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A Jobs Diagnostic for Moldova

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A Jobs Diagnostic for Moldova: 10 Key Facts

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Team and Acknowledgments

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Moldova has experienced rapid growth and increases in living standards in the past decade.

The economy has grown by an average 5 percent a year in the past 15 years, while the national poverty rate declined from 26 percent in 2007 to 11 percent in 2014; there are sharp declines observed in the early 2000s as well.

However, Moldova's growth model has relied on remittances, with limited job creation.

The World Bank (2016) report *Moldova: Paths to Sustained Prosperity* finds that Moldova's growth model triggered a cycle in which men and women migrated in search of better economic opportunities and sent remittances home that continued to support consumption-driven growth, and that this contributed to poverty reduction and welfare improvement among the less well off, particularly those in rural areas. The wage differential with richer countries in Western Europe and Russia and the lack of jobs at home were likely push factors for emigration. In fact, employment declined over the past decade, led by falling labor force participation rates among both men and women. With high internal demand, combined with weak industrial capacity and high obstacles for firms to invest, expand and create jobs, remittance inflows led to an increase in imports and widening trade deficits. Under these circumstances, many Moldovans continued to seek better opportunities abroad. More remittance inflows were generated, and the cycle repeated itself.

The drivers of growth and poverty reduction are not sustainable. Alongside income from remittances, pensions have also played an important role in raising incomes among the population, mainly in urban areas. Increases in wages in the nonagricultural sectors also contributed, but given the decline in employment the benefits were not broad-based.¹ Remittances and pensions may not be able to sustain progress: the growth in remittance inflows is expected to continue declining, limiting the role of remittances as a driver of growth and poverty reduction. Meanwhile, the pension system is unsustainable, and coverage and benefits are expected to decline if reforms are not undertaken.² Progress that relies on private and public transfers without job creation does not offer a sustainable path for improving the living standards of the population, particularly in the context of an aging society. The demographic pressures the country faces –with a shrinking and aging population– add to concerns about the prospects of growth and poverty reduction.³

Given the centrality of jobs to Moldova's past story and future prospects, this Job Diagnostic contributes to the discussion by drawing from various sources of data to present 10 KEY FACTS about Moldova's labor market. These Facts, although not aiming at providing a comprehensive view of the labor market, can shed light on the demand and supply sides of labor and the key jobs challenges Moldova faces going forward. This note compiles background analysis prepared by the Jobs Group for the World Bank and by Dávalos et al. (2016a) report. It relies on various sources of data. The aggregate macroeconomic analysis uses World Development Indicators data for sectoral gross domestic product (GDP), employment shares, and labor demographics, and

1 World Bank (2016).

2 Dávalos et al. (2016b)

3 Dávalos et al. (2016b); World Bank (2016).

United Nations data for population projections.⁴ The microeconomic analysis of household labor supply relies on Labor Force Surveys from 2006 to 2012, while the analysis of trends in the demand for labor by firms makes use of the Financial Statements census collected by the National Bureau of Statistics, a unique panel dataset from 2003 to 2014 that draws on company tax returns.⁵

The 10 facts presented in the note are as follows:

- Fact 1: Job losses are increasing overall, with productivity-driven economic growth since the 2000s benefitting a smaller number of people who were able to find jobs
- Fact 2: Workers left agriculture and industry for services, but the 2009 global crisis dampened the job prospects in services.
- Fact 3: Out-migration means that Moldova failed to fully capture a demographic dividend for the economy, and is now an aging country
- Fact 4: Employment and wage patterns show that job outcomes are becoming less inclusive.
- Fact 5: Despite their rising educational attainments, young people face significant challenges finding non-farm jobs
- Fact 6: As inequality in earnings widens, post-secondary education still earns more, but is becoming less of a guarantee of a better job
- Fact 7: Efficient firms are raising their productivity by shedding jobs, not creating them, while firm entry and survival rates are low.
- Fact 8: The most productive firms (small, young, foreign, and private) firms have the most productive jobs, but they are not increasing their share in employment
- Fact 9: While productivity is increasing, a growing share of jobs is in less-productive firms.
- Fact 10: Firms providing employment are typically larger and older, while younger firms are struggling, and fewer new firms have been launched since the crisis.

It is key to continue monitoring these trends over time and, after the release of the 2014 census data, the labor market and demographic challenges that the country faces will need to be revisited to reflect a more current picture of the situation and the prospects.

⁴ WDI (World Development Indicators) (database), World Bank, Washington, DC, <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>; World Population Prospects: The 2015 Revision (database), Population Division, Department of Economic and Social Affairs, United Nations, New York, <http://esa.un.org/unpd/wpp/>.

⁵ The Financial Statements census collects balance sheets, income statements, cash flow statements, and changes in equity for all legal persons except farms, individual entrepreneurs not registered as payers of value added tax, and individuals who provide professional services. In 2014, the census covered over 13,000 firms (National Bureau of Statistics).

Main labor market trends

Fact 1: Job losses are increasing overall, with productivity-driven economic growth since the 2000s benefitting a smaller number of people who were able to find jobs

Rapid economic growth was not accompanied by job creation. Since the beginning of the 2000s, the economy has experienced sustained GDP growth, with the exception of 2008–09, when real GDP value added fell by 6.3 percent following the global financial crisis.⁶ Compared with a group of 18 similar, remittance-receiving lower-middle-income countries, the economy’s growth in value added per capita during 1,370 growth episodes in 1991–2014 was remarkable.⁷ Nonetheless, it was accompanied by a decline in labor activity and a net loss in jobs. Total employment fell from 1.5 million in 2000 to 1.2 million in 2014, and the employment rate declined among both men and women (figures 1 and 2). The share of the working-age population in the total population, in turn, rose by 0.8 percent annually, a cumulative rise of 7.0 percent between 2000 and 2013. However, in response to out-migration and perhaps masking the true number of short-term outward migrants who do not seek work in Moldova, the labor force participation rate (the share of the working-age population employed or seeking work) fell cumulatively by 27 percentage points in 2000–14, to reach 38.1 percent in 2014 (figure 3). These macrodata are validated by micro labor force surveys showing that the inactivity rate rose from 50 percent to 55 percent in 2007–12.⁸ Moreover, the share of the working-age population categorized in labor force surveys as employed dipped from around 47 percent to about 43 percent in 2006–12. Although data on labor market outcomes and other economic indicators will need to be revised as the 2014 Census data is made available as well as used to improve labor force data collection, the observed and persistent trends still provide a compelling story of deteriorating labor markets.

Box 1: Labor market definitions and Population data:

Moldova’s last population census was in 2002, before the rapid out-migration of the workforce. That census provides the sampling frame for both the Household Income and Expenditure surveys and the Labor Force Surveys. Given the census was so long ago, preceding rapid changes in the population, precise levels of some demographic indicators may be subject to statistical error, although the directions ought to be consistent.

In this report we use the following definitions:

- Working Age Population (WAP): population aged 15-64
- Labor Force Participation rate (LFP): equal to Labor Force/WAP
- Inactivity Rate (I): is equal to (1-LFP)
- Employment Rate (E): Those in Employment / Labor Force

⁶ However, in the second half of 2015, growth stagnated because of drought that was affecting agricultural output, a tightening monetary policy, and the aftermath of a large-scale bank fraud.

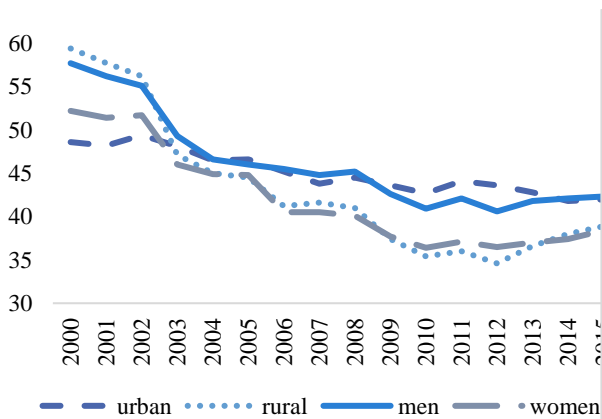
⁷ Calculations using the World Bank Jobs Group JobStructures tool.

⁸ The inactivity rate is the proportion of the working-age population that is not in the labor force.

Those who remained in the labor force and were able to find jobs typically found *better* jobs, that is, jobs that were more productive⁹. Among the employed, average value added per worker rose by 6.4 percent a year, and it increased across nearly every subsector of the economy, although at the expense of jobs in agriculture and industry (as described under Fact 2 below). Productivity per employee in agriculture grew annually by 6.4 percent as labor left the sector. Average labor productivity in the booming service sector rose by 4 percent annually, while productivity in industry fell by 0.2 percent.

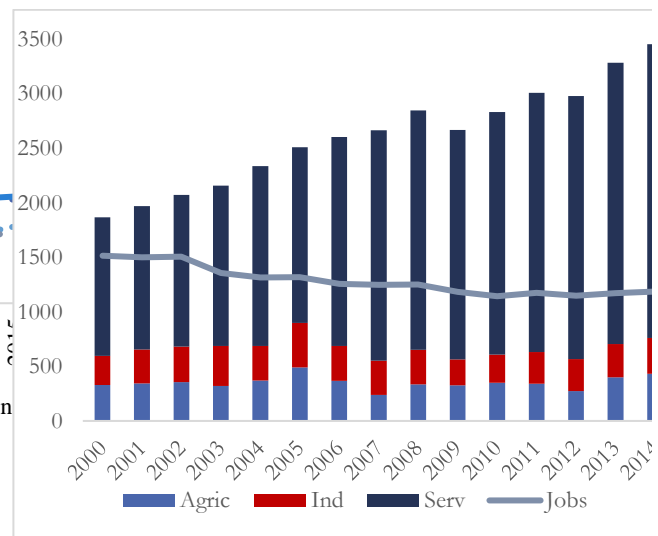
Moldova is well above the median in the measure of changes in growth because of changes in productivity. Compared with 46 countries in Western Europe and in Eastern Europe and Central Asia during 6,992 overlapping growth episodes, the growth of the Moldovan economy in 2000–13 was in the 86th percentile of per capita GDP growth and the 95th percentile in the contribution of productivity growth to real GDP growth, but was the poorest performer during almost 7,000 growth episodes in the contribution of labor force participation growth to overall GDP growth. Across sectors, the contribution of industrial job creation and productivity growth in Moldova in 2000–13 was in the 9th and 14th percentiles during the relevant 7,000 growth episodes in 46 countries.

Figure 1. Employment Rate, 15-64 Age-Group, 2000–15



Source: World Bank based on labor force survey data of the National Bureau of Statistics.

Figure 2. Real GDP, by Sector and Employment (constant 2005 U.S. dollars, millions)

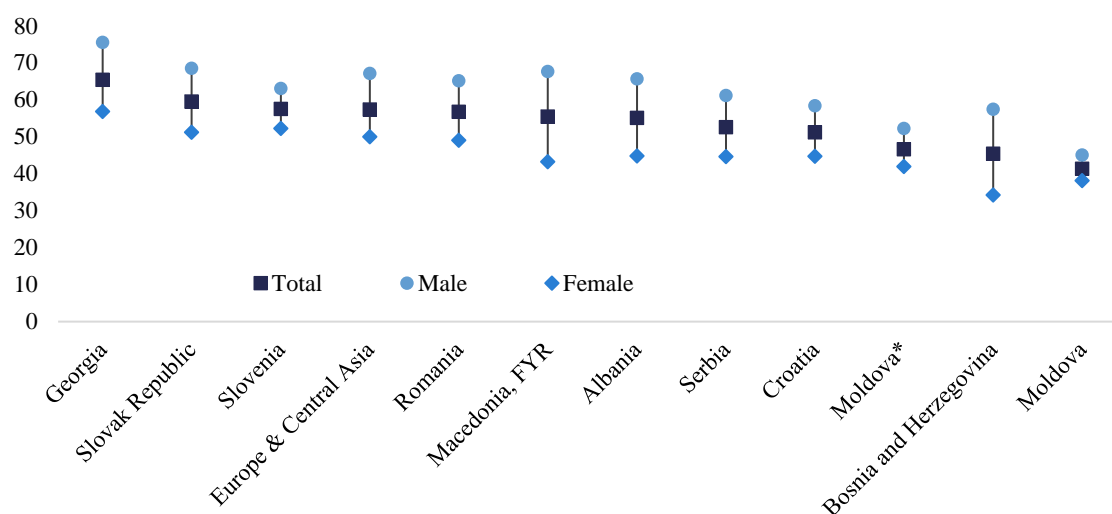


Sources: World Development Indicators, World Bank.

⁹ We define “better” jobs as those with higher labor productivity. In Moldova between 90-92 percent of jobs are in the informal sector, and relatively generous labor regulations afford comparatively good job security and working conditions.

Remittances fueled the increases in productivity, which drove growth of the economy. Out-migration led to a rise in remittances to 30 percent of GDP, financing a boom in consumption and housing and fueling service-driven growth. Though, like many countries in Eastern Europe and

Figure 3. Labor Force Participation Rates (Ages 15-64), Moldova—Official Definition, and Excluding Migrants—and Comparators, 2014



Sources: World Bank 2016 based on data of the National Bureau of Statistics and World Development Indicators, World Bank. Note: The number for Moldova is the official labor force participation rate. It excludes from the labor force people who are working abroad or looking for a job abroad. These people are counted as inactive in the official definition.

Central Asia, Moldova experienced a large drop in real GDP during the global financial crisis, the remittance-funded boom in domestic demand and the changing economic structure it induced generated greater productivity in 2000–13, and the economy bounced back quickly from the global crisis-induced slump. A decomposition of growth in per capita income in 2000–13 shows that productivity contributed 6.5 percentage points to growth in per capita value added (see figure 2; table 1). However, the declining labor force participation rate knocked 3 percentage points off annual per capita income growth, whereas the slight rise in the working-age population and a tiny increase in employment relative to the size of the labor force—the labor force fell by even more than employment—added 1.1 percentage points to the annual growth in real GDP per capita.

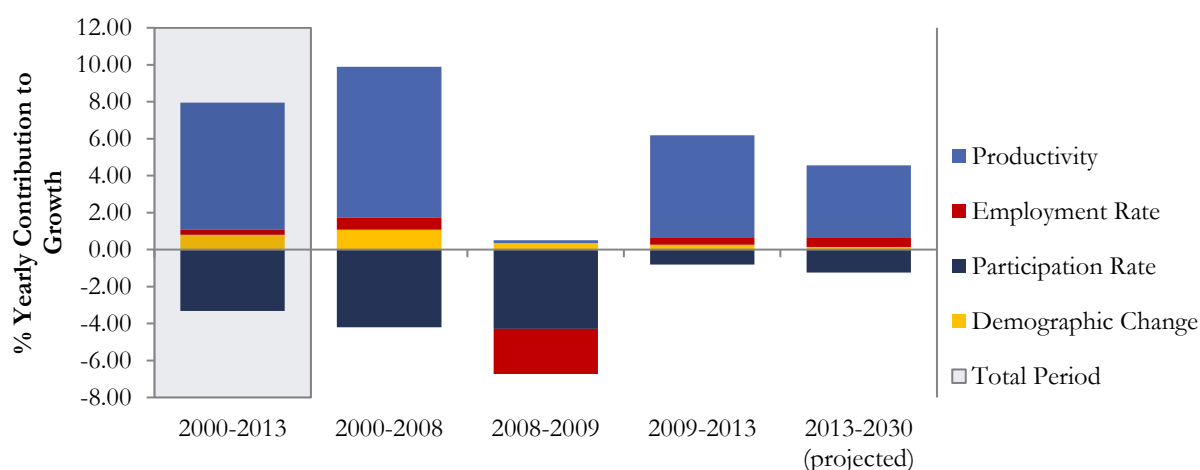
Table 1. Decomposition of Growth in Per Capita Value Added, Moldova, 2000–13

constant 2005 U.S. dollars, millions, per 1,000 people

<i>Indicator</i>	<i>Change</i>	<i>% of total change</i>	<i>% yearly contribution to growth</i>
<i>Change in per capita value added</i>	0.41	100.00	4.62
<i>changes in productivity</i>	0.58	141.14	6.52
<i>changes in employment rate</i>	0.03	6.61	0.31
<i>changes in participation rate</i>	-0.27	-65.79	-3.04
<i>changes in share of working-age population</i>	0.07	18.03	0.83

Source: Calculations based on World Bank's JobStructures Tool.

Figure 4. Decomposition of Growth in Per Capita Value Added, 2000–13 and Projected in 2013–30



Source: Calculations using World Bank’s JobStructures Tool.

Fact 2: Workers left agriculture and industry for services, but the 2009 global crisis dampened the job prospects in services

The structure of employment across sectors has changed dramatically over the past decade as jobs disappeared in agriculture. Moldova has been characterized as an agricultural economy not because of the share of GDP generated by the sector, but because of the share of the labor force that was employed in the sector. At the start of the 2000s, 51 percent of employment was in agriculture. However, in 2000–14, there was a 56 percent fall in the total number of jobs in agriculture, and the share of jobs in agriculture to total jobs had dropped to 29 percent by 2012 (figure 5). Agriculture’s share has risen slightly since then.

Not all the lost jobs were reallocated to other sectors. Prior to the global crisis in 2008–09, industrial jobs had increased by 19 percent over the 2000s, but, beginning in 2008, they fell 16 percent, ending slightly lower in 2013 than in 2000. Service sector employment grew by only a quarter relative to the jobs lost in agriculture and was thus unable to offer jobs to all the workers leaving agriculture. (Figure 6 shows that net job creation among registered firms was negative in all sectors after 2008.) Since the global crisis, the rate of losses and gains by sector have flattened out, and the gains in agriculture and services almost equaled the losses in industrial employment.

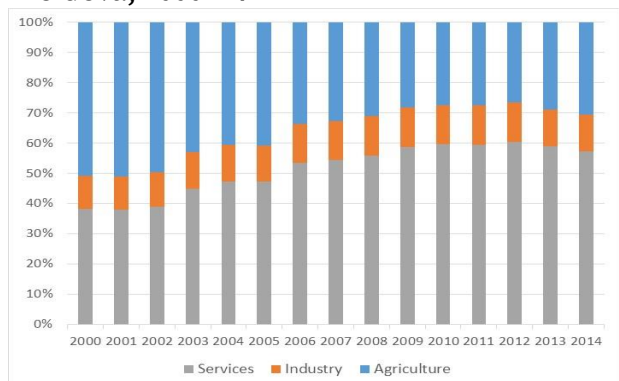
A share of the jobs lost in agriculture reflect a move to low-productivity agriculture. Much of the agricultural employment in Moldova is on family-owned farms and a large share in semisubsistence and subsistence farming.¹⁰ The 2011 general agricultural census revealed that more than half the farms cultivate less than half of an hectare, and about 95 percent have an area less than three hectares and

¹⁰ Möllers et al. (2016).

occupy only 27 percent of the total agricultural land. Most of these smallholders have limited opportunities and potential to commercialize and increase the size of their farms.¹¹ Over the past years, the share of people in *self-employment in agriculture for own consumption who are working less than 20 hours a week*—currently excluded from official employment numbers— rose from 15 percent of those working in agriculture in 2007 to 24 percent in 2014. This suggests that a larger share of people—mainly older people and the less well educated—were rapidly transitioning into unpaid, low-intensity agricultural jobs.¹²

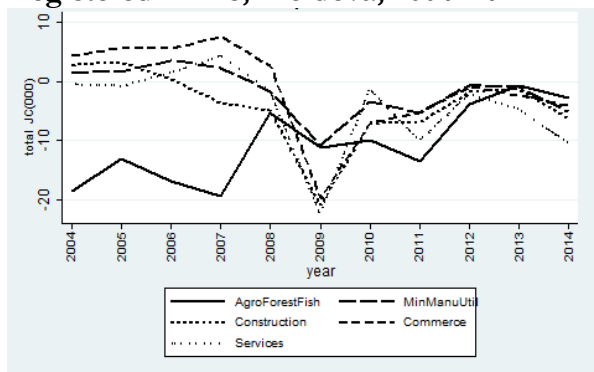
Although not capturing the full labor market, job creation patterns and trends among registered firms provide an informative view of the effect of the crisis on labor markets in each sector. Figure 7 shows that net job creation among registered firms economy-wide was negative. This was particularly true in agriculture prior to 2009 and, to a lesser extent, in construction. Firms in the rest of the economy started to shed jobs especially after the economy slumped during the global financial crisis and have not rebounded since.

Figure 5. Employment Shares, by Sector, Moldova, 2000–14



Source: Labor force data of the National Bureau of Statistics.

Figure 6. Net Job Creation, by Sector, Registered Firms, Moldova, 2004–14



Source: Calculations based on Firm Survey data, National Bureau of Statistics.

Fact 3: Out-migration means that Moldova failed to fully capture a demographic dividend for the economy, and is now an aging country

Moldova has started aging quite rapidly. Figures 7 and 8 compare Moldova’s demographics of the past 16 years with future projections, and display the growth rates by age-group. Figure 8 shows growth only in the number of people over retirement age. The number of children *below working age*, dropped by 35 percent from 2000-2016, faster than the decline in the number of *working age* people (which fell by 13 percent between 2000 and 2016). Consequently, youthful dependency fell from 0.35 children per worker in 2000 to 0.24 per worker in 2010. While taking into account those above retirement age, the ratio of working age Moldovans to total dependents peaked at 2.54 workers per dependent in 2010. The retired population started to grow fast after 2010; by 6 percent between 2010

¹¹ Möllers et al. (2016).

¹² World Bank (2016).

and 2016, and it is set to rise by 10% between 2010 and 2016 and by some 22% between 2020 and 2030. The UN thus projects that by 2030, Moldova will have only 1.84 workers per dependent. That is a decline of 0.7 workers per dependent within just one generation. When a decline in dependency is coupled with increased working age population, labor force participation and increased employment, a ‘demographic dividend’ can support economic growth¹³. However, Moldova seems to have missed out on this dividend to some extent. As working age Moldovans migrated out, labor force participation and employment both fell at home.

Migration has reshaped Moldova’s workforce and the economy as a whole. Most of the working-age population lives in rural areas, and, as figure 9 shows, the majority of emigrants are from rural areas. This means that a widening share of the remaining Moldovan workforce is urban. Though causality cannot be determined, this raises a question: which came first, the drop in agricultural employment or the rise in emigration from rural areas? From 2000 to 2005, the number of emigrants nearly quadrupled. By 2008, an estimated 40 percent of Moldovans of working age were living and working abroad. Although the global financial crisis had a dampening effect on emigration, the number of emigrants remained at around three times the number in 2000 and was creeping higher (figure 9). Since 2010, Moldovans have continued to migrate abroad in search of more and better jobs; especially people in the 25–34 age-group, who are typically considered the engines of growth in a country. Were it not for out-migration, the working-age population in Moldova would have increased throughout the period.

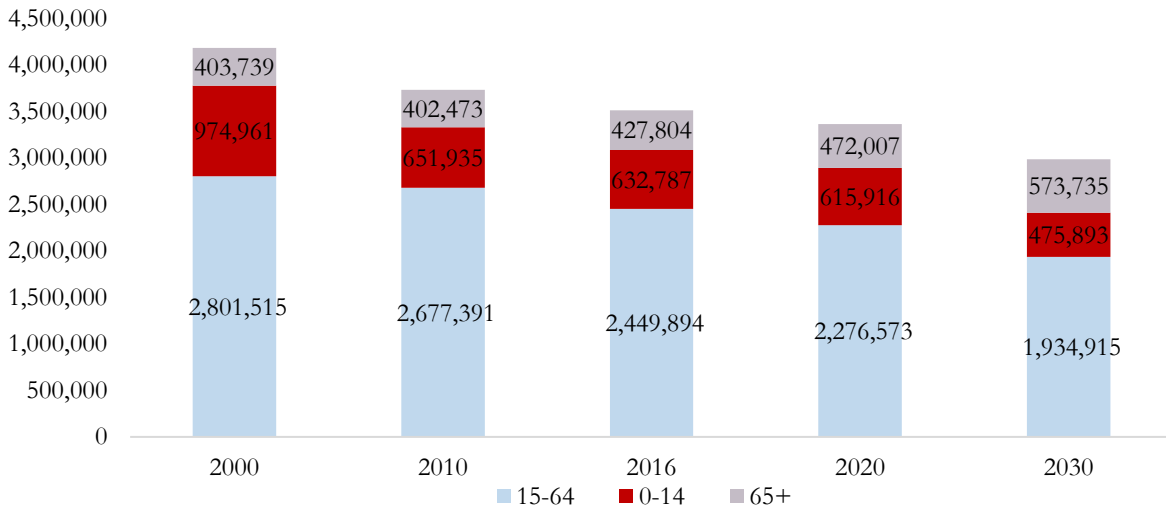
In essence, Moldova traded a demographic dividend for migrant remittances as the workforce was gradually exported. Whereas the economy could have started enjoying a significant demographic dividend, Moldova entered the millennium not with a booming labor force and employment, but with booming migration and remittances.¹⁴ Remittances, pre-crisis, were more than 30 percent of GDP. However, because of the rising uncertainty of employment among labor migrants to the Russian Federation and Western Europe in 2009, the GDP share of remittances fell to only 21 percent, before recovering to 24 percent by the middle of 2013 and steadying at 23.5 percent in 2015.¹⁵

13 “The demographic dividend a new perspective on the economic consequences of population change” David E. Bloom, David Canning, Jaypee Sevilla (2003).

14 A demographic dividend is a boost in economic growth that occurs when there are growing numbers of people in the workforce relative to the number of dependents. In Moldova, population and labor force numbers are clouded by official and informal out-migration, making interpretation difficult. Based on data of the United Nations and World Development Indicators, the ratio of the working-age population to dependents rose from 2.0 to a peak of 2.5 in 2000–10. It is expected to decline with aging to 2.3 in 2020 and 1.8 in 2030. See WDI (World Development Indicators) (database), World Bank, Washington, DC, <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>; World Population Prospects: The 2015 Revision (database), Population Division, Department of Economic and Social Affairs, United Nations, New York, <http://esa.un.org/unpd/wpp/>.

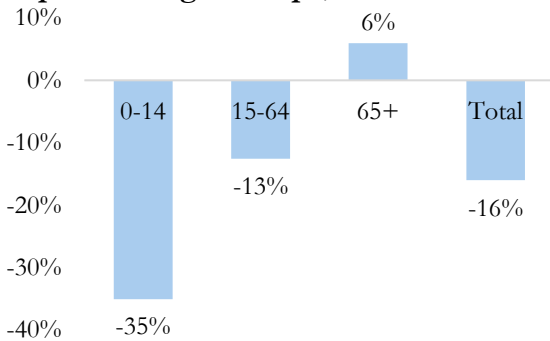
15 EBRD (2014); WDI (World Development Indicators) (database), World Bank, Washington, DC, <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>.

Figure 7. Past and Projected Demography, 2000–30



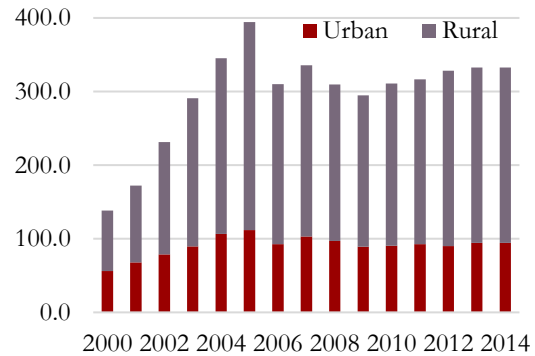
Source: World Bank using United Nations data on population.

Figure 8. Estimated Percentage Change in Population Age-Groups, 2000–16



Source: National Bureau of Statistics.

Figure 9. Number of Migrants, 2000–14



Source: National Bureau of Statistics.

Jobs and inclusion

Fact 4: Employment and wage patterns show that job outcomes are becoming less inclusive

Jobs became less inclusive between 2006 and 2012. Women, the poor, youth, and rural residents fared less well in the labor market as employment opportunities dried up. Women of working age are more well educated than men, a gap that has widened in recent years. In 2012, 15.5 percent of women had completed postsecondary education, compared with 12.4 percent of men. In the same year, slightly more women (93 percent) than men (90 percent) were likely to be formally employed. While the portion of the population that is employed does not vary greatly by sex, the portion of the population that is out of the labor force is strikingly different. Figure 10 provides a breakdown between the sexes by consumption decile. The differences become more visible among the higher deciles, most likely because married women in richer households may choose not to work. However, women who do work can expect to earn significantly less than their male counterparts, an average sex wage gap of 17 percent has persisted.¹⁶

The majority of people in the bottom deciles are in elementary occupations with less earning power. The share of youth employment (ages 15–24 years) across consumption deciles is highest at the lower levels of earnings, most likely because the poorer young people cannot afford not to work. Once employed, these youth are more likely to be in informal employment than adults.¹⁷

Disparities in job opportunities and occupations are affected by educational attainment. People with no education or only primary education have remained in agriculture, and an increasing share in the informal sector over the years, where earnings are lowest (figure 11).¹⁸ Jobs in the informal sector are almost unheard among people with postsecondary educational attainment. These differences also appear in wages. People with primary education earn 50 percent more than those with no education, and those with postsecondary education earn 90 percent more than those no education.¹⁹

Rural areas are mostly associated with inactivity and jobs in agriculture. Controlling for all individual- and household-level characteristics, wage regressions show that Chisinau has 52–55 percent higher earnings relative to the central region.²⁰ The north has 11 percent lower earnings, and this does not change after controlling for industry or occupation. The south has 27–29 percent lower earnings. The gap between the central region and the south decreases only slightly by industry and occupation. Wage differences across regions also vary by sex. An average woman (given observable characteristics) in the north earns about 8 percent less than her counterpart in the central region, while

¹⁶ World Bank calculations.

¹⁷ World Bank calculations.

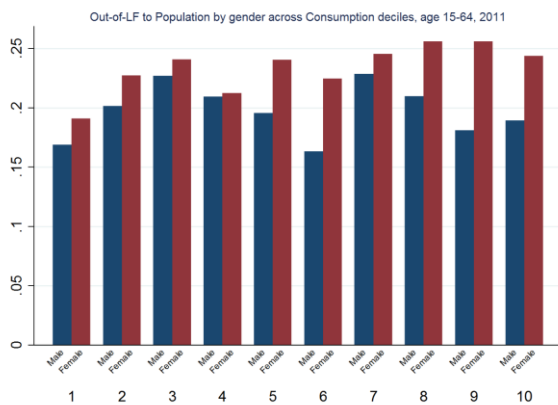
¹⁸ There are few observations on the no education subsample.

¹⁹ Mincerian returns to education were calculated for wage workers using Labor Force Survey earnings data.

²⁰ The central region was used as the base category for the regression analysis.

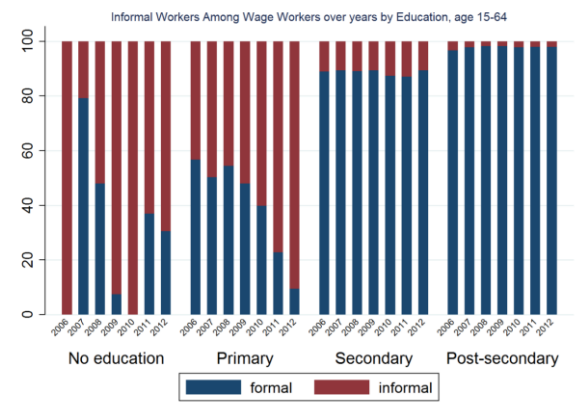
this difference is 16 percent for a man. Similarly, women in the south earn 23 percent less than women in the central region, while men in the south earn 36 percent less than their counterparts in the central region. In Chisinau, the wage premium among men and women are 57 percent and 52 percent, respectively.²¹

Figure 10. The Portion of the Population Out of the Labor Force, by Sex, 2011



Source: Calculations based on Labor Force Survey data.

Figure 11. Informality among Wage Workers, by Highest Level of Educational Attainment, 2006–13



Source: Calculations based on Labor Force Survey data.

Moreover, the pattern of job destruction disproportionately affected low-skilled rural workers. Rural areas were hardest hit by falling employment and rising inactivity; agricultural employment and female employment probabilities fell significantly (annex figure A1). Analysis of firms in the Firm Survey dataset shows that only firms in Chisinau did not see a drop-off in jobs, on average, in 2004–14.

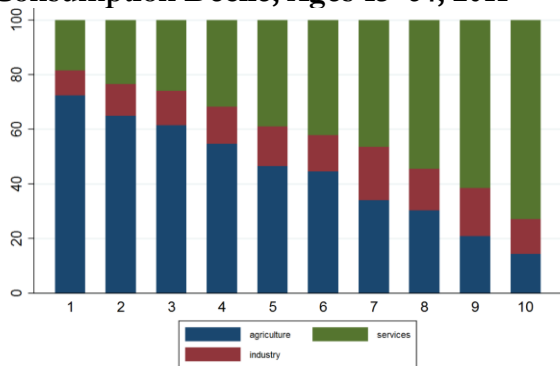
Fact 5: Despite their rising educational attainments, young people face significant challenges finding non-farm jobs

The poorest are being left behind and relegated to less profitable sectors of the economy. The bottom 40 are more likely to be self-employed farmers, in elementary occupations in skilled agriculture, or in crafts, and the majority are in agriculture (figure 12). The number of people employed in agriculture sector has been decreasing since 2000.

Young people are seeking other jobs. By 2012, the share of the labor force over the age of 24 engaged in self-employed agriculture was 18.5 percent, while the share ages 15–24 engaged in the same activity was only 11.7 percent (figure 13). Additionally, the share of youth in public wage jobs was smaller than the corresponding share ages 24 or older, at 18 percent and 29 percent, respectively. Nearly 46 percent of young workers were concentrated in private sector wage jobs.

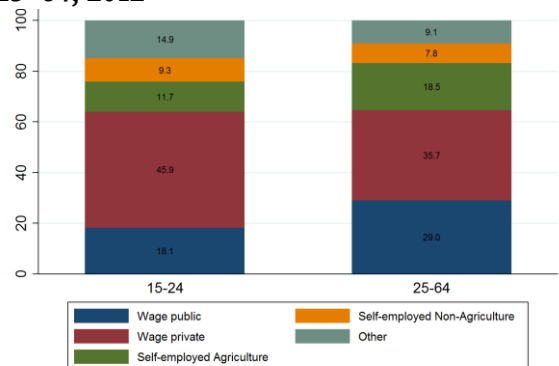
²¹ Annex table 2.

Figure 12. Employment across Sectors, by Consumption Decile, Ages 15–64, 2011



Source: Calculations based on Labor Force Survey data.

Figure 13. Employment Types, by Age, Age 15–64, 2012

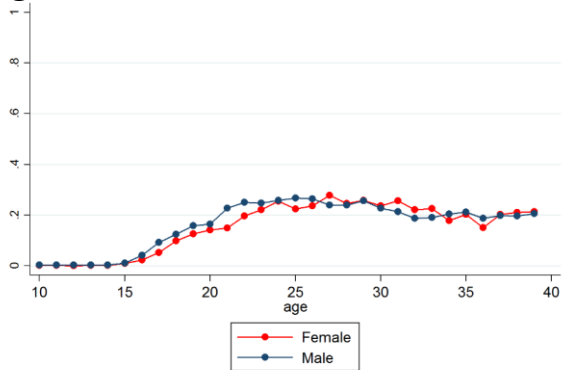


Source: Calculations based on Labor Force Survey data.

The educational attainment of youth is rising, but youth face significant challenges in finding jobs. In 2006, 24 percent of men had achieved only primary education or less, but, by 2012, this had dropped to 21 percent. Among women, the rate fell from 26 percent to 21 percent during the same period. However, as youth became more well educated, they still faced uncertain employment options. In 2006, around one-fifth of youth, starting at about 20 years of age, were not engaged in employment, education, or training (figures 14 and 15). In 2015, the rate rose to nearly one-third of all youth, irrespective of sex. Both young women and men are taking longer to transition to work and were more likely in 2015 than in 2005 to transition from school to inactivity. Young men were increasingly likely to fall into inactivity, perhaps because the only sector generating net new jobs was the services. This problem is not restricted to youth without education, though these were disproportionately overrepresented among those who are inactive. Youth with postsecondary education were also represented in inactivity at higher rates than the overall population.

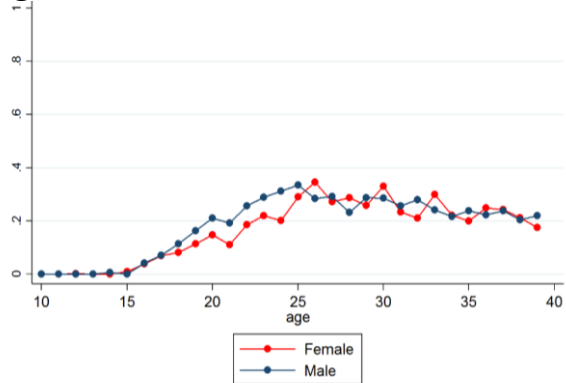
From 2000 to 2016, the working-age population decreased by an estimated 13 percent, while the 65+ age-group expanded by 6 percent. The result of a growing retiree population, plus a decreasing working-age population because of migration, should have been to create greater employment prospects for those gradually more well educated young people staying in Moldova. Yet, the opposite seems to be true: while youth were staying longer in schools, the proportion of youth ages 15–24 who were neither in school nor working increased between 2006 and 2015.

Figure 14. Percentage of Population Not in Employment, Education, or Training, by Age or Sex, 2006



Source: Calculations based on Labor Force Survey data.

Figure 15. Percentage of Population Not in Employment, Education, or Training, by Age or Sex, 2012



Source: Calculations based on Labor Force Survey data.

Fact 6: As inequality in earnings widens, post-secondary education still earns more, but is becoming less of a guarantee of a better job

There are labor market inequalities in earnings. The use of regression analysis (Mincerian log, nominal) on earnings among wage workers in 2012 (see the annex for results) show that (1) women earned less than men; this gender gap diminishes when adjusted for sectors and occupations, but stays at 11 percent; (2) older people earned more than younger people, perhaps because of experience or stability in the job; (3) education pays: people with postsecondary education earn significantly more than people with no education (but not people with secondary education after adjusting for occupation); and (4) urban jobs and work in industry (but not services) pay more than rural agricultural work.

Inequalities seem to be widening. Comparing Mincerian returns over time among wage workers, rural earnings fell further behind urban earnings between 2006 and 2012.²² In 2006, rural earnings were 22–28 percent lower than urban earnings, whereas, by 2012, they were between 32 percent and 38 percent lower. Similarly, within urban areas, earnings in Chisinau are not only higher than elsewhere, but the wage gaps were widening: compared with the central region, the wage premium in Chisinau had risen from 38–40 percent to 52–55 percent. In terms of educational attainment, the skills gap seems to be narrowing over time among people with postsecondary education, but remains robust for secondary education, while the premium of industry wages over agricultural wages has widened. However the premium of service wages over agriculture did not widen, and public wages fell further behind private wages, on average. That urban service jobs—the only types of jobs for which firms were hiring over the period—did not see a widening in wages relative to rural agricultural jobs and that, adjusting for occupations, the skills gaps did not widen may be indicative of an oversupply of

²² World Bank calculations.

postsecondary skills in urban services relative to the relevant labor demand and a tightening in rural labor markets as unskilled and semiskilled workers migrate. This result may suggest that postsecondary graduates in urban areas may be relatively underemployed over time in lower wage service jobs (such as retail trade and the hospitality industry). Those people who find a profession or a technical or a clerical job may be able to reap the skills gap, but others may not be able to do so. If there were sufficient demand for skills in the economy, but an insufficient supply of skills, this would show up in a relatively greater number of the unskilled facing underemployment, while foreigners take the higher-end jobs in the economy. There is little evidence of this.

The findings suggest that the key job challenge in Moldova may be a lack of demand for labor, although matching skills to labor market demands is likely also a problem.

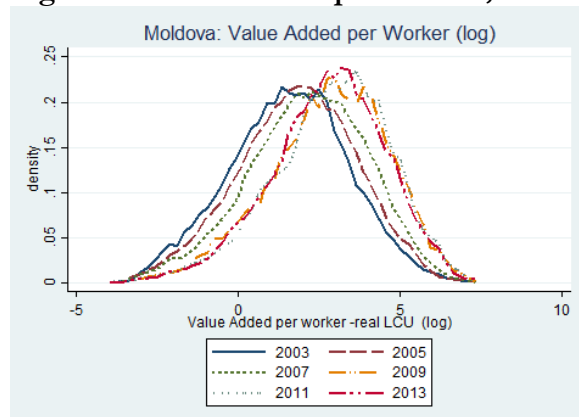
Demand for labor

Fact 7: Efficient firms are raising productivity by shedding jobs, not creating them, while firm entry and survival rates are low

So why did the prospects among more well educated young people not seem to improve in an economy in which the labor force was shrinking through out-migration? The reasons seem to lie in a reduced demand for labor. The following messages rely on data on registered firms to explore the demand side of the labor market. This data under-reports agricultural workers, because it excludes informal household farming. There is coverage across all sectors for firms that file taxes. The data suggests two thirds of employment falls into eight two-digit product categories²³; retail and wholesale trade (14 and 11 percent), land transport (10 percent), manufacturing of food (9 percent) beverages (4 percent) clothing (5 percent), crop and animal farming (7 percent) and construction (5 percent).

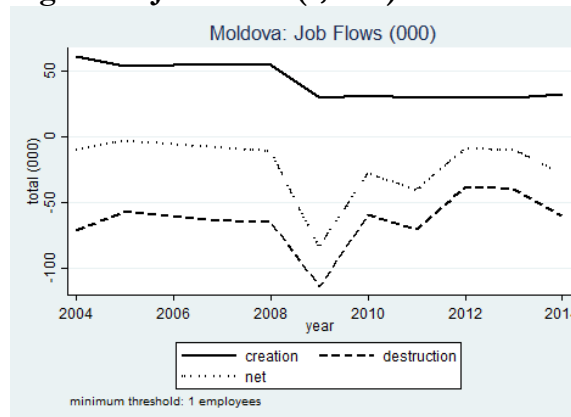
In line with the macroeconomic trends, firms shed jobs and experienced an overall increase in productivity during the survey period. The increases in productivity were observed whether the productivity is measured as output per worker, value added per worker, or total factor productivity (figure 16). However, over the same period, firms reported negative net job creation, meaning that businesses were shedding jobs more quickly than they were creating them (figure 17).

Figure 16. Value Added per Worker, 2003–13



Source: Calculations based on Firm Survey data.

Figure 17. Job Flows (1,000s)



Source: Calculations based on Firm Survey data.

How did increased productivity come about? To understand how, the analysis looks at dynamic allocative efficiency, explores the extent to which changes in aggregate firm productivity has been derived from firms that became more productive by expanding and from firms that became less productive by contracting.²⁴ The results, presented in figure 18, show the following:

²³ ISIC4 2-digit classification

²⁴ Haltiwanger (2011).

- The positive within-firm productivity growth term shows that **surviving firms, independent of their labor share, became more productive over the period**, with the exception of the years 2004 and 2012.
- Between-firm productivity effects, which occur when more (less) productive firms increase (decrease) their employment share, were mostly positive, but relatively small. This is the important term to highlight: **productive firms were not able or willing to increase their share of the labor market**; instead the greatest productivity gains arose from within-firm increases in productivity.
- Nonetheless, the positive gains to productivity from the between term are nearly cancelled out by the negative cross term. The negative cross term indicates that firms that were becoming more productive were decreasing their employment share in the firm census. This term had a negative impact on productivity across nearly all the years from 2003 to 2014, suggesting that, as **firms became more productive, they shed labor, or, alternatively, firms may have become more productive by downsizing**.
- The entry of new firms generated few productivity gains, while the exit of firms generally generated mostly negligible positive gains to changes in productivity indicating that inefficient firms did exit, but not nearly enough did so to make a difference.

Figure 18. The Change in Total Factor Productivity Weighted by Employment, by Year



Source: Calculations based on Firm Survey data.

Fact 8: The most productive firms (small, young, foreign, and private) have the most productive jobs, but they are not increasing their share in employment

Table 2. Labor Productivity Regression Results (see the annex)

For workers who remained in Moldova and managed to stay employed, better jobs generally became available. Productivity, as measured by value added per worker, output per worker, and total factor productivity, was rising in all sectors, as well as across most firm age and size categories. However, Fact 7 reveals a productivity conundrum: the most productive firms are not hiring more employees.

Zooming into the profile of productive firms shows distinctive patterns. First, productivity is highest among smaller firms, younger firms, foreign and private firms, commerce and services, and firms in Chisinau (table 2). Second, regressions show that productivity growth is also higher among small firms, young firms, and firms participating in the agricultural sector. The last means that the movement of labor out of agriculture into urban centers and into jobs in firms in commerce and in foreign firms, or out of the country altogether has been productivity- and growth-enhancing for the agricultural sector, as well as for the commerce sector and foreign-owned firms.

However, as seen in fact 7, growth in productivity does not appear to be correlated with employment size. Part of the reason for this is that as overall employment in Moldova was decreasing after 2008, employment in majority publically owned firms first increased slightly and then remained stable. More productive domestic private firms were fewer and shrinking in employment share after 2008, whereas the average size of a majority public firm increased. The

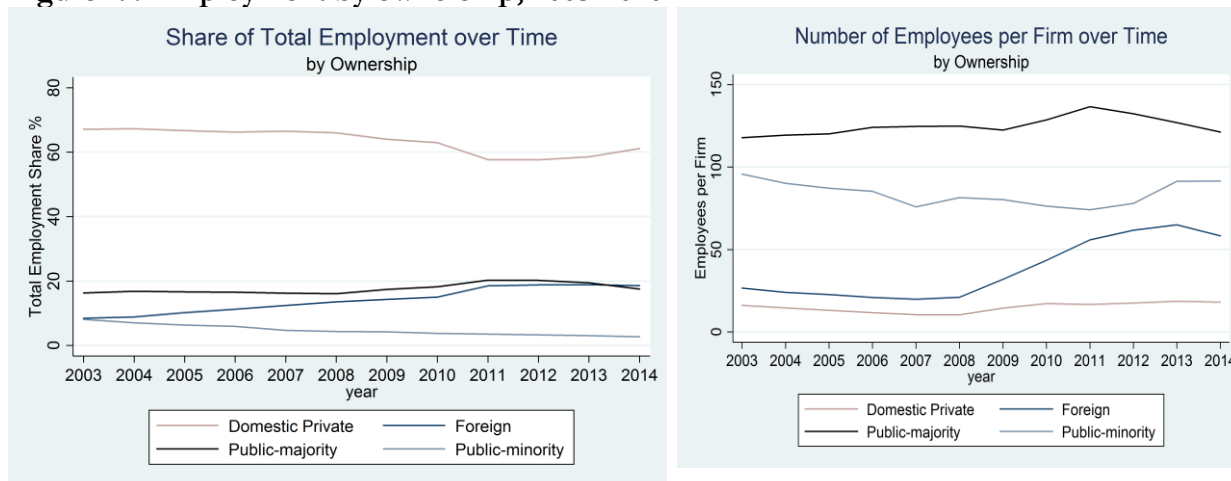
VARIABLES	LHS=lnLPQ- Basic-RE	LHS=lnLPQ- Region-RE	LHS=lnLPQ- Sector-RE
Size 10to19	0.0896*** (0.0128)	0.0899*** (0.0128)	0.0901*** (0.0125)
Size 20to49	0.0830*** (0.0269)	0.0837*** (0.0269)	0.0862*** (0.0270)
Size 50to249	-0.0251 (0.0422)	-0.0248 (0.0423)	-0.0236 (0.0426)
Size 250to499	-0.147** (0.0606)	-0.147** (0.0605)	-0.148** (0.0610)
Size 500plus	-0.192** (0.0803)	-0.191** (0.0803)	-0.203** (0.0819)
Age 6to9	0.00255 (0.0112)	0.00255 (0.0112)	-0.00281 (0.0118)
Age 10to19	-0.0564** (0.0227)	-0.0561** (0.0227)	-0.0722*** (0.0238)
Age 20to29	-0.220*** (0.0347)	-0.219*** (0.0347)	-0.247*** (0.0362)
Age 30plus	-0.728** (0.341)	-0.726** (0.341)	-0.878** (0.429)
Foreign	0.258*** (0.0273)	0.260*** (0.0273)	0.284*** (0.0293)
Public	-0.280*** (0.0402)	-0.280*** (0.0401)	-0.300*** (0.0406)
Balti		-0.299*** (0.103)	
North		-0.277*** (0.0950)	
Central		-0.221*** (0.0698)	
South		-0.437*** (0.0976)	
Gagauzia		-0.325*** (0.0939)	
Agriculture			0.414*** (0.160)
MinUtilConstr			0.182 (0.111)
Commerce			0.741*** (0.105)
Services			-0.204** (0.0815)
Constant	4.964*** (0.212)	4.964*** (0.212)	4.500*** (0.174)
Observations	160,297	160,297	160,297
Number of id	42,272	42,272	42,272
Sector dummies	YES	YES	NO
Location dummies	YES	NO	YES
Year Dummies	YES	YES	YES
Between R2	0.197	0.196	0.118
Overall R2	0.216	0.215	0.140
Within R2	0.0385	0.0389	0.0407

Robust standard errors in parentheses

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

regressions in table 1 show that relative to domestic private firms, public firms are significantly less productive, and hence the relative shift in labor shares towards publically owned firms would have been productivity reducing. As discussed in key fact 10, World Bank (2012 and 2014) show that public companies have greater access to State Aid, and so face significantly cheaper costs of financing than domestic private firms.

Figure 19. Employment by ownership, 2003-2014



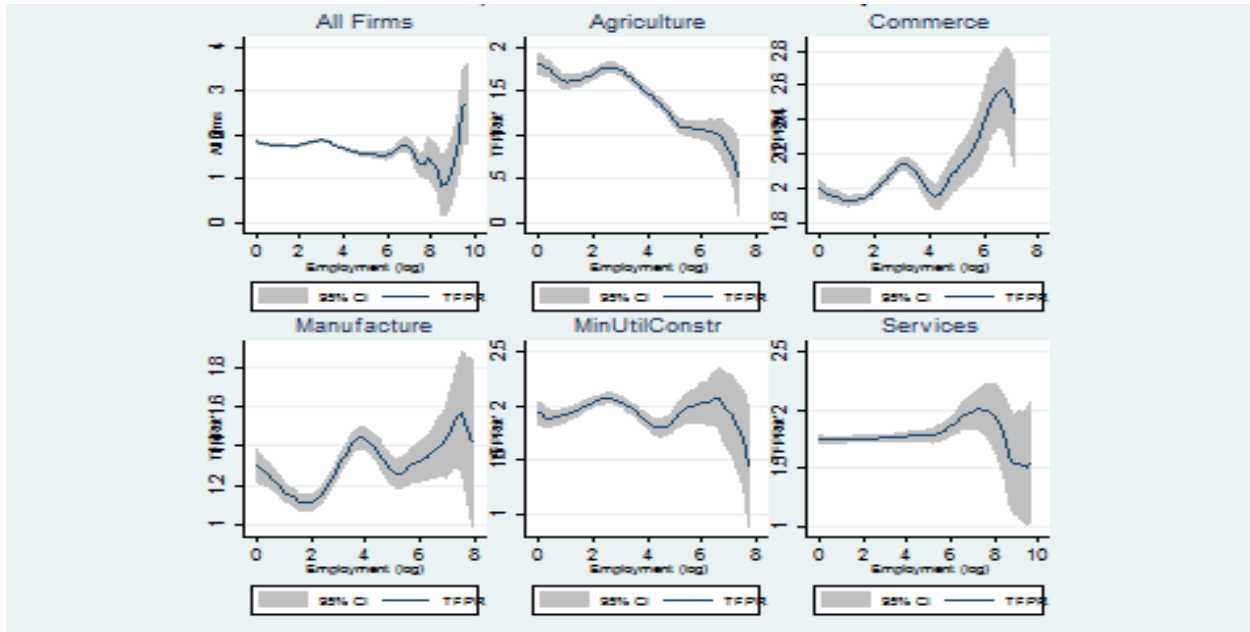
Source: Calculations based on Firm Survey data.

Fact 9: While productivity is increasing, a growing share of jobs is in less-productive firms

The more-productive firms are smaller. Regression analysis of firm size suggests that, within the same year, location (district level), and industry (2-digit level), the more-productive firms—measured by value added per worker—are smaller. The same results, though with a smaller magnitude of coefficients, apply in examining firm employment growth and firm employment growth with fixed effects. The results show that the average effect of a within-firm increase in productivity by 10 percent contracts a firm by between 0.017 percent and 0.033 percent, a small magnitude, but significant and negative nonetheless.

There is no relationship between firm productivity and employment size. Figure 20 graphs the allocation of labor with respect to total factor productivity with the aim of displaying the allocation efficiency between employment and productivity, meaning more employment is allocated to more productive firms. A positive slope would be deemed healthy because it would indicate a positive relationship between employment size and productivity. Over the whole of the economy, however, the relationship between firm productivity and hiring is mostly flat, with a small spike upward at the tail. Indeed, only firms involved in commerce have a positive slope, while agriculture has a steeply negative slope, and the remaining sectors are mostly flat with downward movements.

Figure 20. The Allocation of Labor with Respect to Total Factor Productivity



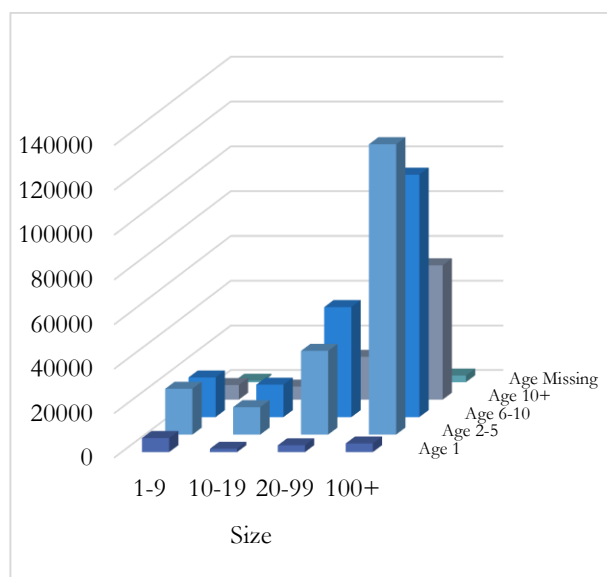
Source: Calculations based on Firm Survey data.

Fact 10: Firms providing employment are typically larger and older, while younger firms are struggling, and fewer new firms have been launched since the crisis

In the years leading up to the 2008–09 global financial crisis, the economy witnessed an increase in microfirms, but these were deeply affected by the crisis. In 2008, at the peak of such firms, they comprised nearly 19 percent of all registered firms in the country. However, the rate dropped quickly because of the impact of the crisis and has not yet recovered to precrisis levels. The largest firms were able to weather the crisis: firms of of 500 or more employees never accounted for less than 20 percent of all employment, and firms with 50 or more employees always included 60 percent or more of the employees in the workforce.

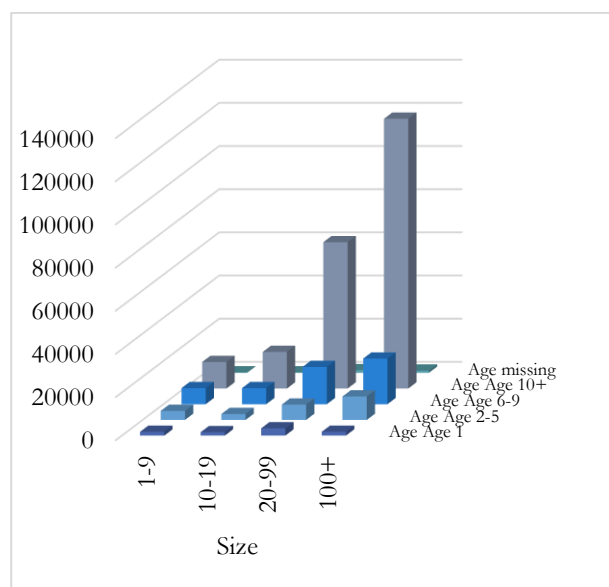
Firms have continued to age, and older firms have increased their dominance in employment share. In 2003, nonfarm employment in registered firms was spread across a variety of firms, varying in size and age; the majority of workers were in young to middle-age firms (figure 21). The majority of firms—more than 75 percent—had less than 10 employees and were neither young nor old, but in between. Firms 10 years or older only accounted for 30 percent of the employment share, not so surprising given that the country had only declared independence a decade earlier. By 2014, firms in the same age bracket accounted for over 70 percent of all firms in the country, and large firms dominated the employment landscape (figure 22). Entry-level firms (a year old) and young firms (ages 2–5 years) accounted for a negligible portion of the overall employment in registered firms (figure 22).

Figure 21. Total Employment, by Firm Age and Size, 2003



Source: Calculations based on Firm Survey data.

Figure 22. Total Employment, by Firm Age and Size, 2014

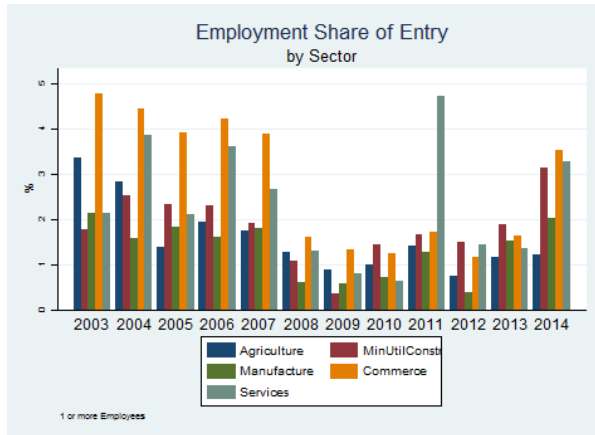


Source: Calculations based on Firm Survey data.

Employment in registered firms at entry is low, well below 5 percent by sector, and there were few entrants during the financial crisis (figure 23). However, new service firms appear to have

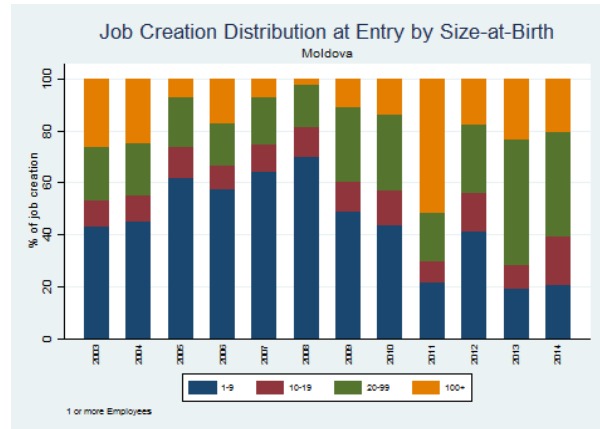
been launched in 2011, and employment shares were again rising in services, commerce, mining, utilities, and construction in 2013. Employment among these entrants dropped dramatically during the crisis and has been slow to recover, further adding to the dominance of larger and older firms in employment. Figure 24 illustrates how microfirms contributed over 60 percent of the jobs created by entrants firms in 2008, but only 20 percent in 2014. In fact, since the crisis, a growing share of job creation among entrants has been associated with larger entrants.

Figure 23. Employment Share of Entry, by Sector



Source: Calculations based on Firm Survey data.

Figure 24. Job Creation Distribution at Entry, by Size at Birth



Source: Calculations based on Firm Survey data.

Not only do small firms struggle to enter the market, but, once they enter, they must struggle to survive. The rate of exit among young entrants is high. Between 2003 and 2014, 55.6 percent of firms with less than 10 employees exited before they were 5 years old, and 50 percent disappeared within three years (table 3). The data suggest that the crisis took a disproportionate toll on these firms and that they have not recovered since. But, like job losses, high rates of early exit were already an issue precrisis.

Moreover, there is little upward movement among size categories (table 3). In fact, a higher percentage of firms that have 10 to 19 employees at birth shrink to less than 10 employees (21 percent) than those that grow to 20 or more employees (18 percent) by the age of 5, while the exit rate is even higher (35 percent). Additionally, a safety-in-size theme emerges from a look at the exit rates of firms: firms with 100+ employees exhibit an exit rate of only 6 percent at any moment three years later, while half of all microfirms closed their doors during the same period.

Table 3. Transition Matrix, Firm Size (%)

size at birth to age 5					
Size	1-9	10-19	20-99	100+	Exit
1-9	30.84	3.52	1.99	0.22	63.43
10-19	21.70	24.89	16.08	1.82	35.51
20-99	10.30	11.24	37.24	8.67	32.55
100+	6.90	1.72	15.52	48.28	27.59
size t to t+3 (now to 3 years)					
Size	1-9	10-19	20-99	100+	Exit
1-9	44.60	3.53	0.93	0.07	50.86
10-19	23.90	37.26	12.14	0.27	26.42
20-99	7.37	13.61	61.43	3.57	14.02
100+	3.09	1.43	22.96	66.24	6.27

Source: Calculations based on Firm Survey data.

cannot identify financing sources and must rely on the scarce funding options subsidized either by the government or international organizations. Larger public companies are more likely to receive public money or state aid.²⁶ However, World Bank (2016) points to significant governance-related challenges that affect firms across the board in Moldova and, potentially, the more vulnerable microfirms.

Precisely what is driving this lack of growth, especially among micro firms, is difficult to decipher. There may be a funding constraint that is leaving firms without financing options. According to the Banking Environment and Performance Survey II, a survey of the majority of banks in Moldova, banks cite insufficient credit demand and lack of creditworthy customers as the main constraints to lending.²⁵ These same banks also report participation in specialized lending programs of the government or international agencies to support lending to micro, small, or medium size enterprises as important or very important in attracting new customers. The result is possibly a situation where firms have a desire to grow, but

²⁵ The purpose of the survey was to obtain data on bank activities and bank perceptions of the banking environment. See “Banking Environment and Performance Survey II Country Profile: Moldova, Strong Parent Banks but Weak Courts,” European Bank for Reconstruction and Development, London, <http://www.ebrd.com/downloads/research/economics/microdata/beps/moldova.pdf>.

²⁶ World Bank (2012), (2014).

Conclusions

Moldova could have achieved faster poverty reduction if job creation by firms had been healthier. As the analysis shows, the economy grew quickly, while experiencing net job losses. Jobs got more attractive because of productivity gains in services and agriculture, and a structural change away from agriculture and into services up until the global crisis. Following the crisis, job loss occurred across all sectors. People fortunate enough to have a job are seeing their earnings rise, especially in industry, which, however, is not creating more jobs, and in Chisinau. These people not only receive higher wages; but are also more likely to have job contracts, health insurance, and pensions. The few jobs that exist are getting better on average. The problem now is how to expand the number of these better jobs.

The economy is heading in the wrong direction, and development opportunities are being missed. The economy is currently in the midst of a growth-enhancing demographic dividend, but is exporting its workforce. Young, women, informal, and rural workers are becoming less likely to find work, and their labor earnings (already lower) are falling further behind. The result is that the labor force is not being maximized, and an already precarious situation among the most vulnerable is becoming riskier. The pattern in the dynamics of employment means that jobs outcomes are becoming less inclusive. This is almost certainly the motivation for out-migration, which continues to rise, especially among people starting families (ages 25–34) and transiting out of school.

More and higher-productivity jobs need to be created especially in the private sector and particularly because the population is aging. At present, entrant firms are starting smaller (which is normal). It is these small, young firms that are most productive.²⁷ However, these young small firms are experiencing high exit rates, and nearly two-thirds have closed within the first five years. The resulting economic landscape is dominated by larger and older firms, which show lower employment growth rates. The finding that older, unproductive firms do not exit, while younger ones do is troublesome and may arise because of market competition and asymmetric access to finance.

Significant challenges persist among firms in creating jobs and more equitable access to economic opportunities. As described in World Bank (2016), Moldova needs to (1) strengthen the rule of law and the accountability of institutions, particularly to unlock the main constraint identified to firm growth and job creation; (2) improve the efficiency and equity of service delivery to establish an enabling environment for firms and individuals to gain access to better economic opportunities, especially in rural areas; and (3) increase the quality, equity, and relevance of education and training systems, so that Moldovans may become well prepared to access productive jobs. Priority areas also include (4) improving the business regulatory framework, (5) ensuring sound macroeconomic and fiscal management, and (6) reforming the social protection system, particularly pensions.

Regional benchmarks confirm these challenges. The final section of the annex to this report provides benchmarks on key aspects of Moldova's labor regulations, investment climate and worker education. In summary, Moldova is a regional poor performer on control of corruption, construction

²⁷ These results are robust to different measures of productivity, including value added per worker and total factor productivity.

permits, insolvency, enforcing contracts, and labor market regulations. Whereas the education of workers in Moldova is mid-ranking for the region, the minimum wage in Moldova is relatively low. This reflects Moldova's low per capita income. However, the minimum wage is high relative to average value added per worker, meaning that despite having relatively high years of education workers in Moldova have lower productivity (and lower wages)²⁸. In addition Moldovan workers receive more stability and better terms and conditions. Severance pay is generous compared to the region, as is the increment for night work. Gradual loosening of labor regulations may make Moldovan workers more attractive in future. However, it seems from the analysis of this job diagnostic that the sequence of reforms should start with improvements to the trade and investment climate in Moldova, which calls for addressing pressing governance-related challenges (see World Bank, 2016). This would increase the demand for labor. A second priority is to improve the vocational relevance of Moldova's systems for education and skills training, as skills will be all the more important as Moldova's workforce continues to shrink.

²⁸ Regressions show that for Moldovan firms, average labor costs per worker correlate with firm level productivity, even after accounting for fixed effects.

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Annexes

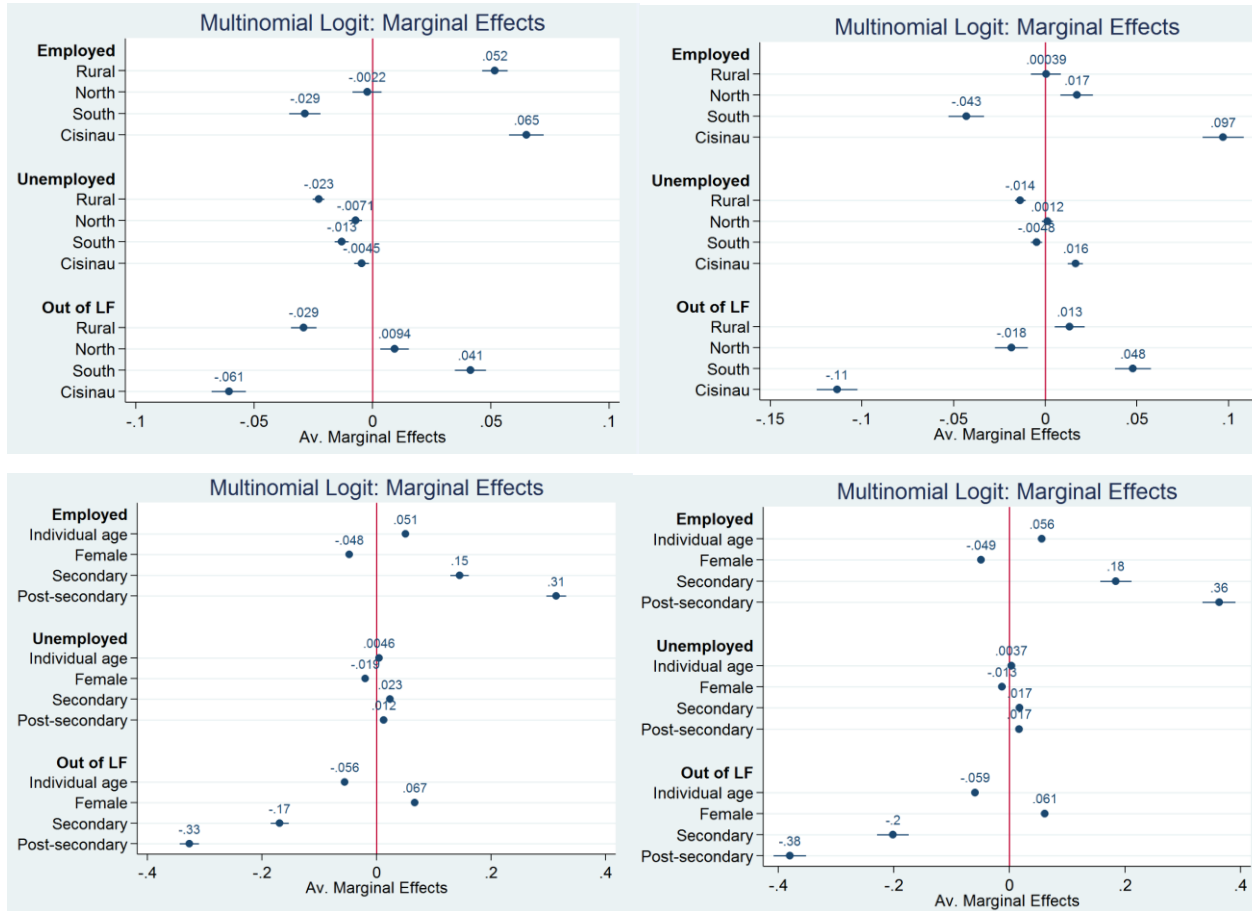
Mincerian Earnings Estimations

	Parsimonious	Sector Dummies	Occupation FE	Sector FE
Female	-0.172*** (-11.39)	-0.175*** (-11.56)	-0.151*** (-8.97)	-0.109*** (-6.53)
Individual age	0.047*** (6.13)	0.047*** (6.18)	0.044*** (5.84)	0.045*** (6.19)
Secondary	0.511** (2.34)	0.503** (2.27)	0.277 (1.32)	0.538** (2.54)
Post-secondary	0.881*** (4.02)	0.891*** (4.01)	0.628*** (2.95)	0.960*** (4.51)
Rural	-0.380*** (-17.85)	-0.370*** (-17.27)	-0.322*** (-15.30)	-0.342*** (-15.79)
North	-0.118*** (-4.51)	-0.114*** (-4.37)	-0.111*** (-4.40)	-0.102*** (-3.93)
South	-0.292*** (-12.49)	-0.286*** (-12.28)	-0.279*** (-12.45)	-0.274*** (-11.94)
Chisinau	0.546*** (19.16)	0.533*** (18.75)	0.518*** (18.47)	0.531*** (18.90)
industry		0.112*** (4.21)	0.151*** (5.40)	
services		-0.019 (-0.76)	-0.033 (-1.30)	

Earnings Estimates Based on Multinomial Logit (Heckman) Correction

	Parsimonious	Sector Dummies	Occupation FE	Sector FE
Female	-0.159*** (-4.40)	-0.163*** (-4.53)	-0.138*** (-3.91)	-0.103*** (-2.83)
Individual age	0.011 (0.57)	0.010 (0.56)	0.013 (0.70)	0.010 (0.53)
Secondary	0.195 (0.81)	0.191 (0.79)	-0.030 (-0.13)	0.242 (1.04)
Post-secondary	0.548** (2.18)	0.559** (2.20)	0.307 (1.27)	0.642*** (2.62)
Rural	-0.363*** (-12.14)	-0.356*** (-11.88)	-0.302*** (-10.26)	-0.331*** (-11.13)
North	-0.129*** (-4.89)	-0.126*** (-4.77)	-0.120*** (-4.71)	-0.113*** (-4.33)
South	-0.278*** (-11.35)	-0.272*** (-11.15)	-0.268*** (-11.40)	-0.261*** (-10.83)
Cisinau	0.533*** (9.38)	0.522*** (9.26)	0.507*** (9.24)	0.524*** (9.39)
industry		0.108*** (4.04)	0.146*** (5.19)	
services		-0.022 (-0.88)	-0.037 (-1.46)	
= " * p < 0.1	** p < 0.05	*** p < 0.01 "		

Figure A1. Multinomial Logit Analysis of Employment Status 2006 (left) and 2012 (right)



Source: Calculations based on Labor Force Survey data.

Key Labor Market Indicators

Year	Type of job (percent of employed workers 15-64)				Labor Force Participation (percent of working-age population, 15-64)							
	Wage employees	Employers	Self-employed	Unpaid	Males	Females	Male Youth	Male Adult	Female Youth	Female Adult	Urban	Rural
2007	68.50	2.25	0.93	28.31	50.35	49.65	6.40	43.95	4.67	44.98	45.86	54.14
2008	69.48	2.31	0.98	27.23	50.45	49.55	6.25	44.21	4.84	44.71	46.25	53.75
2009	71.54	2.51	0.89	25.06	51.07	48.93	6.60	44.48	4.99	43.94	47.51	52.49
2010	71.32	2.58	0.65	25.45	50.87	49.13	6.70	44.18	5.13	44.00	48.45	51.55
2011	71.27	2.98	0.69	25.06	50.96	49.04	6.40	44.57	5.06	43.98	48.49	51.51
2012	71.45	2.21	0.56	25.78	50.87	49.13	5.92	44.95	4.38	44.74	49.40	50.60
2014	68.01	2.35	0.73	28.91	50.79	49.21	5.38	45.41	3.37	45.83	46.83	53.17
2015	67.99	3.04	0.61	28.36	50.62	49.38	4.78	45.84	3.55	45.83	48.36	51.64

Source: Based on labor force surveys.

Share of Employed, by Sector, 15–64 Age-Group (percent)

Year	Agriculture	Industry	Services
2007	37.50	20.72	41.78
2008	36.37	21.80	41.83
2009	33.86	23.52	42.61
2010	33.39	23.56	43.05
2011	33.87	23.82	42.31
2012	32.70	22.91	44.38
2014	10.03	12.52	77.46
2015	9.20	12.76	78.03

Source: Based on labor force surveys. Notes: share of employed missing industry increases in 2014 and 2015 to 30 percent.

Employed population by economic activity, year, and area

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Economic activities - total	1514.6	1499	1505.1	1356.5	1316	1318.7	1257.3	1247.2	1251	1184.4	1143.4	1173.5	1146.8	1172.8	1184.9
Agriculture	770.4	764.8	747.1	583.2	532.9	536.5	422.4	408.6	388.6	333.7	314.7	323	303.3	337.9	361.1
Industry	166.1	165.1	171.4	164.5	161.8	159.3	161.3	158.1	163.4	155.4	145.8	153.2	150.9	142.4	145.6
Services	578.2	569	586.6	608.7	621.3	622.8	673.6	680.6	699.1	695.3	682.9	697.4	692.7	692.4	678.1

Source: Based on labor force surveys.

Distribution of Registered Firms, by Characteristics (percent)

Firms: Year	Location		Ownership				Region					
	Urban	Rural	Public Majority	Public Minority	Domestic	Foreign	Chisinau	Balti	North	Central	South	Gagauzia
2003	87.64	12.36	2.95	1.81	88.49	6.75	66.36	3.99	9.16	12.19	5.47	2.84
2004	87.32	12.68	2.70	1.45	88.68	7.17	66.26	4.04	8.92	12.49	5.47	2.82
2005	87.32	12.68	2.44	1.24	88.39	7.94	66.55	4.17	8.67	12.57	5.35	2.68
2006	85.56	14.44	2.18	1.08	88.10	8.64	66.67	4.47	8.46	12.48	5.30	2.61
2007	85.65	14.35	1.88	0.86	88.27	9.00	67.11	4.57	8.16	12.50	5.10	2.56
2008	85.27	14.73	1.70	0.71	88.43	9.16	67.03	4.56	8.04	12.77	4.99	2.60
2009	84.68	15.32	1.81	0.64	88.48	9.07	65.04	5.05	8.59	12.90	5.38	3.04
2010	78.69	21.31	2.79	0.96	87.25	9.00	45.54	8.54	13.90	18.21	8.86	4.95
2011	76.44	23.56	3.30	1.04	87.13	8.53	35.32	11.54	17.15	19.11	11.39	5.50
2012	75.05	24.95	3.75	1.03	86.99	8.22	29.49	13.56	19.21	18.74	13.24	5.76
2013	74.46	25.54	3.98	1.01	86.86	8.15	27.47	14.31	20.12	18.24	13.91	5.95
2014	75.74	24.26	3.71	0.77	87.28	8.23	33.37	13.35	18.87	16.53	12.92	4.97

Source: Based on Financial Statements census collected by the National Bureau of Statistics.

Distribution of Registered Firms, by Size and Age (percent)

Year	Size				Exit	Age			
	Size 1-9	Size 10-19	Size 20-99	Size 100+		Age 1	Age 2-5	Age 6-10	Age 10+
2003	74.41	10.79	10.72	4.08	-	12.47	38.59	35.03	13.90
2004	70.92	9.86	9.49	3.41	6.31	12.52	38.17	33.13	16.18
2005	72.94	9.95	8.67	3.06	5.37	12.05	38.12	29.33	20.49
2006	74.20	9.31	8.19	2.62	5.68	12.60	38.15	26.51	22.73
2007	76.14	9.11	7.75	2.17	4.84	12.78	37.95	25.49	23.78
2008	69.69	9.02	7.30	1.97	12.02	10.41	38.15	25.78	25.67
2009	40.02	7.17	7.27	2.03	43.51	8.12	37.30	26.54	28.04
2010	48.36	10.22	12.14	3.15	26.14	5.67	30.71	28.14	35.48
2011	50.82	12.10	14.15	3.60	19.33	6.44	23.60	29.34	40.62
2012	54.48	12.92	16.51	4.14	11.95	5.61	19.79	29.46	45.14
2013	53.30	12.99	17.67	4.52	11.51	4.95	16.90	29.03	49.12
2014	50.92	15.17	17.36	4.01	12.54	6.51	14.81	26.64	52.04

Source: Based on Financial Statements census collected by the National Bureau of Statistics.

Distribution of Registered Firms, by Sector (percent)

Year	Sector				
	Agriculture	Commerce	Manufacturing	Mining /Utilities / Construction	Services
2003	8.40	42.21	15.29	7.56	26.55
2004	8.45	42.32	15.25	7.44	26.54
2005	8.16	41.67	15.36	7.68	27.13
2006	7.91	41.35	15.47	7.76	27.51
2007	7.65	41.53	15.33	7.91	27.59
2008	7.48	42.02	14.89	7.90	27.70
2009	7.91	41.80	14.77	7.96	27.56
2010	11.05	39.58	15.49	8.36	25.52
2011	12.74	38.69	15.57	8.52	24.49
2012	13.68	38.22	15.58	8.60	23.92
2013	14.19	37.61	15.57	8.99	23.63
2014	13.53	37.31	15.20	9.05	24.90

Source: Based on Financial Statements census collected by the National Bureau of Statistics.

Key labor market indicators, by sector

Year	Population <15 and 65+	Employment 15- 64	Unemployment 15- 64	Outside Labor force 15-64	Sector		
					Agriculture	Industry	Services etc.
2000	32.88	40.35	3.75	23.02	50.90	13.90	35.20
2008	27.20	34.38	1.43	36.98	31.10	19.70	49.20
2009	26.91	32.36	2.21	38.52	28.20	19.30	52.50
2013	25.84	32.37	1.74	40.05	28.80	17.70	53.50
2030 (p)	30.94	28.50	1.13	39.43	10.48	18.61	70.90

Source: Based on labor force surveys.

Percentage yearly contribution to Growth

Period: 2000 to 2013		
% Yearly Contribution to Growth	Percent	% Contribution
Annual Growth per capita Value Added	4.62	100.00
Change in Productivity	6.52	141.14
Change in Employment rate	0.31	6.61
Agriculture	-1.73	-37.44
Industry	0.37	7.94
Services etc.	1.67	36.11
Change in Participation Rate	-3.04	-65.79
Change in Share of Working-age Population	0.83	18.03

Source: Based on data from World Development indicators and labor force surveys.

Labor market indicators by groups

Year of survey	Inactive								
	<u>Inactive</u> to Population Ratio (15-64)	Inactive___to Population Ratio (15-64) <u>Urban</u>	Inactive to Population Ratio (15-64) <u>Rural</u>	Inactive to Population Ratio (15-64) <u>Males</u>	Inactive to Population Ratio (15-64) <u>Females</u>	Inactive to Population Ratio (15-64) <u>Male Youth</u>	Inactive to Population Ratio (15-64) <u>Male Adult</u>	Inactive to Population Ratio (15-64) <u>Female Youth</u>	Inactive to Population Ratio (15-64) <u>Female Adult</u>
2007	50.25%	42.16%	57.84%	46.97%	53.03%	20.52%	26.45%	21.45%	31.58%
2008	50.64%	41.89%	58.11%	46.96%	53.04%	20.22%	26.74%	20.92%	32.12%
2009	52.41%	39.56%	60.44%	46.41%	53.59%	19.29%	27.11%	19.22%	34.38%
2010	53.49%	38.44%	61.56%	46.49%	53.51%	18.29%	28.21%	18.35%	35.16%
2011	53.03%	37.58%	62.42%	46.63%	53.37%	17.82%	28.81%	17.61%	35.76%
2012	54.71%	37.04%	62.96%	47.47%	52.53%	17.14%	30.33%	16.52%	36.02%
2014	54.57%	39.58%	60.42%	47.24%	52.76%	16.09%	31.15%	14.72%	38.04%
2015	53.87%	41.43%	58.57%	47.21%	52.79%	15.30%	31.91%	14.18%	38.62%

Source: Based on labor force surveys.

Firm job dynamics

Year	Nr Jobs Created	Nr Jobs Destroyed	Net	Nr of Entrant Firms	Entry Rate	Exit Rate
2003	14753	-	14753	2734	12.00%	-
2004	61491	-71685	-10194	3051	12.00%	6.31%
2005	54910	-57998	-3088	3164	11.00%	5.37%
2006	56485	-61803	-5318	3636	12.00%	5.68%
2007	57606	-64778	-7172	3672	10.00%	4.84%
2008	58436	-65952	-7516	1489	4.00%	12.02%
2009	30802	-114866	-84064	656	3.00%	43.51%
2010	32799	-61069	-28270	609	4.00%	26.14%
2011	30883	-71236	-40353	666	5.00%	19.33%
2012	29546	-38837	-9291	518	4.00%	11.95%
2013	31304	-40362	-9058	430	4.00%	11.51%
2014	32598	-61654	-29056	769	6.00%	12.54%

Source: Based on Financial Statements census collected by the National Bureau of Statistics.

Job Creation

Jobs Created per New firm										
Year	Agriculture	Business Finance	Commerce	Construction	Hotels Restaurants	Manufacturing	Mining Quarrying	Other Services	Transport Storage Comm	Utilities
2003	23.32	2.51	2.82	4.95	5.40	6.49	1.00	3.06	3.80	11.54
2004	48.58	11.08	9.95	24.02	11.10	33.16	156.67	18.37	21.39	49.50
2005	41.22	9.59	10.87	25.85	12.54	25.42	44.86	11.45	15.31	39.17
2006	27.45	8.18	9.43	25.41	15.15	22.84	43.75	10.72	18.08	47.85
2007	22.78	8.46	10.70	26.74	24.14	23.72	113.67	10.64	17.76	25.68
2008	59.85	6.57	27.79	62.28	41.92	64.54	92.00	30.59	38.51	77.36
2009	44.31	6.00	37.74	88.88	56.47	69.97	0.00	56.17	69.06	36.27
2010	31.47	9.72	30.62	73.83	29.74	111.51	41.25	196.11	61.20	25.00
2011	43.91	6.94	36.68	42.89	21.59	74.72	75.00	95.00	52.79	24.54

2012	60.37	8.68	42.98	66.05	38.53	128.12	0.00	51.91	71.20	23.63
2013	71.21	10.38	47.58	105.69	38.33	181.70	40.50	84.43	83.75	40.36
2014	36.94	8.74	32.27	49.24	37.80	78.30	97.00	51.65	48.10	40.53

Source: Based on Financial Statements census collected by the National Bureau of Statistics.

Jobs Created Overall by Entrants										
Year	Agriculture	Business Finance	Commerce	Construction	Hotels Restaurants	Manufacturing	Mining Quarrying	Other Services	TransportStorage Comm	Utilities
2003	5108	113	3411	762	567	2666	1	885	1090	150
2004	11563	565	12742	5021	1110	15652	470	6503	6974	891
2005	8945	393	13806	5610	1405	13828	314	4132	5772	705
2006	7412	319	14063	7013	1576	12838	350	5061	7231	622
2007	5876	423	17031	7247	1955	12051	341	5393	6801	488
2008	9396	499	16564	5854	1593	12133	184	5200	5930	1083
2009	4121	360	9283	2311	960	6297	41	3370	3660	399
2010	2706	350	7503	2584	684	7248	165	7256	3978	325
2011	3908	361	8509	1973	583	7248	75	4845	3062	319
2012	3924	330	8253	2774	655	7687	97	1817	3560	449
2013	5127	270	7470	3699	690	8358	81	2364	2680	565
2014	3620	297	9166	3102	1134	6890	97	2841	4762	689

Source: Based on Financial Statements census collected by the National Bureau of Statistics.

Table A. Labor Productivity Regressions

VARIABLES	LHS=lnLPQ-Basic-RE	LHS=lnLPQ-Region-RE	LHS=lnLPQ-Sector-RE
sz_10to19	0.0896*** (0.0128)	0.0899*** (0.0128)	0.0901*** (0.0125)
sz_20to49	0.0830*** (0.0269)	0.0837*** (0.0269)	0.0862*** (0.0270)
sz_50to249	-0.0251 (0.0422)	-0.0248 (0.0423)	-0.0236 (0.0426)
sz_250to499	-0.147** (0.0606)	-0.147** (0.0605)	-0.148** (0.0610)
sz_500plus	-0.192** (0.0803)	-0.191** (0.0803)	-0.203** (0.0819)
age_6to9	0.00255 (0.0112)	0.00255 (0.0112)	-0.00281 (0.0118)
age_10to19	-0.0564** (0.0227)	-0.0561** (0.0227)	-0.0722*** (0.0238)
age_20to29	-0.220*** (0.0347)	-0.219*** (0.0347)	-0.247*** (0.0362)
age_30plus	-0.728** (0.341)	-0.726** (0.341)	-0.878** (0.429)
Foreign	0.258*** (0.0273)	0.260*** (0.0273)	0.284*** (0.0293)
Public	-0.280*** (0.0402)	-0.280*** (0.0401)	-0.300*** (0.0406)
Balti		-0.299*** (0.103)	
North		-0.277*** (0.0950)	
Central		-0.221*** (0.0698)	
South		-0.437*** (0.0976)	
Gagauzia		-0.325***	

		(0.0939)	
Agriculture			0.414*** (0.160)
MinUtilConstr			0.182 (0.111)
Commerce			0.741*** (0.105)
Services			-0.204** (0.0815)
Constant	4.964*** (0.212)	4.964*** (0.212)	4.500*** (0.174)
Observations	160,297	160,297	160,297
Number of id	42,272	42,272	42,272
Sector dummies	YES	YES	NO
Location dummies	YES	NO	YES
Year Dummies	YES	YES	YES
Between R2	0.197	0.196	0.118
Overall R2	0.216	0.215	0.140
Within R2	0.0385	0.0389	0.0407

Robust standard errors in parentheses

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

Productivity Growth Regressions (Value Added per Worker)

	(1)	(2)	(3)
VARIABLES	LHS: Value Added growth	LHS: Value Added growth	LHS: Value Added growth
sza_10to19	-0.0220** (0.0105)	-0.0219** (0.0105)	-0.0243** (0.0106)
sza_20to49	-0.0543*** (0.0143)	-0.0541*** (0.0144)	-0.0576*** (0.0143)
sza_50to249	-0.0211 (0.0192)	-0.0218 (0.0193)	-0.0276 (0.0191)
sza_250to499	-0.0477	-0.0457	-0.0585*

	(0.0347)	(0.0343)	(0.0337)
sza_500plus	-0.0506	-0.0490	-0.0575
	(0.0478)	(0.0477)	(0.0464)
age_6to9	-0.0739***	-0.0738***	-0.0739***
	(0.0120)	(0.0121)	(0.0121)
age_10to19	-0.0684***	-0.0686***	-0.0671***
	(0.0117)	(0.0117)	(0.0114)
age_20to29	-0.0194	-0.0216	-0.0156
	(0.0247)	(0.0246)	(0.0244)
Foreign	-0.0171	-0.0173	-0.0161
	(0.0170)	(0.0171)	(0.0161)
Public	-0.0379	-0.0381	-0.0296
	(0.0250)	(0.0251)	(0.0233)
Balti		-0.00786	
		(0.0184)	
North		-0.00866	
		(0.0184)	
Central		-0.0111	
		(0.0166)	
South		-5.62e-05	
		(0.0235)	
Gagauzia		-0.0130	
		(0.0255)	
Agriculture			0.0926***
			(0.0334)
MinUtilConstr			0.0122
			(0.0206)
Commerce			-0.0417***
			(0.0154)
Services			-0.0470***
			(0.0169)
Constant	0.231***	0.236***	0.149***
	(0.0382)	(0.0379)	(0.0256)
Observations	64,460	64,460	64,460
Number of id	20,174	20,174	20,174

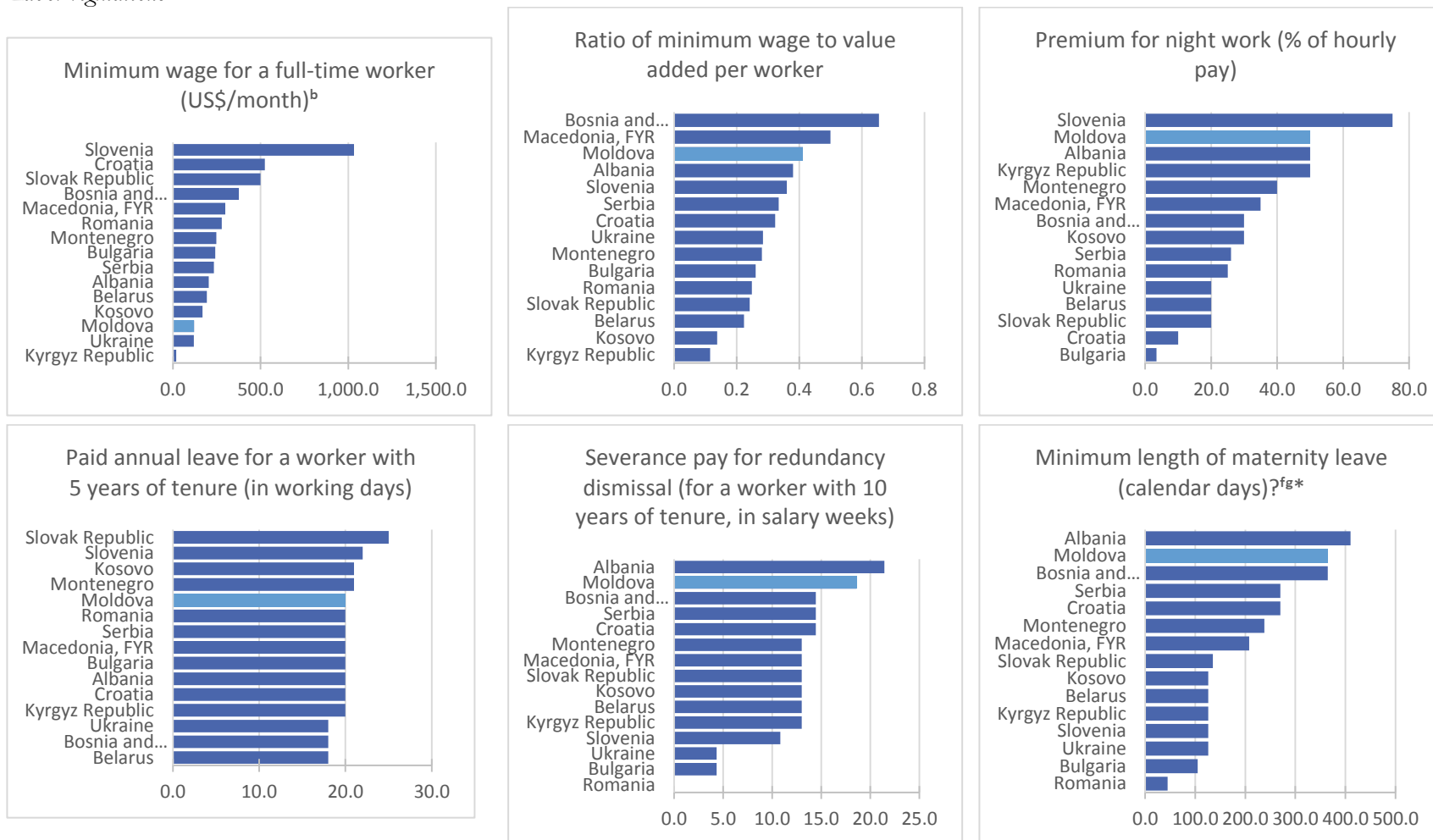
Sector dummies	YES	YES	NO
Location dummies	YES	NO	YES
Year Dummies	YES	YES	YES
Between R2	0.0312	0.0300	0.0288
Overall R2	0.0223	0.0219	0.0214
Within R2	0.0183	0.0182	0.0183

Robust standard errors in parentheses

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

Benchmarking Moldova

Labor regulations



Source: Data from Doing Business database (WBG): Labor Market Regulation 2016. Accessed: 17-Apr-2016.

Notes:

.. No Doing Business data available.

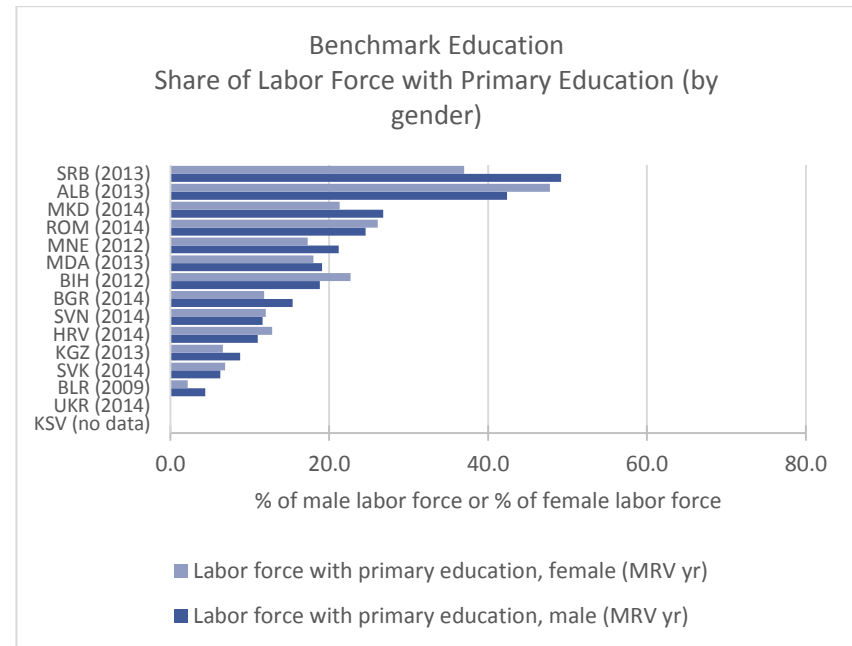
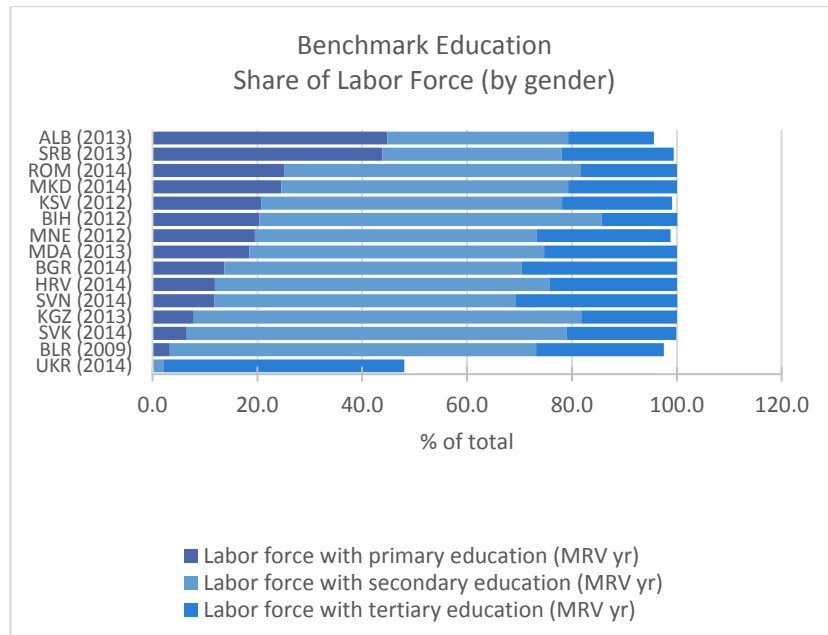
* Data were collected jointly with the World Bank Group's Women, Business and the Law team.

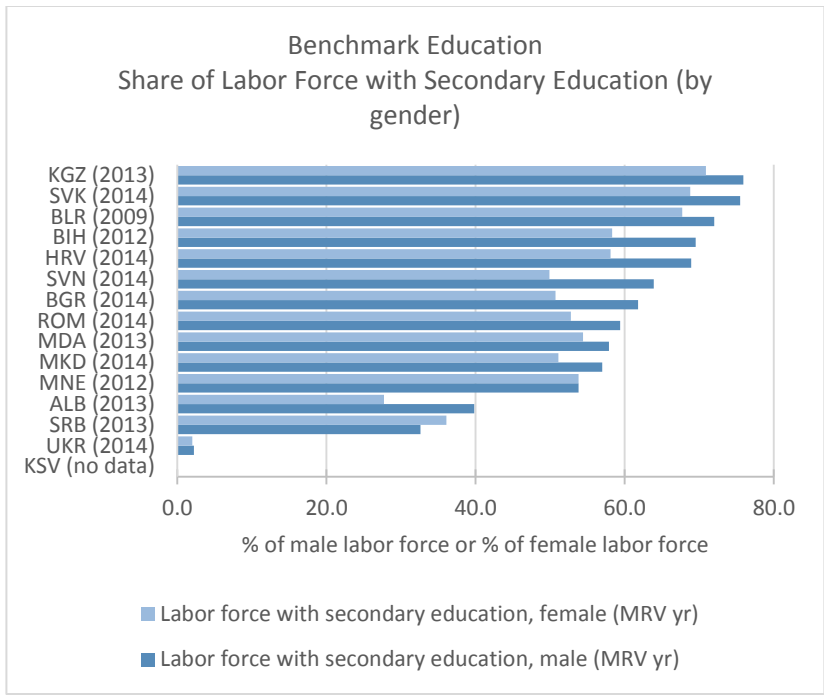
a. Including renewals.

b. Refers to the worker in the Doing Business case study: a cashier, age 19, with one year of work experience. Economies for which 0.00 is shown have no minimum wage in the private sector.

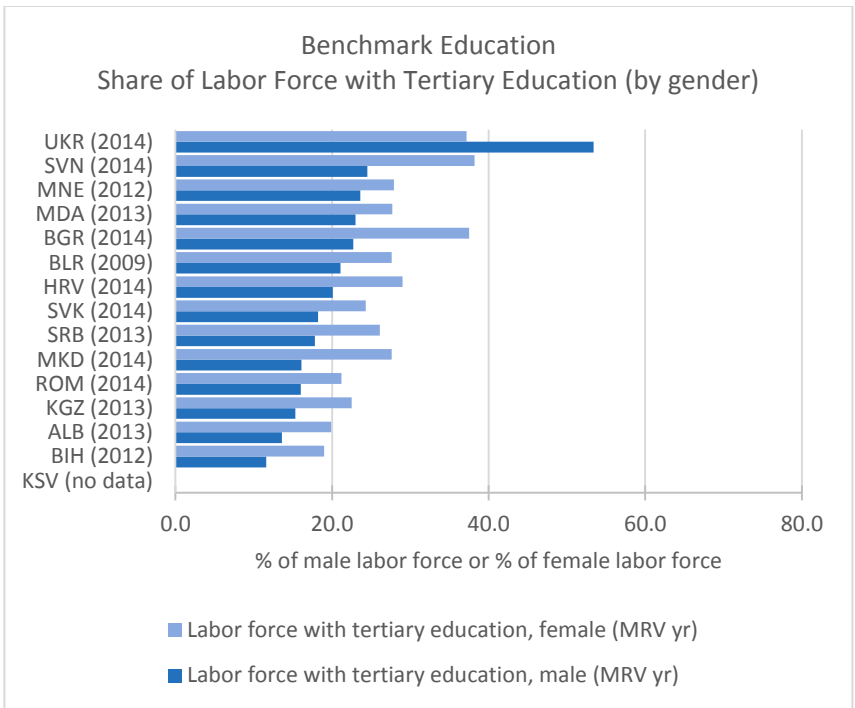
- c. Average for workers with 1, 5 and 10 years of tenure.
- d. Not applicable (n.a.) for economies with no statutory provision for a probationary period.
- e. Whether compulsory before redundancy.
- f. If no maternity leave is mandated by law, parental leave is measured if applicable.
- g. The minimum number of days that legally have to be paid by the government, the employer or both.
- h. Not applicable (n.a.) for economies with no unemployment protection scheme.
- i. Some answers are not applicable (n.a.) for economies where dismissal due to redundancy is disallowed.

Education

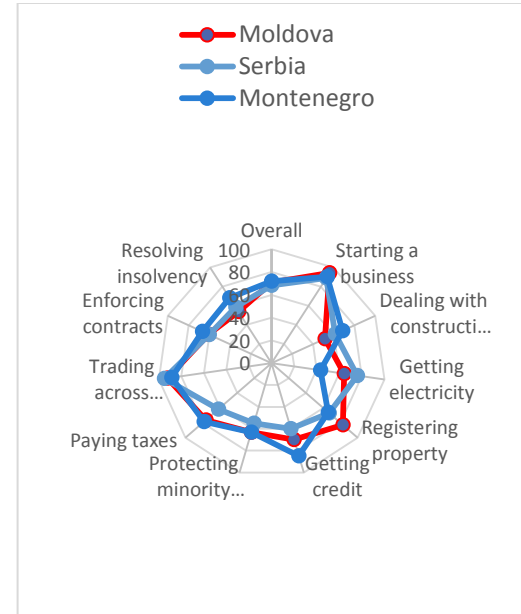
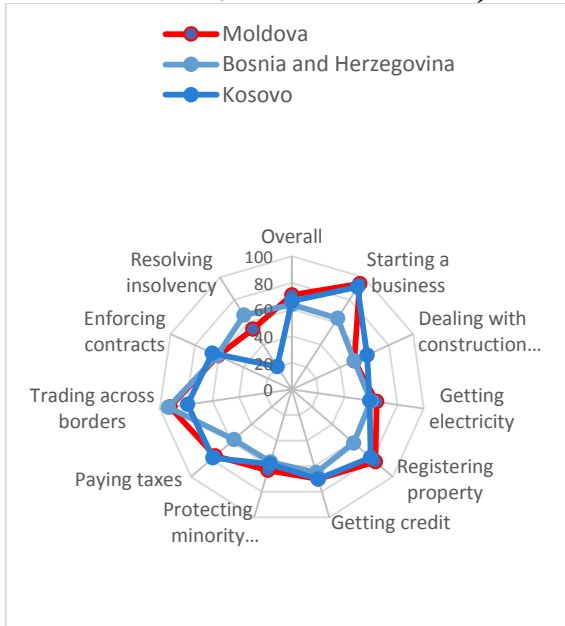
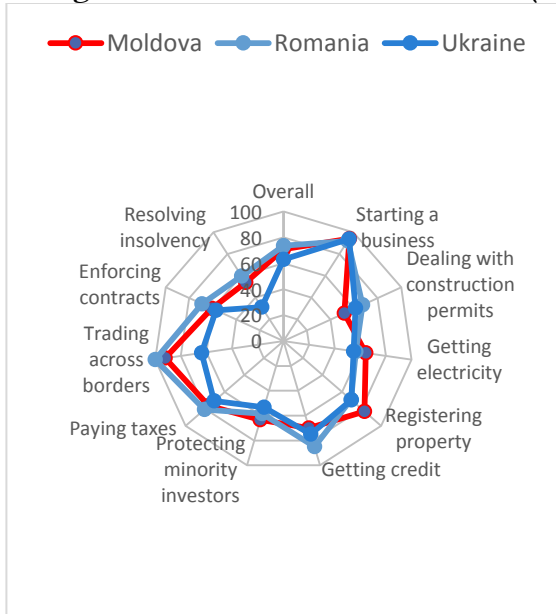




Source: Data from database: World Development Indicators. Accessed: 15-Apr-2016.



Doing Business – Investment Climate (Distance to Frontier, 100=Best Practice)



Source: Data from Doing Business database (WBG): Distance to Frontier. Accessed: 17-Apr-2016.