

ANALYTICAL ARTICLES

Economic Bulletin

1/2021

BANCO DE **ESPAÑA**
Eurosistema

THE GENDER GAP IN FINANCIAL COMPETENCES

Laura Hospido, Sara Izquierdo and Margarita Machelett

ABSTRACT

The Survey of Financial Competences shows that men are better at answering financial literacy questions than women. This article documents the magnitude of the gender gap in this area, reviews the hypotheses that, according to the academic literature, might explain the gender gap and quantifies the contribution of each hypothesis in the case of Spain. The findings suggest that a significant gender gap in financial literacy remains when considering the differences between men and women in terms of their socio-demographic characteristics, numeracy and reading comprehension skills, attitudes as measured by interest in finance, specialisation in household tasks and risk preferences. However, the gender gaps are significantly smaller in regions with more egalitarian financial arrangements for custody and marriage, suggesting that social norms may be important in explaining these disparities. Finally, the article advises treating any measurement of financial competences that merely adds up the correct responses to financial literacy questions with caution. The use of alternative measures of financial competences changes the size of the gap usually observed.

Keywords: Financial competences, financial literacy, gender gap.

JEL classification: D14, G53, I22, J16.

The authors of this article are Laura Hospido, Sara Izquierdo and Margarita Machelett of the Directorate General Economics, Statistics and Research.

Introduction

Financial literacy is essential for people's well-being: they need it to manage their finances in their most routine activities (e.g. planning daily spending) and when taking decisions with greater long-term consequences, such as which mortgage or pension scheme to choose and how much to invest in education.

Despite the international consensus on the importance of financial literacy, various studies have shown that in many countries large groups of the population are not familiar with basic concepts relating to inflation, the compound rate of interest and risk diversification. Among these groups, women are generally observed to be less financially literate than men.

A comparative analysis of levels of financial literacy by country and gender shows that Spain is no exception. Chart 1 presents the financial literacy scores for 30 countries obtained in the measurement exercise coordinated by the OECD International Network on Financial Education (OECD/INFE) in 2016.¹ Specifically, the study includes seven financial knowledge questions, and the columns in the chart show the percentage of the population capable of correctly answering at least five of these questions.² On average, for all the countries included in the chart, 61% of men answer at least five of these seven questions correctly, as opposed to 51% of women.³ The figures for Spain are 67% (men) and 50% (women). With respect to the other countries considered, Spain comes fourteenth in the classification of financial literacy for men, falling to twentieth in the case of women.

This article documents how the financial competences of men and women differ in Spain. The second section quantifies the gender gap in financial literacy using the 2016 Survey of Financial Competences (ECF by its Spanish initials). The third section reviews the main mechanisms that, according to the literature, might explain this gap and describes the variables available in the ECF associated with

1 Apart from the data collected by the OECD/INFE (see Atkinson et al. (2016)), information on more than 140 countries shows that gender differences are present in both developing and advanced economies (Klapper and Lusardi (2020)).

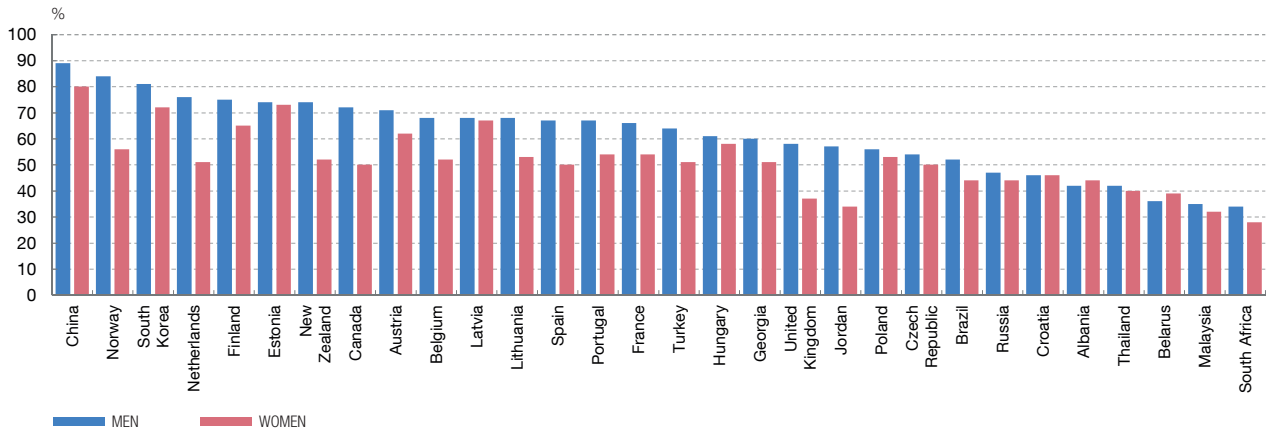
2 The OECD considers the target to be a score of at least 70% of correct answers, i.e. five out of seven.

3 The average cross-country financial literacy of men and women is not adjusted for the population of each country.

Chart 1

FINANCIAL LITERACY BY GENDER IN VARIOUS COUNTRIES

There are gender differences in financial literacy in most countries, with generally higher levels for men than for women. In Spain, 67% of men correctly answer at least five of the seven financial questions common to the other countries, compared with 50% of women.



SOURCES: Banco de España calculations based on ECF (2016) microdata and Atkinson et al. (2016).

NOTE: The chart shows the percentage of respondents scoring at least five out of seven in financial literacy, by gender and by country.



each of these hypotheses. The fourth section estimates how the financial literacy gender gap is affected by each of the proposed mechanisms. Finally, the fifth section presents alternative measures of financial competences and quantifies the gender gap in each case.

The gender gap in financial literacy in Spain

In this section the observed differences in financial literacy between men and women in Spain are quantified using the ECF (2016) data.⁴ These data arise from a joint initiative of the Banco de España and the CNMV (National Securities Market Commission) within the Financial Education Plan framework.⁵ This survey was conducted in 2016 to measure the financial competences of the adult population in Spain. The INE (National Statistics Institute) also assisted by providing a broad sample of randomly selected individuals representative of Spain as a whole and each region (*Comunidad Autónoma*).⁶

The ECF has a total of ten financial knowledge questions, seven of which coincide with those of the OECD/INFE study and are, therefore, comparable across the

4 Microdata files can be downloaded at https://www.bde.es/bde/es/areas/estadis/estadisticas-por/encuestas-hogar/relacionados/encuesta-de-comp/ECF_2016.html.

5 For further information on the Financial Education Plan, see <https://www.cnmv.es/portal/inversor/Plan-Educacion.aspx?lang=en>.

6 See Bover et al. (2018) for a detailed description of the sample and the information obtained from the ECF.

countries that belong to the network. The ECF includes three questions proposed in a study by Lusardi and Mitchell (2011) and that are often used in international studies.⁷

The level of financial literacy is usually measured by comparing the number of correct responses to financial knowledge questions divided by the total number of such questions. This percentage results from two components: answering (rather than selecting “Don’t know”) and answering correctly. It is important to draw this distinction, since the gender gap may reflect a real difference in literacy or in how questions are answered. For example, when they do not know the answer, men may be inclined to respond anyway, while women may prefer to answer “Don’t know” rather than risk giving the wrong answer.⁸

Chart 2.1 shows the percentage of correct answers to each of the three questions evaluating the concepts of inflation, compound interest and risk diversification. A gender gap of 9 percentage points (pp) is observed for the question on inflation, 8 pp for the compound interest question and 13 pp for the risk diversification one. Chart 2.2 shows that the percentage of men who respond incorrectly to the inflation question is 4 pp less than that of women, to the compound interest question 2 pp less and to the risk diversification question only 1 pp less. Lastly, the gender gap in the percentage of “Don’t know” responses (see Chart 2.3) is always larger (5 pp for the inflation question, 7 pp for the compound interest one and 12 pp for the risk diversification one).

A similar pattern is seen for the rest of the financial knowledge questions. On average, men respond correctly to seven of the ten questions, while women do so to six of them. The average number of incorrect responses is 2.1 for men and 2.4 for women, while their average number of “Don’t know” responses is 0.8 and 1.4, respectively. Accordingly, the gap in their correct responses of one in ten may be divided into two parts: 35% is due to the difference in their incorrect responses and 65% to that in their “Don’t know” responses.

The next section reviews the mechanisms that the literature has proposed to explain the financial literacy gender gap. It also presents the ECF questions that provide information on each of these mechanisms in Spain.

7 See, for example, Hastings et al. (2013). The first question measures if it is understood that, when inflation is positive, waiting a year to receive a nominal amount of money reduces its purchasing power. Answering the second question correctly requires understanding that interest accumulated in an account is calculated on the amount initially deposited and on the return already accumulated. The third question indicates whether it is understood that the volatility of a broad portfolio of shares is generally lower than that of a single share.

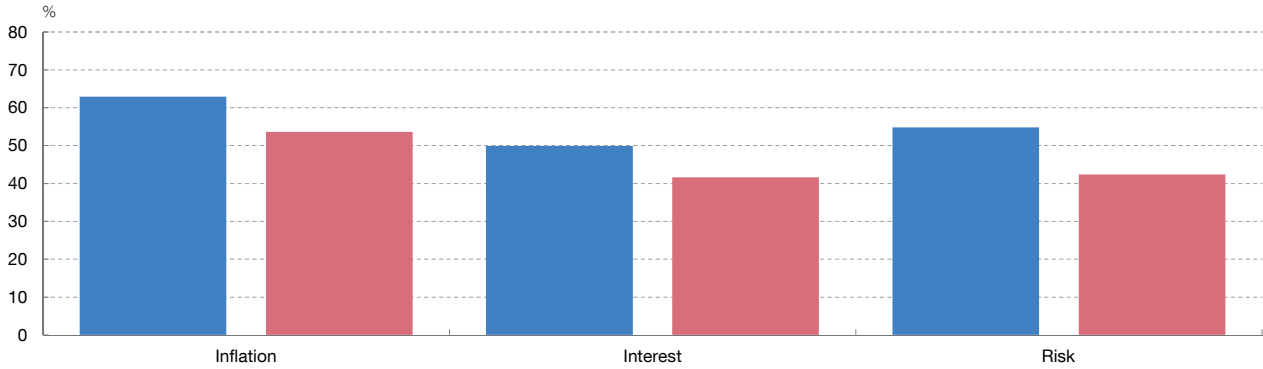
8 Bordalo et al. (2019) link the different patterns of answers to questions of different difficulty to the gender gap in confidence.

Chart 2

FINANCIAL LITERACY BY GENDER IN SPAIN

There are gender gaps in the percentage of correct answers to basic financial literacy questions, measured through three questions on inflation, compound interest rates and risk diversification. The gender differences in the percentage of “Don’t know” answers to these three questions are larger than in the percentage of incorrect answers.

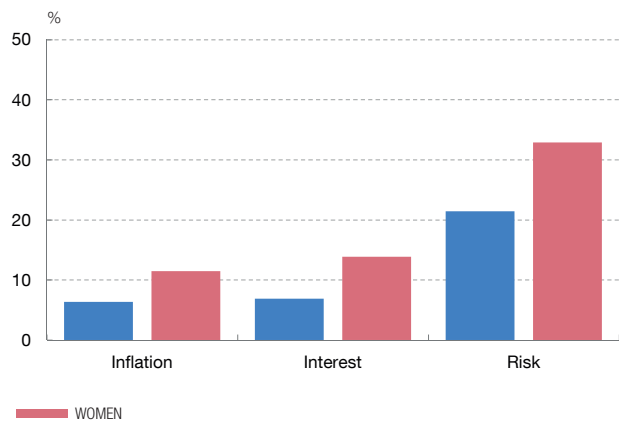
1 PERCENTAGE OF CORRECT ANSWERS



2 PERCENTAGE OF INCORRECT ANSWERS



3 PERCENTAGE OF "DON'T KNOW" ANSWERS



SOURCE: Banco de España calculations based on ECF (2016) microdata.



Mechanisms explaining the gender gap in financial literacy according to the literature

Various studies have attempted to explain the different levels of financial literacy of men and women. There is still no consensus regarding the explanation of these differences. However, the literature has suggested various possible mechanisms, distinguishing between differences in characteristics, skills and interests or attitudes.

This section reviews these mechanisms and presents the variables available in the ECF associated with each of them. The next section quantifies each factor’s contribution to explaining the financial literacy gender gap observed in Spain.

Differences in socio-demographic characteristics

A number of papers explore whether the gender gap can be explained by differences in the socio-demographic characteristics of men and women. Thus, for example, if higher levels of education are associated with greater financial literacy and women have lower levels of education than men, then women's financial literacy will also be lower. However, when US men and women of the same age, birthplace, education and marital status are compared the gap is only reduced by 25% with respect to that observed for the population as a whole. Similar studies in countries such as Germany and the Netherlands also conclude that individuals' socio-demographic characteristics cannot fully explain gender gaps in financial literacy.⁹

In the Spanish context, Table 1 sets out the differences in socio-demographic characteristics, such as level of education, birthplace, age and household income. For example, the percentage of women with a primary education is 2 pp higher than that of men, with a secondary education 6 pp lower, and with a tertiary education (advanced vocational training or university studies) 4 pp higher. In the next section, the portion of the financial literacy gender gap that disappears when men and women with similar socio-demographic characteristics are compared is quantified.

Differences in numeracy and reading skills

Another hypothesis is that the gender gap in financial literacy reflects differences in skills that are not captured by level of education.¹⁰ However, although the gender gap among young people disappears in some countries when numeracy and reading skills are taken into account, in others the gap widens.¹¹

The ECF measures generic skills such as reading comprehension and mathematical and graphical abilities using six questions. When both types of skills are measured (financial literacy and generic skills) in comparable units, the financial literacy gender gap is observed to be greater than the generic skills one (0.45 standard deviations in the first case as against 0.24 in the second (rows 1 and 2 of Table 1, respectively)).¹²

Differences in interests or attitudes

Interest or experience in finance: men are usually more interested in finance than women, which may result in gender gaps in financial literacy.¹³ One way of verifying

9 See Bucher-Koenen et al. (2017) or Driva et al. (2016).

10 Mahdavi and Horton (2014) show that even among women who attend an elite university, the level of financial literacy is low.

11 See Bottazzi and Lusardi (2020).

12 In order to obtain a comparable measure for variables with different variance, the usual practice is to transform them into a standardised measure, with a mean of 0 and a standard deviation of 1.

13 See, for example, Driva et al. (2016) or Brown and Graf (2013).

Table 1

DESCRIPTIVE STATISTICS

The characteristics of men and women in the sample show differences that could be relevant factors in explaining the financial literacy gender gap.

Variables	Women			Men		
	Average	Stand. Dev.	Obs.	Average	Stand. Dev.	Obs.
Financial literacy index	-0.22	0.99	4,220	0.23	0.96	4,198
Generic skills index	-0.12	0.99	4,116	0.12	0.99	4,117
Primary education	0.18	0.39	4,290	0.16	0.37	4,262
Lower secondary education	0.25	0.43	4,290	0.28	0.45	4,262
Upper secondary education	0.21	0.41	4,290	0.24	0.43	4,262
High-level vocational training	0.21	0.41	4,290	0.18	0.38	4,262
University	0.15	0.43	4,290	0.14	0.45	4,262
Born abroad	0.13	0.33	4,290	0.12	0.33	4,264
Aged 18 to 24	0.09	0.28	4,290	0.09	0.29	4,264
Aged 25 to 34	0.15	0.36	4,290	0.16	0.36	4,264
Aged 35 to 44	0.21	0.41	4,290	0.22	0.41	4,264
Aged 45 to 64	0.37	0.48	4,290	0.37	0.48	4,264
Aged 65 to 79	0.18	0.38	4,290	0.16	0.36	4,264
Household income less than €9,000	0.17	0.38	4,290	0.13	0.33	4,264
Household income between €9,001 and €14,500	0.24	0.42	4,290	0.21	0.41	4,264
Household income between €14,501 and €26,000	0.27	0.44	4,290	0.28	0.45	4,264
Household income between €26,001 and €44,500	0.20	0.40	4,290	0.22	0.42	4,264
Household income more than €44,500	0.11	0.32	4,290	0.16	0.37	4,264
Works	0.48	0.50	4,290	0.59	0.49	4,263
Works / has worked in finance	0.06	0.25	4,290	0.08	0.27	4,264
Lives with partner	0.65	0.48	4,290	0.65	0.48	4,264
Lives with children	0.52	0.50	4,290	0.43	0.50	4,264
Not informed of financial decisions	0.05	0.23	4,290	0.07	0.25	4,264
Recently acquired a financial product	0.39	0.49	4,290	0.44	0.50	4,264
Risk averse	0.46	0.50	4,183	0.42	0.49	4,189
Risk neutral	0.23	0.42	4,183	0.20	0.40	4,189
Risk acceptant	0.32	0.47	4,183	0.38	0.49	4,189

SOURCE: Banco de España calculations based on ECF (2016) microdata.

NOTE: The variable "Recently acquired a financial product" takes the value "0" for individuals who have not acquired a financial product of their own accord in the last two years.

this hypothesis is to compare whether the gender gap between men and women interested in financial matters is smaller than between those who profess no interest. For example, US data show a smaller financial literacy gender gap between young people studying for a business degree than in the population as a whole, although the gender gap does not disappear in this group.¹⁴

The ECF asks respondents whether they have labour market experience in finance. Table 1 shows that 6% of women and 8% of men have or have had a finance-related

¹⁴ See Chen and Volpe (2002).

job.¹⁵ Having labour market experience in finance is associated with a higher percentage of correct answers. The next section evaluates whether comparing men and women with similar labour market experience contributes to reducing the financial literacy gender gap.

Specialisation in household tasks: alternatively, the gender gap in financial literacy may stem from the specialisation in household tasks. According to this hypothesis, if men take most of the household financial decisions, they will develop greater financial knowledge than women over time. Indeed, a longitudinal survey of US citizens' financial knowledge reveals that women's financial competences increase as their husband ages and their life expectancy shortens. That is to say, the financial knowledge of women increases when the possibility that they take household financial decisions is greater.¹⁶ However, other studies do not indicate that women's financial competences vary according to the number of years since they started cohabiting, got married or were widowed.¹⁷ Moreover, the knowledge gap does not disappear when women and men who live and take decisions on their own are compared.¹⁸

The ECF asks participants to what extent they are informed about the financial decisions taken in their household. The percentage of adults that are not informed of such decisions in their household is very low (6%), and it is lower for women than for men (5% and 7%, respectively, see Table 1). However, among those who have acquired financial products in the last two years, women are less inclined to purchase them on their own (39% of women, as against 44% of men).

Risk preference differences: another hypothesis points out that, if for the same level of income women accumulate fewer assets than men, their incentive to acquire financial knowledge will be lower.¹⁹ This lower accumulation may be due to the fact that women are less prepared to take on risk than men.²⁰ In line with this argument, Table 1 shows that men say they are more prepared to take on risk than women (38% of men state that they are prepared to take on risk to obtain a higher return, 6 pp more than in the case of women).

Social norms: lastly, some studies suggest that the difference may stem from social norms that assign a more traditional role to women. This more traditional role would be associated with more limited access by women to financial resources, political power and education. By contrast, in less traditional societies gender roles would be

15 The difference between the percentages of men and women who work in the labour market is 11 pp.

16 See Hsu (2016).

17 See, for example, Bucher-Koenen et al. (2017) or Fonseca et al. (2012).

18 See Brown and Graf (2013).

19 See Jappelli and Padula (2013).

20 There are multiple references documenting women's greater risk aversion. See, for example, Jianakoplos and Bernasek (1998) or Croson and Gneezy (2009), and the references they cite.

more similar. According to this hypothesis, in more egalitarian societies there should be smaller financial literacy gender gaps. One possible channel would be that in households exposed to more egalitarian norms men might be expected to take turns with women in financial decision-making.²¹ Furthermore, the importance of social norms may transcend the domestic environment. For example, wider gender gaps have been documented among young Italians in regions with more traditional social norms.²²

In order to be able to quantify the importance of social norms in Spain, regional differences are considered in the arrangements established by default for the following two cases: custody (sole or joint) in the case of divorce, and the financial arrangements (community property or separate property) in matrimonial agreements. These arrangements may be interpreted as indicators of the degree of gender equality within a society. Thus, in regions where the separate property system predominates, one might expect women to have greater financial autonomy. This would be due to the fact that there are higher expectations for women to be responsible for their own finances, rather than delegating them or sharing them with their partner. Greater responsibility would be associated with greater financial knowledge, either merely through experience or through the deliberate decision to acquire such knowledge. Likewise, in regions in which joint custody is more common, women may have greater incentives to acquire or improve financial knowledge²³ (for example, because it increases their ties to the labour market). A possible explanation would be that the introduction of joint custody has an effect on the distribution of time within the marriage, since married women devote more time to work and married fathers assign more time to household tasks.²⁴

Chart 3 shows the gender gap according to the default arrangements existing in each region. The gender gap is 10.2 pp in those regions where the default arrangement is sole custody, as against 8.7 pp in those where it is joint custody (Aragon, Catalonia, Valencia, Navarre and Basque Country). Likewise, in the regions where the community property system is the default for marriage arrangements the gap is 10.3 pp, while the gap is 8.0 pp in those where it is the separate property system (Aragon, Balearic Islands, Catalonia, Navarre and Basque Country).²⁵

21 See Zaccaria and Guiso (2020).

22 See Bottazzi and Lusardi (2020).

23 Given women are expected to have fewer resources in the event of divorce with joint custody than with sole custody (where the recipient of a supplementary pension is usually the woman), married women will increase their saving (Fernández and Wong (2014)). The type of custody, however, does not seem to have affected the probability of divorce (Gruber (2004) and Halla (2013)).

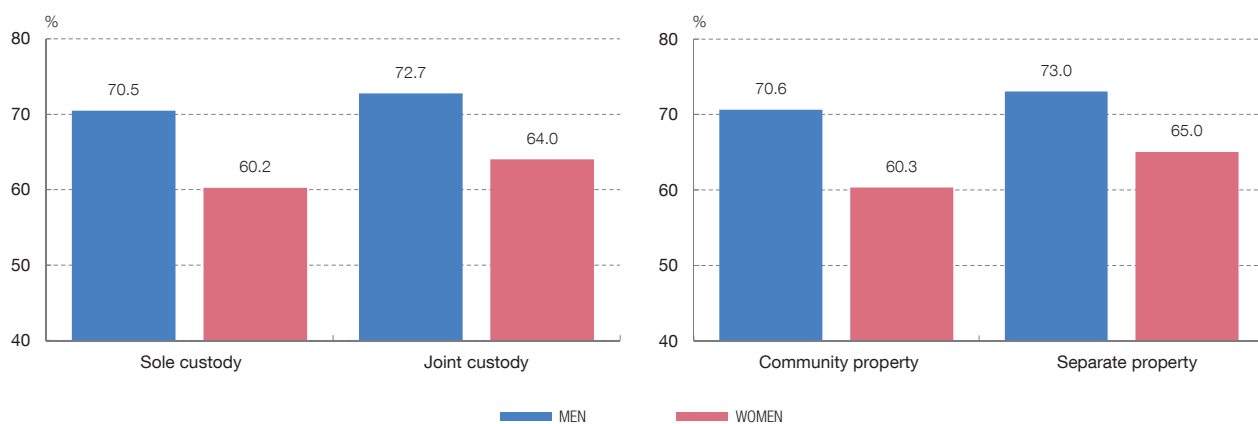
24 See Altindag et al. (2015). For their part, González and Özcan (2008) show that financial activities, such as the decision to save, change when society allows divorce.

25 The default financial arrangements for marriage and custody types may measure other factors in addition to social norms. For example, some papers, such as Mora-Sanguinetti and Spruk (2018), indicate that the regions where community property arrangements predominate have a different level of court congestion and of business activity. These effects are accounted for by including controls for the regions in the regressions, since it is not clear why the impact would be asymmetric by gender.

Chart 3

PERCENTAGE OF CORRECT ANSWERS BY GENDER IN GROUPS OF REGIONS

The financial literacy gender gap is wider in regions where sole custody and community property arrangements are the default than in those with joint custody (Aragon, Catalonia, Valencia, Navarre and Basque Country) or separate property (Aragon, Balearic Islands, Catalonia, Navarre and Basque Country) ones.



SOURCE: Banco de España calculations based on ECF (2016) microdata.



In the next section, ECF data are used to quantify how the financial literacy gender gap varies in Spain when each of the mechanisms mentioned in the literature is considered.

The contribution of the possible mechanisms to the financial literacy gender gap in the case of Spain

This section shows how the financial literacy gender gap’s size varies when each mechanism explored in the literature is taken into account. To do so, multiple linear regression models are estimated by incorporating the ECF variables associated with each mechanism.

The results of the estimation are presented in Table 2. Each column shows how the gender gap varies when considering each mechanism. This is indicated by the coefficient associated with “Woman”, which measures women’s average financial literacy index difference relative to men. For example, column 1 shows the original gap without adjusting for any possible explanation (i.e. without including additional variables in the regression). The coefficient corresponding to the “Woman” variable indicates that, on average, women’s financial literacy is 0.45 standard deviations below men’s. This gap is statistically different from zero. The following columns of Table 2 show how this gap varies when considering successively men and women who are similar in terms of their socio-demographic characteristics (column 2), their generic skills (column 3), their attitudes (column 4) and their social milieu (column 5).

Table 2

REGRESSION OF THE STANDARDISED SUM OF CORRECT ANSWERS

40% of the gender gap is explained by differences between men and women in socio-demographic characteristics, generic skills, interest in or attitudes towards finance and social norms, which can be measured using variables included in the ECF (2016).

	(1)	(2)	(3)	(4)	(5)
Woman	-0.45***	-0.4***	-0.34***	-0.33***	-0.27***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
<i>Controls included:</i>					
Socio-demographic characteristics		Yes	Yes	Yes	Yes
Generic skills			Yes	Yes	Yes
Interest in or attitudes towards finance				Yes	Yes
Social norms					Yes
# obs	8,418	8,417	8,128	7,976	7,976
R ²	0.05	0.35	0.42	0.42	0.42

SOURCE: Banco de España calculations based on ECF (2016) microdata.

NOTE: the dependent variable is the standardised sum of correct answers to the financial literacy questions; the data are weighted and the income used is imputed income (the standard errors shown in brackets are adjusted for multiple imputation). The regressions in columns (2)-(5) include binary variables for regions. Under the "Controls included" row are the variables progressively added to the specifications. Column (2) adds controls for socio-demographic characteristics; specifically, the indicators of age group, "born abroad", highest completed level of education and imputed household income. Column (3) includes the generic skills index as a control. Column (4) includes indicators for interest in finance (if the respondent works or has worked in finance), household composition (i.e. whether the respondent lives with a partner and/or children), specialisation in household tasks (measured using the variable of recent acquisition of financial product of their own accord) and risk aversion. Lastly, column (5) includes a control for social norms, by means of an interaction between being a woman and residing in one of the regions where sole custody or community property arrangements predominate. See Table 1 for further details on the variables included as controls. The number of observations decreases between columns (1)-(4) since data for some of the variables used are not available for some individuals. *** p < 0.01, ** p < 0.05, * p < 0.10.

Chart 4 provides a visual summary of the results where each bar corresponds to a column in Table 2.

First, the results show that, even when comparing men and women with similar socio-demographic characteristics (column 2 of Table 2 and bar 2 of Chart 4), the gap between their average financial literacy is not substantially different from the gap observed in the population as a whole. For instance, women's average level is 0.40 standard deviations below men's when taking into account socio-demographic characteristics such as age, region of residence, country of birth, level of education and household income.

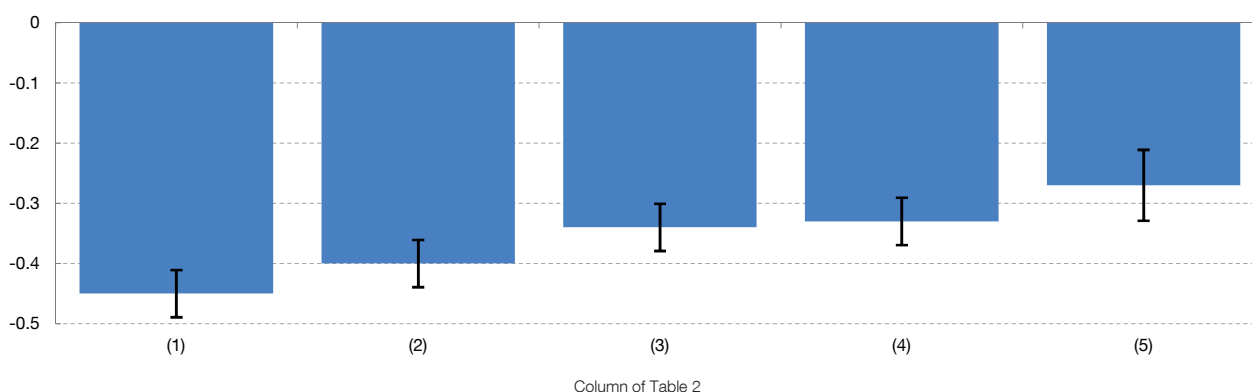
Second, the gap narrows to 0.34 standard deviations when including the generic skills index (column/bar 3). Therefore, neither do differences in skills suffice to fully explain why men are more financially literate.

Further, differences in attitudes (measured using labour market experience in finance, the level of risk aversion, the specialisation in household tasks, household composition and an indicator of whether the person concerned has recently acquired a financial product of their own accord) do not make a substantial contribution to explaining the financial literacy gender gap either, which remains 0.33 standard deviations (column/bar 4). The hypotheses considered thus far are only able to close the gap by 27%.

Chart 4

CONTRIBUTION OF MECHANISMS TO THE FINANCIAL LITERACY GENDER GAP IN SPAIN

The financial literacy gender gap is 0.45 standard deviations. This gap narrows to 40% when comparing men and women who share similarities in socio-demographic characteristics, generic skills, interest in and attitudes towards finance, and social norms.



SOURCE: Banco de España calculations based on ECF (2016) microdata.

NOTE: Column (1) = Unadjusted gap; column (2) = (1) + Socio-demographic characteristics; column (3) = (2) + Generic skills; column (4) = (3) + Attitudes; column (5) = (4) + Social norms (regions with non-traditional regimes). The lines superimposed on each column represent the 95% confidence interval associated with each estimated gap.



Lastly, whether the financial literacy gender gap varies with social norms, measured in this case on the basis of the default marriage or custody arrangements in the region of residence, is assessed. For instance, in the regions where the default option is joint custody or separate property marriage arrangements, the gender gap narrows to 0.27 standard deviations (column/bar 5). In contrast, in those regions where sole custody and community property marriage arrangements predominate, the gender gap is 0.35 standard deviations.²⁶ Although this evidence is consistent with the hypothesis that the gaps are narrower in more gender-equal societies, they are still substantial — even in the former group of regions —, since 60% of the gap remains unaccounted for.²⁷

Alternative measures of financial competences

This section considers alternative measures of financial competences to the sum of correct answers. First, men's and women's uneven recourse to responding "Don't know" is taken into account. Second, the gender gap in the perception of own financial literacy and confidence in their survey answers is documented. Lastly, gender gaps in knowledge and use of financial products are considered.

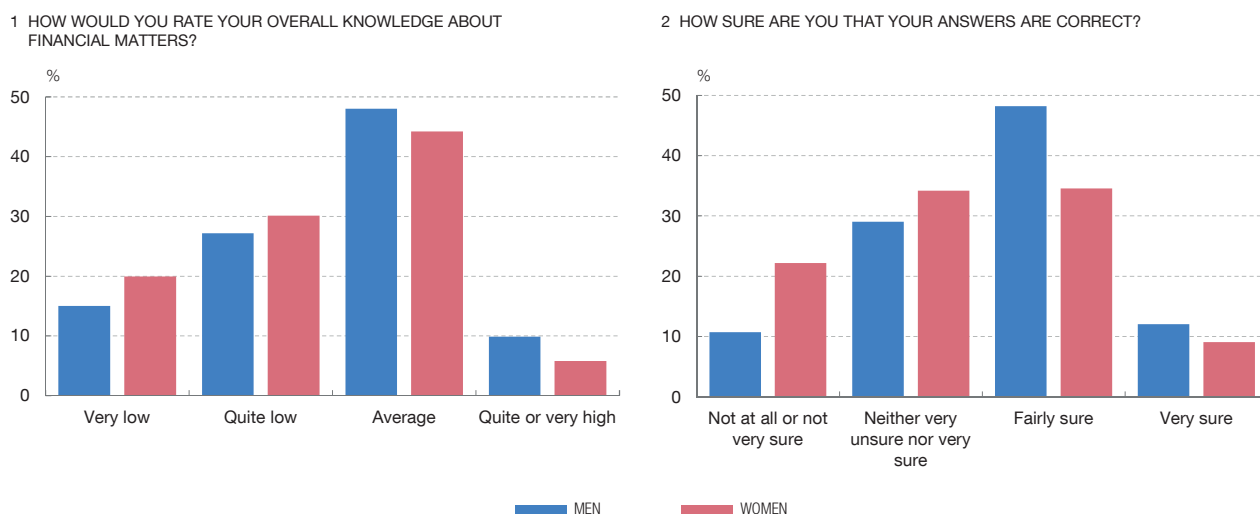
²⁶ It is interesting to point out that, in a generic skills regression, the estimated coefficient for woman does not depend on the marriage or custody arrangements prevalent in the region of residence.

²⁷ It is important to indicate that the order in which the controls are included in the regression does not affect the article's conclusions.

Chart 5

PERCEPTION OF OWN FINANCIAL LITERACY, BY GENDER

Set against women, men have a higher perception of their own financial literacy and greater confidence in their answers to financial questions.



SOURCE: Banco de España calculations based on ECF (2016) microdata.



As the second section of this article shows, more than half of the gender gap in the sum of correct answers is due to a greater share of women responding “Don’t know”. While answering “Don’t know” is different to answering incorrectly, it is difficult to determine the extent to which recourse to the former indeed indicates a lack of knowledge or whether it points to a lack of confidence.²⁸ It is possible that a portion of the gender gap in financial literacy reflects differences in how questions are answered when respondents are not sure about the correct answer.²⁹ A similar exercise to Table 2, in which the propensity to answer “Don’t know” is considered the dependent variable, shows that 50% of the difference in “Don’t know” answers observed between men and women is accounted for by the same mechanisms analysed above. There is a gender gap of 0.35 standard deviations in “Don’t know” answers, which closes to 0.18 when adjusting for the hypotheses mentioned in the literature. This remaining gap is equivalent to two-thirds of the adjusted gender gap in “correct” answers.

The ECF also asks respondents to assess how they perceive their level of financial literacy. Moreover, the survey includes a question on how confident they are that their answers are correct. The results of these answers (perceived financial literacy and

28 For example, 70% of respondents answering “Don’t know” in a survey conducted in Germany had answered the same questions correctly when the “Don’t know” option was not available (Bucher-Koenen et al. (2017)).

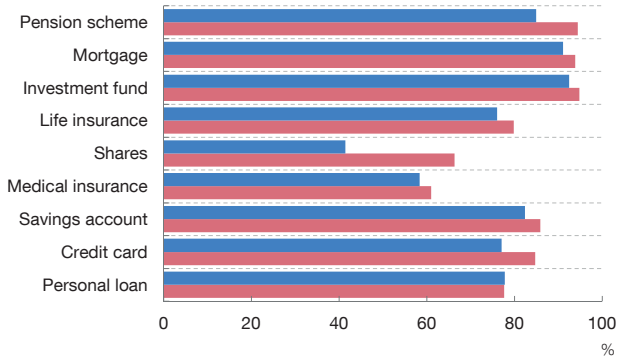
29 If the probability of responding to the survey’s questions with at least one “Don’t know” answer is included in Table 2 as an additional control, the gender gap closes to 0.24 standard deviations, approximately half the initial gap. However, it is important to indicate that the “Don’t know” answers are automatically associated with the final financial literacy score. Therefore, the quantification of this association may be problematic.

Chart 6

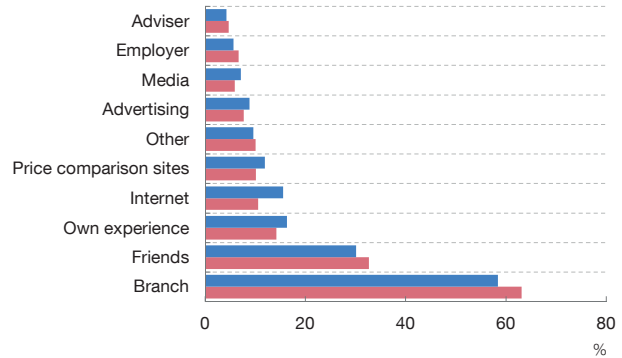
SOURCES OF INFORMATION ON THE PRODUCT ACQUIRED

When acquiring financial products, women are more inclined to obtain information from professionals. For women, the information they obtain at branches has the most influence on their decisions, whereas men tend to rely more on their prior experience.

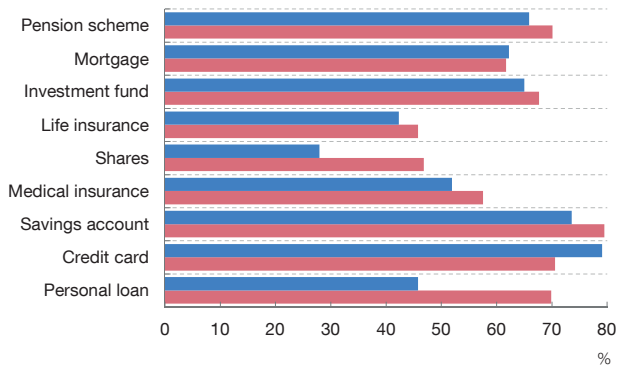
1 THE PROFESSIONAL PROVIDES THE INFORMATION



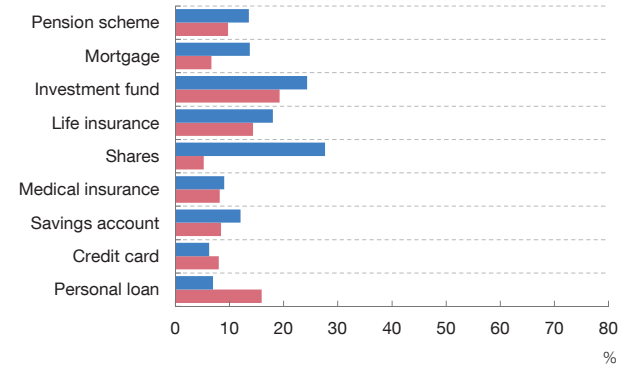
2 MOST INFLUENTIAL SOURCE OF INFORMATION ON THE DECISION



3 THE BRANCH HAS MOST INFLUENCE ON THE DECISION



4 THE INTERNET HAS MOST INFLUENCE ON THE DECISION



■ MEN ■ WOMEN

SOURCE: Banco de España calculations based on ECF (2016) microdata.

NOTE: The sample includes respondents who have acquired a financial product of their own accord in the last two years. Fixed-income securities are excluded (less than 0.5% of men and women acquired them). "Branch" includes the information provided by financial institution staff.



confidence in their answers) are shown, by gender, in Charts 5.1 and 5.2, respectively. In both cases, men report higher levels than women. On average, women report having a financial literacy level that is 0.20 standard deviations below men's. This is once again notably lower than the 0.45 figure obtained from the sum of correct answers.³⁰

Lastly, the ECF asks about familiarity with and ownership and recent acquisition (in

30 The narrower gap may be due to women assessing their level of financial literacy less correctly. However, a similar exercise to that above, testing whether the same hypotheses could explain the gap in perceived financial literacy, shows that the gap closes in the same proportion as in Table 2. Once again, the difference is significantly smaller in regions with joint custody and separate property marriage arrangements. Therefore, it is unclear why women should make more mistaken assessments precisely in more equal societies.

31 Bover et al. (2018) provide aggregate information on the products acquired and uses of information sources, in addition to a detailed analysis of the main results of the ECF (2016).

the last two years) of a set of ten financial products and services.³¹ Overall, no significant gender gaps are observed in product familiarity or in products owned. However, such familiarity is measured as having heard of the products, which is a broad measure. Ownership and acquisition may be individual or joint with other household members.

The ECF shows some small differences regarding the most influential information source when deciding whether to acquire a product (see Chart 6).³² For instance, in the sample of respondents who have acquired a product in the last two years, women are more inclined to obtain information from professionals than men (80% and 75%, respectively).³³ The information provided at branches, including branch staff, also influences women more (63%) than men (58%), whereas men tend to do more independent research.

The financial product familiarity and acquisition gaps are smaller than those detected in the financial literacy level. A possible explanation could be women's greater propensity to seek professional assistance and that the decisions analysed are not usually individual ones. It is also possible that the financial literacy gap is reflected in other dimensions, such as in the quality of the type of product chosen (e.g. bank accounts with greater economic benefits), in projected income for old age and even in the planning of day-to-day spending. Further, how literacy is measured may impact the size of the gap. All this suggests that more detailed analyses are required to better measure financial literacy and to assess the consequences of the gender gaps in the Spanish population.

1.3.2021.

³² Various studies find that women are less likely to use internet resources as a source of information and to consult professionals. See, for example, Loibl and Hira (2006 and 2011) and Bucher-Koenen et al. (2017).

³³ This difference is more pronounced when shares are the product acquired.

REFERENCES

- Altindag, D., J. Nunley and A. Seals (2015). "Child-custody reform and the Division of Labor in the Household", *Review of the Economics of the Household*, vol. 15(3), pp. 833-856.
- Atkinson, A., C. Monticone and F. A. Mess (2016). *OECD/INFE international survey of adult financial literacy competencies. Technical Report*, OECD.
- Banco de España and CNMV (2018). Survey of Financial Competences (ECF) 2016. Available at <https://app.bde.es/pmk/en/ecf/2016>.
- Bordalo, P., K. Coffman, N. Gennaioli and A. Shleifer (2019). "Beliefs about gender", *American Economic Review*, vol. 109(3), pp. 739-73.
- Bottazzi, L. and A. Lusardi (2020). "Stereotypes in Financial Literacy: Evidence from PISA", *NBER Working Paper* No. 28065.
- Bover, O., L. Hospido and E. Villanueva (2018). *Survey of Financial Competences (ECF) 2016: main results*, Banco de España and CNMV. Available at https://www.bde.es/f/webbde/SES/estadis/otras_estadis/2016/ECF-Prest-en.pdf.
- Brown, M. and R. Graf (2013). "Financial literacy and retirement planning in Switzerland", *Numeracy*, vol. 6(2), pp. 2-23.
- Bucher-Koenen, T., A. Lusardi, R. Alessie and M. Van Rooij (2017). *How financially literate are women? Some new perspectives on the gender gap*, Network for Studies on Pensions, Aging and Retirement.
- Chen, H. and R. P. Volpe (2002). "Gender differences in personal financial literacy among college students", *Financial Services Review*, vol. 11(3), pp. 289-307.
- Croson, R. and U. Gneezy (2009). "Gender differences in preferences", *Journal of Economic literature*, vol. 47(2), pp. 448-74.
- Driva, A., M. Lührmann and J. Winter (2016). "Gender differences and stereotypes in financial literacy: Off to an early start", *Economics Letters*, vol. 146, pp. 143-146.
- Fernández, R. and J. C. Wong (2014). "Divorce risk, wages and working wives: A quantitative life-cycle analysis of female labour force participation". *The Economic Journal*, vol. 124(576), pp. 319-358.
- Fonseca, R., K. J. Mullen, G. Zamarro and J. Zissimopoulos (2012). "What explains the gender gap in financial literacy? The role of household decision making", *Journal of Consumer Affairs*, vol. 46(1), pp. 90-106.
- González, L. and B. Özcan (2013). "The risk of divorce and household saving behavior", *Journal of Human Resources*, vol. 48(2), pp. 404-434.
- Gruber, J (2004). "Is Making Divorce Easier Bad for Children?", *Journal of Financial Economics*, vol. 22, pp. 799-833.
- Halla, M (2013). "The effect of joint custody on family outcomes", *Journal of the European Economics Association*, vol. 11(2), pp. 278-315.
- Hastings, J. S., B. C. Madrian and W. L. Skimmyhorn (2013). "Financial literacy, financial education, and economic outcomes", *Annual Review Economics*, vol. 5(1), pp. 347-373.
- Hsu, J. W. (2016). "Aging and strategic learning: The impact of spousal incentives on financial literacy", *Journal of Human Resources*, vol. 51(4), pp. 1036-1067.
- Jappelli, T. and M. Padula (2013). "Investment in financial literacy and saving decisions", *Journal of Banking & Finance*, vol. 37(8), pp. 2779-2792.
- Jianakoplos, N. A. and A. Bernasek (1998). "Are women more risk averse?", *Economic Inquiry*, vol. 36(4), pp. 620-630.
- Klapper, L. and A. Lusardi (2020). "Financial literacy and financial resilience: Evidence from around the world", *Financial Management*, vol. 49(3), pp. 589-614.
- Loibl, C. and T. K. Hira (2006). "A workplace and gender-related perspective on financial planning information sources and knowledge outcomes", *Financial Services Review*, vol. 15(1), pp. 21-42.
- (2011). "Know your subject: A gendered perspective on investor information search", *Journal of Behavioral Finance*, vol. 12(3), pp. 117-130.
- Lusardi, A. and O. S. Mitchell (2011). "Financial literacy and planning: Implications for retirement wellbeing", *NBER Working Paper* No. 17078.

- Lusardi, A. and O. S. Mitchell (2014). "The Economic Importance of Financial Literacy: Theory and Evidence", *Journal of Economic Literature*, vol. 52(1), pp. 5-44.
- Lusardi, A., O. S. Mitchell and V. Curto (2012). "Financial sophistication in the older population", *NBER Working Paper* No. 17863.
- Mahdavi, M. and N. J. Horton (2014). "Financial knowledge among educated women: Room for improvement", *Journal of Consumer Affairs*, vol. 48(2), pp. 403-417.
- Mora-Sanguinetti, J. S. and R. Spruk (2018). "Industry vs services: do enforcement institutions matter for specialization patterns? Disaggregated evidence from Spain", *Working Paper* No 1812, Banco de España.
- OECD (2018). *OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion*, Paris.
- Zaccaria, L. and L. Guiso (2020). *From Patriarchy to Partnership: Gender Equality and Household Finance*, available at SSRN 3652376.