Gender dimension of employment decisions during the COVID-19 lockdown: evidence from Armenia

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Gender dimension of employment decisions during the COVID-19 lockdown: evidence from Armenia

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Key Findings

- Flexibility among women to switch to a remote working regime, not conditioned by industry type or firm size, suggests that the gender gap in the labor market in emergency situations can be effectively mitigated, if companies are able to offer switching regimes for existing positions.

- Tax incentives for switching to a remote working regime can mitigate gender unemployment imbalance in times of emergency. For example, a differentiated (lower) income tax for remote workers can do this job.

- The role of industry structure of the Armenian economy in explaining the gender gap in the labor market seems to be critical and deserves exploration in more detail. From our analysis, we infer that a significant portion of gender imbalance in furloughs is attributable to industry structure.

- We do not observe a gender gap in layoffs during the emergency period.

With the COVID-19 outbreak rolling all over the world, a multidimensional crisis is expected both in industrialized and developing countries. Businesses are striving to be agile and respond quickly to the current pandemic. One of the challenges they are facing in these unusual times when disruptions are omnipresent almost in all functional areas of the business is maintaining optimal structures of human resources. Furlough is one of the most common responses to uncertainties and expected economic crisis. Evidence shows that furloughs and/or layoffs have occurred on a considerable scale after countries were locked down (Brynjolfsson et al., 2020; Nicola et al., 2020). We have already witnessed different economies having this issue resulting from the multifaceted COVID-19 crisis; however, men and women are being affected in different ways. For instance, Alon, Doepke, Olmstead-Rumsey and Tertilt (2020) show that employment opportunities of female workers are likely to be harder hit than those of male employees.

Ongoing studies are exploring the global economic turmoil caused by COVID-19 and are unfolding its impact on different business sectors. Regardless of which sectors are most affected by the economic crisis, gender norms are such that chances for women to be furloughed or laid off are higher in some countries because men are perceived to be the legitimate jobholders when jobs are scarce (Seguino, 2010; Singh and Zammit, 2002).

In the economic literature, individual traits (among other factors) of employees affect chances of employment (Becker, 2009; Parsons, 1972). Unequal chances (of layoff or furlough) are conditioned by independent effects of structural, procedural, and employee variables (Cornfield, 1983). The consideration of individual chances of employment from an organizational perspective depends on a number of factors: organizational structure, corporate culture, business model. Furthermore, some evidence shows that when companies have "good corporate citizen" mindset they respond to an economic crisis differently. They may have higher numbers of laid-off workers; however, they also allocate significant resources to those employees' social benefits (Collins, Fleischman and Sanchez, 2018). Employee-level characteristics are also essential determinants, such as seniority, investment made in professional development (e.g. trainings), etc.

In response to the COVID-19 epidemic, many businesses in Armenia have adopted work-from-home and remote operations for the first time. After the COVID-19 outbreak in Armenia began in mid-March 2020, the Government brought forward a need for amendments in the labor code in order to accommodate legally the large amount of restructuring happening within local

employers during this crisis. The Parliament accepted the labor code amendments (related to remote work and disciplinary liabilities of employees) on 29 April 2020. Some of those amendments create enabling conditions for female workers (e.g.; childcare needs). Also, a number of Government aid programs have been launched to support businesses facing COVID-19 related challenges. On June 17, 2020 the deputy-prime minister of Armenia Mr. Mher Grigoryan noted that based on some preliminary data, 12.000 employees are currently furloughed. The Government seeks to assess comprehensively the number of employees who have been furloughed (without any salary payment). The Government aid programs continue supporting those businesses that did not lay off their employees and paid salaries over the pandemics period.

What determines employment decisions by companies' management? Do male and female employees face equal chances to be furloughed or laid off?

In our study, we address these questions by using survey data collected by Center for Business and Research Development (CBRD) at the American University of Armenia. In May 21, 2020, 51,000 SMS messages have been sent to a population of 500,000 identified smartphone owners with jobs sometime in the past.

Table 1. Employment status change breakdown by gender for the period March 15 – April 20.

	Continued working with non-remote regime	Continued working remotely	Switched to remote work	Switched to non-remote work	Laid off	Furloughed	Did not work	Total
	1	2	3	4	5	6	7	8
Female	29.13%	65.00%	68.03%	45.10%	39.58%	59.14%	62.21%	51.67%
Male	70.87%	35.00%	31.97%	54.90%	60.42%	40.86%	37.79%	48.33%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Note: The number of observations is 927. Pearson's chi square test rejects the hypothesis that the rows and columns in a two-way table are independent with high confidence.

From Table 1, we learn that 51.67 percent of respondents are female, after identifying those individuals who have answered the question on the employment change.[1] A few interesting observations can be drawn from the tabulation table:

- The fraction of women not working in the considered period is substantially high, 62.21 percent. In Armenia, the unemployment rate is traditionally high among women. The gap is nevertheless decreasing. For 2019, World Bank reports 17.3 percent female unemployment, versus 16.7 percent male unemployment, as percentages of respective (female and male) labor forces.[2] The corresponding rates for 2009 are 14.0 percent and 8.0 percent.

- A much smaller fraction of female respondents continued working with the same non-remote regime (29.13 percent), vis-à-vis to male respondents (70.87 percent). Further inspection of the tabulation table shows that women seem to be more flexible in switching to working conditions from non-remote to remote (68.03 percent) or sustaining the remote regime (65 percent).

- Interestingly, men are more exposed to layoffs (60.42 percent). On the other hand, women seem to be more sensitive to the change from employment status to forced vacation (59.14 percent). Importantly, by construction, these fractions do not change when excluding respondents without working status (column 7).

Next, we ask whether gender differences identified from tabulation analysis is preserved, when controlling for potential confounding factors, such as individual (age, education, work title), household location (rural, urban and the capital), the industry type and the company size. We estimate a multinomial logit model, which enables to identify marginal contribution of gender type to a number of possible employment conditions.[3]

Table 2. Regression results from multinomial logit model.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7

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[1] Respondents have been asked to answer the question "What is your employment status in the first 45 day of the emergency state, March 15 – April 20?", with possible options for an answer indicated in the first row of Table 1.

[2] http://datatopics.worldbank.org/gender/country/armenia.

[3] Greene (2003) and Wooldridge (2010) are among the classic references for multinomial-logit models.

Marginal effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Continued remote	2.75%**	1.90%**	2.95%*	1.25%**			
Switched to remote	10.80%***	10.66%***	17.96%***	23.83%***			
Switched to non-remote	-0.96%	-1.12%	-1.28%	0.05%			
Laid off	0.15%	0.16%	0.14%	0.00%	0.11%	0.12%	0.00%
Furlough	8.77%***	9.41%***	11.70%***	5.67%***	6.36%**	7.69%***	2.50%***
Did not work	8.58%**	9.18%**	-	-	6.83%*	-	-
Added controls							
Work title	-	+	+	+	+	+	+
Industry	-	-	-	-	-	-	+
Pseudo-R²	0.1469	0.1793	0.1729	0.3166	0.181	0.168	0.256
Observations	743	704	550	550	704	550	550

Note. The dependent variable in Models 1-2 includes all categories in Table 1. In Models 3 and 4, we drop the category "did not work". In Model 5 the dependent variable has the following categories: (i) continued working by combining the first 3 categories in Table 1, (ii) laid off, (iii) furlough and (iv) did not work. We then drop the category "did not work' in Models 5-6. In Models 1-4, the base category is "continued remote" and in Models 5-6 the base category is "continued working". Significance of estimates are reported as follows: *** $p<0.001$, ** $p<0.01$, * $p<0.05$.

In Table 2, we report probability shifts in respective categories of dependent variables for female respondents. In Models 1-4, we keep all categories of the dependent variable, leaving out "did not work" category in Models 3 and 4. As multinomial logit estimates can be sensitive to the number (and the type) of categories, we re-estimate the model combining the first 4 categories in Table 1, into a single category, "continued working". In Model 5, we keep the category "did not work" and we drop it in Models 6 and 7.[4] In all specifications, we control for age, education, firm size, rural, urban and capital areas. Of particular interest are the confounding effects of work title and industry type, and for this reason we estimate models with and without these variables, indicated by plus and minus signs, respectively.

Here are our key observations from the model outputs:

- Women are more successful in sustaining or shifting to a remote working regime. In particular, probability that women switch to a remote regime is substantially high relative to that for men, around 11 percent (Models 1-2) when industry of the workplace is not controlled, 17.96 percent when the sample excludes previously unemployed respondents

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[4] The reason is that when incorporating industries into the model, the maximum likelihood does not converge.

and industry is not controlled (Model 3), and 23.83 percent when industry is controlled (Model 4).

- We do not observe a gender gap in layoffs during the emergency period. In all specifications, probability shifts in layoffs from males to females are close to zero and insignificant.

- We do observe an excessive fraction of working women who have been furloughed. For women, probability of facing furlough is higher by around 9-11 percent (Models 1-3), if not controlling for industries. The number, however, decreases substantially to 5.67 percent, if controlling for industries, among other controls.[5] Still, the effect is highly significant, suggesting that women are exposed to furlough more consistently, which cannot be merely or partly explained by firm size, industry type and/or any other control in the model.

- Work title does not perturb probabilities for employment status changes between female and male. In other words, the distribution of work title, based on order classification, seems to have no discriminating effect on employment related decisions for women. On the contrary, as already discussed, industry has a strong confounding effect on switching working regime (positive) and furlough (negative).

In general, in order not to 'boost' the gender employment inequality gap, businesses, large or small, need support in the form of financial assistance, such as government-backed credit, fiscal stimulus, debt management, and asset investment assistance. This assistance should be conditioned by a company's survival and development rather than its profitability. Gender implications of this action can depend on the industries favored/prioritized by the stimulus package with the objective of preserving female employment. Flexibility among women to switch to a remote working regime, not conditioned by industry type or firm size, suggests that the gender gap in the labor market in emergency situations can be effectively mitigated, if companies are able to offer switching regimes for existing positions. Tax incentives for switching to a remote working regime can mitigate gender unemployment imbalance in times of emergency. For example, a differentiated (lower) income tax for remote workers can do this job.

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[5] We drop the capital dummy, as the maximum likelihood does not converge.

The role of industry structure of the Armenian economy in explaining the gender gap in the labor market seems to be critical and deserves exploration in more detail. From our analysis, we infer that a significant portion of gender imbalance in furloughs is attributable to industry structure.

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