

Access to Finance in Turkey

By Baybars KARACAOVALI [†]

Abstract. Access to finance is essential for a successful development and growth of the private sector. In the absence of finance, enterprises cannot develop, innovate, and compete with other firms in other countries which offer more favorable access to finance. This paper makes use of the *Enterprise Survey* conducted with a representative stratified random sample of 6,006 Turkish firms for the 2015 fiscal year to evaluate the access to finance conditions in the nation. Moreover, data from the *Enterprise Surveys Database* for a comparison group of countries and 2013 survey for Turkey are employed to put the current survey in perspective.

Keywords. Business environment, Financial constraints, Access to finance, Turkey.

JEL. G10, G30, O12.

1. Introduction

Access to finance is essential for a successful development and growth of the private sector and several studies link finance with economic growth (Claessens & Laeven 2003; Levine, Loayza, & Beck 2000; Levine 2006; and Rajan & Zingales 1998). In the absence of finance, enterprises cannot develop, innovate, and compete with other firms in other countries which offer more favorable access to finance.

This paper makes use of the *Enterprise Survey* conducted with a representative stratified random sample of 6,006 Turkish firms for the 2015 fiscal year to evaluate the access to finance conditions in Turkey. We start out with a comparative analysis relative to a group of countries, namely Brazil, China, India, Mexico, South Africa, and the Eastern Europe and Central Asia (ECA) region as well as a previous survey conducted in Turkey for the 2013 fiscal year although it was a much smaller and not as representative sample. Overall, the access to finance conditions seem to have worsened between 2013 and 2015 but this might simply be due to differences in the sample. Otherwise, Turkey ranks average relative to the comparison group in terms of use of credit products and using external financing for investments and working capital. The only exception is in percent of firms with a bank account where Turkey lags significantly behind other countries. In 2015 access to finance was more often reported as the biggest obstacle in the business environment and a larger fraction of firms were credit constrained as compared to 2013. Yet, the figures are again somewhat average and a bigger proportion of Turkish firms are not credit constrained at all relative to the comparison group.

Next, we explore the access to finance indicators along various firm characteristics: firm size, firm age, legal status, industry, region, exporter and foreign/female ownership status. Firm size appears to be an important factor and access is more challenging the smaller the firms are. Microenterprises have lower usage of credit products and bank accounts, are more likely to report access to finance the biggest obstacle, less likely to have applied for a loan, more likely to have their loan applications rejected and less likely to indicate “no need for a loan”

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as a reason for lack of application. This can suggest that microenterprises and also small firms have more demand for loans but less ability to access them and it is no wonder that they are found to be more credit constrained than larger firms. The firm age is not an important factor in the use of credit products but access to finance is relatively easier for older firms given their experience which might signal more credit-worthiness. Limited liability corporations (LLCs) and shareholding companies seem to have more favorable access to finance conditions as compared with sole proprietorships which we might expect from the degree of separation of the firm from its owners, and hence its formality. There is no obvious difference in the access to finance indicators across the industry groups but manufacturing firms in general seem to have slightly better access. There is some evidence for regional disparity in access where incentive region 5 firms (the poorest region in eastern and southeastern Turkey) have somewhat less favorable finance conditions although there is no clear-cut variation across the regions. Exporters (direct exports 10% or more of annual sales), foreign firms (with 10% or more foreign ownership), and firms with female participation in ownership have better access to finance. The distinction is especially significant for exporters versus non-exporters and foreign versus domestic firms but less pronounced for firms with female ownership.

Finally, Turkish firms rank favorably relative to the comparison group of countries in terms of using banks to finance investments, that is purchase of productive assets such as machinery, vehicles, equipment, land, and buildings. They rank somewhat less favorably in using banks to finance their working capital, that is funds available for day-to-day operations. Yet, a significant majority of Turkish firms rely on internal sources for financing both investments and working capital. Most firms make productive investments and the proportion of new investment relative to existing assets is healthy, above depreciation rates. The extent of external finance for both investments and working capital is higher the larger the firms are but there is no clear association with the region firms are located in and their sources of finance.

The rest of the paper is organized as follows. Section 2 provides comparison of access to finance conditions in Turkey in 2015 with other countries and the 2013 survey. Section 3 delves into firm characteristics and access to finance indicators, while section 4 discusses sources of finance. Section 5 concludes.

2. Access to Finance in an International Perspective

We start out by comparing objective and subjective indicators of access to finance for firms in Turkey in 2015 with the latest available *Enterprise Surveys* for Brazil (2009), China (2012), India (2014), Mexico (2010), South Africa (2007) and the average of Eastern Europe and Central Asia (ECA) countries¹. We also include the survey data for 2013 in Turkey as a reference point although the sample was much smaller (a little over 1,300 as compared to 6,000) and not as comprehensive as the latest survey.

The percent of firms with a loan or line of credit in 2015 was 30.3% which was 10% below the 2013 figure but was comparable with South Africa and Mexico, albeit 6% lower than the ECA region (Figure 1, left panel). However, it should be noted that the difference between the 2013 and 2015 figures may be partially due to sample differences between the two surveys and may not reflect a real decline in the use of credit products for all firms in Turkey.

Next, when we compare the percent of firms with a bank account, we see that Turkey ranked much lower than the comparison group with 52.9% compared to the 88.3% for the ECA region, for instance (Figure 1, right panel). The 2013 figure was 78.7% which was still lower than all but Mexico. Part of this low rate for firms with bank accounts may be explained by a strong representation of micro-enterprises (with 1-4 employees) and sole proprietorships in the 2015 data although

¹The data are available at www.enterprisesurveys.org

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the difference relative to other countries is quite noteworthy. We will explore the breakdown of access to finance measures by various firm characteristics in Section 3.

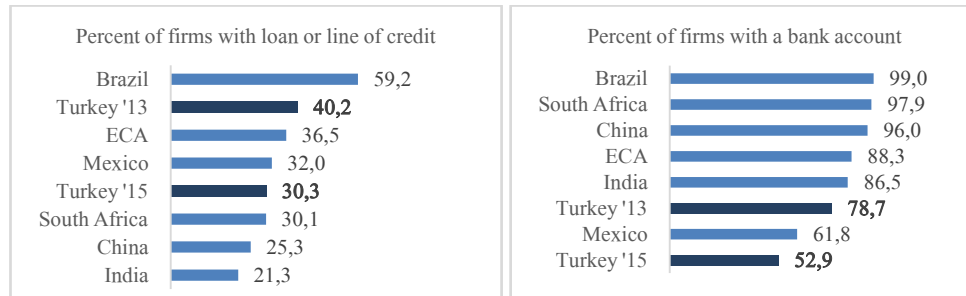


Figure 1. Cross-Country Comparison of Credit Products and Bank Account Use
Source: World Bank Enterprise Surveys Database

Turkey ranked favorably relative to its comparison group in reliance on banks for financing investments, that is purchase of fixed assets such as machinery, vehicles, equipment, land or buildings. In 2015, 31.1% of firms used banks for investments, financing 19.2% of their total investments (Figure 2). This was higher than the ECA region figures where 24.2% of firms used banks financing 13.7% of their investments. The figures for South Africa were slightly higher (34.8% and 25.8%, respectively) exceeded only by Brazil (43.7% and 32.3%). In 2013, Turkey ranked the highest in the percentage of firms using banks for investments (44.2%) and slightly below Brazil in the percentage of investments financed by banks (31.4%).

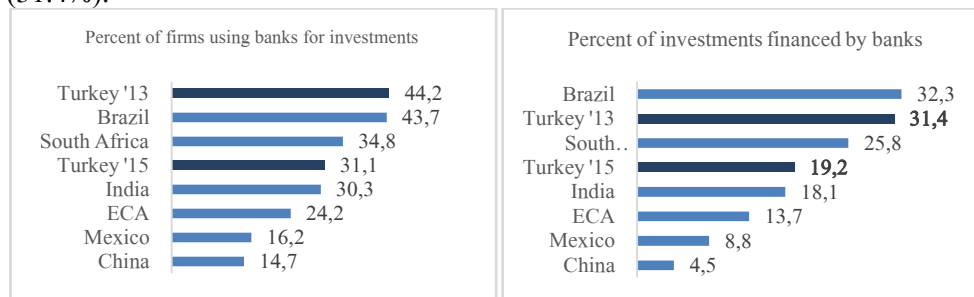


Figure 2. Cross-Country Comparison of Bank Finance Usage for Investments
Source: World Bank Enterprise Surveys Database

When it comes to financing working capital, that is funds available for day-to-day operations, Turkish firms relied a bit less on banks compared to others. In 2015, 26% of firms used banks for working capital, financing 9.6% of their working capital expenditures (Figure 3). This was lower than the ECA region figures where 31.2% of firms used banks financing 12% of their working capital purchases. However, the 2013 figures for Turkey were significantly higher (42.4% and 16%, respectively) and Brazil ranked the highest with 52.3% and 21.5%, respectively. We will look at firms' sources of finance in more detail in Section 4.

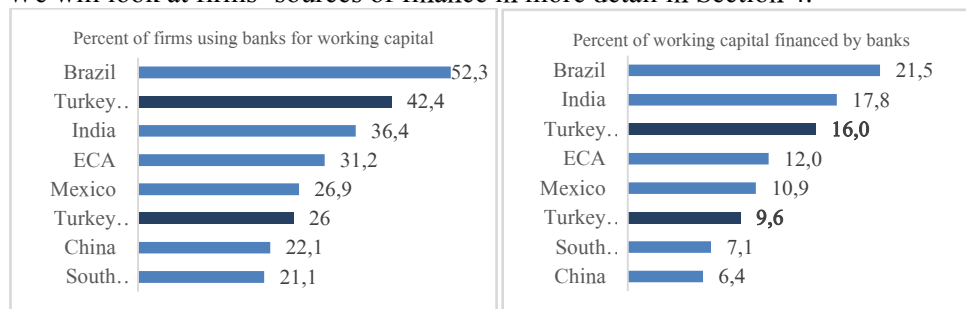


Figure 3. Cross-Country Comparison of Bank Finance Usage for Working Capital
Source: World Bank Enterprise Surveys Database

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Moving to a subjective measure of access to finance, the percent of firms reporting access to finance a major obstacle was 15.6% in 2015 which was comparable with South Africa and India and was slightly lower than the ECA region (Figure 4). However, in 2013 the figure for Turkey appeared much lower at 8.7%. This increase may again partially reflect the sample differences or can signal a potential downturn in the access to finance in Turkey as discussed above referring to Figures 1 through 3.

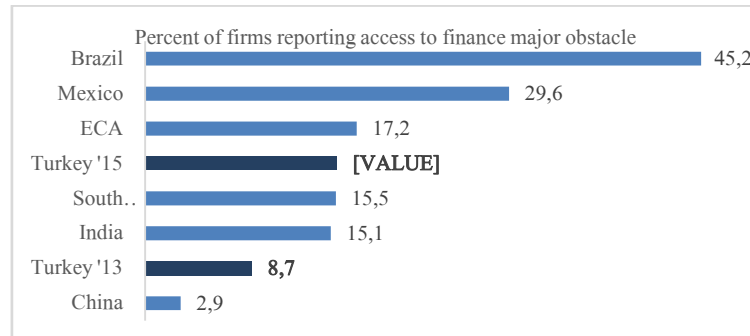


Figure 4. Cross-Country Comparison of Access to Finance Reported as Major Obstacle
Source: World Bank Enterprise Surveys Database

Finally, relying on the classification of firms' degree of credit constraint in Kuntchev *et al.* (2014), we compare how credit constrained firms were in Turkey according to 2013 and 2015 surveys relative to the same comparison group (excluding India due to lack of data availability). Following Kuntchev *et al.* (2014), firms are divided into four groups based on their credit-constrained status: Fully, partially, maybe, and not.

1. A firm is considered *fully credit constrained* if it did not use external sources of finance for neither working capital nor investments during the previous fiscal year and did not have an outstanding loan at the time of the survey although it might have applied for one but was rejected or it chose not to apply for one because of the loan's prevailing terms and conditions.

2. A firm is classified as *partially credit constrained* if it used some form of external financing for working capital and/or investments during the previous fiscal year or had an outstanding loan at the time of the survey but it did not apply for a loan in the past year for a reason other than having enough capital for the firm's needs or it applied for one and got rejected. That is, although the firm has some external financing, it is currently deterred from applying for a loan or was rejected, and hence it is considered partially constrained.

3. A firm is considered *maybe credit constrained* if it used some form of external financing for working capital and/or investments during the previous fiscal year or had an outstanding loan at the time of the survey. Moreover, it applied for and obtained a loan in the past year. However, there is still the possibility that it was rationed partially on the terms and conditions of its external finance which cannot be ascertained by the survey, and hence it is classified as maybe credit constrained.

4. A firm is classified as *not credit constrained* if it did not apply for a loan in the previous year because it had enough capital for its needs. The firm may or may not be using external finance for working capital and/or investments.

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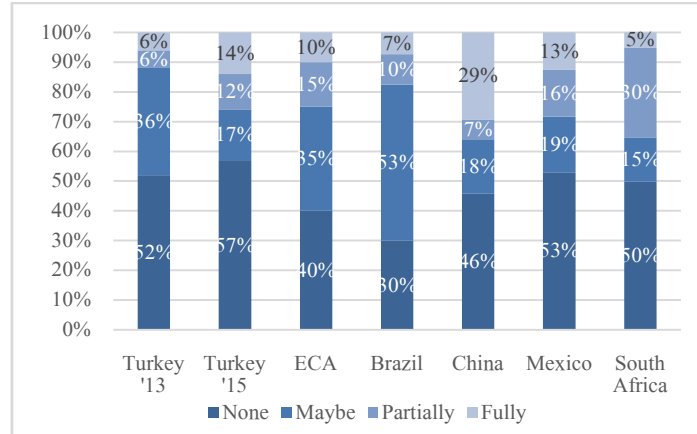


Figure 5. Cross-Country Comparison of Firms' Degree of Credit Constraint
Source: World Bank Enterprise Surveys & Kuntchev *et al.* (2014)

On the one hand, most Turkish firms appeared to be not credit constrained: 57% of firms in 2015 and 52% in 2013 (Figure 5). The proportion of firms not credit constrained in ECA region was 40%, for instance, and as low as 30% in Brazil. On the other hand, 14% of firms in 2015 and 6% in 2013 were identified as fully credit constrained in Turkey which was slightly higher than the ECA region (10%) but comparable to Mexico (13%). It is noteworthy that the 14% figure for Turkey was in line with the subjective measure of access to finance being reported as the biggest obstacle in the business environment for 15.6% of the firms in 2015 (Figure 4). There was an increase in the proportion of partially credit constrained firms as well, from 6% to 12%, which was still less than the ECA region (15%) and Mexico (16%), for example. Finally, the firms designated as maybe credit constrained reduced from 36% to 17% in 2015 and compared favorably with the countries in the comparison group.

3. Access to Finance in Turkey and Firm Characteristics

Looking at the top five constraints firms report as the biggest obstacle in their business environment in 2015, access to finance ranked in the second place for 16% of the firms after tax rates for 29% of the firms (Figure 6). This is in line with the comparisons above which may signal access to finance conditions worsening between 2013 and 2015 or might again be a reflection of different samples in the two surveys. Yet, access to finance was consistently one of the top five concerns for businesses.

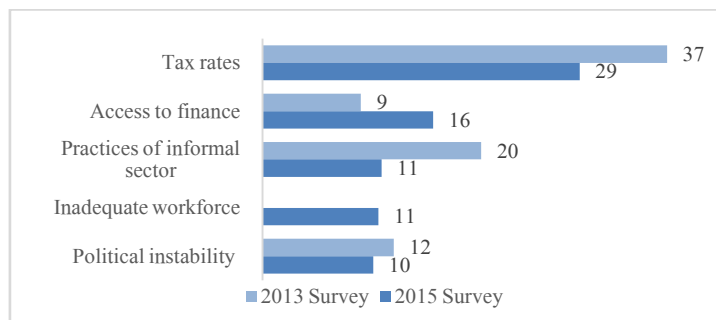


Figure 6. Percentage of Firms Reporting Constraint as Biggest Obstacle (Top Five Constraints)

Source: World Bank Enterprise Surveys (Turkey 2013, 2015)

Given that the 2015 *Enterprise Survey* was representative of Turkish firms along various dimensions including firm size, industry, and regional location among others, we will explore access to finance indicators in more detail by firm

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characteristics for this current survey below. First, we should note that although the proportion of firms with a line of credit and/or loan was average compared with other countries as discussed above (Figure 1), about 17% of owner(s) held personal loans to finance business activities in 2015 (Table 1). When owner loans are combined with business loans, 38.7% of firms are identified as loan owners (Table 1) which compares more favorably to the comparison group of countries (Figure 1) as opposed to using business loans alone.

Table 1. Use of Bank Accounts and Credit Products

| | Mean | No. of Obs. |
|--|-------|-------------|
| Percent of firms with a bank account | 52.8% | 5873 |
| Percent of firms with a line of credit or loan | 30.3% | 5883 |
| Percent of firms with owner(s) holding personal loans to finance business activities | 17.2% | 5729 |
| Percent of firms with a line of credit/loan or personal loans by owner(s) for business | 38.7% | 5925 |
| Percent of firms with an overdraft facility | 36.5% | 5839 |
| Percent of firms with an overdraft facility or a line of credit/loan | 45.3% | 5932 |

Source: Enterprise Survey (Turkey 2015), World Bank.

We now compare and contrast the use of credit products by firms, before looking at other indicators of access to finance, along various dimensions: firm size, firm age, legal status, industry, incentive region, direct exporter and foreign and female ownership status.

The firms are divided into four groups in terms of employment size: 1. Micro (1-4 employees), 2. Small (5-19 employees), 3. Medium (20-99 employees), and 4. Large (100 or more employees). Small businesses play an important role in the economy in terms of providing jobs and dynamism as well as economic development and wealth distribution. Access to credit is usually more challenging for microenterprises around the world (Beck *et al.*, 2008) and in Turkey, 32% of microenterprises (and/or their owners) had loans or line of credit, compared with 42% of small, 45% of medium, and 53% of large firms (Figure 7). Similarly, 41% of microenterprises had bank accounts, compared with 57% of small, 68% of medium, and 74% of large firms (Figure 7). Therefore, there is a positive correlation between firm size and use of credit products by firms.

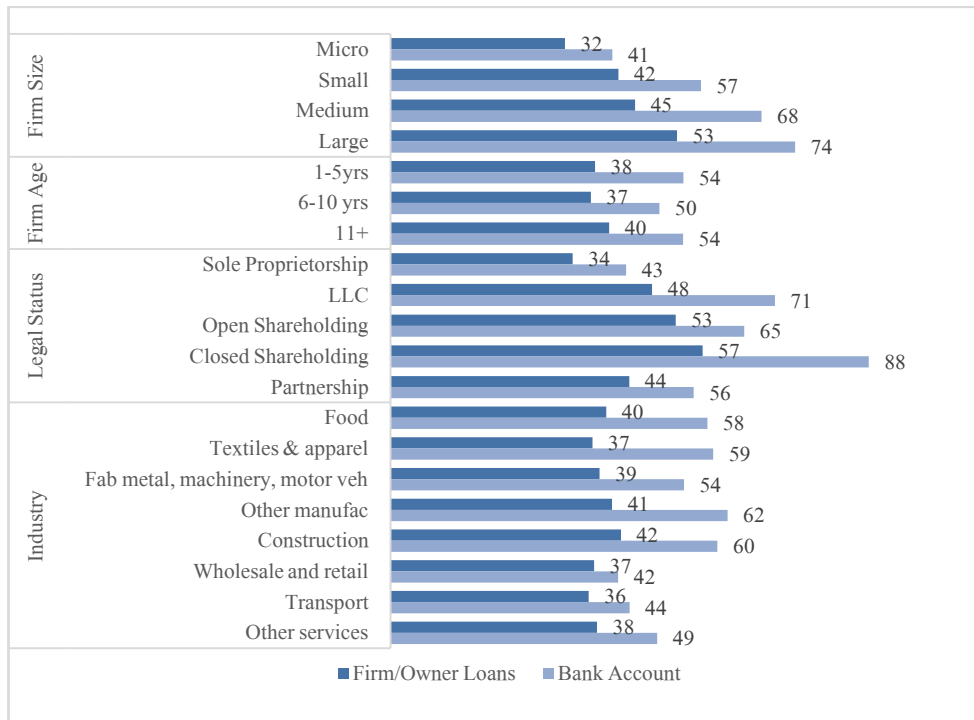


Figure 7. Credit Products Use by Firm Size, Age, Legal Status, and Industry

Source: Enterprise Survey (Turkey 2015), World Bank

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In terms of providers, most loans were granted by private commercial banks followed by state-owned banks or government agencies (Table 2). On the one hand, larger firms relied proportionately more on private banks than smaller firms, with 78.2% of large firms versus 70.9% of microenterprises. On the other hand, larger firms relied proportionately less on state banks than smaller firms, with 18.9% of large firms versus 24.2% of small firms. Firms in Turkey did not use non-bank financial institutions significantly, with only 3.8% of microenterprises and just 1.2% of small firms employing them. This might be seen as a positive feature according to the empirical evidence which suggests that government ownership of banks is commonly associated with low bank efficiency and ineffective allocation of resources, including political lending (for example, [La Porta, Lopez-de-Silanes, & Shleifer 2002](#); [Iannotta, Nocera & Sironi, 2007](#); and [Micco, Panizza, & Yanez, 2007](#)).

Table 2. Loan Providers

| Type of financial institution | Micro | Small | Medium | Large |
|--|-------|-------|--------|-------|
| Private commercial banks | 70.9% | 73.7% | 77.3% | 78.2% |
| State-owned banks or government agency | 23.5% | 24.2% | 20.8% | 18.9% |
| Non-bank financial institutions | 3.8% | 1.2% | 1.6% | 2.5% |
| Other | 1.7% | 0.9% | 0.3% | 0.4% |
| Observations | 574 | 586 | 365 | 243 |

Source: Enterprise Survey (Turkey 2015), World Bank

The firm age doesn't seem to be a factor in terms of firms' use of credit products. Dividing firms into three age groups, 38% of firms 5 years and under had owner/business loans as compared with 37% of firms in the 6-10 years range and 40% of firms 11 years and over (Figure 7). The proportion of firms with bank accounts was also more or less the same across different age groups: 54% for 1-5 years as well as 11 years and up group versus 50% for 6-10 years range.

Next, we consider whether the use of credit products varies by the legal status of the firm. We expect limited liability companies (LLCs) and shareholding companies (with traded or untraded shares) to have better access than sole proprietorships and partnerships given their higher formality with the separation of the individual ownership and the firm identity. Sole proprietorships had the lowest use of credit products where 34% of firms had loans and 43% had bank accounts (Figure 7). This is in sharp contrast with closed shareholding companies (nontraded shares), for instance, where 57% of firms had loans and 88% had bank accounts. Similarly, 48% of LLCs had outstanding loans and 71% had bank accounts.

The survey has a representative sample of 8 industries: 1.Food; 2.Textiles and apparel; 3.Fabricated metal, machinery and motor vehicles; 4.Other manufacturing; 5.Construction; 6.Wholesale and retail; 7.Transport; and 8.Other services. The percentage of firms with owner/business loans was comparable across industries. The service sectors (namely, wholesale and retail; transport; and other services) had a slightly lower proportion of outstanding loans but significantly lower usage in terms of bank accounts. For instance, 42% of wholesale and retail firms as compared with 62% of other manufacturing had bank accounts (Figure 7).

The survey also has a representative sample from 26 NUTS² II Regions aggregated into 5 economic incentive regions. It's worth noting regions 1, 2, and 5 especially. Region 1 is Istanbul only, which is the largest city and has a very high concentration of firms (26% of Turkish firms are located here). Region 2 includes the second, third, and fourth largest cities of Turkey: Ankara (the capital), Izmir and Bursa, among others. Region 5 includes cities from eastern and southeastern Turkey with relatively lower economic development and higher poverty rates. We can clearly see the regional disparities in the use of credit products. While in region

² Nomenclature of Territorial Units for Statistics, largely used by European Union bodies.

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1 (Istanbul) 91% of firms had bank accounts and 40% had loans, in region 5 (poorest region) only 32% of firms had bank accounts and 28% had loans (Figure 8). The proportion of firms with loans was somewhat comparable in regions 1-4 but firms with bank accounts varied. Region 2 (with big cities) trailed region 1 (Istanbul) with the high rate of 76%, while region 4 firms had the lowest rate of bank accounts among all with 30%.

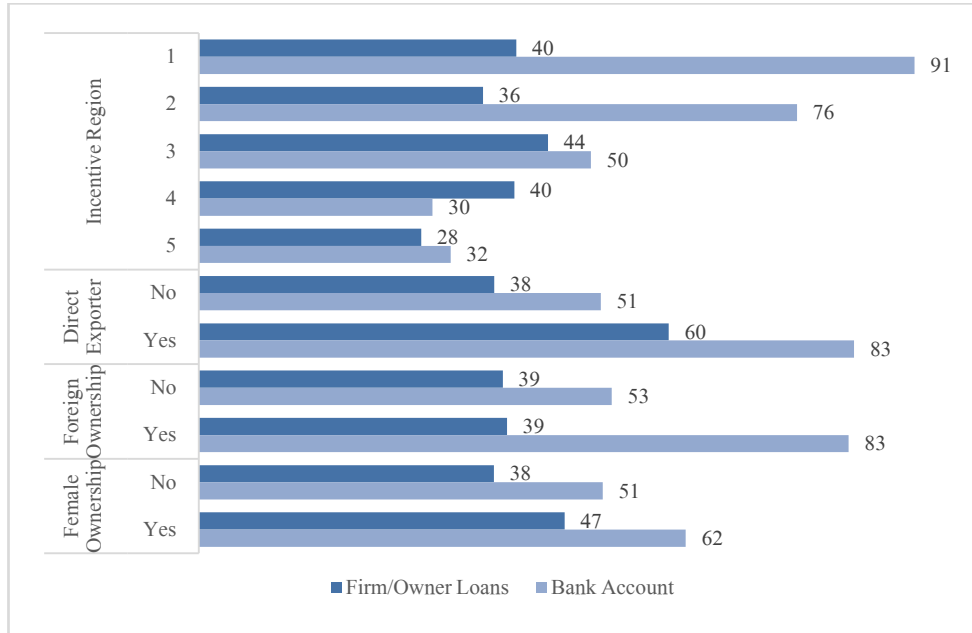


Figure 8. Credit Products Use by Incentive Region, Exporter Status, and Ownership
Source: Enterprise Survey (Turkey 2015), World Bank

Exporting firms tend to be more productive and competitive around the world so we would expect them to have easier access to credit, which was confirmed by the Turkish data as well. A firm is classified as a direct exporter if its direct exports are 10% or more of its total annual sales. 60% of exporters had a loan and 83% had a bank account compared with 38% of non-exporters with a loan and 51% with a bank account (Figure 8).

Firms are classified as foreign if the share of foreign ownership in the firm is 10% or more. Although the usage rate of loans was the same for both types of firms, foreign owned firms had a markedly higher rate of bank accounts with 83% versus 53% for domestic firms (Figure 8). Finally, firms with females amongst their owners had higher usage of credit products: 47% with loans compared with 38% without female ownership and 62% with bank accounts compared with 51% (Figure 8).

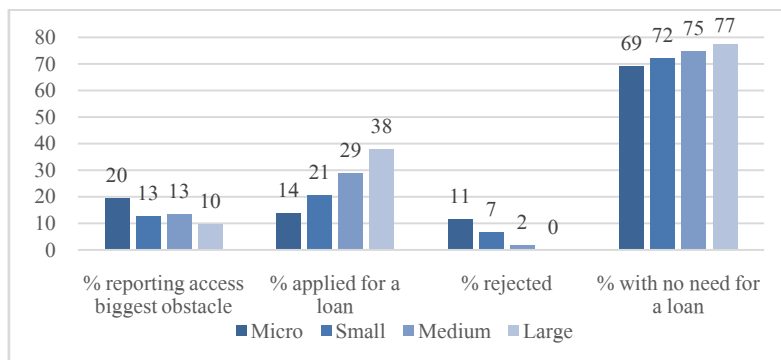


Figure 9. Other Access to Finance Indicators by Firm Size
Source: Enterprise Survey (Turkey 2015), World Bank

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Moving on to other indicators of access to finance, microenterprises were more likely to report access to finance as the biggest obstacle in the business environment with 20% of them reporting so versus 10% of large firms (Figure 9). This is an important consideration since Beck, Demirguc-Kunt, & Maksimovic (2005), find that the negative impact of reported obstacles on firm growth is stronger for small firms as compared to large firms and stronger in countries with underdeveloped financial systems. Microenterprises were less likely to apply for loans with 14% of them applying versus 38% of large firms, probably because they had higher rejection rates. 11% of microenterprise loan applications were rejected, whereas none of the large, 2% of the medium, and 7% of the small firm applications were rejected. In terms of the demand for loans, microenterprises were also less likely to state “no need for a loan” as a reason for lack of loan application-69% of microenterprises versus 72% of small, 75% of medium, and 77% of large firms (Figure 9 and Table 3). This may suggest that microenterprises and small firms may have had somewhat more demand for loans, but less ability to access them, which is an indication of financial constraints.

The second main reason for lack of applications across all firms was “Interest rates were not favorable” and other reasons were not of much concern (Table 3).

Table 3. Reasons for Lack of Loan Applications

| Reason | Micro | Small | Medium | Large |
|---|-------|-------|--------|-------|
| No need for a loan | 69.1% | 72.2% | 74.8% | 77.4% |
| Application procedures were complex | 2.2% | 2.2% | 2.1% | 2.1% |
| Interest rates were not favorable | 14.5% | 14.3% | 13.9% | 11.5% |
| Collateral requirements were too high | 3.1% | 1.8% | 1.8% | 1.0% |
| Size of loan and maturity were insufficient | 2.4% | 0.9% | 1.1% | 2.1% |
| Did not think it would be approved | 2.8% | 2.3% | 0.5% | 1.0% |
| Other | 5.9% | 6.3% | 5.8% | 4.9% |
| Observations | 2,307 | 1,338 | 618 | 288 |

Source: Enterprise Survey (Turkey 2015), World Bank

Now, applying the degree of credit constraint defined in Section 2 across different firm sizes, we see that firm size was indirectly correlated with degree of credit constraint. 17% of microenterprises were classified as fully credit constrained, as compared with 14% of small, 11% of medium, and 8% of large firms (Figure 10). Moreover, 13% of microenterprises were classified as partially credit constrained, as compared with 11% of small, 10% of medium, and 8% of large firms. However, 60% of microenterprises were classified as not credit constrained, as compared with 57% of small, 53% of medium, and 48% of large firms. This has to be considered in conjunction with the maybe credit constrained category which was also increasing in firm size. Recall that maybe credit constrained category actually refers to firms with current external financing and/or loans but we cannot ascertain if they were potentially rationed on the terms and conditions of their loans. Therefore, combining the none and maybe credit constrained categories indicates 85% of large firms compared with 71% of microenterprises, for instance.

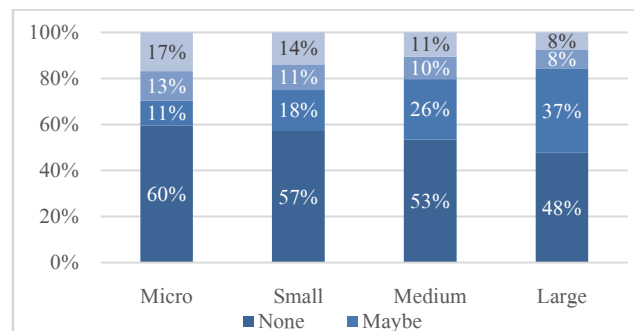


Figure 10. Degree of Credit Constraint by Firm Size

Source: Enterprise Survey (Turkey 2015), World Bank

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In terms of firm age, firms which have been 11 years or more in business were less likely to report access to finance as the biggest obstacle with 13% of them reporting so as compared with 17% of the 6-10 years range and 18% of the 5 years and under group (Figure 11). Older firms were also more likely to apply for a loan, less likely to be rejected, and more likely to indicate “no need for a loan” as a reason for lack of loan applications. These trends are intuitive given that we would expect older, and hence more experienced firms with a proven track to have better access conditions. Yet, the differences weren’t pronounced apart from the rejection rates, where 10% of 1-5 year range firm loan applications were rejected as compared with 7% of 6-10 years and 4% of 11 years and above groups.

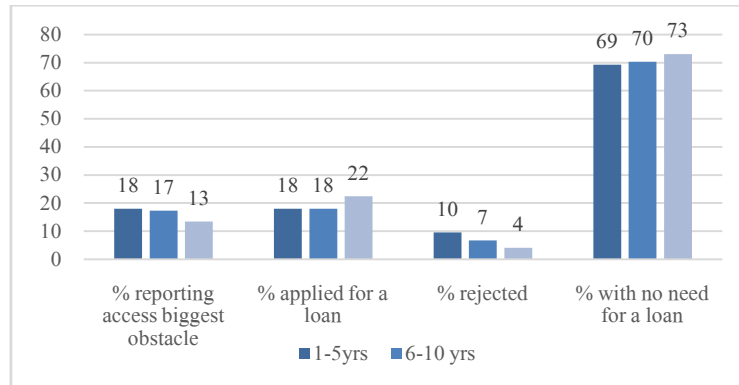


Figure 11. Other Access to Finance Indicators by Firm Age
Source: Enterprise Survey (Turkey 2015), World Bank

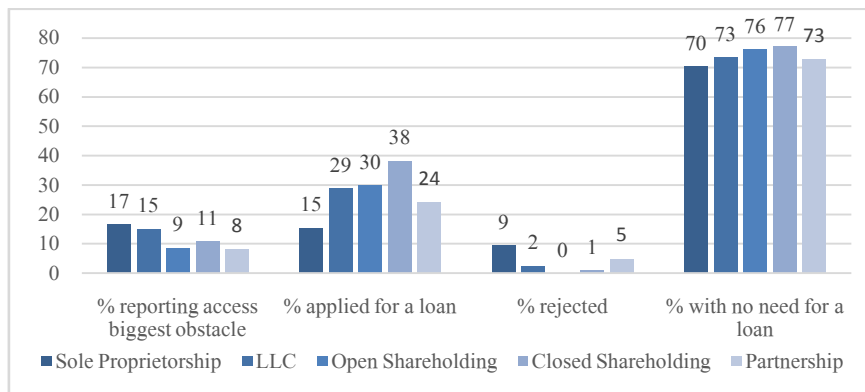


Figure 12. Other Access to Finance Indicators by Legal Status
Source: Enterprise Survey (Turkey 2015), World Bank

In line with some of the trends observed in Figure 7 for credit products usage depending on legal status of firms, sole proprietorships were most likely to list access to finance as the biggest obstacle (17%), least likely to apply for a loan (15%), most likely to be rejected (9%), and least likely to indicate “no need for loan” (70%) among others (Figure 12). Limited liability corporations (LLCs) and shareholding companies (with or without traded shares) seemed to have more favorable access conditions. For instance, open shareholding companies were the second least likely to report access to finance as the biggest obstacle (9%) and least likely to be rejected (0%); and closed shareholding companies were most likely to apply for a loan (38%) and indicate “no need for loan” (77%) as compared with others.

There did not appear to be an obvious trend for access to finance indicators across the 8 industry groups despite the slight variation across them and somewhat more favorable access for manufacturing firms. For example, food industry firms were least likely to list access to finance the biggest obstacle (13%) while wholesale and retail services industry firms were the most likely (18%) (Figure

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13). Other services industry firms were most likely to have a rejected loan application (11%) and firms in all three services industries were the least likely to apply for a loan. Finally, both the most and least likely firms to indicate “no need for loan” were in manufacturing—75% of food industry firms and 68% of textiles and apparel industry firms.

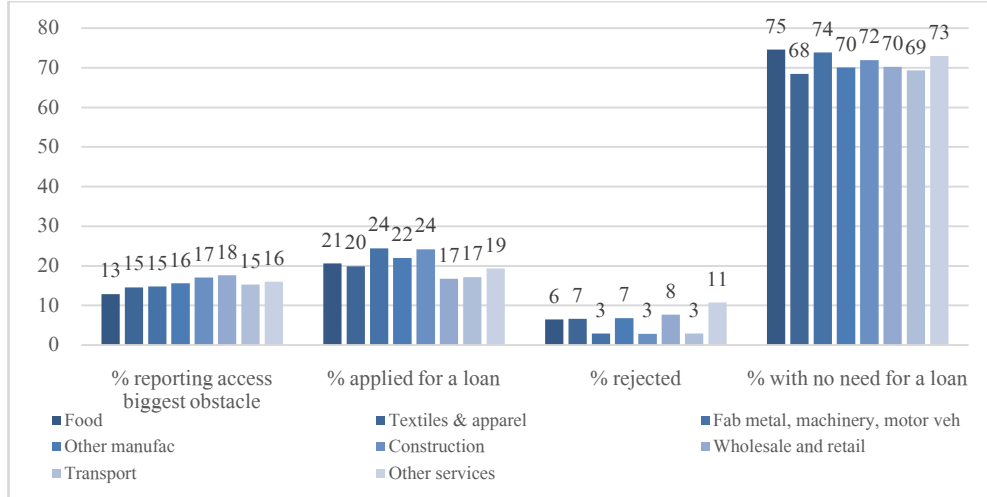


Figure 13. Other Access to Finance Indicators by Industry
Source: Enterprise Survey (Turkey 2015), World Bank

There was quite a bit of variation across the incentive regions in terms of access to finance indicators. On the one hand, firms in the biggest regions of 1 (which is just Istanbul-biggest city with highest firm concentration) and 2 (which includes Ankara, Izmir, and Bursa-the next three largest cities) were more likely to list access to finance the biggest obstacle in their business environment, with 22% of region 1 firms and 24% region 2 firms (Figure 14). On the other hand, firms in region3 (which includes several sizeable cities with important natural and agricultural resources) and region 5 (which includes some of the poorest and least developed cities in Turkey) were less likely to list access to finance the biggest obstacle, with 9% of region 3 firms and 12% of region 5 firms. In terms of other access indicators, trends for region 5 (least developed area) firms were more in line with Figure 8 where we noted they had relatively less usage of credit products. Region 5 firms were the least likely to have applied for a loan (10%), most likely to have been rejected (9%), and least likely to indicate “no need for loan” (66%). Therefore, there is some evidence for region 5 firms to have had more unfavorable access to finance conditions. Interestingly, region 3 firms were the most likely to apply for a loan (27%) but second highest likely to be rejected (8%) so we do not obtain a clear-cut picture of the variation across incentive regions.

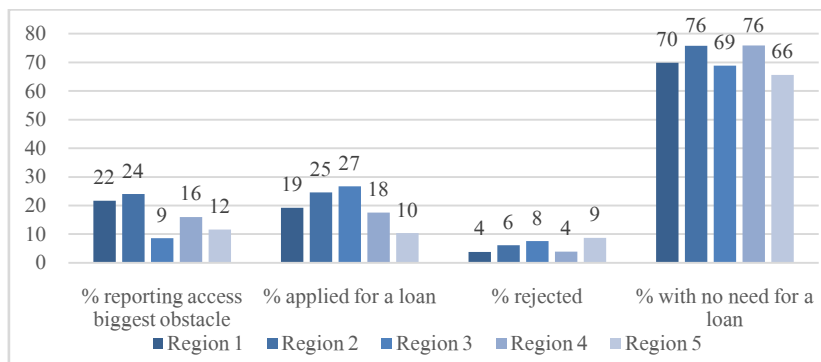


Figure 14. Other Access to Finance Indicators by Incentive Region
Source: Enterprise Survey (Turkey 2015), World Bank

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As expected, exporters (with export value 10% or more of their annual sales) had better access to finance, probably reflecting the stylized fact that exporting firms tend to be more productive and profitable, and hence more credit-worthy. Exporters were less likely to report access to finance as the biggest obstacle with 10% versus 16%, more likely to apply for a loan with 40% versus 19%, less likely to be rejected with 2% versus 7%, and more likely to indicate “no need for a loan” with 76% versus 71% of non-exporters (Figure 15).

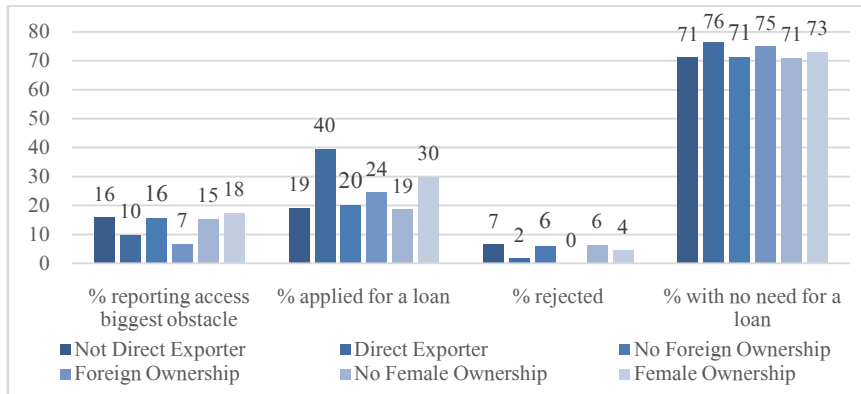


Figure 15. Other Access to Finance Indicators by Exporter Status and Ownership Structure
Source: Enterprise Survey (Turkey 2015), World Bank

Firms with foreign ownership (10% or more shares owned by foreigners) had more favorable access to finance. Foreign firms were less likely to report access to finance as the biggest obstacle with 7% versus 16%, more likely to apply for a loan with 24% versus 20%, less likely to be rejected with 0% versus 6%, and more likely to indicate “no need for a loan” with 75% versus 71% of domestic firms (Figure 15).

Finally, firms with female participation in ownership had a somewhat better access to finance, for three of the four indicators. Firms with female ownership were more likely to report access to finance as the biggest obstacle with 18% versus 15%, but more likely to apply for a loan with 30% versus 19%, less likely to be rejected with 4% versus 6%, and more likely to indicate “no need for a loan” with 73% versus 71% of firms without female owners (Figure 15).

Next, we perform a multivariate analysis of the access to finance indicators discussed above. One advantage of controlling for the multitude of firm characteristics at the same time is the ability to obtain the marginal effects holding everything else constant. When we take each variable one at a time, they can indeed be serving as a proxy for other firm characteristics in a univariate framework. Table 4 reports probit regressions with several indicators of access as dependent variables: 1) Whether the firm/owner currently has loans; 2) Whether the firm reports access to finance as the biggest obstacle in the business environment; 3) Whether the firm has applied for a loan in the previous fiscal year; 4) Whether the firm indicates “No need for a loan” as a reason for lack of application. The independent variables are all dummy variables too, capturing the various firm characteristics discussed above. The results are in line with the univariate analysis in general. Young and micro firms are more likely to report access to finance as the biggest obstacle. Micro and small firms are less likely to have firm/owner loans, apply for a loan and express no need for a loan. LLCs are more likely to have firm/owner loans and have applied for a loan but still indicate access to finance as the biggest obstacle. Firms with female participation in ownership and direct exporters are more likely to have applied for a loan and currently have firm/owner loans. Firms in services industries are more likely to have firm/owner loans but otherwise are not statistically different from manufacturing industries in terms of other access indicators. Finally, there is

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evidence of more favorable access to finance conditions in all the incentive regions relative to the poorest region 5.

Table 4. Regression Analysis of Access to Finance in Turkey

| | Firm/Owner Loans | Access Biggest Obstacle | Applied for a Loan | No Need for a Loan |
|---------------|------------------|-------------------------|--------------------|--------------------|
| Firm Age: | 0.005 | 0.106** | -0.061 | -0.077 |
| 1-5yrs | (0.041) | (0.052) | (0.047) | (0.048) |
| Firm Age: | -0.033 | 0.084 | -0.058 | -0.065 |
| 6-10yrs | (0.043) | (0.054) | (0.050) | (0.050) |
| Firm Size: | -0.367*** | 0.451*** | -0.606*** | -0.208** |
| Micro | (0.071) | (0.100) | (0.076) | (0.096) |
| Firm Size: | -0.136* | 0.147 | -0.387*** | -0.108 |
| Small | (0.069) | (0.100) | (0.074) | (0.095) |
| Firm Size: | -0.106 | 0.163 | -0.163** | -0.030 |
| Medium | (0.074) | (0.104) | (0.077) | (0.102) |
| Legal Status: | 0.162*** | 0.122** | 0.138*** | -0.031 |
| LLC | (0.043) | (0.057) | (0.048) | (0.055) |
| Direct | 0.362*** | -0.134 | 0.260*** | 0.055 |
| Exporter | (0.080) | (0.113) | (0.083) | (0.112) |
| Foreign | -0.263 | -0.476 | -0.286 | 0.074 |
| Ownership | (0.188) | (0.301) | (0.206) | (0.249) |
| Female | 0.162*** | 0.102 | 0.219*** | 0.036 |
| Ownership | (0.050) | (0.065) | (0.055) | (0.064) |
| Services | 0.075** | 0.013 | 0.022 | 0.005 |
| Industries | (0.036) | (0.046) | (0.042) | (0.042) |
| Incentive | 0.275*** | 0.396*** | 0.311*** | 0.130* |
| Region 1 | (0.062) | (0.075) | (0.076) | (0.067) |
| Incentive | 0.182*** | 0.483*** | 0.542*** | 0.316*** |
| Region 2 | (0.063) | (0.077) | (0.074) | (0.072) |
| Incentive | 0.396*** | -0.180** | 0.601*** | 0.095 |
| Region 3 | (0.056) | (0.077) | (0.068) | (0.062) |
| Incentive | 0.312*** | 0.181*** | 0.310*** | 0.308*** |
| Region 4 | (0.055) | (0.070) | (0.069) | (0.060) |
| Constant | -0.427*** | -1.564*** | -0.889*** | 0.575*** |
| | (0.079) | (0.111) | (0.089) | (0.101) |
| <i>N</i> | 5,829 | 5,235 | 5,754 | 4,503 |

Notes: Estimated by probit model. Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

4. Sources of Finance in Turkey

Although Turkey ranked favorably relative to its comparison group of countries with its reliance on banks for financing investments, as discussed in Section 1 (Figure 2), Turkish firms predominantly used internal funds for investments as opposed to external finance which was a common feature for the comparison group as well. 87% of firms used internal funds or retained earnings for investments, financing 73% of their total investments (Figure 16, Panel A). Moreover, 10% of firms relied on owners' contributions or issued new equity shares, financing 5% of their total investments this way. Banks were the main source of external finance, while supplier credit was not noteworthy, with 4% of firms making investment purchases on credit from suppliers and advances from customers, financing only 2% of their total investments.

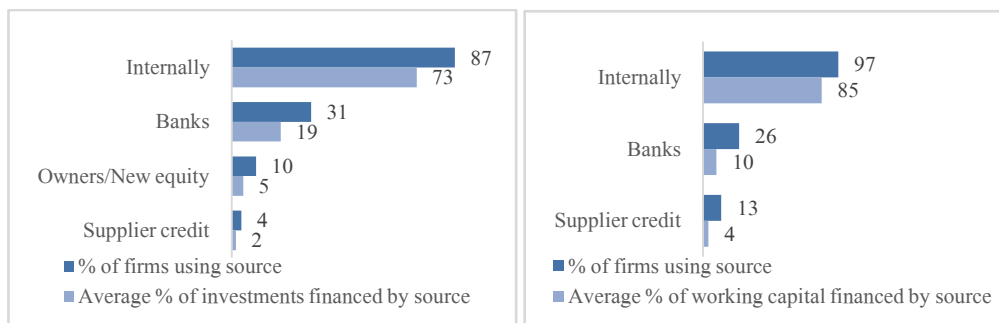


Figure 16. Firms' Sources of Finance

A. For investments (purchase of fixed assets); B. For working capital

Source: Enterprise Survey (Turkey 2015), World Bank

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Internal financing was even more important for financing working capital than investments in Turkey. 97% of firms used internal funds and retained earnings for working capital, that is funds available for day-to-day operations, financing 85% of their working capital expenditures (Figure 16, Panel B). Bank finance was the second important source, with 26% of firms using banks to finance working capital, yet financing only 10% of the total expenditures which was somewhat lower than the comparison group (Figure 3). Although Turkish firms also relied on supplier credit as another external source, only 13% of them actually used it financing just 4% of the total working capital purchases. This is in sharp contrast with some countries such as South Africa in which firms financed 22.3% of working capital by supplier credit, and Mexico in which firms financed 21.2%.

Next, comparing the sources of finance across the four firm size groups, the larger the firms were the less they financed their investments and working capital internally and the more by banks. The proportion of investments financed by internal funds and retained earnings was 76% for microenterprises, compared with 73% for small, 71% for medium, and 68% for large firms (Figure 17, Panel A). Similarly, proportion of working capital financed internally was 88% for microenterprises, compared with 84% for small, 81% for medium, and 75% for large firms (Figure 17, Panel B). In contrast, the proportion of investments financed by banks was 18% for microenterprises, compared with 19% for small and medium, and 22% for large firms. Similarly, proportion of working capital financed by banks was 7% for microenterprises, compared with 10% for small, 13% for medium, and 16% for large firms. Larger firms were more likely to use supplier credit for financing investments and working capital, and they were also more likely to rely on owners' contribution or issue new equity shares to finance investments.

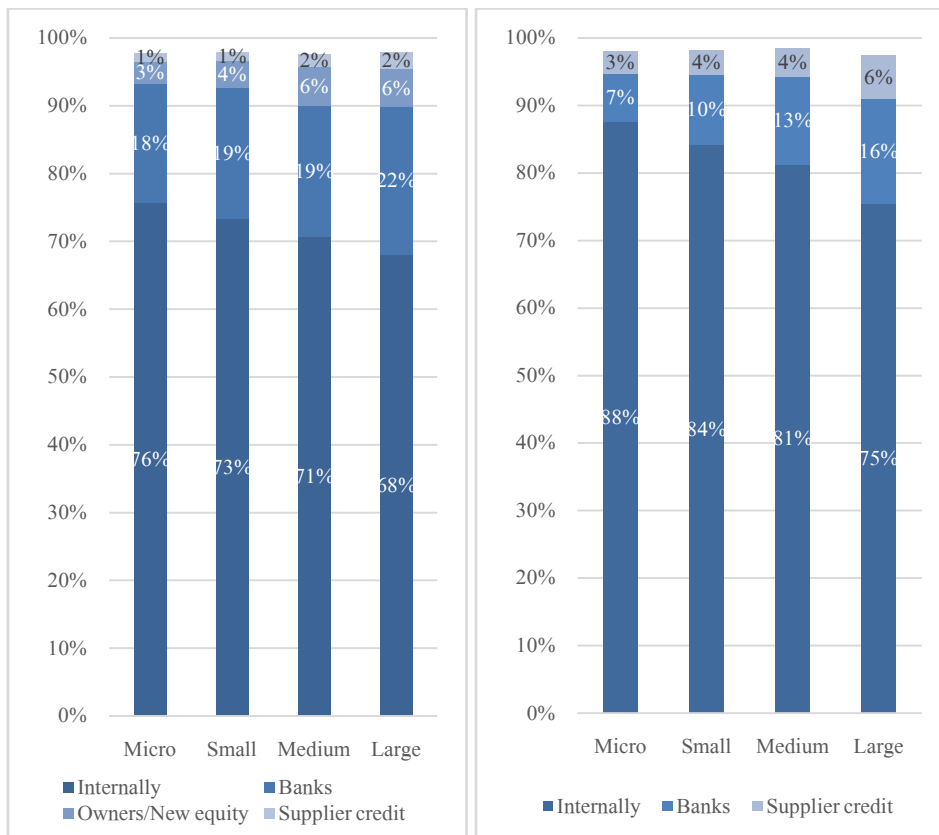


Figure 17. Firms' Sources of Finance by Firm Size
A. For investments (purchase of fixed assets); B. For working capital
Source: Enterprise Survey (Turkey 2015), World Bank

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There was slight variation in the average annual growth of sales for different firm sizes where large firms grew by 9% as compared with small firms which grew by 15% (Figure 18). Apart from microenterprises which grew by 1%, the average annual growth in employment was 2% for all firms. It's not surprising for microenterprises (1-4 employees) to not grow in employment given their nature as most may not have employees or may be small family businesses (Figure 18).

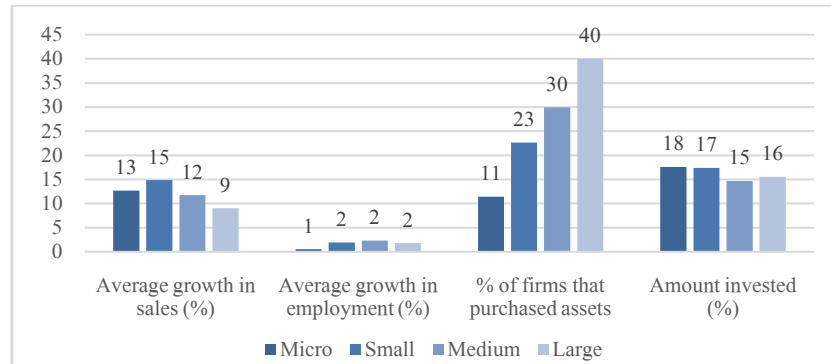


Figure 18. Firms' Growth and Investment
Source: Enterprise Survey (Turkey 2015), World Bank

Investment in productive assets, such as purchases of machinery, vehicles, and equipment as well as purchases of land and buildings is essential for continued growth and development of a firm and the economy overall. In Turkey, most firms made productive investments but large firms were the most likely to invest, with 40% of them purchasing assets, compared with 30% of medium, 23% of small, and 11% of microenterprises (Figure 18). Yet, the proportion of new investment relative to existing assets was comparable across different firm sizes ranging between 15% to 18% and appeared to be healthy if we consider common rates of depreciation of 6% or more.

Finally, comparing the firms' sources of finance across the five incentive regions we observe some variation. On the one hand, firms in region 5 (poorest area) were some of the least likely to rely on internal funds for investments-financing 68% of their investment expenditures internally, whereas they were the most to rely on internal funds for working capital-financing 91% of their working capital expenditures internally (Figure 19). On the other hand, firms in region 5 (least developed area) were some of the most likely to rely on banks-financing 23% of their investment expenditures by banks, whereas they were the least to rely on banks for working capital-financing just 6% of their working capital expenditures by banks. Interestingly, region 1 (Istanbul) firms relied most on internal funds financing 78% and least on banks financing 11% of their investments as compared with firms in other regions. In sum, there was no clear association between sources of finance and the location of firms.

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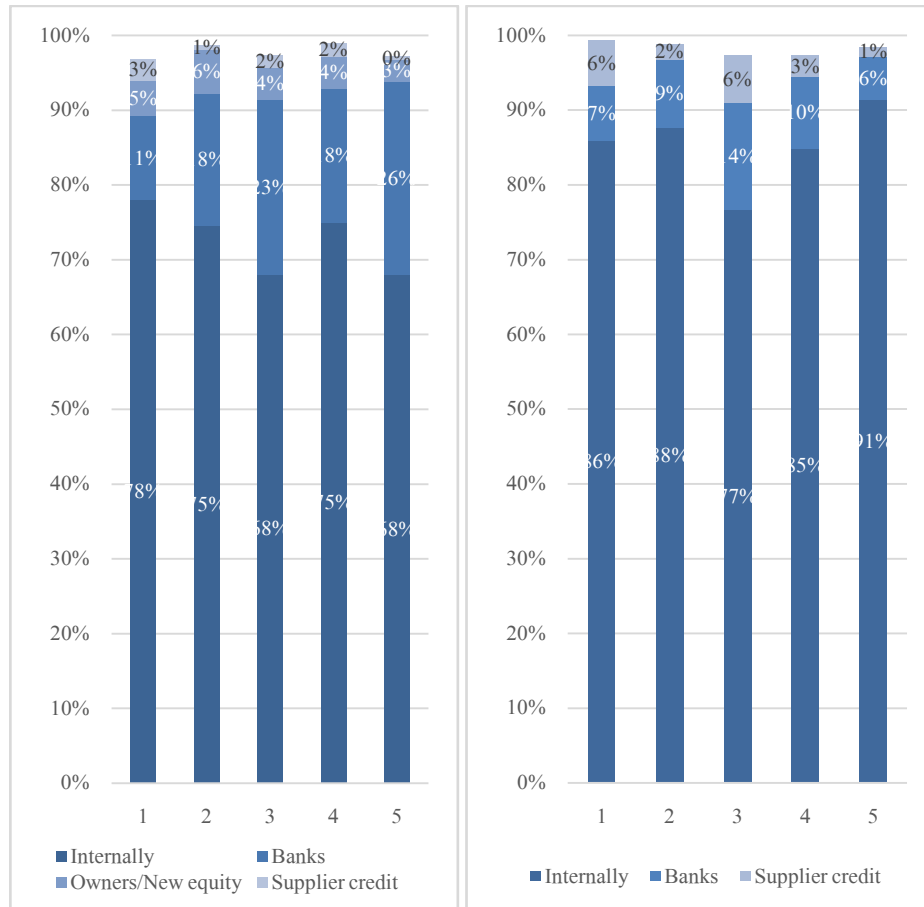


Figure 19. *Firms' Sources of Finance by Incentive Region*
A. For investments (purchase of fixed assets); B. For working capital
Source: Enterprise Survey (Turkey 2015), World Bank

5. Concluding Remarks

This paper utilizes the World Bank *Enterprise Survey* conducted with a representative stratified random sample of 6,006 Turkish firms for the 2015 fiscal year to evaluate the access to finance conditions in Turkey. Overall, the access to finance conditions seem to have worsened between 2013 and 2015 but otherwise, Turkey ranks average relative to the comparison group in terms of use of credit products and using external financing for investments and working capital. The only exception is in percent of firms with a bank account where Turkey lags significantly behind other countries. Yet, a bigger proportion of Turkish firms are not credit constrained at all relative to the comparison group.

We also explore the access to finance indicators in Turkey along various firm characteristics: firm size, firm age, legal status, industry, region, exporter and foreign/female ownership status. For example, firm size appears to be an important factor and access is more challenging the smaller the firms are. Microenterprises have lower usage of credit products and bank accounts, are more likely to report access to finance the biggest obstacle, less likely to have applied for a loan, more likely to have their loan applications rejected and less likely to indicate “no need for a loan” as a reason for lack of application. This can suggest that microenterprises and also small firms have more demand for loans but less ability to access them.

A multivariate analysis shows that young and micro firms are more likely to report access to finance as the biggest obstacle. Micro and small firms are less likely to have firm/owner loans, apply for a loan and express no need for a loan. LLCs are more likely to have firm/owner loans and have applied for a loan but still

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indicate access to finance as the biggest obstacle. Firms with female participation in ownership and direct exporters are more likely to have applied for a loan and currently have firm/owner loans. Firms in services industries are more likely to have firm/owner loans but otherwise are not statistically different from manufacturing industries in terms of other access indicators. There is evidence of more favorable access to finance conditions in all the incentive regions relative to the poorest region 5.

Finally, Turkish firms rank favorably relative to the comparison group of countries in terms of using banks to finance investments, that is purchase of productive assets such as machinery, vehicles, equipment, land, and buildings. They rank somewhat less favorably in using banks to finance their working capital, that is funds available for day-to-day operations. Yet, a significant majority of Turkish firms rely on internal sources for financing both investments and working capital. Most firms make productive investments and the proportion of new investment relative to existing assets is healthy, above depreciation rates. The extent of external finance for both investments and working capital is higher the larger the firms are but there is no clear association with the region firms are located in and their sources of finance.

References

- Beck, T., Demirguc-Kunt, A., & Maksimovic, V. (2005). Financial and legal constraints to firm growth: Does firm size matter?, *Journal of Finance*, 60(1), 137-177. doi. [10.1111/j.1540-6261.2005.00727.x](https://doi.org/10.1111/j.1540-6261.2005.00727.x)
- Beck, T., Demirguc-Kunt, A., Laeven, L., & Levine, R. (2008). Finance, firm size, and growth, *Journal of Money, Credit and Banking*, 40(7), 1379-1405. doi. [10.1111/j.1538-4616.2008.00164.x](https://doi.org/10.1111/j.1538-4616.2008.00164.x)
- Claessens, S., & Laeven, L. (2003). Financial development, property rights, and growth, *Journal of Finance*, 58(8), 2401-2436. doi. [10.1046/j.1540-6261.2003.00610.x](https://doi.org/10.1046/j.1540-6261.2003.00610.x)
- Iannotta, G., Nocera, G., & Sironi, A. (2007). Ownership structure, risk and performance in the European banking industry, *Journal of Banking & Finance*, 31(7), 2127-2149. doi. [10.1016/j.jbankfin.2006.07.013](https://doi.org/10.1016/j.jbankfin.2006.07.013)
- Kuntchev, V., Ramalho, R., Rodriguez-Meza, J., & Yang, J.S. (2014). What have we learned from the enterprise surveys regarding access to credit by SMEs?, *World Bank Policy Research Working Paper*, No.6670. doi. [10.1596/1813-9450-6670](https://doi.org/10.1596/1813-9450-6670)
- LaPorta, R., Lopez-de-Silanes, F., & Shleifer, A. (2002). Government ownership of banks, *Journal of Finance*, 57(1), 265-301. doi. [10.1111/1540-6261.00422](https://doi.org/10.1111/1540-6261.00422)
- Levine, R. (2006). Finance and growth: Theory and evidence, in P. Aghion & S. Durlauf, (Eds.), *Handbook of Economic Growth*, (pp.865-934), New York: Elsevier, North-Holland. doi. [10.1016/S1574-0684\(05\)01012-9](https://doi.org/10.1016/S1574-0684(05)01012-9)
- Levine, R., Loayza, N., & Beck, T. (2000). Financial intermediation and growth: Causality and causes, *Journal of Monetary Economics*, 46(1), 31-77. doi. [10.1016/S0304-3932\(00\)00017-9](https://doi.org/10.1016/S0304-3932(00)00017-9)
- Micco, A., Panizza, U., & Yanez, M. (2007). Bank ownership and performance. does politics matter?, *Journal of Banking & Finance*, 31(1), 219-241. doi. [10.1016/j.jbankfin.2006.02.007](https://doi.org/10.1016/j.jbankfin.2006.02.007)
- Rajan, R.G., & Zingales, L. (1998). Financial dependence and growth, *American Economic Review*, 88(3), 559-586.



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