
**ASSESSING THE IMPACT OF COVID-19 ON
SMALL AND MEDIUM-SIZED ENTERPRISES IN
ARMENIA**

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ASSESSING THE IMPACT OF COVID-19 ON SMALL AND MEDIUM-SIZED ENTERPRISES (SMES) IN ARMENIA

BASED ON LABOR FORCE SURVEY DATA

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Key Findings

- SMEs in Armenia have been affected by the crisis to a greater extent than large companies.
- Employees in industries that allow for remote work, e.g., education and ICT services have been less affected by the crisis, in both SMEs and large companies.
- Employees who have medium to high professional qualifications have been less affected by the crisis, in both SMEs and large companies.

1. Introduction

Researchers both in Armenia and abroad have tried to assess the economic and social costs that the COVID-19 pandemic imposes on national economies and the global economy (Atkeson, 2020; Avanesyan, 2020; Baldwin and Weder di Mauro, 2020; Gourinchas, 2020; McKibbin and Fernando, 2020; Mkrtchyan, 2020). These analyses underscore that in its scale and scope, the current crisis surpasses the financial crisis of 2008-2009 and is comparable to the Great Depression of 1929-1933 in the United States and the wartime devastation of 1939-1945 in Europe. Not surprisingly, leaders of many countries have drawn parallels between fighting the pandemic and mobilizing for war, increasing public spending commensurately.

This paper aims to contribute to the discussion by assessing the extent to which the employees of small and medium-sized enterprises (SMEs) in Armenia have been affected by the crisis. Like in other developed and developing economies, SMEs account for most of the private-sector employment and value added in Armenia (European Commission, 2019; OECD, 2019; Statistical Committee of the Republic of Armenia, 2019; World Bank, 2020). Targeted public assistance to these businesses and their employees is crucial to post-crisis recovery (OECD, 2020).

This brief is based on the findings of an extended research paper and is structured as follows. Section 2 below provides an overview of the research methodology. It is followed by sections on data analysis, including both descriptive and inferential statistics. The final two sections offer a discussion of the limitations of the study, its main conclusions, and policy implications.

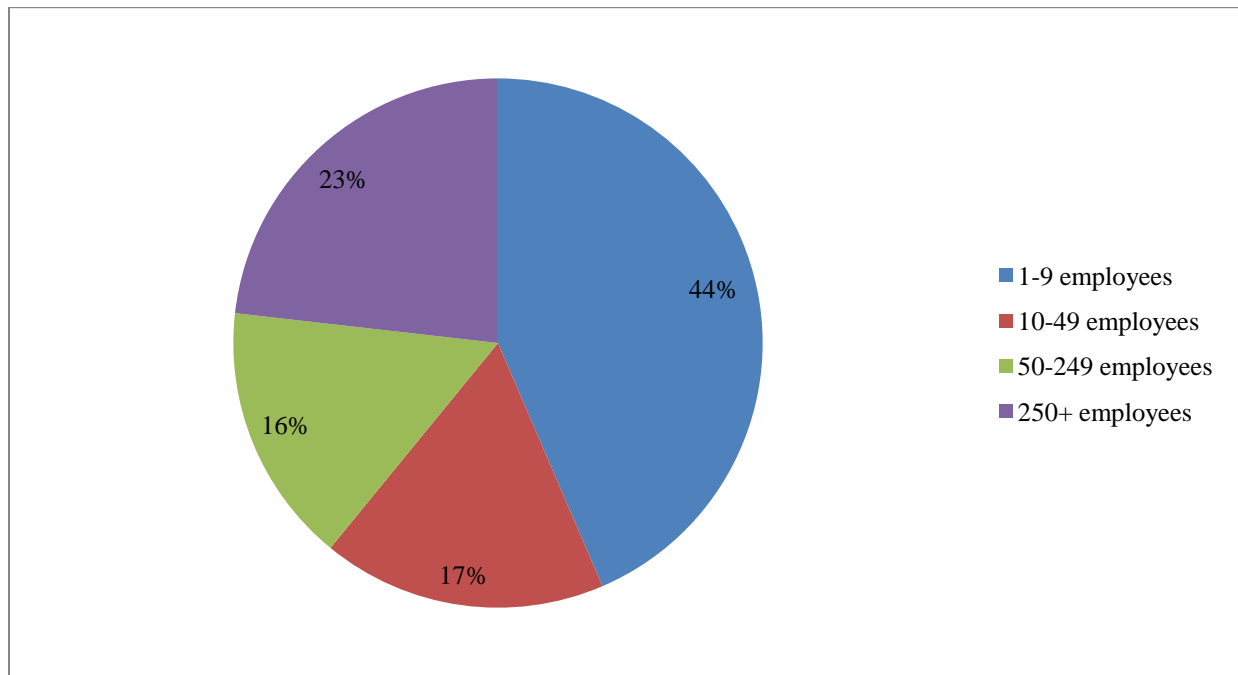
2. Methodology

The paper is based on the analysis of survey data collected by the Paul Avedisian Center for Business Research and Development (CBRD), American University of Armenia. The survey was conducted through stratified random sampling in May 2020 and is representative of the entire territory of Armenia (n=1,312). As not all respondents were employed at the time the survey was taken, we analyze only the cases for which data on company size are available (n=944). In accordance with the RA law on state support to small and medium entrepreneurship (National Assembly of the Republic of Armenia, 2000), the paper defines SMEs as companies that have less than 250 employees.

3. Descriptive Statistics

Figure 1 provides an overview of respondents' employment by company size. As can be seen, the majority (77%) were employed by SMEs. Around half of the respondents (53.4%) are male, and around a third (39.4%) are from Yerevan. Occupation and wage distribution data show that around 60% of SME employees (n=725) are wage employees and have an average monthly income of AMD 75,000 (median=93,500). Among large-company employees (n=219), a great majority (90%) are wage employees, and most (41%) earn in the range of AMD 180-500 thousand (USD 350-1,000 a month).

Figure 1. Size of the Respondent's Employer (n=944)

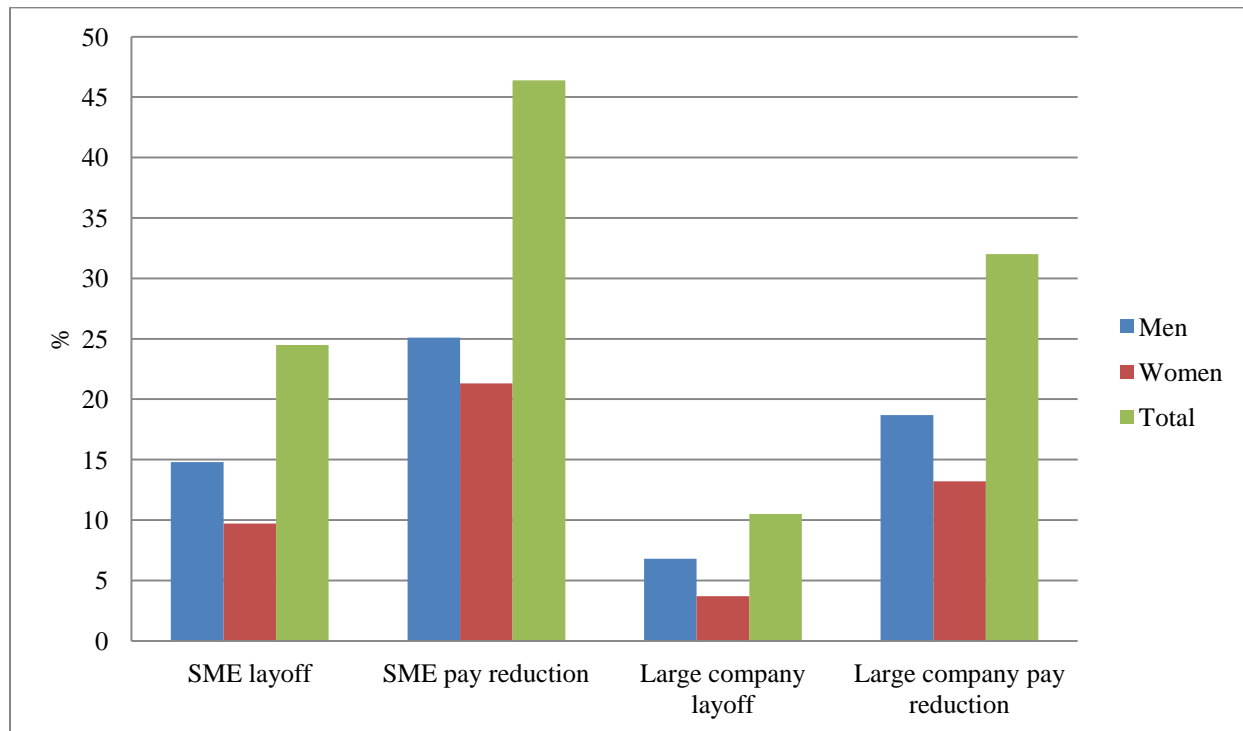


Source: AUA CBRD survey dataset

4. Preliminary Inferential Statistics

Cross-tabulations of pay reduction and layoff data with SME and large-company employment data show that SME employees have been more affected by the crisis than large-company employees. Specifically, 25% of the SME employees report having been laid off due to the crisis, and around half have had a reduction in pay. By contrast, 11% of the large-company employees report being laid off, and 32% have had a reduction in pay. In both cases, men have been more affected by the crisis than women (see Figure 2 below).

Figure 2. Employment Changes due to the Pandemic (n=714 SMEs and n=219 Large Companies)

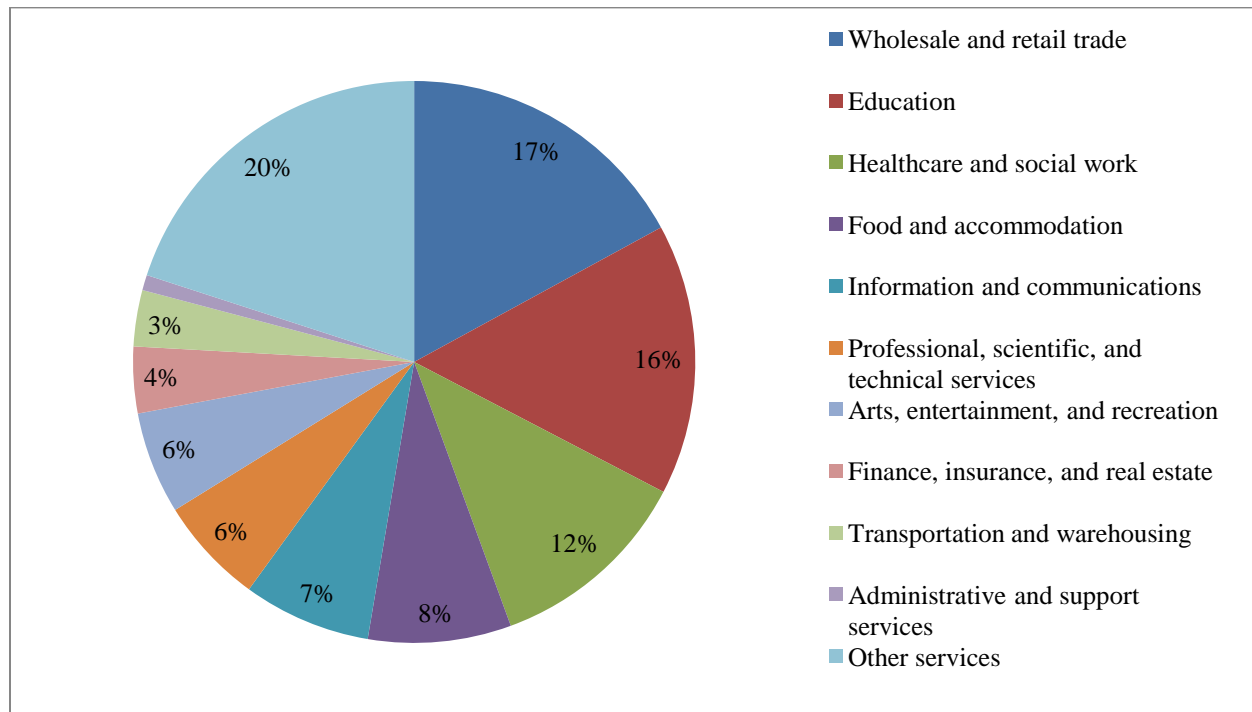


Source: AUA CBRD survey dataset

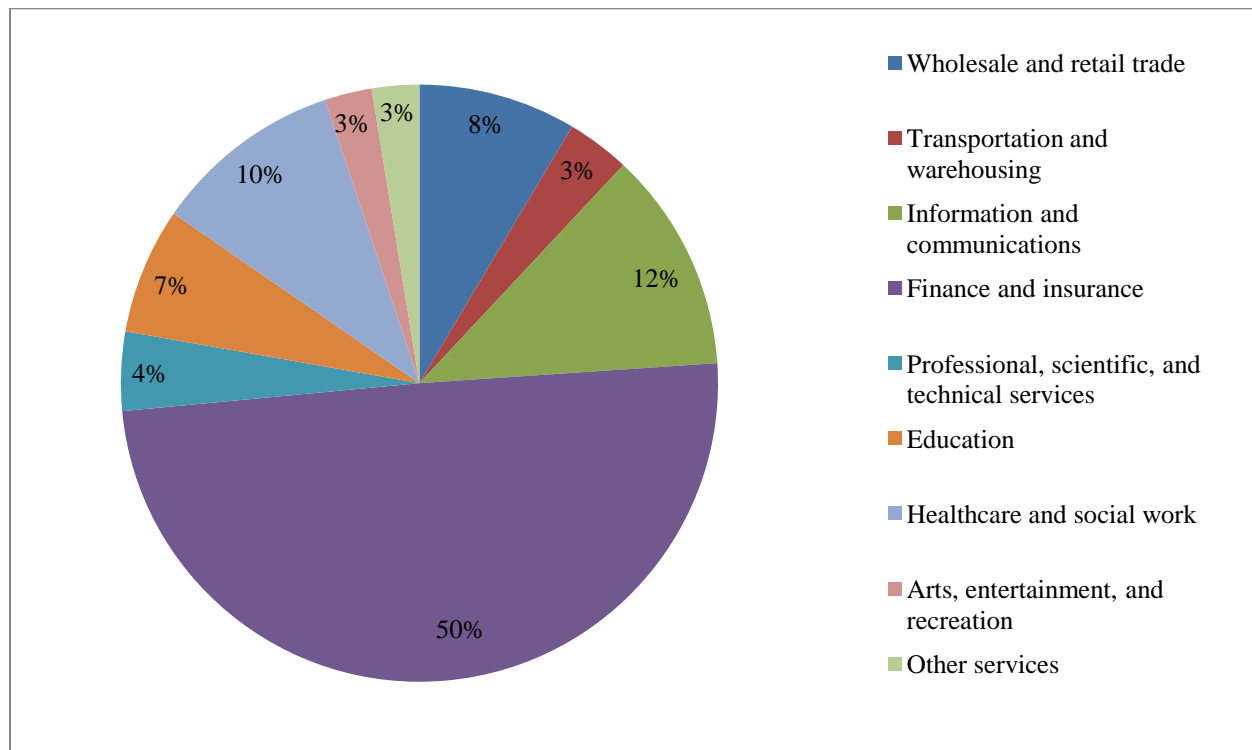
Respondents who were employed at the time the survey was conducted (May 2020, n=490 SME employees and n=154 large-company employees) are primarily in services, in both SMEs and large companies (69% and 76%, respectively). For SME employees, the main sectors of employment (within the trade and services subcategory, n=340) are wholesale and retail trade, education, and healthcare and social work (see Figure 3). For large companies (n=117), those are finance and insurance (50%) and information and communications (12%). Most of the respondents have medium to high professional qualifications, in both SMEs (43%) and large companies (56%).

Figure 3. SME and Large Company Employment (Services), May 2020

a) SMEs (n=340)



b) Large companies (n=117)



Source: AUA CBRD survey dataset

5. Primary Inferential Statistics

Logistic regression results show that being an SME employee increases the likelihood of layoff and pay reduction by 2.5 and 2 times, respectively. Regression models do not have a good fit, but the SME variable odds ratios are significant at 1-5% level in both cases, accounting for more of the variance in the dependent variable (layoff or pay reduction) than all the other independent variables (see Table 1 below). Other variables that are significantly associated with layoff are gender, full-time employment, and monthly income. In the pay reduction equation, those are age, residence in the capital city and in an urban area, and full-time employment.

Table 1. Logistic Regression Results

	LAYOFF		PAY REDUCTION	
	Odds ratio	Standard error	Odds ratio	Standard error
Gender	1.92***	0.43	1.01	0.18
Age	0.98	0.01	0.97***	0.01
Residence 1	1.04	0.25	1.60**	0.32
Residence 2	1.51	0.42	1.50*	0.35
SME	2.49**	0.82	2.00***	0.43
Full-time	0.44**	0.10	0.49***	0.10
Wage employee	0.94	0.21	0.93	0.18
Income	0.69***	0.07	0.95	0.07
Constant	0.43	0.26	1.47	0.69
$LR \chi^2$	78.25***		55.55***	
Pseudo R^2	0.12		0.06	
Observations	652		638	

Notes: Variable measurements: gender (1=male, 0=female), age (continuous), residence 1 (1=capital, 0=regions), residence 2 (1=urban, 0=rural), SME (1=SME employee, 0=large-company employee), full-time (1=full-time employee, 0=part-time), wage employee (1=yes, 0=no), income (interval scale). Significance levels: * p<0.10, ** p<0.05, *** p<0.01. Replication data are available upon request.

6. Limitations

Unlike most of the SME studies to date (see OECD, 2020 for an overview), this paper is based on the results of an employee (labor force), not company owner/manager (employer) survey data. Nevertheless, as the respondents were identified through stratified random sampling, some confidence in the results is apposite.

7. Conclusion and Policy Implications

This study shows that small and medium-sized enterprises in Armenia have been more affected by the COVID-19 crisis than large companies. As employees have already been laid off and have had a pay reduction, government measures directed at employment maintenance (economic assistance packages № 5, 18, and 21) are less effective than direct assistance (package № 3) and corporate tax deferrals. Data released by the Ministry of Economy (2020) show that less than 1,000 have benefited from direct state support, although there are around 70,000 SMEs in the country. As SMEs account for a significant share in both employment and value added, a well-designed policy should reach most businesses.

This study also shows that employees have been less affected in sectors which allow for work to be carried out remotely, e.g., education, ICT services, and finance. This finding is consistent with similar studies in other countries and implies that more government assistance should be directed to sectors that were particularly hit by the crisis. Among those are tourism, transportation, retail trade, and hospitality.

Finally, the results of this study suggest that employees who have medium to high professional qualifications have been less affected by the crisis. Thus, government assistance should also be targeted at low-skill workers who have been laid off and cannot find remote employment opportunities.

References

- Atkeson, A. (2020). What will be the economic impact of COVID-19 in the US? Rough estimates of disease scenarios. *NBER Working Paper*, 26867 (March).
<http://www.nber.org/papers/w26867>
- Avanesyan, V. (2020, April 3). *Assessment of the economic impact of restrictive government policies (lockdowns) to combat coronavirus*. Russian-Armenian University, College of Business and Economics. <http://inecbus.rau.am/rus/11/1226>
- Baldwin, R., & Weder di Mauro, B. (Eds). (2020). *Economics in the time of COVID-19*. CEPR Press. <https://voxeu.org/content/economics-time-covid-19>
- European Commission. (2019). *Annual report on European SMEs 2018/2019: Research & development and innovation by SMEs*. Publications Office of the European Union.
- Gourinchas, P. O. (2020, March 26). Flatten the curve of infection and the curve of recession at the same time. *Foreign Affairs*. <https://www.foreignaffairs.com/articles/world/2020-03-26/flatten-curve-infection-and-curve-recession-same-time>
- McKibbin, W., & Fernando, R. (2020). The global macroeconomic impacts of COVID-19: Seven scenarios. *CAMA Working Paper*, 19 (February). <https://cama.crawford.anu.edu.au/publication/cama-working-paper-series/16221/global-macroeconomic-impacts-covid-19-seven-scenarios>
- Ministry of Economy of the Republic of Armenia. (2020, June 16). *Applications to the third package for mitigating the economic impact of coronavirus close on June 30th* (in Armenian). <https://mineconomy.am/news/2065>
- Mkrtchyan, T. (Ed). (2020). *Coronavirus and the world*. Tntesaget Publishing.
<https://asue.am/upload/files/amberd/Amberd%202020.1.pdf>
- National Assembly of the Republic of Armenia. (2000). *Law of the Republic of Armenia on state support to small and medium entrepreneurship* (in Armenian, as amended 22 December 2010). <https://www.arlis.am/DocumentView.aspx?DocID=64617>
- Organisation for Economic Co-operation and Development (OECD). (2020, May 19). *Coronavirus (COVID-19): SME policy responses*. <http://www.oecd.org/coronavirus/policy-responses/coronavirus-covid-19-sme-policy-responses-04440101/>
- OECD. (2019). *OECD SME and entrepreneurship outlook 2019*. OECD Publishing.
<https://doi.org/10.1787/34907e9c-en>

Statistical Committee of the Republic of Armenia. (2019). *Small and medium entrepreneurship in the Republic of Armenia*. <https://armstat.am/en/?nid=82&id=2218>

World Bank. (2020). *Small and medium enterprises (SMEs) finance*.
<https://www.worldbank.org/en/topic/smefinance>