DO INNOVATIONS STIMULATE EMPLOYMENT GROWTH IN PRIVATE FIRMS?

Alisher Suyunov
Independent researcher Westminster International University in Tashkent
E-mail: alishersuyunov.as@gmail.com

Abstract: *For Uzbekistan experiencing a demographic gift phenomenon, the increased supply of workforce poses significant challenges for the Government to reap benefits from growing population and reach sustainable and inclusive economic growth.*

Using a sample of 46,405 firms from 30 countries in Europe and Central Asia region in World Bank Enterprise Survey data, we estimate the effect of innovations on employment growth in firms. Our preliminary results imply product and process innovations experienced by enterprises improves employment growth, the effect is even stronger in firms with higher growth rate.

The positive employment effects of innovations in firms in Uzbekistan would improve the absorption of growing working-age population on condition that firms are provided with incentives to invest in product and process innovations.

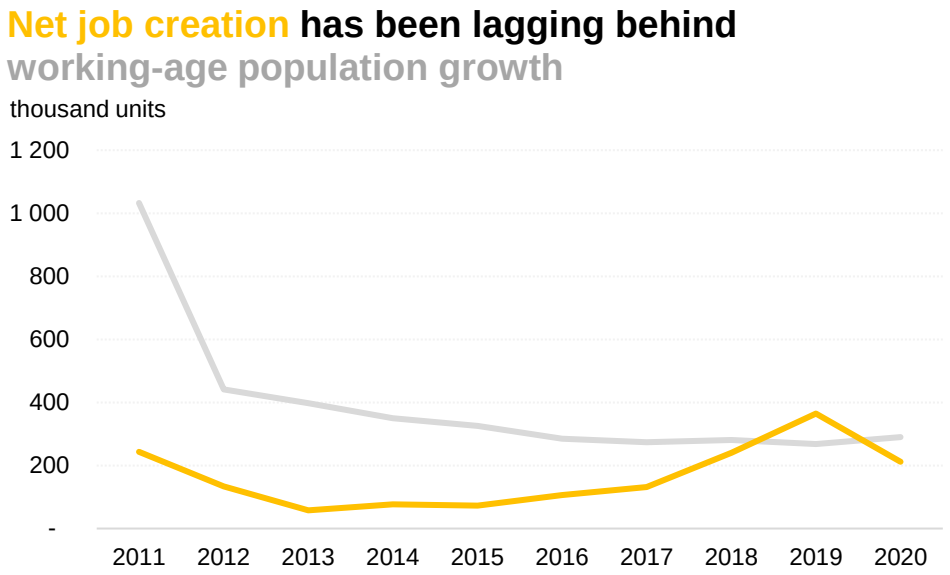
Keywords: *innovations, job creation, transition probability, Uzbekistan*

Creating more and better jobs is one of the most critical challenges in economic development of the countries in Europe and Central Asian region. Employment is essential because it plays a major role in maintaining their income security to support their life and leisure. Putting extra pressure on people, unemployment worsens individuals' well-being and their integration to the society. In addition to employment importance in individuals' survival in modern world, employed people are inclined to exude trust in other people and be interested in civic participation. ILO et al. [1] pointed up an importance of focusing on employment aspects of growth, creation of decent jobs, its sectoral composition, thereby, implying a research gap to be filled in further studies. Holmes et al. [2]'s study emphasised the urgency of employment creation in the Central Asian region – Afghanistan, Kyrgyzstan, Tajikistan, and Uzbekistan – so-called "fragile states" with weak job opportunities.

For Uzbekistan experiencing a demographic gift phenomenon, the increased supply of workforce should be effectively integrated in the economy to achieve a sustainable and inclusive economic growth. The misalignment of job creation and job destruction is one of the most overlooked aspects of labour market in Uzbekistan. Over the period from 2017 to 2021, a total number of created jobs is accounted for roughly one million workplaces. In contrast, job

destruction figures suggest there has been substantial reduction in a number of jobs, resulting in net job creation of 181.3 thousand jobs, while over 2017–2020 period, a number of working-age population increased by 1.1 million people.

Figure 1. Net job creation and working-age population growth in Uzbekistan over 2011–2020



Source: State Statistics Committee of Uzbekistan

A comparison of working-age population growth trends with net job creation dynamics (Figure 1) shows working-age population growth in Uzbekistan has not been accompanied with sufficient net job creation. This finding is also consistent with World Bank [3]'s argument on economic development of Uzbekistan observed over 1996–2016 was not able to maintain sufficient job creation for rapidly-growing population. As entrepreneurship is one of sources of job creation, the entrance of new firms into market plays a crucial role in labour market. In this context, the firm growth in terms of the number of workers – business dynamism over time can imply current state of business environment in Uzbekistan. Business dynamism shows creative destruction process in economy has been operating–an up-or-out process by which unproductive incumbent firms are pushed out of the market by new entrants or other more productive incumbents or both [246]. Empirical studies pointed up the contribution of firm dynamism on growth in developing countries. The capacity of productive enterprises to expand is widely identified as key to a country economic prosperity [5]. Hsieh and Klenow [6,7] and Arouri et al. [8]'s studies showed that the failure of high-productive enterprises is growing large over time results in significant losses in aggregate productivity growth in developing economies in comparison with developed ones.

Our estimate of firm dynamics imply firm dynamism is generally weak in Uzbekistan. The transition probabilities demonstrate that relatively few firms transitioned from one size category (micro, small, medium, and large) to another between 2016–2019. When firms enter and operate in private sector, very few of them seem to be able to grow in size, defined as a number of workers. Estimates of firm dynamism in terms of firm size show that Uzbek businesses are inclined to stay small, while transition probability to medium- or large-size remained low. However, as OECD [9] pointed out, the smaller SMEs are the more likely they are to close operations being affected by shocks. It indicates that Uzbek businesses are remain prone to external factors, deteriorating its probability of survival in the market.

Table 1.

Probability of firms transition to other firm size categories, % of firms

Firm size (in 2016)	Firm size (in 2019)			
	Micro	Small	Medium	Large
Micro (up to 10)	57.4%	32.7%	7.6%	2.3%
Small (10-49)	7.6%	83.1%	9.3%	0.0%
Medium (50-249)	0.6%	6.6%	87.3%	5.5%
Large (250+)	0.0%	1.4%	14.3%	84.3%

Source: The author's own estimates

Our preliminary estimates of firm dynamism show that in the context of Uzbekistan, micro and small enterprises' probability of entering large size category remained negligible (Table 1). In 2019, while negligible share of micro and medium-size firms tends to enter large size category, small firms in both countries did not enter large-size category. In addition, the probability of remaining at the same size category is high which indicates firms in these countries are inclined to remain unchanged in terms of their size. This finding in the context of Uzbekistan is consistent with the World Bank [231]'s results which showed the Uzbek private firms have not grown as fast as key players and tend to stay small over time. Despite the fact that a dynamic private sector is foundation of decent jobs [11], dynamism in Uzbek private sector is low.

From the perspective of job creation, weak net job creation we stressed out previously could be attributed to insufficient firm dynamism rather than solely job destruction. Although the firms' entry rate has been high, once they are

created firms tend to stay small and grow slowly. This pattern highlights Uzbek (formal) private sector inability to absorb the growing working-age population, i.e. bulge workforce, leaving workers with few employment opportunities, encouraging seeking job opportunities in informal sector. In general, in Kazakhstan and Uzbekistan, weak firm dynamics and market imperfections prevent the best firms from flourishing. In general, private sector in Uzbekistan lacks dynamism reflected upon weak job creation, limited firm entry, growth, and exit in addition to low investments in physical capital, innovation, and worker training.

In this research study, we use a sample of 46,405 firms from 30 countries in Europe and Central Asia region which are covered by pooled World Bank Enterprise Survey data. Our preliminary empirical results suggest that both product and process innovations contribute to employment growth.

In this case, a median firm engaged in product and process innovation demonstrates a growth in employment by 0.195 pp. and 0.496 pp. respectively. The magnitude of the impact of both is found to be greater in firms in 70th quantile for both product and process innovations. Although some research studies documented negative relationship between innovations and employment growth, our estimates on positive employment effects of product innovations are in line with other research studies [144] arguing firms that innovate products or processes and have achieved higher productivity tend to demonstrate higher employment growth than their non-innovative peer.

The preliminary results are consistent with Ortiz et al. [13], Lachenmaier and Rottmann [14] findings on the positive effects of introduction of product or process innovations on the demand for labour using firm-level data. On average, our estimates imply the positive impact of process innovations is greater than that of product innovations which is consistent with Greenan and Guellec [15] and Lachenmaier and Rottmann [14]. As product innovations, in general, are related to an increase in employment independent of industry. A key source of innovations in products is the cultural economy that generates additional spillovers into other sectors of economy and enhance both their competitiveness and productivity [16].

To conclude, our study showed that both product and process innovations experienced by enterprises can contribute to employment growth. This estimate is even stronger in firms with higher growth rate. From policy perspective, the positive employment effects of innovations carried out by firms in Uzbekistan would improve the absorption of growing workforce given that firms are provided with right incentives to invest in product and process innovations, such as fiscal incentives after introduction of an innovative product into the market or improved business process.

References:

1. ILO et al. Macroeconomic stability, inclusive growth and employment. 2012.
2. Holmes R. et al. What is the evidence on the impact of employment creation on stability and poverty reduction in fragile states. 2013.
3. World Bank Group. Uzbekistan Country Economic Update, Summer 2019: Toward a New Economy. Washington DC: World Bank, Washington, DC, 2019.
4. Akcigit U. et al. Rising Corporate Market Power: Emerging Policy Issues: 2021/001. 2021.
5. Rijkers B. et al. Which firms create the most jobs in developing countries? Evidence from Tunisia // Labour Econ. 2014. Vol. 31.
6. Hsieh C.-T., Klenow P.J. The Life Cycle of Plants in India and Mexico // Q J Econ. 2014. Vol. 129, № 3. P. 1035–1084.
7. Hsieh C.-T., Klenow P.J. Misallocation and Manufacturing TFP in China and India // Quarterly Journal of Economics. 2009. Vol. 124, № 4. P. 1403–1448.
8. Arouri H. et al. Firm types and jobs creation in developing countries [Electronic resource] // Vox.eu. 2015. URL: https://voxeu.org/article/firm-types-and-jobs-creation-developing-countries (accessed: 07.06.2021).
9. OECD. OECD SME and Entrepreneurship Outlook 2021. OECD, 2021.
10. Izvorski I. et al. Assessing Uzbekistan's Transition: Country Economic Memorandum. Washington, DC, 2021.
11. Islam A.M., Moosa D., Saliola F. Jobs Undone: Reshaping the Role of Governments toward Markets and Workers in the Middle East and North Africa. Washington DC, 2022.
12. International Finance Corporation. IFC Jobs Study: Assessing Private Sector Contributions to Job Creation and Poverty Reduction. Washington, DC, 2013.
13. Ortiz J., Salas Fumás V. Technological innovation and the demand for labor by firms in expansion and recession // Economics of Innovation and New Technology. 2020. Vol. 29, № 4. P. 417–440.
14. Lachenmaier S., Rottmann H. Effects of innovation on employment: A dynamic panel analysis // Int J Ind Organ. 2011. Vol. 29, № 2. P. 210–220.
15. Greenan N., Guellec D. Technological Innovation and Employment Reallocation // Labour. 2000. Vol. 14, № 4. P. 547–590.
16. UNCTAD. How the creative economy can help power development [Electronic resource]. 2019. URL: https://unctad.org/news/how-creative-economy-can-help-power-development (accessed: 29.08.2021).