

Report No. 102017-TR

# THE GENDER GAP IN THE USE OF FINANCIAL SERVICES

December 2015



# **THE GENDER GAP IN THE USE OF FINANCIAL SERVICES**

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## **EXECUTIVE SUMMARY**

1. The reach of the financial sector in Turkey is wide—as measured by account penetration, use of electronic payments, and credit card ownership—relative to both developing and high-income countries. For instance, according to the Global Financial Inclusion (FinIndex) database, 58 percent of adults report having a formal account and 45 percent of adults report having a credit card (in comparison, 43 percent of adults in middle-income countries, on average, report having an account and 7 percent having a credit card). However, a closer look at disaggregated data reveals that while there is very high account ownership among men, the rate is comparatively low for women. The gender gap in Turkey for account ownership is 49 percentage points, the highest rate among all middle-income countries. Multivariate regressions estimate that women in Turkey are 38 percentage points less likely than men to have an account, after controlling for other individual characteristics, such as income, employment, education, and age.

2. Savings, both formal and informal, and among both men and women, is very low in Turkey—only 10 percent of adults report saving in the past year—consistent with low national savings rates. Even among adults that report having an account, only eight percent of banked adults report saving in a formal financial institution and another six percent of banked adults report saving using other modes of. Access to formal credit from banks is low (5 percent), especially among women (2 percent). However, there is a very high reported use of store credit, which is likely debt incurred on store-issued credit cards (as corroborated by data collected on credit card ownership). 81 percent of men and 55 percent of women in Turkey report using bank or store credit or having a credit card, which is double the reported use of credit in comparable ECA and middle-income countries.

3. We explore reasons for the large gender gap in financial inclusion in Turkey and find that female workplace participation is an important factor in explaining financial inclusion among women. Men are more than three times as likely as women to report using an account to receive money from work and/or the government. Although only 16% of women report being in the workforce, 97 percent of wage- and self-employed women in Turkey are banked, as compared to 23 percent of women who report being out of the workforce. In comparison, 70 percent of Turkish men that report being out of the workforce have an account

## **1. INTRODUCTION**

4. At the 2014 World Bank/IMF Annual Meetings, World Bank President Kim spoke of the 2.5 billion adults worldwide excluded from the formal financial system. He used the statistic to illustrate the Bank's commitment to expanding financial inclusion among the poor and to launch a new initiative to provide universal financial access to all working-age adults by 2020. A key component of the World Bank pledge is towards inclusive financial growth, including greater access to financial services by women, youth, and the rural poor.

5. Financial inclusion, defined broadly as a measure of access to and the use of financial services by individuals and firms, is a topic closely tied to overarching goals of economic development and inclusive growth. Research on the subject has been advanced by the recent availability of detailed micro data for individual and firms to complement earlier country level financial infrastructure and service statistics. In large part due to cross-country individual level data from the Global Financial Inclusion Database (Finindex), the World Bank Enterprise Surveys, and other country-led data collection efforts, a gender gap in financial inclusion has been identified and studied. For instance, the Finindex data has been used to show a persistent gender gap in developing countries, after controlling for other individual characteristics, such as employment and income (Demirguc-Kunt and Klapper, 2013).

6. Turkey, an upper-middle income country, is one of the founding member of OECD and a member of the Group of Twenty (G-20) major countries. At first glance, Turkey, where 58 percent of individuals use a formal financial account, ranks favorably in comparison to its regional and economic comparison groups. A more nuanced examination of the data, however, reveals a large gender gap— 82 percent of men own an account, as compared to only 33 percent of women. This gender gap compares poorly to other countries in the ECA region, the emerging BRIC countries, and among the larger sample of all middle-income countries. In addition, the data show that savings rates, both formal and informal, among both men and women are comparatively low, though this is consistent with national data. The use of credit card debt (reported as store credit) is much higher than its use in other middle-income countries, though a significant gender gap exists.

7. Globally, around 50 percent of adults have a bank account (Demirguc-Kunt and Klapper, 2013). It is important to note that using an account does not necessarily mean a lack of "access" to financial services, i.e. some people might have affordable access, but have no need for financial services and choose not to use them. However, many of the estimated 2.5 billion adults without a formal account lack access in the sense that costs are prohibitively high or banks and other financial institutions are located too far away, or financial services are not available because of legal barriers, regulatory constraints, information impediments or cultural deterrents. The poor, women, youth, and rural residents are more likely to report greater barriers to access to financial services (Allen, et al., 2013). In particular, women are more likely to report not having an account because they use someone else's in the family.

8. However, the evidence found in previous literature points to many benefits of personal account ownership and the use of accounts to make formal payments and save, particularly for women and the poor. For instance, having a bank account increases savings (Aportela, 1999), female empowerment (Ashraf et al., 2010), and consumption and productive investment of entrepreneurs (Dupas and Robinson, 2009). Furthermore, remaining unbanked can result in higher costs associated with money order or check-cashing services (Lusardi, 2010), increase the risk of stolen assets (Gross, Hogarth and Schmeiser, 2012), and decrease financial security after retirement (Rhine, et al., 2006).

9. More generally, a wide range of studies find that expanding access to financial services can help reduce poverty and increase economic development (see Rodrik and Rosenzweig, 2009). Earlier theoretical models suggest that financial market frictions can lead to 'poverty traps' by restricting investment in education or occupational choices (for example, Aghion and Bolton, 1997; Galor and Zeira, 1993; and Banerjee and Newman, 1993). For instance, greater occupational choices may in turn affect saving and borrowing behavior, and thus lead to greater income mobility.

10. Empirical studies support these models, for instance, Aportela (1999) and Prina (2012) find that the exogenous provision of accounts to poor households in Mexico and Nepal, respectively, led to a significant increase in household savings. Burgess and Pande (2005), and Bruhn and Love (2009) find significant increases in income, output and employment as a consequence of bank branch expansion in India and Mexico, respectively.

11. Furthermore, the inability to smooth consumption during shocks also causes poor households in financially underdeveloped countries to make suboptimal choices. Jacoby and Skoufias (1992), Funkhouser (1999) and Jensen (2000) provide evidence from India, Costa Rica and Côte d'Ivoire respectively, showing that kids drop out of school in the face of adverse income shocks. Mudroch (1995) makes an extremely important observation that households and enterprises might be making inefficient employment and production choices *ex ante*, simply because they entail a smaller risk (income smoothing, as against the more commonly reported consumption smoothing).

12. Demirguc-Kunt, Klapper and Singer (2012) use the Findex database to document and analyze gender differences in the use of financial services. Even after controlling for a host of individual characteristics including income, education, employment status, rural residency and age, gender remains significantly related to usage of financial services. This study also finds that legal discrimination against women and gender norms may explain some of the cross-country variation in access to finance for women. For instance, in countries where women face legal restrictions in their ability to work, head a household, choose where to live, and receive inheritance, women are less likely to own an account, relative to men, as well as to save and borrow. The results also confirm that manifestations of gender norms, such as the level of violence against women and the incidence of early marriage for women, contribute to explaining the variation in the use of financial services between men and women, after controlling for other individual and country characteristics.

13. In this paper we discuss environmental factors that might help explain the significantly low use of financial services by women in Turkey. For instance, The Gender Gap Report (2013) provides a cross-country rank and score across several socio-economic dimensions. Turkey ranks poorly - 120 out of 136 countries overall. In addition, associated employment data from the Gallup World Poll Survey shows a large gender gap in workforce participation in Turkey and suggests important implications for female workplace participation—98 percent of wage employed women in Turkey are banked, as compared to 23 percent of the majority of women who report being out of the workforce.

14. This paper proceeds as follows. Section 2 summarizes account ownership and usage in Turkey. Section 3 analyzes formal and informal saving rates, Section 4 discusses the use of formal and informal credit and the high use of store credit cards. Section 5 examines gender differences in enterprise financing. Section 6 concludes. An Appendix includes detailed information on our regressions analysis.

## **2. FORMAL ACCOUNT OWNERSHIP**

15. Findex is a public database collected with funding from the Bill & Melinda Gates Foundation and in partnership with Gallup, Inc. on how people in 148 countries around the world report using formal and informal financial services.<sup>1</sup> The database includes nationally representative samples of at least 1,000 randomly selected adults per country. In Turkey, 58 percent of adults report having an account at a formal financial institution—a bank, a credit union, cooperative, post office, or microfinance institution.

16. Financial inclusion in Turkey is high as compared to a wide range of comparison groups - Eastern Europe and Central Asian countries (ECA), middle income countries (MIC), countries where a majority of individuals are Muslim (Islamic), the emerging quartet of countries Brazil, Russia, China and India (BRIC), and members of the Organization for Economic Co-operation and Development (OECD)<sup>2</sup>. Turkey is second to only the sample of OECD countries (Figure 1).

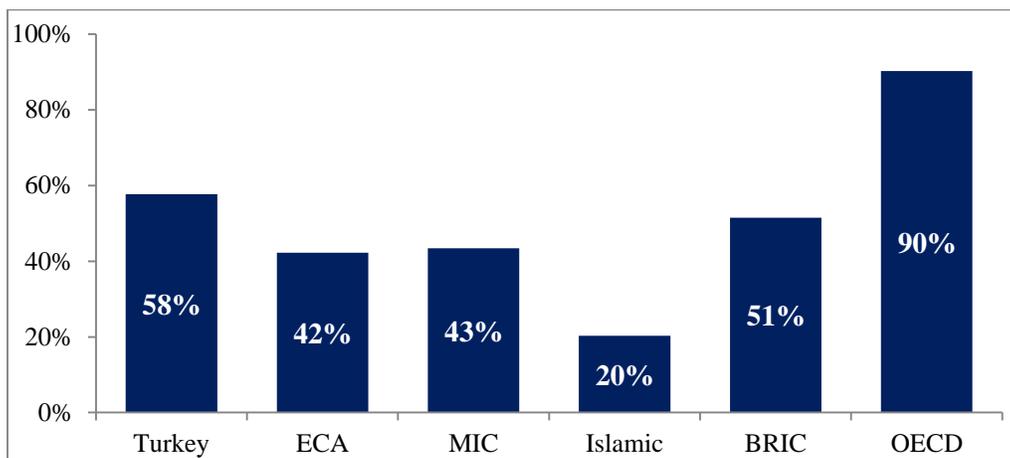
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<sup>1</sup> Complete data (and related methodology and research reports) are available at: [www.worldbank.org/globalfindex](http://www.worldbank.org/globalfindex).

<sup>2</sup> Turkey is excluded from all comparison groups.

**Figure 1: Account Penetration**

Adults with an account at a formal financial institution (%)

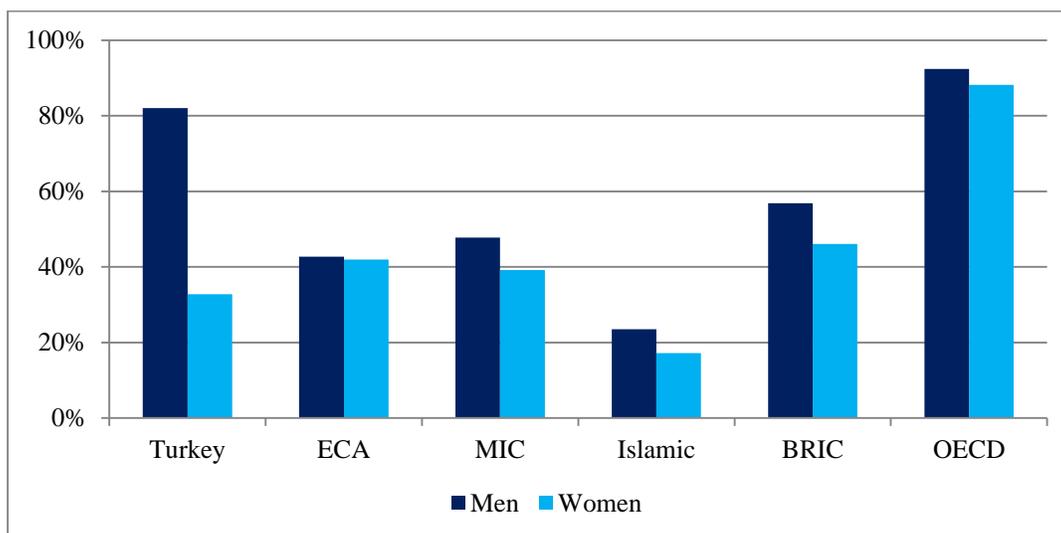


Source: Global Findex; Demircuc-Kunt and Klapper, 2012

17. Yet the gender gap in account penetration for Turkey - 82 percent of men report owning an account compared to 33 percent of women - is significantly larger than all other comparison groups, including MIC, ECA, and Islamic countries (Figure 2). In multivariate regression analysis (Appendix A) we find that after controlling for other individual characteristics, being female in Turkey decreases the log odds of having a formal account by 1.84. Holding all individual characteristics at their means, this translates to a 38 percentage point decrease in the probability of owning a formal account if the adult is female rather than male.

**Figure 2: Account Penetration by Gender**

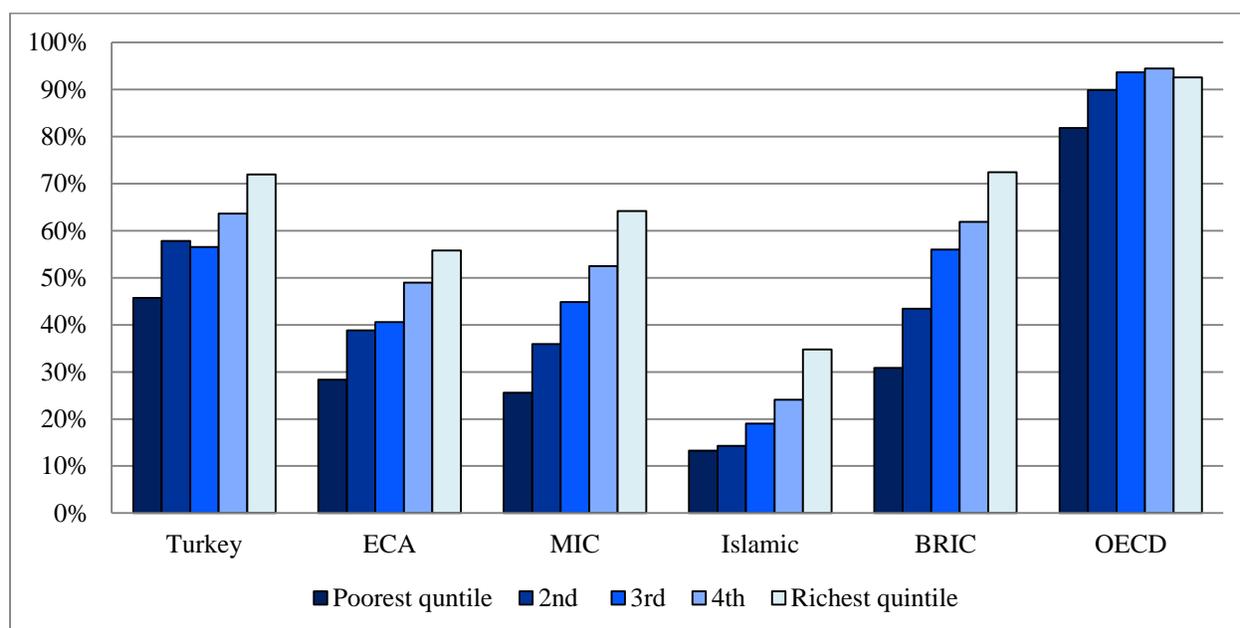
Adults with an account at a formal financial institution (%)



Source: Global Findex; Demircuc-Kunt and Klapper, 2012

18. Next, we examine the relationship between income and account ownership (Figure 3). Multivariate estimations also find that both relative income quintiles and absolute (log) income in Turkey is insignificantly related to account ownership, whereas in a pooled regression of middle-income countries (including country fixed-effects), both measures are largely and significantly related to account ownership.

**Figure 3: Account Penetration across Income Quintiles**  
Adults with an account at a formal financial institution (%)



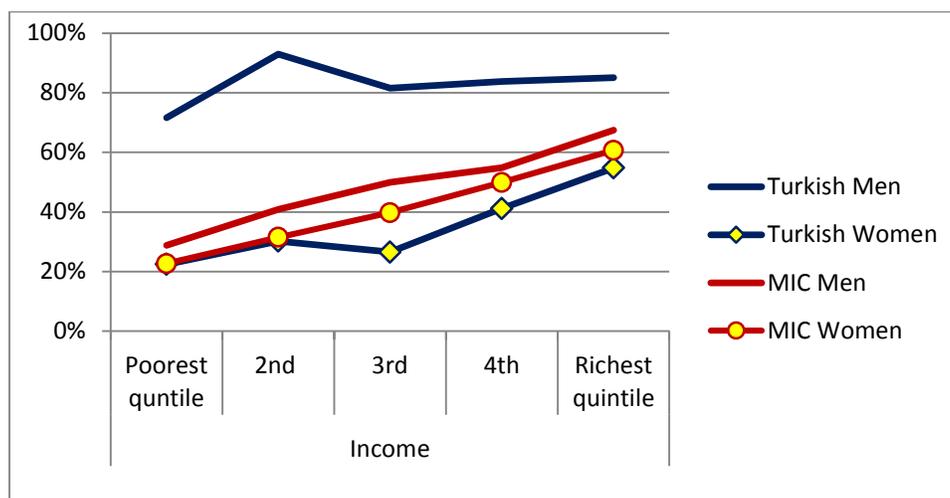
Source: Global Findex; Demircuc-Kunt and Klapper, 2012

19. Before proceeding with our analysis of the gender gap, it should again be noted that the sample for Turkey is only 1,000 observations, and therefore some sub-samples (e.g. by gender and income, education, or age) have fewer than 100 observations.

20. With this caveat in mind, we also find that poor women in Turkey are less likely than wealthy women to have an account, but an 'income gap' does not exist among men (Figure 4). 55 percent of women in the wealthiest 20 percent of earners report owning an account, compared to 22 percent of women in the poorest income quintile, compared to 71 percent of men in the poorest income quintile and 85 percent of women. In other words, within the sample of female respondents, as well as among both men and women, on average, across middle-income countries, we see a relationship between income and financial inclusion, but not among Turkish men.

**Figure 4: Account Penetration by Gender across Income Quintiles**

Adults with an account at a formal financial institution (%)

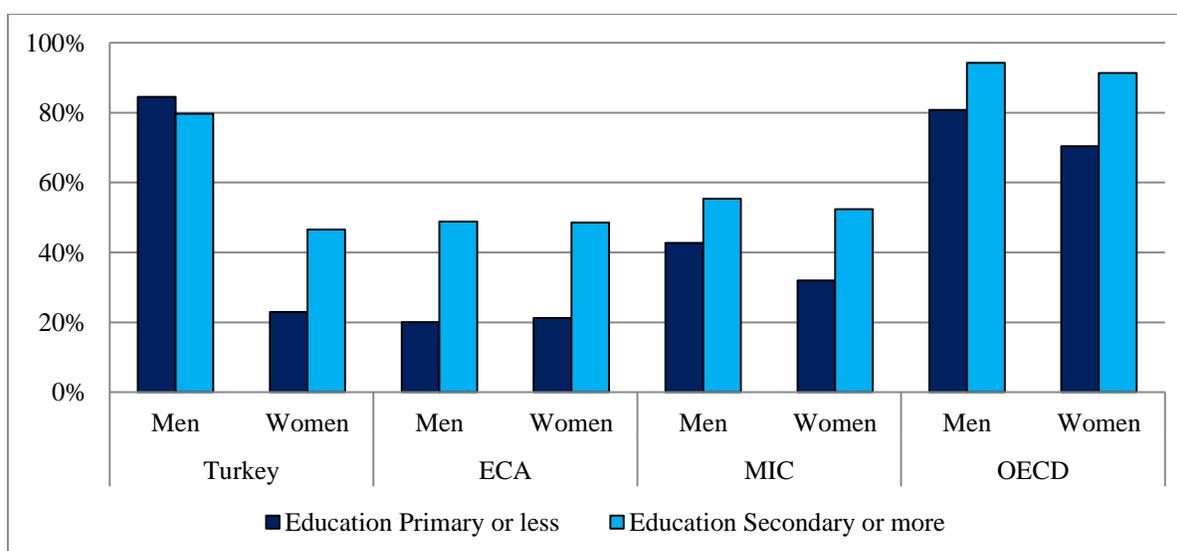


Source: Global Findex; Demircuc-Kunt and Klapper, 2012

21. Figure 5 shows the relationship between education and financial inclusion. Among adults with only a primary education, 85 percent of men report having an account, as compared to only 23 percent of women. Interestingly, in our multivariate analysis (Appendix A), we find that after controlling for employment, age, income, etc., women with more than a primary education are more likely to be banked (as compared to women with only a primary education), but we do not find a significant relationship between education and financial inclusion among men.

**Figure 5: Account Penetration by Gender and Education**

Adults with an account at a formal financial institution (%)



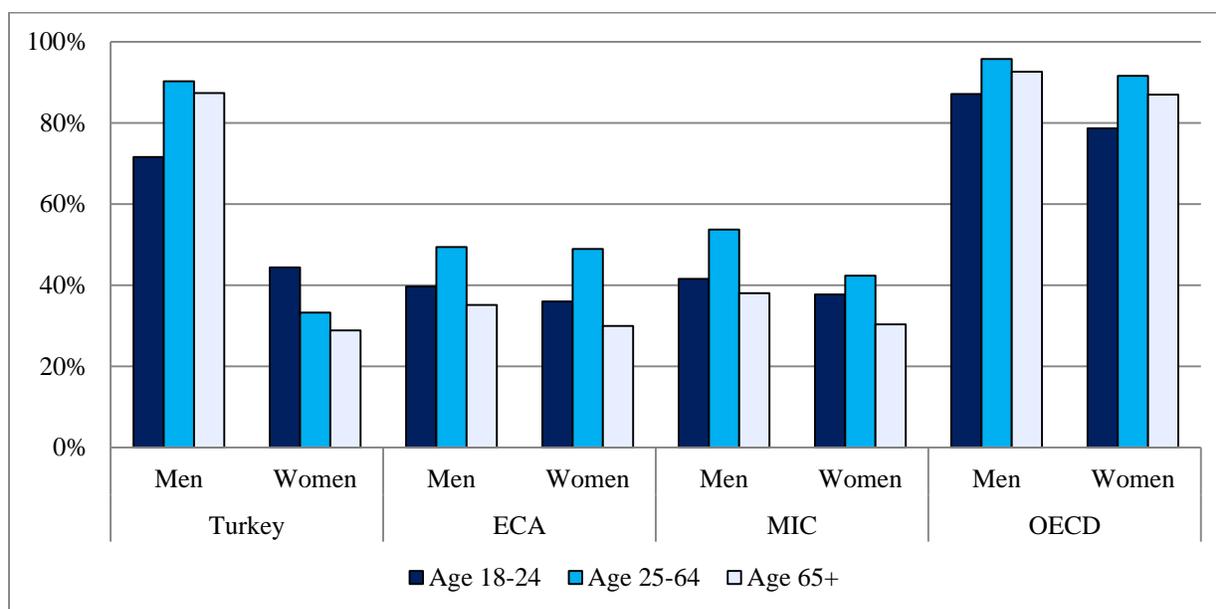
Source: Global Findex; Demircuc-Kunt and Klapper, 2012

22. Next, we examine account ownership over the life-cycle (Figure 6). Among men, we do not find significant differences across age categories, although young men (age 18-24) are less likely to have an account than older men, who would have an account to receive wages or manage their household or business finances. However, we find an interesting trend of increasing use of bank accounts among young women—44 percent of women age 18-24 report having an account, as compared to 33 percent of women age 25-64, and 29 percent of women age 65 and older. This might suggest that younger women have greater need or access to financial services, and might suggest an improving trend in financial inclusion among women.

23. We include in our multivariate analysis (Appendix A) age and age-squared (to test for curvature in the relationship). We find that age is significant for both men and women, however, age-squared is significant only for women. In other words, after controlling for education, employment, income, etc., the ‘typical’ female account holder is younger than the respective male.

**Figure 6: Account Penetration by Gender and Age**

Adults with an account at a formal financial institution (%)



Source: Global Findex; Demirguc-Kunt and Klapper, 2012

24. Labor force participation is also highly correlated with the gender gap in account ownership. As shown in Table 1, Panel A, waged and self-employed women are as likely as men to own an account. However, only 11 percent of women (compared to 34 percent of men) in our sample report wage employment, while only 3 percent of women (compared to 22 percent of men) report self-employment, which includes both formal and informal enterprises. 84 percent of women report being out of the workforce (compared to 37 percent of men), but a large gender gap exists within this group: 23 percent of women out of the workforce report having an account, as compared to 70 percent of men.

25. It is interesting to note that these trends are not observed in the pooled sample of middle-income countries. For instance, among those that report being out of the workforce (21 percent of men and 48 percent of women), reported account ownership is 33 percent and 28 percent, respectively.

26. In Appendix A, we show estimation results of multivariate Logit regressions for the complete sample and split by gender. We find that after controlling for other individual characteristics, being wage employed in Turkey increases the probability of owning an account by 17 percentage points for men—but 74 percentage points for women.

27. We return to this important relationship between wage employment and account ownership in Section 2.3.

**Table 1: Workforce Participation and Financial Inclusion**

Adults with an account at a formal financial institution (%)

**Panel A: Turkey**

	Men		Women		% Own Bank Account	
	<i>Obs</i>	%	<i>Obs</i>	%	<i>Men</i>	<i>Women</i>
Employed (full or part time)	195	34.36%	67	10.71%	94.3%	97.9%
Unemployed	30	6.82%	14	2.29%	53.2%	32.4%
Out of workforce	185	37.09%	382	84.30%	69.5%	22.6%
Self employed	112	21.72%	14	2.70%	93.2%	92.2%

**Panel B: All Middle-Income Countries**

	Men		Women		% Own Bank Account	
	<i>Obs</i>	%	<i>Obs</i>	%	<i>Men</i>	<i>Women</i>
Employed (full or part time)	12,977	39.13%	10,125	21.61%	55.21%	59.81%
Unemployed	2,697	4.27%	,3,175	4.32%	31.05%	33.97%
Out of workforce	9,136	20.53%	20,157	48.21%	33.21%	27.97%
Self employed	8,581	36.06%	6,985	25.06%	49.92%	43.54%

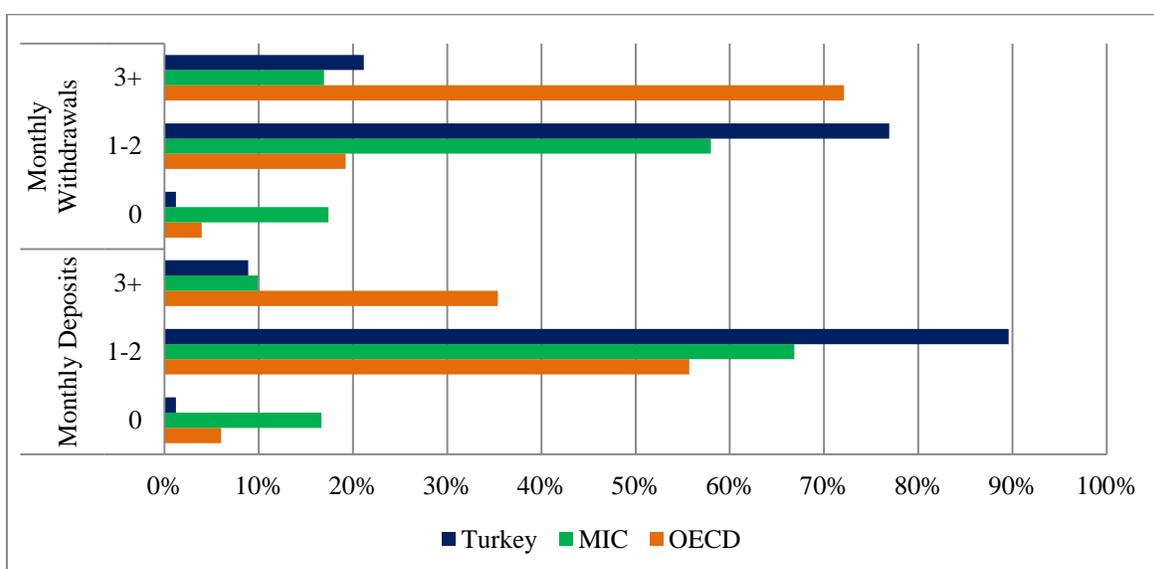
Source: *Global Findex; Demirguc-Kunt and Klapper, 2012*

28. Finally, we examine the use of financial services by rural versus urban residents. Among men in our sample, we do not find a significant difference between the use of financial services between men living in rural versus urban residences, perhaps because of the relatively high ATM penetration of 30 per 1000 Km (compared to the regional average of 19 in ECA). In comparison, we find 27 percent of rural women are banked, as compared to 35 percent of urban women—although this difference is not significant after controlling for income and other individual characteristics.

## 2.1 HOW ARE ACCOUNTS USED?

29. The majority of Turkish account owners access their accounts once or twice a month to deposit or withdraw money (Figure 7). 90 percent of account holders deposit money into their account 1-2 times a month, while only 9 percent deposit more than 3 times per month. Self-employed Turkish adults (13 percent of the population), are more frequent depositors – 21 percent make 3 or more deposits per months. Similarly, 77 percent of account holders withdraw money 1-2 times a month, though 21 percent withdraw money more than 3 times per month. The rate of high frequency withdrawals is relatively high compared to other middle income countries (17 percent) and BRIC countries (15 percent).

**Figure 7: Frequency of monthly withdrawals and deposits**  
Adults with an account at a formal financial institution (%)



Source: Global Findex; Demirguc-Kunt and Klapper, 2012

30. In our sample of Turkish respondents, 98 percent of banked adults report having a debit card, higher than the average across middle income countries of 57%. Adults in Turkey are most likely to withdraw money from their accounts using an ATM. 89 percent of Turkish account holders report using an ATM when they needed to get cash (paper or coins) out of their account. The corresponding proportion of account holders that use an ATM to withdraw money in ECA and MIC countries is 64 and 38 percent, respectively.

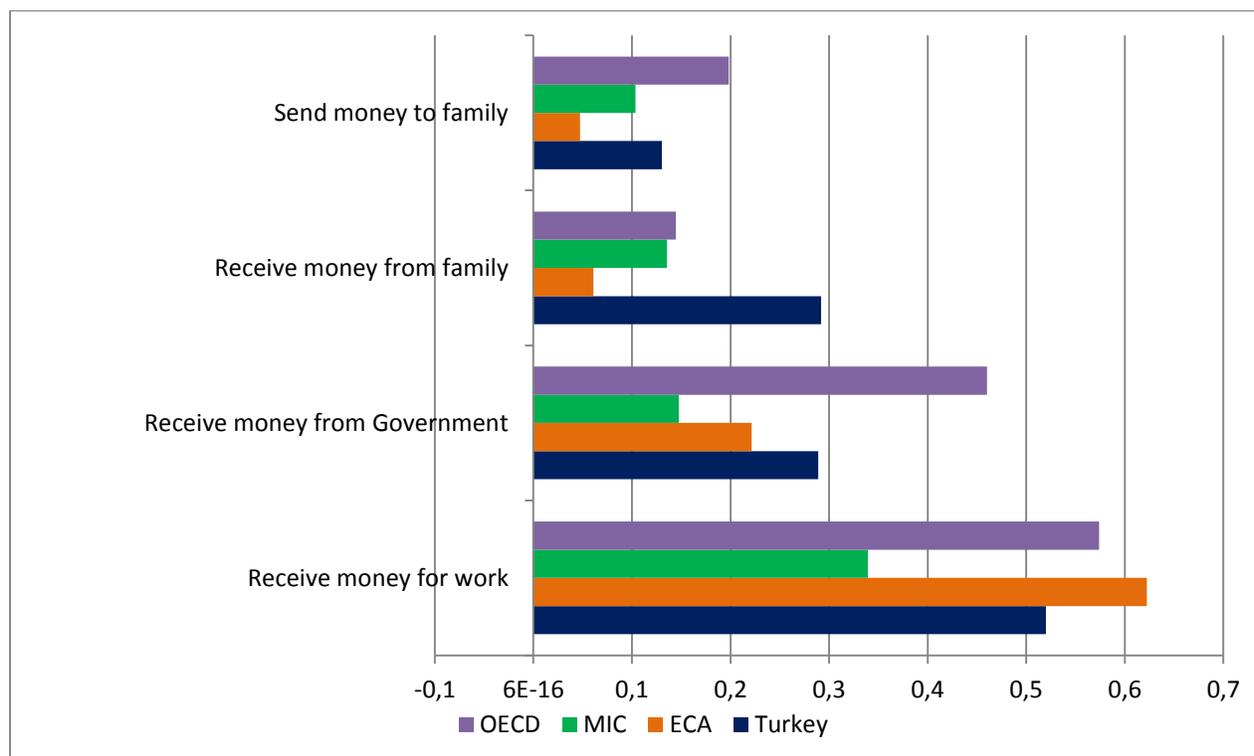
## 2.2 WHY ARE ACCOUNTS USED?

31. Not only are adults in Turkey more likely than adults in other middle-income countries to have an account, they are also more likely to use their accounts to send and receive money and receive wages and/or government payments. The Findex data asks banked adults whether they use their account for a variety of purposes (Figure 8). Among banked Turkish adults, 52 percent of account holders use their accounts to receive wages or payments from the sale of goods or services, which corresponds to 32 percent of all adults in our sample. In addition, 29 percent of banked adults use their accounts to receive government payments, which corresponds to 18 percent of all adults. Adults in Turkey are more than twice as likely to use their accounts to receive wages or government payments as adults in middle-income countries, on average, and on-par with the use of electronic payments in high-income countries.

32. Furthermore, 29 percent of Turkish account holders (16 percent of all adults in our sample) use their account to receive money from family and friends, and 13 percent of account holders use their account to send money (8 percent of all adults). Comparatively, the use of account to receive money is more than twice as high as reported in middle- or high-income countries.

**Figure 8: Account Use**

Adults with an account that use their account to send and receive money (% banked adults)



Source: Global Findex; Demircuc-Kunt and Klapper, 2012

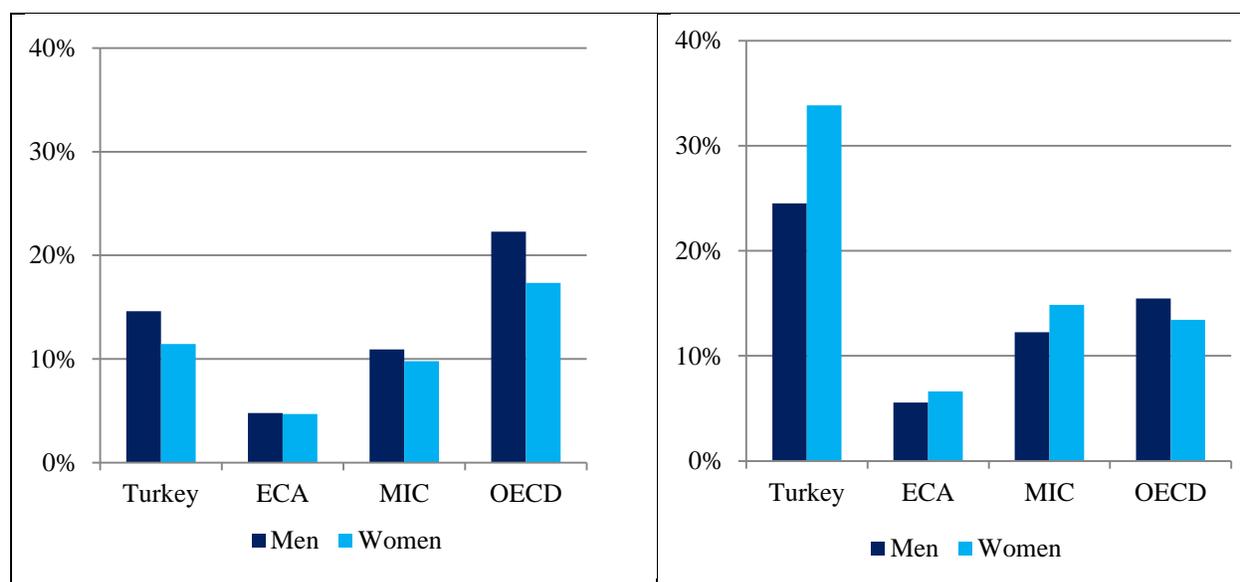
33. Figure 9 reports the gender gap in the use of accounts to receive and/or send money. Both men and women, in Turkey and in comparative country groups, are most likely to use their accounts to receive wages. Strikingly, 34 percent of women also report using their account to receive domestic and/or international remitted money from family and friends, which is almost three times as likely as women (or men) in MIC or OECD countries, on average.

**Figure 9: Account Use by Gender**

Adults with an account that use their account to send and receive money (% banked adults)

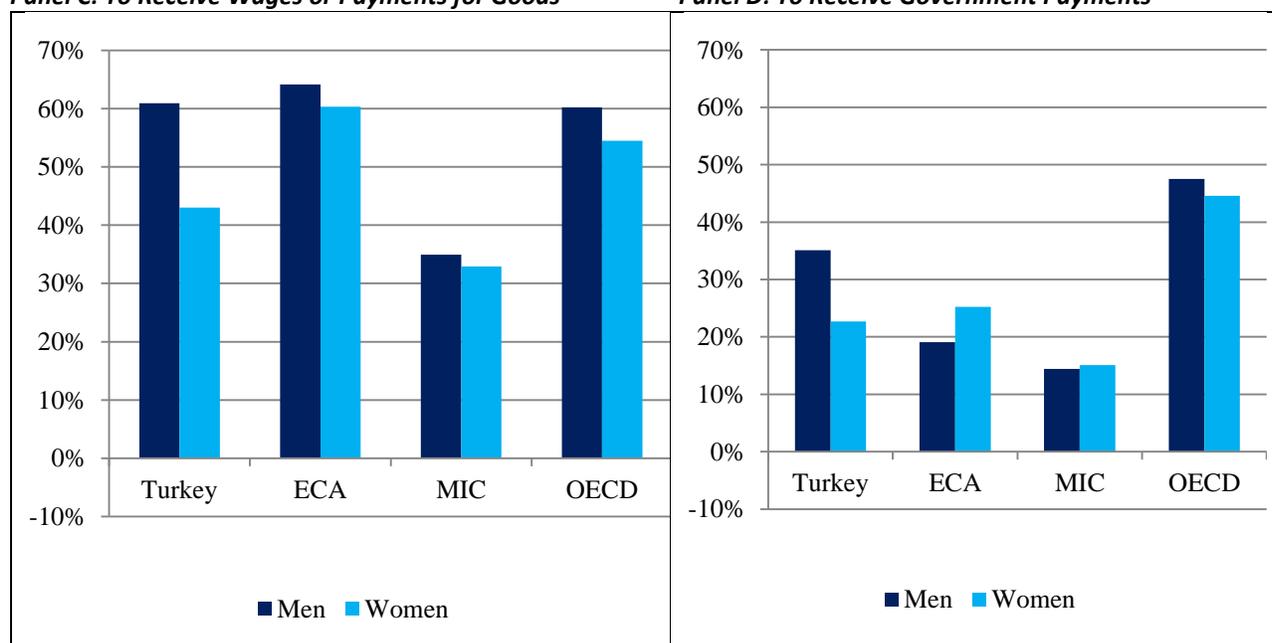
**Panel A: To Send Money**

**Panel B: To Receive Money**



**Panel C: To Receive Wages or Payments for Goods**

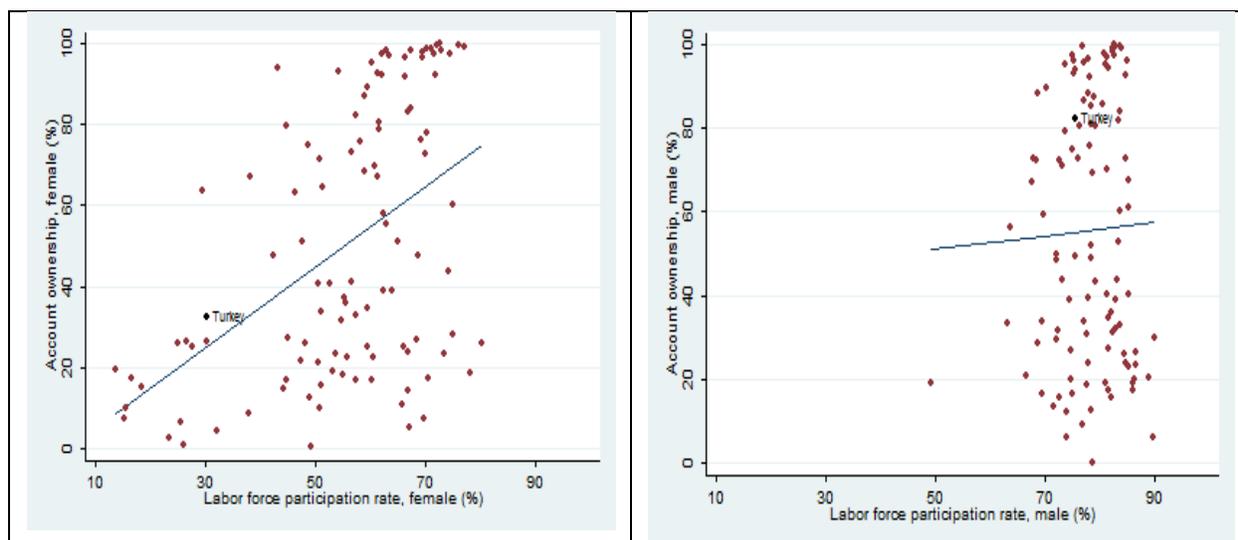
**Panel D: To Receive Government Payments**



Source: Global Findex; Demircuc-Kunt and Klapper, 2012

34. As discussed earlier, the widespread use of electronic payments appears to help explain bank penetration rates in Turkey, particularly among women. In Figure 10, we investigate further the potential role of electronic wage accounts. As shown, in a cross country sample of middle and high income economies, labor force participation rates are significantly positively correlated with account penetration for women—but not for men. We can only speculate that regardless of wage employment, men open accounts to manage household (and enterprise) finances. In contrast, women are more likely to have an account in their own name only if the account is needed to receive payments, such as wages (or remittances). Another explanation might be that only women with wage employment need or can afford their own account.

**Figure 10: Account Ownership and Labor Force Participation rates**

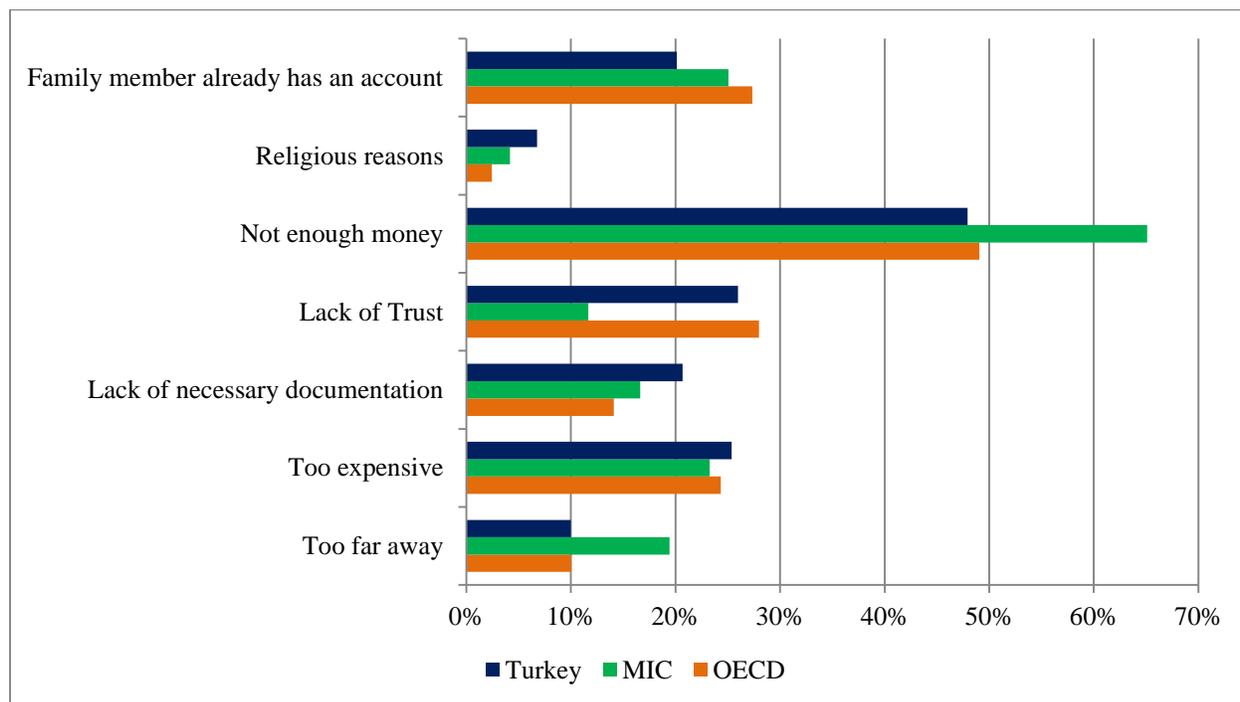


Source: Global Findex; Demircuc-Kunt and Klapper, 2012; World Development Indicators, 2013.

### 2.3 BARRIERS TO ACCOUNT OWNERSHIP

35. In this section we use Findex data on self-reported barriers to account ownership to better understand the low use of accounts by women, relative to men. As shown in Figure 11, the most commonly reason reported globally for not having an account was a lack of money to use it: 15 percent of unbanked adults in Turkey said this was the only reason they did not have an account and 47 percent of the unbanked listed lack of money as one of the reasons (multiple responses were permitted). Yet in comparison, 67 percent of non-account holders in the rest of developing world cited as lack of money as a reason not to have an account. Notably, lack of trust (26 percent) are higher for Turkey than the average of other middle-income countries. Cost and documentation are also cited as reasons for not having an account, as well as ‘indirect’ usage through another family member’s account.

**Figure 1 1: Self-Reported Barriers to Formal Account Use**  
 Non-account holders reporting of reasons behind not having an account (%)

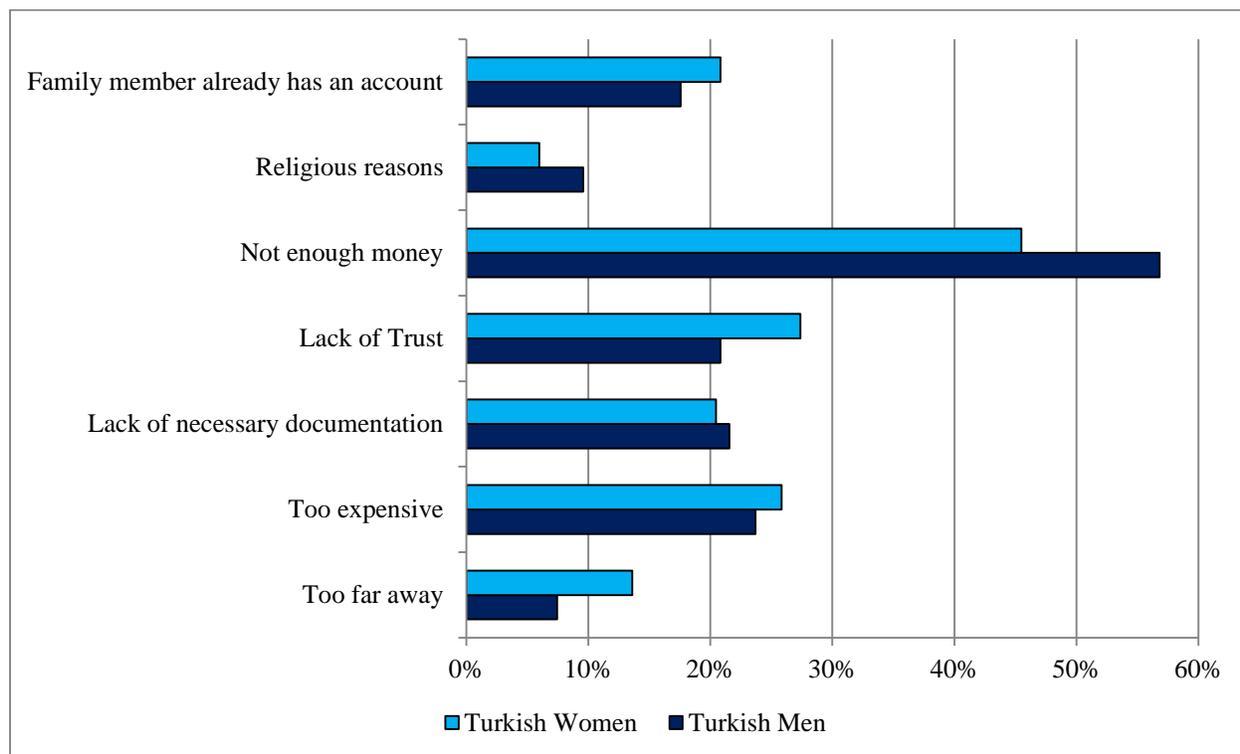


Source: Global Findex; Demirguc-Kunt and Klapper, 2012

Note: Multiple responses were permitted to this question

36. Figure 12 illustrates barriers to account ownership disaggregated by gender. The most common reported single reason for not having an account by both men and women is a lack of money to use it, although this reason is more typically reported by men. Women are over twice as likely as men to report distance as a barrier, which may reflect the greater barriers in traveling to a bank branch. Women are also more likely to report a lack of trust in banks.

**Figure 12: Self-Reported Barriers to Formal Account Use in Turkey**  
 Non-account holders reporting of reasons behind not having an account (%)



Source: Global Findex; Demirguc-Kunt and Klapper, 2012

## 2.4 LEGAL AND CULTURAL NORMS

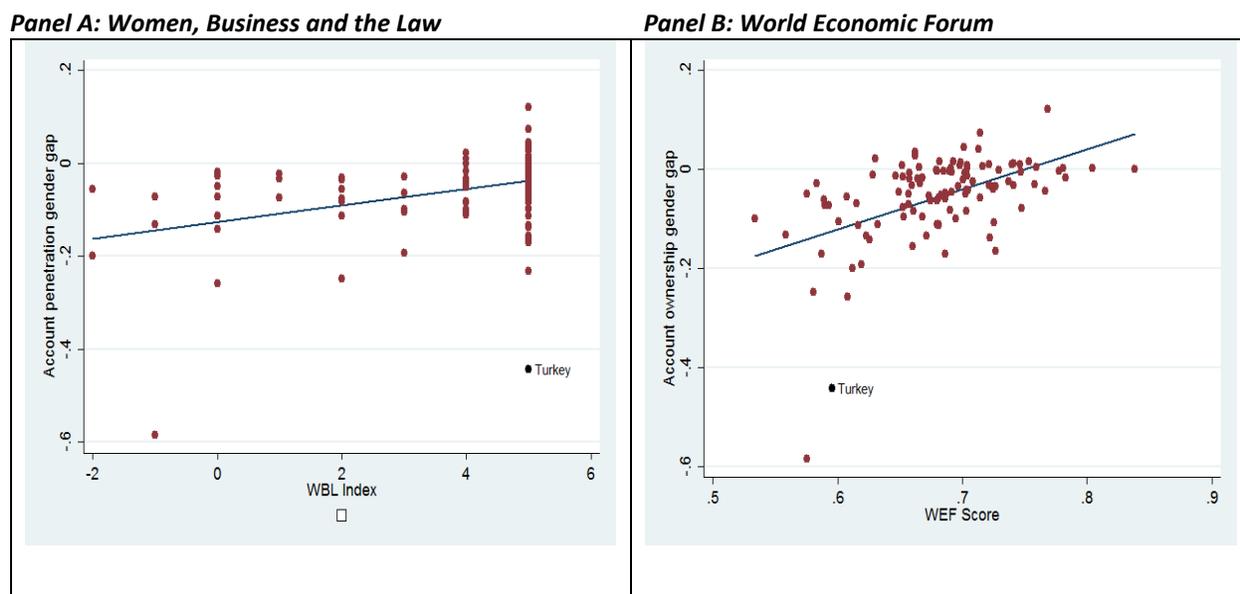
37. Institutional factors and gender norms are important determinants of cross-country variations in the gender gap for financial inclusion (Demirguc-Kunt, Klapper, and Singer, 2012). The World Bank Women, Business and the Law (WBL) dataset includes variables indicating laws restricting women’s ability to earn an income, either as an employee or entrepreneur.

38. Following Demirguc-Kunt, Klapper and Singer (2012), we construct a simple index ranging from -2 to 5 using the 7 WBL variables.<sup>3</sup> Turkey has the highest possible score of 5 in each of the seven codified laws promote gender equality. Figure 13, Panel A shows a weak relationship between legal restrictions to female employment and a gender gap in financial inclusion.<sup>4</sup> This figure also shows that Turkey has the highest gender gap in account ownership among the set of countries with a WBL index of 5.

<sup>3</sup> Can a married woman get a job or pursue a trade or profession in the same way as a married man? Can a married woman be “head of household” or “head of family” in the same way as a married man? Can a married woman choose where to live in the same way as a married man? Are married women required by law to obey their husbands? Do sons and daughters have equal inheritance right immoveable property from their parents? Do female and male surviving spouses have equal inheritance rights to immoveable property? Separation is default marital property regime

<sup>4</sup> The extreme observation in the far bottom-left corner is Saudi Arabia.

**Figure 13: Scatter Plot of the Gender Gap in Account Penetration and Legal and Cultural Norms**



Source: Global Findex; Demircuc-Kunt and Klapper, 2012; Women Business & the Law, 2012; World Economic Forum, 2013.

39. An important consideration is that the WBL is based on *de jure* laws and regulations, and does not judge the effectiveness or enforcement of the law. To complement the *de jure* WBL data, we consider a *de facto* measure of gender inequality. The World Economic Forum publishes the annual “Gender Gap Report” by scoring the gender gap in economic opportunity, education, health and political participation. In the 2013 Gender Gap Report, Turkey ranked 120 out of 136 countries, with a sub-index ranking above 100 in all but the health sub-index. It is the lowest ranked country in the ECA region. It appears that the socio-economic gender gap outcome indicators in Turkey are more aligned with the observed gender gap in financial inclusion. Figure 13, Panel B shows the correlation between the gender gap report score and the gender gap in account penetration. Here, we find a significant relationship between gender differences in account penetration and gender norms. The gender gap in Turkey remains an outlier, even as compared to other countries that rank low in gender inequality ‘in practice’.

## 2.5 REGIONAL VARIATION IN ACCOUNT PENETRATION

40. The Global Findex survey questions are administered by Gallup as part of the Gallup World Poll. Gallup, for reasons unrelated to the questions relevant to Global Findex, oversampled Istanbul during its 2011 survey of Turkey. Sample weights issued by Gallup to make the survey sample nationally representative should in theory mute the issue of oversampling Istanbul. For the sake of thoroughness and as a check of robustness, we further breakdown account penetration into Istanbul and the rest of Turkey for all respondents and by gender. Overall account penetration in Istanbul and the rest of Turkey are similar at 62 percent and 56 percent. Table 2 shows that the gender gap is slightly higher in the rest of Turkey than in Istanbul. A breakdown by rural and urban location within these areas shows no major differences (except

rural Istanbul with only 3 surveyed adults). Further analysis finds that rural areas in Turkey have the largest gender gap in account penetration while urban Istanbul has the lowest. This suggests that the oversampling of Istanbul should not pose any biases in our analysis of the gender gap on the national level.

**Table 2: Account Penetration by Region and Gender**

	All	Female	Male	Rural	Urban	Rural female	Rural male	Urban female	Urban male
<b>Turkey (full sample)</b>	0.58 (1001)	0.33 (478)	0.82 (523)	0.56 (304)	0.58 (697)	0.27 (131)	0.80 (173)	0.35 (347)	0.83 (350)
<b>Istanbul</b>	0.62 (301)	0.41 (154)	0.86 (147)	-	0.62 (298)	-	-	0.41 (152)	0.86 (146)
<b>Turkey, Ex. Istanbul</b>	0.56 (700)	0.30 (324)	0.81 (376)	0.56 (301)	0.57 (399)	0.27 (129)	0.80 (172)	0.33 (195)	0.82 (204)

Source: Global Findex; Demircuc-Kunt and Klapper, 2012

Note: Reported means, number of observations are in parentheses. Sub-samples that include less than 50 observations are not reported.

41. In Table 3, we present a breakdown of the Turkey survey sample by population size of the survey strata. The 469 individuals in strata population size greater than one million includes all of Istanbul as well as other major cities. Similar disaggregation as before shows no irregularities, and a gender gap that persists with similar magnitude throughout.

**Table 3: Account Penetration by City Size and Gender**

	All	Female	Male	Rural	Urban	Rural female	Rural male	Urban female	Urban male
<b>Turkey (full sample)</b>	0.58 (1001)	0.33 (478)	0.82 (523)	0.56 (304)	0.58 (697)	0.27 (131)	0.80 (173)	0.35 (347)	0.83 (350)
<b>&lt; 1 million</b>	0.56 (532)	0.28 (231)	0.80 (301)	0.57 (272)	0.54 (260)	0.30 (115)	0.79 (157)	0.26 (116)	0.81 (144)
<b>&gt;1 million</b>	0.60 (469)	0.39 (247)	0.86 (222)	-	0.62 (437)	0.10 (16)	-	0.42 (231)	0.86 (206)

Source: Global Findex; Demircuc-Kunt and Klapper, 2012

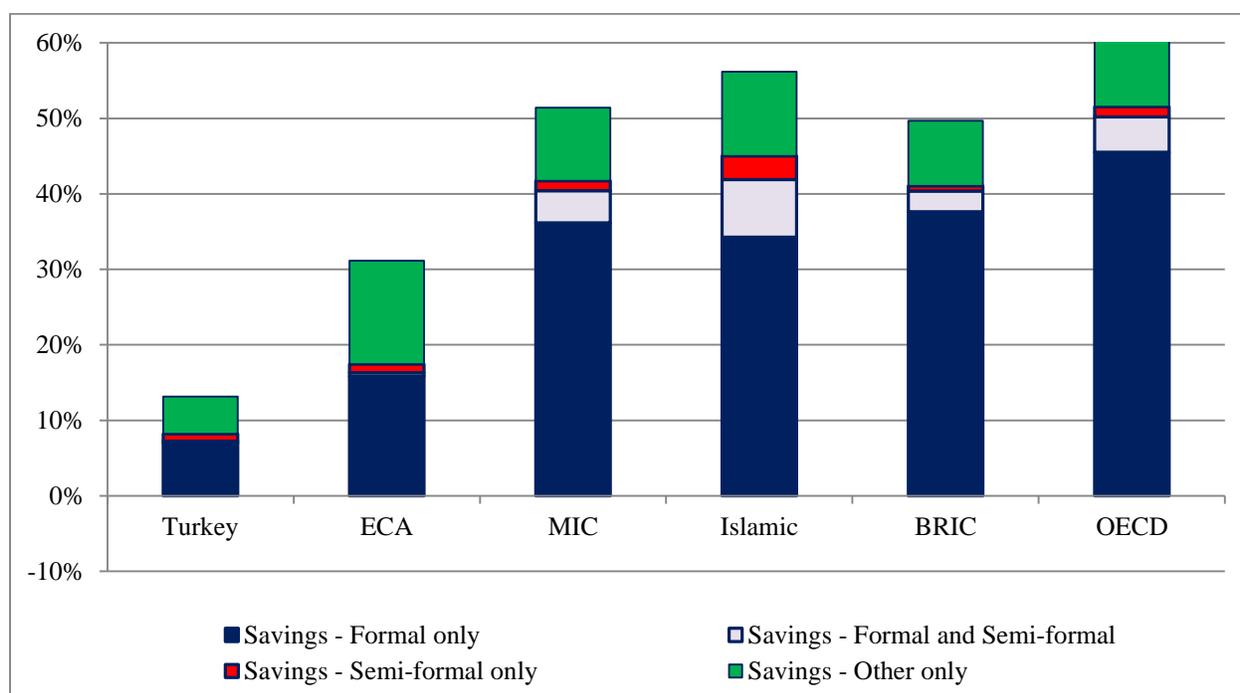
Note: Reported means, number of observations are in parentheses. Sub-samples that include less than 50 observations are not reported.

### 3. SAVINGS

42. Overall, only 10 percent of Turkish adults report saving (Figure 14). This compares to 22 percent of adults that report saving in ECA countries, and 31 percent and 26 percent, on average, in MIC and OECD countries, respectively. This relatively low reported rate of personal savings is consistent with national statistical data showing that domestic savings in Turkey declined significantly in the 2000's—from an average of 23.5 percent of gross national income in the 1990's to an average of 17 percent over the 2000-2008 period, and down to 12.7 percent in 2010 (World Bank report , 2011).

**Figure 14: Formal and Informal Savings**

Adults who reported saving any money in the past year (%)



Source: Global Findex; Demirguc-Kunt and Klapper, 2012

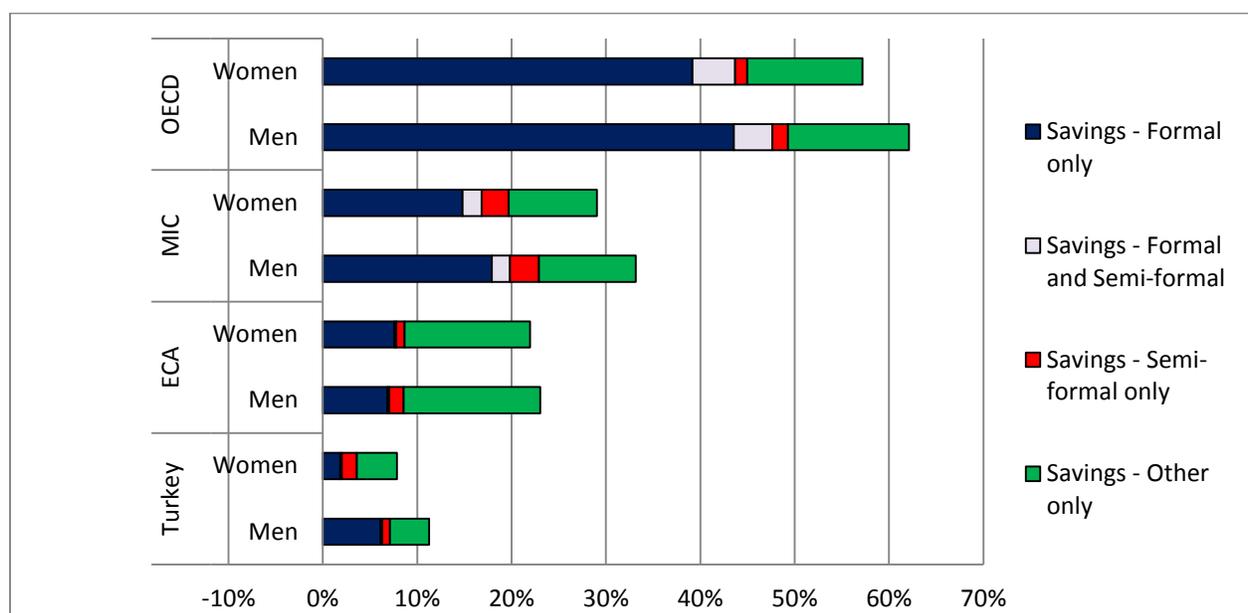
43. The Findex questionnaire surveys both formal and informal modes of saving. This includes formal, 'semi-formal', and 'other' modes of saving. 'Semi-formal' savings includes informal savings clubs or someone outside the family. Whereas in most developing countries, the 'other' category is primarily informal sources, such as gold, livestock, or in the home, in Turkey, developed capital markets might offer additional formal modes of savings and investments (such as equity and mutual funds).

44. Among the 10 percent of adults who report saving in Turkey, 44 percent say they used a formal account (Figure 14). This compares to a formal savings rate of 59 percent and 77 percent of adult savers in MIC and OECD countries, respectively. 5 percent of adults in Turkey (50 percent of savers) report saving somewhere other than a bank or formal financial institution. A negligible percentage of adults report saving using community savings groups.

45. Figure 15 shows that across comparative country groups, women are (insignificantly) less likely than men to save in the past year. For instance, in Turkey, 8 percent of women saved, as compared to 11 percent of men. Women are also (insignificantly) less likely to formally save—2 percent of women in Turkey saved in the past year at a bank or other formal financial institution, as compared to 6 percent of men.

**Figure 15: Formal and Informal Savings**

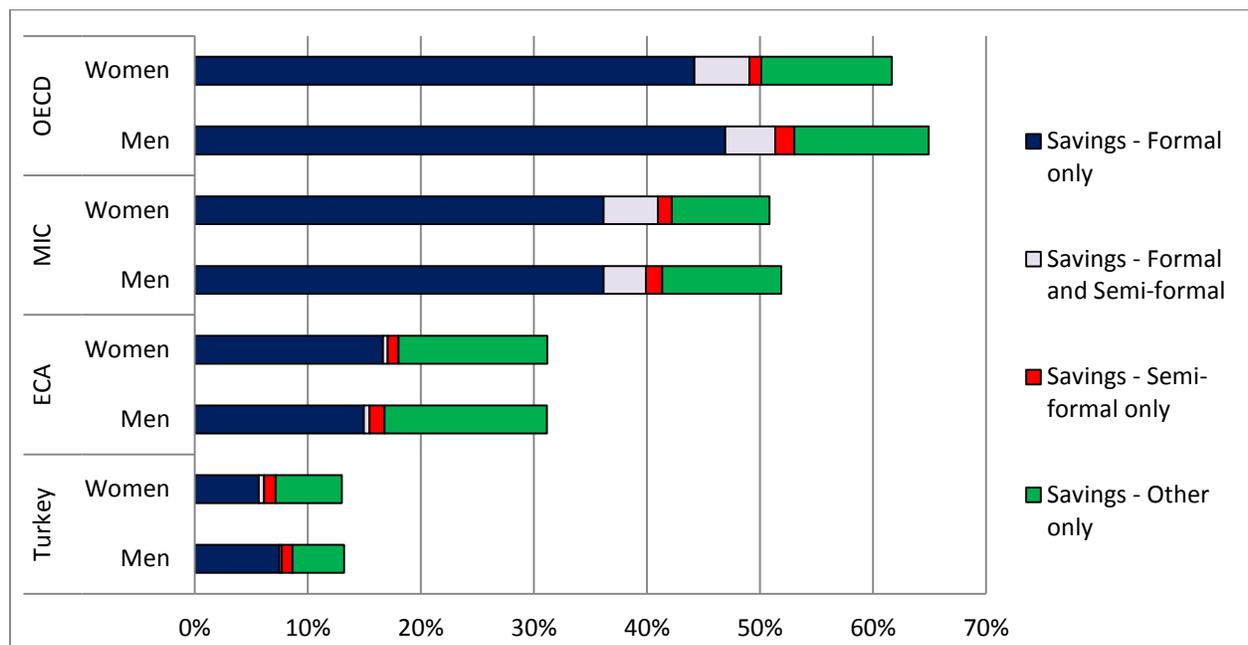
Adults who reported saving any money in the past year (%)



Source: Global Findex; Demirguc-Kunt and Klapper, 2012

46. Figure 16 highlights that even among Turkish adults with an account, only 13 percent report any form of saving. Almost 50 percent of both male and female savers with accounts save in ways “other” than a bank or formal financial institution. Although this might include equity or real-estate, it might also include money saved informally or “under the mattress”, which suggests a missed opportunity for banks to provide appropriate savings products.

**Figure 16: Formal and Informal Savings of Account Holders**  
Adults with accounts who reported saving any money in the past year (%)



Source: Global Findex; Demirguc-Kunt and Klapper, 2012

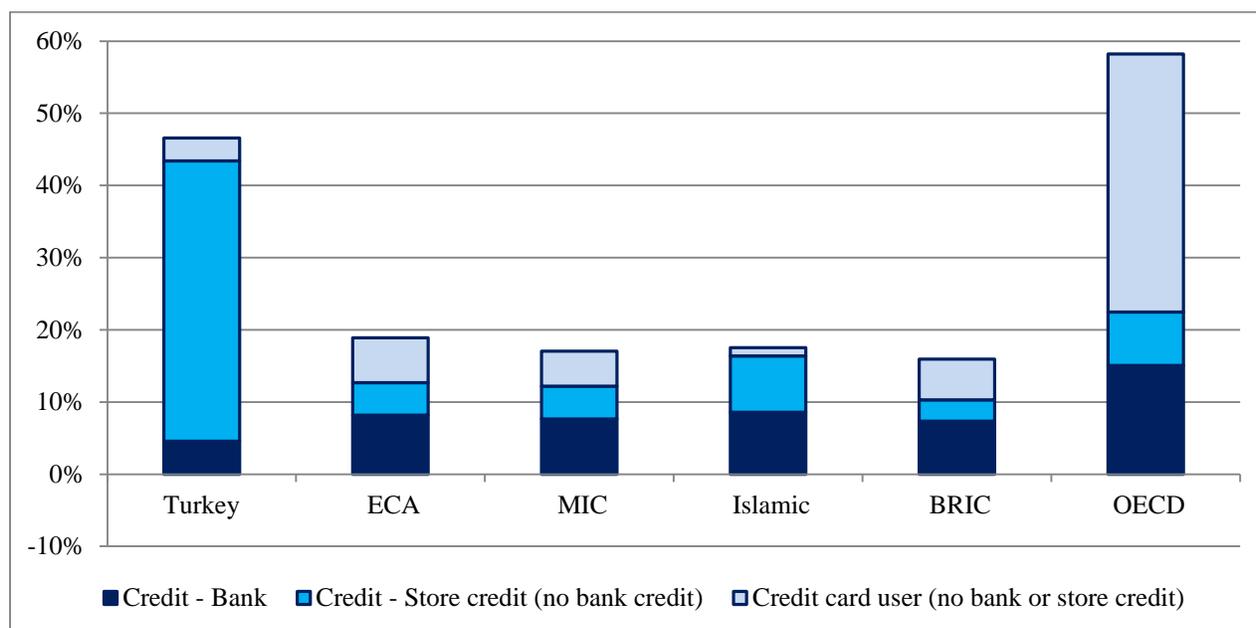
#### 4. CREDIT

47. In the Findex database, 45 percent of adults in Turkey report having a credit card, which might be used as a substitute for formal short-term credit (Figure 17). This is in comparison to 50 percent of adults in OECD countries and a much lower credit card ownership in the rest of ECA and middle-income countries, 10 and 7 percent, respectively. Even among OECD countries, only 58 percent of account owners have a credit card; much lower than the 78 percent in Turkey.

48. It is likely that adults using store-issued credit cards reported using “store credit” in the Findex survey, rather than “from a bank or other formal financial institution”. Only 5 percent of adults in Turkey report borrowing from a bank, credit union or MFI in the past year, which is comparatively low. But the low use of bank financing might be explained by the very high use of store credit (or likely credit cards), reported by 43 percent of Turkish adults. This is in comparison to less than 5 percent of adults that report using store credit across all developing countries, and 12 percent in the OECD. If we include adults that report having a credit card (information is not collected on the use of credit cards), then the use of (or access to) formal credit in Turkey is comparable to OECD countries.

**Figure 17: Sources of Credit**

Adults who reported using formal credit in the past year (%)

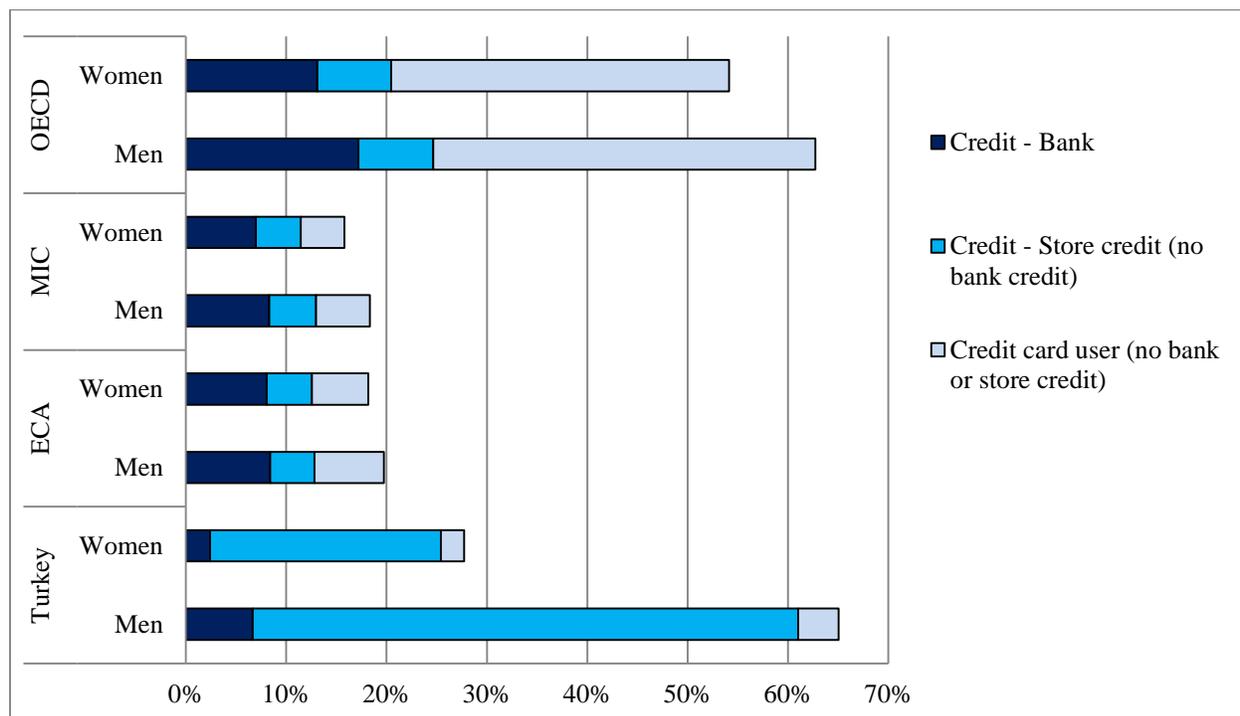


Source: Global Findex; Demircuc-Kunt and Klapper, 2012

49. As shown in Figure 18, Turkish men are more than twice as likely as Turkish women to use formal credit (the sum of the blue bars), 36 percent and 29 percent, respectively. However, it should be noted that the use of credit by women in Turkey is greater than the use of formal credit by men or women in all comparative groups except OECD countries.

50. The gender gap in the use of formal credit in Turkey is significant after controlling for other individual characteristics (Appendix A4). However, we do not find gender to be significantly related to the use of credit in middle-income countries, on average, likely because the overall formal borrowing rates are very low. We also find age and age squared to be significant in both samples, for men and women, pointing to middle-age men and women most likely to use credit. Widowed women are significantly less likely to use credit, but not widowed men. Most strikingly, wage- and self-employment appear to be the strongest predictors of using formal credit, both for men and women. For example, among women in our sample, being self-employed in Turkey increases the log odds of using formal credit by 3.77, which translates to a 70 percentage point increase.

**Figure 18: Sources of Credit**  
Adults who reported using credit in the past year (%)

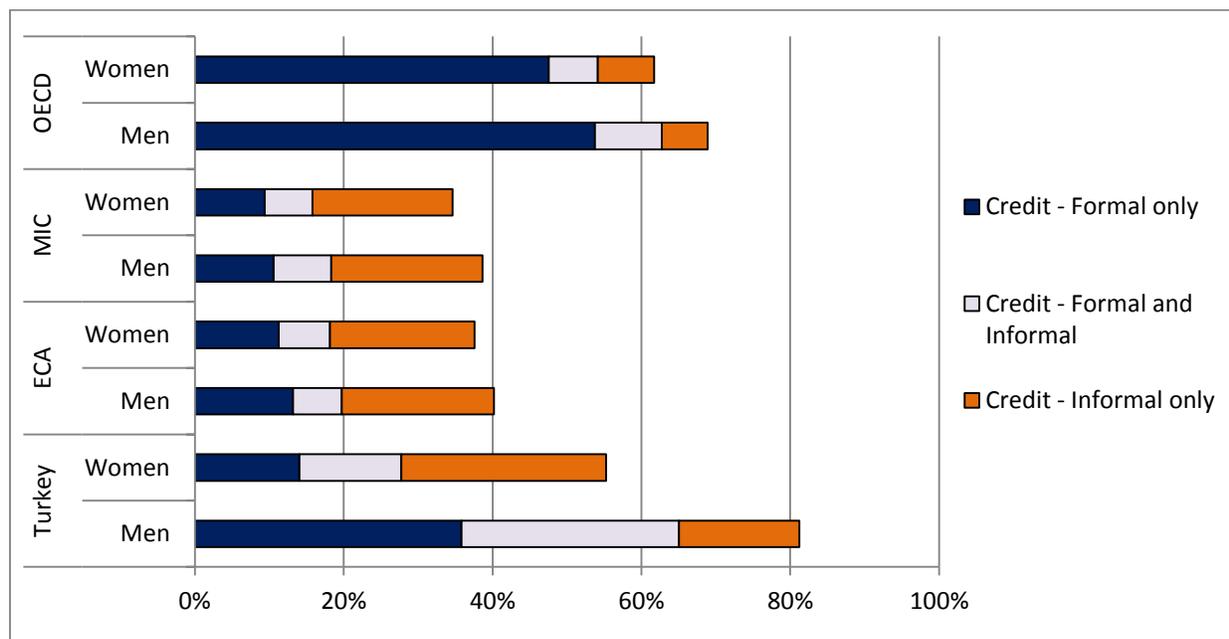


Source: Global Findex; Demirguc-Kunt and Klapper, 2012

51. Figure 19 examines the use of informal credit from family and friends: 43 percent of adults in Turkey report borrowing from family and friends, as compared to 25 percent of adults across all developing countries and 12 percent of adults in the OECD.<sup>5</sup> Furthermore, 28 percent of women and 16 percent of men report using only informal sources of credit, such as family and friends, which is higher than the average of ECA and MIC countries. Notably, a comparatively high percentage of adults— 29 percent of men and 14 percent of women report—using *both* informal and formal credit.

<sup>5</sup> Other informal sources of credit (not shown) include employers (3 percent) and other private lenders (0.5 percent).

**Figure 19: Formal and Informal Credit**  
Adults who reported using credit in the past year (%)



Source: Global Findex; Demircuc-Kunt and Klapper, 2012

Note: For the purposes of this figure, store credit and credit card ownership is included as Formal Credit.

52. The most common reported reasons for taking out a loan in Turkey include emergencies or health purposes (44 percent), to pay school fees (31 percent), or to extend or repair one’s home (18 percent).

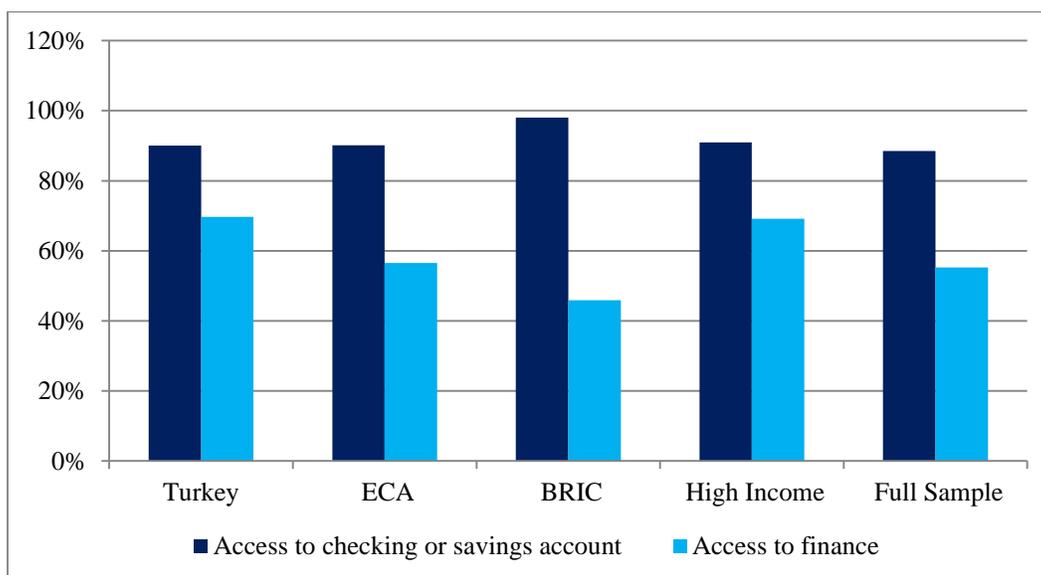
## 5. FIRM FINANCING

53. To gain a better understanding of formal firms’ access to finance, we use data from the World Bank Enterprise Surveys (WBES), which cover more than 130,000 formally registered firms in 127 countries.<sup>6</sup> 90 percent of firms in Turkey report having access to a checking or savings account (Figure 19). 89percent of formal small and medium sized enterprises (SME’s) in Turkey report having a bank deposit account. In comparison, 70 percent of firms in Turkey report having access to finance, defined as access to either a loan, line of credit or overdraft facility (Figure 20).

<sup>6</sup> Complete data is available at: [www.enterprisesurveys.org](http://www.enterprisesurveys.org)

**Figure 20: Firm Access to Finance**

Formally registered firms with an account or a loan or line of credit



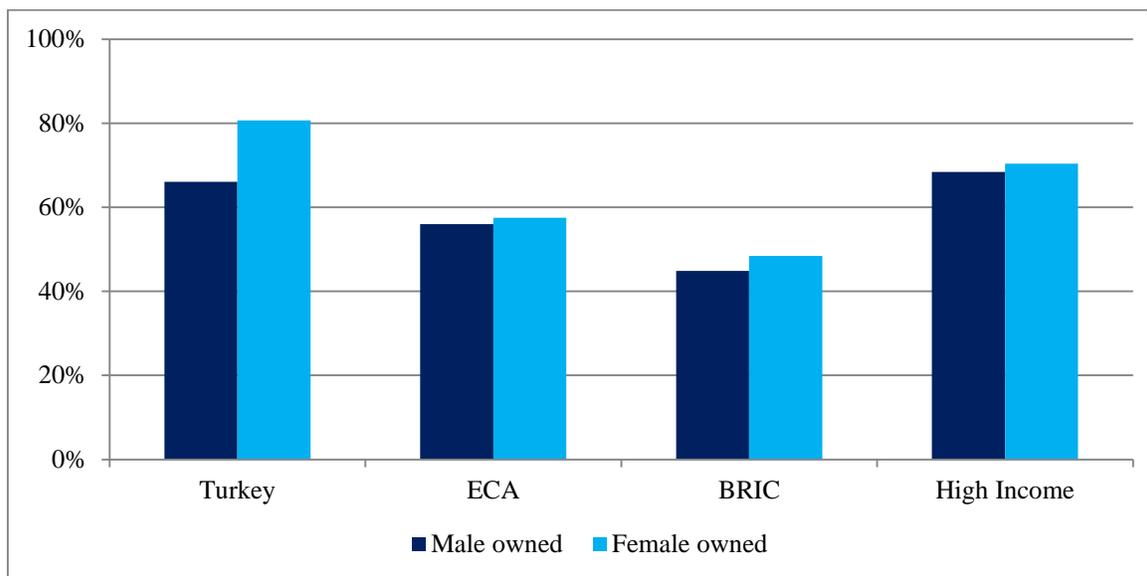
Source: Enterprise Survey dataset, 2003-2011

Note: "Formal Credit" includes outstanding loan, overdraft or line of credit.

54. The World Bank Enterprise Surveys identifies the gender of the firm owner(s). 656 firms in the sample (24 percent) in Turkey are female owned, with a distribution of 28 percent small, 38 percent medium, and 66 percent large. Figure 21 shows that, contrary to summary statistics from individuals (in Section 2), female owned firms have higher access to finance than male owned firms in Turkey. Out of 2,024 male owned firms surveyed in Turkey, 65 percent report access to a loan, line of credit or overdraft facility. For the 656 female owned Turkish firms in the sample, over 80 percent have access to finance. This includes 72 percent of small, female-owned firms report access to formal credit (compared to 81 percent and 86 percent of medium- and large-sized firms, respectively). Both male and female owned firms have better access to finance in Turkey than both the ECA region and the full sample of developing countries. These findings might suggest that only women who can access formal financing formally register firms (or that only owners that need formal financing operate in the formal sector).

**Figure 21: Use of Formal Credit by Formally Registered Firms**

Formally registered firms with a loan or line of credit



Source: Enterprise Survey dataset, 2003-2011

Note: A firm is categorized as female owned in the new round of surveys (2006-2011) if any of the owner(s) are female and in the old core surveys (2003-2005) if the principal owner is female.

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## APPENDIX A: REGRESSION ANALYSIS

In this section we use more rigorous statistical analysis to test the significance of gender in predicting ownership of a formal account and use of formal credit, after controlling for other individual characteristics (Appendix 1). We follow the methodology used in Demirguc-Kunt and Klapper (2013) and estimate a logit model where we predict having an account and, separately, use of formal credit on gender and a series of control variables: income quintiles, completed level of education, rural or urban residence, marital status, being head of household, employment status, age (and its squared term), and the household dependency ratio (children under age 15 as a fraction of total household size). Definitions and mean summary statistics for all variables are shown in Table A1 and univariate summary statistics, by gender, in Table A2. The result of logit regressions predicting ownership of accounts and the use of formal credit (plus ownership of a credit card) are shown in Tables A3 and A4, respectively.

To compare Turkey with all comparison groups, we ran an identical Logit regressions with country fixed effects over those comparative country groups (the results for MIC countries are shown in Table A3, other comparative country groups not shown). The log odds coefficient for the gender dummy variable show that the gender gap in account ownership is statistically insignificant for the sample of ECA and OECD countries. For other comparison country groups, the gender dummy variable is statistically significant after controlling for individual characteristics, but the magnitude is much smaller than that found in Turkey.

**Table 1: Logit Estimation Coefficients for Gender (Female=1) in Predicting Account Ownership**

	Turkey	ECA	MIC	OECD
<b>Female</b>	-1.844***	-0.003	-0.085***	0.024
<b>[SE]</b>	[0.233]	[0.044]	[0.024]	[0.073]

Source: Global Findex; Demirguc-Kunt and Klapper, 2012

We find similar results for multivariate regressions on the use of formal credit, including store credit and credit card ownership (Table A4). We find significant gender differences in only Turkey and OECD countries, in part because the use of formal credit in many other middle-income countries is very low (on average, 25 percent of adults in MIC report using in the past year formal credit or store credit, or having a credit card) .

**Table 2: Logit Estimation Coefficients for Gender (Female=1) in Predicting use of Formal Credit**

	<b>Turkey</b>	<b>ECA</b>	<b>MIC</b>	<b>OECD</b>
<b>Female</b>	-0.967***	-0.028	-0.030	-0.239***
<b>[SE]</b>	[0.214]	[0.043]	[0.025]	[0.038]

*Source: Global Findex; Demirguc-Kunt and Klapper, 2012*

**Table A1: Data Description and Summary Statistics**

Variable	Definition	Mean	
		MIC	Turkey
Account (0/1)	Dummy equal to 1 if account with financial institution (bank, credit union, cooperative, post office or microfinance institution)	0.49	0.58
Credit (0/1)	Dummy equal to 1 if the individual reports having used a loan from a formal bank or store credit in the past 12 month or reports having a credit card, and zero otherwise	0.25	0.47
Female (0/1)	Dummy equal to 1 if the respondent is female and 0 otherwise.	0.51	0.49
Income: poorest 20% (0/1)	Dummy equal to 1 if the respondent falls in the lowest income quintile and 0 otherwise. Income quintiles are based on the incomes of the respondents in a country.	0.22	0.26
Income: second 20% (0/1)	Dummy equal to 1 if the respondent falls in the second lowest income quintile and 0 otherwise. Income quintiles are based on the incomes of the respondents in a country.	0.22	0.19
Income: middle 20% (0/1)	Dummy equal to 1 if the respondent falls in the middle income quintile and 0 otherwise. Income quintiles are based on the incomes of the respondents in a country.	0.19	0.18
Income: fourth 20% (0/1)	Dummy equal to 1 if the respondent falls in the second highest income quintile and 0 otherwise. Income quintiles are based on the incomes of the respondents in a country.	0.19	0.25
Income logged	Log income (US\$)	8.74	9.17
Age	Age in years	39.51	38.07
Rural (0/1)	Dummy equal to 1 if the respondent resides in a rural area and 0 otherwise.	0.67	0.36
Education: Primary (0/1)	Dummy equal to 1 if the respondent completed elementary education or less (up to 8 years of education) and 0 otherwise.	0.55	0.53
Household size logged	Log number of household members	1.39	1.41
% HH under age of 15	Fraction of household members that are under the age of 15.	0.19	0.15
Married (0/1)	Dummy equal to 1 if the respondent is married and 0 otherwise.	0.64	0.62
Widowed (0/1)	Dummy equal to 1 if the respondent is widowed (and hasn't re-married) and 0 otherwise.	0.05	0.05
Employed for employer (0/1)	Dummy equal to 1 if the respondent is employed for an employer full-time or part time and 0 otherwise.	0.31	0.23
Self-employed (0/1)	Dummy equal to 1 if the respondent is self-employed full-time or part-time and 0 otherwise.	0.28	0.12
Unemployed (0/1)	Dummy equal to 1 if the respondent is unemployed and 0 otherwise.	0.05	0.05
Out of workforce (0/1)	Dummy equal to 1 if the respondent is out of the workforce and 0 otherwise.	0.36	0.60

**Table A2: Summary Statistics, by Gender**

This table presents summary statistics, by gender, using individual-level survey data from Turkey (999 observations) and 69 Middle-income countries (73,813 observations). See Table A1 for complete variable definitions.

Variable	Middle-Income Countries			Turkey		
	Male	Female	t-Test	Male	Female	t-Test
Account (0/1)	0.48	0.39	***	0.82	0.33	***
Formal credit (0/1)	0.18	0.16	***	0.65	0.28	***
Income: poorest 20% (0/1)	0.21	0.23	***	0.24	0.28	
Income: second 20% (0/1)	0.21	0.24	***	0.16	0.21	*
Income: middle 20% (0/1)	0.19	0.19		0.19	0.16	
Income: fourth 20% (0/1)	0.20	0.18	***	0.26	0.24	
Income logged	8.50	8.46	**	9.21	9.13	*
Employment: Employed for employer (0/1)	0.39	0.22	***	0.34	0.11	***
Employment: Self-employed (0/1)	0.36	0.26	***	0.22	0.03	***
Employment: Unemployed (0/1)	0.04	0.04		0.07	0.02	***
Employment: Out of workforce (0/1)	0.21	0.48	***	0.37	0.84	***
Age	38.98	38.58		39.28	36.84	**
Rural (0/1)	0.69	0.68	*	0.38	0.33	*
Education: Primary (0/1)	0.61	0.65	***	0.48	0.58	***
Household size logged	1.43	1.43		1.41	1.40	
% HH under age of 15	0.18	0.21	***	0.15	0.16	
Marital Status: Married (0/1)	0.64	0.69	***	0.62	0.62	

**APPENDIX A3: LOGIT ESTIMATIONS OF ACCOUNT OWNERSHIP**

This table presents logit estimations using individual-level survey data from 69 Middle-income countries and Turkey. The dependent variable is equal to one if the individual reports owning an account and zero otherwise. The coefficients are log odd ratios. Regressions for MIC include country fixed effects. See Table A1 for complete variable definitions. Columns 1-3 include the full sample; columns 4-6 include only male respondents; and columns 7-9 include only female respondents. All variables are defined in Table A1. Standard errors are in brackets and \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	<u>Middle-Income Countries</u>			<u>Turkey</u>		
	All	Male	Female	All	Male	Female
Female (0/1)	-0.085*** [0.024]			-1.844*** [0.233]		
Income: Poorest 20% (0/1)	-0.591*** [0.092]	-0.613*** [0.133]	-0.594*** [0.115]	-0.067 [1.163]	0.156 [1.059]	-1.293 [1.263]
Income: second 20% (0/1)	-0.502*** [0.068]	-0.535*** [0.096]	-0.472*** [0.086]	0.486 [0.965]	1.680 [1.035]	-0.950 [0.984]
Income: middle 20% (0/1)	-0.364*** [0.054]	-0.330*** [0.076]	-0.401*** [0.070]	0.003 [0.787]	0.506 [0.733]	-0.955 [0.841]
Income: fourth 20% (0/1)	-0.244*** [0.043]	-0.238*** [0.059]	-0.256*** [0.057]	0.048 [0.481]	0.487 [0.484]	-0.502 [0.582]
Log HH income	0.323*** [0.039]	0.339*** [0.055]	0.309*** [0.049]	0.340 [0.750]	0.526 [0.636]	-0.418 [0.680]
Age	0.059*** [0.004]	0.070*** [0.006]	0.057*** [0.005]	0.141*** [0.049]	0.200** [0.085]	0.147** [0.067]
Age squared	-0.001*** [0.000]	-0.001*** [0.000]	-0.001*** [0.000]	-0.001** [0.001]	-0.001 [0.001]	-0.002** [0.001]
Rural	-0.283*** [0.033]	-0.280*** [0.042]	-0.287*** [0.041]	-0.103 [0.247]	-0.380 [0.345]	0.131 [0.361]
Primary Education	-0.897*** [0.031]	-0.914*** [0.043]	-0.847*** [0.042]	-1.211*** [0.276]	-0.721 [0.458]	-1.225*** [0.336]
Log HH size	0.294*** [0.065]	0.222** [0.093]	0.302*** [0.090]	-0.707*** [0.254]	-0.502 [0.431]	-1.355*** [0.391]
% HH under age of 15	0.151*** [0.030]	0.198*** [0.044]	0.110*** [0.042]	-0.118 [0.699]	-1.862 [1.232]	1.012 [0.836]
Married (0/1)	0.239*** [0.058]	0.292** [0.121]	0.273*** [0.070]	-0.213 [0.379]	-0.577 [0.645]	-0.162 [0.482]
Widowed (0/1)	-0.318*** [0.028]	-0.299*** [0.039]	-0.347*** [0.037]	0.836 [0.603]	-0.655 [1.149]	2.201*** [0.783]
Wage worker	1.092*** [0.033]	0.933*** [0.049]	1.175*** [0.043]	3.027*** [0.394]	2.564*** [0.504]	4.748*** [1.135]
Unemployed	0.015 [0.049]	-0.097 [0.071]	0.044 [0.067]	0.209 [0.499]	0.332 [0.701]	0.626 [0.723]
Self employed	0.543*** [0.037]	0.445*** [0.055]	0.510*** [0.047]	2.524*** [0.558]	2.188*** [0.636]	3.802*** [1.271]
Constant	-4.586*** [0.402]	-4.718*** [0.572]	-4.626*** [0.501]	-4.182 [7.316]	-7.853 [5.889]	3.105 [7.110]
Observations	73,813	32,920	40,422	999	522	477

## APPENDIX A4: LOGIT ESTIMATIONS OF USE OF FORMAL CREDIT

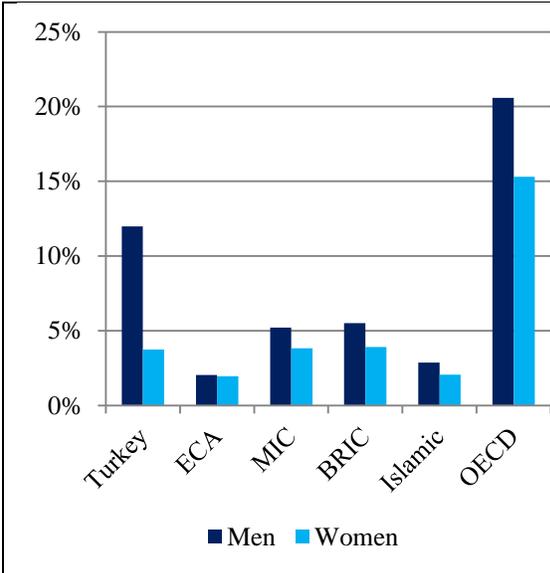
This table presents logit estimations using individual-level survey data from 69 Middle-income countries and Turkey. The dependent variable is equal to one if the individual reports having used a loan from a formal bank or store credit in the past 12 month or reports having a credit card, and zero otherwise. The coefficients are log odd ratios. Regressions for MIC include country fixed effects. See Table A1 for complete variable definitions. Columns 1-3 include the sample middle income country; columns 4-6 include only the Turkey subsample. All variables are defined in Table A1. Standard errors are in brackets and \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% level, respectively.

	(1)	(2)	(3)		(4)	(5)	(6)
	<u>Middle-Income Countries</u>				<u>Turkey</u>		
	All	Male	Female		All	Male	Female
Female (0/1)	-0.030 [0.025]				-0.967*** [0.214]		
Income: Poorest 20% (0/1)	0.002 [0.086]	0.069 [0.124]	-0.079 [0.117]		-0.967 [0.922]	-0.368 [1.063]	-1.825 [1.300]
Income: second 20% (0/1)	-0.134** [0.063]	-0.127 [0.091]	-0.147* [0.087]		-0.505 [0.811]	-0.196 [0.883]	-1.028 [1.052]
Income: middle 20% (0/1)	-0.218*** [0.052]	-0.262*** [0.074]	-0.173** [0.072]		-0.204 [0.610]	0.503 [0.759]	-1.205 [0.906]
Income: fourth 20% (0/1)	-0.117*** [0.041]	-0.126** [0.058]	-0.100* [0.057]		-0.219 [0.386]	0.333 [0.540]	-0.830 [0.599]
Log HH income	0.234*** [0.034]	0.271*** [0.049]	0.192*** [0.048]		-0.113 [0.540]	0.019 [0.544]	-0.418 [0.748]
Age	0.076*** [0.005]	0.065*** [0.007]	0.088*** [0.006]		0.228*** [0.058]	0.329*** [0.080]	0.162* [0.083]
Age squared	-0.001*** [0.000]	-0.001*** [0.000]	-0.001*** [0.000]		-0.002*** [0.001]	-0.004*** [0.001]	-0.002** [0.001]
Rural	-0.042 [0.034]	-0.062 [0.043]	-0.017 [0.043]		0.001 [0.242]	-0.144 [0.301]	0.164 [0.373]
Primary Education	-0.383*** [0.032]	-0.393*** [0.043]	-0.358*** [0.044]		-0.956*** [0.244]	-0.637* [0.373]	-1.049*** [0.332]
Log HH size	0.316*** [0.068]	0.285*** [0.096]	0.346*** [0.091]		-0.754 [0.612]	-2.153** [0.848]	0.742 [0.899]
% HH under age of 15	0.322*** [0.032]	0.376*** [0.048]	0.278*** [0.042]		-0.272 [0.352]	-0.464 [0.398]	-0.055 [0.544]
Married (0/1)	0.150** [0.064]	0.192 [0.126]	0.144* [0.077]		0.149 [0.424]	-0.214 [0.843]	0.707 [0.663]
Widowed (0/1)	-0.072** [0.030]	-0.066 [0.041]	-0.094** [0.041]		-0.295 [0.248]	0.153 [0.303]	-1.026** [0.396]
Wage worker	0.794*** [0.034]	0.781*** [0.054]	0.811*** [0.043]		2.195*** [0.243]	1.908*** [0.331]	2.781*** [0.519]
Unemployed	0.150*** [0.054]	0.220*** [0.081]	0.056 [0.072]		-0.211 [0.489]	-0.786 [0.574]	0.675 [0.733]
Self employed	0.577*** [0.040]	0.581*** [0.058]	0.551*** [0.052]		2.945*** [0.446]	2.654*** [0.533]	3.766*** [1.223]
Constant	-5.446*** [0.373]	-5.392*** [0.522]	-5.535*** [0.507]		-2.236 [5.292]	-6.222 [5.491]	2.459 [7.837]
Observations	73,813	33,391	40,422		999	522	477

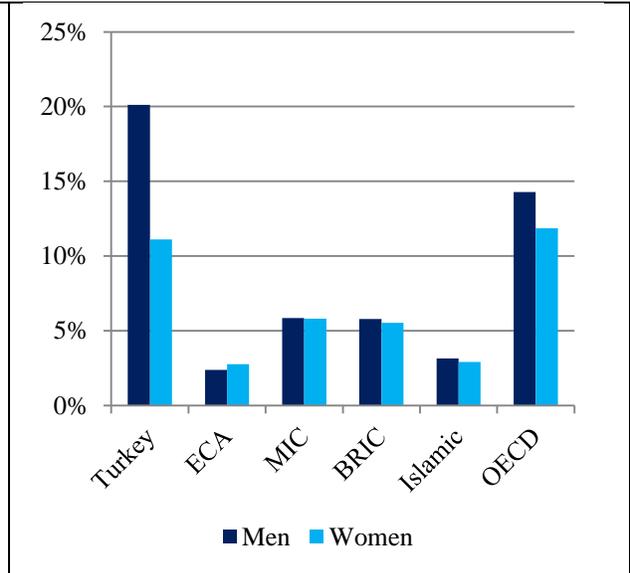
## APPENDIX B: ACCOUNT USE, FULL SAMPLE

Adults that use their account to send and receive money (% adults)

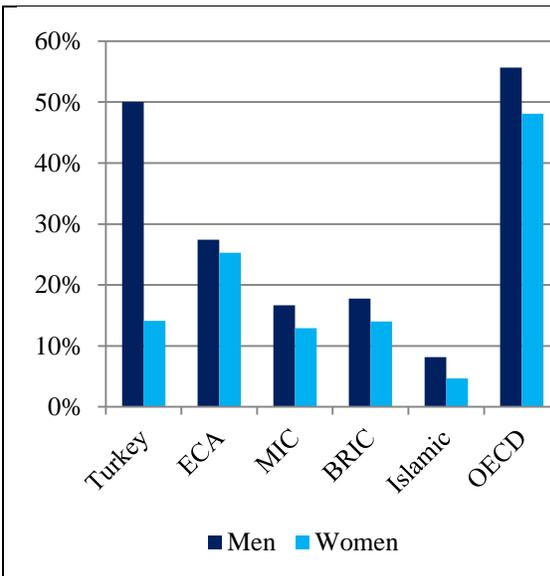
**Panel A: To Send Money**



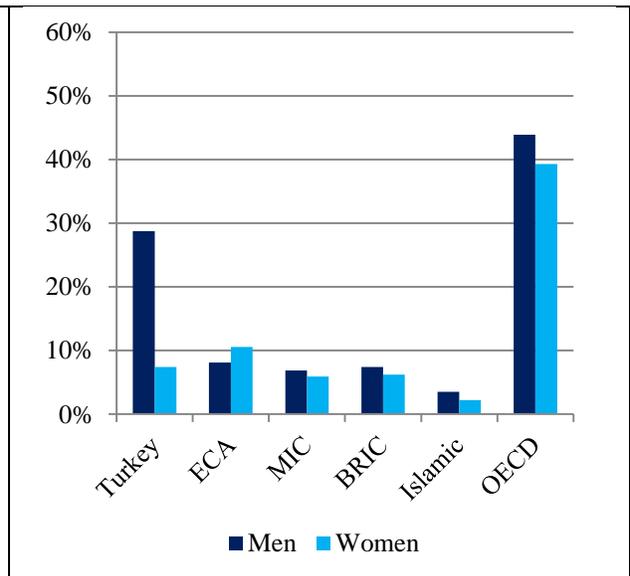
**Panel B: To Receive Money**



**Panel C: To Receive Wages**



**Panel D: To Receive Government Payments**



Source: Global Findex; Demirguc-Kunt and Klapper, 2012