

**Self-employment in Canada:
A Survey of the Recent Literature**

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1. Introduction

“Self-employment is a type of entrepreneurship and small business, something that is encouraged by various government policies and sometimes thought to have particularly desirable impacts, such as on economic growth (Lin et al., 1998).” Recent data has often reported that there has been an increase in the share of self-employment relative to total employment. Between 1976 and 1998, self-employment rose steadily by an annual average rate of 3.6%, while paid-employment rose more slowly by an annual average rate of only 1.4% (Simpson & Sproule 1998). Despite the fact that there was a small decline in the share of self-employment to total employment at the end of the 1990s, self-employment still accounted for about 75% of all job growth in the 1990s (Hughes 2001).

In 2004, self-employment accounted for about 18% of total employment in Canada. In other words, one out of six workers in Canada is currently self-employed (Statistics Canada 2001a). Compared to 20 years ago, when about one out of eight workers reported being self-employed, self-employment has increased by more than 100% (from less than 1.2 million in 1976 to nearly 2.5 million in 2000). In contrast, the number of paid-employees rose by merely one-third, from 8.6 million to 11.5 million during the same period. Some OECD countries have experienced similar growth trends of self-employment and paid-employment during the last two decades. The combination of the rapid growth of self-employment together with the slower growth of paid-employment has received increasing attention from academic researchers and government agencies.

Self-employment is typically viewed as problematic when studying the labour market. Because total employment contains only a relatively small group of self-employed individuals, self-employment has often been ignored by researchers for reasons of analytical inconvenience or data limitations. Even when self-employment data were available, researchers often omitted the self-employed group from their samples because they viewed this data as unreliable. For this reason, there exists only a very limited number of articles dealing with self-employment in Canada in the earlier periods.

The continuation of the self-employment trend suggests the importance of revising some government policies dealing with self-employment. The objective of this paper is to explore the recent economic literature on self-employment in Canada. Attempts will be made to identify the causes of the rapid growth of self-employment and to explain why current studies are incomplete.

A sizeable section of the paper will be devoted to summarizing the existing empirical theories and evidence on self-employment and examining the role of government policies regarding self-employment.

Section 2 provides a definition of self-employment according to the description provided by Statistics Canada. Section 3 provides a discussion of the importance of self-employment to the Canadian labour market and an overview of the characteristics of self-employment in Canada. The economic theories and the policy issues related to self-employment will be discussed in sections 4 and 5 respectively. Section 6 provides a detailed analysis of an important self-employment related government program, namely Self-employment assistance (SEA), which has attracted interest in the last two decades, and has been adopted by some OECD countries since the mid-1980. The paper concludes with a summary and brief discussion on the undeveloped state of self-employment.

2. The definition of self-employment

What does it mean to be “self-employed”? There is no one definite answer to this question. The authors’ intention often determines the definition of “self-employed”. As a result, there exists a variety of definitions for self-employment in the literature. In general, “self-employed” refers to people who work for themselves. In addition, individuals who are self-employed can work in either the for-profit or non-profit sectors. According to the definition of “self-employed” described by Statistics Canada’s Labour Force Survey (Statistics Canada, 2001b), self-employed activities can be categorized into five different groups.

- I. Working owners of incorporated businesses with paid help.
- II. Working owners of incorporated businesses without paid help.
- III. Working owners of unincorporated businesses or other self-employed with paid help.
- IV. Working owners of unincorporated businesses or other self-employed without paid help.
- V. Unpaid family members.

It is important to notice that the goal of this paper is to survey the economic literature on self-employment; unpaid family workers are not the target group of this literature. Therefore, “self-employed” refers only to those who are paid for being “self-employed” regardless of whether they are incorporated or unincorporated, with or without paid help. In sum, “self-employed workers” include all those from group (I) to (IV) above.

Likewise, self-employed workers can be subdivided into two main types. They are employer and own-account workers. Employers refer to self-employed workers who had paid help in both incorporated and unincorporated business; own-account workers refer to self-employed workers without paid help in both incorporated and unincorporated business (Hughes, 2004). It is necessary to make such a distinction on self-employment because the two types are playing very different roles in the economy. A more detailed comparison on their characteristics and trends will be examined in the next section.

3. An overview of the characteristics of self-employment in Canada

What is the nature of self-employment? How does the work of self-employed men and women compare? How do the changes in growth trends differ between self-employed men and women since the mid-1970s? How does gender segregation within self-employment compare to that within paid-employment? This section attempts to address the above questions and to describe the basic issues regarding various demographic characteristics such as gender, age, earnings, education levels, working hours, occupations, and more. Finally, a general review on gender segregation within self-employment will be discussed.

3.1 Employers versus own-account workers

Are there any differences between the 1980s and the 1990s cohorts who are the self-employed? By breaking the self-employed population into employers and own-account workers, a striking difference is revealed in the growth trends of self-employment in referenced periods. During the 1980s, total self-employment grew by 347,000 (Statistics Canada, 2001a). Employers accounted for 60% (208,000) of those new self-employment jobs created. Only 40% of the self-employed population were own-account workers (Lin et al., 1999a). Consider that if each self-employed employer hired just one employee, there would be another 208,000 paid-job positions generated from new enterprises.

While the growth of self-employment continued to make up a significant portion of new job creation between 1989 and 1997, employers accounted for only 10% of the 458,000 new self-employment jobs gained. In contrast to the 1980's, nine-tenths of the newly self-employed in the 1990s were entrepreneurs working purely for themselves. As a result, the expansion of the self-employed employers no longer contributed as much to the paid-employment growth. This development might partially explain the slow pace in the growth of paid-employment in the early 1990s. Recently, Statistics Canada (2001b) has reported that about 59 percent of self-employed men and 75 percent of self-employed women are own-account self-employed (Hughes, 2004).

3.2 Gender

Recently, self-employment has risen for both women and men, but especially so for women. In the 1990s, most women who became self-employed came from paid-employment,

while most men who entered self-employment came from non-employment¹. Data indicate that the increases in male self-employment are closely tied to overall labour market conditions. Men often view self-employment as the “employment of last resort”. They turn to self-employment if there is no other employment opportunity in the market. Another possible reason for the rise of male self-employment is the declining real wage rate in the paid-job sector (Kuhn and Schuetze, 1998). In fact, men still make up of over two thirds of the total present self-employed workforce.

Recently, women represented more than one-third of the total self-employed population, compared to around one-fourth in 1976 (Statistics Canada, 2001b). In comparison to the paid-employed, the self-employed often have more control over their working hours. As a result, studies regarding the decision of women entering self-employment are often done together with family-related issues such as childcare and care giving to ill family members (Hughes 2004).

3.3 Age and labour market experience

For both males and females combined, the age distribution of the self-employed population has a bell shape (Statistics Canada, 2001b). Among the self-employed, 10% are younger workers (age 15 to 29), and 8% are senior workers (age 60 to 69). By contrast, among the paid labour force, 25% are younger workers and 3% are senior workers. Notably, senior self-employed workers are not subject to any mandatory retirement; they can continue to be self-employed even after retirement age. As a result, they commonly have a longer tenure rate than other employees.

There is a strong positive relationship between the likelihood of an individual being self-employed and his/her level of labour market experience. One possible explanation is that as an individual’s age increases and he/she has acquired more labour market experience, he/she is more likely to have accumulated the necessary wealth and knowledge required for being self-employed. As a result, individuals between the ages of 45 and 59 account for nearly 40% of the self-employed but only 30% of the paid-employees.

3.4 Training & education

Statistics have revealed that self-employed workers appeared to be concentrated at the lower level and higher level of education attainment (Statistics Canada, 2001c). Currently, more

¹ Non-employment is not unemployment. Unemployed individuals are those who are without jobs and are seeking the same. Non-employed individuals are those outside the labour market.

than half of the self-employed have received some sort of post-secondary certificate or diploma, and workers with a university degree make up for about a quarter of the total self-employed population. In comparison to paid employees, the self-employed are both more likely to have a university degree and more likely to have less than a high school degree. Within the self-employed population, employers are more educated than own-account workers; they are also more likely to have graduate degrees (Master and Ph.D.).

By field of study, it is no surprise that a large proportion of the self-employed is comprised of social science students due to its dominant share of graduates. There are significant numbers of health graduates (including doctors) who are self-employed, indicating that the area of study is directly linked to one's occupation.

In terms of gender, self-employed women are more educated than self-employed men. They are also better educated than the paid-employed population. Women with Ph.D.'s are more likely to become self-employed; this is consistent with the hypothesis that self-employment tends to enhance the employment opportunities for highly educated women. This is worth studying closely when more data become available.

3.5 Marital status

Marital status is an important determinant in the study of the labour market because it influences a person's employment decision in various ways. Statistical evidence suggests the following hypotheses. First, individuals are less likely to participate in the labour force if the earnings of their spouses are high enough. Second, an individual is more likely to be in the labour force if his / her spouse is not. Therefore, it is clear that the existence of a spouse can affect a person's decision to work both positively and negatively.

Wong (1986) has found that marriage tends to enhance the probability of one becoming self-employed. According to the statistics in Labour Force Survey (LFS) released in 2001, nearly 80% of self-employed workers are married. The proportion of married self-employed workers is higher among women than men. This seems to suggest that married women are more likely than married men to be self-employed. Devine (1994) has estimated that a working wife is four times as likely to be self-employed if her husband is also self-employed. That is, the self-employment effect transferred from a self-employed spouse seems to be higher for women than for men.

More recently, Bruce (1998) has suggested that self-employed husbands tend to transfer their business experience and knowledge to their wives. This event, therefore, increases the likelihood of the wives entry into self-employment. This assertion has gained increasing support from statistical evidence. One should keep in mind that the positive relationship between marriage and self-employment could be due to assortative mating between couples – those who are likely to become self-employed are likely to marry entrepreneurs.

3.6 Presence of children

It has been shown that the presence of children is one of many determinants that affects the individual's entry into self-employment. Some studies have confirmed that married females or males with children are more likely to be self-employed. However, the effect is greater for self-employed women regardless of age (Kuhn and Schuetze, 1998). However, the presence of a dependent child (younger than six years of age) that requires parental care can substantially reduce the labour supply for the mother (Cleveland et al., 1996).

According to Cleveland et al, childcare responsibility can affect the parents' self-employment decision in two different ways. First, some parents may choose to become self-employed because it allows them to work under more flexible hours and to provide better parental care. Second, even if a full-time paid job is available for the parents, the demanding childcare responsibilities may not allow the parents to work full-time. As a result, self-employment may be seen as more advantageous, since it allows the parents to have more control over work and childcare schedule.

3.7 Earnings

According to the data reported on Labour Force Survey by Statistic Canada in 2001, the distribution of the self-employment earnings is somewhat polarized. A high percentage of the self-employed are disproportionately found into the low end and high end of the earnings distribution. At the low end, 45.1% of the self-employed earn under \$20,000 annually. In the middle range, 48.5% of the self-employed earn between \$20,000 and \$80,000. At the high end, 6.4% of the self-employed earn over \$80,000. In comparison, the distribution of employees' earnings is less polarized: 25.5% of employees earn under \$20,000, 71.8% of employees earn between \$20,000 and \$80,000, and only 2.7% of employees make over \$80,000 (Hughes, 2001).

Both male and female employers earned substantially more than own-account workers. In 1995, 56% of own-account workers earned less than \$20,000, and only 2.2% earned more than \$80,000. In contrast, 31.4% of employers earned under \$20,000, and about 8.6% earned over \$80,000. While employers are concentrated at the high end of the earnings distribution, own-account workers are at the low end.

As the wage gap between male and female continues to be an issue in the paid-sector, self-employment has narrowed the wage gap between the sexes. On average, the wage gap between male and female employers in 1996 was 25%, compared to 31% for paid employees. While the wage gap between the sexes of employers is less than the wage gap between the sexes of paid-employees, the wage gap between the sexes of own-account workers is even narrower than it is for employers (merely 22.7%).

There is ongoing discussion concerning the reliability of earnings data reported by the self-employed workers. Because the payroll system used within the paid-employment sector does not apply to the self-employed, earnings are self-reported by self-employed workers from alternative sources, namely surveys and income tax returns. As a result, some researchers argued that there are significant underreporting problem on the taxable earnings of self-employment.

3.8 Working hours

In general, full-time self-employed workers work for an average of 48.8 hours per week, compared to the normal 40 hours among full-time employees (Statistics Canada, 2001b). That is, the self-employed workers generally put in substantially more hours. About 92.5% of the self-employed men work full-time, which is somewhat lower than the 95% of male employees who work full-time. On the other hand, approximately 77% of the self-employed women work full-time, which is very similar to what is observed among female employees.

On average, part-time self-employed workers work 21.4 hours per week, which is very similar to what is observed among employees. Employers are less likely to work part-time than own-account workers. Only 6% of the self-employed employers work part-time, compared to 18% of the own-account self-employed. Female employers are also more likely to work part-time than males. Only 3.9% of male employers worked part-time, compared to nearly 20% of females. A similar pattern is observed for own-account workers. About 17.4% of male own-account workers worked part-time, compared to 45.7% of females. In summary, men tend to

work longer hours than women, and employers have a longer work week than own-account workers.

3.9 Industrial composition

In 1977, female employers were concentrated in three main service industries: trade (50.2%), accommodation and food services (21.4%), and other services (15.1%). In contrast, male employers were involved in a much broader range of industries, including trade (30.2%), construction (20.8%), business services (9%), manufacturing (8.6%), and other services (7.3%). Over one quarter of male employers were located in the goods producing industries, such as manufacturing and construction, compared to 6.7% for female employers.

Many changes have occurred in the concentration of industries between the male and female self-employed during the past two decades. There is very little decline in the presence of female self-employed in the service industries, but women are still significantly concentrated in the traditional service areas such as trade (30.8%), accommodation and food services (13.2%) and other services (15.9%). On the other hand, women employers have located themselves into a broader range of industries. These include health and social services (9.9%), business services (9.4%), construction (6.6%), and manufacturing (5.8%). Notably, women employers have increased their representation into the male dominated sectors (construction and business). Overall, male employers are spread into a number of different industries, namely trade (26.1%), construction (15.4%), business services (14.3%), manufacturing (8.4%), and health and social services (8.1%). Male employers have significantly increased their numbers in the business sector. In general, about one-third of male employers are in goods-producing industries; they are less likely to work in services industries.

Both male and female own-account workers are significantly concentrated in trade (17.9% and 13.7%, for men and women respectively) and business industries (18.3% and 17.6%). Male own-account workers are highly represented in construction (20.1%) and transportation, storage and communication (10.3%), compared to only 1.6% and 1.4% of the women respectively. In contrast, female own-account workers are more likely to appear in health and social services (12.2%) and other services (38.7%), compared to merely 2.3% and 13.9% of the men respectively.

3.10 Occupational distribution

The arrival of the personal computer has made it more feasible for small business owners to become involved in a wider range of occupations (Hughes, 2001). Nearly 60% of the female employers were working in the sales (35.6%) and service jobs (24%) in 1984, compared to over 30% of male employers. Besides, female employers were also present in some professional, managerial, and administrative (12%), and clerical occupations (10.3%). While women were concentrated in the service sector, male employers were engaged over a broader range of occupations in sales (23.5%), managerial and administrative (19.1%), construction (13%), services (9.2%), and manufacturing (7.4%). In 1997, women employers continue to be concentrate in sales (23.7%), services (22.4), and clerical occupations (12.3%); they have also shown significant increases in managerial and administrative (18.5%) jobs.

Sales and service jobs are particularly important for female own-account workers; they made up 57.5% of total female own-account workers. Male own-account workers have been less involved in the service sector: they appeared to be most involved in sales (20.9%), construction (18.8%), transportation (10.5%), manufacturing (7.8%) and primary sector (5.2%) jobs – including fishing, hunting, trapping, forestry and logging, mining and quarrying. On the other hand, both own-account males and females are less likely to be involved in managerial and administrative occupations (only 7.2% and 6.6%, for men and women respectively), but they have increased their presence in artistic and recreational occupations (8% and 9.6%). In summary, gender differences among the self-employed are still significantly present in terms of occupation: clerical and service jobs tend to be more important for women, and construction and transportation jobs are more important for men.

3.11 Overall job satisfaction

It is a common belief that self-employed workers are happier than paid-employees. Self-employment may be able to offer additional employment opportunities for individuals who want to fully employ their skills and education into work practices. The possibility to match education skill to employment activities can be seen as one attractive factor within self-employment. Statistical evidence tends to be consistent with the hypothesis that job satisfaction has been greater amongst the self-employed than for employees (Finnie et al., 2002). This holds true for both men and women regardless of their self-employment status (employers and own-account workers).

3.12 Nature of self-employment and patterns of gender segregation

Some researchers and policy makers argue that self-employment can provide broader economic opportunities and improve social equities, while others believe that self-employment is no different to paid-employment because both are considerably segregated by gender. In most industrial countries, self-employed women are still facing additional barriers, such as lack of access to capital and greater childcare responsibilities (Hughes, 1999). Consequently, enterprises headed by women are highly concentrated in “peripheral economic niches”, such as retail and personal services. Men are generally less likely to be employed in these extremely competitive areas that tend to offer relatively low wages. As a result, these areas will end up being female dominated and having much lower than average earnings than “male” sectors and occupations. It seems that gender segregation remains a significant issue in self-employment activity.

4. Economic theory and empirical evidence

There is a considerable literature on self-employment. Self-employment has been studied by several social science disciplines, such as economics, sociology, and women's studies. This section will explore the theories and the empirical validation.

4.1 The recession push theory and entrepreneur pull theories

The decision of people moving into self-employment can be classified into two main theories: the "recession push" theory and the "entrepreneur pull" theory. There is plenty of evidence that supports each of these two theories. However, neither of the two theories seems to be sufficient to explain the cause of rapid growth in self-employment. Are people being "pushed" into self-employment because they cannot find paid employment? Do people "pull" themselves into self-employment because they are more talented, and are able to enjoy all the comparative advantages (independence, flexibility of work schedule) from being their own boss? In the following discussion, the approach of the "recession push" theory will be presented first, followed by the approach of "entrepreneur pull". In addition, some of the noteworthy evidence pertaining to both theories will also be provided.

Lin et al. have conducted a number of comprehensive studies examining both theories. These papers are entitled the "Rising Self-employment in the Midst of High Unemployment: An Empirical Analysis of Recent Developments in Canada" (1999a), "The Entry and Exit Dynamics of Self-employment in Canada" (1999b), and "The Role of Self-employment in Job Creation in Canada and the United States" (1998).

Recession (unemployment) push theory

Naturally, the labour market and current macroeconomic conditions are often linked. Since recessions lead to lower sales in both product and service markets, firms tend to reduce production and, hence, staff during difficult times. Since no one else is hiring, unemployed individuals will have no choice but to "push" themselves into self-employment.

All other factors held constant, a higher earnings premium may be expected to be found among the self-employed individuals because of the risks involved with operating their businesses. However, the earnings premium is not found in most empirical self-employment studies. Some self-employed people may have negative earnings at the beginning of their entrepreneurship. Because of greater income reliability of paid-employment compared to the

unstable earnings in self-employment, workers tend to prefer paid employment rather than self-employment. It is also worth noting that the self-employed have to finance their own social benefits. When one takes account of all the social benefits such as health insurance, dental insurance, employment insurance, and disability insurance, self-employment becomes less financially attractive.

Given that paid-employment is the more preferred job status, people who prefer to work in paid-employment are “pushed” into self-employment because they cannot find a suitable paid-employment opportunity due to a weak labour market. Empirical evidence supporting this hypothesis is available. Schuetze (1998) found that the male self-employment rate in both Canada and U.S. is positively correlated with the unemployment rate. Acs, Audretsch and Evans (1994) examined some OECD countries and also reported that the self-employment rate increases with unemployment rate with a long lag of about five years. Evans and Leighton (1989a) concluded that there is a higher probability for the unemployed to become their own bosses, compared to a much lower probability for paid-employees. Based on US data, Highfield and Smiley (1987) note a positive correlation between unemployment and incorporated self-employment activity.

Entrepreneurial (prosperity) pull theory

The alternative to the “recession push” hypothesis is known as the “entrepreneurial pull” hypothesis. This theory is developed based on micro-economic theories. It is well known that running a business venture will always involve some risks. The “entrepreneurial pull” hypothesis argues that some specific knowledge and abilities that the workers have accumulated at their workplace would certainly help in reducing the avoidable risks in running their own business. People are becoming self-employed simply because they are capable of managing those risks. This skill matching practice will only encourage the more suitable individuals to start their own businesses. As a result, a longer tenure rate will be expected from those successful entrepreneurs.

According to the “Entrepreneurial pull” theory, new companies headed by individuals are less likely to enter the market during recession periods. That is, potential entrepreneurs will delay their entry into self-employment because it may not be profitable to start their business in weak market conditions. Lin et al. (1999a) have provided two possible explanations for this. First, a high unemployment rate will produce some disincentive effects to self-employment. Because high unemployment is always positively associated with weak economic conditions, it is less

advantageous for people to enter into self-employment due to the fact that their business will have higher probability of failure. Second, since paid-employment is generally preferable to other job statuses, unemployed individuals may simply decide to wait out a short recession in order to avail themselves of job opportunities that return during periods of low unemployment.

This hypothesis is also supported by empirical evidence. Blanchflower and Oswald (1998) report that increases in the local unemployment rate have a negative impact on the probability of self-employment. While Whitefield and Wannell (1991) have found that financial hardships “push” people into self-employment, they also concluded that highly paid workers are more likely to move into self-employment. Also, workers who decided to quit their jobs voluntarily are more likely to become self-employed, compared to those who are involuntarily laid off by the firms. Blau (1987) attempted to examine the non-cyclical determinants for male self-employment in the U.S. at an aggregate level. She found that changes in technology, tax rates, and social security retirement benefits all contributed to the change in self-employment.

4.2 Empirical test on recession push theory and entrepreneur pull theory

Due to the fact that there is evidence supporting both the “push” and “pull” theories, the empirical research remains inconclusive. In other words, the two effects may work jointly, although in opposite directions, and the net effect depends on which one dominates. If it is dominated by the “push” effect, unemployment and self-employment will be positively related. Poor labour market conditions will be associated with a higher unemployment rate as well as a higher self-employment rate; people who cannot match themselves into a paid-job will be “pushed” to work for themselves. If it is dominated by the “pull” effect, the self-employment rate will depend on the knowledge and skills of workers who are most susceptible to self-employment. Thus, the unemployment rate may no longer be a good predictor of self-employment. During economic booms, individuals who are better qualified for self-employment might “pull” themselves away from their paid-jobs, and become self-employed. They are expected to have a higher chance to survive in their entrepreneurship as well.

Lin et al. (1999a) involves an empirical test of the two competing theories. The data set used by Lin et al. for the regression analysis is drawn from the Labour Force Survey from January 1976 to February 1998. The aggregated time series data set reflected a total of 2,660 self-employed individuals. Only individuals whose self-employment earnings are their main source of earnings were counted.

The estimated equation is:

$$SE_RATE_{it} = \beta_0 + \beta_1 CYCLE_{it} + \beta_2 PARTRATE_{it} + \beta_3 PROVINCE_i + \beta_4 TIME + \beta_5 MONTH_m + \epsilon_{it}$$

Where

- SE_RATE is the self-employment rate (dependent variable). It is the number of the self-employed as a percentage of the total labour force;
- CYCLE consists of variables including the labour market cycle indicator;
- PARTRATE is the monthly provincial labour force participation rate;
- PROVINCE is used to denote the 10 provinces;
- TIME is the dummy variable indicating time trend calculated on an annual basis; (TIME = 1 for 1981, 2 for 1982,, 15 for 1995);
- MONTH is used to denote the 12 months in a year.

Table 4.1 – Regression result for equation (1)

Fixed Effects Model Full Pooling GLS Result [Dep. Var. = Ln (SE_RATE)]				
	Indep. Var. = Ln (Urate)		Indep. Var = Ln (FTPE* Rate)	
	Coeff.	Std. Error	Coeff.	Std. Error
Men & Women	-0.056	0.007	0.135	0.014
Men	-0.051	0.006	0.153	0.039
Women	-0.032	0.011	-0.054	0.055

* FTPE is defined as full-time paid-employment as a percentage of the labour force.

Source: Table 5: Key Variable Sample Statistics and Regression Results on Canadian Self-Employment. (Lin et al., 1998)

Regression analysis:

The model was estimated for both men and women combined and also separately using generalized least squares with fixed effects by province. After controlling for labour force participation, the time trend, provincial differences, and month-to-month seasonal variations, an average of 1% increase in the unemployment rate for both men and women is found to be associated with an average of 0.056% decrease in overall self-employment rate (See Table 4.1). An average of 1% rise in unemployment rate is associated with an average 0.051% fall in the overall self-employment rate for men and an average 0.032% fall in the overall self-employment rate for women. There seems to be a small but statistically significant negative relationship between unemployment rate and self-employment rate. This means that the unemployed individuals are unlikely to enter self-employment due to a long period of unemployment. A possible interpretation is that a high unemployment rate is indicative of a depressed economy in which the potential revenues for would-be into self-employment entrants are lower due to higher chances of failure.

The relationship between self-employment rate and full-time paid employment (FTPE) rate is also estimated. For both men and women combined, an average of 1% increase in full-time paid employment rate is associated with an average of 0.135% increase in overall self-employment with a standard error of 0.014. The small but statistically significant positive relationship between self-employment rate and full-time paid employment rate suggests that the strong labour market conditions are associated with a higher incidence of self-employment.

For Men, a 1% increase in full-time paid employment rate is associated with a 0.153% increase in overall self-employment with a standard error of 0.039. A possible interpretation is that favourable labour market conditions promote self-employment for men. For women, a 1% increase in full-time paid employment rate is associated with a 0.054% decrease in overall self-employment with a standard error of 0.055. This is consistent to the “recession push” theory; self-employed women who prefer to work for others will be pushed into self-employment, exit self-employment and re-enter paid-employment again when more paid-job opportunities become available in the market during economic booms.

Lin et al’s study has provided some evidence on “recession push” effect on female self-employment, but such effect is not found on male self-employment. In conclusion, the “recession push” effect exists, but does not dominate the “entrepreneurial pull” effect. Perhaps, the effects of changes in current market condition toward self-employment are partially different between genders.

4.3 The patterns of labour market status transitions

As seen from the above section, using the unemployment rate as an indicator for labour market conditions to analyse self-employment is not enough in that it fails to distinguish between the 2 theories. To further understand self-employment in Canada, Lin et al. (1999b) looked at the entry and exit dynamics of self-employment patterns. Lin et al. claims that previous employment status could offer new insights for the study of self-employment. By examining the patterns of labour market status transitions, Lin et al. can identify a broader range of reasons relating to the causes that lead to self-employment entries and exits.

Lin et al. extracted the required self-employment entry and exit information from the annual T1 files, and selected a 10% random sample between the years 1981 and 1995. Because of the differences in definitions of self-employment, only those individuals for whom self-employment incomes are their primary source of earnings are included in the regression sample. Lin et al. divided self-employment entry into three different labour market statuses prior to self-employment: paid-employment, unemployment, and non-participation. Data revealed that there are roughly similar proportions distributions among the three statuses (Figure 4.1, Appendix). According to the diagram, a transition to self-employment is more likely to come from the state of paid-employment than from unemployment. Also, it is slightly more likely to come from non-employment than unemployment.

Lin et al. studied the labour market status of self-employed exiters a week immediately after they shut down the old business. The result is summarized in figure 4.2 in Appendix. 36% of self-employment exiters were working for others, 24% were unemployed, and 40% dropped out of the labour force. In comparison to paid-employment exiters, a lower percentage were working for another employer (30%), 3% were self-employed, a higher proportion were unemployed (37%), and a lower fraction were not in labour force (30%).

The estimated equation is:

$$SE_{it} = \beta_0 + \beta_1 CYCLE_{it} + \beta_2 PARTRATE_{it} + \beta_3 PROVINCE_i + \beta_4 TIME + \varepsilon_{it}$$

Where the unit of analysis is the province

Dependent variables:

- SE is the annual provincial self-employment rate / entry rate / exit rate (dependent variables), The self-employment rate is the number of the self-employed as a percentage of the total labour force (taken from the Labour Force Survey);
- The entry rate is the number of entries as a fraction of the total labour force (taken from the T1 files);
- The exit rate is the number of exits as a proportion of the self-employed population (taken from the T1 files);

Independent variables:

- CYCLE is the set of variables that include the labour market cycle indicator;
- PARTRATE is provincial labour force participation rate;
- PROVINCE is used to denote the 10 provinces;
- TIME is the dummy variable indicating time trend calculated on an annual basis; (TIME = 1 for 1981, 2 for 1982,, 15 for 1995);

Note that the structure of this model is similar to their prior work; only the dependent variables are different.

The model was estimated for both men and women combined and also separately by Generalized Least Squares with a pooled cross-section, time-series fixed effects structure. The regression results on self-employment flows are summarized in the following table.

Table 4.2 – Regression result for equation (2)

Fixed Effects Model Full Pooling GLS Regression Results						
	DepVar = Ln (SE_Rate)		DepVar = Ln (Entry Rate)		DepVar = Ln (Exit Rate)	
	Coeff.	Std. Error	Coeff.	Std. Error	Coeff.	Std. Error
Indep. Var. = Ln (U Rate)						
Men & Women	-0.044	0.009	-0.178	0.030	-0.140	0.011
Men	-0.036	0.009	-0.060	0.024	-0.133	0.013
Women	-0.039	0.011	-0.289	0.038	-0.135	0.022
Indep. Var. = Ln (FTPE* Rate)						
Men & Women	0.340	0.070	1.140	0.201	0.985	0.090
Men	0.300	0.078	0.455	0.189	1.152	0.113
Women	0.259	0.060	1.808	0.112	0.690	0.132

* FTPE is defined as full-time paid-employment as a percentage of the labour force.

Source: Table 2: Key Variable Sample Statistics and Regression Results on Canadian Self-Employment Flows. (Lin et al., 1999a)

Regression analysis:

For the pooled sample, a 1% rise in unemployment rate will lead to a 0.044% fall in total self-employment, and a 1% rise in full-time paid employment rate will lead to a 0.34% rise in total self-employment. The effects are small but they are statistically significant. This result suggests that rising unemployment makes individuals less likely to enter self-employment, ceteris paribus. Notably, the effect of a 1% rise in full-time paid employment rate is greater for men (0.3) than for women (0.259). This result is again consistent with the previous regression result that men respond more positively to the changes in full-time paid-employment rate.

It is important to note that a 1% increase in unemployment rate is associated with a 0.178% decrease in self-employment entry rate and a 0.140% decrease in self-employment exit rate. The net effect of a 1% increase in unemployment rate is a decline in total self-employment. The combination of the two results indicates that self-employment rate is negatively associated to unemployment rate. Once again, “recession push” theory fails to find support from regression

analysis. Potentially self-employed workers are less likely to enter the market during recession period.

A 1% increase in full-time paid employment rate is associated with a 1.140% rise in self-employment entry rate and a 0.985% fall in self-employment exit rate. The net effect of a 1% increase in full-time paid employment rate is an increase in total self-employment. This outcome is consistent with the hypothesis that individuals are more likely to become self-employed during economic booms. Again, there is no evidence that “recession push” effect is predominating. A noteworthy finding is that the use of unemployment rate as a proxy variable for labour market conditions to estimate the transition of self-employment often produce statistically significant results; however, the use of full-time paid employment rate as a proxy variable has produced a much lower level of significance in the regression results. The failure to achieve significant estimates may be due to improper usage of the independent variable, the full-time paid employment rate, as a proxy for labour market conditions to estimate the flows of self-employment. Perhaps the two indicators may have capture different aspects of the labour market conditions; full-time paid employment rate appears to be less relevant.

In comparison to self-employed men, the entry rate of self-employed women appears to be more sensitive to the changes in full-time paid employment rate, whereas the exit rate of self-employed women appears to be less sensitive to the changes in full-time paid employment rate. One possible explanation for this result is that most self-employment entries during the 90’s was made up of female-headed enterprises which they are likely to be operated through account of the owners. The advantage of own-account enterprises is that they are generally in small scale, and for that reason set-up cost is usually low. This makes possible for a large number of self-employment entries to occur in a short period. The own-account enterprises are also resilient due to low operation cost, which makes easier for the own-account enterprises to survive during difficult times.

The attempt to use unemployment and full-time paid employment as proxies for labour market conditions to study self-employment has shown a negative relationship between both entries and exits from self-employment and unemployment and a positive relationship between both entries and exits from self-employment and full-time paid-employment. The overall result does not provide strong evidence that the recession push force is dominating the entrepreneurial

pull force; in fact, it only provides evidence that the current market conditions and the flows of self-employment are correlated. In short, both push and pull effects may coexist.

4.4 The effect of individual characteristics and labour market experiences on self-employment

The studies of Lin et al. in the previous sections used aggregated data, which doesn't allow for the inclusion of personal characteristics. According to the "entrepreneur pull" theory, the decision to enter self-employment could also depend on individual characteristics, such as gender, age, education level, previous job experiences, marital status, etc. What influences do personal characteristics and labour market experiences have on the decision to enter and exit self-employment? To address this question, researchers have used regression analysis and have found some key elements that determine one's decision to become self-employed.

This section attempts to analyze some key variables that determine the decision of self-employment by summarizing two leading papers. The first one is entitled "Econometric Analysis of Canadian Self-Employment Using SLID" by Simpson and Sproule in 1998. The authors have studied the decision of self-employment based on cross-sectional data from the Survey of Labour Income Dynamics (SLID). The previously reviewed paper "The Entry and Exit Dynamics of Self-employment in Canada" (Lin et al., 1999b) will be discussed again in greater detail from another perspective. Lin et al. have made additional efforts to study the probability of entering and leaving self-employment from the longitudinal data file of SLID for the years 1993 and 1994. The studies of both cross-sectional and longitudinal data based on SLID combined provide a comprehensive report on the characteristics that are associated with self-employment.

I turn first to the Simpson and Sproule (1998) paper:

Data and methodology

SLID provides a very informative source on income and labour market activities for both self-employed workers and paid employees. An individual is classified as self-employed, paid employee, or undetermined according to his/her current status at the time of the survey. The regression sample contains a total number of 18,021 individuals with 8,762 men and 9,439 women; 1,087 of 8,762 men and 1,218 of 9,439 women are self-employed. Notably, there are 324 self-employed men and 521 self-employed women have no positive earnings. It is restricted to all individuals over age 16 and under age 65. For the labour market participation decision, the authors assumed that the individual employment choice follows a two-step procedure. In the first step, the individual decides whether or not to participate in the labour force (For $Y_i = 1$ if participated; $Y_i = 0$ otherwise). If the individual chooses to work, the person will proceed to the

second step; he/she will choose between self-employment and paid-employee based on his/her work preferences and perhaps on labour market constraints.

The estimated earnings equations related to employment statuses:

$$Y_{wi} = Z_i^W \beta^W + \xi_i^W \quad (1)$$

$$Y_{si} = Z_i^S \beta^S + \xi_i^S \quad (2)$$

$$Y_{Ni} = Z_i^N \beta^N + \xi_i^N \quad (3)$$

where

- Y_{wi} is the logarithm of earnings from salaried employment for individual i ;
- Y_{si} is the logarithm of earnings from self-employment for individual i ;
- Y_{Ni} is the logarithm of shadow income from non-participation for individual i .
- Z_i^W is the determinants of wage-employed earnings.
- Z_i^S is the determinants of self-employed earnings.
- Z_i^N is the determinants of shadow earnings derived from not working.

Note: Errors are assumed to be normally distributed with mean zero and constant variance σ_j^2

The behavioural equations that explain the choices between non-work and work and between wage-employment and self-employment are:

$$P_i^* = \gamma_P + \alpha_P \{ \max[E(Y_{wi}), E(Y_{si})] - E(Y_{Ni}) \} + \delta_P X_i^P + \xi_i^P = V_i^P \pi_P + \xi_i^P \quad (4)$$

$$S_i^* = \gamma_S + \alpha_S \{ E(Y_{si}) - E(Y_{wi}) \} + \delta_S X_i^S + \xi_i^S = V_i^S \pi_S + \xi_i^S \quad (5)$$

where

- P_i^* is the latent variable which determines the choices between non-work and work for individual i ;
- S_i^* is the latent variable which determines the choices between wage-employment and self-employment for individual i ;
- X_i^P and X_i^S are the exogenous variables that contain individual i 's characteristics which can affect the earnings functions.

Observed earnings Y_i are specified as follows:

$$Y_i = \begin{cases} Y_{si} & \text{if } \{P_i^* > 0 \text{ and } S_i^* > 0\} \\ Y_{wi} & \text{if } \{P_i^* > 0 \text{ and } [S_i^* < 0 \text{ or } S_i^* = 0]\} \end{cases} \quad (6)$$

The above framework is a standard mover-stayer model and can be estimated by a three-stage econometric model. In the first stage, the authors use the method of maximum likelihood to estimate the reduced-form participation and self-employment models based on the probit framework (Equation 4 and 5). The second stage estimates two separate earnings equations for the self-employed and paid-employed. In order to correct for the selection bias resulting from the non-random decisions associated with participation and self-employment, the inverse Mills ratio obtained from the coefficients estimates for γ_P , α_P , δ_P , γ_S , α_S , and δ_S (combined as π_P and π_S , respectively) in equation (4) and (5) is added to the earnings equations for wage-employment and self-employment. In the final stage, a simple structural model (Equation 5) of self-employment will be estimated consistently using the predicted earnings difference between wage-employed and self-employed workers. The model estimates men and women separately. Regression results for the last stage are summarized in Table 4.3.

Table 4.3

Structural Probit Model of the Self-Employment Decision (3rd stage results)

Variables	Men		Women	
	Coeff.	t-value	Coeff.	t-value
Constant	-5.844	-15.195	-12.706	-9.538
Δ Earn	4.834	39.050	13.048	14.859
Unemployment rate	-0.142	-14.384	0.033	1.297
Age	0.337	17.771	0.099	2.008
Age square	-0.003	-15.285	0.000	-0.154
Immigrant	-1.004	-6.752	2.008	4.485
Disabled	-1.550	-10.988	2.997	8.408
Student	-0.948	-8.912	-1.262	-4.887
Educated outside Canada	1.198	7.193	-1.135	-2.363
High school diploma	-0.255	-4.296	-1.413	-7.118
College diploma	-0.287	-5.067	-0.369	-2.163
University degree	-0.476	-6.200	-0.422	-1.664
Married	0.286	3.688	0.431	1.994
Children under 6 year present	0.160	2.132	-0.373	-1.671
Children 6 - 19 years present	0.120	2.107	0.603	3.291
English mother tongue	-0.769	-7.485	1.343	4.355
French mother tongue	-0.690	-5.978	3.042	7.532

Note: Δ Earn is the earnings difference between self-employment and paid employment predicted from individual characteristics and the earnings equation in step 2 of the model.

Source: Table 4: *Structural Probit Model of the Self-Employment Decision (Simpson and Sproule, 1998)*

Regression analysis:

- As expected, the coefficient of change in earnings on self-employment decision for both men and women are positive and significant. This means that the imputed estimated earnings difference between self-employment and paid-employment is positively associated with people's decision to be self-employed. More people will choose to become self-employed if earnings from self-employment are greater than the earnings from wage-employment, *ceteris paribus*. Not surprisingly, women are more sensitive to earnings differentials between the two sectors. As a result, the existing wage gap between genders in the paid-job market could possibly be one reason that drives women into the field of self-employment.
- Interestingly, the coefficients of the unemployment rate variable appear to have conflicting results between men and women. For men, unemployment is negatively associated with self-employment (-0.142). This result is inconsistent with the "recession push" theory; unfavourable labour market conditions discourage men from entering self-employment. For women, unemployment is positively related to self-employment (0.033). Even though the effect is small and insignificant, it is still consistent with the "recession push" theory. The two results together provide a good demonstration of how labour supply patterns differ between self-employed men and women. It also provides support for the idea that people's self-employment choices differ between genders.
- The age variable can serve as a rough proxy for personal potential wealth. Individual wealth could represent a person's financial capability to start a new business, so it is expected to have a positive effect on one's self-employment decision. It is important to note that age is also positively related to personal work experience and human capital accumulation. As expected, the coefficients of the variable of age are positively related to self-employment (0.337 for men and 0.099 for women). This result is consistent with the "entrepreneurial pull" theory.
- The coefficients of both males and females immigrant status are significant but with different signs. A possible interpretation is that the unstable income associated with self-employment makes male immigrants less interested in self-employment compared to native-born Canadians. However, the opposite is true for female immigrants. One possible explanation is that married females' employment decisions are often jointly

determined with their spouses. Consequently, they appear to be “added workers” in the labour market, and they are more likely to rely on their husbands’ income.

- Most of the coefficients of human capital variables are negatively related to self-employment. The male self-employment likelihood decreases as education level increases, whereas the opposite is true for females. That is, men with high school diplomas are more likely to become self-employed compared to men with university degrees. Women with high school diplomas are less likely to become self-employed compared to women with university degrees. Notably, men are more likely to become self-employed if they have obtained their education outside Canada.
- As expected, the presence of spouse appears to have some effects on one’s decision to become self-employed. The coefficient of marital status is significantly positive for both men and women (0.286 and 0.431 respectively). Men also play an important role to maintain a stable source of income for the family. Again, women differ from men in that they appeared to be “added workers” in the family; therefore the more secure and higher the husbands’ income, the more the wife can engage in self-employment. This is one possible explanation to the greater marriage effect for women in comparison to men.
- Some observers claim that self-employment offers some advantages over traditional paid-employment. This includes the flexible working schedule of self-employment that increases the possibility for one to balance between family and work responsibilities. Thus, the presence of children is expected to have a positive effect on the decision of whether to become self-employed. In general, the overall results are consistent to this hypothesis. However, there is one exception; women with dependent children (younger than six years of age) are less likely to engage in self-employment (-0.373) in comparison to women with children older than six years of age. One possible explanation for this is the expensive childcare cost increases the opportunity cost for women to participate in the labour force. Another possible reason is that women are more loosely connected with the labour market before and after their maternity periods compared to men.

The second summary is of the paper “The Entry and Exit Dynamics of Self-Employment in Canada” by Lin, Yates, and Picot in March 1999. This time, I will extend section 4.3 from above and look into some different individual’s characteristics (non-aggregate level) that can affect the decision to enter and leave self-employment in greater detail:

Data and methodology

The data are extracted from the longitudinal file of the Survey of Labour and Income Dynamics (SLID) of Statistics Canada for the years 1993 and 1994. After excluding the individuals who have undetermined labour force status and restricting the sample to ages between 15 and 64, the final sample consists of 19,654 observations. According to the self-employment definition, only those for whom self-employment earnings are the main source of earnings during the year will be included in the regression sample.

For the entry equation, the dependent variable is defined to take the value of one if the individual started a spell of self-employment and zero otherwise. On the other hand, for the exit equation, the dependent variable is defined to take the value of one if the worker ceased to be self-employed and zero otherwise. The matrix of independent variables can be classified into four categories: macroeconomic conditions, human capital variables, family-related characteristics, and other demographic controls.

First, as mentioned in section 4.1, a high unemployment rate may push people into self-employment due to the lack of paid-employment opportunities. Alternatively, a high unemployment rate may serve as a barrier to enter self-employment because of higher possible failure rate of new businesses as a result of unfavourable economic conditions. In order to include these fluctuations, the provincial unemployment rates are included in the model to capture the effects of macroeconomic conditions on self-employment.

Second, self-employed workers are expected to have some initial financial resources and specific abilities to manage their businesses. While direct measures of financial assets are not available, the empirical literature commonly uses age, educational attainment and prior self-employment experience to proxy for the effects of wealth on self-employment.

Family-related characteristics such as marital status might be among the most influential determinants of self-employment. Self-employed workers differ from paid-employees in that

they have less financial certainty. Indeed, some self-employed people might even earn negative incomes, which are particularly common during the initial period of most businesses. If their spouses are full-time paid-employees, the cost associated to become self-employed will be greatly reduced. Also, most full-time, full-year paid jobs in Canada provide medical and dental insurance as well as other benefits for all family members. Consequently, there are economic reasons to believe that having a full-time, full-year paid employed spouse is a main determinant for the other partner in deciding whether to become self-employed or not.

Finally, other demographic controls such, as gender, immigrant status and presence of dependent children are included. These control variables are normally believed to have influences on the decision of labour force participation.

Table 4.4

Regression Results and Estimated Probability of Entering/Leaving Self-Employment

	Entering any S.E. in 1994		Leaving any S.E. in 1993	
	Coefficient	t-ratio	Coefficient	t-ratio
Constant	-4.1329	-11.46	-0.5042	-0.99
Female	-0.4045	-3.41	0.8808	6.22
Age:				
15-24	Control		Control	
25-34	-0.2178	-1.12	-1.0654	-3.07
35-44	-0.6101	-3.07	-0.9209	-2.72
45-54	-0.9415	-4.16	-0.9172	-2.54
55-64	-1.2439	-4.46	-0.1074	-0.28
Education:				
Elementary	-0.5804	-1.77	0.1861	0.59
Some secondary	-0.1985	-0.98	0.1038	0.42
High school	Reference		Reference	
Some post-secondary	-0.0961	-0.48	0.2485	1.05
Post-secondary certificate	-0.1348	-0.83	-0.3628	-1.74
Undergraduate degree or higher	-0.1915	-0.97	-0.3305	-1.35
Presence of children aged 0-4:	0.3032	2.17	0.5033	2.84
Spouse self-employed:	1.4351	11.78	-0.1855	-1.15
Spouse FTFY employee:	-0.2239	-1.88	-0.8589	-5.78
Unemployment rate:	0.0343	1.38	0.0497	1.48
Paid-employment experience:	0.3027	2.25		
Self-employment experience:	0.6268	3.88		

Source: Table 7: Logistic Regression Results and Estimated Probability of Entering/Leaving Self-Employment (Lin et al, 1999b)

Regression analysis:

The regression results are contained in Table 4.4.

- Women are less likely than men to enter self-employment, and they are also more likely than men to exit from self-employment.
- All age dummy variables are significantly negative for both entering and leaving self-employment. Self-employment entries are more likely for the younger individuals aged 15 – 24 years old than for older individuals aged 55 – 64 years. However, self-employment exits are also more likely for individuals aged 15-24 years. This probably reflects the higher turnover in the labour market experienced by younger people. It is important to note that coefficient of the age 55 – 64 variable of leaving self-employment is only -0.1074, indicating that the older self-employed are less likely to exit compared to the reference category. This is consistent with the idea that self-employment spells are usually longer than paid-employment spells because self-employment is not subjected to any retirement constraint.
- The education coefficients are not statistically significant. This suggests that educational attainment is not an important factor in determining self-employment. Because self-employment exists across all different education groups, this maybe the evidence that self-employment could serve as a way to earn higher income for the less educated. In addition, the result confirms the hypothesis that the highly educated groups would generally have a higher survival rate than the low-educated groups in the state of self-employment.
- Two contradictory hypotheses pertain to the effect of having dependent children on the state of self-employment. In comparison to paid-employees, self-employed workers usually work longer hours. Consequently, the first hypothesis argues that parents of dependent children are less likely to enter self-employment because they will not be able to keep up with their demanding schedule between both endeavours. In contrast, the second hypothesis argues that parents can make use of the flexible schedule offered by self-employment to balance between family and work. According to the regression results, the presence of dependent children aged between 0 and 4 are significantly positive for both entering and leaving self-employment. However, the coefficient of entering self-employment is smaller than the coefficient of leaving self-employment. The

result is more favourable to the first hypothesis, which suggests that the presence of dependent children aged between 0 and 4 will tend to discourage self-employment.

- As expected, there is statistical evidence suggesting that the presence of spouses has a significant influence on self-employment. There is strong evidence indicating that individuals whose spouses are also self-employed are more likely to enter self-employment than others. Furthermore, individuals whose spouses are working as full-time, full-year employees are less likely to leave self-employment because spousal incomes can be used to diversify the sources of family income given the risks inherent to self-employment.
- The coefficients of the unemployment variable for both entering and leaving self-employment are insignificantly positive. They are 0.0343 and 0.0497 respectively. Again, there is no statistical evidence in favour of either the recession push theory or the entrepreneurial pull theory. This would mean that unemployment affects different individuals differently. In other words, the two forces exist simultaneously.
- Previous paid-employment experiences and previous self-employment experiences are both significantly positive (0.3027 and 0.6268 respectively), indicating that prior labour market experience is a key determinant to entries of self-employment. However, the coefficient of previously self-employment experience is double the magnitude of the coefficient of previously paid-employment experience. This indicates that the effect of prior self-employment as the probability of becoming self-employed is twice as high as the effect of prior paid-employment, all other factors held constant.

Concluding remarks

The two papers have demonstrated how individual characteristics could have affected the decision for one to enter self-employment. Such analytical framework is derived from the “entrepreneurial pull” theory, in which earning, gender, age, education attainment, marital status, presence of children and other demographic related factors are believed to have impacts on the decision to enter self-employment. The two papers together tend to yield consistent results on the followings:

- Older workers are more likely to become their own bosses.

- Marriage is positively associated to self-employment status, and it serves as a very crucial determinant of self-employment.
- The presence of dependent children (Under 6 years old) is positively associated to the self-employment decision of men, while the presence of dependent children tends to discourage women from entering self-employment.

For both men and women, marriage tends to encourage individuals to enter self-employment, whereas the presence of dependent children tends to discourage individuals from entering self-employment for men. It follows that the decision for one to become self-employed is not completely dependent on that individual's characteristics. The self-employment decision appears to be a joint decision among family members, such as parents, spouses, and children.

The attempts to use the unemployment rate variable to capture market fluctuation in the two models have produced inconsistent results. Simpson and Sproule have employed cross-sectional data and found a statistically significant negative relationship between unemployment and self-employment. However Lin et al. have employed longitudinal data and found a statistically insignificant positive relationship between unemployment and self-employment. Therefore, it is inconclusive to say which of the "push" and "pull" effect predominates.

Surprisingly, educational attainment appears to be loosely tied up with self-employment. Recall from the previous section that a large portion of self-employment occurs in sales, service and manufacturing sectors that do not require a lot of formal education attainment in order to operate. As a result, educational attainment is probably not a main factor in the decision to enter and exit self-employment. As we will see later, self-employed workers tend to acquire their required skills through "informal" training rather than through "formal" training. A more detailed discussion about "formal" and "informal" trainings of self-employment will be presented in section 5.2.

4.5 Previous work experience and attitudes of the self-employed

This section will summarize the first half of the paper “Results from the Survey of Self-employment in Canada” written by Benoit Delage in 2002. Delage (2002) has done a very detailed analysis about the Survey of Self-employment (SSE²). The SSE has surveyed the self-employed workers on their previous work experiences before being self-employed, reasons for entering self-employment, attitudes toward self-employment, as well as the aspects of self-employment that they most liked and disliked. Some of the questions were intentionally designed for the self-employed workers to determine what factors drove them to move into self-employment. I will first look at the reasons that motivate individuals to become self-employed, followed by their attitude towards self-employment. Lastly, the advantages and disadvantages of self-employment will be examined.

Previous work experiences before being self-employed

The SSE provides much information as to whether or not individuals have voluntarily chosen to become self-employed. Around 60% of the surveyed individuals decided to voluntarily quit or resign from their jobs in order to become self-employed. Nearly 30% of the surveyed individuals had lost their jobs, and a few had retired before entering self-employment. Since a higher proportion of individuals have voluntarily entered self-employment, one might conjecture people are becoming self-employed voluntarily. Another study tends to confirm this result by showing that the self-employed are happier than employees in term of job satisfaction (Blanchflower and Oswald, 1998).

Reasons for entering self-employment

Part of the SSE consists of questions related to the “recession push” theory of self-employment. The question is “Did you become self-employed because you could not find suitable paid employment?” Only 21.8% of the self-employed felt that they are being “pushed” into self-employment. In addition, it is interesting to see how satisfied the self-employed are with their current employment status. To examine this issue, the SSE asked the self-employed a hypothetical question: “If instead of self-employment, you could get a paid-job at the going wage or salary rate for someone with your experience and education, would you accept it, yes or no?” Only about 30% of the self-employed replied that they would switch to a paid-job if there were one available at the time of the survey. In short, there is about 78.2% of the self-employed who were not “pushed” into self-employment, and the 70% of them who expressed no desire toward a

² SSE is a special supplement to the monthly Labour Force Survey (LFS) during April 2000.

paid-job. According to these survey questions, the self-employed workers are typically not “pushed” into self-employment: instead they self-select into the field. In order to have a better understanding of the decision to enter self-employment, the remainder of the 78.2% of self-employed were asked for the reasons of why they voluntarily became self-employed. These reasons are summarized in Table 4.5.

Table 4.5

Main reason one became self-employed ¹	Employer status				
	All self-employed	OASE ²	Employer	Men	Women
Independence, freedom, own boss	36.3	35.1	37.5	42.1	24.0
Control, responsibility, decision making	7.4	5.7	9.1	8.7	4.6
Challenge, creativity, success, satisfaction	9.8	7.9	11.8	9.7	10.1
Flexible hours	6.9	9.6	4.2	5.3	10.2
Balance of work and family	5.4	7.7	3.0	1.7	13.2
More money, unlimited income	7.5	6.8	8.2	8.6	5.2
Nature of the job	6.4	6.8	6.0	5.8	7.8
Joined or took over family business	9.3	6.8	11.8	9.5	8.8

¹All respondents who did not become self-employed for lack of suitable paid employment were asked to identify the main reason why they became self-employed instead of working for an employer.

²OASE stands for own account self-employed workers

Source: Table 4.1: Main reason one became self-employed (Delage, 2002)

Given that these reasons are collected from individuals who voluntarily became self-employed, it is no surprise that “entrepreneurial-value” related factors such as independence and freedom, decision making, and challenges that lead to self-satisfaction are the primary reasons that attract them to self-employment. Whereas women are more likely to have mentioned “time-related” factors, such as flexible hours and balance of work and family for reasons of being self-employed, men are more likely to have mentioned “entrepreneurial-value” related factors. There is also a significant number of individuals who become self-employed by inheriting family businesses. Employers tend to put a greater value on “entrepreneurial-value” and “income” related reasons, while own-account workers are more concerned with “time-related” reasons.

Attitudes towards self-employment

According to Delage (2002), the attitudes of the self-employed are categorized as:

- I. Self-employed by choice – people who became self-employed *voluntarily*.
- II. Involuntary self-employed – people who became self-employed *involuntarily*.
- III. Discouraged self-employed – people who did not become self-employed for lack of a suitable paid-job but would presently accept the opportunity of paid employment at the going rate.
- IV. Adjusted self-employed – people who became self-employed for lack of suitable paid employment but would presently turn down a paid-job at the going rate.

Evidence drawn from the SSE has shown that the majority of self-employed workers are in the status “by choice”, and there are about as many “adjusted” self-employed workers as “involuntary” self-employed workers. Notably, only a few of them are “discouraged”. In other words, individuals who resigned or quit their job voluntarily are more likely than those who lose their jobs to be self-employed by choice. Evidence drawn from the SSE also revealed that self-employed with university degrees are more likely than self-employed with lower education levels to be self-employed “by choice”. Employers are more likely than own-account workers to be self-employed by choice. Those who choose to be self-employed are often associated with a higher income level and a longer tenure³; they are also less likely to quit.

³ Tenure rate refers to the number of employment years and the delay in taking retirement.

Advantages of self-employment

The SSE asked what individuals like the most about being self-employed. The most prevalent advantages that they expressed are summarized in Table 4.6.

Table 4.6

Aspect of self-employment that is most liked by the self-employed, in percentages ¹							
	Groups of occupations ²						
	Both sexes	Men	Women	1	2	3	4
Independence, freedom, etc.	41.4	47.7	28.1	39.9	32.9	47.2	54.7
Control, decision making	10.3	11.3	8.1	13.1	6.4	9.8	9.7
Challenge, creativity, etc.	13.7	13.9	13.3	17.4	11.0	12.4	8.6
Flexible hours	13.7	12.2	17.0	13.8	16.8	13.7	6.9
Balance of work and family	6.3	3.4	12.4	4.8	10.6	-	8.8
Work from home	4.5	1.1	11.5	2.8	9.4	-	4.3
	Employer status		Attitude towards self-employment				
	OASE ³	Employer	By choice	Involuntary	Discouraged	Adjusted	
Independence, freedom, etc.	39.5	43.7	44.0	28.3	38.8	42.4	
Control, decision making	7.9	13.2	11.0	-	12.5	-	
Challenge, creativity, etc.	9.9	18.1	14.0	12.8	12.7	15.2	
Flexible hours	16.8	10.2	12.1	18.7	15.3	16.2	
Balance of work and family	7.9	4.4	6.2	7.8	6.2	-	
Work from home	6.6	2.0					

¹ For all respondents; computed from answers to questions (unique answers).

² 1, manager/professional occupations; 2, service occupations; 3, blue-collar occupations; 4, occupations unique to primary industries.

³ OASE stands for own account self-employed workers.

- Estimate of unacceptable quality, data suppressed.

Source: Table 4.2: Aspect of self-employment that is most liked by the self-employed, in percentages (Delage, 2002)

Pooling males and females together, the attributes that the self-employed liked the most are “entrepreneurial-value” related advantages, followed by flexible work hours. Independence and freedom are more valued by men, whereas flexible hours, balance of work and family, and the possibility of working from home are more valued by women. “Entrepreneurial-value” related advantages are particularly appealing to the self-employed in managerial positions and professional occupations, while “time” and “family” related advantages are more valued by the self-employed in service occupations. While own-account workers show a greater concern for time- and family-related advantages, employers’ primary concerns are the advantages linked to “entrepreneurial-values”.

Disadvantages of self-employment

The SSE asked what individuals dislike the most about being self-employed. The most prevalent disadvantages are summarized in Table 4.7.

Table 4.7

Aspect of self-employment that is most disliked by the self-employed, in percentages							
	Groups of occupations ²						
	Both sexes	Men	Women	1	2	3	4
Uncertainty, insecurity	21.9	22.4	20.9	21.3	22.8	22.6	21.3
Long hours, no time off	15.0	14.2	16.6	15.4	13.5	12.9	20.4
Income fluctuations, cash flow problems	12.1	12.3	11.7	10.7	11.1	12.1	19.1
Lack of benefits	7.1	5.8	9.9	6.2	11.0	5.6	4.8
Stress	7.4	7.6	6.9	7.1	7.3	9.4	5.1
	Employer status		Attitude towards self-employment				
	OASE ³	Employer	By choice	Involuntary	Discouraged	Adjusted	
Uncertainty, insecurity	24.8	18.6	19.0	31.0	24.0	25.1	
Long hours, no time off	11.2	19.5	16.8	7.8	16.6	10.3	
Income fluctuations, cash flow problems	14.8	9.0	11.0	15.5	11.5	14.4	
Lack of benefits	9.7	4.1	5.7	9.9	8.0	-	
Stress	5.2	9.9	8.7	-	6.7	-	

¹ For all respondents; computed from answers to questions (unique answers).

² 1, manager/professional occupations; 2, service occupations; 3, blue-collar occupations; 4, occupations unique to primary industries.

³ OASE stands for own account self-employed workers.

- Estimate of unacceptable quality, data suppressed.

Source: Table 4.3: Aspect of self-employment that is most disliked by the self-employed, in percentages (Delage, 2002)

The five prevalent disadvantages for self-employment are insecurity, long working hours, income fluctuations, cash flow problems, the lack of social benefits, and stress. For both self-employed males and females, uncertainty and insecurity are most frequently expressed as disadvantages associated with self-employment. In comparison to men, women are more likely to mention the lack of benefits and long working hours of self-employment. Own-account workers are more likely than employers to dislike income fluctuations, cash flow problems and lack of benefits, indicating that own-account workers are more likely to have experienced financial problems. On the other hand, employers are more likely to mention long working hours and stress in self-employment. Individuals who are self-employed by choice are less likely to consider uncertainty and insecurity as the main disadvantages. However, they are more likely to have mentioned stress and less likely to have an unfavourable view of self-employment, compared to other groups of self-employed workers.

Concluding remarks

In the previous section, the use of the regression techniques with time series macro data and cross-sectional data as well as longitudinal econometric evidence with micro-data, has produced inconclusive results on which of the “push” and “pull” theory is more valid in explaining why individuals choose to enter self-employment. In this section, the SSE has found that over 80% of the self-employed workers are either “by choice” (75%) or “adjusted” (8%). Furthermore, voluntarily becoming self-employed can be interpreted as the absence of external forces in driving individuals to become self-employed; individuals are self-selected into the self-employment field based on different reasons. This finding tends to provide support to the entrepreneurial pull theory.

Reasons for individuals to become self-employed appear to be different between genders. For men, “Entrepreneurial-value” related reasons of self-employment are commonly cited as main advantages. This perhaps militates toward the assertion that self-employed men are affected by the “entrepreneurial pull” effect. The measures of the “recession push” effect are usually small, and researchers often fail to explain why men will enter self-employment during economic troughs in which failure chance is expected to be high. Therefore, it may be correct to conclude that the “entrepreneurial pull” theory is more valid in explaining why men enter self-employment. For women, it is tempting to simply look at the statistics reported by SSE and claim that “time and family” related reasons are the primary reasons that have driven women to enter self-employment rather than working for others. Though this is only true if self-employed women act

as “added workers” in which their earnings serve as a supplementary income to the income of their spouses. However, income related factors such as income fluctuations and cash flow problems are the also frequently mentioned as disadvantages for the self-employed women. Another study tends to confirm this result by showing that women are far more likely than men to pursue self employment as a way to balance between family and work (Rooney, 2003).

Unlike the case for men, both “entrepreneurial-values” and “time and family” related reasons appear to be equally appealing to women. As a result, female self employment should be studied along with many other family related issues such as self employed spouse, child care responsibility, illness of family members, and maternity/parental leaves. This would be helpful in explaining why becoming an employer is more favourable to men while women prefer to become own account workers. The study of Hughes (1999) also tends to confirm this result by revealing that self-employed women are more likely than their male counterparts to be in the service sector, to have home-based business, to be own-account, and to work part-time.

Notably, 9.3% of the individuals enter self-employment by assuming responsibility for family businesses. In the 1995 Survey of Work Arrangements, there were about twice as many self-employed workers (17.1%) who entered self-employment for the same reason. This indicated that the incidence of transferring one’s business to the next generation has significantly decreased over time. Further studies may be needed to see whether there are obstacles for the retiring self-employed individuals to transfer the businesses to their descendents or other parties. Further discussion of issues related to retirement of the self-employed appears in section 5.3 below.

5. Policy issues related to self-employment

The changes in family composition, labour market conditions, and pattern of work over the last few decades have continuously challenged the existing Canadian labour market and social policies. The historical development of the Canadian social protection policies include a variety of programs providing protection against health risk, family benefits, retirement pensions and unemployment compensation. Self-employed workers differ from paid-employed workers; they do not have access to most insurance programs that are offered by government. They often have to pay a higher cost compared to paid workers in order to obtain their own insurance plans. This is less of a concern for high earners or employers, but this remains a significant issue for those in low paying sectors such as own-account workers. Since most of the employment-related insurance programs were developed in the postwar period, their protection target was set to full-time traditional paid-employed workers who were expected to be the primary earner in the family. Concern about income adequacy and the lack of protection for self-employed individuals in the event of illness, disability and retirement apply to both self-employed men and women.

The Canadian government has always pursued the goals of improving social protections and enhancing economic growth. In order to achieve these two goals, government must define new policies to ensure income adequacy and social protection for all self-employed individuals and their families. In 2001, the government of Canada has considered the possibility of extending the coverage to the self-employed workers under the Employment Insurance program. However, the government soon realized that there is a foreseeable problem known as “moral hazard” that makes it almost impossible to distinguish between involuntary and voluntary unemployment among self-employed workers (Canada, 2001a). This is one of the many attempts by the government to improve the income adequacy of the self-employed. Within the same year, another approach was recommended to enable the self-employed parents to qualify for maternity and parental leave benefits (Canada, 2001b). This program has been developed in Quebec but has not yet been implemented.

This section extends Delage’s paper from the section 4.5 and aims to address the following issues in self-employment: the lack of health and disability benefits, the barriers to obtaining appropriate training and education, and the difficulty in financing proper retirement plans.

5.1 Dental, Health and Disability Insurance Coverage

Since self-employed workers are excluded from receiving benefits offered by the government programs, they often have to insure themselves through private insurance. Alternatively, self-employed workers may be able to obtain fringe benefits from their full-time full-year paid-employed spouse: company insurance plans often provide complete coverage to employees as well as to their family members; While some self-employed workers have the resources to insure themselves through private insurance and others secured by their spouses' insurance plans, some have to self-insure. This raises the concern of whether self-employment is a good policy option in order to promote self-sufficiency.

Supplementary health insurance and dental insurance

Health and dental insurance are often available to both employees and their family members. They are usually provided to employees as fringe benefits. Employers can provide such benefits cost-effectively to their employees through well-priced group insurance plans. SSE has reported that only around 40% of the self-employed have supplementary health and dental insurance. Self-employed workers who have obtained insurance coverage also vary according to their employer status, occupation, income level and age. Four noteworthy findings from the SSE are listed: Employers are more likely than own-account self-employed workers to have insurance coverage. Self-employed individuals in managerial positions and professional occupations have the highest rate of insurance coverage, while the self-employed in occupations unique to primary industries have the lowest. The rate of insurance coverage increases with higher income levels. The insurance coverage rate is the highest for self-employed between ages of 40 to 49.

In addition, fairly similar reasons are mentioned for the self-employed workers who were not covered by supplementary health insurance and dental insurance during the survey periods for both insurance plans. For both self-employed males and females combined, around 40% gave the reason that they cannot afford it, 25% answered that the insurance plans did not offer good value for the premiums, and 20% have not thought about it. Own-account self-employed workers were more likely to report that they could not afford the plans, while employers were more likely to complain that the available plans did not offer good value for money.

Disability insurance

Disability insurance plans differ from the above two plans because they cover only the person who acquires it. The SSE reported that about 40% of the self-employed workers are

covered by disability insurance plans. The plan tended to attract more employers than own-account workers and more men than women. Income level again appeared to be positively correlated with the coverage rate of disability insurance plans. The youngest and oldest age groups among self-employed workers were less likely to be protected by the plan. Individuals who are covered by the plan were highly concentrated in the prime age group (30 to 59 years of age). The reasons for the absence of coverage of disability insurance plan were very similar to the supplementary health insurance and dental insurance plans. It is important to note that only 3.6% of the self-employed workers stated that they were not eligible for the disability insurance plan.

Concluding remarks

Both health supplementary and disability insurances are very important benefits for any labour force participant. However, a large portion of self-employed workers is still not covered by these plans. The income level can greatly affect the insurance planning decision for the self-employed. As a result, one can expect that the low-income self-employed workers (e.g. own-account workers) would be less well off compared to the low-earnings employees.

5.2 Training behaviour of the self-employed

It is widely thought that human capital is a crucial determinant of labour force participation and a country's productivity growth. In the paid-employment sector, highly educated individuals are often associated with high labour force participation rate. However, this is not always true for the self-employed. There is a polarized distribution of education among self-employed workers, which suggests that education is not a good determinant of the transitions in or out of self-employment.

The self-employed workers differ from employees in that the ventures of the self-employed often require additional occupation-related skills to manage their businesses. However, not all self-employed workers are able to acquire all required skills to manage their businesses through standard education. In contrast, self-employed workers may need to enrol in some occupation-related training program in order to increase the survival rate and profit on their business ventures. Therefore, it is important to investigate the training behaviour of the self-employed.

Formal training

Taking a course or hiring an instructor to gain the essential occupation-related skills is considered as formal training. The SSE revealed that about a quarter of self-employed workers had taken formal training during the twelve-month period preceding the survey. Own-account workers are less likely than employers to have trained formally. Older self-employed workers are less likely to have undertaken formal training. More highly educated self-employed workers are more likely to have trained formally. Men are less likely than women to have taken formal training.

Around a quarter of all self-employed workers did not attend any formal training. Notably, while only 16.8% of self-employed workers who did not train formally indicate that some obstacles prevented them from doing so, about 60% did not express a desire to do so. In addition, the SSE has gathered some frequently mentioned obstacles that are reported by self-employed workers who have not taken any formal training. Close to 60% of the self-employed workers mentioned that they do not have the time to train; nearly 30% of them mentioned that the training costs are too expensive; about 10% of them mentioned that the training session is offered at an inconvenient time or location.

Informal training

The three widely used informal training techniques are: (1) studying books, manuals or other publications in either print or electronic format; (2) observing colleagues demonstrating skills; (3) discussing problems with others. The SSE reported that almost 80% of the self-employed workers used at least one of the three techniques. The most prevalent technique used to attain the required knowledge is discussions with others (71.5%), followed by studying manuals and books (62.2%). There are no significant differences between men and women regarding the three techniques. Employers are more likely than own-account workers to utilize informal training. The proportion of informal self-employed training increases with education level but decreases with age.

Comparing formal and informal training

During the reference period, around half of the self-employed workers became involved with some informal training but not formal training; a very small proportion of them have been trained formally but not informally. About 25% of the self-employed workers had been trained both formally and informally. The SSE contained questions for self-employed workers as to which type of training is more useful for the self-employed. Around 45% of them answered that informal training is more useful, and only 18% of them reported that formal training is more useful.

Concluding remarks

The lack of economies of scale for self-employed programs and courses may be the reason why training institutions are unable to offer these at affordable prices and at convenient times for self-employed workers. Consequently, the tuition fees and the loss of income associated with training can be viewed as an individual's opportunity cost to engaging in training activity. This is, the perceived benefits from the training would not offset the cost of the training. Indeed, estimating the expected returns from the training can be difficult. Whether the self-employed workers are unable to absorb the costs that are associated with training is not known.

So far, based on the SSE, only very little is known about the training behaviour of the self-employed. Since self-employed workers often need to work longer hours than employees; informal training appeared to be a more appropriate strategy for the self-employed in comparison to formal training, as it offered greater time flexibility for the self-employed workers.

5.3 Retirement preparation

Many employees participate in employer-sponsored pension plan or group – Registered Retirement Saving Plan (RRSP). These retirement plans allow the employees to spread the risk over a diversified portfolio of assets. However, this is not the case for the self-employed. Self-employed workers lack the option of participating in those retirement plans, and they often have to prepare financially for retirement by themselves.

SSE has determined four different prevalent saving methods for the self-employed. They are equity in one's home, cottage or business (79%), RRSPs (70%), and other forms of savings for retirement, such as mutual funds and guaranteed income certificates (45%). Other assets include land or rental property (around 28%). In fact, slightly more than 90% of the self-employed workers have saved in one way or another for their retirement. Not surprisingly, the likelihood of self-employed workers saving for retirement tends to increase with higher income level and age.

In terms of asset diversification, 90% of the self-employed hold at least four different types of assets, slightly less than 30% of them hold three types, 28% of them hold two types, and only 16% of them hold only one type of asset. However, women are more likely than men to hold only one or two types of assets. In comparison to employers, own-account workers are more likely to hold fewer types of assets.

Concluding remarks

Given that the wealth of the self-employed is often in the form of some physical assets such as land, buildings, and machinery, the value of such assets have appeared to be very sensitive to the business cycle. Whether the self-employed are well prepared financially for their retirement depends on the time of liquidation of their businesses. As a result, it may not be feasible for the self-employed to retire when they want to.

6 Self-Employment Assistance (SEA) program

In 1985, the Canadian federal government first introduced Self-Employment Incentive (SEI) as a policy option to fight unemployment rate. At that time, SEI was funded directly from government revenues. Its primary objective was to promote self-sufficiency by encouraging employability of the unemployed individuals through self-employment. The SEI program was designed to provide income support for 52 weeks duration and free business counselling to qualified individuals who were required to develop a business; otherwise, they would lose all of the income supplements. To be eligible for this program, the applicant must be a UI or welfare recipient at the time of application, have prepared an approved business plan, agreed to invest at least 25% of the benefit entitlement⁴ (\$180 x 52) or \$2,340 in the business over the 52 weeks, work full-time (at least 30 hours), and be a resident in the chosen rural areas (Wong, Henson, and Riddell, 1998).

The Self-Employment Assistance (SEA) measure replaced SEI beginning in June 1992. Some adjustments had been made according to the amendment of the Unemployment Insurance (UI) Act. It provided new regulations and additional funding under the Developmental Uses of UI. The intention of modifying the former UI measure into SEA program was to replace passive income support with active training and re-employment assistance for the SEA participants. The funding source of SEA changed from general tax revenue to the UI Account. The rate of SEA payments was to be aligned with the UI benefit rate. In order to provide greater financial incentives to participants (instead of just collecting the passive UI benefit), the SEA allowance could be collected concurrently with other supplementary allowances including childcare, commuting, disability and living-away from home. The income entitlement of the SEA program was extended to cover the previous 52 weeks SEI period with a maximum of 156 weeks total UI benefit duration, with no deduction or claw back on the self-employment earnings during the benefit period. Furthermore, participation in SEA was no longer limited to UI and welfare claimants in the designated areas. Seasonal self-employed ventures became eligible; participants would be allowed to resume their businesses in subsequent seasons⁵.

In order to ensure that SEA participants would follow the SEA regulations closely, they were required to sign an agreement between the employer and Human Resources Development

⁴ \$180 is a weekly taxable allowance or grant that was given to successful applicants for income support for up to 52 weeks. Such allowance was raised to \$230 in 1991.

⁵ For example, a seasonal self-employed worker who is off for three months a year could stretch out his one year of benefits over four years under the SEA program.

Canada. According to the contract, participants must agree to develop a long-term business plan that would be implemented during the participation period, take some appropriate business training, make a personal investment of at least \$1000 to a maximum of \$4000, and work full-time on the new business venture while receiving financial assistance, starting a new business, or alternatively take over an existing business without having prior ownership.

The modifications of the SEA have made it much more restrictive. There are three noteworthy changes. First, income support in the post-UI world is to be received for a much shorter period than 52 weeks. Second, since regular insurance benefits (EI) are no longer provided at a predetermined rate, there is a probability that the new replacement rate may be less than that of the old rate. Finally, a more permissive attitude towards seasonal business ventures has been introduced.

The changes within the SEA program have raised important questions regarding the effectiveness of government programs in promoting self-sufficiency in the labour market. Wong, Henson and Riddell (1998) have found that the SEI and SEA programs were successful in promoting self-sufficiency. Their studies were presented in the paper "Earnings Impact of Self-employment Assistance For the Canadian Unemployed, 1987 – 1996" in 1998. I now summarize their work in a greater detail.

Data and methodology:

Wong et al. employed the longitudinal administrative micro data sets of Human Resources Development Canada. The regression dataset is constructed by three separate files; they are Status Vector of insurance benefits master file, Canadian Jobs Strategy (CJS) file, and the T1 tax filers from Revenue Canada. The Status Vector insurance benefits master file provided detailed information on the individual's qualifying employment spell (with information on insurable earnings) and UI claims history. The Canadian Jobs Strategy (CJS) file gives a record of program interventions financed from the general revenues. The T1 tax file administrative data provides an annual individual income categorized by source. The three resource files are connected using social insurance numbers, resulting in 66,391 self-employment program participants contained in the final dataset between 1987 and 1998. Given that the SEA is a less restrictive program than SEI, the majority of participants are drawn from year 1994 to 1997 (Table 6.1). In comparison to the treatment group, a comparison group of 40,000 (0.125% of the 32,041,000 the initial sample) individuals are randomly selected from the UI and non-self-

employed claimant population. Notably, there is a sharp increase in the number of UI self-employed participants between 1992 and 1995, whereas the number of UI yet non-self-employed claimants has decreased slightly during the same period (Figure 6.1).

Table 6.1

The number of SEI / SEA Participants from year 1987 - 1998

	Start Year Participant (UI and SE)		Comparison (UI and non-SE)	
	Number	Percent	Number	Percent
1987	288	0.43%	3436	8.59%
1988	1203	1.81%	3581	8.95%
1989	2285	3.44%	3509	8.77%
1990	3345	5.04%	3876	9.69%
1991	3359	5.06%	4002	10.01%
1992	4118	6.20%	4045	10.11%
1993	6942	10.46%	3819	9.55%
1994	9578	14.43%	3293	8.23%
1995	10992	16.56%	3428	8.57%
1996	10590	15.95%	3154	7.89%
1997	9192	13.85%	2913	7.28%
1998*	4499	6.78%	944	2.36%
Total	66391	100.00%	40000	100.00%

* Incomplete year data

Source: Table 1: Participant and Comparison Group Sample Sizes (Wong et al., 1998)

Figure 6.1

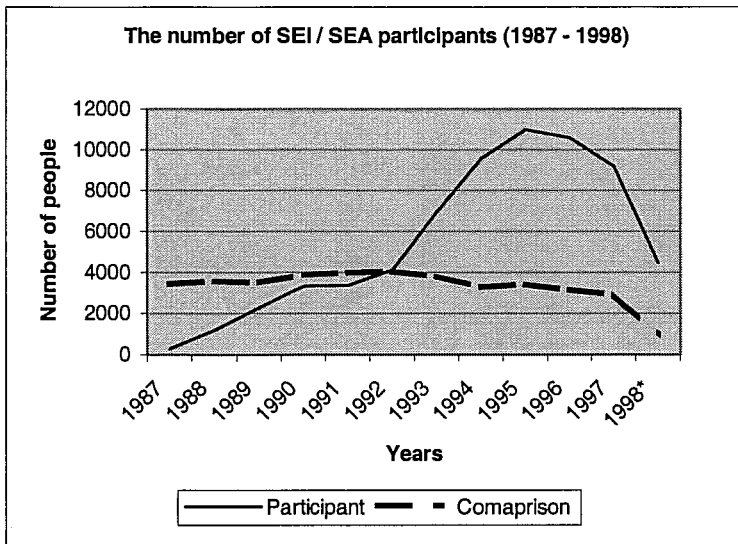


Table 6.2

Participant / Comparison Group Differences, Selected Characteristics

Variable	SE Participants	Comparison Group	t-Statistic on difference**
Demographics (percent)			
Youth (16 – 24)	6.5	17.7	58.8
Prime Age (25 – 44)	90.9	74.2	73.5
Older (45 – 65)	2.7	8.1	38.0
Male	63.4	55.0	27.2
Income Benefits (weeks)			
Insurable	41.4	37.8	24.8
Entitlement	40.4	37.6	39.5
Elapsed*	46.2	32.3	121.2
Prior 2 Year Earnings (\$)			
Employment Earnings	20,300	16,236	40.6
Gross SE Earnings	5,082	1,201	1.9***

Source: T1 tax file, Status Vector and CJS

Note: All differences are statistically significant at the one per cent level

* Elapsed Weeks for SE refers to the length of time on SE. It does not include the time spent on the claim before SE started. For the Comparison group, it is the length of time while on the claim. This includes weeks where no benefits are paid.

** t-Statistics are based on regressing the dependent variable on a SE participation dummy.

*** This data is mostly zeros, with extremely high standard deviations for non-zero values. It is likely that the above test was inappropriate for this variable.

Source: Table 2: Participant / Comparison Group Differences, Selected Characteristics (Wong, et al., 1998)

The characteristics of SEI and SEA participants (See Table 6.2):

- The SEI and SEA participants are less likely to be in the youth and the older worker categories in contrast to the comparison group. They are highly concentrated in the prime ages of 25 to 54. This is consistent with the hypothesis that prime age workers are more favourably disposed to self-employment.
- As expected, men are more likely to start a business through the self-employment program. This is consistent with the hypothesis that men view self-employment as “employment of last resort”. In other words, when men have suffered from long-term unemployment, they will become more likely to consider the option of self-employment.
- Interestingly, statistics show that self-employment participants have a more secure paid employment history than the comparison group members. The program selection bias and self-selection bias are two possible explanations for this result. For program selection bias, workers with some employment history are definitely more experienced than workers without any employment history as they have already accrued some particular skills and knowledge that might be useful in operating their own businesses. As a result, the SEI and SEA programs are designed to guide the more experienced unemployed UI claimants to become self-employed. For self-selection bias, the currently employed workers who are interested in becoming self-employed are able to take advantage of the self-employment program. By leaving his/her current job and becoming an UI claimant, a worker can be self-selected into the Self-employment program. There are no data available to test for the existence of the two biases. However, both of them could work together since the biases do not necessarily contradict one another.
- While significant differences between self-employment and paid-employment earnings were found, the authors argued that it is inappropriate to conclude that self-employment is a better job than paid-employment in terms of disposable income. Since self-employment incomes are reported by self-employed workers, there may be a tendency to under-report one’s income. As a consequence, researchers often assume incomes of the self-employed are understated. In other words, it would be correct to say, a dollar of self-employment earnings produces greater individual welfare than a dollar of paid employment earnings. It follows from this view that the gross earnings from paid

employment and self-employment can be interpreted as a proxy for economic self-sufficiency.

The primary objective is to examine whether the SEI and SEA program generates value-added benefits in the form of increased earnings for participants. A simple difference-in-difference (fixed-effect) model was used to estimate the changes in earnings for the first, second, and third year after SEI against earnings in a base year prior to program participation. Because the change in earnings will not take place immediately as the individual is selected into the program, two-year lagged earnings will be used to account for pre-program earnings. Consequently, $Y_{t+1} - Y_{t-2}$, $Y_{t+2} - Y_{t-2}$, $Y_{t+3} - Y_{t-2}$ were calculated for each participant and non-participant, where t denoted the program start time and Y represented income. Wong et al. took the difference of this difference between the participants and non-participants for a final result. A set of explanatory variables are also included to control for important characteristics that are expected to have influences on earnings, namely gender, age, experience, experience squared, and regional labour market controls. The hypothesis to be tested is that the SEI and SEA programs will have a positive impact on the earnings.

Table 6.3
Effects on Gross SE Earnings of Control Variables by Cohort Year

	SEI Cohorts				SEA Cohorts			
	1988	1989	1990	1991	1992	1993	1994	1995
Youth	119.7	851.9	554.2	-51.8	-64.6	-208.1	-3189.3	1124.2
Older	-153.6	923.9	-2175.8*	104.2	987.2	-4494.8*	796.0	-1673.0
Female	441.6	612.9	1085.0	1135.5	1751.7*	3616.6*	6956.2*	7422.3*
Exper	312.0*	716.2*	477.8*	-306.5	-198.1	47.1	-185.4	-341.8
Exper ²	-3.8*	-10.8*	-6.3*	4.7	2.7	-1.5	2.1	4.1
Atlantic	-48.6	-1037.8	1420.7	-321.2	692.1	94.2	-4086.2	-501.9
Quebec	907.4	-736.8	-2274.2*	-280.6	-1588.4	-1653.3	-7420.8*	-7108.1*
Prairies	428.9	-411.2	381.7	160.0	1350.0	-2664.6	-1124.6	-2059.4
BC	661.2	2158.1	2444.8	1674.5	1241.9	2301.4	-1689.8	3049.3
R ²	0.087	0.065	0.071	0.062	0.078	0.068	0.064	0.066

*Significant at the 5% level

Source: Table 5: Effects on Gross SE Earnings of Control Variables by Cohort Year (Wong et al., 1998)

Regression analysis:

The regression results are summarized in Table 6.3.

- Most estimates in Table 6.3 appeared to be positive, indicating that the SEI and SEA participants received higher gross earnings when compared to comparison group members (UI non-self-employed claimants). The regression outcome suggests that both SEI and SEA programs were successful in increasing SEI/SEA participants' incomes while reducing dependency on UI.
- The earnings differences for the older participants appeared to be significantly negative. This indicated that the older SEI and SEA participants are less likely to achieve self-sufficiency through the programs than the UI and non-self-employed claimants.
- As expected, the earnings differences for female participants appeared to be significantly positive, indicating that female SEI and SEA participants are likely to achieve self-sufficiency through the programs than female UI non-self-employed claimants.

Concluding remarks

The Self-Employment Assistance (SEA) program is an important government intervention aiming to fight the persistently high unemployment rate during the 1990s. Its primary objective was to promote self-sufficiency by assisting the SEA participants to become self-employed. According to this evaluative study, the SEA program has effectively increased income for the majority of participants over time, while reducing the dependency on income maintenance programs at the same time. Consequently, Wong et al.'s study suggests that the objective of the SEI/SEA program in promoting self-sufficiency through self-employment may have been fulfilled in the short run.

The SEI and SEA impact appears to be the strongest in the first year after the program. However, some participants are unable to maintain their earnings, and their earnings tend to diminish over time. One possible explanation is that these participants who received the start-up training through the program were unable to develop the necessary skills required to maintain their businesses. Alternatively, some SEI/SEA participants may still prefer paid-employment rather than self-employment. These individuals only become self-employed because it appeared to be a better choice in a poor set of options (self-employed UI claimants and UI claimants). In this case, their incentive to achieve higher earnings decreased toward the end of the program. For

that reason, the self-employment venture was being used as a complement to paid employment, not as a substitute.

Meanwhile, SEA may be over-emphasizing the advantages of being an own-account worker because own-account workers do not necessarily have attractive employment conditions. Since own-account workers often have lower earnings and longer working hours, they also lack many employment benefits such as Employment Insurance, dental insurance, and supplementary health insurance compared to employees. Besides, most SEA participants were UI claimants initially, and thus these participants may lack some required skills to re-enter paid-employment should their self-employed businesses fail. Therefore, SEA participants are unlikely to exit self-employment even though they are trapped in deteriorated own-account work thereafter.

Leading the unemployed into unfavourable own-account work is definitely not an objective of SEA. In order to provide better employment opportunities for the unemployed, SEA can try to encourage some successful participants to turn into employers by offering additional tax credits and income incentives. By doing so, SEA may be able to promote complete self-sufficiency to the unemployed by leading them to more employment opportunities. This would result in creating additional jobs in the paid-sectors as well. Thus, more studies may be required to determine the level of success of the SEI/SEA programs over a longer period of time.

7. Concluding comments

During the last two decades, changes in demographic factors, technological innovations and government tax policies seem to have changed the Canadian labour market structure by shifting the nature of jobs toward “non-standard” types of work. This included “irregular” work schedules (part-time, part-year, home-based and temporary work), fewer “permanent” job positions, more multiple-job holdings, and particularly a rise in self-employment. One possible explanation is the changes in peoples’ work preferences: they are more attracted to “non-standard” types of work. Perhaps the possibility to match education to skill offered by self-employment has “pulled” people into self-employment. An improvement in computer technology has greatly reduced the operating cost for small business ventures, and this undoubtedly helps to explain the current rapid growth of home-based businesses in many OECD countries. Nevertheless, there are only a relatively few empirical studies on the issues of non-standard work due to data constraints. Thus, a detailed study on such topic may provide us with more discerning knowledge about self-employment.

Recently, many researchers and policy makers have questioned the ability to use self-employment as a policy option to balance work and family demands for women. The transition to self-employment allows women to meet the demanding childcare responsibilities without quitting their jobs. One reason that childcare appeared to be an important issue for all working parents is because of its cost. The cost of childcare is commonly viewed as a key determinant that influences both the employment decision and the decision to purchase the market form of childcare. Cleveland et al. (1996) found that government policies such as childcare tax deductions, subsidies or other regulations can alter the expected cost of childcare. A reduction in the cost of childcare can undoubtedly increased labour supply for women. It seems reasonable to expect that the cost of childcare and female self-employment rate are correlated. Self-employed women do not have access to those benefits that many paid-employment mothers enjoy. The effect of the cost of childcare and maternity benefits on female self-employment is expected to be greater than female paid-employment. Therefore, it would be interesting to estimate the effect of the cost of childcare on self-employment. It would certainly be helpful in analyzing the issues related to work and family work within women self-employment.

As Canada has increasingly become a receiving country for immigrants, some academic researchers have suggested that the immigration cohorts in the 1990s have contributed much to the growth of self-employment. On the other hand, other researchers suggested that native-born

are more likely to enter self-employment. There is statistical evidence supporting both hypotheses. Frenette (1998) has studied the immigration cohorts between 1991 and 1995, and found that those immigrants were 30% more likely than the native-born to become self-employed. In particular, the creation of the entrepreneurial business immigrant program has attracted a lot of foreign entrepreneurs moving into Canada. Such a program is especially attractive to those immigrants who were also self-employed in their homeland. In contrast, Bratsburg and Ragan (2002) reasoned that education acquired in non-English speaking countries is not valued as highly as if it were acquired in English speaking countries. As a result, non-Anglophone immigrants may not be able to find the desired paid-jobs due to the failure of Canadian society to recognize their education. Hence, the sum of the two theories may simply imply that the more time immigrants spend in a country, the more likely they will become self-employed. A more detailed study on the Canadian immigration policy might help to explain the rise of self-employment in the last two decades.

Other self-employment issues are summarized as below:

- Whether self-employment is simply a stopgap that people use until they find a paid job remains a question for researchers. Attitudes toward self-employment tend to provide new information about the transition of self-employment. Men who considered self-employment as “the job of last resort” are more likely to become self-employed involuntarily, whereas men who put importance on “entrepreneurial values” are more likely to become self-employed by choice. Women who are self-employed by choice are more attracted to “time and family” related reasons within self-employment. These findings suggest that self-employment between men and women is very different, and they should be analyzed separately.
- Most self-employed workers do not have access to governmental benefits programs. Given that some special inclusions are granted to some self-employed workers in various government programs (e.g. barbers/hairdressers, taxi drivers, fishers, and some employment agency workers), they are eligible to claim benefits from government benefits programs (e.g. Employment Insurance) in cases of emergency. However, whether such government benefits programs should cover for all self-employed workers still remains a big question to policy makers.

- Self-employment clearly creates good job opportunities for certain individuals. However, a significant portion of the self-employed are still working for relatively poor earnings and in an insecure work environment. Even the most successful self-employed workers might still be facing financial difficulties and other obstacles operating their businesses.
- Some researchers have argued that tax rate, family wealth, and interest rates tend to be correlated with the self-employment rate. However, there are no economic reasons explaining why this correlation might be the case.

In sum, self-employment has now played a greater role because of its increasing presence in the labour market over the last two decades. There seems to be no single theory capable to explain why people become self-employed. Statistical results indicate that men and women tend to have different reasons to become self-employed and must be studied separately. Individuals' characteristics can also affect one's decision on whether to become self-employed. "Entrepreneurial-value" related reasons are more valued by men, whereas "time" and "family" related reasons are more valued by women. However, a significant portion of self-employed workers lack access to dental, health and disability insurances coverage, and they are also excluded from Employment Insurance program. As a result, self-employed workers are vulnerable to financial insecurity when their earnings are interrupted by unexpected problems. Some individuals may view self-employment as an unfavourable occupation because it does not provide income stability. However, self-employment continues to be considered as an excellent opportunity for people who are seeking for a great amount of self-satisfaction and entrepreneurial values. Therefore, I believe that the growth of self-employment in Canada will continue and studies regarding government programs on self-employment should be supported.

8. Appendix

Figure 4.1

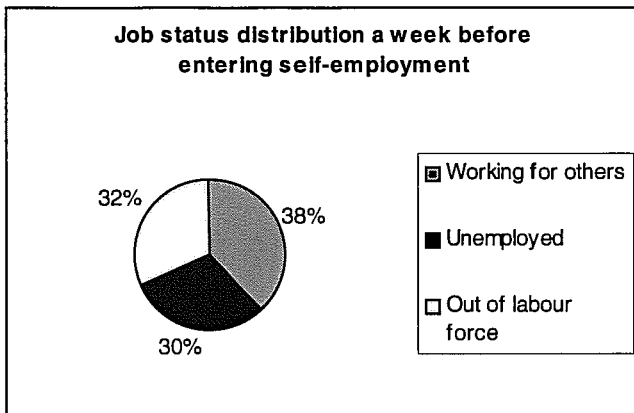


Figure 4.2

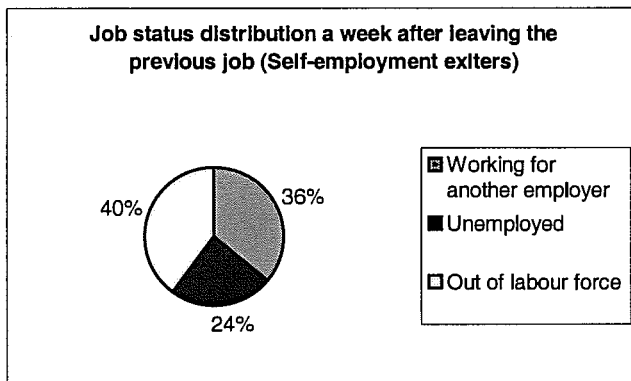
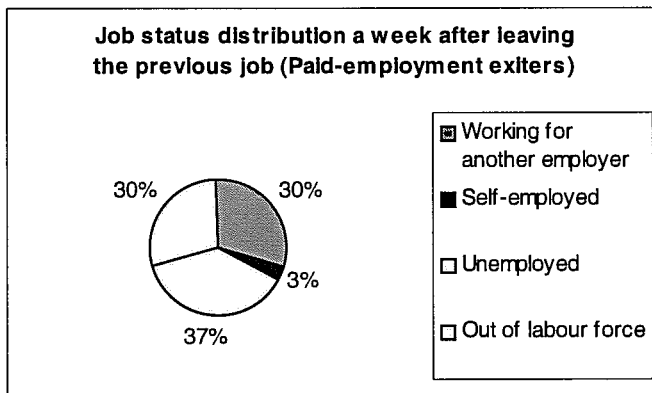


Figure 4.3



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