan, administer, analyze, evaluate and instruct lifelong education policies and practices (MEST and KEDI, 2003). The number of lifelong educator's certificated issues in 2012 was 8,153, up more than four-fold since 2000. The total number of officers' certificated issues between 2000 and 2012 is nearly 63,000 (MEST and KEDI, 2003). In accordance with the growth of the governance and provision structures and personnel, National data on patterns of participation over time reveal that the participation rates are steadily increasing over time, from about 26% in 2008 to about 36% in 2012.

While an important stated end for developing the adult education system is to promote economic capacity and national competitiveness, a clearly stated goal is also to promote individual citizens' self-actualization and community development, as well as to improve the cultural and political capacity of both individuals and local communities (NILE, 2014). As can be seen from Figure 1, this goal is more than simply rhetoric as Korea displays one of the most developed adult education provision structures for non-job related reasons among the countries with available data.

Korea has especially well developed policy efforts to boost employer investment in adult education. In particular, it has focused on expanding provision and quality of workplace training at SMEs. SMES are important since they employ 87% of the workforce and comprise more than 99% of all firms in the country, as of 2011. Engaging SMEs in workplace training is a well-known challenge (See OECD, 2003; 2005) because they lack the administrative and managerial capacity as well as funds. Consequently, SMES tend to underinvest in adult education and require advanced policy attention.

The Korean government has four well developed initiatives to directly target SME employees to promote job-related skills. First, it introduced a SMEs Training Consortium Programme in 2003, now renamed Consortium for HRD Ability Magnified Programme (CHAMP) as of 2012. As of 2013, there are 159 training consortiums in operation (CHAMP, 2014). The consortiums are stakeholder based involving different firms, higher education institutions, public and private training providers and the relevant SME as key actors. Stakeholders work together to identify training needs in SMES, develop training programmes, and manage administrative tasks relevant for obtaining the public subsidies via the CHAMP initiative (Kis and Park, 2012). Consortiums may receive subsidies covering all costs for facilities and personnel. The initiative has steadily grown in scope to cover over 271,000 employees and nearly 115,000 SMEs by 2012 (MOEL, 2013). Though it has expanded rapidly, growth of training output has not met expectations (Lee, 2009). Second, the government provides subsidies for targeted advanced training programmes. Employees who qualify are trained free of charge at vocational training institutions with state-of-the-art facilities and equipment, and their employers receive part of their labor costs. The number of employees applying has grown from about 19,000 in 2006 to about 38,000 in 2012 (MOEL, 2013). Third, since 2006 the government also provides subsidies for organized study within

SMEs. Support is available for year at a time but renewabe up to three years based on results. In 2010, subsidies were obtained by 315 SMEs (HRDSK, 2013). Lastly, the government provides subsidies for self-directed learning called "Job Upgrading and Maturing Programme (JUMP) for SME employees and non-regular workers (MOEL, 2013). These opportunities involve module based training courses on either weekends or weeknights to provide opportunities for mobility. In 2010, over 57,000 workers had their costs covered entirely in participating in such opportunities.

Vietnam

Vietnam has undergone significant growth in the last 20 years and is now East Asia's second fastest growing economy. It has placed a high priority on education and literacy and now features high school enrollment and literacy rates among its population. In 2012, Vietnam performed higher than average on PISA, with an average score ranking of 17 out of 65, compared to 38th for Sweden and 36th for US and 26th for the UK (OECD, 2013). Nonetheless, access to education can differ drastically depending on geographical location, minority status and other characteristics reflecting disadvantage. Minorities tend to receive less social benefits than other groups including health services and access to income generating and education opportunities. The Vietnamese government has actively sought to improve rates of literacy and since 1997 has been investing policy attention and funds more heavily in adult education (UNESCO and VMET, 2009). The literacy development work is understood as an important step in creating a more equitable society, providing more opportunities for disadvantaged groups. Efforts include education for out-of-school youth and women from disadvantaged backgrounds as well as improving the quality and relevance of programmes for adults, and a comprehensive national policy for continuing education.

Non-formal education appeared in the national education law in 1998. Although initially narrow and focused on literacy training, an amendment in 2005 sought to integrate adult education (non-formal education and literacy training) as a major component within the overall educational system. This included provisions for skill advancement in the workplace, second chances opportunities linked to the formal education system, and the development of people as citizens and essential participants within communities. Programmes are now diverse and aspire to account for many different needs of the population. Examples include programmes for HIV prevention, education for peace and human rights, gender-focused programmes, healthcare for mothers and children, drug prevention, nutrition, and environment education.

Participation rates in adult education have risen over recent years. According to MOET annual statistics, the number of participants in adult learning/non-formal education programmes in Vietnam in 2008 was almost 10 million (compared to 594,159 in 1999). Assuming, 70% of the total population (92 million) are aged 15 to 65, this translates into a participation rate of approximately 15% (three times the rate estimated by World Bank STEP project in 2013).

Community Learning Centers now represent the most important platform in Vietnam for accessing adult education opportunities. By 2010, there were nearly 10,000 CLCs in the country (ASEM LLL Hub and UNESCO, 2010). CLCs were officially adopted as the platform for continuing education for adults at the grassroots level.

Special focus is given to illiterates with no formal education experience, drop-outs, minorities, rural populations and other disadvantaged adults, but any educational activity can be carried out in CLCs as long as it responds to the needs of the community (Okukawa, 2009). CLCs are important due to their potential in mobilizing educational action and motivation among participants using a grass roots approach. CLCs have proved to be an effective model of providing adult education in Vietnam, especially

literacy training. Community literacy is at the center of CLCs' work and believed to have had a major impact on the improvement of literacy rates in the country since 2000 (Zolfaghari et al, 2009). A stated goal is to use CLCs as a pillar in working toward becoming a modernized and industrialised nation by 2020 (Okukawa, 2009).

In principle, CLCs depend on outside support but operate alongside community stakeholders who are responsible for co-implementation. For example, community stakeholders are responsible for identifying the most pressing needs of that specific region, and to investigate ways to most effectively implement and evaluate educational programmes in those locales (Okukawa, 2009). CLCs play a critical role in connecting the organization and social actors in the community. They also allow for different educational programmes that were operating separately to come together, improving coordination, resource use and effectiveness. Integrating individuals and agencies from various sectors, not just from education, also greatly expands the scope of educational activities that can take place in those spaces (Okukawa, 2009).

CLCs are part of a broader education and literacy training framework put forward by UNESCO's Asia-Pacific programme of Education for All in 1998, with financial support from Japan and Norway (Zolfaghari et al, 2009). As part of the framework, CLCs do not necessarily need new structures for education programs to take place. Existing schools, health centers and religious establishments (homes, churches, and primary schools) may be used as platforms for education practices to flourish. This is an example of good practice in sharing resources.

However, low funding and reliance on volunteers remains a threat to sustainability and effectiveness. Most CLC teachers have not attained upper secondary and 77% are volunteers (ASEM LLL Hub and UNESCO, 2010). The bulk of investment comes from modest grants provided by the state. New CLCs receive $1500 to begin activities and receive annual grants of $1,000-1,200. Some CLCs are able to supplement with funds from private donors, student fees, NGOs or other aid. But the majority of CLCs suffer from a shortage of funds which limits the scope and impact activities, as well as logistical and infrastructural support. Consequently, only 20-30% of CLCs are thought to operate effectively (ASEM LLL Hub and UNESCO, 2010).

Despite the apparent progress and admirable policy attention that the adult education sector has received in the last decade in Vietnam, there is a systemic lack of funding which threatens further progress, quality and sustainability. Lack of government financing is the main issue hindering the development and expansion of adult education in the country. Investments come mainly from individuals, private sector, NGOs and other aid. Vietnam continues to rely heavily on aid both in terms of financial and technical assistance, for example, in providing training and development of the personnel carrying out the programs on the ground. In reality, the Vietnamese government does not offer substantial support to adult education. In 2005, less than $600,000 was allocated to adult education which is less than 2.85% of the education budget (national education budget of 21 million) (UNESCO and VMET, 2009). This is somewhat short of the 3% of national education budgets recommended for adult education by the Global Campaign for Education (2005) but more importantly, it is far short of the additional 3% recommended for supporting literacy training efforts. This brings into question sustainability and the level of commitment by the government to boost levels of adult education and provide equitable access. Despite being present in virtually all regions of the country and making progress in attracting an increasing number of participants since its inception, the proportion of people taking up the provisions in CLCs is still low compared to the number of people who could potentially benefits from those centers.

Brazil

Brazil is regarded by many as a Latin America Success story. Economic growth and recent policy efforts have lifted millions of people out of poverty and extreme poverty. The proportion of people in poverty has fallen from about 26% in the 1990s (Cruz, 2010) to about 16% in 2012 (Brazilian Government Website, 2013). Policy efforts have included major social and welfare policy programmes including the second largest cash transfer programme in the world called Bolsa Familia (second to Oportunidades in Mexico). Over 40 million people were raised out of extreme poverty since the programme's implementation in 2003 (OECD, 2010). As part of the programme, families living below the poverty line receive a cash transfer of $31 per individuals, as long as the keep their children up-to-date with vaccinations and attending school regularly. This has significantly boosted enrollment rates in Brazil although the quality of public schooling remains a major concern.

Other major policy efforts have affected education in Brazil including provisions focused on improving the level of and access to adult education. The FUNDEB programme (National Fund for the Maintenance and the Development of Basic Education) for example, is responsible for having changed the way basic education is financed in Brazil. It was a renewal and expansion in 2006 of the FUNDEF programme initiated in 1996. As an effort to address regional disparities by fostering a more equitable allocation of state and municipal taxes directed at education (OECD, 2010), the rate of direct public investment in basic education has also increased since the programmes implementation. In 2006, the focus was expanded from primary and secondary education to include early childhood education, provisions for out-of-school youth as well as support for adult education (OECD, 2010).

Despite progress in alleviating poverty, major concerns remain including deep social and economic inequalities, regional disparities and Illiteracy. Illiteracy rates were estimated to be about 13% in 2013 (Cirilo, 2013). Functional illiteracy however, is thought to be much higher, encompassing up to 75% of the population (OECD, 2010) (i.e., individuals who are not able to read long texts, follow subtitles, compare two texts, carry out conclusion and synthesize documents, solve basic mathematical problems or understand maps and graphics).

The Education of Youth and Adults (EJA) programme as well as other major literacy programmes like Alfosol and Literate Brazil have helped to reduce drastically illiteracy in the country. EJA is a second chance education programme aimed at giving opportunities for youths and adults aged 15 and over to complete the requirements for primary and secondary education. While EJA has been around since the 1960s, it became formalized under law only in 1996, a step that incorporated programme into the regular educational system. Adult education and second-chance opportunities now account for a sizeable proportion of upper secondary programmes. EJA is flexible by providing options for in-person (day or night classes) or distance education or to be carried out in private or public institutions. Graduates receive an official diploma that allows them to move further along the educational pipeline.

Diversity is one of the main characteristics of students enrolled in EJA programmes. The student body varies greatly by age, occupation and even economic status. In 2012, over 3 million students were registered in EJA classes within the public schooling system (Global Educacao, 2013). The greatest majority of students are youth and young adults but older Brazilians are relatively active in education too. Some 10% of graduates from general upper secondary programmes in Brazil are 25 years or older. In 2010, some 8.6% of 30-39 year-olds in Brazil were enrolled in education, which is more than the OECD average of 6.2%. Similarly, 2.5% of Brazilians over 40 years are enrolled in an educational institution, compared to 1.5%, on average, in OECD countries. These adults were not able to get their education at

an earlier age and share a common interest in receiving a diploma to better their life prospects in terms of employability and personal development. Those attending often include migrants, rural workers, people from poor backgrounds or working-class families.

EJA seeks to recognize cultural differences as a key element to meet the needs of non-traditional students. The model factors in the individual's knowledge of his/her territory. This approach diverges from approaches to EJA under the Brazilian dictatorship era (1964-1985) (Amaral, 2000). That era had marked the implementation of the MOBRAL (Brazilian Literacy Movement) programme which forcefully replaced all educational activities that did not comply with the interests of the dictatorship (Coleti, 2009). As part of the FUNDEB programme, EJA now has a greater presence in remote and in-need areas of the country. Nevertheless, the initiative is far from being able to meet the needs of all. More flexibility is needed for the attainment of basic education for vulnerable populations (Silva, 2012). Other problems exist. Despite being integrated into the overall education system, EJA remains in practice a weak pathway back to the formal education system. The quality of education obtained via EJA is deficient and drop-out rates are high, making it difficult for adults to expand their educational opportunities and mobility.

Other major programs include Alfasol and Literate Brazil. AlfaSol is a literacy program implemented in 1996 and administered by an NGO. It is now seen as an international model for providing basic education to adults, and being adapted in countries such as Mozambique, Cape Verde and Guatemala. The experience is made to be relevant to people's realities, and yet replicable (Global Educacao, 2013). It is recognized by UNESCO as a stakeholder model bringing different partners together to improve education, including the formation of over 257,000 professional to teach literacy. In 2010, 162 firms and 41 institutions of higher education supported the initiative which reached over 5.5 million adults from over 2,200 municipalities. The programme is attributed with being responsible for 32% drop in illiteracy in the last decade. Alfasol relates directly to EJA and has been attributed with being responsible for an increase in the participation of students in EJA (AlfaSol website, 2012).

Literate Brazil is a counterpart programme administered by the Brazilian Ministry of Education since 2003. From 2003 to 2009, the programme is credited with teaching literacy to nearly 15 million adults throughout the country (MEC, 2012). The program operates on the basis of literacy being a human right, and that it is the main door through which individuals can access education throughout their lives. From this perspective, the programme is linked to the EJA initiative.

Conclusion: Implications for a post-2015 global education agenda on adults skills in middle income countries

The following briefly summarizes a number of key problems and constraints, as well as ways forward and action options. These emerge from an analysis of the developments related to adult education discussed in the four case studies above as well as other analyses of the UNESCO survey findings on the state of adult learning in Member countries in 2009, and again in 2012 (see Desjardins, 2013).

Key problems and constraints

Lack of consistent and reliable data for judging trends and conditions.

Given the many stakeholders involved it is problematic to get an overview of the resources used and required, and how this is changing over time. Few efforts have been made to set up administrative or survey data that permit the measurement of costs or benefits for different types of AE provision.

Consequently, communicating the benefits of AE including the monetary and non-monetary dimensions is difficult, even if indications suggest these are significant (Schuller et al., 2002). Policy debates regarding AE are thus poorly informed and decisions to invest in AE are fraught with imperfections. This lack of information means that many governments are unable to establish priorities, budget adequate resources, and justify investments in AE. Likewise, firms and individuals have difficulty assessing the costs and benefits, which can lead to reduced incentives and underinvestment.

Constrained resources from all sources.

All sources of funding face severe constraints, some much more than others. In the face of competing claims to the public purse, governments are constantly under pressure to limit spending. This highlights the importance of, and need for, good data on AE. While employers have an incentive to invest in AE, they are also under pressure to control costs, especially in competitive environments. In the absence of appropriate incentives, some firms as a consequence choose low skills strategies to compete in product and service markets (Brown et al., 2001). Individuals are equally constrained, foremost by their own income but also the risk of losing their jobs. This is especially acute among the most vulnerable. Investment is thus highly dependent on the perception of the benefits to be gained, and by whom. Combined with poor information, these conditions often mean that priority is given to other activities. Indeed, AE remains marginal and under-funded in low and middle countries.

Low commitment and low priority for AE.

Countries around the globe differ markedly in whether they have a strategy to ensure adequate resources for AE. They also differ in their priorities, pace of progress and the availability of information for assessing progress. An overwhelming reality, however, is that AE is a marginal element of most countries agenda including in a number of high income countries. Many mandates to improve AE structures remain unfunded and neglected, and often receive low priority in public budgets. Budgeted funds are sometimes not released because they are kept as an option, either with implicit or explicit clauses, such that funds are released only if other priorities are met. In developing countries, this means AE funds are often diverted to compensate for shortfalls in the primary or secondary education budget. This problem can be exacerbated when budgetary processes are decentralized because some communities may be more susceptible to financial strain or their priorities diverge from central government policies. Even in high income countries, where there is universal primary education and high rates of upper secondary completion, the OECD takes the position that levels of investment in AE are too low (OECD, 2003).

Tendency for government support to go to those already better off.

Many governments recognize a role for public investment in AE, either for correcting market failures or for redressing social disadvantages. But unless government support is carefully designed, it tends to go to adults who already receive AE (Desjardins and Rubenson, 2013). When targeted, government support can reach adults most in need, but only if funds are earmarked and complemented with outreach activities. Often this is more expensive. Otherwise, support rarely reaches adults in need. This is especially the case when market or quasi-market mechanisms are utilized. Programmes requiring individuals to apply with eligibility criteria to qualify are equally divisive. Enforcing accountability measures for use of public funds by NGOs can also lead to barriers for disadvantaged groups because the tendency is to recruit those most likely to succeed in reaching the stated learning outcomes or other criteria. Unless funds are earmarked specific groups, even AE initiatives with pronounced ambitions to reach disadvantaged adults can provide a service that corresponds better to the demands of the advantaged.

Desjardins, R. (2015). Participation in Adult Education Opportunities: Evidence from PIAAC and policy trends in selected countries, background paper for the Education for All Global Monitoring Report 2015.

Lack of incentive to invest among private sources.

For many countries, progress depends on their ability to mobilize private resources to supplement public funding in AE. But for reasons mentioned, many employers and individuals lack incentives to invest. In some cases, employers are reluctant if the skills to be gained are general because employees may then become more employable at a competing firm, and the sponsoring firm may lose its investment. In practice, many firms choose to invest in general skills anyway because general vs specific skills are difficult to distinguish and several other labour-market imperfections exist, but incentives remain poorly aligned. Incentive problems are being handled in diverse ways. Favourable tax treatments are commonly used and there are examples of mandated outlays such as levy systems that promote AE. Nevertheless, policies that comprehensively address incentive problems and other market failures are often lacking and in many cases remain entirely absent.

Incentive strategies exacerbate inequalities.

Where incentive strategies do exist, there is a tendency to rely on quasi-market based approaches which exacerbates inequalities. Incentive strategies directed at employers and individuals, but without targeted strategies, can serve to exacerbate inequalities. Unfortunately, there appears to be a lack of willingness in policy circles to directly address the implications of the increasing impact of employer-funding on the distribution of AE. A common position is that it is not feasible to expect the public purse to cover the new demands and that the private sector must somehow contribute toward AE. But evidence suggests that there is a strong role for the public sector; that is if issues of equity are to be taken seriously, and that the evidence on market failures, although imperfect are to be acknowledged.

The complexity of market failures.

The best approach to correct for market failures and inequities is structural reform. For example, redefining public-private sector boundaries in the AE sector and aligning better the incentives to invest, but there are many reasons why this is difficult. First, many of the failures are due to natural imperfections that are difficult to overcome and no viable strategies have yet been devised. Rarely do the mechanisms devised to carry out government strategies genuinely address the nature of the problem, for example inequality, or the forces that drive it. To do so, requires in-depth and ongoing public policy analysis, which requires technical capacity and a well established as well as responsive governances and provision structures in AE. Second, some imperfections do not relate solely to AE, and thus reforms should not be undertaken without consideration of relevant trade-offs with other sectors. For example, imperfections may be linked to initial education structures that promote narrow vocational pathways, or with occupational and industrial structures which may encourage a low skills equilibrium in the economy (Brown et al., 2001). Accordingly, it is necessary to coordinate approaches across policy sectors, both private and public.

Ways forward and action options

Mobilize resources among stakeholders.

Foster demand and incentives to invest among stakeholders, including through tax and institutional arrangements that favour cost sharing. Promote co-financing schemes that channel resources from at least two parties.

Assert strong role for public funding.

While non-governmental resources need to be mobilized, public authorities need to renew commitments to increase targeted funding for disadvantaged groups. Governments need to assert a stronger role in devising policies that comprehensively address market failures. Market based principles cannot solve everything. Focusing only on regulatory and institutional arrangements that are conducive

to enhancing investments by firms and individuals, as is the trend in many high income countries is not enough, especially if growing inequalities and underinvestment are to be avoided.

Earmark funds for targeting strategies.

Government support for disadvantaged groups should be complemented with targeting strategies. This includes special outreach, guidance activities, and the earmarking of funds for certain groups. These measures are based on the assumption that certain groups must use a certain proportion of the funds made available. The most significant challenge is to stimulate the demands among those groups for which the measure is taken.

Integrate AE into a broader development and poverty reduction strategy.

Publicly funded AE has a strong role to play in preventing and alleviating adverse conditions such as unemployment and large scale displacements associated with modernisation and other structural changes. This is equally applicable to community development in low and middle income countries. Rather than the use of passive transfers of aid to individuals, communities or nations, a renewed commitment to the use of AE as a mechanism for activating development is needed. AE should be a central element of any development strategy and feature more prominently in poverty reduction strategy papers (PRSPs).

Fund and help to coordinate NGOs but leave them to fend for themselves.

NGOs are important for providing AE but lack recognition. They require adequate public funding and government support. This sector is more flexible and adapts to new demands faster than the formal system. Also, it seems to reach adults who otherwise would not enroll in AE. The integration of the voluntary sector into a comprehensive AE policy can be successful only if direct state intervention is avoided, but public funds are provided. Remove bureaucratic barriers that prevent operation or access to funds. As long as the goals for which state funding is received are fulfilled, the sector must be left to fend for itself. At the same time, a mechanism for coordination and information sharing is essential. Rarely is there effective coordination among the many NGOs that are operating. A lack of coordination leads to inefficiencies, such as parallel structures of provision, even though there are clear advantages to sharing facilities and staff. Collaboration between providers can cut programme development costs, and may allow for a more efficient use of accommodation and equipment.

Develop enduring governance and provision structures.

It is necessary to adapt a sustainable strategy to develop AE, in which public investment is adequate, consistent and proportionate to GDP over the long run. This includes the need for continuous policy and institutional development. Developing a diversified, integrated and holistic AE sector requires sustained investment. This can only happen with concrete political commitments at all levels. External aid should only be seen as a way to achieve accelerated progress in this respect.

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Data annex

Table A1. Percentage of adults aged 16 to 65 who participated in adult education programs and courses in the 12 months preceding the survey, by reason for participating (youths 16-24 in initial cycle of formal studies excluded)

		Job related				*Non-job related*				
	Total participation rate	*Total job-related*	*Program-mes only*	*Courses only*	*Program-mes and courses*	*Total non-job related*	*Program-mes only*	*Courses only*	*Program-mes and courses*	*Participated but mising detail*
Austria	*49*	*35*	*3*	*31*	*2*	*9*	*1*	*7*	*1*	*5*
Belgium	*48*	*33*	*2*	*28*	*2*	*9*	*3*	*6*	*1*	*6*
Canada	*58*	*44*	*5*	*33*	*6*	*9*	*2*	*6*	*1*	*5*
Cyprus	*38*	*29*	*2*	*25*	*3*	*6*	*1*	*5*	*0*	*2*
Czech Rep.	*49*	*33*	*2*	*28*	*2*	*7*	*2*	*5*	*0*	*9*
Denmark	*67*	*52*	*8*	*38*	*7*	*8*	*1*	*6*	*0*	*7*
Estonia	*53*	*34*	*3*	*28*	*3*	*11*	*3*	*7*	*1*	*8*
Finland	*66*	*48*	*7*	*35*	*6*	*11*	*3*	*7*	*1*	*7*
France	*36*	*26*	*3*	*21*	*2*	*4*	*0*	*4*	*0*	*6*
Germany	*54*	*39*	*4*	*33*	*3*	*7*	*1*	*6*	*0*	*7*
Ireland	*51*	*38*	*6*	*26*	*6*	*7*	*2*	*5*	*1*	*6*
Italy	*24*	*15*	*2*	*12*	*1*	*4*	*2*	*2*	*0*	*5*
Japan	*42*	*29*	*1*	*27*	*1*	*7*	*1*	*6*	*0*	*7*
Korea	*50*	*33*	*1*	*30*	*2*	*12*	*1*	*11*	*1*	*5*
Netherlands	*65*	*46*	*5*	*35*	*7*	*11*	*3*	*7*	*1*	*7*
Norway	*65*	*50*	*6*	*36*	*7*	*8*	*2*	*5*	*1*	*8*
Poland	*35*	*24*	*3*	*19*	*2*	*6*	*3*	*3*	*0*	*5*
Slovak Rep.	*33*	*24*	*2*	*19*	*2*	*4*	*1*	*2*	*0*	*6*
Spain	*47*	*29*	*4*	*21*	*4*	*11*	*4*	*6*	*1*	*7*
Sweden	*65*	*47*	*5*	*37*	*5*	*13*	*3*	*9*	*1*	*5*
UK	*56*	*43*	*6*	*30*	*8*	*7*	*2*	*4*	*1*	*6*
US	*59*	*46*	*5*	*36*	*5*	*9*	*3*	*6*	*1*	*5*

Source: Author (Richard Desjardins) based on analysis of OECD Survey of Adult Skills database, 2013.

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Table A2. Participation in adult education, GDP per capita and percent of adults overcoming barriers to participation, by countries grouped by adult education participation rates

	Participation rate in adult education (%)	GDP per capita (PPP) 2012	Functional literacy rate
Group 1 (6% or greater)	**66**	**46,859**	**54**
Denmark	67	42,787	49
Finland	65	39,160	64
Sweden	66	42,865	50
Norway	65	66,135	45
The Netherlands	65	43,348	62
Group 2 (50-59%)	**54**	**38,467**	**50**
United States	59	51,689	41
Canada	58	42,114	46
United Kingdom	56	35,471	36
Germany	54	41,923	55
Estonia	53	24,260	60
Ireland	51	43,803	41
Korea	50	30,011	72
Group 3 (40-49%)	**47**	**36,109**	**53**
Czech Republic	49	27,527	54
Austria	49	44,141	47
Belgium	48	40,835	58
Spain	47	32,559	36
Japan	42	35,482	72
Group 4 (30-39%)	**36**	**29,083**	**50**
Cyprus	38	30,768[1]	40
France	36	36,933	49
Poland	35	22,782	61
Slovak Republic	33	25,848	49
Group 5 (20-29%)	**24**	**34,141**	**43**
Italy	24	34,141	43
Group 6 (Less than 20%)	**10**	**9,775**	
Brazil	15	14,551[1]	
Vietnam	5	4,998[1]	

Source: for GDP data, OECD Database and World Bank Database[1]

Table A3. Percentage of adults aged 16 to 65 who participated in adult education programs and courses in the 12 months preceding the survey, by various classification variables (youths 16-24 in initial cycle of formal studies excluded)

	Austria	Belgium	Canada	Cyprus	Czech	Denmark	Estonia	Finland	France	Germany	Ireland
Total participation rate	48.9	48.3	57.8	37.6	49.1	66.8	53.0	66.0	36.2	53.7	50.7
Age											
16-25	63.4	54.5	65.1	39.5	63.8	83.3	67.8	76.6	46.8	72.7	59.7
26-35	60.7	59.1	68.4	49.7	55.4	78.9	65.6	77.4	43.5	60.3	57.9
36-45	54.9	55.0	63.1	43.8	55.6	70.2	56.8	77.4	42.6	58.8	52.8
46-55	48.7	49.2	57.0	32.9	51.8	65.4	49.8	65.8	36.6	53.3	48.4
56-65	20.0	29.7	39.1	17.9	27.1	46.8	31.0	43.4	17.2	33.1	34.5
Gender											
Women	47.3	48.2	57.2	37.4	45.2	68.6	56.7	69.1	35.8	50.3	49.0
Men	50.5	48.4	58.3	37.8	53.0	65.1	50.5	63.0	36.7	56.9	52.6
Parent's education											
Less than upper secondary	36.1	37.9	41.8	30.2	32.0	57.2	36.6	56.0	26.8	34.8	42.6
Upper secondary	51.9	52.4	60.2	47.5	50.4	67.6	57.5	72.1	42.8	52.4	59.5
Higher than upper secondary	62.6	67.5	70.6	56.0	62.9	77.3	66.6	80.7	53.5	66.7	65.1
Education											
Less than upper secondary	29.1	21.6	30.8	13.8	23.5	51.7	35.9	37.7	20.2	37.8	30.4
Upper secondary	49.0	41.1	50.0	33.2	47.6	62.3	43.5	62.0	33.2	47.6	46.4
Professional degree	66.1	66.8	64.3	43.4	58.5	78.1	62.1	72.9	51.7	64.2	62.7
BA, MA, research degree	73.5	72.5	74.2	64.7	70.5	83.8	75.4	86.3	59.1	74.3	78.6
Literacy level											
Below level 1	21.3	22.7	23.5	24.2	20.8	39.4	21.9	36.9	17.0	17.2	28.1
Level 1	31.3	28.2	37.0	31.8	37.5	44.3	35.0	41.6	23.7	33.1	37.2
Level 2	41.2	38.1	50.2	34.1	42.4	62.8	45.8	54.1	32.6	47.0	45.4
Level 3	59.8	58.0	67.6	41.2	55.6	76.1	60.4	71.2	45.6	65.1	58.7
Level 4/5	74.7	68.9	79.0	51.4	65.9	85.9	76.6	84.9	59.2	81.3	75.0
Numeracy level											
Below level 1	24.7	17.4	27.1	22.3	36.5	44.4	19.5	40.4	15.3	22.2	25.1
Level 1	30.7	30.2	41.0	26.7	33.1	47.6	37.3	42.0	25.1	32.7	41.2
Level 2	41.0	38.7	54.6	34.0	42.4	60.6	46.7	57.7	33.8	48.3	46.6
Level 3	56.3	56.2	68.2	45.2	55.1	73.0	61.3	72.7	48.0	61.8	62.9
Level 4/5	70.5	65.2	77.5	52.9	69.2	82.5	73.9	82.0	60.9	78.1	75.7
Problem solving level											
Opted out of CBA	35.4	24.0	35.5		36.2	39.8	41.2	37.3		34.6	39.2
Below level 1 or no score	26.6	28.1	40.4		31.9	47.5	34.4	44.7		32.9	33.4
Level 1	53.6	53.5	59.8		54.8	70.4	60.8	72.2		57.0	59.4
Level 2	66.7	64.6	73.7		63.2	78.8	76.4	80.3		70.2	70.2
Level 3	80.8	69.3	83.0		74.2	93.3	84.1	88.8		79.4	85.4
Employment status											
Unemployed	48.1	33.9	45.0	24.1	39.7	57.6	35.4	42.6	27.1	35.2	39.3
Employed	56.7	55.8	65.1	45.4	60.8	73.8	62.4	76.1	43.4	59.7	61.1
Retired	11.1	21.5	22.0	15.4	8.8	21.2	8.4	21.1	11.1	16.1	22.2
Student	96.9	80.3	97.8	53.3	100.0	96.7	98.7	96.5	90.8	98.2	98.8
Homemaker	21.0	19.0	27.0	13.3	21.6	36.9	32.3	46.9	8.2	21.6	17.5
Occupation											
Skilled occupation	66.8	68.3	71.6	58.6	67.8	81.4	75.9	83.9	52.3	74.5	70.9
Semi-skilled white-collar	50.7	43.9	53.8	37.9	49.7	66.2	56.3	66.6	36.2	52.1	50.9
Semi-skilled blue-collar	38.0	35.5	46.4	23.6	44.1	54.9	36.7	55.0	27.5	44.8	45.0
Elementary	28.4	25.9	42.5	15.9	29.7	55.2	30.7	55.9	23.8	21.8	42.3
Has not worked more than 5 years	19.1	19.2	18.7	15.6	16.8	32.3	17.8	26.5	16.6	30.3	21.4
Immigration and language status											
Native-born/native-language	50.1	48.6	59.3	37.7	49.3	67.5	55.5	66.1	37.5	55.7	50.3
Foreign-born/native-language	53.9	51.6	58.5	43.9	38.3	56.3	39.9	78.3	26.6	50.9	56.5
Native-born/foreign-language	46.1	56.2	59.4	20.0	100.0	79.8	51.5	54.0	41.6	56.6	41.3
Foreign-born/foreign-language	40.1	35.9	51.2	29.6	44.6	61.4	32.5	64.3	28.4	38.8	48.6

Source: Author (Richard Desjardins) based on analysis of OECD Survey of Adult Skills database, 2013.

Table A3 (cont'd). Percentage of adults aged 16 to 65 who participated in adult education programs and courses in the 12 months preceding the survey, by various classification variables (youths 16-24 in initial cycle of formal studies excluded)

	Italy	Japan	Korea	Netherlands	Norway	Poland	Slovak Rep.	Spain	Sweden	UK	US
Total participation rate	24.3	42.1	50.0	64.6	64.9	35.3	33.1	46.7	65.5	55.5	59.6
Age											
16-25	29.1	48.1	62.2	81.2	80.1	48.7	38.1	61.3	75.4	56.3	68.2
26-35	34.5	48.2	62.2	77.0	75.2	49.2	38.3	58.2	75.6	60.6	66.5
36-45	26.4	44.0	55.3	67.9	71.5	39.8	39.5	50.8	68.3	62.2	61.3
46-55	23.3	45.4	43.3	65.6	62.6	29.8	33.9	43.0	66.8	57.3	56.9
56-65	10.0	29.8	30.7	41.9	40.4	14.0	15.8	25.8	47.1	38.5	49.3
Gender											
Women	22.2	36.1	46.1	62.3	66.2	35.1	31.5	46.1	67.4	53.9	59.2
Men	26.4	48.2	53.9	66.9	63.6	35.5	34.6	47.4	63.7	57.2	60.0
Parent's education											
Less than upper secondary	19.1	33.4	42.0	56.4	49.6	15.4	16.8	41.4	57.0	40.3	39.0
Upper secondary	39.6	40.7	59.2	70.6	67.4	41.4	37.6	61.0	70.0	61.6	60.3
Higher than upper secondary	53.6	55.2	67.8	79.9	75.4	63.6	58.2	67.8	76.5	71.2	72.4
Education											
Less than upper secondary	12.2	24.4	21.6	45.6	49.0	18.6	9.1	30.6	44.3	32.3	31.2
Upper secondary	30.1	33.1	43.5	65.4	62.0	24.6	30.8	48.8	64.7	55.3	51.6
Professional degree	10.7	45.3	64.0	77.9	72.7			58.0	73.9	64.3	74.5
BA, MA, research degree	58.9	63.4	75.3	81.3	78.5	66.2	61.2	75.6	83.0	75.0	79.3
Literacy level											
Below level 1	10.4	20.8	13.2	40.2	50.6	12.3	7.2	17.0	42.1	26.1	26.5
Level 1	14.9	22.6	27.6	44.9	48.0	20.6	16.3	33.9	38.2	40.2	43.7
Level 2	20.7	30.8	43.2	54.1	56.6	28.6	26.2	45.7	59.4	47.6	51.6
Level 3	38.3	43.6	61.7	71.8	70.8	45.6	40.1	61.8	71.9	64.1	69.6
Level 4/5	57.0	54.8	76.8	80.4	79.1	64.9	57.0	79.3	84.0	74.8	83.9
Numeracy level											
Below level 1	11.8	18.9	15.3	39.0	54.8	12.2	6.3	17.6	41.8	29.5	35.3
Level 1	13.3	22.7	31.5	43.0	50.5	21.9	13.6	35.3	48.1	43.5	45.6
Level 2	22.0	34.1	47.7	59.4	56.7	32.9	25.3	47.1	61.0	52.2	55.6
Level 3	39.2	43.8	63.0	71.0	70.4	45.2	42.0	64.1	70.6	64.7	75.4
Level 4/5	52.4	58.2	73.9	78.9	76.6	63.2	52.1	80.4	79.1	74.8	82.3
Problem solving level											
Opted out of CBA		29.7	33.7	40.8	31.4	26.6	25.2		37.8	41.8	37.0
Below level 1 or no score		29.9	32.5	43.5	48.9	22.3	16.4		45.8	37.9	42.0
Level 1		44.1	59.3	64.7	65.3	52.3	38.4		63.6	54.9	63.1
Level 2		53.7	68.2	77.3	78.1	63.7	55.8		79.2	71.9	75.5
Level 3		72.4	82.4	88.6	86.8	77.5	77.0		88.8	78.9	85.0
Employment status											
Unemployed	14.1	24.8	37.8	52.4	53.7	23.2	10.3	40.4	46.4	41.6	39.5
Employed	32.9	48.9	56.2	73.6	71.1	47.2	44.8	56.0	71.5	65.3	68.2
Retired	5.5	28.4	40.6	23.8	10.8	7.3	4.3	15.8	23.4	21.7	30.8
Student	93.4	94.5	91.5	99.1	97.9	90.4	96.4	92.7	96.6	90.2	90.2
Homemaker	3.6	14.9	28.3	28.8	31.2	14.1	32.1	17.2	36.7	20.4	35.6
Occupation											
Skilled occupation	48.3	65.8	72.2	78.2	75.1	63.8	53.9	72.1	80.5	72.5	76.5
Semi-skilled white-collar	24.1	44.8	55.4	65.8	62.8	35.6	32.8	48.3	62.6	57.6	59.2
Semi-skilled blue-collar	17.9	30.9	39.0	53.7	54.5	23.4	26.0	37.5	54.1	49.6	45.3
Elementary	18.1	19.4	29.0	50.2	58.3	26.6	13.3	34.2	52.1	38.9	39.7
Has not worked more than 5 years	8.6	15.6	28.3	26.3	33.7	10.5	11.5	24.0	33.0	20.9	21.0
Immigration and language status											
Native-born/native-language	24.9	42.1	50.2	65.4	64.4	35.1	34.1	47.5	66.8	55.1	61.3
Foreign-born/native-language	33.3	64.5	24.7	62.5	65.6	32.5	27.8	42.6	62.3	58.7	59.6
Native-born/foreign-language	11.0		62.6	76.4	66.1	52.0	17.3	52.2	72.1	56.1	57.1
Foreign-born/foreign-language	19.7	50.0	44.8	57.0	68.0	65.5	38.5	38.3	58.6	56.6	48.2

Source: Author (Richard Desjardins) based on analysis of OECD Survey of Adult Skills database, 2013.

Table A4. Adjusted odds ratios showing the likelihood of adults aged 16 to 65 participating in adult education programs and courses in the 12 months preceding the survey, by various (youths 16-24 in initial cycle of formal studies excluded)

	Austria		Belgium		Canada		Cyprus		Czech		Denmark		Estonia		Finland		France		Germany		Ireland	
Age																						
16-25	7.2	***	2.6	***	3.0	***	2.7	***	5.1	***	7.9	***	5.2	***	3.9	***	3.8	***	8.7	***	2.3	***
26-35	4.8	***	2.3	***	2.3	***	2.4	***	2.5	***	3.2	***	3.1	***	2.5	***	2.3	***	2.8	***	1.6	***
36-45	4.1	***	2.0	***	2.0	***	2.8	***	2.9	***	2.1	***	2.4	***	2.9	***	2.6	***	2.7	***	1.5	***
46-55	3.6	***	1.9	***	2.0	***	1.9	***	2.7	***	2.0	***	2.1	***	1.9	***	2.7	***	2.3	***	1.6	***
56-65 (ref)	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
Gender																						
Women (ref)	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
Men	1.0		1.0		1.0		1.1	**	1.3	***	0.8	**	0.7	***	0.8	***	1.1	**	1.2	***	1.3	***
Parent's education																						
Less than upper secondary (ref)	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
Upper secondary	1.1		1.0		1.4	***	1.4	***	1.3	**	1.1		1.4	***	1.1		1.3	***	1.2		1.3	***
Higher than upper secondary	1.3	***	1.4	***	1.7	***	1.5	***	1.4	**	1.1		1.6	***	1.3	*	1.3	***	1.4	**	1.1	
Education																						
Less than upper secondary (ref)	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
Upper secondary	1.7	***	1.8	***	1.5	***	2.8	***	2.3	***	1.4	***	1.4	***	1.9	***	1.4	***	1.5	***	1.7	***
Professional degree	3.8	***	4.3	***	2.5	***	4.5	***	3.4	***	2.8	***	2.8	***	3.3	***	2.7	***	2.6	***	3.3	***
BA, MA, research degree	4.0	***	5.3	***	3.2	***	9.5	***	4.9	***	3.6	***	4.8	***	5.5	***	3.7	***	3.7	***	6.3	***
Literacy level																						
Below level 1 (ref)	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
Level 1	1.5		1.0		1.5	**	0.9		2.3	**	1.4	*	1.3		1.6	**	1.2		1.9	**	1.3	
Level 2	1.8	**	1.1		2.1	***	0.9		2.5	***	2.3	***	1.7	*	2.1	***	1.5	***	3.0	***	1.5	**
Level 3	2.6	***	1.6	*	3.4	***	0.8		3.4	***	3.2	***	2.2	***	2.9	***	1.8	***	4.6	***	1.7	***
Level 4/5	3.7	***	1.6		4.6	***	0.8		3.7	***	4.2	***	3.2	***	4.1	***	2.3	***	7.4	***	2.1	***
Immigration and language status																						
Native-born/native-language	1.4	***	1.1		1.4	***	2.2	***	1.1		1.2		2.0	***	0.9		1.3	***	1.5	***	1.4	***
Foreign-born/native-language	1.2		1.2		1.4	*	0.3				1.6		1.6		0.5	*	1.7	***	2.0	**	1.1	
Native-born/foreign-language	1.2		1.5		1.2		2.0	***	0.8		0.6	**	1.4		1.2		0.9		1.7	**	1.4	**
Foreign-born/foreign-language (ref)	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	

Source: Author (Richard Desjardins) based on analysis of OECD Survey of Adult Skills database, 2013.

*Notes: *** p <.01, ** p<.05, * p<.1.*

Table A4 (cont'd). Adjusted odds ratios showing the likelihood of adults aged 16 to 65 participating in adult education programs and courses in the 12 months preceding the survey, by various (youths 16-24 in initial cycle of formal studies excluded)

c	Italy		Japan		Korea		Netherlands		Norway		Poland		Slovak Rep.		Spain		Sweden		UK		US	
Age																						
16-25	3.2	***	1.9	***	2.0	***	5.5	***	7.0	***	4.2	***	3.4	***	5.0	***	3.2	***	1.9	***	2.6	***
26-35	2.1	***	1.3	***	1.3	**	3.2	***	3.3	***	2.7	***	2.1	***	2.6	***	2.5	***	1.6	***	1.8	***
36-45	2.3	***	1.3	**	1.3	**	2.2	***	2.9	***	2.7	***	2.5	***	2.0	***	1.8	***	2.1	***	1.5	***
46-55	2.4	***	1.5	***	1.2		2.3	***	2.3	***	2.2	***	2.5	***	1.7	***	2.1	***	1.9	***	1.3	***
56-65 (ref)	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
Gender																						
Women (ref)	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
Men	1.2	***	1.5	***	1.2	*	1.2	**	0.9		1.1		1.2	**	1.1	**	0.8	***	1.1		1.0	
Parent's education																						
Less than upper secondary (ref)	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
Upper secondary	1.2	**	1.0		1.2	**	1.2	**	1.4	***	2.0	***	1.5	***	1.4	***	1.1		1.5	***	1.4	***
Higher than upper secondary	1.4	***	1.3	***	1.3	**	1.5	***	1.4	***	2.7	***	2.1	***	1.3	***	1.2		1.7	***	1.6	***
Education																						
Less than upper secondary (ref)	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
Upper secondary	2.5	***	1.3	**	1.9	***	1.7	***	1.6	***	1.0		2.7	***	1.7	***	1.6	***	2.0	***	1.7	***
Professional degree	0.5		2.1	***	3.7	***	3.5	***	3.0	***					2.3	***	2.3	***	2.9	***	3.9	***
BA, MA, research degree	6.7	***	3.5	***	5.7	***	3.5	***	3.3	***	3.8	***	7.8	***	4.7	***	3.3	***	3.8	***	4.5	***
Literacy level																						
Below level 1 (ref)	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
Level 1	1.2		1.2		2.2	**	0.9		1.1		1.3		1.2		1.8	***	1.0		1.6		1.8	***
Level 2	1.6	***	1.3		2.7	***	1.0		1.5	**	1.6	**	1.7		2.3	***	2.1	***	1.9	**	1.7	***
Level 3	2.3	***	1.7		3.9	***	1.5		1.9	***	2.3	***	2.4	**	2.7	***	2.8	***	2.8	***	2.6	***
Level 4/5	3.3	***	1.9		5.7	***	1.5		2.1	***	2.9	***	3.5	***	4.0	***	4.1	***	3.4	***	4.3	***
Immigration and language status																						
Native-born/native-language	1.4	***	0.2		0.8		1.2		0.9		0.4		0.6		1.5	***	0.9		1.1		1.1	
Foreign-born/native-language	0.8		0.0		1.4		2.0		0.9		0.8		0.4	***	1.8	***	1.6		1.0		1.2	
Native-born/foreign-language	1.7	***	0.3		0.3		0.9		0.5		1.0		0.7		1.1		0.9		1.0		1.1	
Foreign-born/foreign-language (ref)	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	

Source: Author (Richard Desjardins) based on analysis of OECD Survey of Adult Skills database, 2013.

*Notes: *** p <.01, ** p<.05, * p<.1.*