

Subsistence Self-Employment and Unemployment Benefits

Sujan Bandyopadhyay * Furkan Sarikaya **

September 28, 2024

-Extended Abstract-

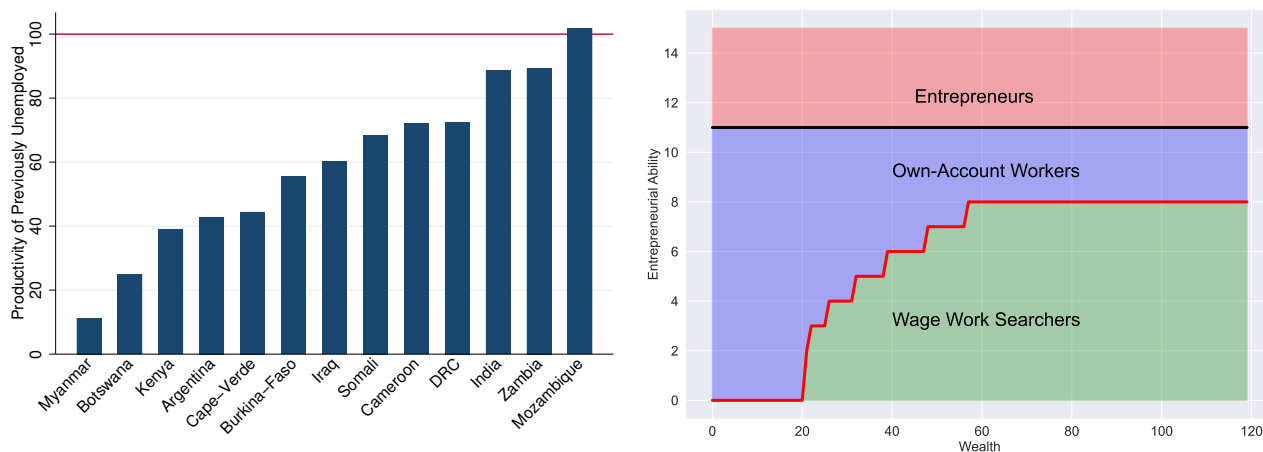
Self-employment rates are significantly higher in less developed countries, where subsistence motives often drive individuals into self-employment. While the average self-employment rate in high-income countries is 11%, it is 57% in low- and middle-income countries.¹ Prior research suggests that individuals in developing countries often choose self-employment not due to superior entrepreneurial skills but as a result of limited opportunities in the labor market (see, for example, Donovan (2014) and Poschke (2024)). At the same time, these countries are typically characterized by weak or nonexistent unemployment benefits.

This paper explores the interplay between unemployment benefits and subsistence self-employment, focusing on how low-productivity individuals with limited wealth turn to self-employment when faced with unemployment. Our analysis is motivated by empirical findings indicating that individuals who were unemployed before becoming self-employed are significantly less productive than those who were employed prior to self-employment, as illustrated in Figure 1(a). Furthermore, we find that a substantial fraction of the self-employed in these countries were previously unemployed. Taken together, these findings suggest that the lack of unemployment benefits may be a driving factor behind individuals' pursuit of self-employment in these contexts. Additionally, this selection into self-employment due to subsistence concerns contributes to lower aggregate output in these countries.

We develop a model that incorporates occupational choice, search frictions, and borrowing constraints. Individuals can choose between three occupations: wage worker, own-account worker, or entrepreneur. Unemployed individuals face search frictions when seeking wage employment, while entrepreneurs and own-account workers can begin working immediately. Entrepreneurs utilize standard span-of-control technology, employing both labor and capital, whereas own-account workers, regarded as informal self-employed (as in Poschke (2024)), rely solely on their own labor. Both entrepreneurs and own-account workers are classified as self-employed.

* Arizona State University, *E-Mail*: sujan.bandyo@asu.edu

** Arizona State University, *E-Mail*: fsarikay@asu.edu.



(a) Rel. Productivity of Previously Unemployed (b) Occupational Choice by Wealth and Ability

Figure 1: Panel (a) shows the average productivity of self-employed individuals who were previously unemployed, compared to those who were not. The data is sourced from the World Bank Enterprise Surveys. The average productivity of self-employed individuals in each country is normalized to 100. Panel (b) illustrates the occupational choice decision of unemployed individuals in our benchmark calibration model. The x-axis represents wealth bins, while the y-axis indicates entrepreneurial ability bins.

Due to search frictions and borrowing constraints, occupational choices in the model are influenced not only by entrepreneurial ability but also by individual wealth.² While higher-ability individuals typically become entrepreneurs, a key feature of our model is that low-wealth, low-productivity individuals select into own-account work. This occurs because these individuals cannot afford the cost of searching for wage employment in a labor market with frictions. Figure 1(b) illustrates this selection mechanism.

We calibrate the model to the Mexican economy, which is characterized by high self-employment rates, significant informality, and the absence of unemployment benefits. Subsequently, we conduct a series of counterfactual analyses to examine the potential impacts of introducing U.S.-style unemployment benefits. Crucially, the model’s implications for aggregate output depend on the institutional capacity to prevent free-riding among own-account workers.

When own-account workers can conceal their employment status while receiving unemployment benefits, the introduction of U.S.-style unemployment benefits leads to a significant decline in aggregate output due to the excessive selection of unemployed individuals into own-account work. In this scenario, individuals receiving unemployment benefits face a perverse incentive to engage in own-account work, as they can earn income from both sources. Conversely, if they choose to search for wage employment and succeed in finding a job, they forfeit their access to unemployment benefits.

Conversely, if institutions can accurately monitor employment status, unemployment benefits result in gains in aggregate output. In this scenario, low-wealth, less productive

individuals utilize the benefits to remain in the labor market and actively search for wage employment, leading to a significant decline in subsistence self-employment, particularly among own-account workers. Specifically, this analysis reveals a drop in the share of own-account workers by 15 percentage points, resulting in an approximately 2% increase in aggregate output.

Furthermore, we find that the structure of unemployment benefits—particularly the replacement rate and benefit duration—plays a quantitatively significant role in our results. In our next steps, we aim to examine the role of the funding structure for unemployment benefits. For instance, the negative effects of a distortionary output tax may outweigh the efficiency gains from unemployment benefits funded by such a tax, even in scenarios where own-account workers cannot conceal their employment status.

Notes

¹Source: World Bank Database, <https://data.worldbank.org/indicator/SL.EMP.SELF.ZS?view=map>

²Herreño and Ocampo (2023) develops a similar model with two occupational choices, search frictions, and borrowing constraints. Our paper extends this framework by focusing specifically on unemployment benefits and informality. Cirelli et al. (2021) emphasizes the importance of informality in developing labor markets when assessing the potential effects of unemployment benefits.

References

- Cirelli, F., E. Espino, and J. M. Sánchez (2021). Designing unemployment insurance for developing countries. *Journal of Development Economics* 148, 102565.
- Donovan, K. (2014). Subsistence Entrepreneurs and Misallocation. Technical report.
- Herreño, J. and S. Ocampo (2023). The macroeconomic consequences of subsistence self-employment. *Journal of Monetary Economics* 136, 91–106.
- Poschke, M. (2024). Wage employment, unemployment and self-employment across countries. *Journal of Monetary Economics*, 103684.