Self-Employment among In-Movers and Stayers in Rural Areas: Insights from Swedish Register and Survey Data

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Abstract

Our use of longitudinal register data combined with a unique survey allows us to offer a more comprehensive picture of rural self-employment than in previous studies. We find that self-employed in rural settings are more likely than those in metropolitan regions to employ others, but self-employment rates in rural areas are lower. There is substantial heterogeneity among the rural self-employed; in-movers are quite different from stayers in terms of their perceptions of the conditions necessary for business success and their employment practices. Policy initiatives aimed at fostering development in rural areas should consider these distinctions.

JEL classification: J24, J61, R11

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1. Introduction

The promotion of entrepreneurship in rural areas has become a key focus on the political agendas of numerous countries in recent years. Both national governments and the European Union have implemented a variety of programs and policies aimed at boosting rural entrepreneurship. These efforts seek to prevent depopulation and promote the development of these regions. The potential of entrepreneurship to contribute significantly to rural development has garnered interest not only from policymakers but also from researchers, as evidenced by the studies surveyed by Pato and Teixeira (2014).

Relative to other regions, rural areas encounter several challenges, including lower service levels, a scarcity of knowledge production institutions, and high unemployment rates. However, successful entrepreneurship within these areas could create employment opportunities, offer essential services to residents, reduce income disparities across regions, and curb out-migration from rural locales. This potential has been highlighted in various studies, such as Florida (2003), Robinson et al. (2004), and Olfert and Partridge (2010).

In this paper, we delve into various aspects of rural self-employment in Sweden. We investigate the contribution of self-employed individuals to economic activity in rural areas and identify factors they deem crucial for the success of self-employment. For this purpose, we employ a combination of high-quality, nationwide longitudinal data from public registers and an own-designed survey. We begin by mapping self-employment incidence, the pathways individuals take into self-employment, and their role in creating employment opportunities for others, utilizing data from public registers. We further analyze differences between rural and other regions, focusing on the contributions of individuals who have grown up in the area, referred to as stayers, and those who have relocated there as adults, referred to as in-movers. In-movers and stayers can contribute to self-employment differently. It has been argued that movers, who

have a taste for variety, might prefer non-standardized job roles (Åstebro et al. 2011), making them more inclined toward self-employment compared to stayers, given that wage employment tends to be more standardized (Frederiksen et al. 2016). Using detailed public register data spanning from 1990 to 2020, we track three cohorts (born in 1970, 1975, and 1980) over time, from age 20 to 40. This longitudinal approach allows us to observe self-employment activities over a 20-year period for these individuals, adopting a life-cycle perspective on self-employment.

To deepen our understanding of the conditions for conducting business in rural regions of Sweden, we complement our analysis of self-employment propensities and hiring practices with a survey. This survey targets individuals aged 25–55, whose earnings primarily come from self-employment and operate businesses with no more than 10 employees. We inquired about the essential prerequisites for business success and the obstacles self-employed individuals encounter in their daily operations. Similar to our analysis using register data, we study how these opportunities and challenges differ across various regions and among individuals, distinguishing between in-movers and stayers, with a particular emphasis on rural settings.

Our findings indicate only marginal differences in self-employment rates between rural regions and other areas. Specifically, individuals residing in rural areas are slightly less likely to be self-employed than those living in metropolitan regions, a disparity that becomes apparent when individuals reach their late thirties. However, when comparing the most rural municipalities with metropolitan areas, there is no difference in self-employment propensities. Interestingly, self-employed individuals in rural areas are more likely to have employees and to hire additional staff compared to business owners in metropolitan regions.

Examining the differences between in-movers and stayers, we find that in-movers, regardless of whether they are in rural or metropolitan areas, are less likely to engage in self-employment

compared to stayers. However, among those who are self-employed, in-movers are more likely than stayers to employ others. Generally, individuals are more inclined to transition into self-employment from inactivity rather than from wage employment. Yet, in-movers to rural areas are more likely than stayers in these regions to enter self-employment from wage employment.

The survey evidence indicates that stayers in rural areas report local and geographically dependent factors as significant obstacles to self-employment success more frequently than in-movers to such areas. These factors include the attitudes of local politicians and officials toward entrepreneurship, the absence of local services such as bank offices, police stations, and childcare facilities, and the high costs of energy and fuel. This observation aligns with the research by Westlund et al. (2012), which highlights the significance of local officials' and politicians' attitudes toward entrepreneurship for start-ups. Additionally, our results suggest that in-movers are generally more educated than stayers, corroborating findings from other studies surveyed by Akgün et al. (2011).

Our study contributes to the literature in several significant ways. While most prior research has relied on data from public registers or conducted surveys and interviews, typically utilizing cross-sectional data as in Belloc (2022), the findings from such research have often been somewhat inconclusive. These studies have identified differences in self-employment propensities between rural and other areas, as well as variations in the reasons individuals choose self-employment in different locales. Our approach, leveraging nationwide high-quality longitudinal register data combined with a unique survey, enables us to track the entire population across their life cycle. This methodology allows us to investigate how self-employment propensities and pathways into self-employment evolve over time, and to study the importance of a broad array of individual and local factors for self-employment success—factors for which data might not be readily accessible otherwise. Hence, our research offers a more comprehensive view of self-employment in rural areas than previously available.

Furthermore, research focusing on self-employment among in-movers and stayers in rural areas has often been limited to small samples from specific regions within various countries, relying on interviews and surveys (see, e.g., Akgün et al. 2011). Exceptions are Eliasson et al. (2014) and Habersetzer et al. (2022), who utilize nationwide data for Sweden. Eliasson et al. (2014) found that in-movers to rural areas exhibit lower rates of self-employment compared to stayers, a disparity attributable to age differences and distinct life cycle stages between these groups. Habersetzer et al. (2022) noted that firms operated by local natives in rural areas tend to create more jobs than those run by in-movers, likely because locals can leverage existing social networks and have a concern about their role as local employers. Our research documents a similar pattern in self-employment propensities and add new evidence on the extent to which stayers and in-movers generate employment opportunities for others, as well as the factors they deem crucial for the self-employment success.

The remainder of the paper is organized as follows. Section 2 presents the data as well as central concepts and definitions used in the analysis. Section 3 contains the results from the estimations based on register data. The findings from the survey are discussed in Section 4, while Section 5 concludes the paper.

2. Data

Our analysis is based on data from two sources: longitudinal register data spanning from 1990 to 2020, and survey data collected in 2023. We focus on individuals who are self-employed in rural areas, with a comparative analysis of self-employed individuals in other regions. Using panel data, we present general trends in self-employment over the first 20 years of individuals' careers in the labor market. The survey we designed complements the longitudinal register findings by offering rarely available information on the conditions for conducting business as perceived by the self-employed individuals themselves.

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2.1 Longitudinal Register Data

The first dataset draws from the Longitudinal Integrated Database for Health Insurance and Labour Market Studies (LISA), compiled by Statistics Sweden. The LISA database encompasses longitudinal register data on a wide array of demographic, educational and labor market outcomes for all adult permanent residents in Sweden at the end of each year. We make use of data on labor market status, occupation, industry, education, age, gender, marital status, region, and country of birth.

In the LISA database, individuals are classified as self-employed if self-employment constitutes their primary source of annual income (surpassing 1,000 SEK, approximately 89 EUR or 93 USD as of February 2024). Consequently, hybrid entrepreneurs, whose earnings from self-employment are less than those from wage employment, are categorized as employees. Our analysis encompasses both incorporated and unincorporated firms. [5] While an individual may be the sole owner or run a business with partners, all data refer to the individual owner.

There is no explicit information in LISA that directly indicates whether an individual resides in a rural area; it only records the county and municipality. To determine rural residency, we utilize the regional classification provided by the Swedish Association of Local Authorities and Regions (SALAR 2017). According to this classification, municipalities are divided into three main groups—A, B, and C—based on population size, geographic density, proximity to large cities or urban areas, and commuting patterns. Group A includes metropolitan areas and their surrounding municipalities, Group B comprises larger towns and their neighboring municipalities, and Group C consists of smaller towns and rural municipalities.[6] As of 2017,

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[5] Around 40 percent of the self-employed in the data are incorporated.
[6] To be more precise, Group A is composed of metropolitan areas that have a population of at least 200,000 inhabitants, as well as municipalities where at least 40 percent of the workforce commutes to either the

from a total of 290 municipalities, 46 were classified as belonging to Group A, 108 to Group B, and 136 to Group C.

The primary focus of this study is on Group C, which serves as our broad definition of rural municipalities. This category is further divided into four subcategories, C6 through C9, allowing us to delineate two additional, more specific rural sub-areas.[7] The narrowest definition of rural areas encompasses the subgroups C8 and C9, restricted to municipalities with fewer than 15,000 inhabitants and a relatively small number of workers commuting to larger towns. In 2017, 55 municipalities were classified under C8 and C9. Subgroups C6 and C7 consist of small towns with populations ranging from 15,000 to 40,000.[8]

Maps of Sweden, illustrating the distribution of municipalities categorized as A, B, C6/C7, and C8/C9, along with the average proportion of self-employed individuals in these groups from 1990 to 2020, are included in the Appendix (Figure A.1). Municipalities within Group C (broad definition) are scattered throughout all major regions of Sweden, from the south to the north. However, there is a notable concentration in the "forest" counties located in the central and

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metropolitan areas or adjacent municipalities. Group B encompasses towns with populations ranging from 40,000 to 200,000 inhabitants, along with nearby municipalities where a minimum of 25 percent of the workforce commutes to these towns. Group C includes all other municipalities, within which subgroups C6 and C7 are identified as smaller towns with 15,000 to 40,000 inhabitants, or nearby municipalities where at least 30 percent of the workforce commutes either to or from the smaller town. Subgroups C8 and C9 are classified as rural municipalities, characterized by having fewer than 15,000 inhabitants and a relatively low number of workers commuting to larger towns, as detailed in SALAR (2017).

[7] Groups A and B consist of five subgroups, A1–A2 and B3–B5, respectively. We do not use these subgroups.

[8] The classification system for municipalities by the Swedish Association of Local Authorities and Regions (SALAR) was initiated in the early 1980s and has undergone several revisions since then. These revisions have been driven by changing definitions of the groups and the changing characteristics of the municipalities themselves. Initially, the classification largely hinged on population size and the structure of industries to define each group. However, subsequent versions have incorporated commuting patterns as a critical factor. Over time, shifts in population sizes and commuting behaviors have necessitated the reclassification of some municipalities, with the most recent update occurring in 2023. This revision meant that two municipalities changed categories from C to B and two changed from C6/C7 to C8/C9 (SALAR 2022). For the purposes of our study, we have opted to consistently use the 2017 classification throughout our investigation period. This approach ensures that municipalities remain in the same group throughout our analysis, avoiding any complications arising from changes in their classification. One complication associated with utilizing the 2017 SALAR classifications is the division of some municipalities into two separate entities during our study period. To address this issue, we adopt the 2017 classification corresponding to the municipality from each split pair that has the larger population. We then apply this classification to the entire period before the split, ensuring consistency in our analysis.

northern parts of the country. This pattern is even more pronounced for municipalities in subgroups C8 and C9 (narrow definition).

Next, we create three cohorts of individuals born in 1970, 1975, and 1980. We track these individuals from the age of 20 to 40, covering observation periods from 1990–2010, 1995–2015, and 2000–2020, respectively.[9] In our analysis, we make a distinction between stayers and in-movers within the municipality groups. In-movers are identified as individuals who have relocated across municipality groups (note that relocations within the same municipality group are not considered) after the age of 20. Stayers are defined as those who do not meet the criteria for in-movers.

Figure 1 illustrates the probability of being self-employed from age 20 to 40, revealing a gradual increase in this likelihood as individuals age. By age 40, an average of 7 percent of individuals are self-employed, with the proportion significantly higher among males than females (approximately 10 percent for males compared to 4 percent for females). Figure 2 presents the corresponding probabilities by municipality group, showing that the three groups have similar self-employment probabilities until about age 30, after which they begin to diverge. By age 40, around 7 percent of individuals in Group C municipalities are self-employed, which is lower than in Group A (8 percent) but higher than in Group B (6 percent). Figure 3 indicates slight differences in self-employment probabilities across cohorts, with Cohort 1, born in 1970, showing a marginally higher probability at age 40 than the subsequent cohorts.[10]

[FIGURE 1 ABOUT HERE]

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[9] Individuals may exit the sample due to emigration from Sweden or death.

[10] Patterns of self-employment in the cohorts across municipalities are rather similar and not shown here.

Descriptive statistics derived from the longitudinal register data spanning from 1990 to 2020 are reported in the Appendix. These data encompass over 6.5 million observations on approximately 325,000 individuals, including around 238,000 observations for nearly 46,000 individuals who are self-employed, constituting 3.6 percent of the sample. As indicated in Table A.1, self-employed individuals are, on average, older than the general population within the sample. Migration to a different municipality group during the study period varies across destinations, with between 25 percent (toward C municipalities) and 32 percent (toward A municipalities) of individuals relocating.

The self-employed shows a strong overrepresentation of males, married individuals, and those with young children, whereas tertiary education is less common among them compared to the general population.[11] Focusing on Group C, we note that self-employed individuals are less likely to be female, married, foreign-born, or to have tertiary education compared to their counterparts in other areas. Significant regional differences in industry structure are also evident; for example, agriculture predominates in Group C municipalities, whereas financial services and information and communication sectors are notably less represented, as detailed in Table A.2.b.

Table A.3 highlights distinct differences between in-movers and stayers across all municipality groups. On average, in-movers — those who have relocated to a different municipality group after the age of 20 — are more likely to be older, female, married, and to have tertiary education than stayers in their new localities. For self-employed in-movers, these traits are typically even more marked when compared to stayers.

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[11] Relative to other developed nations, Sweden exhibits a notably lower proportion of self-employed individuals who have attained tertiary education (OECD 2024).

2.2 Survey of the Self-employed

To deepen our understanding of the business conditions in rural regions of Sweden, we conducted a survey targeting individuals aged 25–55 in 2021, whose primary source of income is self-employment, and who operate a business with up to 10 employees.[12] The inclusion of individuals older than those analyzed in the register data (ages 20–40) allows us to capture the perspectives of those with more extensive experience in managing a business.

In our survey, we approached the self-employed with questions about the prerequisites for a successful business and the extent to which they encounter obstacles or problems in their daily operations. Statistics Sweden distributed the survey in early 2023 to a representative sample of 20,000 self-employed individuals. The survey could be responded to on-line or via mail. Furthermore, Statistics Sweden linked the survey responses with register data from LISA and other databases, allowing us to connect the survey findings to a range of individual and firm characteristics for the year 2021. Detailed analyses of these relationships are presented in Section 4.

The sample was stratified by municipality type, the age of the firm, and whether the individual grew up in or had migrated to their current municipality. Each of the six designated strata comprised approximately 3,333 individuals. For a detailed breakdown of these strata, refer to Table A.4 in the Appendix. We report survey results separately for self-employed persons living in A, B, and C municipalities. Within these groups, there are different strata for firms 5 years or younger and for firms older than 5 years. Within C municipalities, our focus in the study, we also report separately for people who 1) were born in a C municipality or migrated to a such a municipality at age 18 or younger; and 2) migrated to a C municipality from other areas or from

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[12] This implies that at the time of the survey in 2023, the respondents were between 27 and 57 years old.

abroad at age 19 or older (with focus on the most recent move). Owing to the minor differences observed and due to space constraints, further analysis of the survey data does not differentiate between groups based on the age of the firm.

We received 5,070 responses, resulting in a response rate of 25.4 percent. Of these responses, 4,942 were included in our analysis.[13] Table A.5 in the Appendix presents the characteristics of the sample as a whole and those of the respondents utilized in the analysis, based on the register data for 2021. It reveals an overrepresentation among respondents of females, married individuals, those with tertiary education, and native-born individuals. There are also noticeable differences in age and industry affiliation (as detailed in Table A.6), with respondents tending to be older on average, underrepresented in the construction industry, and overrepresented in the information and communication as well as financial services sectors.

In Section 4, where we present the survey results, observations will be weighted to ensure the findings are representative of the entire sample. As observed in the register data, substantial differences exist between in-movers and stayers within group C. According to Table A.5, in-movers to C municipalities are more likely than stayers to be female, married, foreign-born, and to have tertiary education. Table A.6 further indicates that in-movers are more likely to be employed in the information, communication, and financial services sectors, whereas they are less likely than stayers to work in agriculture and construction.

3. Evidence from Longitudinal Register Data

In this section, we employ regression analysis to further study the differences between self-employment in rural areas and that in more urban settings. Additionally, we investigate the differences in self-employment activities between individuals who have grown up in an area and continue to reside there, and those who have moved into the area. The regression analysis

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[13] Respondents who reported having more than 10 employees were excluded from the analyses.

enables us to control for the possibility that background characteristics vary across different municipality groups, cohorts, and between stayers and in-movers. Our analysis pools data from the three cohorts born in 1970, 1975, and 1980, and follow them through the life cycle from age 20 to 40.

3.1 Differences in Self-employment Propensities between Rural and Urban Areas

We start our analysis by examining the probability of self-employment across the three municipality groups, using a linear probability model (OLS). [14] For this purpose, we use the following main specification:

$$y_{it} = \alpha + \delta_1 Municipality\_Group\_B_{it} + \delta_2 Municipality\_Group\_C_{it} + X_{it}\beta + \gamma_c + \varepsilon_{it} \,. \qquad (1)$$

The dependent variable, y_{it}, indicates whether an individual is self-employed in year *t*, with a value of 1 for self-employed and 0 otherwise. The variables $Municipality\_Group\_B_{it}$ and $Municipality\_Group\_C_{it}$ are dummy variables that equal 1 if the individual resides in a B municipality (larger towns and their adjacent municipalities) or a C municipality (smaller towns and rural municipalities), respectively, in year *t*, and 0 otherwise. Individuals living in A municipalities (metropolitan areas) in year *t* serve as the reference category.[15] X_{it} represents a vector of control variables that includes age, along with dummy variables for gender, foreign-born status, marital status, level of education, and the presence of children (younger than 18 years old) in the household. Cohort fixed effects, γ_c are included to capture the trends in self-

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[14] All regressions in this section were estimated also with random effects. The results, which did not differ substantially from those we present, are available from the authors on request.

[15] Recall that we follow individuals from age 20 to 40, so they may change municipality over time. Individuals may exit the sample if they emigrate from Sweden or pass away. However, there is no entry into the sample during the observation period; for instance, individuals cannot be added to the sample by immigrating to Sweden within this timeframe. This approach ensures that the sample consists solely of individuals who were part of the study at its inception, allowing for a consistent observation of their self-employment status and other variables over a defined period.

employment propensities across different cohorts.[16] ε_{it} is the error term, which is clustered at the individual level to account for intra-individual correlation. δ_1 and δ_2 are the coefficients of interest; they quantify the percentage-point difference in the likelihood of being self-employed among individuals residing in municipality groups B and C, respectively, compared to those in municipality group A.

Table 1 shows the results. In Column (1), which accounts solely for variation in self-employment propensity among the cohorts, the findings broadly align with the descriptive statistics described in Section 2. Individuals residing in both B and C municipalities exhibit a lower average likelihood of being self-employed compared to those in A municipalities. However, this relative difference is less pronounced for rural areas (C) than for B municipalities.

When accounting for potential differences in individual characteristics across municipality groups, as shown in Column (2), the coefficient for individuals in B municipalities remains practically unchanged. In contrast, the negative coefficient for C municipalities becomes larger. This suggests that, on average, across the entire observation period, the probability of being self-employed is 0.8 percentage points (or 22 percent) and 0.5 percentage points (or 13 percent) lower in B and C municipalities, respectively, when compared to A municipalities.[17]

[TABLE 1 ABOUT HERE]

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[16] Due to the perfect linearity between age, the cohort fixed effects, and years of observation, we must assume that the three cohorts are equally sensitive to changes in the business cycle.

[17] The control variables reveal, consistent with prior literature and our descriptive statistics, that the likelihood of being self-employed rises with age, albeit at a diminishing rate, and falls with higher levels of educational attainment. Females are less likely to engage in self-employment compared to males, whereas foreign-born individuals exhibit a marginally higher tendency toward self-employment than natives. Being married and having children under the age of 18 are factors associated with an increased probability of self-employment. Detailed results pertaining to these control variables can be provided by the authors upon request.

In Columns (3)–(5), we estimate separate regressions for individuals aged 20–26, 27–33, and 34–40 to examine whether differences in self-employment propensity among the municipality groups change over the life cycle. Consistent with the descriptive statistics, the findings suggest that the propensity for self-employment in smaller towns and rural municipalities (Group C) is higher than in metropolitan areas (Group A) for the youngest age group. The lower prevalence of self-employment in Group C municipalities becomes apparent for individuals aged 27–33 and the disparity widens with age. While the gap in self-employment rates compared to Group A municipalities also increases over the life cycle for individuals in Group B municipalities, there is a consistently lower prevalence of self-employed individuals across all age groups.

Given that the broad category of rural areas encompasses both smaller towns and rural municipalities, we further divide this category in Column (6) to explore whether the likelihood of being self-employed differs within rural regions. The analysis reveals that the reduced prevalence of self-employment in Group C municipalities is largely driven by individuals in smaller towns that are within commuting distance to larger towns (C6/C7). Conversely, there is no discernible difference in self-employment propensity between the more narrowly defined rural municipalities (C8/C9) and metropolitan areas.

3.2 Differences in Self-employment Propensity between In-movers and Stayers

Next, we address the question of whether individuals who relocate to certain areas exhibit a higher likelihood of self-employment than those who have grown up in those areas. To investigate this, we estimate an extended version of specification (1):

$$y_{it} = \alpha + \delta_1 Municipality\_Group\_B_{it} + \delta_2 Municipality\_Group\_C_{it} + \delta_3 In\_mover_{it} +$$

$$\delta_4 Municipality\_Group\_B_{it} * In\_mover_{it} + \delta_5 Municipality\_Group\_C_{it} * In\_mover_{it} + X_{it}\beta +$$

$$\gamma_c + \varepsilon_{it} . \tag{2}$$

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In-movers and stayers are identified by assigning each individual a municipality of origin, which is determined by the municipality where the individual resided at age 20. An individual is classified as an in-mover if he or she relocates from the municipality of origin to a municipality in a *different* group, for example, from a Group A to a Group C municipality. In an attempt to mitigate potential issues related to the endogeneity between self-employment outcomes and relocation decisions, our analysis concentrates on the individual's first move. In this way, we abstract from any selection associated with further moves. For example, this means that if an individual relocates from a Group A to a Group C municipality at age 25, he or she is classified as in-mover from age 25 onwards and is assigned to the Group C municipality for the rest of the observation period. An individual remains categorized as a stayer as long as he or she resides in a municipality within the *same* group as the municipality of origin, so individuals are treated as stayers until they relocate to a different municipality group.

Based on these definitions, In_mover_{it} in specification (2) is a dummy variable that equals 1 from the year an individual makes the first move from the municipality of origin to a different municipality group, and it remains 1 for the rest of the observation period. The variable takes a value of 0 if an individual resides in a municipality of the *same type* as the municipality of origin. The coefficient δ_3 then indicates the percentage-point difference in the probability of being self-employed between in-movers and stayers in Group A municipalities, while δ_4 and δ_5 show whether this difference varies for individuals in Group B and C municipalities, respectively. The same control variables from equation (1) are utilized, but to account for individuals who relocate to other municipality groups after their first move, we add an indicator that takes the value of 1 from the year of their second move and for the remainder of the observation period, and 0 otherwise.

The unconditional results, displayed in Column (1) of Table 2, reveal that in-movers, on average, have a higher likelihood of being self-employed compared to stayers. However, once

cohort and background characteristics are taken into account, this estimate becomes negative (as seen in Column 2). This shift implies that in-movers generally possess traits that increase their propensity for self-employment.[18] Specifically, the likelihood of being self-employed is, on average, 0.6 percentage points (or 16 percent) lower for individuals who relocated to a different municipality group than for those who remained within the same type of municipality. Examining the variation between rural and urban areas, the findings in Column (3) suggest that in-movers are less likely to engage in self-employment than stayers across all regions, and by a similar margin. This pattern holds true even when applying the narrower definition of rural areas, as indicated in Column (4).

[TABLE 2 ABOUT HERE]

3.3 Differences in Activity before Self-employment Entry between Rural and Urban Areas

To investigate the types of activities—wage employment, inactivity, or studies—from which individuals transition into self-employment, we employ the following specification:

$$y_{it} = \alpha + \delta_1 Inactive_{it-1} + \delta_2 Student_{it-1} + X_{it-1}\beta + \gamma_c + \varepsilon_{it}. \tag{3}$$

In this analysis, the outcome variable, y_{it}, is set to 1 if the individual is self-employed in year t and was not self-employed (either wage-employed, unemployed, or a student) in year $t-1$, and 0 otherwise. The indicators $Inactive_{it-1}$ and $Student_{it-1}$ denote whether an individual was inactive or a student in year $t-1$, respectively. Wage-employed individuals serve as the reference group. Those who were self-employed in year $t-1$ are excluded from the analysis. We use the same control variables as in specification (1), but the time-varying individual

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[18] Indeed, the control variables, which are not displayed in the table, alongside our descriptive statistics, suggest that in-movers tend to, for instance, be older and are more likely to be married compared to stayers. The complete regression results are available from the authors upon request.

controls are measured in year $t-1$. To explore differences by municipality type, separate regressions are estimated for A, B, and C municipalities.

Compared to wage employment, individuals are more prone to enter self-employment from a state of inactivity and less likely from being students, as indicated in Table 3. This finding regarding inactivity remains even after controlling for differences in individual characteristics, whereas the negative association for students becomes notably smaller, as shown in Columns 1 and 2. The higher likelihood of moving into self-employment from inactivity, as opposed to wage employment, seems to diminish with age. In the youngest age group, the probability for those inactive to become self-employed is about twice as high as for the wage-employed, but it reduces to only 26 percent higher in the oldest age group, as seen in Columns 3–5. This pattern may reflect stronger labor market attachment as individuals grow older.

[TABLE 3 ABOUT HERE]

The increased likelihood of transitioning into self-employment from inactivity, compared to wage employment, is evident across all municipality groups, as shown in Columns 6–8. While the estimates are relatively modest, ranging from approximately 0.4 to 0.6 percentage points, these differences are substantial relative to the mean entry rate, representing roughly a 50 percent increase for all types of municipalities. Using the narrower definition of rural areas reveals a similar pattern, as illustrated in Columns 9 and 10. In contrast, the reduced tendency among students to become self-employed is observed only in A and B municipalities, with the difference being considerably smaller, at about 11–18 percent.

[TABLE 4 ABOUT HERE]

Table 4 highlights that the average differences in activities preceding the transition to self-employment between in-movers and stayers are small, as shown in Column 1. However, among individuals aged 34–40 (Column 4) and particularly those residing in municipality group C, and

more so in the most rural areas (Columns 7–9), in-movers exhibit a greater tendency to shift to self-employment from wage employment compared to stayers. The magnitude of the difference between municipalities in group C and those in group A is about 22 percent, whereas it reaches approximately 34 percent for the most rural municipalities (C8/C9). In contrast, within municipality groups A and B, in-movers are less likely than stayers to make the transition to self-employment from wage employment.

3.4 Differences in the Propensity to Have Employees between Urban and Rural Areas

As a final analysis, we study regional differences in the likelihood of self-employed individuals employing others. For this purpose, we focus exclusively on the self-employed and use a slightly modified version of specification (1). Specifically, the outcome variable, y_{it}, equals 1 if a self-employed individual employs at least one person in year t, and 0 otherwise. Additionally, we examine the extent to which firms grow by increasing their number of employees. Here, the outcome variable is assigned a value of 1 if the total number of employees is higher in year t compared to year $t-1$, and 0 if the total number of employees has decreased or remained the same. The same control variables from specification (1) are utilized, with the addition of controls for industry. In the specification analyzing firm expansion, control variables are measured in year $t-1$.

Table 5 presents the results. When accounting for individual characteristics, the likelihood of self-employed individuals employing at least one person is marginally higher in C municipalities than in A municipalities, as indicated in Column 1. Notably, in the most rural municipalities (C8/C9), the probability of having employees is approximately 2 percentage points higher than in A municipalities, as shown in Column 2. Although the estimate is small, it represents a non-negligible difference relative to the mean rate of the dependent variable, which is about 7 percent. Conversely, in B municipalities, the propensity to have employees is

0.7 percentage points (or 2 percent) lower than in A municipalities. Column 4 further reveals that self-employed individuals in rural areas are more inclined to expand their workforce than those in A municipalities, particularly in the most rural municipalities (C8/C9). Specifically, the likelihood of hiring additional employees is about 0.8 percentage points (or 13 percent) higher in C8/C9 municipalities than for A municipalities.

[TABLE 5 ABOUT HERE]

Finally, Table 6 shows that in-movers are more likely than stayers to employ others. Specifically, the likelihood of having employees is approximately 1.2 percentage points (or about 4 percent) higher for self-employed individuals who relocated to a particular municipality type compared to those who remained in the same area, as seen in Column 1. This relationship does not differ significantly across different municipality groups, as indicated in Columns 2 and 3. Columns 4 through 6 do not show any substantial differences in firm growth, in terms of hiring at least one additional employee, either between in-movers and stayers or across municipality types.

[TABLE 6 ABOUT HERE]

To summarize, between the ages of 20 and 40, individuals in rural areas are slightly less likely to run firms than those in metropolitan areas, a difference that becomes noticeable in their early thirties. However, in the most rural areas, the propensity for self-employment aligns closely with that in metropolitan areas. Regardless of the type of municipality, individuals are more inclined to transition into self-employment from a state of inactivity rather than from wage employment. Nevertheless, this difference in entry to self-employment narrows over the life cycle, likely due to stronger labor market attachment. Self-employed individuals in rural areas, especially in the most rural areas, are more prone to both maintain and expand their workforce compared to their counterparts in metropolitan areas. Consequently, the self-employed in rural

regions appear to play a crucial role in generating employment opportunities within their communities. The three cohorts displayed similar patterns regarding self-employment, despite entering the labor market at different points in time and at different stages in the business cycle.

Finally, while stayers are generally more likely to engage in self-employment than in-movers, the latter group is more prone than the former to employ others. However, no significant differences exist between urban and rural areas in this respect. The only notable difference arises in rural areas, where in-movers are more likely to enter self-employment from wage employment compared to stayers in these regions. In more metropolitan areas we observe the opposite, with stayers more likely to transition into self-employment than in-movers.

4. Survey Evidence

As a complement to the longitudinal register analysis, we conducted a unique survey targeting self-employed individuals. This allows us to delve into the qualitative dimensions of self-employment as experienced by the self-employed themselves and enables the inclusion of variables in the analysis that are typically unavailable, particularly at the individual level. For instance, it seeks to identify factors deemed crucial for the success in self-employment. Thus, this survey serves to enhance and broaden the insights gained from previous findings. The survey responses, collected in 2023, have been weighted by us to ensure they are representative of the entire sample, including those who did not respond. We posed batteries of questions to examine the factors influencing decisions and activities related to self-employment, as well as the barriers encountered in self-employment.

Similar to the register data analysis discussed in Section 3, we categorize municipalities into three groups: Group A (metropolitan areas and their adjacent municipalities), Group B (larger

towns and their neighboring municipalities), and Group C (smaller towns and rural areas).[19]

The first part of this section presents the responses to our survey questions, whereas the second part investigates the extent to which the observable characteristics of the survey participants can account for differences in their responses. While we aim for the reported responses to reflect the entirety of the sample accurately, it was noted in Section 2 that significant differences exist in the background characteristics between in-movers and stayers in Group C municipalities among survey respondents.

4.1 Survey Responses

We present the responses separately for the combined municipality groups in the non-rural areas, A and B, as well as for stayers in C and movers to C. Furthermore, we show the differences in responses between stayers in Group C and the aggregate of Groups A and B, between movers to Group C and the aggregate of Groups A and B, as well as between movers to and stayers in Group C, including the respective levels of statistical significance.

Similar to other surveys on attitudes, we use a Likert scale featuring four response options: "Very important", "Fairly important", "Somewhat important", and "Not at all important" (or context-dependent alternatives to "important"). For brevity, we have grouped the first two responses into a single category ("Very/fairly important") and report only this combined category in the tables.[20]

The first question, labeled as A in Table 7, concerns the general satisfaction with self-employment, asking, "How do you feel about your work as a self-employed?" A clear majority,

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[19] Due the smaller sample size in the survey, we do not examine differences between C6/C7 and C8/C9 municipalities.
[20] Assigning values 4, 3, 2, and 1, respectively, to the response alternatives and calculating averages yielded conclusions similar to those discussed in the text. The results are available from the authors upon request.

approximately 88 percent, indicated that they are either very or fairly satisfied with their work in self-employment, without notable differences across respondent groups.

[TABLE 7 ABOUT HERE]

The table provides further evidence about the personal factors that may influence decisions and activities related to self-employment. Participants in the survey were asked question B: "How important were the following factors in your decision to become self-employed?" The desire for flexibility and independence, both in terms of working hours and job tasks, is important for all groups of respondents. This sentiment is especially pronounced among those in non-rural areas (A+B) and individuals who have moved into such areas, compared to those who have remained (factors 3 and 4). Between 62 and 84 percent believe that flexibility is very or fairly important. A small number of respondents reported inheriting their business, with this being slightly more common among stayers in C municipalities than among other groups. Notably, residents of C municipalities expressed a stronger desire to "contribute to the economic activity of the municipality where I live". This aligns with the findings from the register data analysis, indicating that self-employed individuals in C municipalities not only have other employees but also hire workers to a greater extent than self-employed in other areas. The statement "I had difficulties in getting a permanent job" garnered more agreement among residents of non-rural areas and in-movers than among stayers.

Factors identified as crucial for achieving success in self-employment are shown in Table 8. The factors ranked as most important were "good communications via mobile networks and broadband" (factor 5) and "demand from the local market" (factor 6), with the percentage of responses rating these as "very/fairly important" varying between 68 to 75 percent for the former and 59 to 72 percent for the latter. Respondents in C municipalities expressed greater concern over the attitudes of local politicians and municipal officials toward entrepreneurship,

as well as the services provided by the municipality, compared to their counterparts in non-rural areas. Lesser importance was attributed to "business advisory services", "financial support" and "the Public Employment Service" (*Arbetsförmedlingen*) — the latter being the local branch of the Swedish national employment agency. However, it is noteworthy that stayers in C tended to place more importance on the queried factors than in-movers to C and residents of A and B municipalities, communications being the exception. The finding that in-movers to C prioritize "good communications via mobile networks and broadband" and efficient transportation "via road, rail, and air" more highly than stayers might suggest a desire among in-movers to maintain connections to their regions of origin or to engage with markets that are geographically more distant. In a separate query (not presented), approximately 51 percent of in-movers indicated that their business targets markets beyond the local area, in contrast to a significantly lower figure of 36 percent among stayers.

[TABLE 8 ABOUT HERE]

Table 9 displays responses to questions about obstacles to self-employment, specifically asking "How large a barrier do you feel the following are to your business operations?". The factor identified as the most problematic barrier was "taxes and employer contributions", with 52–59 percent of respondents deeming it very or fairly important. Respondents from the non-rural areas, A and B, generally placed less emphasis on the factors listed in the table compared to those in C municipalities, except for "competition from other businesses", which was an outlier. Additionally, costs related to energy and fuel were highlighted as significant obstacles. For most factors, stayers in C expressed greater concern than both residents in A and B and in-movers to C. This heightened concern covered various areas, including "laws and regulations", "taxes and employer contributions", "energy costs", "fuel costs", "difficulty in recruiting and retaining staff with the right skills", and "crime and safety".

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[TABLE 9 ABOUT HERE]

Table 10 addresses local challenges to self-employment, asking respondents, "How large a barrier do you feel the following are to running a business where you live?". Generally, these local factors were not considered as critical as those discussed in the previous table. Additionally, residents of non-rural areas (A and B) tended to express less concern than those in C municipalities. The lack of access to communication networks, whether through mobile connectivity or via road, rail, and air, emerged as the most important barrier (affecting 13-19 and 13-22 percent of respondents, respectively). Stayers in C municipalities were more likely than business owners in A and B to view the absence of bank offices, police, and welfare services as hindrances. Similarly, stayers showed a greater tendency than in-movers to C to identify the unavailability of bank services and police presence as significant obstacles to self-employment.

[TABLE 10 ABOUT HERE]

4.2 What Explains Responses of In-movers and Stayers?

In Tables 9 and 10, we noted that stayers in C municipalities appear to place greater emphasis on predominantly non-local factors that hinder their business operations than in-movers. To explore the reasons behind this observation, we conducted regression analyses on a subset of these questions that hold particular policy relevance. These regressions take into account various characteristics of the respondents, including whether they are an in-mover, their age and its square, gender, marital status, the presence of children in the household, whether they are foreign-born, their level of education, and the industry in which they operate.

The first set of regressions, focusing on barriers to business operations, is shown in Table 11. When taking the characteristics of respondents into account, most of the differences in responses between in-movers and stayers, as previously observed in Table 9, are not statistically

significant, with the exceptions of "energy costs" and "fuel costs". These remain significant but decrease in magnitude from 14.7 percentage points to 7.0 and from 16.9 percentage points to 4.4, respectively. The level of educational attainment plays a significant role in perceptions of barriers to self-employment; individuals with post-secondary education are consistently less likely than those with lower levels of education to consider the barriers mentioned as either "very" or "fairly" important. The discrepancy in views compared to those with primary education varies between 4.5 and 17.6 percentage points, depending on the question. This may indicate a better capacity to navigate or mitigate perceived business challenges. Foreign-born respondents are more concerned than natives about most obstacles to business operations, whereas females and married individuals are less inclined than their male and unmarried counterparts, respectively, to view some of the barriers as important. The age of the respondent, however, appears to have a negligible impact on the attitude toward business impediments.

[TABLE 11 ABOUT HERE]

Moreover, the industry in which a respondent operates influences the perception of barriers to self-employment activities. Business owners in skill-intensive services—such as "information and communication", "financial activities, business services", and "personal and cultural services"—are generally much less likely than those in other sectors to perceive the examined barriers as important. Additionally, respondents across all industries tend to view the barriers as less pertinent compared to those in "agriculture, forestry, and fishing" (used as the reference category). The notable exception is the perception of "competition from municipal operations", which is regarded as more important in non-agricultural sectors, particularly in transportation and the hospitality industry.

Turning to local barriers to business activities in Table 12, we again observe that most of the differences in responses between in-movers and stayers, which were initially modest, become

either statistically insignificant or even smaller in magnitude. Individuals with post-secondary education show a slightly lower tendency to consider "lack of access to the Public Employment Service" as "very" or "fairly" important. Conversely, foreign-born business owners perceive the lack of access to bank offices, police, and the Public Employment Service as more problematic than their native counterparts.

[TABLE 12 ABOUT HERE]

Industry appears to play a role in shaping attitudes toward certain obstacles, though less consistently than observed in the preceding analysis. Respondents from skill-intensive sectors are generally less inclined to perceive "lack of access to municipal services and responses when dealing with business issues", "lack of access to bank office", and "lack of access to police" as important barriers. Conversely, business owners in the retail and hospitality sectors tend to express greater concern over "lack of access to communications via road, rail, and air" and "lack of access to municipal services and responses when dealing with business issues" compared to respondents from other industries, including agriculture.

To conclude, our survey reveals that residents in C municipalities generally place greater emphasis on factors that either facilitate or hinder their business operations compared to those in A and B municipalities. Moreover, individuals who grew up in C municipalities (stayers) exhibit a higher level of concern regarding these factors than those who have moved there as adult (in-movers). The observed difference between residents in C and those in non-rural areas may be attributed to the business conditions in rural areas being perceived as less favorable in many respects, as discussed in the Introduction.

The finding that stayers exhibit greater concern over these factors compared to in-movers to C (with the exception of communications) cannot be simply ascribed to geographical characteristics of the business environment, which are common to both groups. Our regression

analyses suggest that the differences in attitudes toward barriers are largely attributed to observed characteristics of in-movers and stayers. As discussed in Section 2, in-movers not only possess higher levels of education than stayers but are also more likely to be female, involved in skill-intensive services, and less engaged in industries highly dependent on location, such as agriculture, forestry, and fishing. Higher educational attainment, being female, and participation in skill-intensive services appear to diminish the perceived impact of various barriers. Conversely, involvement in agriculture heightens this perception.[21]

Although relatively few respondents indicated a desire to "contribute to the economic activity of the municipality where I live", a greater proportion of those in C municipalities expressed this sentiment compared to those in other areas. This finding is in line with our register data, which suggest that individuals in C municipalities are more likely to employ others and expand their workforce. Furthermore, in-movers to C appear to enhance economic activity in rural regions by serving markets that are geographically more distant than those targeted by stayers.

5. Conclusions

This paper has examined self-employment propensities and pathways into self-employment over the lifecycle, using nationwide, high-quality longitudinal register data. Additionally, by conducting a complementary survey, we have investigated the importance of a broad array of individual and local factors—data for which are not readily available—for the success in self-employment. In this regard, our study adds a more detailed picture of self-employment in rural areas to the existing body of research, with potentially important implications for policymakers.

We find that the likelihood of being self-employed is slightly lower in rural than in non-rural areas. Differences in this regard start to emerge when individuals reach their early thirties,

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[21]In-movers are more likely than stayers to be foreign-born. Although being foreign-born is generally associated with placing greater importance on barriers to self-employment, the connection is not sufficiently strong to counteract the observed negative correlation between being an in-mover and perceiving various barriers to business activity as important.

highlighting the importance of adopting a life-cycle perspective on rural self-employment. Moreover, we note that negative selection into self-employment, i.e., from a state of inactivity, is not more common in rural areas than in other regions. Our findings also demonstrate that the self-employed in rural areas appear to play a crucial role in the local economy; they have a higher propensity to employ others compared to their counterparts in more urbanized areas.[22]

Our analysis of in-movers and stayers indicates that the latter group is more likely to be self-employed, whereas the former tends to employ others more frequently (with no distinction between rural and non-rural areas). Another observation is that in-movers to rural areas are less adversely selected than those relocating to other regions. A noteworthy finding in this context is that in-movers to rural areas are generally less concerned than stayers about various local and geographic-independent barriers to self-employment success (except for the lack of communications infrastructure). In-movers also target geographically more distant markets than stayers do. The differences in attitudes between self-employed in-movers and stayers in rural areas can largely be attributed to differences in observed personal characteristics and industry sectors.

Overall, our findings suggest a more positive view of rural self-employment than in the previous literature (e.g., Akgün et al. 2011 and Pato and Teixeira 2014). We also document substantial heterogeneity among the self-employed in rural areas, with in-movers differing markedly from stayers in both their perceptions of prerequisites for success in business and their employment practices. Policies aimed at fostering development in rural regions should consider these distinctions.

Although our study makes use of high-quality and unique data, several caveats apply. Our analysis of in-movers and stayers in rural areas cannot be interpreted in strictly causal terms.

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[22] This should not be interpreted as a larger contribution to local employment in absolute terms, given that the largest firms by employment size are typically situated in metropolitan areas.

The decision to migrate is not random, and factors influencing these decisions may also impact business operations. Furthermore, the fact that some barriers to self-employment were deemed unimportant by respondents in the survey does not necessarily mean that these obstacles are irrelevant to the success of self-employment in rural or non-rural areas. Our sample is limited to individuals who have started a business and remain active. Potential or discouraged would-be entrepreneurs, as well as those who have ceased their business activities, may hold different views on these issues.

A number of important questions remain unexplored. Given the positive impact of in-movers on local economic activity in rural areas, as indicated by our findings, it would be interesting to investigate the long-term outcomes in this context. To what extent do in-movers persist as self-employed, alter their business sector, or relocate outside of rural areas? What are their long-term prospects in terms of profitability? To what extent do return movers to rural areas contribute to the business environment? These questions are left for future research.

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Figures and tables

Figure 1: Share of self-employed, overall and by gender
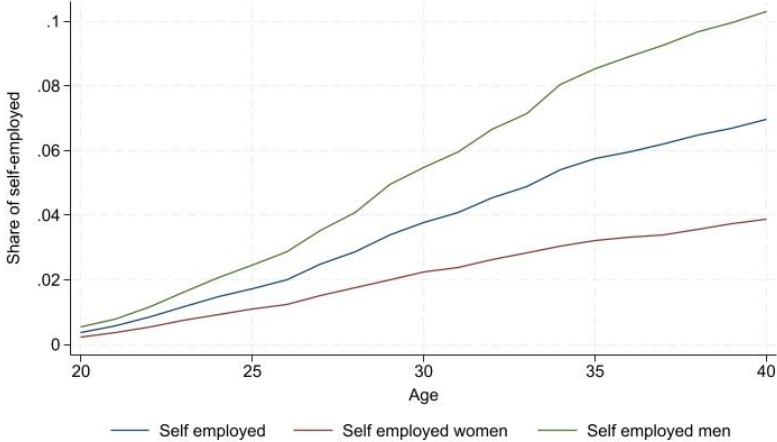
Figure 2: Share of self-employed, by municipality group
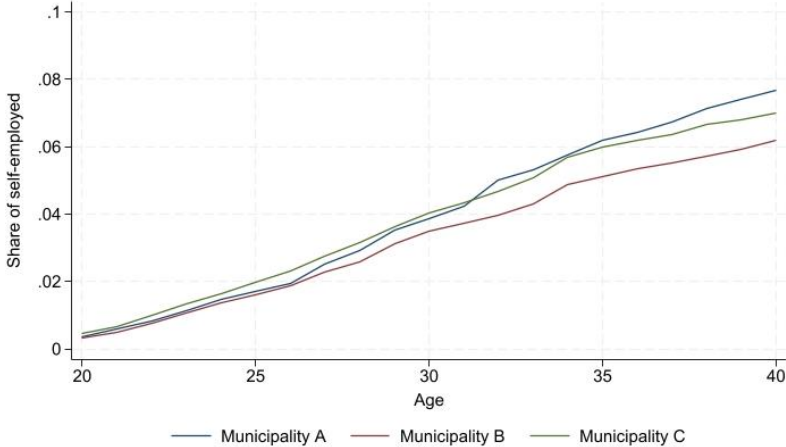
Note: A refers to metropolitan areas and nearby municipalities, B to larger towns and nearby municipalities and C to smaller towns and rural municipalities.

Figure 3: Share of self-employed, by cohort
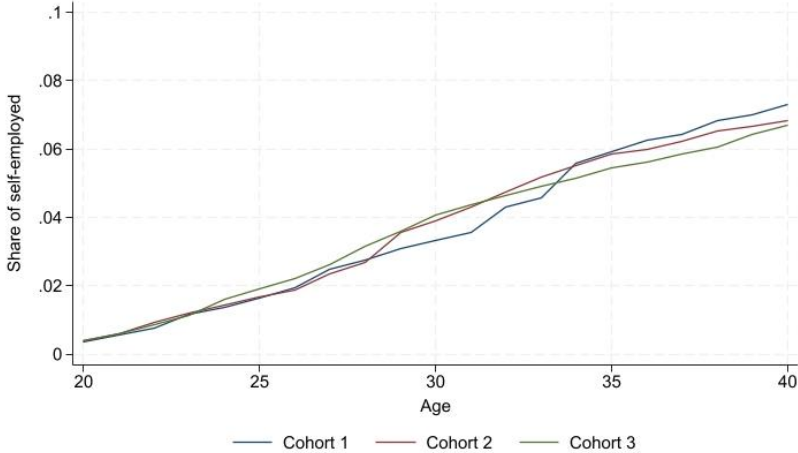
Note: Cohort 1 were born in 1970, cohort 2 in 1975 and cohort 3 in 1980.

Table 1: Probability of Self-employment

	(1)	(2)	(3)	(4)	(5)	(6)
				Age Groups		
	Pooled	Pooled	20–26	27–33	34–40	Pooled
Municipality Group						
B	-0.00813***	-0.00814***	-0.00123***	-0.00867***	-0.0161***	-0.00813***
	(0.000461)	(0.000458)	(0.000288)	(0.000592)	(0.000839)	(0.000458)
C	-0.00224***	-0.00464***	0.000764**	-0.00485***	-0.0100***	
	(0.000564)	(0.000564)	(0.000360)	(0.000735)	(0.00100)	
C6/C7						-0.00615***
						(0.000609)
C8/C9						0.0000282
						(0.00102)
Constant	0.0398***	-0.0698***	0.0204***	0.0610***	0.0874***	-0.0697***
	(0.000463)	(0.00271)	(0.000579)	(0.00122)	(0.00175)	(0.00271)
Control Variables	No	Yes	Yes	Yes	Yes	Yes
# of Observations	6,551,473	6,551,473	2,254,510	2,178,090	2,118,873	6,551,473
# of Individuals	325,933	325,933	325,933	318,559	308,608	325,933
Mean of Dep. Variable	0.0364	0.0364	0.0116	0.0370	0.0621	0.0364
R^2	0.000380	0.0230	0.00319	0.0104	0.0172	0.0230

Note: Municipality group A consists of metropolitan areas and nearby municipalities, B includes larger towns and nearby municipalities, and C consists of smaller towns and rural municipalities. Municipality group A is the reference group. All regressions include indicators for cohort. Columns 2–6 add controls for the individual's age and gender and indicators for being foreign-born, level of education, being married, and having children younger than 18 in the household. Standard errors, in parentheses, are clustered at the individual level. $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 2: Probability of Self-employment – Difference Between Stayers and In-movers

	(1) Pooled	(2) Pooled	(3) Pooled	(4) Pooled
In-mover	0.00146** (0.000647)	-0.00593*** (0.000670)	-0.00636*** (0.000841)	-0.00637*** (0.000841)
Municipality Group B	-0.00793*** (0.000471)	-0.00808*** (0.000467)	-0.00837*** (0.000570)	-0.00836*** (0.000570)
C	-0.00300*** (0.000573)	-0.00526*** (0.000571)	-0.00541*** (0.000693)	
C6/C7				-0.00645*** (0.000751)
C8/C9				-0.00224* (0.00120)
In-mover x B			0.00101 (0.00100)	0.00101 (0.00100)
In-mover x C			0.000483 (0.00122)	
In-mover x C6/C7				0.000544 (0.00132)
In-mover x C8/C9				0.000482 (0.00215)
Constant	0.0399*** (0.000497)	-0.0744*** (0.00284)	-0.0743*** (0.00285)	-0.0742*** (0.00285)
Control Variables	No	Yes	Yes	Yes
# of Observations	6,551,473	6,551,473	6,551,473	6,551,473
# of Individuals	325,933	325,933	325,933	325,933
Mean of Dep. Variable	0.0364	0.0364	0.0364	0.0364
R^2	0.000366	0.0231	0.0231	0.0231

Note: See Table 1 for definition of municipality groups A, B and C. Stayers in municipality group A are the reference group. All regressions include indicators for cohort. Columns 2–4 add controls for the individual's age and gender and indicators for being foreign-born, level of education, being married, having children younger than 18 in the household and for more than one move across municipality groups. Standard errors, in parentheses, are clustered at the individual level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 3: Probability of Becoming Self-employed in Year t by Type of Activity in Year $t-1$

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
				Age Group				Municipality Group		
	Pooled	Pooled	21–26	27–33	34–40	A	B	C	C6/C7	C8/C9
Activity in Year $t-1$										
Student	-0.00363***	-0.00133***	-0.00102***	-0.000639	-0.00120	-0.00135***	-0.00150***	-0.000253	-0.000238	-0.0000714
	(0.000203)	(0.000206)	(0.000217)	(0.000488)	(0.000865)	(0.000366)	(0.000277)	(0.000488)	(0.000531)	(0.00121)
Inactive	0.00446***	0.00523***	0.00564***	0.00684***	0.00328***	0.00665***	0.00420***	0.00470***	0.00491***	0.00400***
	(0.000197)	(0.000213)	(0.000306)	(0.000360)	(0.000380)	(0.000384)	(0.000317)	(0.000407)	(0.000474)	(0.000787)
Constant	0.00957***	-0.0382***	0.00836***	0.0136***	0.0132***	-0.0488***	-0.0309***	-0.0311***	-0.0282***	-0.0392***
	(0.0000501)	(0.00108)	(0.000236)	(0.000341)	(0.000410)	(0.00197)	(0.00160)	(0.00212)	(0.00239)	(0.00454)
Control Variables	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of Observations	6,010,723	6,010,723	1,909,036	2,106,976	1,994,711	2,285,571	2,319,709	1,405,442	1,060,278	345,164
# of Individuals	325,763	325,763	325,429	315,877	301,274	163,435	178,898	116,868	91,383	32,573
Mean of Dep. Variable	0.00983	0.00983	0.00561	0.0109	0.0127	0.0119	0.00821	0.00916	0.00872	0.0105
R^2	0.000189	0.00262	0.00171	0.00223	0.00220	0.00310	0.00244	0.00240	0.00230	0.00275

Note: See Table 1 for definition of municipality groups A, B and C. All regressions include indicators for cohort. Columns 2–10 add controls for the individual's age and gender and indicators for being foreign-born, level of education, being married, and having children younger than 18 in the household. Control variables that vary over time are measured in year $t-1$. Standard errors, in parentheses, are clustered at the individual level. $^{*} p < 0.10$, $^{**} p < 0.05$, $^{***} p < 0.01$.

Table 4: Probability of Becoming Self-employed in Year t by Type of Activity in Year $t-1$ – Difference Between Stayers and In-movers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			Age Group				Municipality Group		
	Pooled	21–26	27–33	34–40	A	B	C	C6/C7	C8/C9
In-mover	0.000527***	-0.0000283	0.000231	0.000612**	-0.000927***	-0.000281	0.00198***	0.00153***	0.00350***
	(0.000159)	(0.000232)	(0.000236)	(0.000246)	(0.000251)	(0.000246)	(0.000367)	(0.000407)	(0.000826)
Activity in year $t-1$									
Student	-0.00131***	-0.000964***	-0.00124**	-0.00237**	-0.00149***	-0.00148***	-0.000601	-0.000383	-0.00127
	(0.000234)	(0.000249)	(0.000592)	(0.00103)	(0.000430)	(0.000310)	(0.000540)	(0.000598)	(0.00126)
Inactive	0.00525***	0.00567***	0.00675***	0.00312***	0.00612***	0.00444***	0.00484***	0.00503***	0.00423***
	(0.000242)	(0.000328)	(0.000418)	(0.000451)	(0.000436)	(0.000360)	(0.000469)	(0.000552)	(0.000896)
In-mover x Student	-0.000154	-0.000214	0.00150	0.00271	0.000257	-0.000732	0.000897	-0.000319	0.00541*
	(0.000471)	(0.000491)	(0.00103)	(0.00182)	(0.000808)	(0.000649)	(0.00117)	(0.00124)	(0.00299)
In-mover x Inactive	-0.000162	-0.000213	0.000296	0.000217	0.00128	-0.000423	-0.00115	-0.000890	-0.00197
	(0.000464)	(0.000832)	(0.000752)	(0.000730)	(0.000847)	(0.000699)	(0.000892)	(0.00103)	(0.00178)
Constant	-0.0377***	0.00838***	0.0134***	0.0127***	-0.0522***	-0.0302***	-0.0274***	-0.0256***	-0.0326***
	(0.00108)	(0.000238)	(0.000345)	(0.000415)	(0.00198)	(0.00160)	(0.00213)	(0.00241)	(0.00451)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of Observations	6,010,722	1,909,036	2,106,976	1,994,711	2,229,704	2,381,599	1,399,419	1,054,455	344,964
# of Individuals	325,763	325,429	315,877	301,274	149,484	169,978	107,428	82,269	28,691
Mean of Dep. Variable	0.00983	0.00561	0.0109	0.0127	0.0118	0.00836	0.00915	0.00881	0.0102
R^2	0.00264	0.00172	0.00224	0.00226	0.00310	0.00254	0.00247	0.00234	0.00296

Note: Wage-employment in year $t-1$ is the reference category. Columns 2–4 present differences by age group and columns 5–9 differences by municipality group. See Table 1 for definition of municipality groups A, B and C. Stayers in municipality group A are the reference group. All regressions include indicators for cohort and controls for the individual's age and gender and indicators for being foreign-born, level of education, being married, having children younger than 18 in the household and for more than one move across municipality groups. Control variables that vary over time are measured in year $t-1$. Standard errors, in parentheses, are clustered at the individual level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Probability of Having and Hiring Employees among the Self-employed

	(1)	(2)	(3)	(4)
	Probability of *Having* at Least One Employee		Probability of *Hiring* at Least One Employee	
Municipality Group				
B	-0.00668*	-0.00667*	-0.000250	-0.00121
	(0.00366)	(0.00368)	(0.00122)	(0.00124)
C	0.00718*		0.00477***	
	(0.00432)		(0.00142)	
C6/C7		-0.00207		0.000629
		(0.00477)		(0.00158)
C8/C9		0.0195***		0.00816***
		(0.00743)		(0.00239)
Constant	0.226***	0.207***	-0.0714***	-0.0364**
	(0.0451)	(0.0463)	(0.0178)	(0.0180)
Control Variables	Yes	Yes	Yes	Yes
# of Observations	238,273	238,273	237,047	237,047
# of Individuals	45,765	45,765	45,484	45,484
Mean of Dep. Variable	0.289	0.289	0.0612	0.0612
R^2	0.0130	0.0189	0.000730	0.00333

Note: See Table 1 for definition of municipality groups A, B and C. All regressions include indicators for cohort and controls for the individual's age and gender and indicators for being foreign-born, level of education, being married, and having children younger than 18 in the household. Control variables that vary over time are measured in year t in column (1)–(2) and in year $t-1$ in column (3)–(4). Standard errors, in parentheses, are clustered at the individual level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 6: Probability of Having and Hiring Employees Among the Self-employed – Differences Between Stayers and In-movers

	(1)	(2)	(3)	(4)	(5)	(6)
		Probability of *having* at least one employee			Probability of *hiring* at least one employee	
In-mover	0.0123**	0.0107*	0.0102*	-0.00281*	-0.00322	-0.00332*
	(0.00491)	(0.00581)	(0.00581)	(0.00170)	(0.00201)	(0.00201)
Municipality Group						
B	-0.00953***	-0.0113**	-0.0112**	-0.00338***	-0.00210*	-0.00325**
	(0.00365)	(0.00438)	(0.00438)	(0.00121)	(0.00121)	(0.00144)
C	0.00421	0.00173		0.00402***	0.00150	
	(0.00436)	(0.00525)		(0.00144)	(0.00170)	
C6/C7			-0.00526			-0.00112
			(0.00573)			(0.00186)
C8/C9			0.0207**			0.00858***
			(0.00919)			(0.00291)
In-mover x B		0.00373	0.00354		0.000141	0.0000932
		(0.00793)	(0.00793)		(0.00260)	(0.00260)
In-mover x C		-0.00435			0.00191	
		(0.00914)			(0.00308)	
In-mover x C6/C7			-0.00942			0.00197
			(0.0100)			(0.00340)
In-mover x C8/C9			0.0110			0.00213
			(0.0161)			(0.00550)
Constant	0.249***	0.232***	0.233***	-0.0698***	-0.0342*	-0.0341*
	(0.0452)	(0.0465)	(0.0465)	(0.0178)	(0.0180)	(0.0180)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
# of Observations	238,273	238,273	238,273	237,047	237,047	237,047
# of Individuals	45,765	45,765	45,765	45,484	45,484	45,484
Mean of Dep. Variable	0.289	0.289	0.289	0.0612	0.0612	0.0612
R^2	0.0136	0.0194	0.0196	0.000778	0.00334	0.00342

Note: See Table 1 for definition of municipality groups A, B and C. All regressions control for the individual's age, gender, being foreign-born, level of education, being married, having children younger than 18 in the household and for more than one move across municipality groups. Control variables that vary over time are measured in year t in columns (1)–(3) and in year $t-1$ in columns (4)–(6). Standard errors, in parentheses, are clustered at the individual level. $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 7: Satisfaction with Self-employment and Factors Affecting Self-employment Decision and Activities

	(1)	(2)	(3)	(4)	(5)	(6)	
	A & B	C: Stayer	C: In-mover	(C: Stayer)-(A&B)	(C: In-mover)-(A&B)	(C: In-mover)-(C: Stayer)	N
A. How do you feel about your work as self-employed?	0.883	0.897	0.882	0.013	-0.001	-0.015	4,750
B. How important were the following factors in your decision to become self-employed?							
1. I wanted to make my business idea a reality	0.534	0.519	0.582	-0.015	0.048***	0.063***	4,713
2. I expected to have a higher income as self-employed than as an employee	0.375	0.256	0.297	-0.120***	-0.078***	0.042**	4,709
3. I wanted flexible working hours	0.740	0.619	0.717	-0.121***	-0.023	0.098***	4,710
4. I wanted to be in charge of my tasks	0.841	0.788	0.837	-0.053***	-0.005	0.049***	4,720
5. I inherited the business	0.058	0.134	0.064	0.076***	0.006	-0.070***	4,413
6. I was asked to become a partner in a business	0.087	0.115	0.076	0.029**	-0.011	-0.040***	4,432
7. I wanted to contribute to the economic activity of the municipality where I live	0.065	0.102	0.111	0.038***	0.046***	0.009	4,658
8. I had difficulties getting a (permanent) job as an employee	0.092	0.041	0.106	-0.051***	0.014	0.065***	4,635
9. I was dismissed/warned/laid off	0.072	0.054	0.061	-0.018**	-0.011	0.007	4,583

Note: For A, the table shows the share of respondents who reported that they were either "very" or "fairly" satisfied, and for B, the share who reported that the factors were either "very" or "fairly" important. *p<0.10, ** p<0.05, *** p<0.01.

Table 8: Factors Important for Self-employment Activities: How Important Were the Following Factors for Your Business?

	(1)	(2)	(3)	(4)	(5)	(6)	
	A & B	C: Stayer	C: In-mover	(C: Stayer)-(A&B)	(C: In-mover) -(A&B)	(C: In-mover) -(C: Stayer)	N
1. Local politicians' attitudes toward entrepreneurship	0.275	0.375	0.314	0.100***	0.039**	-0.061***	4,727
2. Municipal officials' attitudes toward entrepreneurship	0.281	0.398	0.330	0.117***	0.049***	-0.068***	4,715
3. Services and responses by the municipality	0.282	0.414	0.327	0.132***	0.045***	-0.087***	4,710
4. Good communications via road, rail, and air	0.442	0.359	0.416	-0.083***	-0.026	0.057***	4,722
5. Good communications via mobile networks and broadband	0.752	0.680	0.731	-0.072***	-0.021	0.051***	4,731
6. Demand from the local market	0.624	0.721	0.585	0.097***	-0.039**	-0.136***	4,729
7. Access to networks with other entrepreneurs	0.362	0.402	0.352	0.040**	-0.010	-0.050***	4,725
8. Good opportunities to recruit and retain staff	0.316	0.414	0.293	0.098***	-0.023	-0.121***	4,694
9. Business advisory services	0.158	0.217	0.186	0.058***	0.028**	-0.030**	4,708
10. Financial support	0.176	0.240	0.199	0.064***	0.024*	-0.040***	4,713
11. Public Employment Service	0.067	0.069	0.080	0.002	0.013	0.011	4,715

Note: The table shows the share of respondents who reported that the factors were either "very" or "fairly" important. The complete wording is "Services and responses by the municipality when dealing with business matters" for factor 3 and "Good opportunities to recruit and retain staff with the right skills" for factor 8. * $p<0.10$, ** $p<0.05$, *** $p<0.01$.

Table 9: Obstacles to Self-employment: How Large a Barrier do You Feel the Following Are to Your Business Operations?

	(1)	(2)	(3)	(4)	(5)	(6)	
	A & B	C: Stayer	C: In-mover	(C: Stayer)-(A&B)	(C: In-mover) -(A&B)	(C: In-mover) -(C: Stayer)	N
1. Access to financial capital	0.203	0.236	0.224	0.033**	0.021	-0.012	4,709
2. Laws and regulations	0.273	0.384	0.318	0.111***	0.045***	-0.066***	4,717
3. Taxes and employer contributions	0.519	0.593	0.524	0.073***	0.005	-0.068***	4,718
4. Difficulty in recruiting and retaining staff	0.271	0.359	0.300	0.089***	0.029*	-0.059***	4,676
5. Entry level salaries	0.233	0.247	0.225	0.014	-0.008	-0.023	4,660
6. Energy costs	0.282	0.522	0.375	0.240***	0.093***	-0.147***	4,706
7. Fuel costs	0.377	0.649	0.480	0.272***	0.103***	-0.169***	4,719
8. Costs of other intermediate goods/services	0.289	0.488	0.344	0.198***	0.054***	-0.144***	4,706
9. Competition from municipal operations	0.086	0.109	0.090	0.024**	0.004	-0.019*	4,715
10. Competition from other businesses	0.350	0.311	0.273	-0.039**	-0.077***	-0.038**	4,726
11. Crime and safety	0.137	0.232	0.144	0.095***	0.007	-0.087***	4,722

Note: The table shows the share of respondents who reported that the obstacles were either "very" or "fairly" large. The complete wording of obstacle 4 is "Good opportunities to recruit and retain staff with the right skills" and the complete wording of obstacle 8 is "Costs of other intermediate goods/services in production". * $p<0.10$, ** $p<0.05$, *** $p<0.01$.

Table 10: Obstacles to Self-employment: How Large a Barrier Do You Feel the Following Are to Running a Business Where You Live?

	(1)	(2)	(3)	(4)	(5)	(6)	
					(C: In-mover)		
	A & B	C: Stayer	C: In-mover	(C: Stayer)-(A&B)	-(A&B)	(C: In-mover)-(C: Stayer)	N
Lack of access to…							
1. …communications via mobile networks and broadband	0.132	0.156	0.186	0.024*	0.054***	0.030**	4,714
2. …communications via road, rail, and air	0.134	0.150	0.222	0.016	0.088***	0.072***	4,722
3. …services and responses by the municipality	0.105	0.172	0.134	0.068***	0.030***	-0.038***	4,715
4. …a bank office	0.109	0.208	0.158	0.100***	0.050***	-0.050***	4,721
5. …police	0.090	0.181	0.122	0.091***	0.032***	-0.059***	4,723
6. …the Public Employment Service	0.036	0.050	0.055	0.014*	0.019**	0.005	4,715
7. …primary care	0.067	0.113	0.120	0.046***	0.053***	0.007	4,725
8. …schools	0.088	0.116	0.122	0.028**	0.034***	0.005	4,721
9. …child care	0.077	0.114	0.115	0.037***	0.038***	0.001	4,723

Note: The table shows the share of respondents who reported that the obstacles were either "very" or "fairly" large. The complete wording of obstacle 3 is "Services and responses by the municipality when dealing with business matters". * p<0.10, ** p<0.05, ***p<0.01.

Table 11: How Large a Barrier Do You Feel the Following are to Your Business Operations?

	(1) Access to Financial Capital	(2) Laws and Regulations	(3) Taxes and Employer Contributions	(4) Energy Costs	(5) Fuel Costs	(6) Competition from Municipal Operations
In-mover to C	0.00224	-0.000866	-0.0253	-0.0698***	-0.0437**	-0.0209*
	(0.0172)	(0.0188)	(0.0203)	(0.0193)	(0.0186)	(0.0121)
Age	-0.0104	0.0142	0.00496	0.00127	0.0114	-0.000429
	(0.0111)	(0.0121)	(0.0131)	(0.0125)	(0.0120)	(0.00784)
Age^2	0.0000793	-0.000163	-0.0000723	0.00000782	-0.000123	-0.000000450
	(0.000131)	(0.000143)	(0.000154)	(0.000147)	(0.000142)	(0.0000924)
Female	0.0101	-0.0716***	0.0177	-0.0338*	-0.101***	0.00853
	(0.0177)	(0.0193)	(0.0208)	(0.0198)	(0.0192)	(0.0124)
Married	-0.0428***	0.0128	-0.0442**	-0.0185	-0.0620***	0.000245
	(0.0160)	(0.0175)	(0.0189)	(0.0180)	(0.0174)	(0.0113)
Children under 18	0.0239	-0.0129	0.00429	0.0200	-0.00451	0.00675
	(0.0170)	(0.0186)	(0.0200)	(0.0191)	(0.0184)	(0.0120)
Foreign-born	0.0777***	0.0369	0.0704**	0.100***	0.0821***	0.0958***
	(0.0263)	(0.0288)	(0.0310)	(0.0296)	(0.0285)	(0.0185)
Secondary Educ.	-0.0741**	-0.0551	-0.0748**	-0.0538	-0.0202	-0.00904
	(0.0315)	(0.0345)	(0.0371)	(0.0353)	(0.0343)	(0.0224)
Tertiary Educ.	-0.0900***	-0.0911**	-0.176***	-0.162***	-0.112***	-0.0447*
	(0.0333)	(0.0365)	(0.0393)	(0.0373)	(0.0362)	(0.0236)
No Educ. Data	-0.186	-0.303*	-0.298*	-0.221	0.0536	0.269***
	(0.143)	(0.156)	(0.168)	(0.160)	(0.155)	(0.101)
Manufacturing and Extraction	-0.0943***	-0.305***	-0.0112	-0.0604	-0.214***	-0.0325
	(0.0358)	(0.0392)	(0.0423)	(0.0401)	(0.0388)	(0.0252)
Construction	-0.148***	-0.308***	-0.0723**	-0.273***	-0.101***	0.0672***
	(0.0273)	(0.0299)	(0.0322)	(0.0307)	(0.0296)	(0.0193)
Retail	-0.0403	-0.297***	0.0185	-0.129***	-0.279***	0.0368*
	(0.0297)	(0.0325)	(0.0351)	(0.0334)	(0.0323)	(0.0210)
Transportation	-0.0719	-0.0952*	0.0232	-0.0427	0.0519	0.186***
	(0.0487)	(0.0534)	(0.0572)	(0.0547)	(0.0527)	(0.0342)
Hotels and Restaurants	-0.0680	-0.102**	0.0244	0.0540	-0.231***	0.121***
	(0.0446)	(0.0491)	(0.0527)	(0.0503)	(0.0486)	(0.0316)
Information and Communication	-0.200***	-0.455***	-0.125***	-0.424***	-0.512***	-0.0142
	(0.0408)	(0.0448)	(0.0482)	(0.0460)	(0.0444)	(0.0289)
Financial Activities,Business Services	-0.184***	-0.358***	-0.138***	-0.338***	-0.330***	0.0283
	(0.0258)	(0.0283)	(0.0305)	(0.0290)	(0.0280)	(0.0182)
Personal and Cultural Services	-0.126***	-0.340***	-0.0732**	-0.268***	-0.456***	0.00254
	(0.0302)	(0.0330)	(0.0356)	(0.0338)	(0.0327)	(0.0212)
Other	-0.144***	-0.201***	-0.0578	-0.282***	-0.389***	0.0455*
	(0.0376)	(0.0413)	(0.0445)	(0.0423)	(0.0409)	(0.0266)
Constant	0.718***	0.396	0.674**	0.703***	0.689***	0.103
	(0.228)	(0.249)	(0.268)	(0.256)	(0.247)	(0.161)
# of Obs.	3,124	3,127	3,125	3,124	3,130	3,127
Mean of Dep. Variable	0.231	0.342	0.557	0.438	0.558	0.0982
R^2	0.0422	0.0911	0.0395	0.127	0.184	0.0413

Note: The sample consists of business owners in C municipalities. The dependent variable is the probability of responses "Very important"or "Fairly important". The reference category for education is Primary Education and for industry Agriculture, Forestry and Fishing. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 12: How Large of a Barrier do You Feel the Following are to Running a Business Where You Live?

	(1)	(2)	(3)	(4)	(5)	(6)
			Lack of Access to…			
	Mobile Broadband and Communications	Communications via Road, Rail, and Air	Municipal Services and Responses When Dealing with Business Issues	Bank Office	Police	Public Employment Service
In-mover to C	0.00567	0.0611***	-0.00627	-0.0357**	-0.0282*	0.00236
	(0.0157)	(0.0160)	(0.0146)	(0.0158)	(0.0144)	(0.00903)
Age	0.000404	0.0126	0.0111	0.0134	0.00361	-0.00440
	(0.0102)	(0.0104)	(0.00943)	(0.0102)	(0.00929)	(0.00584)
Age^2	-0.00000576	-0.000159	-0.000143	-0.000142	-0.0000163	0.0000595
	(0.000120)	(0.000122)	(0.000111)	(0.000121)	(0.000110)	(0.0000689)
Female	0.00496	0.000596	-0.0111	0.0101	-0.0346**	0.00719
	(0.0162)	(0.0165)	(0.0150)	(0.0163)	(0.0148)	(0.00930)
Married	-0.00542	-0.0104	0.0118	-0.0276*	0.00246	-0.00571
	(0.0146)	(0.0149)	(0.0136)	(0.0147)	(0.0134)	(0.00841)
Children under 18	0.000170	0.00395	-0.0166	0.00886	-0.0122	0.00405
	(0.0155)	(0.0158)	(0.0145)	(0.0156)	(0.0142)	(0.00893)
Foreign Born	0.0186	-0.0254	0.00636	0.0527**	0.0586***	0.0906***
	(0.0241)	(0.0246)	(0.0224)	(0.0242)	(0.0220)	(0.0139)
Secondary Educ.	-0.0308	0.0143	-0.000853	-0.0134	0.00863	-0.0269
	(0.0288)	(0.0294)	(0.0268)	(0.0291)	(0.0264)	(0.0166)
Tertiary Educ.	0.00724	0.0392	-0.0402	-0.0493	-0.0205	-0.0501***
	(0.0305)	(0.0312)	(0.0284)	(0.0308)	(0.0280)	(0.0175)
No Educ. Data	0.130	-0.180	-0.186	-0.00657	-0.0842	-0.154**
	(0.131)	(0.133)	(0.121)	(0.131)	(0.120)	(0.0751)
Manufacturing and Extraction	-0.0305	0.0634*	0.0120	0.00349	-0.0536*	0.0288
	(0.0328)	(0.0334)	(0.0304)	(0.0329)	(0.0299)	(0.0188)
Construction	-0.0268	-0.0372	0.00373	-0.0135	-0.0116	0.0168
	(0.0250)	(0.0255)	(0.0232)	(0.0251)	(0.0229)	(0.0144)
Retail	-0.0318	0.0535*	0.0441*	0.0248	0.0418*	0.0184
	(0.0272)	(0.0277)	(0.0253)	(0.0274)	(0.0249)	(0.0157)
Transportation	-0.0275	0.00942	0.0385	0.0828*	0.0427	0.0358
	(0.0444)	(0.0453)	(0.0414)	(0.0446)	(0.0406)	(0.0255)
Hotels and Restaurants	-0.0116	0.109***	0.0679*	0.0594	0.0163	0.0559**
	(0.0411)	(0.0419)	(0.0382)	(0.0413)	(0.0376)	(0.0236)
Information and Communication	0.00763	0.0143	-0.0782**	-0.108***	-0.112***	-0.0150
	(0.0375)	(0.0382)	(0.0348)	(0.0377)	(0.0342)	(0.0215)
Financial Activities,Business Services	0.0276	0.0337	-0.0123	-0.00512	-0.0560***	-0.000408
	(0.0236)	(0.0241)	(0.0220)	(0.0237)	(0.0216)	(0.0136)
Personal and Cultural Services	-0.0402	-0.0106	-0.0567**	-0.0319	-0.0536**	0.0128
	(0.0275)	(0.0281)	(0.0256)	(0.0277)	(0.0252)	(0.0158)
Other	-0.0886**	-0.0209	-0.0198	-0.0794**	-0.0956***	-0.0196
	(0.0344)	(0.0352)	(0.0321)	(0.0346)	(0.0315)	(0.0198)
Constant	0.192	-0.111	-0.0227	-0.0718	0.0761	0.139
	(0.208)	(0.212)	(0.193)	(0.209)	(0.190)	(0.120)
# of Obs.	3129	3129	3125	3130	3130	3124
Mean of Dep. Variable	0.175	0.186	0.147	0.180	0.145	0.0512
R^2	0.0109	0.0210	0.0169	0.0203	0.0332	0.0297

Note: The sample consists of business owners in C municipalities. The dependent variable is the probability of responses "Very important"or "Fairly important". The reference category for education is Primary Education and for industry Agriculture, Forestry, and Fishing. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
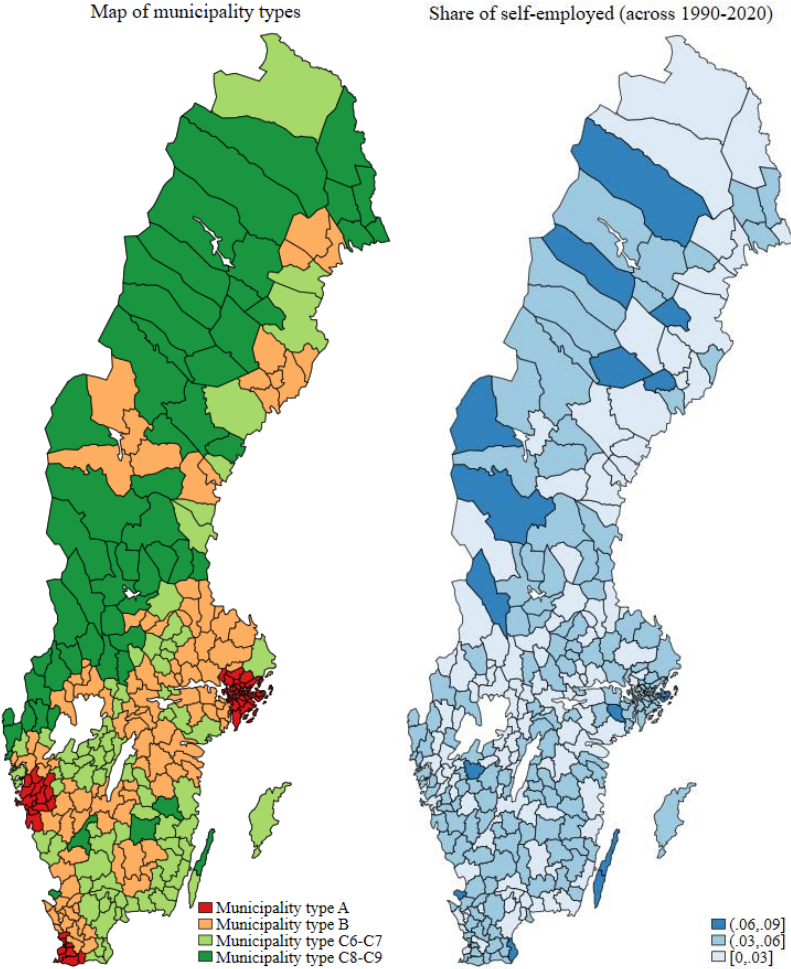
Appendix

Figure A.1: Maps of Municipality Groups and Share of Self-employed

	(1) All	(2) A: All	(3) B: All	(4) C: All	(5) Self-employed	(6) A: Self-employed	(7) B: Self-employed	(8) C: Self-employed
Self-employed	0.0364 (0.187)	0.0400 (0.196)	0.0319 (0.176)	0.0378 (0.191)				
In-mover to A	0.316 (0.465)				0.316 (0.465)			
In-mover to B	0.260 (0.438)				0.266 (0.442)			
In-mover to C	0.250 (0.433)				0.253 (0.435)			
Cohort 1	0.348 (0.476)	0.331 (0.471)	0.347 (0.476)	0.374 (0.484)	0.346 (0.476)	0.318 (0.466)	0.360 (0.480)	0.375 (0.484)
Cohort 2	0.336 (0.472)	0.338 (0.473)	0.337 (0.473)	0.329 (0.470)	0.339 (0.473)	0.342 (0.474)	0.340 (0.474)	0.331 (0.471)
Cohort 3	0.317 (0.465)	0.330 (0.470)	0.316 (0.465)	0.297 (0.457)	0.315 (0.465)	0.340 (0.474)	0.300 (0.458)	0.294 (0.455)
Age	29.84 (6.059)	30.17 (5.928)	29.61 (6.107)	29.68 (6.162)	33.42 (4.938)	33.66 (4.767)	33.27 (5.029)	33.23 (5.077)
Female	0.489 (0.500)	0.501 (0.500)	0.485 (0.500)	0.476 (0.499)	0.282 (0.450)	0.295 (0.456)	0.277 (0.447)	0.265 (0.441)
Married	0.241 (0.428)	0.254 (0.435)	0.236 (0.425)	0.229 (0.420)	0.368 (0.482)	0.372 (0.483)	0.375 (0.484)	0.352 (0.478)
Children under 18	0.440 (0.496)	0.406 (0.491)	0.444 (0.497)	0.486 (0.500)	0.577 (0.494)	0.537 (0.499)	0.602 (0.490)	0.612 (0.487)
Foreign-born	0.0830 (0.276)	0.116 (0.320)	0.0725 (0.259)	0.0476 (0.213)	0.0878 (0.283)	0.115 (0.319)	0.0855 (0.280)	0.0450 (0.207)
Primary Educ.	0.0893 (0.285)	0.0878 (0.283)	0.0876 (0.283)	0.0944 (0.292)	0.0952 (0.294)	0.0875 (0.283)	0.100 (0.300)	0.101 (0.302)
Secondary Educ.	0.534 (0.499)	0.462 (0.499)	0.544 (0.498)	0.634 (0.482)	0.602 (0.490)	0.506 (0.500)	0.641 (0.480)	0.710 (0.454)
Tertiary Educ.	0.369 (0.483)	0.442 (0.497)	0.361 (0.480)	0.265 (0.441)	0.301 (0.459)	0.404 (0.491)	0.257 (0.437)	0.187 (0.390)
No Educ. Data	0.00756 (0.0866)	0.00825 (0.0905)	0.00708 (0.0839)	0.00723 (0.0847)	0.00188 (0.0434)	0.00206 (0.0453)	0.00140 (0.0374)	0.00226 (0.0474)
Firm Growth					0.0609 (0.239)	0.0612 (0.240)	0.0590 (0.236)	0.0631 (0.243)
≥1 Employee					0.289 (0.453)	0.299 (0.458)	0.279 (0.448)	0.286 (0.452)
# of Observations	6,551,473	2,477,333	2,525,948	1,548,192	238,273	99,174	80,585	58,514
# of Individuals	325,933	165,002	182,627	121,861	45,765	21,458	16,191	11,056

Note: Means of variables, standard deviations within parentheses. The observation period is 1990–2020. Municipality group A consists of metropolitan areas and nearby municipalities, B includes larger towns and nearby municipalities, and C consists of smaller towns and rural municipalities. Cohort 1 were born in 1970, 2 in 1975 and 3 in 1980.

Table A.2: Descriptive Statistics, Register Data

	Self-employed			
	(1) All	(2) A	(3) B	(4) C
Industry				
Agriculture, Forestry and Fisheries	6.8	1.0	8.2	14.6
Manufacturing and Extraction	6.1	3.8	6.9	8.9
Construction	14.7	12.4	16.2	16.7
Retail	13.1	10.6	14.8	14.9
Transportation	4.7	3.6	5.2	5.7
Hotels and Restaurants	5.0	4.5	5.5	5.1
Information and Communication	8.3	13.2	6.0	3.2
Financial Activities, Business services	18.4	26.1	14.9	10.3
Personal and Cultural Services	13.0	14.5	12.6	10.9
Other/No Data	10.0	10.3	9.8	9.7
Total	100.0	100.0	100.0	100.0
# of Observations	238,273	99,174	80,585	58,514
# of Individuals	45,765	21,458	16,191	11,056

Note: Means of variables. The observation period is 1990–2020. See Table A.1 for definition of municipality groups A, B, and C.

Table A.3: Descriptive Statistics, Register Data

	(1) A: Stayer	(2) A: In-mover	(3) B: Stayer	(4) B: In-mover	(5) C: Stayer	(6) C: In-mover	(7) SE A: Stayer	(8) SE A: In-mover	(9) SE B: Stayer	(10) SE B: In-mover	(11) SE C: Stayer	(12) SE C: In-mover
Self-employed	0.0403	0.0402	0.0320	0.0331	0.0370	0.0375						
	(0.197)	(0.196)	(0.176)	(0.179)	(0.189)	(0.190)						
Cohort 1	0.357	0.288	0.364	0.292	0.401	0.284	0.341	0.278	0.380	0.287	0.402	0.297
	(0.479)	(0.453)	(0.481)	(0.455)	(0.490)	(0.451)	(0.474)	(0.448)	(0.485)	(0.453)	(0.490)	(0.457)
Cohort 2	0.328	0.366	0.332	0.342	0.325	0.343	0.343	0.362	0.339	0.330	0.325	0.323
	(0.470)	(0.482)	(0.471)	(0.474)	(0.468)	(0.475)	(0.475)	(0.481)	(0.473)	(0.470)	(0.468)	(0.468)
Cohort 3	0.315	0.346	0.304	0.366	0.274	0.373	0.316	0.360	0.281	0.382	0.273	0.380
	(0.465)	(0.476)	(0.460)	(0.482)	(0.446)	(0.484)	(0.465)	(0.480)	(0.450)	(0.486)	(0.446)	(0.485)
Age	29.24	32.09	28.92	31.81	28.82	32.15	33.19	34.65	32.88	34.55	32.74	34.46
	(6.102)	(5.130)	(6.155)	(5.318)	(6.213)	(5.222)	(4.989)	(4.111)	(5.170)	(4.269)	(5.264)	(4.308)
Female	0.497	0.524	0.476	0.502	0.456	0.533	0.291	0.324	0.259	0.303	0.230	0.366
	(0.500)	(0.499)	(0.499)	(0.500)	(0.498)	(0.499)	(0.454)	(0.468)	(0.438)	(0.460)	(0.421)	(0.482)
Married	0.232	0.307	0.214	0.300	0.197	0.316	0.371	0.389	0.356	0.413	0.321	0.427
	(0.422)	(0.461)	(0.410)	(0.458)	(0.398)	(0.465)	(0.483)	(0.488)	(0.479)	(0.492)	(0.467)	(0.495)
Children under 18	0.405	0.438	0.433	0.460	0.467	0.507	0.549	0.537	0.596	0.598	0.599	0.617
	(0.491)	(0.496)	(0.495)	(0.498)	(0.499)	(0.500)	(0.498)	(0.499)	(0.491)	(0.490)	(0.490)	(0.486)
Foreign-born	0.129	0.0833	0.0728	0.0709	0.0449	0.0706	0.125	0.0856	0.0853	0.0852	0.0352	0.0920
	(0.335)	(0.276)	(0.260)	(0.257)	(0.207)	(0.256)	(0.330)	(0.280)	(0.279)	(0.279)	(0.184)	(0.289)
Pimary educ.	0.110	0.0435	0.0953	0.0571	0.102	0.0778	0.111	0.0452	0.107	0.0633	0.113	0.0769
	(0.313)	(0.204)	(0.294)	(0.232)	(0.303)	(0.268)	(0.314)	(0.208)	(0.309)	(0.243)	(0.317)	(0.266)
Secondary educ.	0.550	0.327	0.600	0.326	0.708	0.387	0.579	0.418	0.693	0.424	0.771	0.485
	(0.497)	(0.469)	(0.490)	(0.469)	(0.454)	(0.487)	(0.494)	(0.493)	(0.461)	(0.494)	(0.420)	(0.500)
Tertiary educ.	0.328	0.627	0.296	0.614	0.181	0.532	0.308	0.536	0.199	0.511	0.114	0.436
	(0.470)	(0.483)	(0.457)	(0.487)	(0.385)	(0.499)	(0.462)	(0.499)	(0.399)	(0.500)	(0.318)	(0.496)
No educ. data	0.0115	0.00175	0.00868	0.00214	0.00874	0.00270	0.00240	0.00123	0.00144	0.00139	0.00210	0.00290
	(0.106)	(0.0418)	(0.0928)	(0.0462)	(0.0931)	(0.0519)	(0.0489)	(0.0351)	(0.0379)	(0.0373)	(0.0458)	(0.0538)
# of Obs.	1,654,196	765,883	1,917,580	672,841	1,155,265	385,708	66,708	30,783	61,275	22,238	42,795	14,474
# of Individuals	102,754	51,547	133,451	44,218	89,728	27,280	13,374	7,070	11,172	5,134	7,171	3,377

Note: Means of variables, standard deviations within parentheses. The observation period is 1990–2020. See Table 1.a for definition of municipality groups A, B, and C and Cohorts 1-3. For in-movers, municipality groups are coded according only to the first other municipality group the individual moves to and any subsequent moves to other municipality groups are ignored.

Table A.4: Target Population in the Survey and the Stratified Samples

Stratum	Characteristics of the Self-employed	Number of Individuals			Response Rate, %
		Target Population	Sample	Respondents	
1	Resident in A or B, Firm ≤ 5 Years Old	60,852	3,310	779	23,5
2	Resident in A or B, Firm > 5 Years Old	93,588	3,323	948	28,5
3	Resident in C, Born in C or Moved to C at Age ≤ 18, Firm ≤ 5 Years Old	7,483	3,330	712	21,4
4	Resident in C, Moved to C at Age > 18, Firm ≤ 5 Years Old	9,392	3,319	756	22,8
5	Resident in C, Born in C or Moved to C at Age ≤ 18, Firm > 5 Years Old	19,173	3,325	870	26,2
6	Resident in C, Moved to C at Age > 18, Firm > 5 Years Old	12,976	3,321	1,005	30,3
Total		203,464	19,928	5,070	25,4

Table A.5: Descriptive Statistics, Survey Sample and Respondents

	(1) Sample	(2) Respondents	(3) A: Sample	(4) A: Resp.	(5) B: Sample	(6) B: Resp.	(7) C: Stayer Resp.	(8) C: In-mover Resp.
Age	42.47	45.12	42.62	44.90	42.64	45.50	45.18	44.89
	(0.0594)	(0.136)	(0.136)	(0.239)	(0.160)	(0.274)	(0.207)	(0.218)
Female	0.312	0.362	0.357	0.396	0.290	0.327	0.267	0.420
	(0.00328)	(0.00921)	(0.00798)	(0.0163)	(0.00874)	(0.0182)	(0.0119)	(0.0160)
Married	0.454	0.534	0.471	0.514	0.477	0.582	0.465	0.548
	(0.00353)	(0.00953)	(0.00832)	(0.0166)	(0.00962)	(0.0191)	(0.0136)	(0.0162)
Children under 18	0.542	0.540	0.530	0.542	0.551	0.550	0.487	0.561
	(0.00353)	(0.00953)	(0.00831)	(0.0166)	(0.00958)	(0.0193)	(0.0136)	(0.0161)
Primary Educ..	0.102	0.0506	0.0874	0.0486	0.0990	0.0432	0.0781	0.0479
	(0.00214)	(0.00407)	(0.00471)	(0.00726)	(0.00575)	(0.00791)	(0.00737)	(0.00593)
Secondary Educ.	0.539	0.432	0.389	0.330	0.524	0.485	0.729	0.353
	(0.00353)	(0.00930)	(0.00812)	(0.0157)	(0.00962)	(0.0194)	(0.0119)	(0.0150)
Tertiary Educ.	0.348	0.513	0.509	0.613	0.365	0.471	0.193	0.596
	(0.00337)	(0.00942)	(0.00833)	(0.0162)	(0.00927)	(0.0194)	(0.0105)	(0.0154)
No Educ. Data	0.0118	0.00468	0.0147	0.00904	0.0119	0.00127	0.000419	0.00333
	(0.000765)	(0.00132)	(0.0201)	(0.00302)	(0.00209)	(0.00127)	(0.000419)	(0.00117)
Foreign-born	0.192	0.135	0.293	0.173	0.216	0.122	0.00349	0.173
	(0.00279)	(0.00659)	(0.00758)	(0.0124)	(0.00792)	(0.0125)	(0.00174)	(0.0105)
# of Obs.	19,925	4,942	3,604	917	2,697	674	1,498	1,853

Note: Means of variables, standard deviations in parentheses. Statistics refer to 2021 and are based on register data. See Table A.1 for definition of municipality groups A, B, and C.

Table A.6: Descriptive Statistics, Survey Sample and Respondents

	(1) Sample	(2) Respondents	(3) A: Sample	(4) A: Resp.	(5) B: Sample	(6) B: Resp.	(7) C: Stayer Resp.	(8) C: In-mover Resp.
Agriculture, Forestry and Fisheries	0.109	0.0800	0.0130	0.0141	0.0930	0.101	0.218	0.101
	(0.00221)	(0.00456)	(0.00189)	(0.00405)	(0.00560)	(0.0118)	(0.0115)	(0.00940)
Manufacturing and Extraction	0.0567	0.0473	0.0303	0.0271	0.0528	0.0630	0.0697	0.0517
	(0.00164)	(0.00393)	(0.00285)	(0.00548)	(0.00431)	(0.00948)	(0.00711)	(0.00672)
Construction	0.189	0.127	0.124	0.0896	0.192	0.149	0.217	0.106
	(0.00278)	(0.00621)	(0.00549)	(0.00965)	(0.00759)	(0.0138)	(0.0111)	(0.0105)
Retail	0.116	0.0959	0.0886	0.0667	0.142	0.126	0.126	0.0905
	(0.00227)	(0.00555)	(0.00473)	(0.00842)	(0.00673)	(0.0129)	(0.00915)	(0.00802)
Transportation	0.0362	0.0309	0.0475	0.0343	0.0353	0.0254	0.0446	0.0207
	(0.00132)	(0.00330)	(0.00354)	(0.00602)	(0.00356)	(0.00614)	(0.00574)	(0.00540)
Hotels and Restaurants	0.0464	0.0230	0.0350	0.0185	0.0424	0.0238	0.0159	0.0394
	(0.00149)	(0.00270)	(0.00306)	(0.00449)	(0.00389)	(0.00593)	(0.00336)	(0.00395)
Information and Communication	0.0566	0.105	0.120	0.153	0.0651	0.0897	0.0227	0.0741
	(0.00164)	(0.00617)	(0.00541)	(0.0118)	(0.00476)	(0.0111)	(0.00389)	(0.00944)
Financial Activities, Business Services	0.201	0.296	0.315	0.388	0.192	0.229	0.157	0.294
	(0.00284)	(0.00883)	(0.00774)	(0.0161)	(0.00759)	(0.0163)	(0.00975)	(0.0153)
Personal and Cultural Services	0.138	0.130	0.164	0.140	0.135	0.130	0.101	0.127
	(0.00244)	(0.00650)	(0.00617)	(0.0116)	(0.00660)	(0.0132)	(0.00815)	(0.00953)
Other	0.0500	0.0663	0.0630	0.0688	0.0509	0.0639	0.0288	0.0961
	(0.00154)	(0.00484)	(0.00405)	(0.00844)	(0.00424)	(0.00951)	(0.00437)	(0.0104)
# of obs.	19,899	4,935	3,602	917	2,689	671	1,497	1,850

Note: Means of variables, standard deviations in parentheses. Statistics refer to 2021 and are based on register data. See Table A.1 for definition of municipality groups A, B, and C.