The impact of emigration on source country wages: Evidence from the Republic of Moldova[1]

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Abstract

Thousands of Moldovans emigrated for work abroad over the last few years following nearly a decade of economic stagnation in their home country. At about 30 percent of the labor force, Moldova's emigrant population is in relative terms among the largest in the world. This study uses a unique household survey to examine the impact of emigration on wages in Moldova. We find a positive and significant impact of emigration on wages and the result is robust to the use of alternative samples and specifications. The size of the emigration coefficient varies depending on the sample and model specification, but the baseline result suggests that, on average, a 10 percent increase in the emigration rate is associated with 3.2 percent increase in wages. At the same time, there is evidence of significant differences across economic sectors in the estimated effect of emigration on wages. We speculate and provide some evidence that offsetting changes in labor demand, as revealed by information on employment growth by sector, may help explain some of the heterogeneity.

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I. Introduction

The literature on the effect of migration on source countries has typically focused on the direct effects of remittances on household consumption and investment. However, the emigration of labor and the growing volume of remittances open up many indirect general equilibrium issues for further research, many of which have not been fully explored. These include the labor market shock from reduced labor supply, which has considerable policy importance for developing countries.

To the best of our knowledge, Mishra (2007) is the first econometric study to model the impact of *emigration* (i.e., a negative labor supply shock) on individual wages in a source country, building on an approach introduced by Borjas (2003) using the supply shifts in education-experience groups to assess the labor market impact of *immigration*. Using U.S. census data to track the volume of Mexican emigration to the United States combined with Mexican census data on individuals in the Mexican labor market, this study finds that a 10 percent increase in emigration, on average, increases wages in Mexico by almost 4 percent.

Some papers predate Mishra (2007) but they focus on geographic averages (or sector averages), rather than individuals. Lucas (1987), for example, uses annual time series data from 1946 to 1978 on agricultural wage and employment and finds that mine worker emigration to South Africa has raised wages in Malawi and Mozambique.[3] Hanson et al (2002) finds a marginal negative impact of border enforcement on wages in cities along the U.S.-Mexican border. Robertson (2000), Chiquiar (2004), and Hanson (2004) provide evidence that those Mexican states that have greater international trade and migration links have enjoyed faster growth in average income and labor earnings. In addition, the impact of emigration on wages in Mexico has been largest in states with well-developed U.S. emigrant networks (Munshi, 2003). In yet another study, Hanson (2006) suggests that average hourly earnings in states with high emigration rates increased by 6 to 9 percent, compared to states with low-emigration rates.

[3] See also Lucas (2005, pp. 99-100).

Since Mishra's (2007) paper, a few other studies that focus on national wage effects have found similar results. Using data drawn from the Canadian, Mexican, and U.S. Censuses, Aydemir and Borjas (2007) conclude that a 10 percent change in labor supply is associated with a 3 to 4 percent change in wages in the opposite direction. In a study of Puerto Rican workers, Borjas (2008) finds that a 10 percent emigration-induced fall in the number of workers in a particular skill group raises the average wage by about 2 percent.

The literature on emigration and wages has thus far focused only on the North American experience with international migration—particularly in Canada, the United States and Mexico. In large part, this has been out of convenience, as close to all migrants from Mexico and Puerto Rico are in the U.S., allowing for empirical analysis drawing on U.S. data. Recent evidence shows that although United States is the largest immigrant recipient (in absolute size) of any country in the world, most of the top emigration source countries (in percent of the population) are outside North America. There is, however, no accumulated empirical evidence on the impact of migration on wages in these other countries. Thus, there is a significant knowledge gap in the emigration literature on countries outside North America.

Examining the impact of emigration empirically is challenging because source countries typically do not maintain data on emigrants. In this paper, we examine for the first time the impact of emigration on wages in Moldova using demographic and labor market information on emigrants documented by a recent, nationally representative survey. Moldova provides an ideal case study, given that Moldova's emigrants represent 17 percent of its population and about 30 percent of its labor force, placing it at the highest end of the global distribution of emigrants as a share of (source country) labor force.[4] The majority of workers are in Russia, close to a fifth are in Italy, and the rest are in Ukraine and in France and other Western European countries.[5] About half of these emigrants are employed in construction industries abroad, and about a fifth of these workers are

[4] Mishra (2007) reports that, in a sample of countries, emigrants account for 7 to 27 percent of the source country's labor force. Moldova's emigrant share is calculated in percent of the Moldovan work force, including the emigrants themselves.
[5] See also International Organization for Migration (2007).

employed in the service sector. Most of the workers left the country over the last few years, during which period real wages also grew on average by more than 20 percent.[6] Anecdotal and theoretical evidence suggests that emigration-induced shock to labor supply could be a driving force behind this rapid wage increase.

The paper offers a number of contributions to the literature. First, it provides empirical evidence on the impact of emigration on source country wages outside the North American experience. Second, it makes use of a unique database on emigrants, documented by a nationally representative survey conducted in the source country. Third, for the reasons noted above, on the size of emigration, Moldova offers an ideal case to study the impact of emigration on source country wages. In addition, Moldova also represents what is arguably a more typical source country, with its migrant workers spread out across multiple host countries rather than residing in a single host country, as in the case in North America. The emigrant flow is thus diversified across a number of host countries, and though the majority of workers are in Russia, Moldova's remittance inflows are not as exposed to country-specific downturns. Fourth, this study is unique in that it combines the previously studied net labor supply shock due to emigration with information on sector specific labor demand shocks.

The rest of the paper is organized as follows. Section II provides a simple and stylized theoretical introduction while Section III introduces empirical framework and some descriptive evidence. We then discuss empirical findings and robustness issues in section IV, which is followed by a concluding remark in section V.

II. A simple analytical framework

The textbook model of a competitive labor market yields clear and unambiguous implications of a migration induced reduction in labor supply. Ceteris paribus, a reduction in the supply of labor outflows because of migration should increase the wage

[6] Close to 80 percent of all emigrants left Moldova between 2000 and 2006. At the end of the 1990s, Moldova was the poorest country in the region, with over two-thirds of its population living below the national poverty line. This was at the close of nearly a decade of economic decline due to the initial transition downturn, made worse by the 1998 Russian financial crisis.

of those workers remaining behind, at least in the short run. As shown in Figure 1, an emigration-induced labor supply shock is equivalent to a leftward shift in the labor supply curve, from S^0 to S^1, which results in an increase in real wages from w^0 to w^1.

[Figure 1]

The wages and employment adjustment to migration-induced labor supply shock holds only if there is no employment demand shock, such as, for example, an increased demand for labor in the construction industry spurred on by greater demand for housing that is generated by the higher remittances inflows. Under these circumstances, higher labor demand could reinforce the labor market impact leading to a further increase in the real wages to w^2 and increasing employment back towards its original level of L^0 (as shown in Figure 2). A unique feature of this paper is the efforts to gauge the impact of these sub-national dynamics.

[Figure 2]

In many transition economies where resource reallocation is still taking place, a number of sectors could be contracting, where labor shedding is taking place. This is shown in Figure 3 as a leftward shifting labor demand curve. Under these circumstances, the impact on employment is unambiguous – its declines. However, the impact of wages would depend on the relative magnitudes of the labor supply and demand shocks in the particular sector. If the labor supply shock dominates, then wages will go up in that sector. The reverse is true if the decline in labor demand dominates.

[Figure 3]

III. Empirical framework and data

To test the impact of emigration on Moldovan wages, we estimate an individual level wage regression, including emigration share as one of the explanatory variables.[7] The base regression model is specified as follows:

$$(1) \qquad w^i_{jk} = \alpha m^i_{jk} + X^i_{jk}'\beta + \varepsilon^i_{jk}$$

The dependent variable in equation (1), w^i_{jk}, is the monthly wage (in logs) for individual *i*, in a cohort with education group *k* and experience level *j*. The emigration supply shock, m^i_{jk}, is the ratio of emigrants to the Moldovan workforce (excluding the emigrants) in that particular individual *i*'s education-experience cohort, while X^i_{jk} represents a vector of standard controls including experience (and experience-squared), marital status, gender, industry, and occupation. Finally, ε^i_{jk} is the error term at the individual level, which is correlated between individuals in the same cohort. We adjust standard errors by accounting for cluster effects within cohorts.[8]

We use two main data sources: the 2006 Labor Force Survey (LFS) and the nationally representative migration survey undertaken in 2006 by CBS-AXA (2006). The CBS-AXA survey collects detailed demographic and socio-economic information on every member of the household, including information on whether there are members of the households who are currently abroad, their labor market and remittance activities, etc. We construct education-experience emigration cohort using CBS-AXA data. The rest of the individual-level data are from the LFS. The analysis includes only the working-age, wage-employed individuals, following standard practice. We also use supplemental

[7] See Mishra (2007). More generally, the specification is consistent with the empirical literature on *immigration* and wages in the *host* country, where wages are a function of demographic characteristics and the ratio of immigrants to native workers in a given region or geographic area, or category (e.g., education, experience, or occupation). The analyses are conducted by using either individual level data or by using the relevant group or geographic averages. See, for example, Borjas (2003), Borjas, Freeman, and Katz (1996), Friedberg (2001), Kifle (2009), and Orrenius and Zavodny (2007).

[8] This was done using the *cluster* option in Stata. We also ran our baseline model correcting for cluster effects due to the multi-stage stratified design of the LFS and found similar results.

summary information from the Annual Survey of Enterprises to report relevant labor demand trends and discuss the implications of the main results. The descriptive statistics are in Appendix Table 1. Wages are top-coded and we address this in our robustness tests.

We define as emigrants those who are of working age who are currently abroad and who may or may not have existing ties to households in Moldova.[9] The inclusion of emigrants who are considered ex-members of households in Moldova is an improvement over the existing literature, which has tended to discuss Moldovan emigration only with respect to those with existing ties to Moldovan households. Nonetheless, our measure of emigration may still be subject to measurement error due to sampling error and because households whose members have all left Moldova will not be captured in the survey.

We restrict the analysis to those who left Moldova between 2000 and 2006 because we are interested in recent shocks to the Moldovan labor supply. This group accounts for about 80 percent of Moldova's emigrant population, including those who left in the 1990s. We test a more restrictive measure of emigration—to include only those who left between 2004 and 2006—in our robustness tests.

We construct emigration cohorts based on the available information on education groups and experience levels represented by *j* and *k* respectively. There are a total number of 167 education-experience emigration cohorts representing up to 4 education groups and 55 experience groups.[10] Individuals are classified into four broad educational attainment levels: primary (or less than primary) education, secondary education, tertiary education and higher education. We calculate experiences as years of potential work experience, following the literature, using information on age, years of schooling, and age at the beginning of schooling. An alternative, and arguably more appropriate, way to measure

[9] Other studies (e.g., International Organization of Migration, 2007) restrict their analyses to those emigrants who are still considered members of households in Moldova. In contrast, we also counted among the emigrants those who (a) are of working age and are currently abroad, (b) are considered ex-members of households in Moldova, and (c) may have since formed their own households abroad.

[10] Although there are potentially 220 education-experience emigration cohorts (4 x 55), many of these cells are empty. In our robustness tests, we allow for a broader (and thus fewer) set of experience categories, to retain a few more observations, though the difference is not large.

the labor supply shock is to define emigration cohorts by sectors of employment along with education and experience. This requires information on sectors individuals worked *prior* to migration.[11] Unfortunately, this information is available for a much smaller sample (around 20 percent) of total emigrants, which could raise potential sample selection issues in the estimation.[12] The emigration rate is highest in agriculture (33 percent) followed by construction (17 percent) and wholesale & retail trade (16 percent).

IV. Findings

Baseline Results

The estimated regression outcomes of the baseline individual wage model are shown in Table 1, Column 1. The signs and significance of the coefficient estimates are generally consistent with the wage regression literature. For example, the results suggest positive returns to education, a gender wage differential, and non-linear returns to experience. Marital status is generally insignificant. As for our key variable of interest, the estimated coefficient of emigration is positive and is significant at the 1 percent level. The elasticity of wages with respect to emigration is 0.32[13] - a 10 percent emigrant-induced labor shock increases monthly wages by 3.2 percent. This is well within the range of other estimates in the literature, which fall within the 0.2 to 0.4 range (Mishra, 2007; Aydemir and Borjas, 2008; Hanson, 2006).

[Table 1]

[11] There has been a strong inter-sectoral movement of Moldovan workers as they migrate. Many workers previously employed in agriculture, for example, have moved into construction work abroad. For the purposes of calculating the relevant domestic labor supply shock then, the pre-migration sector of employment is the relevant information.

[12] It is also not clear how best to treat migrant workers who were jobless (unemployed or inactive) just prior to migration.

[13] Aydemir and Borjas (2008) derive an expression for the "wage elasticity" or the percent change in wages for a given percent change in the labor supply due to emigration. They then adjust α, or the coefficient of emigration share, in their regression result accordingly. Because the emigration share in our equation (1) is defined as the ratio of emigrants to the Moldovan workforce (excluding emigrants) in a particular education-experience cohort—in contrast, Aydemir and Borjas (2008) defined the emigration share as the percent of emigrants in their education-experience cohort (including emigrants and those who remained in the source country)—our coefficient estimate for α can be treated as a direct measure of the "wage elasticity" and does not require any further adjustment.

Robustness Tests

One concern about the baseline result is the top-coding of the wage variable. We employ three strategies to address top-coding, following the literature: First we trim the top and bottom 0.5 percent of the sample. Second, we multiply the top-coded variable by 1.5. And third, we impute a mean value for the top-coded values, assuming a log-normal distribution for wages. The three approaches (not shown) all yield positive and significant coefficients for emigration, from 0.21 to 0.32. In addition, following Mishra (2007) and Aydemir and Borjas (2008), we also estimated the baseline regression model for a sample of men only, separate from a sample of women to address potential selection issues. This approach yields a higher emigration coefficient for men (0.40, in Column 2).

A more serious dimension of selection bias, one that is specific to emigration, is explained in Mishra (2007): First, wages in Moldova are observed only for workers left behind. If emigrants are systematically different with respect to their unobserved ability, then the estimated relationship between emigration and wages may be capturing some of the sample-selection bias. That is, our empirical strategy relies upon observing whether wages are higher for those left behind in high emigration groups compared to those in low emigration groups. If, in each group, the least able workers are those that emigrate (based on unobserved ability), then those left behind may appear to have higher wages, though they may not have been raised by emigration or the labor supply shock. [14]

One approach followed by Mishra (2007) is to analyze a sub-sample of workers who are least likely to migrate. It is argued that in this sub-sample (i.e., workers in a region where emigration rates have been low or where emigration is "at the margin"), those who are left behind should not be systematically different from those who leave, because few actually leave. In the case of Moldova, emigration rates are lowest for urban areas; over 90 percent of emigrants have come from outside the big cities. We estimate the baseline model using only the sample of Moldovan workers residing in Chisinau and Balti and the

[14] We speculate that this is unlikely given anecdotal evidence that suggest that higher-ability individuals are more likely to find work abroad, given the costs, both monetary and non-monetary, of assimilating into foreign labor markets. In the literature on internal migration, this selectivity bias has been addressed directly using much richer databases that provide information on likely drivers of emigration, including childhood experiences (e.g., Vijverberg 1995).

results are reported in Table 1, Column 4. The coefficient of emigration is positive and strongly significant, though at 0.24, it is somewhat lower than the baseline coefficient estimate.

An alternative approach would be to focus on the sample of individuals who belong to households without emigrants. This sample may be informative for two reasons: First, households with migrant members are more likely to receive remittances and individuals in such households are observed to reduce their labor supply, in Moldova and in other remittance-receiving countries.[15] These individuals arguably have higher reservation wages and the estimated coefficient of emigration in our baseline regression using the full sample may be capturing this effect. Second, individuals who belong to households without a single emigrant are the individuals who are less likely to have access to emigration networks and are less likely to emigrate.[16] For this sample of individuals, the coefficient of emigration is somewhat lower than the baseline, though still positive and significant (Column 5).

A third approach, though still open to debate, would be to use quantile regression analysis to estimate wage at different points of the conditional wage distribution.[17] Workers at the lower and upper quantiles can be treated as workers with wages lower than and wages higher than predicted by their measurable individual characteristics. As such, some have argued that the relative positions of workers in the conditional wage distribution may reflect differences in ability (e.g., Mwabu and Shultz, 2002). For our purposes, we use quantile regression analysis to estimate our model for those at the lower end of the distribution, as a proxy for individuals with relatively lower ability. The results in Column 6 suggest that the coefficient of emigration remains positive and strongly significant, though lower than the baseline.

[15] The higher inactivity may be due in part in greater participation in higher education and increase home production (Görlich, Mahmoud, and Trebesch, 2007).
[16] These individuals could still be connected to emigration networks, through their friends and social networks, not necessarily through immediate relatives and kinship-based networks.
[17] See Buchinsky (1994).

Finally, following Borjas (2003), we aggregated all the information into the 167 education-experience cohorts, rather than using individual level data, recognizing that the key independent variable takes on only a limited number of possible values. The results are essentially unchanged.

Richer Specification and Alternative Emigration Measures

In Table 2, we use a richer specification for our wage regression, including sector and occupation fixed effects. The coefficient of emigration remains positive and significant, through the size of the coefficient diminishes as additional controls are included, particularly occupation fixed effects, as expected (Columns 1 and 2).

[Table 2]

We also estimate the regression model using fewer categories of experience, in case wages in adjacent education-experience cohorts are not independent (Mishra, 2007). We use 10 categories, corresponding to non-overlapping five-year periods. The coefficient estimates are substantially higher when using broader categories of experience—compared to the baseline categories of experience—and this may be due to the reduction in measurement errors that are associated with the baseline approach, using finer categories of experience, as in Mishra (2007) (Columns 4, 5, and 6). We also redefine emigration to include only those who migrated between 2004 and 2006 (Columns 3 and 6), to allow for the possibility that the most recent shock to labor supply is the most relevant to current wage levels. The results yield coefficient estimates higher than those using the 2000-06 emigration share, following the same specification.

Another concern is the possibility of reverse causality. As explained in Mishra (2007), if lower wages promote emigration, then this biases the estimated coefficient of emigration. Our use of individual data on wages from 2006 combined with emigration data on workers who mostly left during the *preceding* years avoids the possibility of reverse causality due to contemporaneous changes in emigration and wages, though this still leaves the possibility of reverse causality due to *persistent* changes in wages. However, if

reverse causality is an issue, it means that if anything, we likely underestimate the impact of emigration on wages. The results here could then be treated as lower bound estimates.

Differences across Economic Sectors

There are a few other reasons why the baseline results should be interpreted with caution. Equation (1) assumes the emigration of labor force is exogenous to the variation in monthly wages. Second, the emigration-induced labor shock is assumed to be a national shock. This only holds if labor demand is constant across education and experience cohorts. As explained more fully below, this is likely not the case. In addition, the skill premium could add an upward bias in the estimation if a particular job requires skills that are becoming increasingly rare. This would shift the labor demand curve rightward, with almost no spillover of skills.

[Table 3]

Table 3 shows coefficient estimates for the emigration variable and its interaction with economic sector fixed effects, using various measures of emigration and different specification. We distinguish the construction sector from the rest of industry, given its importance in the Moldovan economy. The results indicate that the impact of emigration is, in general, significantly higher in the construction and service sectors. In these sectors, the implied wage elasticity is at least double those of agriculture and industry.

These results may be explained by recent changes in labor demand in each sector, as previously suggested in Section II. Although real GDP grew at an average of around 7 percent per annum between 2003 and 2006, growth in labor demand was much more muted. As with many other transition economies, increases in labor productivity resulted from shedding excess labor. Indeed, over this period, employment generation in Moldova was stagnant with practically no net job creation. Looking across various sectors, however, the lack of job creation was largely the result of significant job loss in the agricultural sector, stagnant job creation in industry (excluding construction), rapid job growth in construction, and modest job growth in the service sectors, led by the

wholesale and retail trade and finance sectors. More generally, as experienced in other transition economies, Moldova's enterprises increasingly face market pressures, leading them to shed the excess labor inherited from central planning; in the agriculture sector, labor shedding has been taking place since the end of the 1990s.[18] The lack of job creation in the agricultural sector and the expansion of the construction industry and service sectors are thus possible explanations for the differences impact of the emigration variable.

V. Conclusion

This study is the first to look at the impact of emigration on wages in a country outside North America. Moldova offers an ideal case to examine the impact of emigration-induced labor supply shock on wages as emigrants represent close a third of the total labor force. Consistent with the literature, we find a positive impact of emigration labor shock on national wages. Using the baseline result, a 10 percent increase in the emigration rate is associated with an average 3.2 percent increase in wages. The size of the emigration coefficient varies depending on the sample and model specification, We also find substantial differences in the impact of emigration on wages across sectors. By combining the results with sector-level information on recent employment, we speculate that a labor demand shock in either direction may help explain this heterogeneity. Better information on the employment experience of emigrants prior to migration could enhance the analysis significantly. We leave these extensions for future study.

[18] World Bank (2005).

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Figure1. Effect of emigration on wages in source country

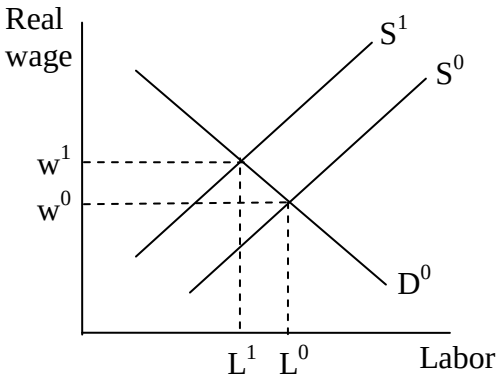


Figure 2. Effect of emigration on wages in source country when labor demand is growing

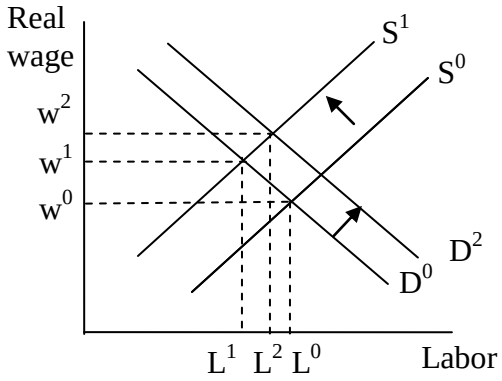
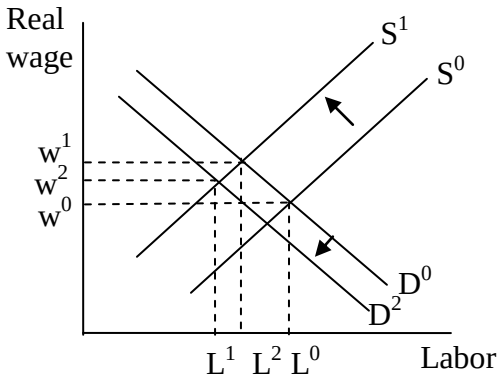


Figure 3. Effect of emigration on wages in source country when labor demand is falling



Appendix Table 1
Descriptive Statistics

	Observations	Mean	Standard deviation	Min	Max
Monthly wages (in Lei)	23,127	2170.11	7951.28	2	99999
Log (monthly wages)	23,127	6.97	0.93	0.69	11.51
Married dummy	23,127	0.73	0.45	0	1
Female dummy	23,127	0.51	0.50	0	1
Education					
Primary education	23,127	0.004	0.06	0	1
Secondary education	23,127	0.27	0.44	0	1
Vocational education	23,127	0.44	0.50	0	1
Higher education	23,127	0.28	0.45	0	1
Experience	23,097	22.16	11.45	0	54
Experience squared	23,097	622.33	504.85	0	2916
Sector					
Agriculture	22,997	0.11	0.31	0	1
Industry	22,997	0.19	0.39	0	1
Construction	22,997	0.05	0.22	0	1
Service	22,997	0.65	0.48	0	1
Occupation					
Legislators, managers, etc	22,895	0.09	0.29	0	1
Professionals	22,895	0.20	0.40	0	1
Technicians and associate professionals	22,895	0.12	0.32	0	1
Plant and machine operators, assemblers, etc	22,895	0.43	0.50	0	1
Elementary occupations	22,895	0.15	0.36	0	1

Table 1
Baseline Specification: Main Results
(Coefficient estimates; standard errors in parentheses)

	Dependent Variable: Log of Monthly Wages						
	Ordinary Least Squares (OLS)						
	All	Male Sample	Female Sample	Urban Sample	Households without Migrants	Quantile Regression Analysis Q=0.25	OLS Cohort Averages
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ratio of emigrants to labor force	0.322***	0.405***	0.216***	0.245***	0.288***	0.189***	0.330**
	(0.084)	(0.132)	(0.071)	(0.087)	(0.082)	(0.004)	(0.133)
Married	-0.038	0.114**	-0.141***	0.000	-0.028	-0.034***	0.072
	(0.029)	(0.051)	(0.030)	(0.046)	(0.029)	(0.002)	(0.210)
Female	-0.245***	0.000	0.000	-0.338***	-0.249***	-0.209***	-0.168
	(0.027)	(0.000)	(0.000)	(0.037)	(0.026)	(0.001)	(0.166)
Education (omitted: primary education)							
Secondary education	0.544***	0.488***	0.599***	0.241***	0.597***	0.498***	0.843***
	(0.091)	(0.131)	(0.143)	(0.051)	(0.097)	(0.013)	(0.098)
Vocational education	0.858***	0.813***	0.886***	0.375***	0.916***	0.811***	1.241***
	(0.087)	(0.119)	(0.144)	(0.052)	(0.093)	(0.013)	(0.105)
Higher education	1.499***	1.495***	1.479***	0.856***	1.539***	1.300***	1.953***
	(0.089)	(0.124)	(0.145)	(0.048)	(0.095)	(0.013)	(0.125)
Experience	0.026***	0.035***	0.010*	0.036***	0.025***	0.013***	0.003
	(0.006)	(0.010)	(0.005)	(0.006)	(0.006)	(0.000)	(0.014)
Experience-squared	-0.001***	-0.001***	-0.000*	-0.001***	-0.001***	-0.000***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	5.819***	5.640***	5.822***	6.693***	5.814***	5.635***	6.100***
	(0.144)	(0.209)	(0.157)	(0.082)	(0.142)	(0.013)	(0.159)
Number of observations	23,029	11,081	11,948	6,151	19,176	23,029	167
R-squared	0.178	0.171	0.183	0.102	0.173	…	0.739

*** p<0.01, ** p<0.05, * p<0.1.
Note: The standard errors are adjusted for emigration cohort clustering.

Table 2
Richer Specification and Alternative Measures of Emigration: Main Results
(Coefficient estimates; standard errors in parentheses)

	Dependent Variable: Log of Monthly Wages					
	Measure of Emigration					
	Baseline Experience Categories 2000-06	Baseline Experience Categories 2000-06	Baseline Experience Categories 2004-06	Broader Experience Categories 2000-06	Broader Experience Categories 2000-06	Broader Experience Categories 2004-06
	(1)	(2)	(3)	(4)	(5)	(6)
Ratio of emigrants to labor force	0.311***	0.134***	0.165***	0.756***	0.345***	0.611***
	(0.086)	(0.045)	(0.062)	(0.193)	(0.091)	(0.154)
Sector fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Occupation fixed effects	No	Yes	Yes	No	Yes	Yes
Number of observations	22,899	22,667	22,667	22,967	22,735	22,735
R-squared	0.229	0.272	0.272	0.233	0.274	0.274

*** p<0.01, ** p<0.05, * p<0.1.
Note: The standard errors are adjusted for emigration cohort clustering. The independent variables include marital status, gender, education, experience, and experience-squared. They also include occupation and sector fixed effects, as indicated.

Table 3
Richer Specification and Alternative Measures of Emigration:
Differences across Sectors
(Coefficient estimates; standard errors in parentheses)

	Dependent Variable: Log of Monthly Wages			
	Measure of Emigration			
	Baseline Experience Categories 2000-06	Broader Experience Categories 2000-06	Baseline Experience Categories 2004-06	Broader Experience Categories 2004-06
	(1)	(2)	(3)	(4)
Ratio of emigrants to labor force	0.515***	0.970***	0.478***	1.045**
	(0.160)	(0.300)	(0.183)	(0.404)
Interactions (omitted: construction)				
Agriculture * Ratio of emigrants to labor force	-0.310**	-0.349	-0.357*	-0.559
	(0.148)	(0.304)	(0.189)	(0.504)
Industry * Ratio of emigrants to labor force	-0.424***	-0.426*	-0.556**	-0.793**
	(0.160)	(0.219)	(0.214)	(0.352)
Service * Ratio of emigrants to labor force	-0.126	-0.150	-0.262	-0.342
	(0.142)	(0.233)	(0.181)	(0.379)
Sector fixed effects	Yes	Yes	Yes	Yes
Occupation fixed effects	No	No	Yes	Yes
Number of observations	22,899	22,967	22,667	22,735
R-squared	0.230	0.233	0.273	0.275

*** p<0.01, ** p<0.05, * p<0.1.

Note: The standard errors are adjusted for emigration cohort clustering. The independent variables include marital status, gender, education, experience, and experience-squared. They also include occupation and sector fixed effects, as indicated.