

Push or Pull into Self Employment? Evidence from Longitudinal Canadian Tax Data

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Abstract

Does the choice of self-employment over paid employment reflect that individuals are “pushed” into self-employment by negative economic conditions or “pulled” in by strong economic prospects? Using longitudinal Canadian taxfiler data, we show that the self-employment rate has been very stable over the past decade in spite of the large increase in unemployment rate associated with the 2008 recession. The lack of cyclical association of self-employment rates suggests that self-employment rates are the product of structural and demographic influences in the economy.

Keywords: self-employment,

JEL Classifications: J21, J22, J65

I Introduction

As one policy lever to deal with persistently high unemployment rates or more recently to stimulate business activity, governments in Canada have encouraged citizens to start businesses. For example, in New Brunswick, the Workforce Expansion Self-Employment Benefit program helps unemployed individuals to start a new business by providing various forms of support “including financial assistance, coaching and ongoing technical advice”.¹ Moore & Mueller (2002), among others, differentiate between “push” versus “pull” factors in the decision to enter self-employment. “Push” factors are typically those associated with being pushed out of paid employment into a less preferred self-employed situation, and are thus positively associated with increases in the unemployment rate and unemployment durations. Conversely, “pull” factors are those which make the choice of self-employment more attractive to paid employment. Understanding the mechanisms by which individuals choose self-employment is important for determining whether a strategy of encouraging self-employment is likely to be effective in combatting high unemployment or for stimulating the economy.

The evidence from Canadian studies suggests that the unemployed are more likely to opt for self-employment than the employed, and the unemployed are more numerous during downturns. However, a given unemployed person is no more likely to opt for self-employment during a downturn than during positive economic conditions. Lin, Picot, & Compton (2000), Schuetze (2000), and Arai (1997) have all found that up to 1994 deteriorating economic conditions in Canada have little impact on the decision to enter self-employment. Moore & Mueller (2002) find little evidence that self-employment decisions, conditional on switching jobs, depend on the business cycle (i.e. the unemployment rate) but they do find that the push hypothesis is consistent with their observation that workers who leave their jobs involuntarily are more likely to become self-employed and that longer spells of unemployment are associated with increased likelihood of self-employment. More recently, LaRochelle-Coté (2010), using labour force and employment survey data, examines the economic downturn between October 2008 and October 2009 and finds substantial increases in the number of self-employed coincident with the decrease in the numbers of paid employees.

Not all studies focus on the business cycle as the driver of self-employment decisions; some studies focus on the demographic characteristics such as age, sex and marital status² or personal characteristics such as risk preferences and access to capital of those choosing self-employment.³

¹ http://www2.gnb.ca/content/gnb/en/services/services_renderer.17077.Self-Employment_Benefit_-_Workforce_Expansion_.html

² Blanchflower & Oswald (1998) show that having received an inheritance or gift strongly increases the likelihood of entering self-employment, while childhood psychological tests show no apparent correlation. This is not surprising since entering self-employment is risky and often requires access to capital. Skriabikova, Dohmen, & Kriechel (2014) focus on the risk preferences of those entering self-employment. Oyelere & Belton (2013) shows that African Americans are much less likely than whites to become self-employed. They further find that this varies substantially within subgroups of African-Americans.

³ Özcan (2011) notes that married individuals are more likely to be self-employed and studies the role of the partner in differing relationship contexts. Furthermore, Noseleit (2014) shows that women with children are more likely to enter self-employment. More generally, Burke, FitzRoy, & Nolan, (2002) explore the determinants of self-

Other studies have identified that some sectors of the economy have higher prevalence of self-employment as do some professions. Consequently, the self-employment rate in the economy will also reflect changing demographics of the Canadian population and structural shifts in the Canadian labour market. Kamhi & Leung (2005, p 15), for example, document that the rising self-employment rate between 1987 and 1998 was primarily caused by increases in “professional, scientific and technical services; educational services and health care; management, administrative, and other support services,” while the decreases in the period of 1999 to 2002 were primarily caused by decreases in agricultural, retail trade and manufacturing industries. Bahar & Liu (2015) report similar findings by industry with data up to 2010, showing steady large declines in self-employment from farming.

In this study, we revisit the macroeconomic determinants of self-employment in Canada using tax-filer data from 1982 to 2013. We show that in spite of the large jump in the unemployment rate associated with the 2008 recession, there is no visible change in the rate of self-employment.⁴ However, this stable rate of self-employment masks considerable variation in the trends across provinces. Regression analysis suggests that the provincial rate of self-employment is only weakly associated with measures of economic activity including the growth of GDP, the change in the unemployment rate and employment rate. The absence of cyclical influences on self-employment rates suggests that the trends in self-employment are more likely due to demographic change in the Canadian population and structural shifts in the Canadian labour market.

II Methods and Data

A Data: The Longitudinal Administrative Database (LAD)

For all variables related to self-employment, we use the Longitudinal Administrative Database (LAD) for the years 1982 to 2013. The LAD is a longitudinal random 20 percent sample of the T1 Family File (T1FF), a yearly cross-sectional file of all Canadian taxfilers and their families. Once an individual is selected into the LAD, his/her tax files for all years are included into the dataset.

employment in Britain, focussing on differences between men and women. Perhaps surprisingly, Henley (2007) shows that aspirations a year earlier are not often related to starting new business. Several studies have attempted to measure outcomes for self-employed workers. Lofstrom (2013) compares earnings for low-skilled American self-employed workers to those working in low-skilled jobs. He finds that while males see returns from self-employment that are slightly higher than for females, for most low skilled workers, paid employment is a more financially rewarding option than self-employment. Caliendo, Hogenacker, Künn, & Wießner (2015) examine a German subsidy program designed to encourage unemployed workers to start their own business. Compared to regular business founders, participants faced disadvantages related to entrepreneurial ability and access to capital; as a result, they lagged regular business start-ups in income, business growth and innovation.

⁴ This appears to be in contrast to the findings of LaRochelle-Coté (2010). However, LaRochelle-Coté (2010) used Labour Force Survey data and a definition of self-employment that included those reporting working for a family business without pay. It is possible that this measure is more sensitive to the business cycle than our measure, which is based on tax filings.

We apply two definitions of self-employment. First, we define a tax-filer as self-employed if he/she reports any self-employment earnings, whether positive or negative, regardless of source – our “broad” self-employment definition. Second, we apply a more narrow definition of self-employment, which counts only those individuals who report positive self-employment earnings that are greater than 50 percent of their total income from all sources. For each of these definitions, we define entrants to self-employment as those who meet the self-employment definition in a given year who had not met the definition in the previous year. Similarly, we define self-employment leavers as those who meet the self-employment definition in a given year but do not in the following year. Therefore, a given individual can be defined as a self-employment entrant or leaver in multiple years. Following the literature, we define the following three rates for each of our two self-employment definitions:

- Self-employment rate – The number of self-employed in a given year divided by the labour force (and multiplied by 100);
- Self-employment entry rate – The number of entrants to self-employment divided by the labour force (and multiplied by 100); and
- Self-employment exit rate – The number of self-employment leavers in a given year divided by the number of self-employed. Thus, for 2012, the number of leavers is defined as the number of self-employed in 2012 who were not self-employed in 2013. This number is divided by the number of self-employed in 2012 for the 2012 exit rate.

B Methods

In descriptive statistics, we provide both the level counts of self-employed as well as self-employment rates for both Canada and individual provinces.

In regression analysis, we use only the provincial rates of self-employment as dependent variables.:

$$\Delta SE\ rate_{pt} = b_1 + b_2 \Delta \ln Cycle_{pt} + b_3 Prov + b_4 Year + \varepsilon_{pt}$$

where $\Delta SE\ rate_{it}$ is the change in the rate of self-employment (using one of our two definitions: broad or narrow self-employment) in province p in year t (from year t-1). We also replace the self-employment rate with rates of entry to and exit from self-employment

$\Delta \ln Cycle_{pt}$ is a measure of the business cycle using either the change in the natural log of real provincial GDP, the provincial unemployment, or provincial employment rate. ε_{pt} is the model’s error term. We include a set of provincial dummy variables, and year dummy variables capturing our data period from 1983 (after differencing) to 2013. Since we have ten provinces and 31 years after differencing, the full sample regressions are based on 310 aggregated province-level observations. Entry and Exit rates lose a year from the beginning and end of the data period, respectively; those regressions are therefore based on 300 province-level observations.

Following Lin et al. (2000)⁵, we also include the change in the natural logarithm of the provincial participation rate, $\Delta LF\ Part_{it}$, in specifications that use the employment or

⁵ Lin et al.’s (2000) model uses natural logarithms of the various rates, but they do not use a differences model.

unemployment rates (but not with GDP). However, given that the participation rate is likely highly correlated with our measures of the business cycle, we also provide specifications excluding the participation rate in the appendix.

III Results

A Summary Statistics

As described above, we use two definitions of self-employment. The first identifies as self-employed individuals who report any amount of self-employment earnings in their annual income tax, henceforth referred to as our *broad* definition of self-employment. The second, our *narrow* definition, counts as self-employed those individuals who earn at least half of their total reported income through self-employment. The counts of the individuals from these two definitions are depicted in Figure 1. As can be seen, the number of individuals reporting any self-employment income grows from just over 1.5 million in 1982 to about 2.9 million in 2013. Individuals meeting the narrow definition grew from about 640,000 to 1.25 million during the same period. The two series follow roughly the same pattern with the broad self-employment series exhibiting a somewhat higher level of variation over time than the narrow definition; not surprising given that less attachment is required to meet the former definition.

In Figure 2, we plot these same two series as a percentage of the Canadian labour force. As a percentage of the labour force, the self-employment rate (regardless of definition used) grew slowly through the 1980s and quickly during the 1990s until 1997. From 1997 to 2003 the self-employment rate fell but then remained stable from 2003 to 2013. This is in spite of the sharp increase in the unemployment rate associated with the 2008 recession. Figure 2 also plots the Canadian unemployment rate over the time period. From casual inspection, it is difficult to discern a strong cyclical pattern at any point during the 32 years of data. This is especially true during the most recent decade, when there is very little variation in the rate of self-employment.

While Figure 2 plots the overall rate of self-employment, Figure 3 shows the rate of entry and exit from self-employment. The rate of exit is defined as the number of individuals leaving SE in a given year divided by the number of self-employed in that year. In contrast however, the entry rate is the number of entrants to self-employment as a percentage of the labour force. This results in the rates of entry and exit to self-employment appearing different, even though the absolute number of entrants and leavers is similar (with entrants being slightly higher in most years). Figure 3 shows that, with the exception of a few spikes related to tax law changes⁶, exit

⁶ The spike in the narrow SE exit rate in 1994 is related to a change in tax law that changed the reported fiscal year for many self-employment. This meant that many self-employed reported on fewer than twelve months of self-employment income in 1994 (hence did not earn enough to meet the “narrow definition” of self-employment). A corresponding increase in “entry” to narrow SE is observed in 1995, as many individuals reported on income from more than 12 months, making it easier to reach our narrow definition of self-employment. There is also a large spike in entries to and exits from any earnings self-employment in 1987. In other words, a large number of individuals reported a small amount of self-employment income in 1987, but not in other years (thus being both entrants and leavers from self-employment in the same year.) This is related to a major tax reform bill (Bill C-139), which broadened the tax base for both personal and corporate income. It is not yet clear to the authors why this seems to have caused a spike in only one year. Finally, it is unclear whether the uptick in exits in 2012 is real or an

rates from self-employment have remained fairly stable over the study period and do not exhibit any obvious relationship with the business cycle. Interestingly, the exit rate from the narrow definition of self-employment is consistently higher (by about 5 percentage points) than the exit rate from broad self-employment (note that the two series use different denominators). The two series following roughly the same pattern with the exception of the spikes mentioned above.

Entry rates to self-employment, as a percentage of the labour force, are also depicted in Figure 3. In this case, entry to the broad definition of self-employment is somewhat higher than entry to narrow self-employment. Spikes in the broad definition in 1987 and in entry to narrow self-employment in 1995 correspond to similar spikes in exit rates, which are related to policy and/or reporting changes. Otherwise, entry rates are fairly steady over time and are not visibly related to the business cycle.

In Figure 4, we break out the self-employment rates by gender. This shows that self-employment rates were substantially higher for men than for women. However, over the period of our data, women have gone a long way to closing the gap in self-employment rates.⁷ Figure 4 shows that self-employment rates were growing for both sexes from the mid-1980s through the 1990s. However, the rate of growth was substantially higher for women than for men. From the late 1990s, the rate of growth slowed for both men and women. For men, this meant that rates were declining since 1996. For women, rates continued to increase slightly, but much more slowly than earlier periods. Together this results in the flat overall rate since the early 2000s observed in Figure 2.

Figures 5 (a and b) and 6 (a and b) break out the broad self-employment rates by the ten Canadian provinces. In Figure 5a, the rates for the broad definition of self-employment are shown for the five easternmost provinces. Similar patterns exist in Nova Scotia, Newfoundland, and New Brunswick; each province had relatively stable self-employment rates through the 1980s, growing rapidly through the mid-1990s, and falling since about 1998. PEI, the smallest province, had the highest rate of self-employment among the eastern provinces; however, it is falling steadily throughout the entire sample period. Quebec, however, by far the largest of these provinces showed rapid growth from the late 1980s, tapering through the late 1990s, and returning to steady growth from 2002.

Figure 5b shows the same series for the 5 westernmost provinces. Of note is that the province of Saskatchewan has a substantially higher rate of self-employment than the other provinces. Otherwise, however, the shapes of the curves over time is very similar across the provinces from 1982 until 2003, and look very much like the provinces in Figure 5a. After 2003, however, there is a divergence; Ontario and British Columbia return to steady growth in the rate of self-employment, while the provinces of Manitoba, Saskatchewan and Alberta all continue on a downward trend. Thus overall, the steady rate of self-employment observed in Figure 1 is a combination of declining rates of self-employment in most of the smaller provinces, but increasing rates of self-employment in the large provinces of Ontario, Quebec and B.C.

artifact of the data. In some cases, the self-employed have longer to file their tax return, which may appear as an exit if the 2013 data were not fully mature.

⁷ The gender gap in self-employment is much larger, and closes much more, than the overall gap in employment rates over the same time period.

Figures 6a and 6b present similar series for the narrow definition of self-employment by province. In Figure 6a, the easternmost five provinces display considerably more variation in the narrow self-employment rates, making it difficult to describe common trends. Importantly, however, it is worth noting that Quebec has a very steady rate of narrow self-employment from about 1996, which contrasts to the rising rate seen for the broad definition of self-employment in Figure 5a. In Figure 6b, the narrow self-employment rates for the westernmost provinces follows largely the same patterns as observed in the rates of broad self-employment (as in Figure 5b). However, as in the case of Quebec, the rates in the provinces of B.C. and Ontario after the early 2000s appear much more level compared to the rising rates of our broad definition of self-employment seen in Figure 5b.

B Regression Results

Table 1 presents coefficients for the change in GDP for 18 regressions of equation 1 using the complete dataset from 1983 to 2013.⁸ The first panel presents results using self-employment rates based on the broad self-employment definition as the dependent variable, while the second presents results using our narrow definition. In each panel, results are presented for men and women together, and each separately. We also present separate results for each of three dependent variables: the overall rate of self-employment, the rate of entry to self-employment and the rate of exit from self-employment. As described above, the major thrust to the “push” theory of self-employment is that entrants are pushed into self-employment after losing their paid jobs and facing unemployment. We would therefore expect to see negative signs on GDP and employment rate coefficients on the overall rate of self-employment and the entry rate to self-employment if the push theory were empirically dominant. For the exit rate, we should expect to see the opposite.

GDP

The first column of Table 1 provides results for the provincial rate of self-employment regressed on the change in the log of provincial GDP. For the overall rate of self-employment and the entry rate, regardless of the definition of self-employment used, the coefficients have a positive sign, indicating that as employment levels increase so too does the self-employment rate (as a fraction of the labour force). However, only the coefficients for the entry into the “any earnings,” our broad definition, are statistically significant. This suggests that earning the first dollar of self-employment earnings is positively associated with economic activity, as measured by GDP. All coefficients for the exit rate from self-employment are statistically insignificant, although the signs switch from positive to negative when switching from the broad to the narrow definition of self-employment.

In Tables 2 and 3, we break the full sample into two smaller timeframes: from 1983 to 1995 and from 1996 to 2013. Results are largely similar, with few statistically significant coefficients.

⁸ Since we cannot observe entry rates until the second year of data, the regressions using the entry rate as dependent variable use data from 1984 to 2013. Similarly, we cannot observe exit for the final year of our data, 2013. The regressions for the exit rates therefore use data from 1983 to 2012.

While the coefficients are not much different in magnitude from the earlier to later period, for the entry rates to broad self-employment, the standard errors are smaller in the later period, which is what is driving the results seen in Table 1.

Employment Rate

The first column of Table 4 provides results for the provincial rate of self-employment regressed on the provincial employment rate. In all cases, regardless of the definition of self-employment used, the coefficients have a positive sign, indicating that as employment rates increase so too does the self-employment rate (as a fraction of the labour force). For the broad definition of self-employment, the employment rate coefficients are significant for both men and women for both the rate of self-employment and the entry rate. For the exit rate from self-employment, the employment rate coefficient is statistically significant only for women.

In the second panel of Table 4, results are shown for the “narrow” definition of self-employment, where self-employment is defined as having earned more than half of total income through self-employment. Again, coefficients are positive. However, it is only for men (and both sexes combined) that the coefficients are statistically significant. Entry and exit rates from “narrow” self-employment are not statistically significantly affected by the employment rate.

Unemployment Rate

The first column of Table 5 provides results for the rate of self-employment regressed on the unemployment rate. In all cases, except for the exit rate from the narrow definition of self-employment, the coefficients have a negative sign. However, they are only statistically significant at the 5% level in the case of the broad definition of self-employment for men; for men and women combined, they are significant at the 10% level. For the narrow definition of self-employment, none of the coefficients is statistically significant at conventional levels.

As we move across the columns of Table 5, we come next to the regressions for the entry rate into self-employment. Again, we find negative coefficients. However, the only statistically significant (at the 10% level) coefficient is for men entering the broad definition of self-employment.

The third set of columns in Table 5 presents the results on exit from self-employment. Here, the coefficients for the broad definition of self-employment are negative while the coefficients for the narrow definition are positive. However, none are significant at conventional levels.

IV Discussion and Conclusion

Theories of self-employment suggest it should vary with the business cycle. The most common “push” set of hypotheses suggests that workers are primarily pushed into self-employment by weak economic job prospects. We should therefore expect to see a positive association between the unemployment rate and self-employment rates. On the other hand, the “pull” hypothesis suggests that workers are attracted to the likely success of a new business and are therefore pulled into self-employment during positive economic conditions.

In fact, when graphed against unemployment rates, self-employment rates show very little obvious correlation with the unemployment rate. Nationally, the employment rate rose fairly steadily during the late 1980s to mid-1990s. Rates then decline until about 2003. Since 2003, however, self-employment rates in Canada have been remarkably stable, in spite of the large increase in the unemployment rate associated with the 2008 recession.

This national result, however, hides considerable variation in self-employment rates across the provinces. Since the early 2000s, slowly rising self-employment rates in the larger provinces of Ontario, Quebec and B.C. have offset larger declines in most of the smaller provinces. Similarly, strong growth in female self-employment rates have offset stagnant or declining male self-employment rates.

Regression results show only a weak association between the provincial self-employment rates (measured in annual differences) and measures of economic activity (GDP, the unemployment rate and employment rate). If anything, self-employment rates are slightly higher in good economic times rather than bad. We conclude that this is weak evidence in support of the “pull” hypothesis of self-employment.

Changes in the self-employment rate are more likely driven by structural factors in the economy, such as changes in the age of the population and increasing importance of certain industrial sectors at the expense of others, rather than business cycle variation.

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Figures

Figure 1 – Self-employment counts, Canada



Figure 2 – Self-employment rates (% of labour force), Canada

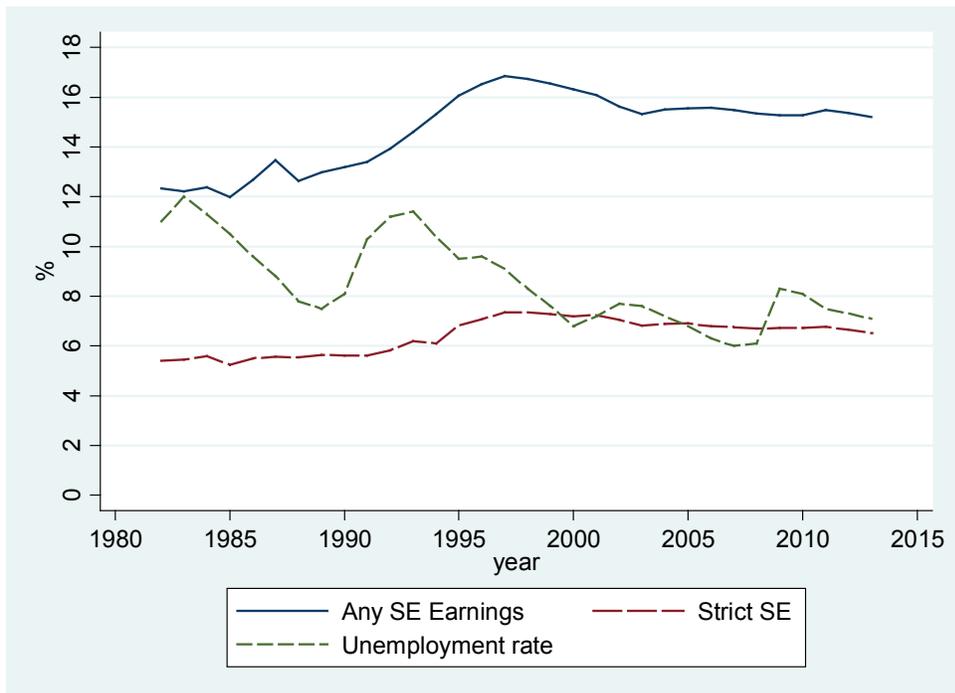


Figure 3 – Self-Employment Entry & Exit Rates, Canada

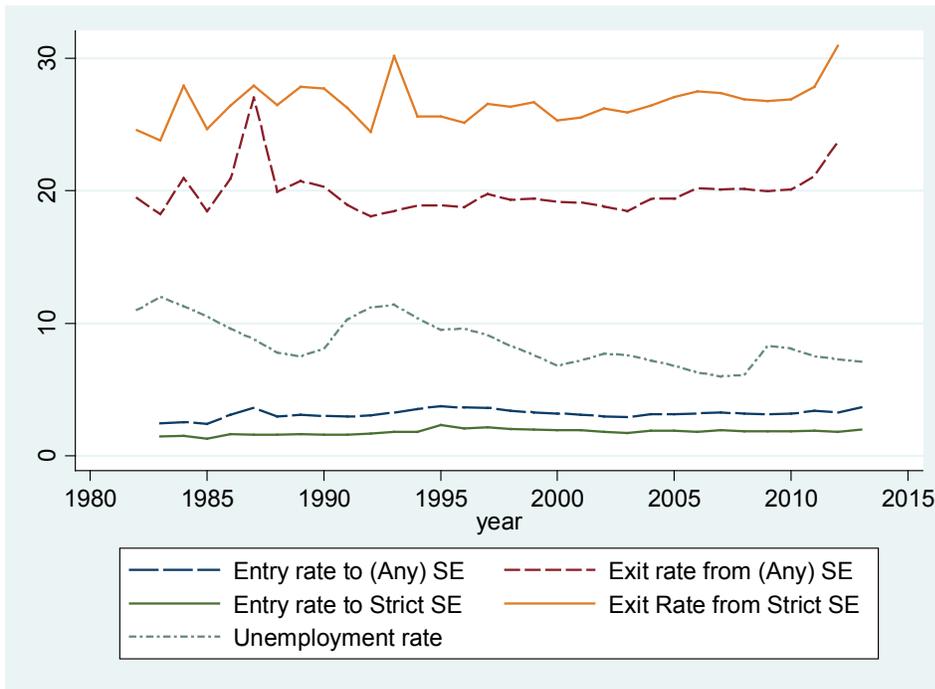


Figure 4 – Self-Employment Rates (% of Labour Force), by Sex, Canada

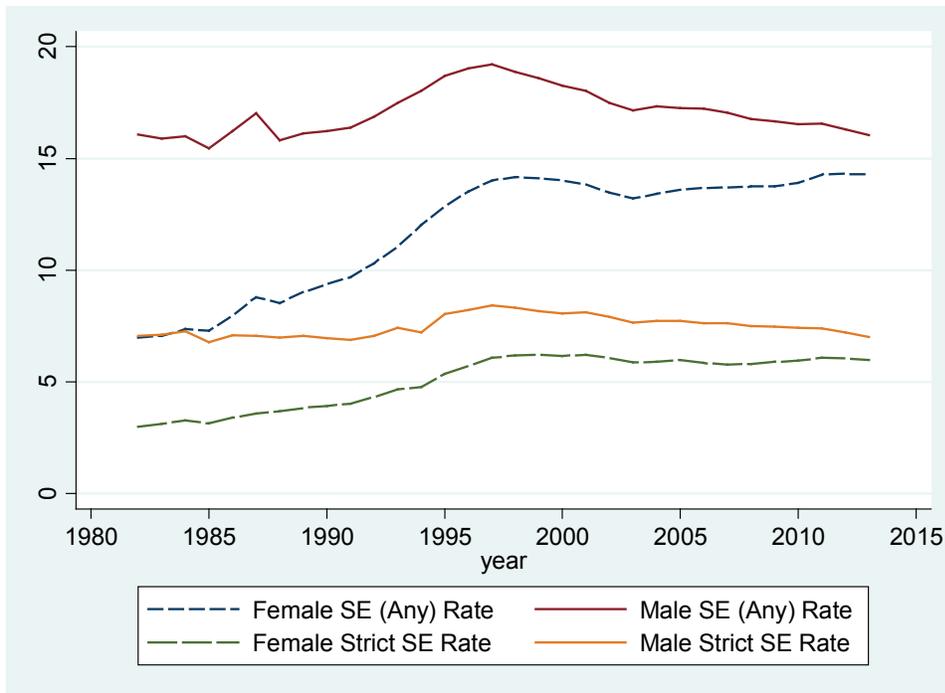


Figure 5a – Self-Employment (Broad definition) Rates by Province (Quebec and Atlantic)

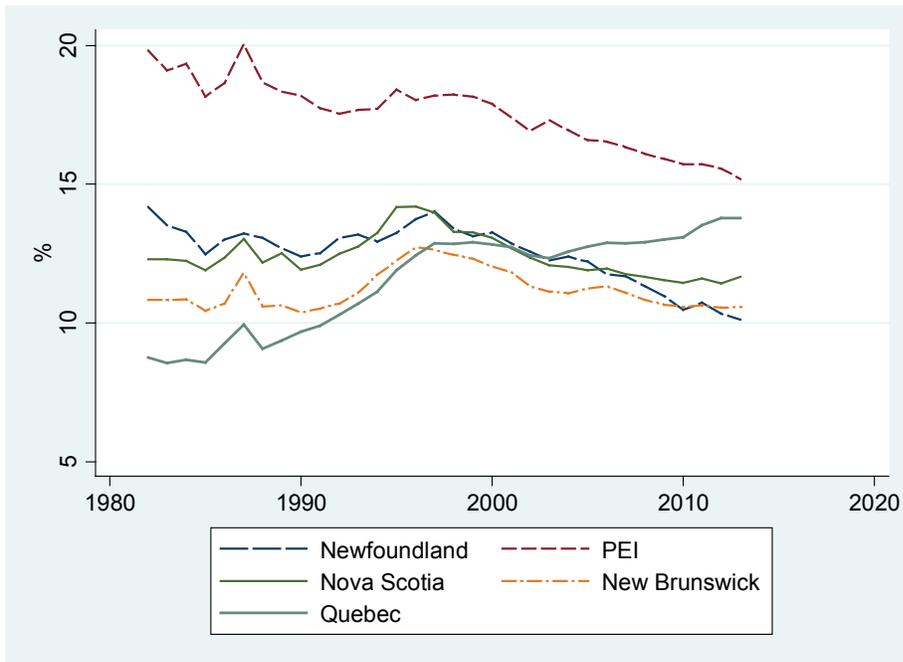


Figure 5b – Self-Employment (Broad definition) Rates by Province (Ontario and West)

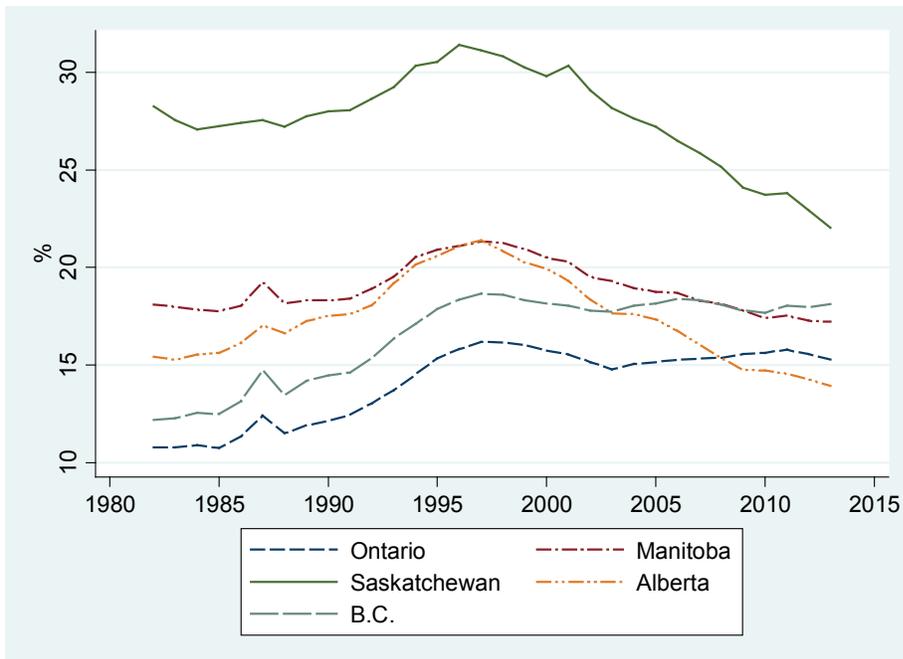


Figure 6a – Narrow Definition Self-Employment Rates by Province (Quebec and Atlantic)

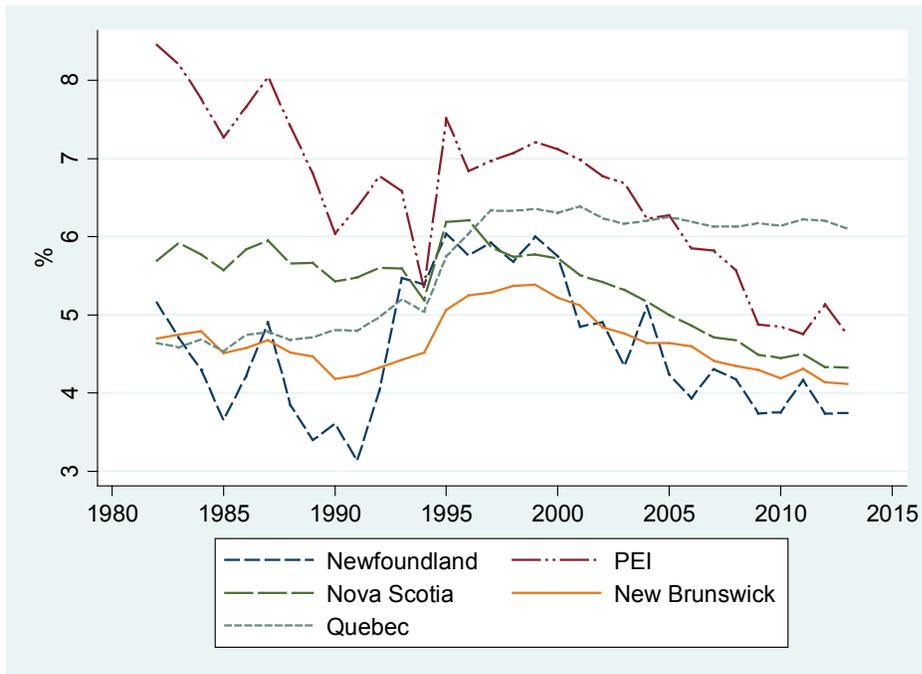


Figure 6b – Narrow definition Self-Employment Rates by Province (Ontario and West)

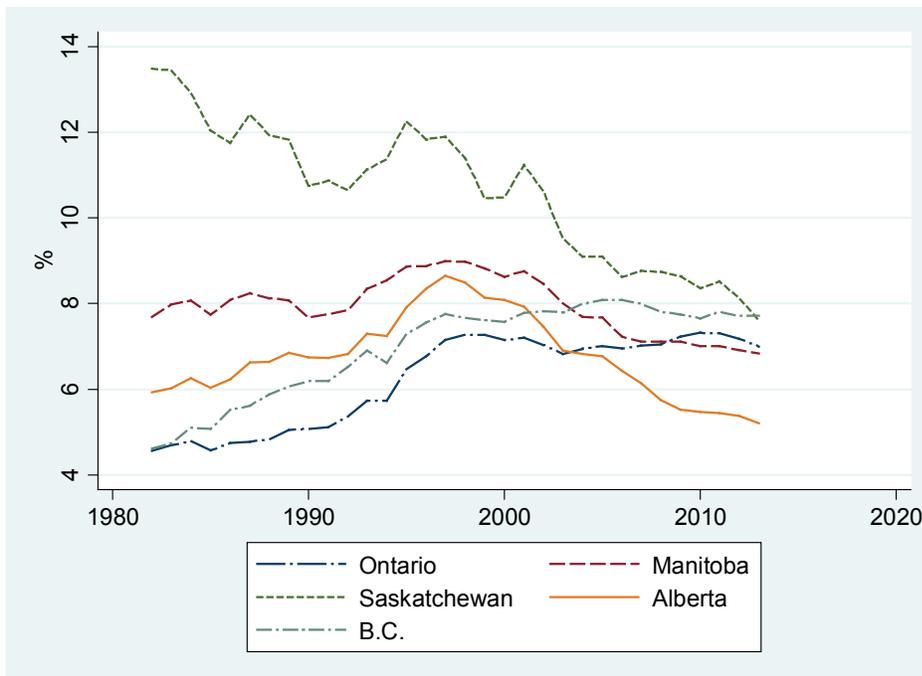


Table 1: GDP – Regressions of Self-Employment on GDP (All Years, 1983-2013)

Broad Se - Change in ln(GDP)

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	0.741	0.695	1.372	0.505	0.962	2.950
Women	0.952	0.756	1.417	0.574	2.560	3.705
Men	0.387	0.832	1.327	0.610	0.065	3.164

Years	1983-2013	1984-2013	1983-2012
N	310	300	300

Narrow Se - Change in ln(GDP)

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	0.318	0.701	1.070	0.624	-1.332	6.912
Women	0.371	0.456	0.601	0.381	-0.640	6.573
Men	0.283	1.035	1.477	0.947	-2.005	8.232

Years	1983-2013	1984-2013	1983-2012
N	310	300	300

Table 2 – Regressions of Self-Employment on GDP (1983-1995)

Broad Se - Change in ln(GDP)

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	1.266	1.086	1.590	1.043	3.218	5.874
Women	0.576	1.116	1.131	1.117	5.331	6.965
Men	1.716	1.350	1.961	1.262	1.870	6.163

Years	1983-1995	1984-1995	1983-1995
N	130	120	130

Narrow Se - Change in ln(GDP)

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	-0.542	1.236	0.704	1.174	-4.652	11.397
Women	-0.278	0.634	-0.222	0.616	-0.839	10.279
Men	-0.689	1.865	1.479	1.775	-6.041	13.488

Years	1983-1995	1984-1995	1983-1995
N	130	120	130

Table 3 - Regressions of Self-Employment on GDP (1996-2013)

Broad Se - GDP

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	0.912	0.759	1.176	0.465	-1.435	2.504
Women	1.908	0.890	1.610	0.593	-1.143	3.628
Men	-0.058	0.912	0.814	0.559	-1.711	2.910

Years	1996-2013	1996-2013	1996-2012
N	180	180	170

Narrow Se - GDP

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	1.310	0.796	1.262	0.679	0.786	8.590
Women	1.171	0.617	1.155	0.479	-2.009	8.595
Men	1.413	1.148	1.385	1.036	1.100	10.309

Years	1996-2013	1996-2013	1996-2012
N	180	180	170

Table 4 – Regressions of Self-Employment on Employment Rate (All Years, 1983-2013)

Broad Se - Employment Rate

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	5.856	2.056	3.309	1.602	10.951	9.158
Women	4.428	2.160	5.235	1.724	24.975	11.204
Men	5.844	1.854	2.819	1.489	7.710	7.637

Years	1983-2013	1984-2013	1983-2012
N	310	300	300

Narrow Se - Employment Rate

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	4.938	2.126	3.126	1.946	22.369	21.444
Women	0.833	1.297	0.913	1.120	-4.964	19.865
Men	5.731	2.490	1.161	2.315	24.791	19.884

Years	1983-2013	1984-2013	1983-2012
N	310	300	300

Table 5 – Regressions of Self-employment on Unemployment Rate (All Years, 1983-2013)

Broad Se - Unemployment Rate

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	-0.396	0.206	-0.241	0.160	-1.195	0.911
Women	-0.183	0.220	-0.184	0.179	-1.609	1.143
Men	-0.430	0.194	-0.283	0.153	-0.451	0.797
Years	1983-2013		1984-2013		1983-2012	
N	310		300		300	

Narrow Se - Unemployment Rate

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	-0.338	0.212	-0.335	0.193	0.546	2.139
Women	-0.066	0.132	-0.102	0.115	0.832	2.016
Men	-0.360	0.260	-0.093	0.238	0.814	2.077
Years	1983-2013		1984-2013		1983-2012	
N	310		300		300	

Appendix Table 1 - Regressions (without labour force participation rate) of Self-employment on Employment Rate (All Years, 1983-2013)

Broad Se - Employment Rate

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	-3.423	1.405	1.115	1.043	7.779	5.957
Women	-5.679	1.344	-0.605	1.050	1.386	6.729
Men	-3.785	1.393	1.474	1.033	7.263	5.300
Years	1983-2013		1984-2013		1983-2012	
N	310		300		300	

Narrow Se - Employment Rate

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	-2.347	1.421	-1.313	1.279	-2.653	13.998
Women	-4.306	0.796	-2.474	0.679	-26.467	11.833
Men	0.859	1.751	0.866	1.601	11.572	13.818
Years	1983-2013		1984-2013		1983-2012	
N	310		300		300	

Appendix Table 2 - Regressions (without labour force participation rate) of Self-employment on Unemployment Rate (All Years, 1983-2013)

Broad Se - Unemployment Rate

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	-0.298	0.216	-0.237	0.159	-1.238	0.909
Women	-0.257	0.237	-0.208	0.182	-1.686	1.145
Men	-0.208	0.208	-0.281	0.152	-0.557	0.787
Years	1983-2013		1984-2013		1983-2012	
N	310		300		300	

Narrow Se - Unemployment Rate

	ln (Se Rate)		ln (Entry Rate)		ln (Exit Rate)	
	Coef.	St. Err	Coef.	St. Err	Coef.	St. Err
Men and Women	-0.264	0.218	-0.299	0.195	0.738	2.136
Women	-0.113	0.143	-0.130	0.120	0.557	2.036
Men	-0.290	0.258	-0.100	0.236	0.805	2.050
Years	1983-2013		1984-2013		1983-2012	
N	310		300		300	