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Abstract

It is well known that capital constraints can hinder individuals to set up a business. Many business owners rely on own capital or capital from friends, fools and family in order to acquire required capital. In this paper, we study the role property plays for starting a business or becoming self-employed. Specifically, we investigate how property values and changes in property taxes affect the likelihood that an individual is or becomes self-employed using rich Swedish individual panel data.

The paper studies the probability that an individual is or becomes self-employed using detailed individual tax return data from Sweden. The property tax reform in 2008 is utilized as a "natural experiment" to analyze whether a lower property tax increased the probability of becoming self-employed. The reform in 2008 lowered the property tax for especially highly assessed property. Hence, the reform is predicted to reduce capital constraints for individuals with highly assessed property. Lower tax payments increase property values and consequently individual wealth, and in addition, increases disposable income as the recurrent yearly tax is reduced. The detailed data also allow us to control for many other important confounding factors. For example, we can control for other financial assets such as accumulated wealth, and capital as well as labor income.

Results indicate that once we identify the effect of property value by the tax reform, property value is associated with higher probability of being self-employed but the result for becoming self-employed vanishes.

Keywords: entrepreneurship, self-employment, property value

JEL Code: M13, R33, R38

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1. Introduction

Generally, entrepreneurship is thought to play a vital role for economic performance as well as providing employment opportunities. For instance, several studies have established that the majority of new jobs are created in small and medium sized enterprises (Davisson et al., 1995, Armington & Acs, 2002, and Santarelli & Tran 2012). In addition, entrepreneurship can be especially valuable in a knowledge economy, as it serves as a mechanism transforming existing knowledge into commercialized products and economic growth (Audretsch, 2004). Consequently, it is common that policy-makers worldwide try to design policies that promote entrepreneurship. In order for these policies to be effective, it is crucial to know what factors affect entrepreneurship.

There is by now a rather extensive literature studying factors influencing the choice to become an entrepreneur, or self-employed (which is commonly used to proxy for entrepreneurship). Generally, these factors can be divided into factors affecting the desire or necessity to become self-employed and factors influencing the means or possibilities to become self-employed. Examples of factors that affect the desire to become self-employed include individual characteristics such as age, education, and family background, and ability, as well as economic and social environments (Giannetti & Simonov, 2004). A factor well-studied, and found to consistently affect the possibility to become an entrepreneur or self-employed is access to own capital (e.g., Evans & Leighton, 1989, Evans & Jovanovic, 1989, Meyer, 1990, Holtz-Eakin et al., 1994, Blanchflower & Oswald, 1998, Lindh & Ohlsson, 1996, Johansson, 2000). For instance, pre-existing wealth has been found to be positively correlated with the likelihood to enter into entrepreneurship (Evans & Jovanovic, 1989, Paulson and Townsend, 2004, Djankov et al., 2006). Ownership of property can be used to mitigate credit market imperfections by increasing access to capital and, hence, the probability to become self-employed (see e.g., Giannetti & Simonov, 2004, Banerjee & Duflo 2004, De Mel et al., and Wang 2012). However, it could also be the case that wealth and property proxy for ability and thus pick up the effect ability has on the probability to become self-employed. To get around this problem researcher have used instruments for wealth, for example inheritance and housing prices. Unfortunately, the results from studies instrumenting for access to capital are mixed (Hurst & Lusardi 2004, Fairlie & Krashinsky 2006).

The focus of the paper is to study what role access to property has in the decision to be self-employed. As already mentioned, access to capital has been found to be important, and access to property can reduce the capital constraint and make it easier to borrow. Indeed, for newly start-ups access to own capital - such as personal savings, house values, and credit cards - has been found to be the most important source of finance (Cassar, 2004, Gregory et al., 2005, Robb & Robinson, 2014). In addition, a recent Swedish survey found that 98 percent of capital providers require personal surety to lend out

to businesses, and consequently more and more small businesses are turning to use mortgage as a mean to finance their business ventures (Lendo, 2019).

We use detailed Swedish data to examine how access to property affect the probability of being and becoming self-employed. The hypothesis is that property value can enhance the ability for potential entrepreneurs to increase their mortgage and use that to finance business ventures. This relationship has previously been found by Jin et al. (2012). In order to get around the possible problem of property proxying for ability, or some other confounding factors, we also use an exogenous change in housing wealth that occurred due to a large property tax reform in Sweden in 2008. The reform lowered the property tax for especially highly assessed property by introducing a fairly low ceiling for the maximum tax payment. Hence, the hypothesis is that the reform reduces capital constraints for individuals with highly assessed property. Lower tax payments increase property values and consequently individual wealth, and in addition, increase disposable income as the recurrent yearly tax is reduced. Data are particularly rich and reliable, and suitable for a study of how property affects individuals' propensity to be and become self-employed. Specifically, the data used in this paper, Longitudinal Individual Database (LINDA), contain detailed tax-return information for over 300,000 individuals that are followed over a long time-period, and include a broad set of socio-economic and demographic variables known to affect self-employment. LINDA, hence, provides the data necessary to estimate statistically how the probability of being or becoming self-employed is affected by property values while simultaneously controlling for important additional determinants.

This study finds that the value of property has a strong and positive correlation with being and becoming self-employed. However, when we use the property tax reform in 2008 as a "natural experiment" in order to identify the effect of property on the employment decision the positive effect disappears for the choice to become self-employed, indicating that property value may proxy for something else than access to property, for example ability. That is, individuals with high ability may both he more likely to become self-employed and live in more valuable homes.

The paper is organized as follow. The next section provides a short discussion of some previous studies analyzing the effect of access to property and self-employment. Section 3 presents the data and describes the main features of the property tax reform, while section 4 describes the estimation technique. Finally, section 5 presents and discusses the results, while section 6 concludes the paper.

2. Earlier studies

Several studies have investigated the link between house prices and entrepreneurship. Many of them are based on regional data and study the effect of increased housing prices in an area on

entrepreneurship in the same area. For instance, Schmalz et al. (2013) find that regions where house prices go up make homeowners more likely to start a business, and that these businesses are larger in size than those created by renters. Similarly, Berggren et al. (2017) find using Swedish aggregate data that rising house prices in Swedish municipalities lead to higher frequency of start-ups in those municipalities. Molina et al. (2015) use microdata over Spanish households and their results indicate that household assets such as vehicles, real estate, and investments together with the financial security they provide encourage individuals to become entrepreneurs. Adelino et al. (2015) study the link between house prices and employment and show that regions with large house price increases experience stronger employment growth in small firms compared to regions that do not experience large price increases.

Related to this is the literature on windfall gains and business start-ups. The benefit from increased property value can be considered as windfall gains to the owners and used to relax credit constraints. Schäfer et al. 2011 found a positive effect of windfall gains and business start-ups using German data. Lindh & Ohlsson (1996) found a similar effect studying the link between lottery gains and the likelihood to start a business in Sweden.

Similarly, some studies have investigated access to collateral and business start-ups, but with mixed results. Black et al. (1996) find that access to collateral strongly influences firm formation. However, Hurst and Lusandi (2004) do not find any support for this relationship.

One problem with regional studies is endogeneity; does house prices lead to more start-ups in the region or do more start-ups and a booming economy increase house prices? It could easily go both ways. Another problem is that access to collateral and property could proxy for something else that also influence the probability of starting a business, such as ability. This would be the case if individuals with higher ability are both more likely to own property, and especially property whose value increases, and more likely to start a business. A way to mitigate the first problem is to look at individual data and not focus on regions. A way to mitigate the second problem is to instrument for property. Wang (2012) tries to get around these problems by using individual data and a property reform in China that allowed some state employees to buy their homes at subsidized prices. Wang compares the treatment group – those that could buy their homes at subsidized prices and, hence, received a windfall gain – with two control groups, either other state employees that did not get to buy their homes or workers in private enterprises. Wang finds that the property reform in China did indeed alleviate the credit constraints and allowed households to capitalize on the value of the real estate and, hence, increased the probability to become self-employed.

3. The Data

To study how property values influence the occupational choice in Sweden we use data from the Longitudinell INdividDAtabas (LINDA), a longitudinal data set that has sampled three percent of the population each year since 1968 (SCB, 2003). It consists of a large panel of individuals, and their household members, and is selected to be representative for the whole population. The sampling procedure - where individuals are replaced by a random sample of, for instance, newborns and immigrants - ensures that each cross-section of LINDA is representative for the population in a particular year (Edin & Fredriksson, 2000). The data come from detailed registers such as the income and wealth registers, tax authority, and population census data and is not self-reported or based on survey questions. The data are highly reliable and rich covering various measures of incomes, taxes, wealth, employment status as well as demographic information.

In this paper, we follow the standard tradition and, hence, use self-employment as a measure of entrepreneurial activity. It is, however, important to bear in mind that it in many ways is a poor measure for entrepreneurial activity. Specifically, we use income from business as an indicator of being self-employed. Business income includes income from sole proprietorships, trading partners, and limited partnerships but not limited liability companies. An individual is considered to be self-employed if he or she has income from self-employment.[1] As 89 percent of all new start-ups in Sweden are sole proprietorship (Cullen & Gordon, 2006) this is a good proxy for start-ups.

We include individuals with valid information on employment status, income, taxes, and demographic variables from 2006 to 2010. This data have the advantage of being able to track the same individuals over a five-year time span and thereby eliminate some of the problems with endogeneity, and is rich enough to be able to control for many confounding factors. We restrict the sample to include individuals that are in their working age (20 - 70) and have non-negative disposable income. They are over 450,000 observations for each year, although the number is reduced when education and other control variables are included.

Table 1 shows some sample characteristics for self-employed and employees, respectively. Over the entire time period, 2006 to 2010, 6.6 percent of those in the sample were self-employed. This number varied over the years, with a maximum value of 6.74 percent in 2006 and a minimum of 6.45 percent in 2010. In the sample, 1.29 percent became self-employed (varied between 1.22 percent in 2008 and 1.36 percent in 2010). Self-employed had a higher average disposable annual income than the

[1] Alternative definitions are used, such as self-reported status and alternative income measures. This does not change the results however.

employed (SEK 247,218 compared to SEK 220,629) and on average more than twice as much annual capital income (55,367 compared to 20,157, respectively). Self-employed also had a considerable higher taxable wealth. The average taxable wealth of the self-employed is almost 50 percent larger than the average taxable wealth of the employed individuals. One can speculate whether the substantially higher taxable wealth for the self-employed is a consequence of higher returns to self-employment or whether the wealth was initially higher, and maybe even a requirement for becoming self-employed. It could also proxy for ability and mean that more able individuals are more likely to become and remain self-employed. As already mentioned, a substantial body of literature has found that access to own capital is an important determinant to become self-employed (e.g., Evans & Leighton, 1989, Evans & Jovanovic, 1989, Meyer, 1990, Holtz-Eakin et al., 1994, Lindh & Ohlsson, 1996, Blanchflower & Oswald, 1998, Johansson, 2000). In addition, self-employed tend to be older than employees (47 compared to 43 years), more likely to be male than female. The fraction with higher education (more than three years of college) is higher among the self-employed compared to employees.

The property tax reform

In 2008, the Swedish property tax was reformed. Prior to the reform owner occupied property faced a one percent recurrent tax rate on the assessment value of the property. The assessment value is set to be approximately 75 percent of the market value, implying a tax rate of 0.75 percent of the market value of the property. The tax reform lowered the tax rate to 0.75 percent of the assessment value, or to 0.5625 of the market value and limited the maximum amount of yearly tax payments, in 2008 the maximum amount was set at 6 000 SEK, above this no tax on property was paid.

Figure 1 illustrates the effect of the reform. All property owners experienced a lower tax rate, but the reduction increases with property value. Owners of property valued up to around one million SEK saw a reduction in the rate from one to 0.75 percent of the assessment value, while owners of higher valued property paid the maximum amount of 6 000 SEK regardless of the value of the property. The tax reform changed the property tax from a proportional tax on property value to a regressive tax, as the tax payment as a share of the property value declines.

The reform also entailed other changes to the tax system in order to be budget neutral within the property sector. One other major change was that the capital gains tax on property increased from 20 to 22 percent of the gain.

4. Estimating the effect of property value on the decision to be self-employed

We follow earlier work and use probability regressions to estimate the binary choice of being as well as becoming self-employed taking into account other determinants such as income, age, and education. In order to identify the effect of the value of property we use the 2008 tax reform. Specifically we look at how the reform affected the probability of being as well as becoming self-employed. In addition, we also investigate whether the property tax reform had any impact on the success of the firms, measured as the growth in business income.

However, we start out running a logit model estimating the probability an individual is self-employed based on access to capital, including capital income (in logarithmic form), property value (measured as assessment value) and wealth (measured as taxable wealth) as well as labor income (in logarithmic form). In addition, we control for age and level of education. Specifically, we use the following logit regression:

$$logit(\Pr(SE_{it} = 1)) = X_{it}\beta' + T_{it}\gamma' + \mu_i + \tau_t + \varepsilon_{it}, \qquad (1)$$

where SE_{it} is a dummy variable that equals one if individual i is self-employed at time t. The X_{it} vector includes variables reflecting capital constraints including property value. T_{it} represents individual specific characteristics such as age, age squared and education level. The error term includes an individual specific time-invariant random effect (μ_i) to capture unobservable individual heterogeneity, an individual-invariant time effect (τ_t), and an independent and identically distributed component (ε_{it}) with zero mean and finite variance.

In addition, we run a specification on the probability of transitioning into self-employment, namely,

$$logit\ (\Pr(BSE_{i,t+1} = 1)) = X_{it}\beta' + T_{it}\gamma' + \mu_i + \tau_t + \varepsilon_{it}, \qquad (2)$$

where $BSE_{i,t+1}$ is a dummy variable that equals one if individual i transitioned from being an employee at time t to becoming self-employed at time t+1, and zero if the individual remains employed or self-employed in both years. The control variables are the same as in specification (1).

A potential problem with above regressions is that our variable of interest, property value, may proxy for confounding factors such as for example ability. Thus, we may have a problem with identification. To mitigate this problem we use the property tax reform in 2008 as a kind of natural experiment to determine whether those for whom the reform likely relaxed the liquidity constraint where more likely to become or be self-employed. Specifically, we would like to estimate a logit differences-in differences where we compare the outcome between two years prior to the reform, 2006, with the outcome two years after the reform, 2010, for those that had a large benefit from the reform to those that had a much smaller benefit from the reform. As the logit differences-in-differences violates the common trend assumption we instead use a linear probability model. As the groups may differ we include additional control variables such as income and age and education level. Specifically, we regress

$$\left(\Pr(y_{it} = 1|\text{Time}, \text{Treat})\right) = \alpha_1 \text{Time}_t + \alpha_2 \text{Treat}_i + \alpha_3 \text{Time}_t \cdot \text{Treat}_i + \beta X_{it} + \mu_i + \tau_t + \varepsilon_{it}$$

where y_{it} is a dummy variable for self-employment for individual i in year t, Treat_i identifies the treatment group (those that received a large decline in property tax), time_t is a dummy variable that equals one in the years following the reform. α_3 is the estimated effect of the property tax reform on self-employment. X_{it} is the vector of covariates and include age, age squared and education.

As a sensitivity, we follow Wang (2012) and estimate the differences-in-differences estimator in a logistical probability model as this model performs better when the mean rate of self-employment is low (Wang, 2012).

We let age enter the regressions in a non-linear way. It has previously been found that older workers are more likely to be self-employed (Blanchflower & Oswald (1990), Meyer (1990) and Blanchflower & Meyer (1994)) possibly, as they have more experience and more knowledge about available business opportunities. This effect is however declining by age. However, age can also proxy for risk aversion. Old tend to be more risk averse than young individuals but at a decreasing rate. Then we would expect the opposite relation; age to be negatively and age squared to be positively correlated with the propensity to become self-employed. Education is represented by a dummy variable that equals one if the individual have more than three years of university education.[2]

Labor income is also included, and expected to have a negative impact if it reflects the opportunity cost of becoming self-employed and/or poor employment opportunities. The opposite relation is also feasible if high-income individuals have greater potential to succeed with their business venture and, thus, more prone to be self-employed. Moreover, as pointed out by Robson (1998) the results may be

biased if individual income is excluded. Capital income is included as it may relax the capital constraint. Taxable wealth was reported in Sweden up until 2007 and we include taxable wealth in 2007 as a sensitivity control (as it reduces the number of observations).

We also include time and individual specific effects to control for time invariant and individual invariant factors that are hard to measure and quantify. It is, for instance, likely that the rules and bureaucracy involved with starting a business can be a deterrent of becoming self-employed. To measure and quantify these factors are hard, however, but as long as these factors are constant to all individuals the time specific effects, τ_t, will control for these factors. The same goes for the macro-economic environment and the institutional setting. The individual specific effects, μ_i, on the other hand, pick up the characteristics that are specific to the individual and constant over time. An individual's risk propensity is an important factor for the occupational choice and as long as this is constant over time the individual specific effect controls for this effect. The age variable, on the other hand, picks up the change in experience and knowledge or the risk propensity over the life-cycle.

5. Results

Table 2 presents the results for the model where access to capital explains self-employment. Four different specifications are presented in the four columns. In the first column property and income measures are included. In column two access to wealth (measured as taxable wealth in 2007) is added (which reduces the number of observation drastically). In column three individual specific characteristics such as age and education are included in addition to the income measures. Finally, in column four capital the income measures are lagged one time period back as it may be previous income that determines whether an individual is or becomes self-employment rather than current income.

The results are robust to the different specifications and have the expected signs. Property value is highly correlated with the probability of being self-employed in all specifications. Labor income has a negative and statistically significant coefficient, which may be due to higher alternative cost of being self-employed for high-income earners. Capital income is positively correlated with self-employment, while wealth seems to have no impact. Age is positively correlated with self-employment but at a diminishing rate, and, finally higher education is positively correlated with the probability of being self-employed. Lagging the income measures have no effect on these results, they remain unchanged. The size of the effects suggest that an increase in property value of 1 million increases the probability of being self-employed by 1.3 to 1.5 percent. Increasing capital income with 1 percent boosts the probability of being self-employed by 0.2 percent, while a one percent increase in labor income reduces the probability of being self-employed by 0.2 to 0.6 percent.

In table 3, regression results explaining the transition into self-employment are presented. The results are similar to those in table 2. Property value is again highly statistically significantly and positively correlated with the probability of becoming self-employed. A one million increase in property value increases the probability of becoming self-employed by 0.7 percent. Labor income is still negatively correlated (decreasing the probability of becoming self-employed by 0.3 to 0.4 percent) and capital income is positively correlated (increasing the probability of becoming self-employed by 0.1 to 0.2 percent), respectively. The other variables have the same impact as in table 2.

Turning to the problem with identification, we next present the results from the differences-in-differences estimators in linear probability regressions. Specifically, we compare self-employment and the transition into self-employment using the property tax reform as a "natural experiment" where the group with highly assessed property were treated and those with lower assessed property constitute the control group. The results are presented in table 4. In the first column no control variables are included, while we in column two and three add income measures as well as other individual specific effects such as age and level of education to control for heterogeneity in the treatment and control group. The effect of the reform on the treated (row one) is positive and statistically significant in all specification (though at a 10-percent significance level in column III). Being treated (receiving a lower property tax) increases the probability of being self-employed with 0.1 to 0.2 percent compared to the control group. The effect of the reform (row two) is positive and statistically significant suggesting that the reform in itself had a positive effect on being self-employed. The time dummy for the post-reform period is negative in columns II and III suggesting that after the reform the probability of being self-employed went down. As the reform coincided with the financial crisis in 2008, that is not surprising. All control variables have the expected sign and are statistically significant indicating that there are systematic differences between the treatment and control group. Capital income increases the probability of becoming self-employed while labor income reduces the same probability, and age has a positive while declining effect.

In table 5, the results for the probability to transition into self-employment are presented. The treatment effect is now negative though insignificant in the specifications with control variables. The reform in itself still has a positive and statistically significant effect but there is not a statistical difference between the probability of becoming self-employed for those that are treated compared to those that are not treated. The other variables do not differ from those in table 4. The results from this specification suggest that there is no effect of increased property value on the decision to become self-employed.

Finally as a sensitivity, in table 6 and 7, we present results from the logistical probability model. Here odds ratios are reported showing whether it is more or less likely that an individual is self-employed or becomes self-employed, respectively. The estimates suggest that the reform significantly increased the log odds of being self-employed by 1.06 to 1.12 times for the treatment group compared to the control group. The overall effect of the reform increases the log odds by 1.59 to 1.97 while the post-reform period decreases the log odds ratios with 0.89 to 0.97. All control variables have statistically significant coefficients with expected log odds ratios, suggesting that there are significant differences between the treatment and control group. Turning to the choice to become self-employed, table 7, we again find that the treatment effect is insignificant – that is the reform did not change the log odds differently for the treated than the untreated group.

Increasing property values, and with that the extra collateral that can be extracted can also affect existing entrepreneurs and make them more successful, for example, by increasing the growth of income from the business. In table 8, we present results of the effect of the tax reform on income growth of self-employment. The tax reform had no statistically significant impact on growth in business income once we include control variables.

6. Conclusions

Entrepreneurship is thought to play a vital role for economic performance and is, hence, something that concerns policy makers worldwide. In order to design efficient polices it is important to know how different measures, that are within the policy makers reach, affect entrepreneurship. In this paper, we look further into the role property values play for the means to be and become self-employed. The hypothesis is that higher property values can be used as collateral and reduce the capital constraint small business owners or potential business owners face. We use several specifications to study the link between property value and self-employment. Specifically, we make use of a large property tax reform in Sweden as a kind of natural experiment to identify the effect of property values on self-employment. We find that increased property values do seem to reduce the capital constraints and make it easier to be self-employed. However, the choice to become self-employed seem to be unrelated to property values when we identify the change in property value using the tax reform. Neither do property values seem to impact how successful, measured as growth in business income, an entrepreneur is.

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Figure 1. Pre- and post-reform property tax rates as share of market value

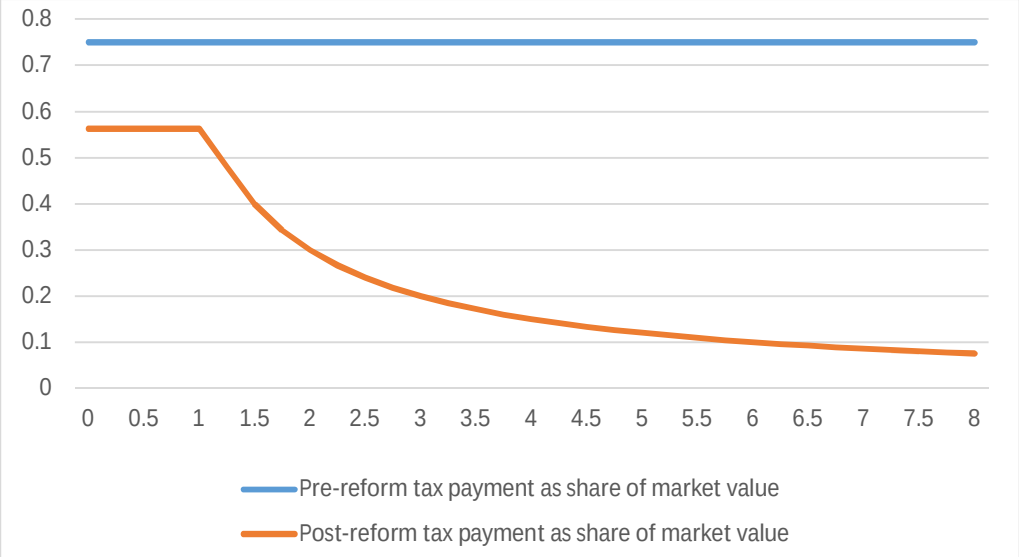

Table 1. Some sample characteristics for self-employed and employees, respectively.

	Self-employed	Employees
Share	6.6 %	93.4 %
Average disposable income	247,218	220,629
Average capital income	55,367	20,157
Average taxable wealth	115,626	81,910
Average assessment value property	333,392	195,927
Average property tax pre-reform	4033	2043
Average property tax post-reform	2755	1526
Average age	47.0	43.2
Share female	35.5%	51.4%
Marital status[1]		
Percent with higher education[2]	1.59	1.05

[1] Marital status equals one if the individual is married and zero otherwise.
[2] Higher education measures percentage with more than three years of university/college education.
Source: LINDA

Table 2. Logit estimation of the probability of being self-employed.

	I	II	III	IV (lagged)
Property value (millions)	1.58 (0.0395)***	0.59 (0.0668)***	1.32 (0.0038)***	1.43 (0.041)***
Capital income	0.21 (0.0055)***	0.21 (0.022)***	0.20 (0.0056)***	0.18 (0.0065)***
Labor income	-0.24 (0.013)***	-0.18 (0.046)***	-0.42 (0.017)***	-0.59 (0.019)***
Wealth		0.014 (0.58)		
Age			0.50 (0.021)***	0.49 (0.024)***
Age squared			-0.005 (0.0002)***	-0.005 (0.0002)***
Higher level of education			0.15 (0.089)*	0.31 (0.098)***
Constant	-6.82 (0.162)	-9.20 (0.664)***	-15.4 (0.471)***	-13.2 (0.491)***
N	547,768	48,084	547,768	423,091
Wald ch2	4236.9	246.7	3899.4	3119.1
Pro > chi2	0.000	0.000	0.000	0.000

Numbers shown in parenthesis are robust standard errors.
Significant at the 10% level, ** significant at the 5% level, *** significant at the 1% level
Capital and labor income are measures in logarithmic form.
Also include year dummies.

Table 3. Logit estimation of the probability of becoming self-employed.

	I	II	III	IV (lagged)
Property value (millions)	0.73 (0.0531)***	0.44 (0.105)***	0.72 (0.055)***	0.74 (0.064)***
Capital income	0.17 (0.0091)***	0.13 (0.040)***	0.17 (0.0093)***	0.13 (0.011)***
Labor income	-0.39 (0.020)***	-0.32 (0.076)***	-0.45 (0.021)***	-0.35 (0.026)***
Wealth		-0.01 (0.054)		
Age			0.11 (0.012)***	0.07 (0.014)***
Age squared			-0.001 (0.0001)***	-0.0008 (0.0001)***
Higher level of education			0.76 (0.156)***	0.74 (0.177)***
Constant	-3.75 (0.233)***	-4.43 (1.22)***	-5.34 (0.278)***	-5.73 (0.342)***
N	381,927	33,221	381,927	281,592
Wald ch2	861.4	51.50	934.4	495.5
Pro > chi2	0.000	0.000	0.000	0.000

Numbers shown in parenthesis are robust standard errors.
Significant at the 10% level, ** significant at the 5% level, *** significant at the 1% level
Capital and labor income are measures in logarithmic form.
Also include year dummies.

Table 4. Differences-in-differences estimation being self-employed, linear probability model

	I	II	III
Treatment effect of reform	0.0014 (0.0005)***	0.003 (0.001)***	0.002 (0.001)*
Reform effect	0.050 (0.0004)***	0.064 (0.001)***	0.049 (0.002)***
Post-reform effect	0.0003 (0.0002)*	-0.002 (0.0004)***	-0.001 (0.0005)**
Capital income		0.005 (0.0002)***	0.004 (0.0002)***
Labor income		-0.003 (0.0006)***	-0.008 (0.0006)***
Age			0.013 (0.0003)***
Age squared			-0.0001 (0.000003)***
Higher level of education			-0.004 (0.006)
Constant	0.053 (0.0004)***	0.069 (0.007)***	-0.13 (0.007)***
N	2,178,134	567,095	567,095
Wald ch2	2959.5	2914.5	9700.5
Pro > chi2	0.000	0.000	0.000

Numbers shown in parenthesis are bootstrap adjusted standard errors.
*Significant at the 10% level, ** significant at the 5% level,
*** significant at the 1% level.
Capital and labor income are measures in logarithmic form.
Also include year dummies.

Table 5. Differences-in-differences estimation becoming self-employed, linear probability model

	I	II	III
Treatment effect of reform	0.0006 (0.0003)	-0.0004 (0.009)	-0.0004 (0.008)
Reform effect	0.010 (0.0004)***	0.012 (0.0008)***	0.010 (0.0007)***
Post reform	0.002 (0.0002)***	0.0006 (0.004)	0.0008 (0.0004)**
Capital income		0.001 (0.0001)***	0.001 (0.0001)***
Labor income		-0.004 (0.0004)***	-0.005 (0.0003)***
Age			0.002 (0.0001)***
Age squared			-0.00002 (0.000001)***
Higher level of education			0.013 (0.003)***
Constant	0.018 (0.0002)***	0.051 (0.005)***	0.031 (0.003)***
N	1,592,179	403,692	403,692
Wald ch2	669.8	698.6	1324.1
Pro > chi2	0.000	0.000	0.000

Numbers shown in parenthesis are bootstrap adjusted standard errors.
*Significant at the 10% level, ** significant at the 5% level,
*** significant at the 1% level.
Capital and labor income are measures in logarithmic form.
Also include year dummies.

Table 6. Differences-in-differences estimation being self-employed, odds ratios from logistic probability model

	I	II	III
Treatment effect of reform	1.05 (0.014)***	1.12 (0.025)***	1.06 (0.024)**
Reform effect	1.97 (0.012)***	1.85 (0.021)***	1.59 (0.018)***
Post reform	0.97 (0.0083)***	0.89 (0.013)***	0.95 (0.014)***
Capital income		1.21 (0.0026)***	1.18 (0.0026)***
Labor income		0.77 (0.0032)***	0.66 (0.0033)***
Age			1.29 (0.004)***
Age squared			0.99 (0.00003)***
Higher level of education			1.12 (0.040)***
Constant	0.058 (0.0002)***	0.42 (0.020)***	0.010 (0.0007)***
N	2,178,134	567,095	567,095
Pseudo R-squared	0.0139	0.0479	0.0721
Wald ch2	15684.6	21268.4	21268.4
Pro > chi2	0.000	0.000	0.000

Numbers shown in parenthesis are robust standard errors clustered at individual level.
Significant at the 10% level, ** significant at the 5% level, *** significant at the 1% level.
Capital and labor income are measures in logarithmic form.
Also include year dummies.

Table 7. Differences-in-differences estimation becoming self-employed, odds ratios from logistic probability model

	I	II	III
Treatment effect of reform	0.99 (0.034)	0.96 (0.063)	0.95 (0.063)
Reform effect	1.49 (0.025)***	1.62 (0.055)***	1.53 (0.052)***
Post reform	0.93 (0.019)***	0.87 (0.035)***	0.89 (0.035)***
Capital income		1.15 (0.0076)***	1.14 (0.0074)***
Labor income		0.77 (0.0089)***	0.73 (0.0087)***
Age			1.10 (0.008)***
Age squared			0.99 (0.00008)***
Higher level of education			1.62 (0.143)***
Constant	0.012 (0.0001)***	0.090 (0.012)***	0.026 (0.004)***
N	1,592,175	403,692	403,692
Pseudo R-squared	0.0032	0.0196	0.0232
Wald ch2	738.3	1182.6	1505.4
Pro > chi2	0.000	0.000	0.000

Numbers shown in parenthesis are robust standard errors clustered at individual level.
Significant at the 10% level, ** significant at the 5% level, *** significant at the 1% level.
Capital and labor income are measures in logarithmic form.
Also include year dummies.

Table 8. Differences-in-differences estimations of increased property value and growth in business income

	I	II	III
Treatment effect of reform	0.084 (0.030)***	0.071 (0.052)	0.081 (0.052)
Reform effect	-0.082 (0.020)***	-0.078 (0.032)**	-0.009 (0.033)
Post reform	-0.056 (0.019)***	-0.009 (0.034)	-0.010 (0.033)
Capital income		0.061 (0.0063)***	0.071 (0.0064)***
Labor income		-0.063 (0.015)***	-0.044 (0.015)***
Age			-0.025 (0.0095)***
Age squared			-0.00009 (0.0001)
Higher level of education			-0.368 (0.135)***
Constant	10.0 (0.0001)***	10.1 (0.183)***	10.7 (0.278)**
N	50,059	18,872	18,872
Wald ch2	21.38	106.1	266.6
Pro > chi2	0.0001	0.0000	0.0000

Numbers shown in parenthesis are robust standard errors clustered at individual level.
Significant at the 10% level, ** significant at the 5% level, *** significant at the 1% level
Capital and labor income are measures in logarithmic form.
Also include year dummies.