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Students' experience with money and their performance in financial literacy

This chapter describes students' experience with money, and in particular how frequently they discuss money matters with parents and friends, whether they hold basic financial products and whether they receive or earn money from various sources, including family and work. The chapter identifies which students are more likely to have had these kinds of experiences, and investigates the relationship between having a practical understanding of money and financial literacy.



Are direct experiences with money and financial products associated with 15-year-old students' knowledge and skills in financial literacy? Do parents transmit financial skills to their children by giving them pocket money and talking to them about how to manage money? Studies on students' access to money and to financial products, and on their financial behaviour, show that they develop financial and economic understanding, skills and habits not only through talking to parents and observing their behaviour, but also via personal experiences and learning by doing (CFPB, 2016; Furnham, 1999; Otto, 2013; Schug and Birkey, 1985; Shim et al., 2010; Whitebread and Bingham, 2013).

Chapter 2 shows that in some countries and economies, many 15-year-old students are already engaged in money matters through their use of basic financial products, such as a bank account and a prepaid debit card, and by earning money through part-time and occasional jobs. This chapter describes in greater detail students' relationship with money in three main areas: discussing money matters with parents, holding basic financial products, and receiving money from various sources, including family and work. The chapter also identifies which students are more likely to have had these kinds of experiences and the relationship between a practical knowledge of money and financial literacy. In interpreting the relationship between experiences and financial literacy it is important to keep in mind that such associations do not necessarily reflect a causal relationship. In some cases, cause and effect may go both ways, or the relationship may be mediated by other important factors. More robust causal links could be identified by comparing the same students over time, but this is not possible given the repeated cross-sectional nature of PISA data.

Information about students' experience with money is based on their responses to a short questionnaire appearing at the end of the PISA 2015 financial literacy assessment. In some countries and economies, a significant proportion of students who sat the financial literacy assessment did not reply to one or more of the questions about money experiences. Results in this chapter are only reported for countries and economies with a sufficiently high response rate across these questions, including Australia, the Flemish Community of Belgium, Beijing-Shanghai-Jiangsu-Guangdong (China) (hereafter "B-S-J-G [China]"), the participating Canadian provinces (British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Nova Scotia, Ontario and Prince Edward Island), Chile, Italy, Lithuania, the Netherlands, Poland, the Russian Federation (hereafter "Russia"), the Slovak Republic, Spain and the United States. OECD averages in this chapter are based on ten countries and economies, as in other chapters. Annex A1 contains more details and analysis on response rates per country/economy.

What the data tell us

- In 10 out of 13 countries and economies with available data, discussing money matters with parents at least sometimes is associated with higher financial literacy than never discussing the subject, after taking into account students' socio-economic status.
- There is large heterogeneity in the proportion of 15-year-old students who report that they hold a bank account. On average across OECD countries and economies, 56% of students hold a bank account. In Australia, the Flemish Community of Belgium, the participating Canadian provinces and the Netherlands, more than seven in ten students hold a bank account, while in Chile, Italy, Lithuania, Poland and the Russian Federation, fewer than 40% of students do.
- In Australia, the Flemish Community of Belgium, the participating Canadian provinces, Italy, the Netherlands, Spain and the United States, students who hold a bank account perform better in financial literacy by over 20 score points than students of similar socio-economic status who do not have a bank account.
- Gifts of money are the most frequent source of money for 15-year-old students. Over 80% of students in 9 countries and economies out of 13 with available data receive money in the form of gifts. More than one in three students, on average in each country/economy, reported that they receive money from an allowance or pocket money for regularly doing chores at home. On average across OECD countries and economies, 64% of students earn money from some formal or informal work activity, such as working outside school hours, working in a family business, or doing occasional informal jobs.
- On average across OECD countries and economies, students who receive gifts of money score 13 points higher in financial literacy than students who do not, after taking into account performance in mathematics and reading, and various student characteristics, including socio-economic status.



DISCUSSING MONEY MATTERS WITH PARENTS AND FRIENDS

Students who discuss money matters with parents and friends

Parents can help their children acquire and develop the values, attitudes, standards, norms, knowledge and behaviours that contribute to their independent financial viability and well-being – that is in the process of financial socialisation (Danes, 1994). Parents can transmit such skills, knowledge and attitudes through their example as role models as well as through direct teaching (Gudmondson and Danes, 2011; Otto, 2013). Surveys about the financial behaviour of young people in Canada, the United Kingdom and the United States show that teenagers indicate parents are the most important source of learning about how to manage money (Charles Schwab and Co., 2011; BCSC, 2011; MAS, 2013). Parents are more than just sources of advice, as parents' attitudes and behaviour, including discussing financial matters with their children, have an impact on their children's habits and behaviour with money, both while they are young and as adults (Buccioli and Veronesi, 2014; CFPB, 2016; Kim and Chatterjee, 2013; Webley and Nyhus, 2006, 2013; Gristein-Weiss et al., 2012; Tang, 2016).

PISA 2015 provides evidence about how frequently students discuss money matters, such as spending, saving, banking and investment, with their parents or guardians. On average across the participating OECD countries and economies, 16% of students reported that they never or hardly ever discuss money matters with their parents, 66% reported that they discuss money matters with their parents weekly or monthly, and 17% reported that they discuss such matters almost every day (Table IV.5.1).

Studies of young people's financial behaviour show that they consider friends and peers to be a much less important source of advice and information about money management than parents and family (Australian Government Financial Literacy Foundation, 2007; BCSC, 2011; Bradley, 2012; Charles Schwab and Co., 2011; MAS, 2013).

PISA 2015 provides evidence about how frequently students discuss money matters with their friends. On average across OECD countries and economies, 59% of students reported that they discuss money matters with their friends at least sometimes (Table IV.5.2). Nevertheless, parents appear to be a more important source of information, as 54% of students discuss money matters more often with their parents than with their friends (Table IV.5.7).

In some countries and economies, girls appear to discuss money matters with parents more often than boys, and socio-economically advantaged students appear to discuss money matters with parents more often than disadvantaged students (Table IV.5.3). Girls in Australia, the Flemish Community of Belgium and Russia are more likely than boys to discuss money matters with their parents weekly or monthly than never to discuss such issues; and girls in Australia, Lithuania, the Netherlands, Russia and Spain and are more likely than boys to discuss money matters with their parents almost every day. By contrast, boys seem more likely to discuss money matters frequently with friends (Table IV.5.4). On average across OECD countries and economies, boys are about twice as likely as girls to discuss money with their friends almost every day as opposed to never discussing the subject; in 8 out of 13 countries and economies, boys are more likely than girls to discuss money matters with their friends almost daily. In Australia, B-S-J-G (China), Poland, the Slovak Republic and the United States, socio-economically advantaged students are more likely than disadvantaged students to discuss money with their parents on a weekly or monthly basis as opposed to never discussing the issue.

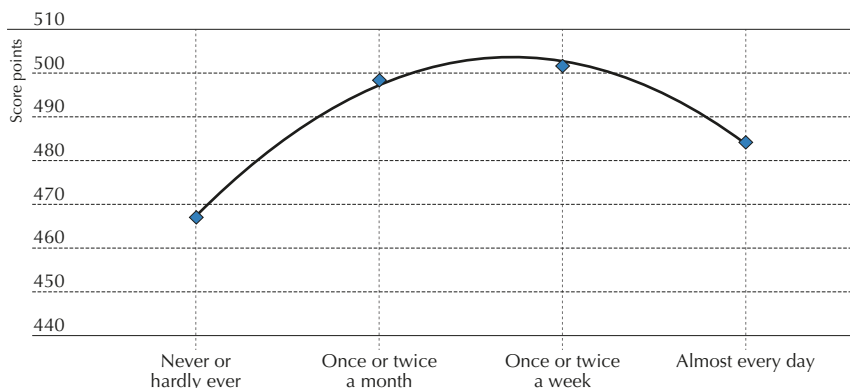
Discussing money matters and financial literacy

The relationship between performance in financial literacy and discussing money matters with parents is not linear. Figure IV.5.1 shows that, on average across OECD countries and economies, talking about money almost every day or never is associated with poorer performance in financial literacy than discussing the subject once or twice a week or once or twice a month. In 10 out of 13 countries and economies with available data, discussing money matters with parents at least sometimes is associated with higher financial literacy than never discussing the subject, after taking into account students' socio-economic status (Table IV.5.5). At the same time, students in Australia, B-S-J-G (China), the Netherlands and the United States, who discuss money matters with their parents almost every day score lower in financial literacy than students of the same socio-economic status who discuss these issues once or twice a week or once or twice a month.

As PISA data do not allow for determining causality, the fact that discussing money matters with parents more often is associated with higher scores in financial literacy (up to a given level) may suggest that students acquire financial skills by discussing the subject with their parents, or that more financially literate students ask questions and seek advice from their family more often than less financially literate students do. At the same time, it appears that, at least in some countries and economies, discussing money matters very often is associated with poorer performance. This may be related to different reasons, such as because low-performing students lack confidence and seek advice often, or because weekly or monthly discussions are of a different nature than daily discussions (e.g. asking for money or being worried about money).



Figure IV.5.1 ■ **Financial literacy performance, by frequency of discussing money matters with parents**
OECD average

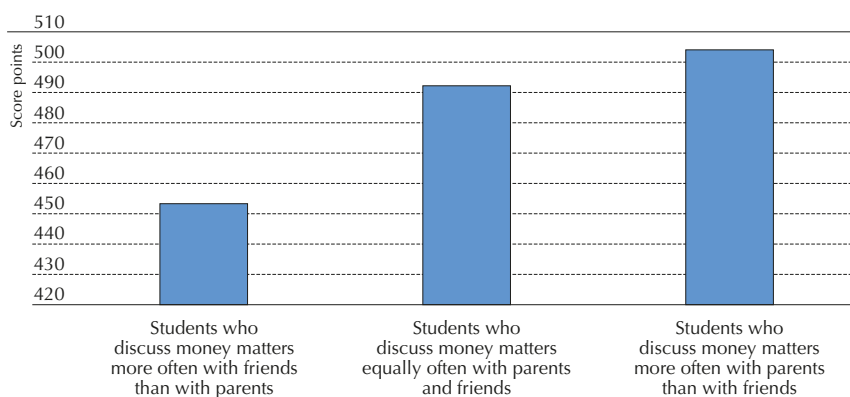


Source: OECD, PISA 2015 Database, Table IV.5.5.

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Not only do students tend to discuss money matters more often with parents than with friends, but discussing with parents is related to better financial literacy performance than discussing with friends, as shown in Figure IV.5.2. In 12 out of 13 countries and economies with available data, students who discuss money matters more often with parents than with friends score higher in financial literacy than students who discuss money matters more often with friends than with parents, after accounting for their socio-economic status (Table IV.5.7). This suggests that students can learn financial literacy skills better from their parents than from their peers; but it is also possible that more financially literate students recognise that their parents can give them more informed perspectives and advice than their friends.

Figure IV.5.2 ■ **Financial literacy performance, by frequency of discussing money matters with parents and/or friends**
OECD average



Source: OECD, PISA 2015 Database, Table IV.5.7.

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STUDENTS' EXPERIENCE WITH BASIC FINANCIAL PRODUCTS

Students holding basic financial products

Do 15-year-olds hold basic financial products, such as bank accounts and prepaid debit cards? Which students are more likely to hold such products? Is experience with these products related to students' performance in financial literacy? The PISA financial literacy assessment framework identifies money and transactions as one of the main content areas of

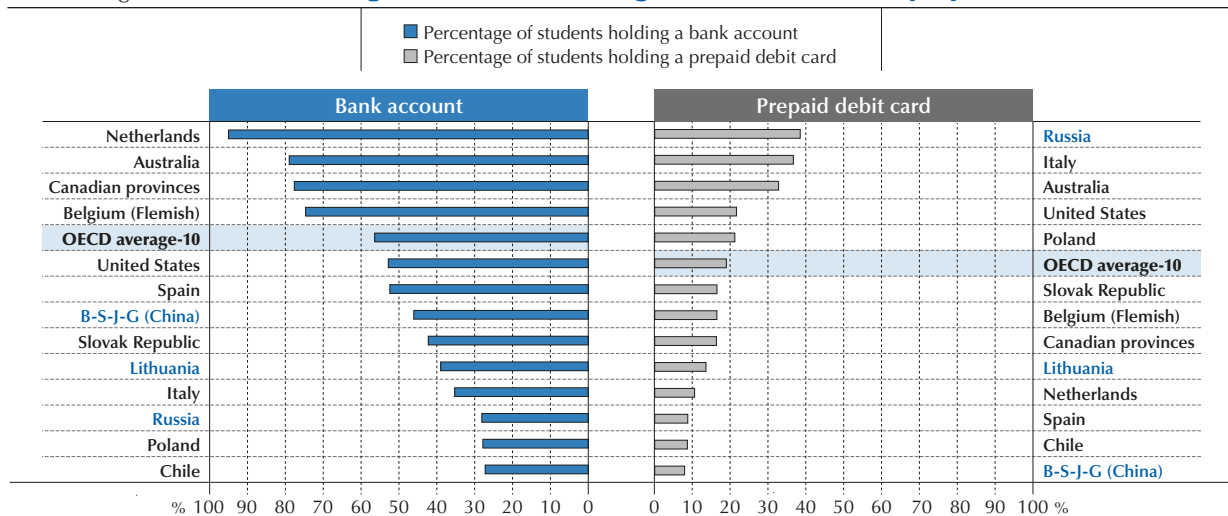


the assessment (OECD, 2013, 2016). Skills in this area include awareness of the different forms of money, handling simple monetary transactions, such as making everyday payments, and handling simple products like bank cards, cheques and bank accounts. Being included in formal financial systems – by conducting transactions or borrowing through formal and regulated intermediaries – is important for participating in society. Holding a basic account from a young age can be a way of becoming familiar with financial products and remaining in the formal financial system in the transition to adulthood (Friedline and Elliott, 2013).

Figure IV.5.3 shows that there is large variation in the proportion of 15-year-old students with bank accounts across the participating countries and economies with available data. This variation depends not only on students' and their families' willingness to hold these products but also on the legal framework regulating minors' access to basic financial products and services (Box IV.5.1). Data from PISA 2015 reveal that, on average across OECD countries and economies, 56% of students hold a bank account. This average masks substantial heterogeneity, as in Australia, the Flemish Community of Belgium, the Canadian provinces and the Netherlands, over 70% of 15-year-old students hold a bank account, but in Chile, Italy, Lithuania, Poland and Russia, fewer than 40% of students do. Less than 5% of students in each country/economy reported that they don't know what a bank account is (Table IV.5.8). Holding a prepaid debit card is somewhat less common in all countries/economies with available data, ranging from fewer than 10% of students in B-S-J-G (China), Chile and Spain, to over 30% of students in Australia, Italy and Russia (Table IV.5.9).

Out of the students who hold at least one of the two products, on average across OECD countries and economies, 26% of students hold both a bank account and a prepaid debit card, 65% hold a bank account but have no prepaid debit card and 8% hold a prepaid debit card but do not have a bank account (Table IV.5.10). In Poland, of the students who hold at least one product, almost two-thirds hold both a bank account and prepaid debit card (64%). Out of the students who hold at least one of the two products, over 60% of students in the Flemish Community of Belgium, B-S-J-G (China), the Canadian provinces, Chile, Lithuania, the Netherlands, the Slovak Republic, Spain and the United States only have a bank account. Out of the students who hold at least one of the two products, over 30% of students in Italy and Russia only have a prepaid debit card.

Figure IV.5.3 ■ **Percentage of students holding a bank account or a prepaid debit card**



Countries and economies are ranked in descending order of the percentage of students holding a bank account and a prepaid debit card, respectively.

Source: OECD, PISA 2015 Database, Tables IV.5.8 and IV.5.9.

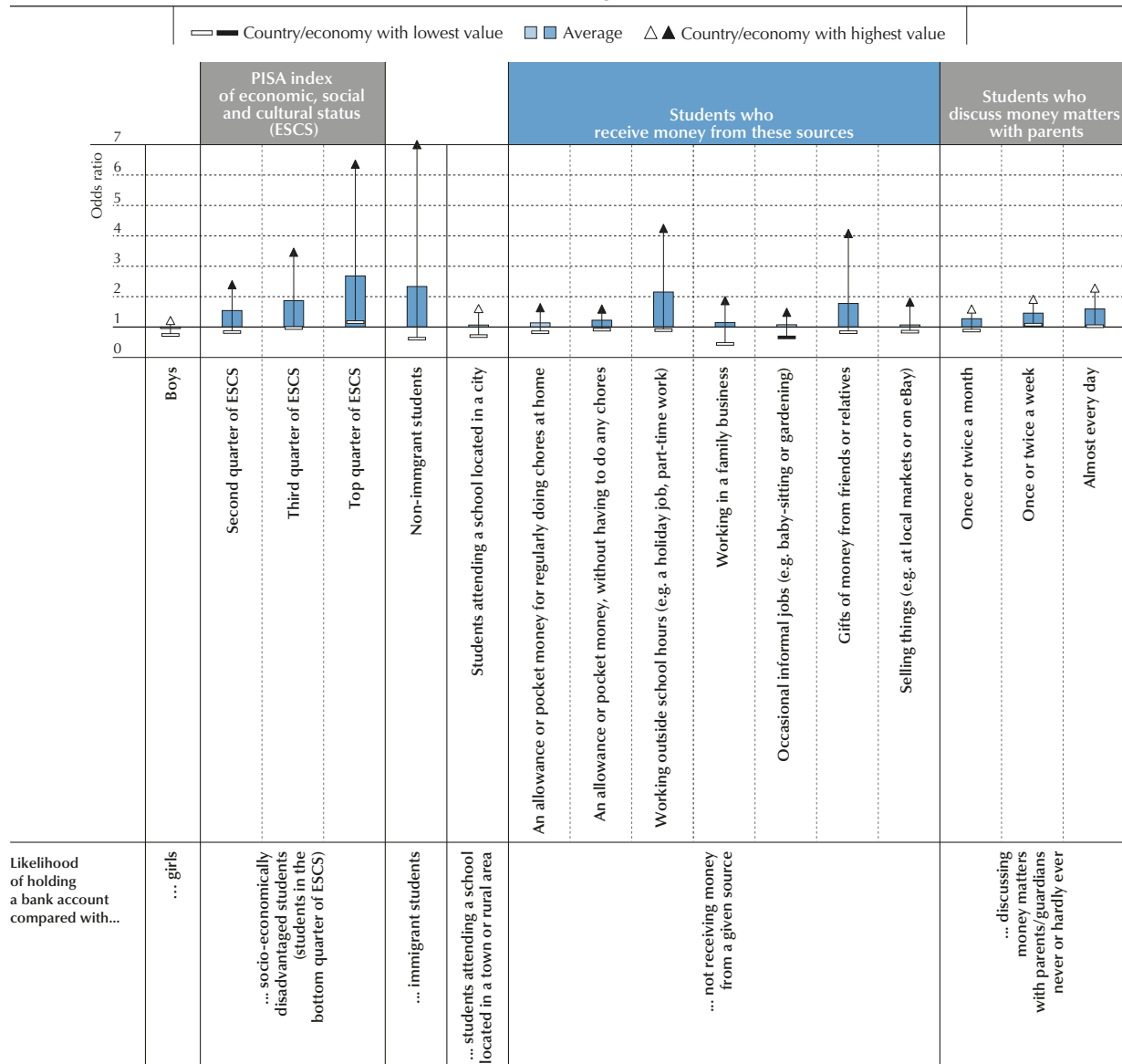
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The percentage of 15-year-old students who reported that they hold a bank account increased considerably between 2012 and 2015 in Poland (from 16% to 28%) and in the Slovak Republic (from 25% to 42%). The proportion of students holding a prepaid debit card also increased during the same period in Australia, Italy, Poland and the United States. In contrast, in Spain, the proportion of students who hold a bank account shrank by 7 percentage points and the proportion of students who hold a prepaid debit card decreased by 4 percentage points (Tables IV.5.8 and IV.5.9).



Who holds a bank account and/or a prepaid debit card among young people? Which student characteristics are associated with a higher likelihood of holding a bank account and/or a prepaid debit card? Figure IV.5.4 shows that, on average across OECD countries and economies, the likelihood of holding a bank account is related to students' socio-economic status, their immigrant background, whether they receive money from work or family, and whether they discuss money matters with their parents, taking into account all of these factors at the same time. By contrast, there are hardly any differences in whether or not students hold a bank account related to gender or school location.

Figure IV.5.4 ■ Likelihood of holding a bank account, by student characteristics
OECD average-10



Note: Odds ratios that are statistically significant are marked in a darker tone (see Annex A3).

Source: OECD, PISA 2015 Database, Table IV.5.11.

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Socio-economic status is strongly associated with holding a bank account. In Australia, the Flemish Community of Belgium, B-S-J-G (China), Chile, Lithuania, Poland, Spain and the United States, socio-economically advantaged students (those in the top quarter of the PISA index of economic, social and cultural status) are at least twice as likely as disadvantaged students (those in the bottom quarter of the index) to hold a bank account. In Australia, the Flemish Community of



Belgium, the Canadian provinces and the Netherlands, students without an immigrant background are more likely than immigrant students to have a bank account (Table IV.5.11).

On average across OECD countries and economies, holding a bank account is positively associated with earning money from working outside of school hours (such as in a holiday job or part-time work), with receiving gifts of money from friends and relatives and, to a lesser extent, with receiving pocket money without having to do chores and with working in a family business. Students in Australia, the Flemish Community of Belgium, the Canadian provinces, the Netherlands and the United States who earn money from working outside of school hours are at least twice as likely to hold a bank account as students with similar characteristics who do not earn money from work. Students in Australia, the Canadian provinces, Italy, the Netherlands, Spain and the United States who reported that they receive money as gifts from friends and relatives are at least 30% more likely to have a bank account than students with similar characteristics who do not receive money as gifts. This suggests that in some countries and economies, working at small, part-time jobs and receiving money as a gift may be the first occasions to use basic financial services. Opening a bank account may be required when taking a small job, and making regular deposits may be a requirement for holding an account. Gifts of money may be relatively large and may not be spent immediately, making it worthwhile to deposit them in an account, while the amounts of money gained from allowances and selling things may be smaller and spent more quickly.

Discussing money matters with parents is also related to having a bank account. Students in Australia, B-S-J-G (China), the Canadian provinces, Chile and Spain who discuss money issues with their parents weekly, monthly or almost every day are more likely to have a bank account than students with similar characteristics who never talk about money matters with their parents (Table IV.5.11).

Similarly, some students are more likely than others to hold a prepaid debit card (Table IV.5.12). Boys in the Canadian provinces, Italy and the Netherlands are more likely than girls to have a prepaid debit card. Socio-economically advantaged students in the Flemish Community of Belgium, Chile, Italy, Lithuania, Poland, the Slovak Republic, Spain and the United States are at least twice as likely as disadvantaged students to have a prepaid debit card. Students in Lithuania, Poland, the Slovak Republic and Spain who attend schools in cities or large cities are more likely to have a prepaid debit card than students who go to school in towns or rural areas.

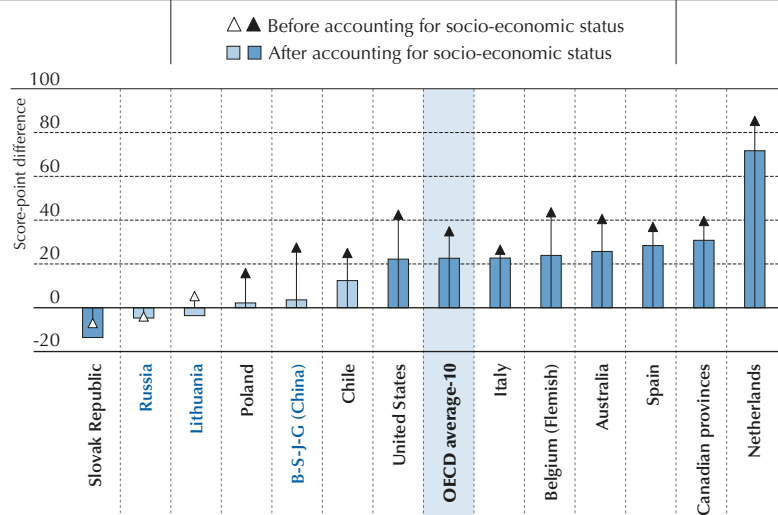
On average across OECD countries and economies, having a prepaid debit card is also associated with receiving money from an allowance or pocket money without having to do any chores, with earning money from working outside school hours, from working in a family business, from occasional informal jobs, and with earning money from selling things at local markets or on line. In Australia, B-S-J-G (China), Italy, Poland and Russia, students who discuss money matters with their parents weekly, monthly or almost every day are more likely to have a prepaid debit card than students who never discuss money matters with their parents.

Experience with basic financial products and financial literacy

Figure IV.5.5 shows that having a bank account is associated with a higher score in financial literacy in some countries and economies. In 10 out of 13 countries and economies with available data, holding a bank account is associated with higher performance in financial literacy. Students in Australia, the Flemish Community of Belgium, the Netherlands and the United States who hold a bank account perform better in financial literacy by over 40 score points than students who do not have a bank account. The association between performance in financial literacy and holding a bank account is strongly related to socio-economic status. In Australia, the Flemish Community of Belgium, the Canadian provinces, Italy, the Netherlands, Spain and the United States, students who hold a bank account perform better in financial literacy by over 20 score points than students of similar socio-economic status who do not have a bank account. The difference in financial literacy scores associated with holding a bank account, after accounting for socio-economic status, is largest in the Netherlands (72 score points).

Having a prepaid debit card is only weakly associated with financial literacy (Table IV.5.14). Only in Australia, Chile, Italy, Lithuania and Poland is holding a prepaid debit card associated with higher performance in financial literacy; in the Slovak Republic, it is associated with lower financial literacy. After taking into account students' socio-economic status, only students in Italy who hold a prepaid debit card perform better in financial literacy than students of similar socio-economic status who do not. Students in the Netherlands, the Slovak Republic and Spain who hold a prepaid debit card perform worse in financial literacy than students of similar socio-economic status who do not.

Figure IV.5.5 ■ **Performance in financial literacy, by whether students hold a bank account**
Score-point difference between students who hold a bank account and those who do not



Note: Score-point differences that are statistically significant are marked in a darker tone (see Annex A3).

Countries and economies are ranked in ascending order of the score-point difference between students who hold a bank account and students who do not, after accounting for socio-economic status.

Source: OECD, PISA 2015 Database, Table IV.5.13.

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Box IV.5.1 Legal framework for young people's access to financial products

The legal framework in relation to the use of basic financial products by 15-year-olds, and by minors (under the age of 18) more generally, varies across countries.¹ The cross-country differences found in PISA and discussed above are consistent with different legislation across countries concerning 15-year-olds' rights to have a bank account and a payment card in their own name.

Most countries require parents' consent for 15-year-olds to open and operate savings and current accounts. In some cases, the account has to be opened and/or operated by parents on behalf of their children. Minors in Belgium can open a current account and withdraw funds only with parental permission; minors from the age of 16 can open savings accounts in their own name, but in the absence of their parents' authorisation they can only withdraw limited amounts from their savings account. In Brazil, Italy, Lithuania, the Netherlands, the Russian Federation and Spain, minors may open and operate an account only under the consent of parents or caregivers. In Chile, minors may operate savings accounts, but the account must be opened by an adult; minors cannot hold current accounts. In Peru, parental consent is typically required; however, minors from the age of 16 may open current and saving accounts under specific circumstances (such as being married or being legally entitled to exercise a profession). In the Slovak Republic, some service providers allow 15-year-olds to hold a savings or current account without legal requirements about parents' consent.

In some cases, financial institutions may impose requirements about holding savings and current accounts beyond what is required by law. For instance, in all Australian states and territories, minors can enter into contracts with financial institutions, but banking institutions may apply additional requirements (which may vary, depending on the age of the young person), such as joint account ownership with a parent or guardian. In Canada, the ability of minors to access savings and current accounts varies by financial institution and by province. In the United States, financial institutions (banks and credit unions) generally offer checking and savings accounts only with the consent or co-ownership of the parent/guardian; but, depending on state laws, some institutions allow minors to own their own account.

Most countries also require parents' consent to allow 15-year-olds to open and operate cash withdrawal/ATM cards, prepaid cards and debit cards. This is the case, for instance, in Brazil, Lithuania, the Netherlands and Peru.

...



In some countries, in addition to parents' permission, there are limitations to the operations that can be carried out by the minors with these cards. In Belgium, banks apply limits for the use of debit cards by minors, usually in consultation with parents. In Spain, minors over 14 years may be supplementary cardholders, but the main cardholder must be a parent/legal representative. In Italy, teens can hold an ATM, prepaid or debit card under parents'/guardians' consent and can use it only under predetermined circumstances and within fixed spending limits. Prepaid cards in Italy, such as those issued by the Italian Post (*Poste Italiane*), may only be loaded by an adult. In the United States, minors who hold an account that is managed by a custodian on their behalf cannot withdraw funds without the custodian's approval. In contrast, in Australia and the Slovak Republic, minors may hold prepaid and debit cards without other legal requirements.

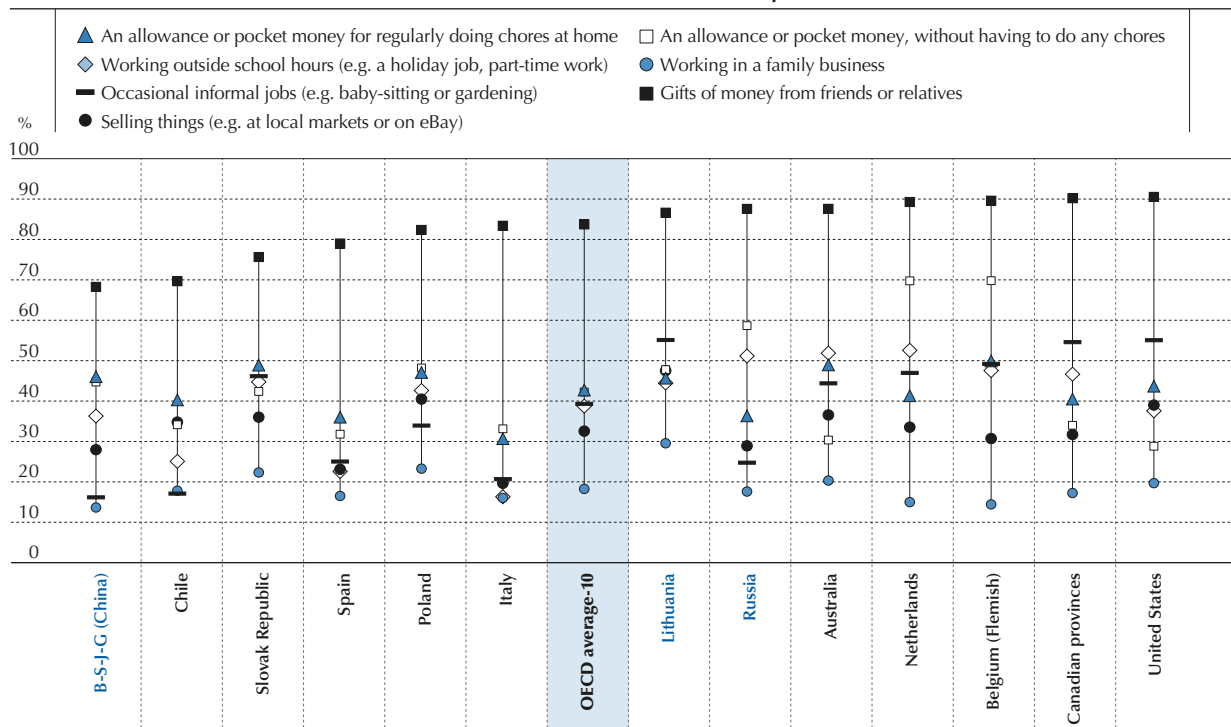
Access to credit cards is generally more restrictive than access to debit cards for people under 18. Credit cards are not issued to minors in Australia, Belgium, Brazil, Italy, Lithuania, the Netherlands, Peru, the Russian Federation and the Slovak Republic. In the United States, consumers under the age of 21 seeking to obtain a credit card need to prove that they are independently able to make the required minimum payments unless they have a co-signer or similar party who is at least 21 years old.

STUDENTS' SOURCES OF MONEY

Students receiving money from different sources

Whether students are using financial products, such as a bank account, also depends on whether they have access to money. The content area "Planning and managing finances" in the PISA financial literacy assessment framework refers to the ability to monitor income and expenses in the short and long term, including being able to identify various types and measures of income (OECD, 2013, 2016). Research on young people's experiences with money shows that some teenagers get their money not only from allowances and gifts given by parents and family, but also from some form of work activity (Centiq, 2008; Charles Schwab and Co., 2011; IEF, 2006; MAS, 2013).

Figure IV.5.6 ■ **Percentage of students receiving money from various sources**
Results based on students' self-reports



Countries and economies are ranked in ascending order of the percentage of students who receive gifts of money from friends and relatives.

Source: OECD, PISA 2015 Database, Table IV.5.15.

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Figure IV.5.6 shows the extent to which students in each country and economy with available data receive money from a number of different sources. The most frequently observed source of money in all countries and economies is gifts from friends or relatives. Over 80% of students in Australia, the Flemish Community of Belgium, the Canadian provinces, Italy, Lithuania, the Netherlands, Poland, Russia and the United States receive money in the form of gifts. The receipt of allowances and pocket money is more heterogeneous: between 31% (Italy) and 50% (the Flemish Community of Belgium) of students reported receiving money from an allowance or pocket money for regularly doing chores at home; between 29% (the United States) and 70% (the Flemish Community of Belgium and the Netherlands) of students reported receiving money from an allowance or pocket money without having to do any chores. More than 40% of students in Australia, the Flemish Community of Belgium, the Canadian provinces, Lithuania, the Netherlands, Poland, Russia and the Slovak Republic reported that they earn money from working outside school hours (e.g. a holiday job, part-time work) and more than 40% of students in Australia, the Flemish Community of Belgium, the Canadian provinces, Lithuania, the Netherlands, the Slovak Republic and the United States earn money from occasional informal jobs, such as babysitting or gardening. Less than 30% of students in all countries and economies with available data reported that they earn money from working in a family business. Earning money from selling things, such as at local markets or on line, varies from 20% in Italy to 48% in Lithuania.

Which students are more likely to receive money from parents, families, work or other sources? Are different money sources complements or substitutes? Are parents combining the disbursement of money with teaching how to use it?

Figure IV.5.7 ■ **Associations among students' sources of money**
OECD average

Increased likelihood of receiving money from one source among students who receive money from another source

Above 2	Above 2
Between 1.5 and 2	Between 1.5 and 2
Above 1 and below 1.5	Above 1 and below 1.5
Not statistically significantly different from 1	Not statistically significantly different from 1
Below 1	Below 1

Increased likelihood of receiving money from (dependent variable):	... among students who receive money from (independent variable):						
	An allowance or pocket money for regularly doing chores at home	An allowance or pocket money, without having to do any chores	Working outside school hours (e.g. a holiday job, part-time work)	Working in a family business	Occasional informal jobs (e.g. baby-sitting or gardening)	Gifts of money from friends or relatives	Selling things (e.g. at local markets or on eBay)
	Odds ratio	Odds ratio	Odds ratio	Odds ratio	Odds ratio	Odds ratio	Odds ratio
An allowance or pocket money for regularly doing chores at home ...		1.39	1.09	1.79	1.89	0.97	1.49
An allowance or pocket money, without having to do any chores ...	1.39		0.58	1.36	0.98	1.58	1.16
Working outside school hours (e.g. a holiday job, part-time work) ...	1.09	0.58		2.93	3.32	0.90	1.67
Working in a family business ...	1.77	1.34	2.93		1.34	0.79	1.46
Occasional informal jobs (e.g. baby-sitting or gardening) ...	1.90	0.98	3.32	1.35		1.12	1.66
Gifts of money from friends or relatives ...	0.96	1.60	0.89	0.78	1.13		1.41
Selling things (e.g. at local markets or on eBay) ...	1.48	1.16	1.66	1.48	1.67	1.39	

How to read this graph

An odds ratio of 0.58 in the likelihood of students who work outside school hours (e.g. a holiday job, part-time work) to receive an allowance or pocket money, without having to do any chores, means that students who work outside school hours are 42% (1 minus 0.58) less likely to receive this allowance than students who do not work outside school hours.

An odds ratio of 2.93 in the likelihood of students who work outside school hours (e.g. a holiday job, part-time work) to work in a family business, means that students who work outside school hours are almost three times as likely as students who do not work outside school hours to also work in a family business.

Source: OECD, PISA 2015 Database, Tables IV.5.16a-g.


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Figure IV.5.7 shows how receiving money from one source is correlated with receiving money from another one, after taking into account various student characteristics. On average across OECD countries and economies, there is a positive and relatively strong association across sources of money related to some kind of work activity, such as working outside of school hours, having occasional informal jobs and working in a family business. On average across OECD countries and economies, students who work outside school hours in part-time or holiday jobs are more than twice as likely as similar students who do not work outside school hours to be also earning money from working in a family business or doing occasional informal jobs. It is likely that some students engage in multiple forms of work activities and that they constitute complementary sources of money.

Receiving an allowance for doing chores at home is also associated with earning money from occasional informal jobs and working in a family business. On average across OECD countries and economies, students who receive an allowance for doing chores are about 80% more likely to earn money from working in a family business and about 90% more likely to earn money from occasional informal jobs, such as babysitting or gardening, than similar students who do not receive allowances for doing chores. By contrast, receiving an allowance or pocket money without having to do any chores at home is not related to earning money from occasional informal jobs and is negatively related to earning money from working outside school hours (e.g. a holiday job or part-time work). On average across OECD countries and economies, students who receive pocket money without having to do chores are 42% less likely than similar students who do not receive pocket money to earn money from working outside of school hours. This suggests that students may try to earn some money if they don't receive an allowance from their parents, or that parents give their children an allowance to enable them to use their after-school time to focus on learning and reduce the time they spend working (Holford, 2016).

Receiving money as a gift is positively related to receiving allowances without having to do any chores and is negatively associated with earning money from working in a family business. Earning money from selling things is positively associated with all other sources of money, especially working outside of school hours and doing occasional informal jobs. This suggests that students who want to earn some money may put in place multiple strategies at the same time.

Figure IV.5.8 shows how students' sources of money vary by gender, socio-economic status and immigrant background, after taking into account other student characteristics. The left panel of Figure IV.5.8 focuses on gender differences. On average across OECD countries and economies, boys are more likely than girls to receive pocket money for doing chores, to earn money from working outside of school hours or in a family business, and from selling things they own; on average, girls are slightly more likely than boys to receive money from occasional informal jobs and from gifts. Overall, these results suggest that boys are more likely than girls to be involved in regular work activities, and to receive money in exchange for work inside and outside the household, while girls in some countries and economies are more likely than boys to receive money without working, in the form of allowances or gifts. These results might indicate that boys begin to seek ways of becoming more financially independent at an earlier age than girls.

The middle panel of Figure IV.5.8 shows how students' sources of money vary by socio-economic status. On average across OECD countries and economies, socio-economically advantaged students (those in the top quartile of the PISA index of economic, social and cultural status) are more likely to receive money from occasional informal jobs, such as babysitting or gardening, and from gifts than disadvantaged students (those in the bottom quartile of the index). By contrast, on average, disadvantaged students are more likely to earn money by working outside of school hours than advantaged students. On average, students across different levels of socio-economic status are equally likely to receive an allowance or pocket money (with or without having to do chores at home), to earn money by working in a family business and by selling things.

The right panel of Figure IV.5.8 shows how students' sources of money vary by immigrant background, after accounting for students' socio-economic status and other characteristics. On average across OECD countries and economies, non-immigrant students are more likely than immigrant students to earn money by working outside school hours (in a holiday or part-time job) or in occasional jobs (such as babysitting or gardening), by receiving gifts of money, or by selling things. This result may suggest that immigrant students have less access than non-immigrant students to small jobs. In contrast, students with an immigrant background are more likely to get pocket money, without having to do chores at home, than students without an immigrant background. On average, students with and without an immigrant background are equally likely to receive pocket money for chores and to earn money in a family business.

On average across OECD countries and economies, students attending schools in urban areas are as likely as students attending schools in rural areas to earn money from work activities and from most other sources. Only in Australia,

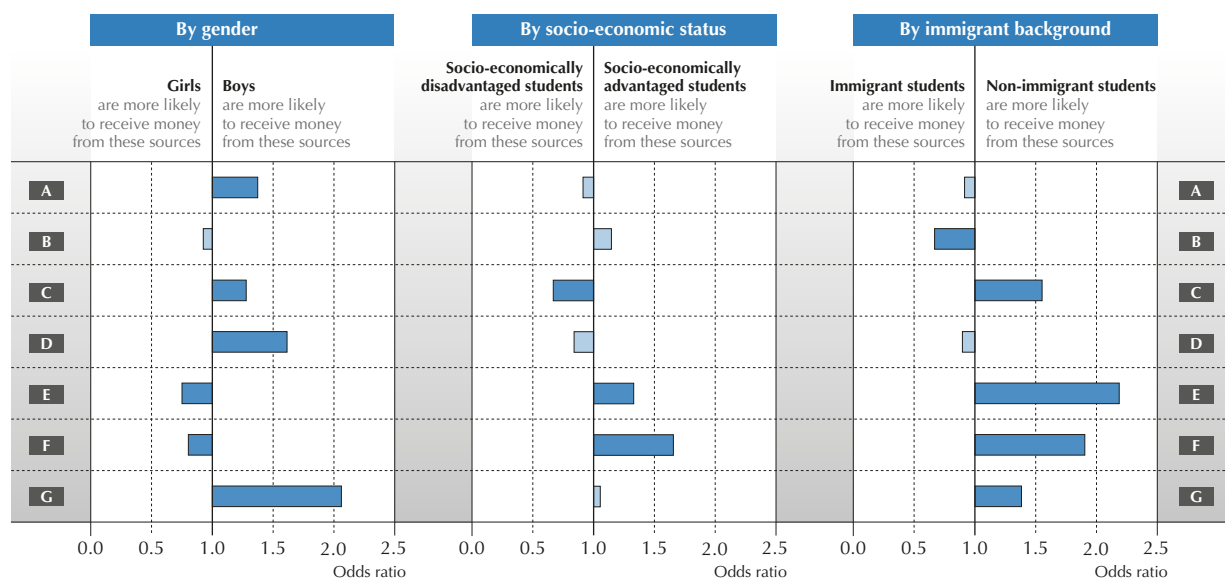


Poland and Russia are students who attend schools in a town, village or rural area more likely than students who attend school in a city to earn money from work, including working outside school hours, in a family business or in occasional informal jobs (Tables IV.5.16a to IV.5.16g).

Figure IV.5.8 ■ **Likelihood of receiving money from various sources, by gender, socio-economic status and immigrant background**

OECD average

- A** An allowance or pocket money for regularly doing chores at home
- B** An allowance or pocket money, without having to do any chores
- C** Working outside school hours (e.g. a holiday job, part-time work)
- D** Working in a family business
- E** Occasional informal jobs (e.g. baby-sitting or gardening)
- F** Gifts of money from friends or relatives
- G** Selling things (e.g. at local markets or on eBay)



Note: Odds ratios that are statistically significant are marked in a darker tone (see Annex A3).

Source: OECD, PISA 2015 Database, Tables IV.5.16a-g.

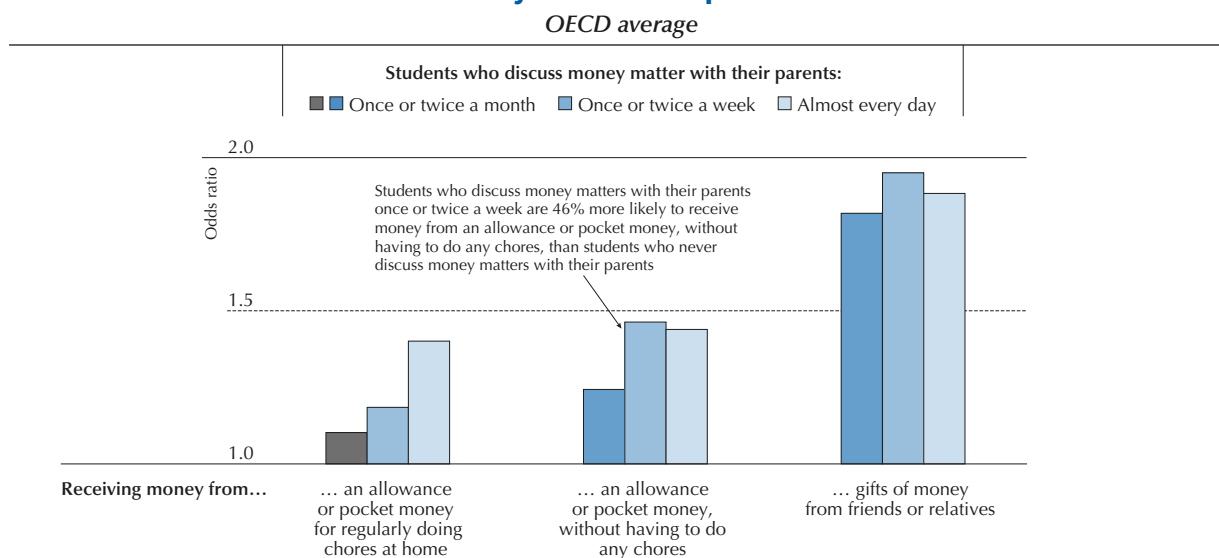
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The probability of receiving money in the form of pocket money or gifts – which is likely to come from parents and other family members – is also related to the extent to which students talk about money matters with their parents. Figure IV.5.9 shows that, on average across OECD countries and economies, the likelihood of receiving money from an allowance (with or without having to do chores at home) and of receiving gifts of money increases the more frequently students discuss money issues with their parents, after accounting for student characteristics, including gender and socio-economic status. On average, students who talk to their parents about money almost every day are about 40% more likely to receive pocket money (with or without having to do chores at home) and about 90% more likely to receive gifts of money than students with similar characteristics who never talk about money with their parents. This suggests that students may be more likely to get money from their parents if they ask for it, if they show an interest in learning more about how to manage money, or if parents who want to teach their children about money use gifts and pocket money as an opportunity for educating them about money.

Work-related money sources could be expected to be associated with the time students spend learning in school and after school, as engaging in work activities may take time away from studying and homework. However, receiving money from working outside of school hours (e.g. in a holiday job or part-time work), from working in a family business and from occasional informal jobs (e.g. babysitting or gardening) are only weakly correlated with the total time students spend per week in regular lessons or studying after school, including homework, additional instruction and private study (Tables IV.5.16c to IV.5.16e).



Figure IV.5.9 ■ **Likelihood of receiving money from various sources, by frequency of discussing money matters with parents**



Note: Odds ratios that are statistically significant are marked in shades of blue (see Annex A3).

Source: OECD, PISA 2015 Database, Tables IV.5.16a, IV.5.16b and IV.5.16f.

StatLink <http://dx.doi.org/10.1787/888933485362>

Students' sources of money and financial literacy

PISA data can be used to investigate the extent to which experience with different sources of money is associated with performance in financial literacy. The relationship between performance in general (and financial literacy performance in particular) and earning money from small jobs is not clear *a priori*. As discussed in previous chapters, students' performance in financial literacy may be related to students' overall ability, to the extent to which they are exposed to formal financial education in school, to the effort that they put into learning, and to any other opportunity for informal learning, such as discussions with parents and personal experience. Earning money from doing household chores or small jobs may be considered one such experience, as it allows young people to become familiar with the idea of work, wages and money management (Shim et al., 2010). At the same time, these activities may take time away from learning during after-school hours (Oettinger, 1999; Payne, 2003). Even though financial education is taught in schools to a limited extent, time that is not spent learning may limit students' opportunity to improve in the core subjects of mathematics and reading, which are fundamental to building financial literacy skills. Research has not found conclusive results about the relationship between earning money from small jobs and performance in financial literacy (Grohmann, Kouwenberg and Menkhoff, 2015; Shim et al., 2010).

Figure IV.5.10 shows how performance in financial literacy, mathematics and reading varies, on average across OECD countries and economies, between students who receive money from various sources and those who do not receive money from those sources, after taking into account student characteristics, including gender, socio-economic status, immigrant background, school location, whether they discuss money matters with their parents, and the time they spend learning at and after school. Students who receive gifts of money score higher in financial literacy (by 37% of a standard deviation) than similar students who do not receive such gifts. Gifts may be related to higher financial literacy if they provide an occasion for students to think about their saving and spending decisions, but also if high-performing students receive money as a reward for school performance.

By contrast, students who receive pocket money for doing chores at home, those who earn money from part-time jobs or in a family business, and those who obtain money from selling things score lower in financial literacy than students with similar characteristics who do not receive money from these sources. On average, earning money from occasional informal jobs is not associated with performance in financial literacy. PISA data do not provide information on the amounts received, but future research could aim to determine whether a positive association between gifts of money and financial literacy is related to the amount of money received from different sources.

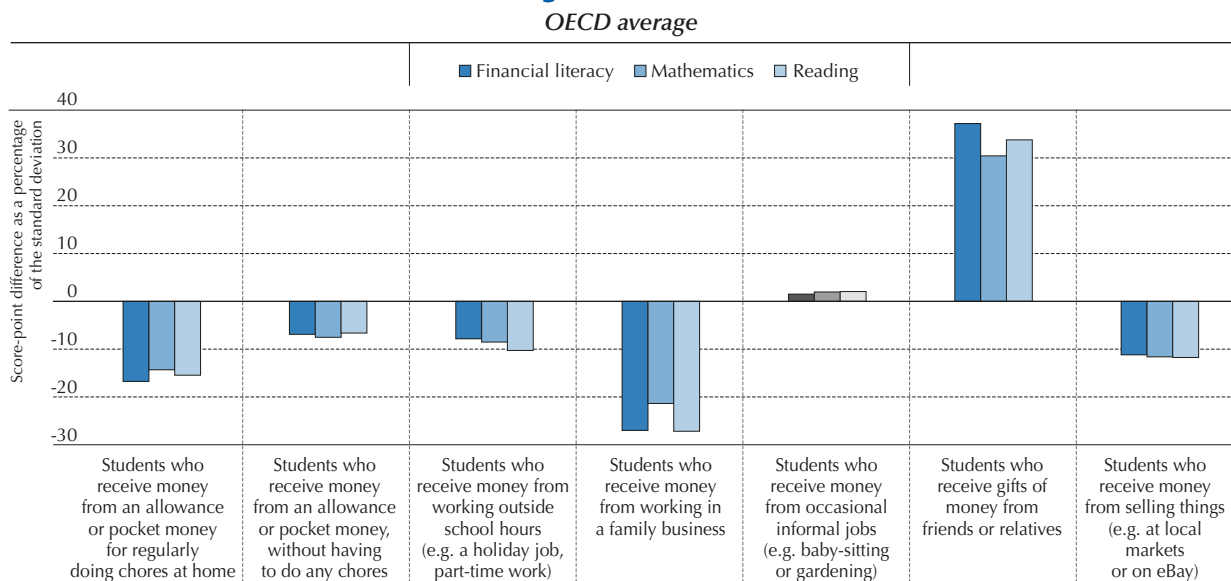


Differences in performance in mathematics and reading associated with receiving money from various sources are similar to those in financial literacy.² Nevertheless, on average across OECD countries and economies, the difference in financial literacy performance associated with receiving gifts of money (37% of a standard deviation) is slightly larger than the difference in mathematics performance (30% of a standard deviation). In Australia and Lithuania, receiving gifts of money is associated with a greater (standardised) difference in financial literacy than in both mathematics and reading (Table IV.5.17b). This suggests that, in some countries and economies, managing some money may provide a greater opportunity to acquire financial skills than skills in other domains, such as doing calculations.

Moreover, on average across OECD countries and economies, even after accounting for student characteristics and performance in mathematics and reading, students who receive money as a gift perform better in financial literacy by 13 score points. In Australia, the Flemish Community of Belgium, Lithuania, Poland, the Slovak Republic and the United States, students who receive money as a gift score higher in financial literacy than students of similar characteristics and ability who do not receive gifts of money (Table IV.5.18). These results suggest that having some money to manage could provide an opportunity to acquire financial skills regardless of students' socio-economic status and ability.

The results of Figure IV.5.10 also show that earning money from work (either doing chores or working outside the home) is associated with lower performance in financial literacy, mathematics and reading, even after accounting for student characteristics, such as socio-economic status and time spent learning. These results should be interpreted with caution, however, as the data do not say how much money students get from these money sources, how much time they spend working, and when they perform any work activities (e.g. during term time or during school holidays). Overall, these results are consistent with research suggesting that the quality of the interactions between parents and children about money may have more of an impact on children's financial socialisation than receiving allowances per se. Without substantial parental guidance about finances, just receiving money may not be sufficient for children to develop a real understanding of how to use it (Beutler and Dickinson, 2008; Xiao, Ford and Kim, 2011).

Figure IV.5.10 ■ **Association between students' performance and sources of money, after accounting for student characteristics**



Note: Score-point differences as a percentage of the standard deviation that are statistically significant are marked in shades of blue (see Annex A3).

Source: OECD, PISA 2015 Database, Table IV.5.17b.

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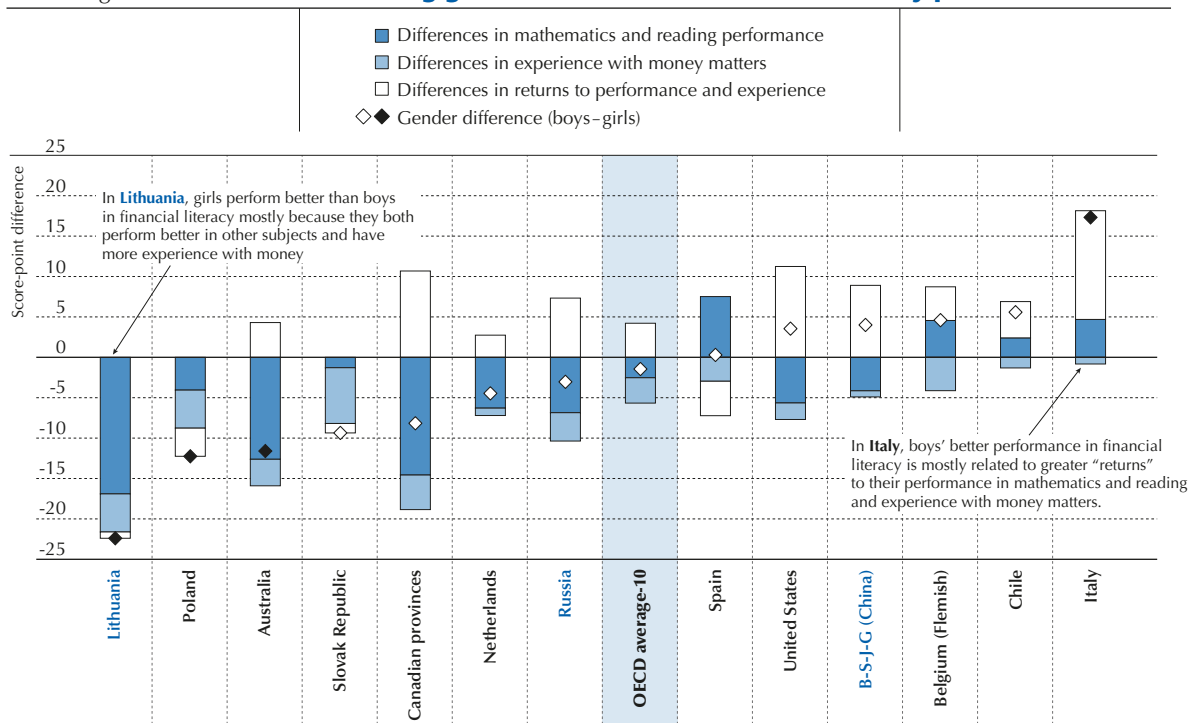


Box IV.5.2 The role of money experience and performance in core PISA subjects in explaining gender differences in financial literacy

The heterogeneity in gender differences in financial literacy found in PISA 2015 (Chapter 4) suggests that boys and girls may have different opportunities for being exposed to financial matters, such as the possibility to access and use basic financial products, receive money from various sources and discuss money matters with parents and friends. In addition, PISA results have consistently shown gender differences in mathematics and reading performance, which, in turn, are closely correlated with financial literacy.

Figure IV.5.11 shows the results of a decomposition of the gender differences in financial literacy into three components (in the figure, the sum of the values represented by the three bars corresponds to the value represented by the diamonds) (Blinder, 1973; Oaxaca, 1973). The dark blue bars represent the gender difference in financial literacy performance related to differences in mathematics and reading performance across boys and girls. The medium blue bars represent the gender difference in financial literacy related to differences in experience with money (a combination of discussing money matters with parents and friends, experience with basic financial products, and with sources of money). The light blue bars represent the extent to which the different “endowments” (reading and mathematics skills, and experience with money matters) of boys and girls are associated with financial literacy, that is the extent to which boys and girls have different “returns” to their characteristics (for example, not only do boys and girls perform differently in mathematics, but the association between mathematics and financial literacy might also be different for boys and girls).

Figure IV.5.11 ■ Understanding gender differences in financial literacy performance



Notes: Experience with money matters includes: holding a bank account, holding a prepaid debit card, receiving money from various sources, discussing money matters with parents, and discussing money matters with friends.

Differences in returns to student characteristics refer to the fact that a characteristic may have a different association with financial literacy performance for boys and girls. For instance, boys and girls may have different levels of performance in mathematics (different characteristics) and the association between performance in mathematics and performance in financial literacy may be different for boys and girls (different returns to performance in mathematics).

Gender differences represented by the diamonds that are statistically significant are indicated in a darker tone (see Annex A3). The statistical significance of the values represented by the bars is not shown in the figure; please refer to Table IV.5.19 for values' statistical significance.

Gender differences in financial literacy performance may differ slightly from those in Table IV.4.5 because results in this table are calculated considering only students for whom data on all the variables in the model are available.

Countries and economies are ranked in ascending order of the score-point difference in financial literacy performance between boys and girls.

Source: OECD, PISA 2015 Database, Table IV.5.19.

StatLink <http://dx.doi.org/10.1787/888933485387>



Figure IV.5.11 shows that, in some countries and economies, differences in experience and/or performance in mathematics and reading contribute to explaining significant fractions of the gender difference in financial literacy. In Australia, Lithuania and Poland, girls perform better in financial literacy than boys mostly because they have more favourable characteristics, that is girls both perform better in mathematics and reading (combined) and have more opportunities to experience with money overall. In B-S-J-G (China), the Canadian provinces, the Netherlands, Russia and the United States, student characteristics in terms of experience with money and performance would favour girls, but boys seem to offset their lower “endowments” with greater “returns”, e.g. because they are more able to apply experience with money, and reading and mathematics skills, to financial contexts, leading to differences that are not statistically significant. In the Flemish Community of Belgium, Chile and Spain, the similar financial literacy performance of boys and girls is related to the balancing of better performance among boys and greater experience among girls. In Italy, boys’ better performance in financial literacy is mostly related to greater “returns” to their characteristics and, to some extent, to their better performance in mathematics and reading combined.



Notes

1. Information on the legal requirements regulating the access of minors to bank accounts and cards was collected from national authorities of the participating countries and economies in October-December 2016.
2. The relationship between financial literacy and science performance is not discussed in the text and figures because science competencies are not strictly necessary to be proficient in financial literacy and there are no links across the two assessment frameworks. The relationship between performance in financial literacy and performance in science, in addition to mathematics and reading, is nevertheless presented in the tables.

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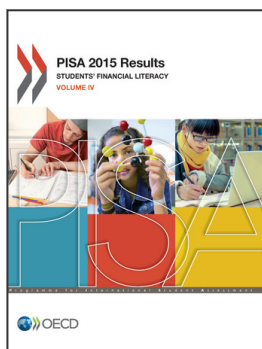
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