The Transition into Self-Employment in Canada: The Importance of Involuntary Separation and Unemployment Duration

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I. Introduction and Conceptual Framework

In recent years, self-employment has become the primary source of new employment in the Canadian economy. For example, Statistics Canada (1997) notes that over three-quarters of all new jobs created between 1989 and 1996 were in self-employment. Over the 1990-96 period, self-employment grew by an annual average of 3.3 percent, while paid employment grew by an average of 0.2 percent per year.

The comparatively slow creation of paid jobs has been striking to observers of the Canadian economy. For example, Gauthier and Roy (1997) note that Canadian self-employment growth rates have been "remarkably steady" over the 1976-96 period at the same time that the self-employment as a proportion of total employment has been increasing. By 1996, 17 percent of all workers were self-employed, up from 12 percent in 1976. Furthermore, while most of the growth in self-employment over the 1976-90 period was in employer self-employment (i.e., self-employed with paid labor), growth in own-account self-employment (i.e., no paid labor) has dominated since the early-1990s. The self-employment rate among those with no paid employees has increased by an average of 5.3 percent annually over this period.

The relatively slow pace of paid employment growth suggests that self-employment may represent an adjustment to structural change (e.g., "downsizing," greater openness to international trade) or cyclical recessions in the Canadian wage/salary sector. Thus, the self-employed may include workers who would prefer a paid job at a given wage, but who are using self-employment to maintain earnings. While macroeconomic trends in and of themselves do not show that self-employment is less desirable than paid employment, the fact that own-account

self-employment is inversely correlated to levels of paid employment may be the result of individuals being laid-off from paid jobs and entering into self-employment. An alternative interpretation is that workers are increasingly pulled away from paid employment, and that its slow growth reflects increased preferences, or expanded opportunities (e.g., greater access to credit) among labor market participants for self-employment.

The purpose of this paper is to investigate the importance of what may be broadly defined as "push" factors the decision to enter self-employment. Using data from the Canadian Labour Market Activity Survey (LMAS), we examine determinants of self-employment. To capture "push", we relate self-employment to the incidence of involuntary job loss, number of weeks between jobs, and the unemployment rate. The analyses will be undertaken for both males and females.

Several studies based on micro-data support the role of "push" factors in self-employment growth. The 1995 Survey of Work Arrangements, conducted by Statistics Canada and Human Resources Development in November 1995, asked respondents their main reason for being self-employed. Only about 12 percent said that they were self-employed because no other work was available (Statistics Canada 1997).[1] Of the own-account self-employed, however, this number increased to 15.4 percent (versus 6.9 percent for the self-employed with employees). Although any survey data must be interpreted with some caution, the growth in own-account self-employment coupled with the increased probability that individuals were pushed into this type of self-employment suggests that larger numbers are entering this type of employment reluctantly. This is supported by a recent consulting report (Ekos Research Associates 1998) which observes that factors such as employer downsizing and subcontracting appear to be important determinants of own-account self-employment and that "push" appears to be the main reason for entering self-employment. The same report, however, goes on to note that many respondents had come to enjoy the "pull" factors of self-employment such as independence and flexibility.

[1] In a similar fashion, Dennis (1996) uses a variety of U.S. survey data to argue that most of the self-employed are such because they want to be, not because it may be the only option available.

The economics literature offers many explanations for the increased movement from paid into self-employment. Most studies point to potential gains in earnings or nonpecuniary benefits as the reason for movement into self-employment. Recently this has been done with U.S. data in terms of immigrants (Fairlie and Meyer 1996) and females (Devine 1994), and with U.K. data (Taylor 1996). Workers who desire non-standard weekly hours of work may find self-employment relatively attractive. Fuchs (1982) found that older workers who worked either low or high weekly hours were more likely to move into self-employment compared to those who worked a standard workweek. Rettenmaier (1996) finds similar evidence in his broader sample of male and female workers. Similarly, Rees and Shah (1986) and Taylor (1996) find that increased independence is a motivating factor. Collectively, these studies suggest that the increase in Canadian self-employment may be attributable to a shifting labor force mix and increased labor market participation of workers who value flexible/non-standard schedules.

Although these (and other) studies can also explain what attracts individuals to self-employment from paid employment, they imply that movement between the sectors is fully explained by workers maximizing utility by increasing incomes and/or relaxing sub-optimal aspects of paid employment. Some recent evidence, however, has suggested that part of the movement may be the result of involuntary separation from paid employment. Bradbury (1994) examines trends in paid- and self-employment in New England between 1988 and 1992, and argues that self-employment may represent a "stopgap measure" to sustain earnings after the loss of a paid job. She finds, for example, that the earnings of those who moved into self-employment fell by a greater degree than did those who maintained employment in the paid sector, but fell by less than those who remained unemployed. The implication is that movement into self-employment need not always be driven by preferences. Although her data do not extend into the economic recovery following 1992, Bradbury hypothesizes that the movement into self-employment could partially be reversed as employment opportunities in the paid sector increase. Alba-Ramirez (1996) uses data from both Spain and the United States and finds that the probability of movement from paid work to self-employment following job loss is positively

correlated to the duration of unemployment. Evans and Leighton (1989) find that, all else equal, individuals are more likely to enter self-employment from a state of unemployment than from one of employment.

The Canadian evidence on the movement into self-employment is sparse. Cohen (1988) outlines some of the characteristics of the self-employed in Canada, but does not delve into what motivates these individuals to enter self-employment in the first place. Bernhardt (1994) concentrates on the attractiveness of self-employment relative to paid employment. His central result was that relative potential earnings were the dominant determinant of sector choice in his cross-sectional data. Maxim (1992), by contrast, alludes to the importance of push factors when he tests the hypothesis that immigrants to Canada choose self-employment as a means of circumventing discriminatory practices in wage labor. The existing research most closely related ours has been conducted on U.S. and Spanish data (Alba-Ramirez 1994), U.S. data (Evans and Leighton 1989) and U.K. data (Taylor 1996).

We hypothesize that individuals will be more likely to enter self-employment, following a spell of paid employment, as the length of the jobless spell increases. The "push" of spell length may be explained in several ways. If the probability of exiting unemployment and/or the reservation wage fall with the duration of the spell, we expect the relative attractiveness of self employment to increase even though it entails greater income risk than paid work. Similarly, Vishwanath (1989) argues that prolonged unemployment generates a negative signal to potential employers, amounting to a "stigma effect." To reflect the availability of employment opportunities, we include the unemployment rate at the time of job search as our second "push" metrics. Finally, we address the importance of voluntary versus involuntary job change. We do have evidence that layoff rates in Canada are higher for those with a history of lay-offs (Picot, Lin and Pyper 1997), and that workers with a history of employment instability are more likely to move into self-employment (Evans and Leighton 1989). Several U.S. studies (e.g., Addison and Portugal 1989) have found that displaced workers take a wage cut upon reemployment, suggesting that self-employment may be relatively attractive to displaced workers.

Alternatively, push factors may be unrelated, or even inversely related, to self-employment. Periods of high unemployment are unfavorable for obtaining a paid job, but they may also be unfavorable for opening a business. Job losers, and those unemployed for many weeks, may lack the managerial skill needed to run a business; or they may face difficulties obtaining credit. Evans and Jovanovic (1989) and Holtz-Easkin, Joulfaian and Rosen (1994) discuss liquidity constraints as impediments to self-employment and to the success of these establishments. Several studies (Borjas 1987; Borjas and Bronars 1989; Fugii and Hawley 1991) have argued that worker productivity differs between the two sectors and that more skilled workers sort into self-employment. Blau (1987) makes the assumption that managerial ability affects earnings only in self-employment, and that those with this (unobserved) skill will move into self-employment.

In the context of a job-search model, we can assume that individuals will maximize utility. All else equal, individuals who are faced with the choice of paid labor and self-employment will choose the option with the highest returns. We can write the probability of entering self-employment as:

$$P^* = Y^{se} - Y^p = X\beta + \varepsilon ,$$

where Y^{se} is the expected income from self-employment, Y^p is the expected income from self-employment, X is a vector of individual and labor market charteristics that effect the expected income in either sector, β is the relative returns to these characteristics, and ε is the error term and follows the usual normality assumptions.

We do not observe P^*, but do observe whether the individual moves from paid to paid employment, or from paid to self-employment. Thus, the estimatable probit model becomes:

$$P = 1 \quad if \quad P^* > 0 \quad i.e., \varepsilon > -\beta X$$

$$P = 0 \quad if \quad P^{*} \leq 0 \quad i.e., \varepsilon \leq -\beta X \, .$$

II. Data

To test our hypotheses, a pooled cross-section from the 1988-90 Labour Market Activity Survey (LMAS) is used. This data set contains detailed information on each type of job (paid versus self-employed), reason for job separation, start and stop dates of each employment spell, and demographic and job control variables within each cross section. Our data do not distinguish between weeks of labor market non-participation, and weeks of active search between jobs. The data also contain information on the whether the respondent collected unemployment benefits at any time during the survey period. The LMAS definition of self-employment includes those working for incorporated and unincorporated businesses, with or without paid help. We supplement the LMAS data with annual averages of seasonally-adjusted national unemployment rates from Statistics Canada (1994) which we weight by the number of observations in our data. This results in an unemployment rate which differs by gender and year.

We coded reasons for leaving the starting job into four groups. "Voluntary" leavers expressed dissatisfaction with some job attribute as a reason for leaving. "Involuntary" separations included plant closures, lay offs, or firings. Because household and other personal demands have been found to influence self-employment, we created a "personal separations" category. Finally, we coded a residual category, "other", for which reasons for leaving were unspecified. [2]

Each year of the LMAS contains over 60,000 observations. We restrict our analysis to

[2] Specifically, involuntary leavers are those who were permanently separated from their first jobs because of a labor dispute, the end of a seasonal job, a permanent layoff, an employer moving or going out of business, or dismissal by the employer. Voluntary leavers are those who separated for reasons of low pay, no advancement opportunity, working conditions, concern about job security, or to begin a new job. Personal reasons for separation include illness of disability, personal or family responsibilities, return to school, move to a new residence and retirement. The residual category is other and includes those who separated for undisclosed reasons (but may be included in any of the above three categories).

transitions from paid employment, including those with no intervening spell of joblessness. Our sample is further limited to those who were between the ages of 25 and 64, who were not full-time students at any point during the year, and who held at least two jobs during the period of observation, 1988-1990 The final sample size is 9,832. Each of these individuals held paid jobs before moving into a second job, which was either paid or self-employed. Some 650 individuals moved from paid into self-employment while the remainder remained in the paid employment sector.

III. Results

The summary statistics for the sample are presented in Table 1. Those who enter self-employment have a mean spell between jobs that is negligibly higher (5.3 weeks v. 5.2 weeks), and they were also much less likely to have collected unemployment insurance benefits in the year of the survey. Involuntary separations are less prevalent amongst those who entered self-employment while personal reasons for job change are more common. Voluntary leavers constitute a greater fraction of those who obtained paid reemployment (48 percent) than self-employment (43 percent). Those entering self-employment were more likely to be married than those who took a paid job in the second instant. This may be reflect spousal contributions to household resources, allowing the respondent the means necessary to enter self-employment. Individuals entering self-employment are much more likely to be in the middle of their careers (ages 35-54) than those who move into paid jobs. Finally, the self-employed are slightly more likely to have a university education, less likely to be unionized or be covered by pension plans in their initial jobs, and have about 30 weeks more of job tenure at their initial jobs.

To investigate the independent effects of factors that motivate individuals to move from paid to self-employment, we estimate several probit equations. The dependent variable takes on a value of 1 if the respondent was self-employed in his or her second job. The results from four specifications are presented in Table 2. A number of findings are robust. The probability of moving into self-employment is higher for males and for married individuals. Residents of

British Columbia have a much higher probability of moving from paid to self-employment. Age is positively related to self-employment up to ages 45-54 and then declines. Those with a university education are generally more likely to move from paid to self-employment. Both union status and pension status at the first job is negatively related to changing sectors. Tenure length at the first job increases the probability of self-employment but at a decreasing rate. These findings are generally in accord with the literature.

The variables of central interest to us are related to unemployment and reasons for separation from the initial job. The unemployment rate is positively related to the probability of self-employment. The coefficient estimate is significant at the five percent level in all but the fourth specification where it is significant at 10 percent. This supports the importance of this push factor in determining self-employment. The results in the literature are mixed. Alba-Ramirez (1994) estimates the relationship to be negative and significant, but uses a regional rather than unemployment rate. In separate estimates on these data using regional unemployment rates (not reported here), coefficient estimates were insignificant.[3] Taylor (1996) uses a different unemployment definition and has negative coefficient estimates in his structural model, albeit only significant at 10 percent. When estimating a reduced-form model, however, his coefficient estimates remain negative but are insignificant.

To examine the relationship between spell length and self-employment, we used weeks between jobs together with a dummy set equal to one for jobless spells of length zero. The results in Columns 2-4 of Table 2 show that the spell length variable is positive and statistically significant at the five percent level and the duration zero dummy was also significant at least at 10 percent (depending on model specification). Thus, those with spells of zero length are more

[3] We estimated the same probit specifications outlined in Table 2, with the regional unemployment rate (by year and gender) was substituted for the national unemployment rate, and regional variables were dropped due to collinearity. In none of the specifications were coefficient estimates significant at five percent (although they were all negative and the first and second specifications had coefficients significant at 10 percent). The unemployment results are at odds with those of Alba-Ramirez (1994) who finds a negative relationship between the two. The difference is likely due to his use of regional unemployment rates as an explanatory variable whereas we employ year and gender-specific national averages computed from provincial averages in our data. We also control for the regional differences.

likely to enter self-employment than are those who experience a period of joblessness. However, for those with nonzero spell lengths, the probability of moving into self-employment increases with the number of weeks out of work.[4] This latter result is supportive of the unemployment push hypothesis. These results echo those of Alba-Ramirez (1994) who discovered a similar positive and significant relationship in both Spain and the United States. Evans and Leighton (1989) arrive at results that generally support the unemployment push hypothesis although their estimates are dependent on probit model specification and the data utilized.

Collecting unemployment benefits is significant at the one percent level in both specifications in which it is included, and is negatively related to self-employment. The point estimates imply that collecting unemployment benefits reduces the probability of entering self-employment by about 2.6 percentage points. This result is consistent with the literature, and may reflect risk aversion among unemployment benefit collectors.

Finally, we examine the relationship between reason for separation and the probability of self-employment. The results from this exercise are presented as model 4 in the final column of Table 2 (with "other" the omitted category). Each of these coefficient estimates is significant, but since the omitted category is the ambiguous "other" category, these results are difficult to interpret. What we do know is that voluntary leavers are the least likely to enter self-employment followed by involuntary leavers and finally those who left for personal reasons. Tests for differences in these coefficients, however, do not allow us to reject the null that these effects are equal between groups. Pairwise comparisons between both voluntary and involuntary leavers and personal leavers do allow us to reject the hypothesis that coefficient estimates are equal.[5] Thus, those who separate from their jobs for personal reasons are the most likely to enter self-employment (at least among the three groups that we have unambiguously identified). This result is consistent with the idea that workers are pulled into self-employment to maintain

[4] We also tried using spell length without the dummy for spells of zero length. In this case, the relationship between spell length and self-employment entry was not robust across different model specifications; in only one case was the coefficient estimate significant at the 5 percent level.

[5] We can reject the null of coefficient equality at 1 percent when comparing personal and voluntary leavers and at 5

flexible schedules.

In sum, these data show that the unemployment rate and unemployment spell length are both positively related to the probability of entering self-employment. By contrast, collecting unemployment insurance benefits and entering self-employment are negatively related.

We also asked if push factors exert different effects on the self-employment decisions of males and females. Results for separate probit regressions for males and females are presented in Table 3. These results suggest that the importance of push factors differs along gender lines. For males, the unemployment rate coefficient is significant at 5 percent, but spell length is not significant. This opposite result holds for females. For neither gender, however, are the differential effects dependent on the reason for separation from job 1. Only when comparing voluntary and personal separation can we reject the hypothesis of different effects at the five percent level.

For both males and females, being married increases the probability of movement into self-employment, which supports the importance of spousal resources in the self-employment decision. Only in the case of males, however, are variables related to the first job significant. Males who were unionized or covered by a pension were less likely to choose self-employment following job separation. Males with more tenure, by contrast, were more likely to enter self-employment. None of these factors were important for women in these data.

The evidence from Table 2 suggests that reasons for job separation are related to self-employment rates. To further investigate this possibility, separate probit regressions are estimated for each job change reason. These results are presented in Table 4. Spell length is positively correlated with self-employment among voluntary job changers. It is possible that voluntary leavers enter self-employment after a search fails to locate a job with the attributes that they are looking for (consistent with a "pull" into self-employment). In the case of personal job

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percent when comparing the involuntary and personal leavers.

changers, the probit is not estimated with a great degree of precision (χ^2 = 35.42, p = .1028), and few of the controls are significant. The unemployment rate is one exception. The fact that the unemployment rate was positive and significant for personal job leavers was surprising, since we expected personal reasons rather than labor market conditions to govern their decision to enter self-employment as well as their decision to leave their previous jobs.

IV. Conclusions

Using the 1988-1990 LMAS, we analyzed the roles of the unemployment rate, length of time between jobs, and involuntary job loss in the decision to enter self-employment following a paid job. We find mixed evidence to support "push factor" interpretations of self-employment growth in Canada. In support of the role of push factors, we find that among workers who experienced a spell of joblessness, those with longer spells between jobs are more likely to become self-employed. Furthermore, workers who face higher unemployment rates when they leave their initial jobs are more likely to become self-employed. Spell length appears to be more important for women, while the unemployment rate is a relatively strong factor for men and for workers who left their first jobs for personal reasons.

Results for reason for loss of the first job did not support the push interpretation. Involuntary job losers were no more likely than were workers who left for other reasons to become self-employed. Indeed, those who left for personal reasons were significantly more likely than either quitters or involuntary leavers to enter self-employment. This supports the relative importance of pull factors (e.g., flexible hours) in self-employment growth. Furthermore, among involuntary job losers, neither the unemployment rate nor the length of time between jobs was a significant determinant of subsequent job choice. Among that group, married people, those who did not collect unemployment benefits, workers whose first jobs were not unionized, and men were more likely to become self-employed than were others.

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Table 1: Summary Statistics by Employment Status at Second Job

	Self-Employed		Paid Employees	
	Mean	Std. dev.	Mean	Std. dev.
Unemployment rate (by year and gender)	8.9452	(0.308)	8.9573	(0.320)
Spell between jobs (weeks)	5.3077	(8.323)	5.1934	(8.081)
No spell between jobs	0.3877	(0.488)	0.3416	(0.474)
Collected UI benefits	0.3108	(0.463)	0.4201	(0.494)
Involuntary separation	0.2754	(0.447)	0.3208	(0.467)
Voluntary separation	0.4262	(0.495)	0.4772	(0.500)
Personal separation	0.1323	(0.339)	0.1136	(0.317)
Other reason for separation	0.1662	(0.373)	0.0883	(0.284)
Male	0.6708	(0.470)	0.5582	(0.497)
Atlantic	0.1969	(0.398)	0.2558	(0.436)
Quebec	0.1323	(0.339)	0.1370	(0.344)
Ontario	0.1815	(0.386)	0.1963	(0.397)
Prairies	0.3215	(0.467)	0.2943	(0.456)
British Columbia	0.1677	(0.374)	0.1166	(0.321)
Family members in LF	2.0062	(0.638)	2.0037	(0.745)
Married	0.8231	(0.382)	0.7457	(0.435)
Number of kids	1.0154	(1.138)	0.8893	(1.051)
Age 25-34	0.4631	(0.499)	0.5355	(0.499)
Age 35-44	0.3431	(0.475)	0.2949	(0.456)
Age 45-54	0.1508	(0.358)	0.1281	(0.334)
Age 55-64	0.0431	(0.203)	0.0415	(0.199)
Visible minority	0.0477	(0.213)	0.0337	(0.180)
Immigrant	0.1138	(0.318)	0.0898	(0.286)
Elementary education	0.0754	(0.264)	0.0888	(0.284)
Some high school	0.2369	(0.426)	0.2238	(0.417)
Completed high school	0.2215	(0.416)	0.2270	(0.419)
Some post-secondary education	0.0938	(0.292)	0.1032	(0.304)
Completed post-secondary	0.2092	(0.407)	0.2339	(0.423)
University education	0.1631	(0.370)	0.1233	(0.329)
Unionized - job 1	0.2062	(0.405)	0.2884	(0.453)
Covered by pension - job 1	0.2569	(0.437)	0.3020	(0.459)
Tenure at job 1 (# weeks/100)	1.7559	(2.653)	1.4534	(2.366)
No. observations	650		9182	

Table 2: Partial Derivatives from Probit Estimates of Movement from Paid to Self-Employment

(t-ratios calculated from robust standard errors are in parentheses)

	(1)		(2)		(3)		(4)	
Unemployment rate	0.0176	(2.10)	0.0175	(2.10)	0.0180	(2.16)	0.0160	(1.95)
Spell between jobs			0.0007	(2.16)	0.0011	(3.32)	0.0009	(2.64)
No spell between jobs			0.0134	(2.30)	0.0107	(1.85)	0.0129	(2.24)
Collected UI benefits					-0.0262	(4.57)	-0.0259	(4.51)
Involuntary separation							-0.0351	(4.89)
Voluntary separation							-0.0447	(6.15)
Personal Separation							-0.0189	(2.28)
Male	0.0327	(5.83)	0.0330	(5.89)	0.0349	(6.26)	0.0350	(6.26)
Atlantic	-0.0076	(1.00)	-0.0075	(0.98)	-0.0010	(0.13)	0.0006	(0.07)
Quebec	0.0054	(0.61)	0.0055	(0.61)	0.0094	(1.03)	0.0105	(1.16)
Prairies	0.0112	(1.54)	0.0109	(1.51)	0.0124	(1.72)	0.0129	(1.81)
British Columbia	0.0304	(3.19)	0.0302	(3.17)	0.0326	(3.41)	0.0322	(3.41)
Family members in LF	-0.0068	(1.82)	-0.0069	(1.84)	-0.0071	(1.93)	-0.0067	(1.84)
Married	0.0243	(3.92)	0.0244	(3.93)	0.0243	(3.94)	0.0240	(3.96)
Number of kids	0.0039	(1.55)	0.0038	(1.52)	0.0035	(1.40)	0.0036	(1.47)
Age 35-44	0.0140	(2.43)	0.0138	(2.41)	0.0131	(2.31)	0.0118	(2.11)
Age 45-54	0.0211	(2.53)	0.0214	(2.56)	0.0211	(2.55)	0.0196	(2.40)
Age 55-64	0.0157	(1.15)	0.0150	(1.11)	0.0137	(1.02)	0.0099	(0.75)
Visible minority	0.0123	(0.85)	0.0125	(0.86)	0.0107	(0.75)	0.0117	(0.83)
Immigrant	0.0042	(0.45)	0.0036	(0.39)	0.0033	(0.36)	0.0032	(0.35)
Elementary education	-0.0095	(0.97)	-0.0090	(0.92)	-0.0059	(0.59)	-0.0060	(0.61)
Some high school	0.0031	(0.42)	0.0030	(0.42)	0.0043	(0.60)	0.0042	(0.59)
Some post-secondary education	-0.0036	(0.40)	-0.0034	(0.38)	-0.0037	(0.42)	-0.0048	(0.55)
Completed post-secondary	-0.0023	(0.32)	-0.0022	(0.31)	-0.0025	(0.36)	-0.0026	(0.37)
University education	0.0244	(2.68)	0.0245	(2.69)	0.0205	(2.30)	0.0171	(1.97)
Unionized - job 1	-0.0255	(4.40)	-0.0252	(4.36)	-0.0230	(3.97)	-0.0232	(4.05)
Covered by pension - job 1	-0.0171	(2.76)	-0.0174	(2.81)	-0.0188	(3.05)	-0.0194	(3.19)
Tenure at job 1	0.0059	(2.47)	0.0057	(2.39)	0.0038	(1.61)	0.0038	(1.65)
Tenure squared	-0.0003	(1.28)	-0.0003	(1.26)	-0.0002	(0.83)	-0.0002	(0.94)
Pseudo R^2	0.0321		0.0335		0.0382		0.0465	
χ^2 (23, 25, 26 and 29 d.f.)	136.53		142.63		162.57		199.91	
p-value	0.0000		0.0000		0.0000		0.0000	
Observed P	0.0661		0.0661		0.0661		0.0661	
Predicted P	0.0606		0.0603		0.0595		0.0582	
No. observations	9832		9832		9832		9832	

Table 3: Partial Derivatives from Probit Estimates of Movement from Paid to Self-Employment, Males and Females

(t-ratios calculated from robust standard errors are in parentheses)

	Male		Female	
Unemployment rate	0.0295	(2.39)	0.0028	(0.27)
Spell between jobs	0.0006	(1.04)	0.0009	(2.49)
No spell between jobs	0.0177	(2.18)	0.0033	(0.41)
Collected UI benefits	-0.0279	(3.28)	-0.0205	(2.90)
Involuntary separation	-0.0501	(4.91)	-0.0165	(1.61)
Voluntary separation	-0.0576	(5.69)	-0.0270	(2.59)
Personal separation	-0.0282	(2.28)	-0.0080	(0.72)
Atlantic	-0.0144	(1.32)	0.0155	(1.43)
Quebec	-0.0066	(0.55)	0.0343	(2.46)
Prairies	0.0066	(0.65)	0.0195	(1.97)
British Columbia	0.0233	(1.82)	0.0392	(2.84)
Family members in LF	-0.0065	(1.27)	-0.0075	(1.51)
Married	0.0194	(2.10)	0.0262	(3.38)
Number of kids	0.0028	(0.78)	0.0049	(1.47)
Age 35-44	0.0246	(2.94)	-0.0015	(0.22)
Age 45-54	0.0319	(2.69)	0.0084	(0.77)
Age 55-64	0.0194	(1.06)	0.0003	(0.02)
Visible minority	0.0030	(0.16)	0.0239	(1.13)
Immigrant	0.0021	(0.17)	0.0021	(0.17)
Elementary education	-0.0138	(1.07)	0.0114	(0.72)
Some high school	0.0010	(0.10)	0.0055	(0.56)
Some post-secondary education	-0.0051	(0.39)	-0.0057	(0.51)
Completed post-secondary	-0.0149	(1.49)	0.0094	(1.01)
University education	0.0109	(0.90)	0.0171	(1.46)
Unionized - job 1	-0.0304	(3.74)	-0.0115	(1.42)
Covered by pension - job 1	-0.0255	(2.96)	-0.0101	(1.17)
Tenure at job 1	0.0078	(2.40)	-0.0025	(0.67)
Tenure squared	-0.0004	(1.49)	0.0001	(0.14)
Pseudo R^2	0.0527		0.0377	
χ^2 (28 d.f.)	139.84		74.95	
p-value	0.0000		0.0000	
Observed P	0.0784		0.0501	
Predicted P	0.0685		0.0444	
No. observations	5561		4271	

Table 4: Partial Derivatives from Probit Estimates of Movement from Paid to Self-Employment by Reasons for Separation

(t-ratios calculated from robust standard errors are in parentheses)

	Voluntary		Involuntary		Personal	
Unemployment rate	-0.0001	(0.01)	0.0199	(1.52)	0.0518	(2.01)
Spell between jobs	0.0017	(3.05)	0.0007	(1.76)	-0.0014	(1.43)
No spell between jobs	0.0162	(2.28)	0.0199	(1.79)	-0.0083	(0.42)
Collected UI benefits	-0.0174	(2.22)	-0.0301	(3.24)	0.0075	(0.47)
Male	0.0341	(4.63)	0.0180	(1.98)	0.0429	(2.36)
Atlantic	0.0065	(0.62)	-0.0064	(0.48)	0.0405	(1.61)
Quebec	0.0077	(0.64)	-0.0042	(0.28)	0.0372	(1.09)
Prairies	0.0117	(1.28)	0.0180	(1.31)	0.0105	(0.48)
British Columbia	0.0326	(2.62)	0.0106	(0.64)	0.0527	(1.94)
Family members in LF	-0.0073	(1.32)	-0.0070	(1.29)	0.0069	(0.65)
Married	0.0236	(2.81)	0.0220	(2.25)	0.0008	(0.04)
Number of kids	0.0062	(1.94)	0.0037	(0.95)	0.0077	(0.93)
Age 35-44	0.0156	(2.03)	0.0040	(0.47)	-0.0113	(0.63)
Age 45-54	0.0277	(2.39)	-0.0027	(0.22)	0.0456	(1.64)
Age 55-64	0.0131	(0.60)	-0.0024	(0.14)	0.0104	(0.30)
Visible minority	0.0373	(1.91)	-0.0216	(0.98)	-0.0074	(0.15)
Immigrant	-0.0037	(0.33)	0.0315	(1.76)	-0.0293	(1.16)
Elementary education	-0.0139	(1.03)	0.0161	(1.09)	0.0018	(0.05)
Some high school	-0.0006	(0.06)	0.0095	(0.83)	0.0351	(1.37)
Some post-secondary education	-0.0046	(0.42)	-0.0009	(0.06)	0.0352	(1.05)
Completed post-secondary	-0.0105	(1.19)	0.0064	(0.52)	0.0609	(2.25)
University education	-0.0062	(0.61)	0.0353	(1.78)	0.0686	(2.05)
Unionized - job 1	-0.0189	(2.34)	-0.0331	(3.54)	-0.0183	(1.05)
Covered by pension - job 1	-0.0286	(3.59)	0.0038	(0.33)	0.0053	(0.27)
Tenure at job 1	0.0016	(0.50)	0.0056	(1.08)	0.0077	(1.16)
Tenure squared	0.0000	(0.06)	-0.0008	(1.26)	-0.0004	(0.87)
Pseudo R^2	0.0530		0.0527		0.0478	
χ^2 (26 d.f.)	106.83		65.79		35.42	
p-value	0.0000		0.0000		0.1028	
Observed P	0.0595		0.0573		0.0762	
Predicted P	0.0505		0.0491		0.0670	
No. observations	4659		3125		1129	