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Research Article

Employment Dynamics and determinants of Transition from Solo Self-Employment to Employer status

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KEYWORDS: Employer; Solo self-employment; transition; employment dynamics

Abstract

The labour markets of many developing countries, particularly Tanzania, are dominated by small businesses that are typically owned and operated by a single family member. Evidence suggests that these individual owned businesses make a slow transition from solo self-employment to employer status. There is little understanding of the mechanisms behind this low transition, particularly in the context of Tanzania. Using panel data, a Markov transition framework is employed to model movements between employment states. A logit regression model is then applied to estimate the determinants of transitioning from self-employment in period t to employer status in period $t+1$. The findings reveal that the extent of transition between labor market status is small while owner characteristics, environmental and business-related factors, play a significant role in explaining the transition across labour market status. According to the study, policies promoting balanced regional development, enterprise market experience, education, microcredit accessibility, and business information access are critical in accelerating the transition of solo self employment to employer status.

1 Introduction

1.1 Background of the Study

Entrepreneurial activity has been playing a crucial role worldwide in contributing to economic growth by creating employment opportunities, improving income distribution, expanding the tax base, and enhancing people's well-being (Basu et al., 2018; Binder & Blankenberg, 2021; Borghi et al., 2025; Gevaert, 2024). It is also argued that the sector is a significant source of new jobs and an alternative to paid employment (Audretsch et al., 2020; Gindling & Newhouse, 2014). However, in most developing countries, the labor market is dominated by small enterprises, primarily owned by a single household member as a Solo self-employed worker (Bonnet et al., 2019; Kweka & Fox, 2011). For instance, in Tanzania, 97 percent of enterprises employ 1-4 people, with 66 percent being Solo self-employed, while only 3 percent of non-farm enterprises employ more than 5 people, with the majority of these businesses operating in the informal sector. Additional

evidence from the Tanzanian labor market indicates that solo self-employment workers (own account workers) accounted for 46.6 percent of business activities from 2000 to 2019 (See appendix A Table A2).

Contributing family helpers accounted for 39.6 percent, followed by wage employees and employers, constituting the smallest percentages (11.7 and 2.0 percent, respectively). Over time, employment shares in Tanzania have changed (See Table A2) with more Solo self-employed workers and family helpers in 2019 than in 2000, and the share of employees and employers almost doubling from 2000 to 2020. While the relative numbers make it difficult to determine whether there is a low transition of non-farm enterprises from Solo self-employment to employers' status, the slight increase in the number of employers within a decade from 1.7 to 2.8 percent, and an increase in the share of solo self-employment workers from 42.1 to 50.2 percent as indicated in Table A2 in appendix A, suggests that the transition from solo self-employment to employer is relatively constant. To ensure that the sector provides maximum benefits to the economy, it is essential to investigate and address the barriers to this low transition from solo self-employment to being an employer of these non-farm enterprises.

Despite the potential for individual success and wealth among some self-employed individuals, the natural progression for most entrepreneurial endeavors involves a shift from Solo self-employment to an employer status. And from this perspective it's important to recognize the complexities involved in the growth process these kind of business and not oversimplify the challenges it may face, such as financial constraints, inadequate infrastructure, or limited technology (Aigbavboa & et al., 2018; Gevaert, 2024; Petković et al., 2016). Previous research on business growth has primarily focused on supply-side factors like infrastructure development, technological advancements, credit policies, market access, and product quality improvements. However, I believe that unique individual, business and regional characteristics may play a critical role in explaining the limited transition of non-farm enterprises from solo self-employment to employer status. Factors influencing a business's growth may not solely be macroeconomic but also individual-specific, contributing to their transition. This study suggests that evolving into an employer can lead to formalizing and expanding an enterprise, thereby significantly contributing to the overall economy. Other studies on similar topics such as Henley (2019), Danquah et al. (2019), and Caliendo et al. (2019) have found that the personal resources and characteristics of business owners are vital not only for job creation but also for understanding the transitions between self-employed, paid employees, and own-account workers. Therefore, this study aims to explore specific circumstances that demonstrate the importance of individual characteristics in explaining the transition of non-farm businesses from self-employment to employer status in Tanzania.

The paper aims to analyze why household non-farm enterprises of Solo self-employment status do not trans to become employer status and uses a logit regression model to estimate the determinants of this transition. Previous studies have mainly focused on self-employment creation, reasons for leaving self-employment for wage work, and the duration of self-employment (Alilović & Blecich, 2017; Krasniqi, 2014; Olaposi & Adelowo, 2014). The study utilizes Tanzania National Panel Survey data (round 1 to 3), including individual, household-level, labor market, and other regional characteristics, to comprehensively analyze the factors responsible for the low transition of household enterprises from Solo self-employment to employer status in Tanzania. There is limited knowledge about the reasons for leaving self-employment to become an employer, particularly in the context of Tanzania, which this study aims to address by analyzing factors associated with the low transitions of non-farm enterprises from self-employment to employer status. To the author's knowledge, no single study in Tanzania has investigated all these issues using three waves of panel data. The panel data used in this paper allows for a thorough examination of key aspects of the labour market.

The descriptive results of this paper on occupational mobility using transition matrix in-

dicates that the dynamics of the Tanzanian labour market, on average, involves transitions from wage employment to self-employment or from employer to self-employment, with a significantly low transition from self-employment to employer status. For example, in 2010, 11.7 percent of wage employee households became self-employed in 2012. In the same year, 60 percent of employers became self-employed, while only 10 percent of self-employed individuals became employers. This evidence suggests that in the Tanzanian labour market, there is a significant transition from employee to self-employed, but a very low transition from self-employed to wage employee. These findings align with previous research such as [Sarkar et al. \(2019\)](#) and [Fields \(2019b\)](#) which suggest that the transition from less preferred forms of work to more preferred forms, such as working for oneself instead of working for others, is an improvement. Another potential reason for the low transition might be that the lower average income from self-employment is offset by the possibility to evade taxes, which could make self-employment more appealing ([Aigbavboa & et al., 2018](#); [Cieřlik et al., 2024](#); [Slonimczyk & Gimpelson, 2015](#)). The literature also indicates that self-employment and entrepreneurship provide individuals with non-pecuniary rewards such as psychological utility ([Hamilton, 2000](#)). Furthermore, the results demonstrate that key socioeconomic characteristics play a significant role in explaining the low transition of household non-farm enterprises from self-employment to employer status, including factors such as family size, owner's marital status, area of residence, enterprise market experience, owner's wealth, education, unequal regional development, microcredit availability, and low access to labour market information as indicated by ownership of a mobile phone.

The rest of the paper is organized as follows. Section 2 provides a review of literature from theoretical and empirical perspectives whereas Section 3 is devoted to the analytical framework of the study. Section 4 is devoted to the study context, data, and methods used in the analysis. Section 5 gives results of the study such as descriptive analysis of the sample population, distribution of the population by employment status, and regression results of the factors behind the low transition of household non-farm enterprises from Solo self-employed to employer status. Section 6 summarises the findings and concludes.

2 Literature

The transition to and from Solo self-employment has been extensively studied in the literature, with most studies focusing on the shift from paid employment to Solo self-employment. Some researchers have analyzed the determinants of transitioning from wage work to Solo self-employment ([Bento & Restuccia, 2019](#); [Boeri et al., 2020](#); [Burke et al., 2021](#); [Cho et al., 2015](#)), but few have explored the transition from self-employment to becoming an employer ([Alilović & Blecich, 2017](#); [Krasniqi, 2014](#); [Naudé, 2022](#); [Olaposi & Adelowo, 2014](#)). One study, [Kunt et al. \(2007\)](#) for example, used household panel data from 2001 to 2004 to examine the factors influencing the transition to Solo self-employment, highlighting the role of financial constraints and the impact of household wealth and income transfers. However, this study did not specify whether individuals were transitioning from unemployment or paid employment to Solo self-employment. Other studies have delved into the transition from Solo self-employment to employer status.

For instance, [Henley \(2019\)](#) assessed whether local economic factors or owner characteristics drive the transition from solo self-employment to becoming a microbusiness employer. The study found that personal resources such as education, vocational training, and individual characteristics like gender, age, and ethnicity played a significant role in this transition. While the study provides an insight to this study especially by considering the categories of the employers by the number of employees, the results may not

be expected to confer with the situation in Tanzania. This is because the present study has considered the transition from Solo self-employed without employees to employer status disregarding the number of employees. In addition, the peculiarity of the labour market in which more than 70 percent of the labour force is employed in rural areas and is employed in informal sector in most developing countries makes the current study differ significantly from the study of [Henley \(2019\)](#).

In a study by [Caliendo et al. \(2019\)](#), an investigation was carried out to determine the factors that influence the decision to hire and the survival of an employer. The study utilized multinomial logit to identify the factors responsible for transitioning into different categories of employment. The employment status was divided into four categories: employer, non-employer, wage employees, and no-employer. The findings indicated that personal traits, such as trust in others, have varying effects compared to other individual characteristics when considering their impact on hiring decisions and employer survival. While the study provided valuable insights by incorporating personal traits to assess their influence on hiring and survival as an employer, it did not consider other important variables, such as regional economic disparities. In countries with low income levels, like Tanzania, regional disparities play a significant role in explaining labor transitions. Furthermore, in my analysis, I included variables such as access to electricity and telephone, as these factors are essential for productivity and accessing market information in low-income countries.

[Krasniqi \(2014\)](#) examined the attributes of self-employed individuals within the transitional economy of Kosovo, utilizing data from the Labour Force and Household Survey. The findings from the multinomial logit analysis suggest that individuals often transition to the status of solo self-employment workers as a means to evade unemployment. Consequently, the choice to become a solo self-employment worker is primarily driven by the scarcity of employment opportunities within the country. Furthermore, the study reveals notable differences in characteristics between employers and solo self-employment workers. A limitation of this research is its reliance on a cross-sectional data set, which fails to adequately capture the dynamic nature and annual transitions of firms across various employment statuses. Additionally, the use of cross-sectional data may lead to biased estimates, as unaccounted heterogeneity among individuals could result in an overestimation of variable impacts. Contributions from studies by [Semenza and Pichault \(2019\)](#) and [Conen and Schippers \(2019\)](#), [Danquah et al. \(2019\)](#), and [Tammelin \(2019\)](#) have significantly enriched the empirical foundation of this research. Specifically, these studies have provided insights into the influence of individual, institutional, sociological factors, and other labor market characteristics on the determinants of labor market transitions. However, data constraints have compelled some of these investigations to adopt a snapshot perspective, neglecting the dynamic elements of the labor market. While these studies employed a static model based on cross-sectional data, [Evans and Jovanovic \(1989\)](#) and [Aigbavboa and et al. \(2018\)](#) have pointed out that such an approach does not effectively capture the determinants influencing transitions between different levels of business activity. Generally, despite a growing body of recent research on entrepreneurial mobility and firm growth, limited attention has been given to intertemporal transitions from self-employment to employer status using panel data in developing economies.

3 Conceptual framework

The current research study's definition of Solo self-employment encompasses both employers and Solo self-employed workers as outlined in the 2014 analytical report of Tanzania Mainland Integrated Labour Force Survey (ILFS). The idea of Solo self-employment can be viewed as the tiniest yet most vital form of entrepreneurial work. An employer is

someone who runs their own business or works independently in a profession or trade and brings on one or more workers. A Solo self-employed individual runs their own business or works independently in a profession without employing anyone. This paper uses the terms entrepreneur, Solo self-employed worker, and independent worker interchangeably when referring to those who are Solo self-employed. A thorough investigation of this activity's impact on an employer's status is crucial as researches has shown that Solo self-employed individuals possess unique characteristics in both the labour market and as individuals compared to those who are employed.

The Consumer choice theory is the theoretical basis for this study, influencing the variables in the empirical model employed. While human capital theory operates within the context of maximizing utility, as noted by [Teixeira \(2014\)](#), recent literature ([Simoes et al., 2016](#)) stipulate that individuals selecting the most beneficial outcomes for themselves and their families. In this framework, people select their occupation and decide whether to switch or not based on resources like income, technology, and the environment. The model forecasts that a family's wellbeing is determined by various factors: shared consumption of market goods, number of children, leisure time for both genders, quality of home life, and personal preferences. Family members choose the outcomes that maximize their family's well-being, but these choices are constrained. Individuals face two constraints—a constraint on their time and a constraint on the number of market goods they can purchase.

Due to limited access to financing, some potential entrepreneurs are forced to stay Solo self-employed rather than becoming employers. When individuals identify a business opportunity, they must decide whether to pursue it or not. Their decision hinges on comparing the expected utility or pay-off for each potential occupation. If the expected utility of being an employer surpasses that of self-employment, they will transition to the employer status. Various factors can influence the expected returns of each activity. 'Traditional variables' studied in empirical research as potential determinants of transition include education, labour market experience, age, job stability, capital, marital status, spouse's educational attainment, spouse's employment status, number of children, health status, religion, and macroeconomic variables such as local unemployment rate ([Sorgner et al., 2017](#)).

Although consumer choice theory and human capital theory explain individual occupational mobility, transition from solo self-employment to employer status can also be influenced by demand conditions and firm level resource availability ([Kösters & Smits, 2022](#)). Demand pull theory posit that individual can expand to employer status when the market opportunity increase return to expansion. Similarly, the resource-based theory postulate that heterogeneity in access to financial, human and social resources can be significant in influencing the transition from solo self-employment to employer status. These two perspectives are complementing human capital and consumer choice theory in addressing individual decision within broader market and resource availability.

Figure 1 outlines a conceptual framework for analysing the study's main objective and specific goals, based on the transitions across individuals' employment statuses, including those from Solo self-employment without employees (OAW) to self-employed with employees (employers).

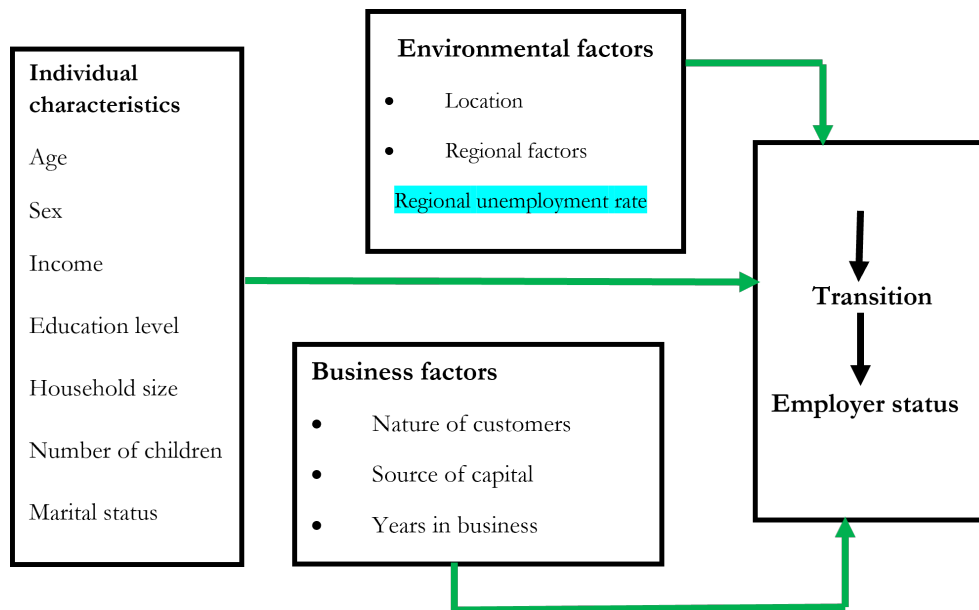


Figure 1: Analytical framework for factors contributing to transition from self-employment to employer (Source: Author's construction)

4 Methodology

4.1 Data, Descriptive statistics, and Empirical model

The information in this research is sourced from two different places. The first data comes from the National Panel Survey, which was gathered in 2008/09, 2010/11, and 2012/13 by the National Bureau of Statistics (NBS) of Tanzania in partnership with the World Bank (WB). The second data source consists of country-specific macro data from the World Bank. The NPS is a comprehensive household survey that provides information on poverty, agricultural productivity, and various important development indicators. It covers a wide range of topics in a single questionnaire, including education, health, crime, gender-based violence, and more, allowing for an analysis of the connections between different sectors and the factors influencing development outcomes. The term "panel" in the NPS title indicates that the same individuals are surveyed on multiple occasions over time. The initial wave (2008/09) of the NPS involved 3,265 households, encompassing all regions and districts of Tanzania, both mainland and Zanzibar. The sample size increased to 3,924 households in the second wave, mainly due to tracking and interviewing split households. An impressive 97 percent of the first wave households were successfully located and interviewed in their original locations during the second wave, resulting in a low attrition rate of 3 percent. The third wave of the NPS follows up on the previous two waves, with the sample size growing to 5,010 households. The increase is again due to tracking and interviewing members from split households, with about 96 percent of the year two households successfully found and interviewed during the third wave, resulting in a low attrition rate of 4 percent. This type of data enables a dynamic analysis of transitions from self-employment to becoming an employer and an exploration of the key factors that limit these transitions.

The study's final sample includes adults aged 15 to 64, based on the Tanzanian definition of the active labor force. It excludes family members under 15, over 64, disabled individuals, students, and self-employed individuals in agriculture. The exclusion of agricultural workers is due to the potential for biased estimates, as they possess unique char-

acteristics requiring a different analytical approach (Henley, 2019). Employment status is categorized into paid employees, self-employed with employees, self-employed without employees, and unemployed, based on the 2014 Tanzania Integrated Labor Force Survey report. The sample consists of 5908 individuals for each wave, totaling 17724 individuals across all three waves. The panel is strongly balanced, retaining the same households across all waves and excluding new members in waves 2 and 3 from the analysis as shown in Table A4 in Appendix A.

4.2 Descriptive characteristics of the sample

The information in Table A3 in appendix A outlines the characteristics of the population analyzed in the three waves. It includes definitions, mean values, and standard deviations (S.D) for each variable. The statistics generally align with the known facts about the population of Tanzania. Table 1 shows that the average household size is 4.6 individuals across all three waves. This is close to the national household size of 4.8 members reported in the 2012 Tanzania national panel survey. The majority of individuals are married, with over 71 percent in 2008/09, 72 percent in 2010, and 73 percent in 2012. Around 79 percent of the population resides in rural areas in 2012, compared to 76 percent in 2010 and 78 percent in 2008. Approximately 54 percent of the population is male. Primary education is the most common level of education, with around 68 percent of the population having this level across all waves. On average, individuals have approximately 8 years of schooling, indicating a prevalence of primary education. The average age of respondents is 39 in wave one, 40 in wave two, and 42 in wave three, suggesting that many are at an age where they might be seeking employment. The average household income across the three waves is approximately 102,600 TZS, which is typical for rural areas in many African countries. About 43 percent of households own their homes, and nearly 15 percent have access to financial resources through borrowing from friends or financial institutions. Non-farm businesses have been in existence for about 9 years on average, and the main customer base consists of end consumers.

Table A3 in the appendix A also shows that all regions of Tanzania have an average of 4 per cent rate of unemployment according to wave 1, wave 2, and wave 3, while their economy is not very strong as they have a per capita GDP of around 960,000 TZS in each wave. As per findings, more than 76 percent of the individuals who own a business have access to the telephone which is either mobile or landline as per the wave 1 while 88 per cent as per the wave 2 and 92 per cent as per the wave 3. On the other hand, some individuals have considerable access to electricity because around 48 per cent are connected to the main grid across all waves.

4.3 Empirical model

Since the study focuses on intertemporal transition rather than static occupational status, panel data provide a methodological advantage by enabling direct observation of mobility across periods. Cross-sectional data would not allow identification of transition events. The logit model is therefore estimated within panel models framework to model the conditional probability of moving from solo self-employment in period t to employment status in period $t+1$. So, to identify and evaluate the barriers to the transition from solo self-employment to employer status, a transition indicator from solo self-employment to employer status is created. The main dependent variable, denoted as SE2EMP, equals 1 if household non-farm businesses transitioned from solo self-employment work to employer status in 2010 or 2012. The explanatory variables include demographic, household, community, and geographical characteristics, which are detailed in Table A1 in Appendix A. A logit model is used to examine the factors that hinder the transition of house-

hold non-farm businesses from self-employment to employer status. Given the limited panel data with only three waves, the evolution of household enterprises in waves 2 and 3 is taken into account. The indicator variable SE2EMP takes the value of 1 if a household non-farm business transitioned from solo self-employment to employer status between wave 2 and wave 3, and 0 otherwise. The model is based on a binomial logit model as follows:

$$Pr(y_{it} = 1) = \frac{\exp(\beta x_{it})}{1 + \exp(\beta x_{it})} \quad (1)$$

The $Pr(\cdot)$ is the probability of an individual in household i exiting self-employment at time t . This is modelled as a function of individual-specific characteristics and the amount of time the person has been self-employed. The dummy variable y_{it} takes on the values of 0 if the self-employed worker remains self-employed and 1 if s/he leaves the self-employment in year $t + 1$ to become an employer in year $t + 2$. The probability of exiting self-employment depends upon a vector of variables x_{it} . By linearizing the standard specified probability model above, I obtain the following actual model to be estimated;

$$\log\left(\frac{y_{it}}{1 - y_{it}}\right) = \beta_0 + \beta_1 x_{it} + \varepsilon_{it} \quad (2)$$

The vector of variables x_{it} is comprised of the standard set of variables such as individuals, households as well as demographic variables, and geographic or regional variables. As such the model can further be written as;

$$\log\left(\frac{y_{it}}{1 - y_{it}}\right) = \beta_0 + \beta_1 I_{it} + \beta_2 D_{it} + \beta_3 F_{it} + \beta_4 G_{it} + \varepsilon_{it} \quad (3)$$

where I_{it} , D_{it} , F_{it} and G_{it} are individuals as well as demographic variables such as, household characteristics, and geographic or regional variables respectively. The β_s are the vector of parameters of the respective variables.

4.4 Variable selection and definition

Research into the growth of businesses at micro level has been associated with both economic and social factors. Existing literature has made a distinction between the influence of institutions, sociological elements, and personal traits in understanding the decision to engage in entrepreneurial endeavors (Kelley et al., 2022). In this study, I investigate the social and economic factors linked to the shift of non-farm household businesses from Solo self-employment to employer status. The rationale for selecting these variables is as follows (See Table A1): individual and demographic characteristics: - Based on a review of empirical studies and theoretical research, it is suggested that factors such as gender (male), age, marital status, education, experience, training, and family size have the potential to explain entrepreneurial activity. Gender is justified by the differing family responsibilities between men and women, which can impact their economic activities. Age is particularly significant when appropriately categorized, as the 30s and 40s are considered pivotal ages for career exploration and occupational choices (Dvouletý & Lukeš, 2016). While education is a crucial variable in understanding an individual's entrepreneurship, its role is complex. On one hand, it enhances a person's business

management capabilities, but on the other hand, it indicates that business success does not solely depend on a good education. In the case of marital status and family size, it is believed that families can support entrepreneurial activities by providing inexpensive labour, although the evidence is not conclusive when considering the transition from one status to another.

Numerous studies have extensively researched variables such as wealth, access to finance, and financial institutions. A considerable body of literature has explored the correlation between wealth, measured in terms of asset ownership, and entrepreneurial endeavors. For instance, [Struckell et al. \(2022\)](#) suggest that challenges in obtaining loans may lead to a positive relationship between an individual's assets and their likelihood of not engaging in entrepreneurial activities. It is important to acknowledge that wealth is likely to be endogenous because individuals involved in entrepreneurial activities are more inclined to save more compared to the general population ([Watson & Kaeding, 2019](#)). In this study, wealth has been represented by equalized per capita consumption, calculated by adjusting household consumption per adult equivalent. The purpose of incorporating wealth variables is to gauge the liquidity constraints faced by individuals seeking to expand their businesses. This study has incorporated access to finance and affiliation with financial institutions as variables to assess their impact on the transition from self-employment to employer status.

The next set of variables pertains to geography, which includes the residential location of households, such as whether they are in rural or urban areas. Geographical location is used as a proxy to gauge the local economy's strength, as seen in [Henley \(2019\)](#). Additionally, rural and urban settings also help explain an individual's employment activity. Urban areas are more conducive to small business entrepreneurial activities and transitioning to employer status compared to rural areas ([Srhøj & Zilic, 2021](#)) due to better market access for urban entrepreneurs. It is crucial to include these variables in empirical studies to assess entrepreneurship policy measures implemented by authorities in different regions. While the idiosyncratic factors mentioned earlier are important for explaining household business transitions, omitting other relevant factors may lead to bias in regression models. Therefore, this study has included factors such as proximity to urban centres, ownership of a phone, and access to electricity to reflect the accessibility of essential infrastructure and support services for conducting business.

In addition to individual, household, and business characteristics, this study incorporates regional economic factors to capture spatial heterogeneity in economic conditions across Tanzania. Specifically, two key variables are included. First, the regional unemployment rate shows how the job market is doing in that area by showing how many job openings there are and how many people are not working. Higher unemployment can either force people to start their own businesses or make it hard for businesses to grow because demand is low. Second, the regional GDP per capita is used as a stand-in for the level of economic activity and development in the region. This variable shows how income levels, market size, and economic opportunities vary from one region to another. These variables enable the analysis to consider the impact of the overall economic environment on the probability of shifting from independent self-employment to employment status.

5 Empirical results, interpretation, and discussion

5.1 Dynamics of the working age population across employment status and waves

The study aims to present evidence regarding the limited transition of household non-farm businesses from self-employment to employer status. It estimates the shift of in-

dividuals who own a non-farm business in the household among various employment categories to comprehend the transition from solo self-employment to becoming an employer. Table 1 illustrates the percentage of individuals who persist, move out, or regress into specific employment statuses across surveys. Each cell in the table displays the percentage of households in each of the four employment categories, indicating the extent of employment transition across the three NPS waves. For instance, the second row of Table 1a demonstrates that 45.7% of the total active labour force was categorized as self-employed in 2008. Among these, 32.3% remained in self-employment in 2010, 1.9% transitioned to unemployment, 5.1% moved to employer status, and 6.5% became wage employees. This implies that 60.1% of those self-employed in 2008 remained in self-employment in 2010, with only 6.5% transitioning to employers. Moreover, while 6.7% of the labour force in 2008 were employers, only 0.7% remained employers in 2010, and 3.7% reverted to self-employed activity within this period.

Table 1: Labour market transitions in Tanzania between the year 2008, 2010 and 2012

Origin Employment Status	Destination Employment Status				Total
	Unemployed	Self-employed	Employer	Wage employee	
(a) Employment status 2010					
<i>Employment status 2008</i>					
Unemployed	2.8%	1.6%	0.5%	1.1%	6.0%
Self-employed	1.9%	32.3%	5.1%	6.5%	45.7%
Employer	0.1%	2.7%	1.7%	0.4%	4.9%
Wage employee	1.5%	6.8%	1.2%	33.8%	43.4%
Total	6.2%	43.4%	8.6%	41.8%	100.0%
(b) Employment status 2012					
<i>Employment status 2010</i>					
Unemployed	2.3%	2.0%	0.1%	1.8%	6.2%
Self-employed	2.1%	31.7%	4.5%	5.0%	43.3%
Employer	0.5%	5.2%	2.2%	0.7%	8.6%
Wage employee	0.4%	4.9%	1.7%	35.0%	41.9%
Total	5.2%	43.7%	8.5%	42.6%	100.0%
(c) Employment status 2012					
<i>Employment status 2008</i>					
Unemployed	2.1%	2.2%	0.0%	1.7%	6.0%
Self-employed	1.8%	30.9%	5.2%	7.6%	45.5%
Employer	0.5%	3.2%	0.6%	0.6%	4.9%
Wage employee	0.8%	7.4%	2.5%	32.7%	43.5%
Total	5.2%	43.8%	8.3%	42.7%	100.0%

Source: Author's calculation based on NPS waves 2008, 2010, and 2012.

Likewise, results in Table 1b reveal a significant labour market dynamic in terms of transitioning between different employment statuses from 2010/11 to 2012/13. For instance, looking across the second row, while 40.0% of the active population was self-employed in 2010, a substantial proportion (23.8%) remained in the self-employed category in 2012, while 2.1% moved back to unemployment, and only 3.7% transitioned to employer status. The results indicate that nearly 56% of individuals who were employers in 2010 shifted back to self-employed activity by 2012, 24% transitioned to wage employee status, and only 16% remained as employers in the same year. Furthermore, 5.0% of the active population were employers in 2010/11, with nearly 3% reverting to self-employed activity in 2012, and only 0.8% remaining as employers in the same period.

So generally, the transition matrices in Tables 1(a) and 1(b) show that the percentage of individuals that were in the self-employed category for two consecutive surveys declined

from 26.1 per cent to 23.8 per cent between 2008-09 and 2010-11 whereas those who were employers declined from 2.8 per cent to 0.8 per cent within the same period. These results provide two major implications. First is that when individuals are employers they do not sustain to remain as they either turn to self-employed activity or they become unemployed. Second, when individuals are in self-employed activity, they tend to remain so for a sustained period which reflects the difficulty of moving to the employer status. The information in Table 1(a) to Table 1(c) shows that the transition of household's enterprise from self-employed category to employer category is minimal.

5.2 The distribution of the population by employment status across waves

Analysis in this section presents the distribution of employed people by occupations ignoring those self-employed in agriculture. Categorization of status in employment helps in understanding the composition and dynamics of the labour market. Table 2 shows the distribution of the population by employment status across all waves of the survey.

Table 2: Tanzania Labour market composition as per National Panel Survey (excluding agriculture and family helpers)

Categories	Across Years						Total	
	2008		2010		2012		All Years	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Unemployed	70	4.2	38	2.0	179	7.9	280	4.8
Self-employed	883	53.9	900	47.8	910	39.9	2,695	46.4
Employer	81	4.9	137	7.3	123	5.4	344	5.5
Paid employee	606	37.0	808	42.9	1,067	46.8	2,483	42.8
Total	1,640	100.0	1,883	100.0	2,279	100.0	5,802	100.0

Source: Author's construction based on Tanzania NPS (2008/'09, 2010/'11, and 2012/'13).

The data in Table 2 clearly shows that solo self-employment (own account) is the largest employment category in Tanzania across all waves, especially when those working in agriculture are excluded. Following self-employment, the next largest categories are wage employees, employers, and unemployed individuals, which make up the smallest category. Analysis of Table 2 reveals a consistent decline in the percentage of self-employment workers over the years. This trend may indicate that some individuals are transitioning to become employers. However, when examining the employer category, particularly in waves 2 and 3, it becomes evident that individuals from solo self-employment (own account) are either becoming unemployed or moving to the wage employee category. The statistics presented in Table 2 indicate that a significant number of people are involved in self-employment without employees, and once they transition to becoming employers, they tend to remain in that occupation for an extended period. For instance, in 2008, 54% of individuals were self-employed, while 5% were employers. In 2010, the percentage of self-employed individuals decreased to 48%, while the percentage of employers increased to 7%. This suggests that those previously engaged in self-employment may have transitioned to employer status over the two periods. However, it is important to note that there is no clear evidence that individuals from self-employment have transitioned to employer status, as other categories such as wage employees have also increased. Even if this were the case, the decline is minimal. This pattern suggests that there are obstacles preventing household enterprises from transitioning from self-employment to employer status. This issue will be further explored in the following section.

5.3 Factors for transition of household enterprises from Solo self-employment to employer status

In order to ensure the accuracy of our estimates, it is necessary to conduct various pre- and post-estimation diagnostic tests including checking for multicollinearity, normality, model specification, and performing the Hausman test to determine whether to use the fixed effects model or random-effects model. The VIF test results in the appendix indicate that there is no significant multicollinearity, and the model specification test also confirms that the model is well-defined. The findings in Table 3 display the outcomes of the multivariate logit model, presenting the estimations of the factors influencing the low transition of households' non-farm enterprises from self-employed to employer. Identifying the socio-economic variables responsible for this transition would provide valuable insights for policy implementation, focusing on the most significant factors affecting the likelihood of transition.

Table 3: Determinants of household enterprises' transitions from self-employed to employer status

Variables	Rural sample	Urban sample	Total sample
	Coefficients (SD)	Coefficients (SD)	Coefficients (SD)
Individuals and Household characteristics			
Household size	0.169*** (0.0356)	0.0784*** (0.0220)	0.117*** (0.0191)
<i>Marital status (married = reference)</i>			
Dummy for separated	0.0675 (0.305)	-0.730*** (0.213)	-0.463*** (0.177)
Dummy for single	0.500** (0.234)	0.0525 (0.154)	0.241* (0.131)
Gender (Male = 1)	-0.0474 (0.143)	0.252** (0.103)	0.158* (0.0854)
Education (years in school)	0.0193 (0.0255)	-0.0197 (0.0163)	-0.00811 (0.0140)
Age (25–40)	-0.0888 (0.250)	-0.0553 (0.192)	– (0.155)
Age (> 40)	-0.337** (0.160)	-0.106 (0.112)	-0.197** (0.0932)
Number of juniors	-0.285*** (0.0592)	-0.138*** (0.0460)	-0.218*** (0.0366)
Number of seniors	-0.0496 (0.190)	0.264* (0.143)	0.143 (0.116)
Wealth and economic status			
Household income (proxy consumption)	0.562*** (0.140)	0.467*** (0.0975)	0.508*** (0.0831)
House status (Owned = 1)	-0.311* (0.176)	-0.216* (0.115)	-0.275*** (0.0975)
Number of assets owned	-0.00203** (0.000979)	0.000183 (0.000683)	-0.000412 (0.000311)
Business factors			
Number of years in business	0.0161** (0.0075)	0.00643 (0.00618)	0.00926* (0.00475)
Nature of customers (Final consumers = 1)	-0.648 (0.439)	0.129 (0.328)	-0.214 (0.260)
Regional economy factors			

Continued on next page

Table 3 – Continued from previous page

Variables	Rural sample	Urban sample	Total sample
	Coefficients (SD)	Coefficients (SD)	Coefficients (SD)
Regional unemployment rate	0.09017*** (0.0335)	0.0259 (0.0453)	0.055067** (0.0229)
Regional GDP per capita	-0.266 (0.356)	-0.406 (0.353)	-0.355 (0.253)
Access to Finance			
Ever take a loan (Yes = 1, No = 0)	-0.215 (0.248)	0.433*** (0.139)	0.252** (0.122)
<i>Source capital (sale of assets = reference)</i>			
A loan from a family member	1.096** (0.433)	0.111 (0.319)	0.535** (0.255)
Own savings	0.923** (0.425)	-0.0154 (0.319)	0.364 (0.252)
Credit from micro banks	0.628 (0.563)	-0.194 (0.379)	0.485** (0.230)
Infrastructure and location factors			
Ownership of phone (mobile/landline = 1)	0.495*** (0.181)	0.540*** (0.209)	0.520*** (0.135)
Location (Rural = 1)	– –	– –	-0.420** (0.167)
Electricity connection	0.0905 (0.199)	-0.0461 (0.113)	-0.00219 (0.000557)
Constant	-5.085 (5.307)	-0.771 (5.124)	-2.548 (3.711)
Observations	1,391	1,976	3,367
Number of UPI3	1,073	1,229	2,176
Wald $\chi^2(26)$	115.01	119.86	222.86
Prob > χ^2	0.0000	0.0000	0.0000
Log likelihood	-717.84785	-1244.9343	-1984.6053
Pseudo R^2	0.10414	0.10068	0.11698
LR test of $\rho = 0$: $\bar{\chi}^2$ (Prob $\geq \bar{\chi}^2$)	6.34 (0.006)	– (0.095)	– (0.0000)

Source: Author's estimations based on NPS data. Standard errors in parentheses.

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

The results presented in Table 3 demonstrate that the location of residence, whether rural or urban, plays a significant role in explaining the transition of household enterprises from solo self-employment to becoming employers. The estimation shows that non-farm businesses in rural areas are less likely to expand into employer status compared to those in urban areas. This difference may be attributed to the limited market for non-agricultural goods and services in rural areas due to lower income levels. Consequently, household non-farm businesses in rural areas may not perceive the necessity to expand beyond self-employment. These findings are also evident in the strata, where the rural variable shows a negative value. However, when analyzing the rural or urban samples independently, this variable appears to have no impact on the enterprise's transition. The results further indicate that men are more inclined to transition from self-employment to employer status compared to women. This gender disparity may be linked to family responsibilities in low-income countries like Tanzania. This observation aligns with previous studies such as Fields (2019b) which found that married men and urban residents are more likely to transition into self-employment compared to their female and rural counterparts, respectively. It is important to note that gender's influence is evident in the full sample and urban sample, but in the rural sample, gender does not play a role in the enterprise's transition from self-employment to becoming an employer.

Education plays a critical role in the advancement of business activities within any nation. It is be-

lieved that education equips individuals with the knowledge necessary for effectively running and managing businesses. The findings in Table 3 suggest that households with solo self-employment, led by heads of households with more years of schooling, show a neutral tendency to transition from self-employment to employer status. This holds true for rural, urban, and overall samples. While this result may seem contradictory, it is not surprising because the influence of education cannot be predetermined in advance (Blumberg & Pfann, 2016). According to Lucas (1978) model, education can potentially improve an individual's managerial capabilities, thereby increasing the likelihood of transitioning to employer status. Furthermore, education can function as a tool for better-informing individuals about business environments and assessing employer status opportunities (De Meza et al., 2019). However, some research has indicated that the qualifications that make someone a successful entrepreneur do not necessarily stem from formal education (Coard et al., 2017). While Fairlie and Miranda (2017) discovered a negative and statistically significant relationship between transitioning to self-employment and education, the study found no established correlation, particularly in the context of Tanzania. Factors such as the unemployment rate play a crucial role in explaining the transition of non-farm businesses from self-employment to employer status. The results in Table 3 demonstrate that the unemployment rate has a positive and significant impact on the household's transition from non-farm business to employer status. High unemployment rates tend to discourage investors from expanding their businesses, as companies are hesitant to hire new workers until they are confident that the economy is well into the expansion phase of the business cycle, as observed by Raj et al. (2020). However, a moderate unemployment rate may indicate an abundant supply of affordable human resources, generally encouraging investors to hire and transition to employer status.

The expansion of the regional economy reduces the likelihood of individual non-farm businesses transitioning from self-employment to employer status in order to take advantage of new opportunities. With a larger economy, there is increased competition in terms of job availability. The finding from table 3 shows that regional GDP per capita is not statistically significant in explaining employment dynamics or transitions from solo self-employment to employer status. This result is quite plausible, especially in developing and highly informal economies like Tanzania. In these countries, higher regional GDP per capita does not necessarily translate into opportunities for small entrepreneurs because growth of the economy may be driven by capital-intensive sectors such as mining, large-scale infrastructure with limited job spillovers. In addition, the informal entrepreneurs, a characteristic of many developing economies, often operate outside formal growth channels, so they don't benefit directly from regional prosperity.

Proximity to the market, as indicated by ownership of a phone (Mobile or landline), is a crucial factor in determining the transition of individual non-farm businesses from self-employment to employer status. However, the type of customers served and access to electricity are not significant factors in this transition. Household characteristics such as size, gender, and marital status have a positive and significant influence on the transition of household non-farm businesses from self-employment to employer status. A household non-farm business owned by an individual with a large family is more likely to transition to employer status, possibly due to the need to support the family. The results in Table 3 show that owners of non-farm enterprises with many assets are 20 percent less likely to become employers, especially in rural areas. This result may seem surprising, but it is consistent with the nature of assets owned by rural dwellers, which may not reflect household wealth.

6 Conclusion

The low transition of household non-farm enterprises from solo self-employment (own-account) to employer status should be understood by considering not only supply factors such as lack of technology, poor infrastructure, and lack of finance but also the individual characteristics of the owner. Using national panel data (all three waves), this study estimated the socio-economic factors contributing to the low transition of household non-farm businesses from self-employed to employer status in Tanzania. The study utilized a Logit model to estimate the socio-economic determinants, aiming to uncover the microeconomic foundations of economic growth in Tanzania.

The findings indicate that several factors explain the transition of household non-farm businesses from self-employment status to employer status. One crucial factor is the location of the business

entity. The study suggests that a household non-farm business located in a rural area is less likely to transition to employer status compared to one located in an urban area. Financial constraints also play a role in explaining the transition to employer status, with only around nine percent of individuals having access to financial resources through borrowing from microfinance or friends. Surprisingly, the study found that the variable measuring "access to finance" had no influence on the transition of non-farm businesses.

Income was shown to significantly influence the transition of non-farm businesses to employer status, suggesting that business expansion in Tanzania largely depends on finance. Therefore, non-farm businesses owned by individuals with low income are less likely to transition to employer status due to financial constraints in borrowing from microfinance. Policy measures aimed at improving financial accessibility for household non-farm business owners are important in this context. In urban areas, there is a market for goods and services, low unemployment, and high-quality infrastructure, making it easier for household non-farm businesses to transition to employer status compared to rural areas.

6.1 Implication for theory and policy

The findings of this study provide important implications for both theoretical understanding and policy design in the context of employment dynamics and enterprise growth. From a theoretical perspective, the results strongly support the theories of consumer choice and human capital, which say that people choose jobs based on the expected benefits, limited by the resources and opportunities they have. The importance of factors like education, work experience, and household characteristics shows that personal traits are very important in determining the transition from self-employment to being an employer. The findings also show that these traditional frameworks don't work as well in developing countries. The lack of significance of regional GDP per capita indicates that macroeconomic prosperity alone does not adequately affect micro-level entrepreneurial transitions. This underscores the significance of resource-based theory and demand-pull perspectives, which emphasize the necessity of access to finance, infrastructure, and market opportunities. In this sense, the study contributes to theory by demonstrating that occupational mobility in developing economies is better explained by a hybrid framework that integrates individual agency with structural constraints such as informality, limited financial access, and uneven regional development.

From a policy perspective, the findings suggest that promoting enterprise growth and employment transformation requires more targeted and inclusive interventions rather than reliance on aggregate economic growth. First, the importance of education and business experience implies that policies should invest in entrepreneurial training, vocational education, and skills development to enhance the managerial capacity of solo entrepreneurs. Second, the strong role of access to finance indicates the need to expand microcredit schemes, improve financial inclusion, and reduce borrowing constraints that prevent business expansion. Third, the relevance of infrastructure and information access, such as electricity and mobile phones, highlights the importance of improving connectivity and access to market information, especially in rural areas.

6.2 Limitations and Future Research Directions

Despite its contributions, this study has several limitations that open avenues for future research. The study utilizes panel data comprising merely three waves (2008–2012), constraining the capacity to observe long-term dynamics and the lagged effects of significant variables, such as regional economic growth. Subsequent research may utilize extended panel datasets to enhance comprehension of the persistence and timing of transitions between employment states. This study's analysis utilizes a logit model framework, which, while appropriate for binary transitions, may inadequately represent the intricacies of employment dynamics, including multiple and concurrent transitions across various states. Subsequent research may utilize more sophisticated methodologies, including multinomial logit models, duration models, or dynamic panel techniques, to more effectively address these complexities. Finally, the study does not fully account for institutional and behavioral factors, such as regulatory barriers, taxation, risk preferences, and social norms, which

may influence entrepreneurial decisions. Incorporating such variables in future research could provide deeper insights into the mechanisms driving or constraining transitions to employer status.

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Data Availability

Data can be made available on the behavior of the request

Declaration of interests' statement

The author declare no competing interests.

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