

Running a Business in Armenia

New data from Enterprise Surveys indicate that in Armenia, financing of investment by owners' contributions or by issuing equity increased to 28 percent, making Armenia the country with the highest equity financing of investment in all of Eastern Europe and Central Asia (ECA) (figure 1). The value of collateral as a percentage of the loan amount is only 96 percent on average, which is the third lowest percentage in ECA. The value of required collateral has decreased substantially from 2005, when it was 179 percent of the loan amount. Regarding gender and the workforce, although female labor force participation is lower in Armenia compared to most ECA countries, nearly 36 percent of all firms have a majority female workforce.

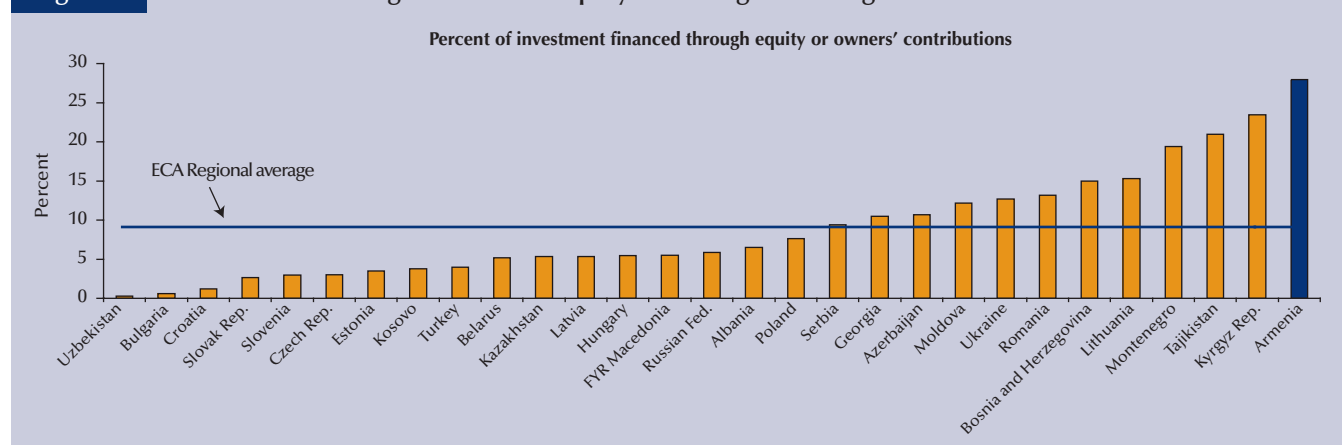
The Enterprise Surveys¹ use standard survey instruments to capture data on the business environment and its effect on competitiveness and firm performance, the relative importance of various constraints to employment and productivity, and the business perceptions of the biggest obstacles to enterprise growth. The survey is designed to be representative of a country's private nonagricultural economy, and firms sampled are stratified by size, location, and sector (figure 2)² to ensure that most major types of firms are covered. Only firms with five employees or more are included in the sample. In Armenia, 374 firms were surveyed from October 2008 to February 2009. The information collected refers to the characteristics of the firm at the moment of the survey or to fiscal year 2007.

What Is the Average Firm in Armenia?

While the average firm³ in Armenia has 41 full-time permanent workers, 38 percent of firms have 10 permanent employees or fewer and 60 percent have 20 permanent employees or fewer. The vast majority of firms in Armenia are closed shareholding companies, with 90 percent of all firms adopting this legal form. Firms in the southwest region of the country are less likely to be closed shareholding companies, with only 69 percent of firms registered as this type of legal entity in that region.

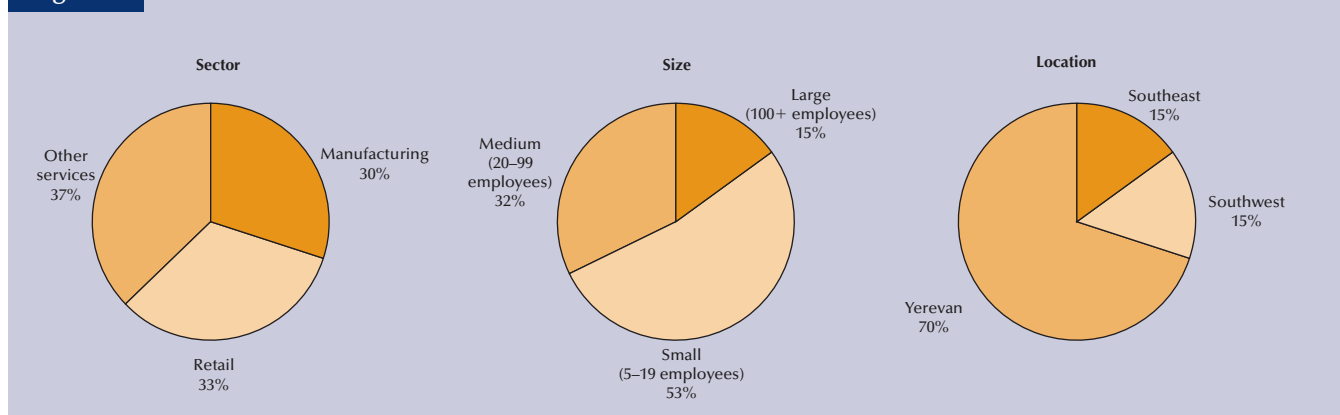
Female participation in the labor force, in firm ownership, and in management is lower in Armenia than in most other ECA countries (table 2). Firms with female top managers are three times as likely to have female participation in

Figure 1 Armenia Has the Highest Level of Equity Financing in the Region



Source: Enterprise Surveys.

Figure 2 Characteristics of the Firms Interviewed



Source: Enterprise Surveys.

ownership than firms with male managers (73 percent versus 25 percent of firms with male managers). Manufacturing firms are much less likely to have female top managers, with only 4 percent versus 14 percent of other services and 22 percent of retail firms (figure 3). Also, 21 percent of small firms have female top managers in contrast to 4 and 7 percent for medium and large firms, respectively. No firms with government ownership have female top managers.

Nearly 36 percent of all firms have a majority female workforce. There is significant clustering in female labor force participation in the formal sector by type of firm and firm location. Just over half of employees in other services firms are female, in contrast to just under a third of firms in

other sectors, including manufacturing. Small firms are also significantly more likely to have female employees than medium firms.

The vast majority of firms in Armenia are fully domestically owned. Only around 11 percent of firms have any foreign participation in ownership, while 4 percent of firms are fully foreign-owned. Government participation in the ownership of private sector firms is relatively low in Armenia (table 2), with nearly 99 percent of firms having no government participation in ownership.

Within Armenia, firm age and years of experience of the top manager vary considerably depending on the firm's size and sector, though firms are on average fairly young. Over

Table 1 How Does Armenia 2009 Compare within Eastern Europe and Central Asia?

Ranking 1 assigned to the largest value	Descending ranking (out of 29 countries)
% of Firms Formally Registered when Started Operations in the Country	19
Private Domestic Ownership (%)*	21
Private Foreign Ownership (%)*	8
Government/State Ownership (%)*	16
% of Firms with Female Participation in Ownership	22
Bank Finance for Investment (%)	16
% of Exporter Firms	13
Domestic Sales (% of Sales)	18
% of Firms with Internationally Recognized Quality Certification	7
% of Firms with Annual Financial Statement Reviewed by External Auditor	29
Capacity Utilization (%)	23
% of Firms Using Their Own Web Site	10
% of Firms Using Email to Communicate with Clients/Suppliers	13
Ranking 1 assigned to the smallest value	Ascending ranking (out of 29 countries)
Value of Collateral Needed for a Loan (% of the Loan Amount)	3
Number of Power Outages in a Typical Month	10
Senior Management Time Spent in Dealing with Requirements of Government Regulation (%)	14
Average Number of Visits or Required Meetings with Tax Officials	21
Incidence of Graft Index **	20
Losses Due to Theft, Robbery, Vandalism, and Arson against the Firm (% of Sales)	21

Source: Enterprise Surveys.

Table 2 The “Average Firm” in Armenia 2009

	Armenia	ECA†	EU-10‡
Age (years)	9.9	14.0	14.1
% of Firms Formally Registered When Started Operations in the Country	96.2	96.8	98.7
Most Common Legal Form	Closed	Closed	Closed
	Shareholding Co.	Shareholding Co.	Shareholding Co.
Private Domestic Ownership (%)*	89.9	91.3	90.2
Private Foreign Ownership (%)*	7.7	6.2	7.5
Government/State Ownership (%)*	0.7	1.2	0.5
% of Firms with Female Participation in Ownership	31.8	36.7	39.1
% of Firms with Female in Top Management Position	13.5	19.1	22.7
Experience of the Top Manager (Years)	13.5	16.1	17.1
Average Number of Temporary Workers	5.2	5.7	3.4
Average Number of Permanent, Full-Time Workers	40.9	44.0	37.3
% of Full-Time Female Workers	36.9	38.7	40.5

Source: Enterprise Surveys.

60 percent of all firms are 10 years old or less and 96 percent of firms are less than 20 years old. Manufacturing firms are also significantly older than firms in other sectors and have more experienced managers. Top managers at manufacturing firms have an average of 18 years of experience, 6 more years than top managers of firms in other sectors. Female top managers have an average of 4 years less experience than their male counterparts.

How Do Businesses Operate in Armenia?

Armenia stands out in ECA for its high use of equity, owners’ contributions, or stock sales to finance investment. Twenty-eight percent of investment in Armenia is financed through equity or owners’ contributions, which is the highest value in all of ECA. Turning to other ways to finance investment, an average firm finances 23 percent of its investment through banks and 47 percent through internal funds. Thirty-seven percent of firms fi-

nance all of their investment from internal funds. Firms with female participation in ownership finance higher percentages of their investment from internal funds (61 percent) than do firms without female participation in ownership (42 percent), which suggests that firms with female participation in ownership may be more credit constrained.

Sales on credit are well below the ECA averages, while prepaid sales are substantially higher than the regional averages. Forty-three percent of firms sell nothing on credit and 9 percent of firms sell everything on credit. Forty-one percent of sales in Yerevan are prepaid, while only 29 percent of sales in the southwest region and 21 percent of

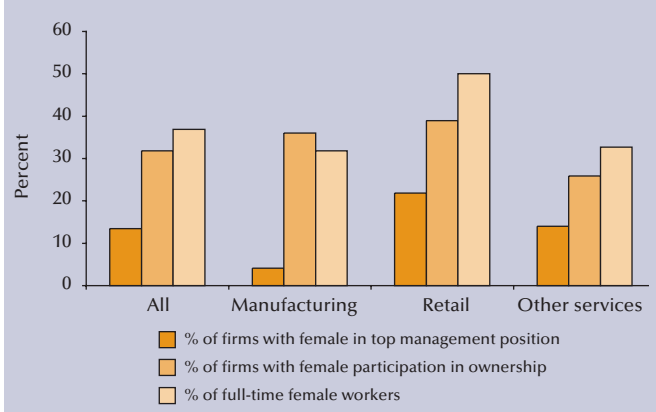
sales in the southeast region are prepaid.

Armenian firms usually need collateral to secure their loans. Eighty-six percent of firms with loans were required to pledge collateral. The value of collateral as a percentage of the loan amount, however, is only 96 percent on average, which is the third lowest percentage in ECA (table 1). Only Turkey and Kazakhstan require a lower value of collateral on average: 90 and 91 percent, respectively. In terms of general access to financial products, 90 percent of Armenian firms have a checking or savings account.

Armenia does not stand out from the rest of ECA in terms of international trade (table 3). Domestic sales are 90 percent of total sales on average. Eighty-five percent of firms sell all of their output in the domestic market. On average, 8 percent of sales are exported directly and 2 percent of sales are exported indirectly. Firms in Yerevan use their own Web site and use email to communicate with their clients significantly more than firms in the other regions within the country. Twenty-seven percent of Armenian firms have an internationally recognized certification of quality (like ISO). Larger firms tend to be more innovative

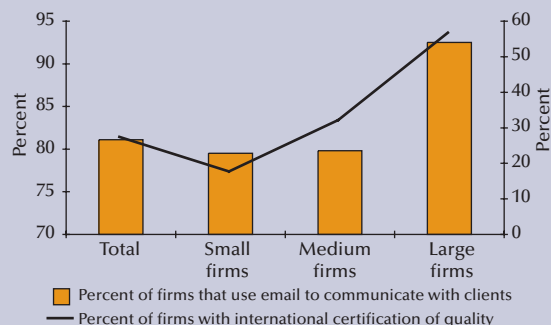
Eighty-five percent of firms sell all of their output in the domestic market.

Figure 3 Female Participation in Ownership and Labor Force Varies across Sector



Source: Enterprise Surveys.

Figure 4 Innovation Gap between Large and Smaller Firms



Source: Enterprise Surveys.

by relying on these technologies and international certifications (figure 4).

Only 19 percent of Armenian firms have their financial statements reviewed by an external auditor, which is the lowest percentage in ECA (table 1). This percentage is much higher for large firms (45 percent) than for medium-size firms (25 percent) or small firms (10 percent). Capacity utilization is also somewhat low—the average capacity utilization in Armenia is 66 percent, so Armenia ranks 23 out of 29 in this measure.

What Constrains Firms in Armenia?

Armenia is comparable with the rest of ECA in terms of the regulatory burden placed on firms. For example, senior managers spend 10 percent of their time dealing with the requirements of government regulation, and the average

Male top managers have almost twice as many visits or required meetings with tax inspectors than firms with female top managers.

number of visits or required meetings with tax officials per year is two (table 4). These results are consistent with other indicators of Armenia's regulatory burden. The *Doing Business 2009* report, for example, ranks Armenia 9 out of 28 countries in ECA. The Global Competitiveness Report 2008-2009 ranks Armenia 9 out of the 17 ECA countries included.

Firms' experiences with corruption vary by firm characteristics. The percentage of firms expected to make informal payments to public officials to "get things done" is 12, which is lower than the ECA average but above the EU-10 average of 7 (table 4). Nonexporting firms, firms with male top managers, and firms without female participation in their ownership are more likely to be expected to pay bribes to get things done. The incidence of graft index, which is an indicator of the importance of bribery in dealing with government officials, is almost identical to the ECA average, but again substantially worse than the EU-10 average of 4.7 (table 4). However, Armenia's rank on this index of 20 out of 29 presents an even less favorable view. Similarly, Armenia is ranked 19 out of the 28 ECA countries in the 2008 Corruption Perceptions Index produced by Transparency International.

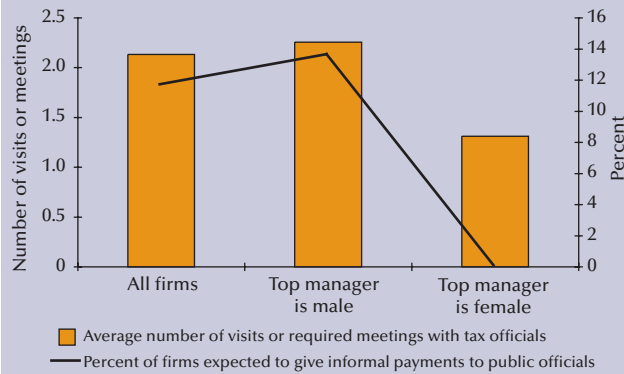
Excessive regulatory requirements may lead to corruption. Each interaction with a government official may present that official with the opportunity to extract a bribe. Male top managers have almost twice as many visits or required meetings with tax inspectors than firms with female top managers (figure 5). In parallel, a much higher percentage of firms with male top managers are expected to give informal payments to public officials than firms with female top

Table 3 Choices by the "Average Firm" in Armenia 2009

	Armenia	ECA†	EU-10‡
Internal Finance for Investment (%)	46.6	62.2	62.3
Bank Finance for Investment (%)	22.6	23.8	26.7
Value of Collateral Needed for a Loan (% of the Loan Amount)	95.6	132.8	124.6
Loans Requiring Collateral (%)	85.9	81.1	74.3
% of Firms with a Checking or Savings Account	89.5	88.9	85.2
% of Exporter Firms	22.1	21.8	28.3
Domestic Sales (% of Sales)	89.6	91.0	88.6
Sales Exported Directly (% Sales)	8.4	7.0	9.2
Sales Exported Indirectly (% Sales)	2.0	2.0	2.2
Sales That Are Prepaid (%)	38.0	22.9	10.9
Sales Sold on Credit (%)	30.0	49.4	66.5
% of Firms with Internationally Recognized Quality Certification	26.9	19.9	25.6
% of Firms with Annual Financial Statement Reviewed by External Auditor	19.1	37.9	38.7
Capacity Utilization (%)	66.3	73.7	81.3
% of Firms Using Their Own Web Site	62.8	48.5	63.4
% of Firms Using Email to Communicate with Clients/Suppliers	81.1	73.2	88.5

Source: Enterprise Surveys.

Figure 5 Female Top Managers Have Fewer Meetings with Tax Inspectors and Face Less Corruption



Source: Enterprise Surveys.

managers. In fact, no firms with female top managers report that they are expected to give informal payments to public officials. One interpretation of these results is that firms with female top managers face less corruption because they have less interaction with government officials. Senior management in firms with top female managers also spend significantly less time (5 percent) dealing with government regulations than senior management in firms with male top managers (11 percent).

Security expenses and losses due to crime in Armenia are also comparable with the region's averages. Only 50 percent of small firms pay for security, but much higher percentages of medium-size firms (65 percent) and large firms (85 percent) pay for security. Security costs as a percentage of total sales have a similar pattern, with 1.2 percent for small firms, 1.4 percent for medium-size firms, and 2.6 percent for large firms. Firms with female management and firms in the southwest have significantly lower security costs than their counterparts.

The value of collateral required to secure a loan plummeted, falling from 173 to 75 percent of the loan value.

How Has the Business Environment Changed over the Past Three Years?

The Enterprise Surveys data provide the tools to monitor changes in the business environment across different rounds of surveys. In Armenia, of 374 firms interviewed in 2009, 99 were also previously surveyed in 2005.⁴ Since the same firms are interviewed over time, this subset of data is more appropriate to evaluate the evolution of the business environment and the impact of business environment reforms than the full datasets for both years. Considering the full datasets would introduce effects that are the result of variations in the sample composition over the two years.⁵ Therefore, the following analysis refers only to these firms that were interviewed in both rounds of surveys.

In general, the firms surveyed in both 2005 and 2009 have grown, increasing the average number of permanent full-time workers from 50 to 66. These increases were concentrated among manufacturing firms and domestically owned firms. Armenian firms have also benefited from several reforms in trade and in business finance. In 2008, Armenia implemented an electronic system that allows import and export declarations to be submitted electronically to the customs offices. This reform may explain why the percentage of firms using material inputs or supplies of foreign origin increased significantly between the two rounds of surveys, from 71 percent to 88 percent.

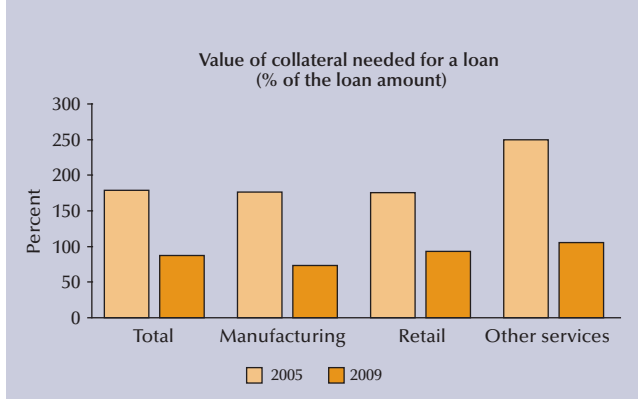
Business financing in Armenia has improved significantly according to several measures. First, for firms in both survey rounds, the value of collateral required to secure a loan plummeted, falling from 173 to 75 percent of the loan value (figure 6). Both prepaid sales and sales on credit nearly doubled as well, from around 15 to 16 percent in 2005 to over 30 percent in the 2009 survey. These improvements may have been helped by several reforms in Armenia, including the introduction of a public credit registry

Table 4 Constraints on the "Average Firm" in Armenia 2009

	Armenia	ECA†	EU-10‡
Number of Power Outages in a Typical Month	2.3	5.8	2.5
Senior Management Time Spent in Dealing with Requirements of Government Regulation (%)	10.3	10.6	9.5
Average Number of Visits or Required Meetings with Tax Officials	2.1	1.7	1.1
% of Firms Expected to Pay Informal Payment to Public Officials (to Get Things Done)	11.6	16.8	7.4
Incidence of Graft Index**	9.9	9.9	4.7
Losses Due to Theft, Robbery, Vandalism, and Arson against the Firm (% of Sales)	0.6	0.5	0.4
% of Firms Paying for Security	59.0	57.7	62.0

Source: Enterprise Surveys.

Figure 6 Collateral Requirements Have Decreased across All Sectors



Source: Enterprise Surveys.

as well as private credit bureaus (*Doing Business 2006, 2007, 2008*). However, financing by raising equity or by contributions of the owners also increased dramatically, rising from under 1 percent in 2005 to 28 percent of all investment financing in the 2009 survey. Internal financing of investment has decreased from an average of 67 percent in 2005 to 48 percent in the 2009 survey.

Tax administration also seems to have improved somewhat between the two rounds of surveys. The percentage of firms that reported that they were expected to give gifts in meetings with tax inspectors fell from 71 percent to 9 percent. Additionally, the average number of visits or required meetings with tax officials decreased from 2.8 to 2.3, and this decline was significant for small firms, retail firms, and domestically owned firms.

Firms in Armenia have benefited from an improved business environment over time, especially in areas of credit access and paying taxes. However, firms in Armenia still face difficulties. Corruption remains a problem, and Armenia ranks at the bottom in firms having their financial statements reviewed by an external auditor. Armenian firms also face challenges in making use of all of their potential capi-

tal, both human and physical. Female participation in management and in the labor force as well as capacity utilization are below regional averages.

Notes

1. The Enterprise Surveys, implemented in Eastern Europe and Central Asia countries, are also known as Business Environment and Enterprise Performance Surveys (BEEPS) and are jointly conducted by the World Bank and the European Bank for Reconstruction and Development for this geographic region.

2. This figure presents the unweighted distributions by size, sector, and location of the firms interviewed without any inferences to the whole economy.

3. The term “Average Firm” is used to convey the average firm characteristics from the Armenia 2009 Enterprise Survey. The sample of firms interviewed is representative of the manufacturing and services sectors of the economy. For more information on the survey methodology, please consult <http://www.enterprisesurveys.org/Methodology/>.

4. The information collected in 2005 refers to the characteristics of the firm at the moment of the survey or to fiscal year 2004.

5. The firms surveyed in both years may not be representative of the Armenia’s private nonagricultural economy since these are a subset of the full sample. Firms with fewer than five employees may be included among the firms surveyed in both years. The analysis presented is purely descriptive and does not aim at establishing causality between reforms and their intended effects.

* The ownership variables represent the average ownership composition within a firm. These variables do not represent the ownership composition across firms.

** Incidence of Graft Index is the proportion of instances in which firms were either expected or requested to pay a gift or informal payment over the number of total solicitations for public services, licenses, or permits for that country. The Graft Index is defined in Gonzalez, Alvaro S., Ernesto Lopez-Cordova, J., and E. Valladares, Elio, *The Incidence of Graft on Developing-Country Firms*. World Bank Policy Research Working Paper Series, 2007.

† ECA includes Albania 2009, Armenia 2009, Azerbaijan 2009, Belarus 2008, Bosnia and Herzegovina 2009, Bulgaria 2009, Croatia 2009, Czech Republic 2009, Estonia 2009, Georgia 2008, Hungary 2009, Kazakhstan 2009, The Republic of Kosovo 2009, Kyrgyz Republic 2009, Latvia 2009, Lithuania 2009, FYR Macedonia 2009, Moldova 2009, Montenegro 2009, Poland 2009, Romania 2009, Russian Federation 2009, Serbia 2009, Slovak Republic 2009, Slovenia 2009, Tajikistan 2008, Turkey 2008, Ukraine 2008, and Uzbekistan 2008.

‡ EU-10 includes 2009 data from Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, and Slovenia.

The Enterprise Surveys measure the business environment in over 100 countries in the world. A standardized questionnaire, universe under study, and implementation methodology is used to make sure information is comparable across countries and time. The full data and documentation explaining the methodology are available at www.enterprisesurveys.org.

The Country Notes are a product of the staff of the Enterprise Analysis Unit. The findings, interpretations, and conclusions expressed in this note are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

