

**Education and Preference for Redistribution: Does the Type of Post-Secondary
Education matter?**

**By Jie Yang
(5717682)**

**Major Paper presented to
the Department of Economics of the University of Ottawa
in partial fulfillment of the requirements of the M.A. Degree**

Supervisor: Professor Pierre R. Brochu

ECO7997

Ottawa, Ontario

August 2011

Abstract

In this paper I use Gallup Poll data for the 1988-1997 period to analyze Canadian preferences for redistribution. My findings are generally in line with those of the literature. I do find, however, that the impact of education depends on the form of redistribution that is proposed.

Introduction

High inequality can not only diminish economic growth and increase social tensions, but it also raises a moral question about fairness and social justice. The government, by its choice of taxation system and government programs, can alleviate inequality. In democratic societies, voter preferences and the mechanism through which these policies translate into government policies both play key roles. In this paper, I explore the determinants of preferences for redistribution in Canada. Public preference affects policy makers when they are making policies or changing policies. Many surveys are conducted for governments every year to find out public opinion, maintain social stabilization and economic development. Finally, there exists also a large political economy literature (e.g., Busemeyer (2010)) that examines how preferences affect decision making.

Many economists have been interested in the determinants of preference for redistribution. Alesina and Ferrara (2005) find that richer people view redistribution less favorably. They also find that higher educated people are less favorable to redistribution, while lower educated people tend to have a more favorable view of redistribution. Alesina and Giuliano (2009) find that the higher on the social ladder individuals believe they will move up, the less they favour redistribution; and people who believe luck is more important than hard work are more in favour of redistribution. They also find that more educated individuals prefer less redistribution, which is consistent with findings of Alesina and Ferrara (2005).

There are two main contributions of this paper: First, this is the first paper to examine the

determinants of Canadian preferences for redistribution using regression analysis.¹ Second, I look at education more closely than what has been done to date in the literature. I investigate whether there are different effects on preference for redistribution between having a community college degree and a university degree.

The main findings of this paper are as follows. Females are more in favour of redistribution, and married individuals are less supportive to redistribution. There is a negative age profile, but it is not statistically significant. These findings are generally in line with those of literature. I also find that the impact of working and the type of education are different to the different types of policies (with respect to redistribution). Working people are much less favorable to redistribution. For the question that focuses on whether an individual would support redistribution to poorer regions, the fact that an individual works or not does not matter. When I focus on assistance for those that are unemployed, workers are much less open to redistribution. For whether we should support government increase spending on poorer region, the education profile is inverse U shaped. For whether we should support government give financial assistance to unemployed people, there is a negative education profile. Finally, a finer breakdown of education categories does not materially affect the findings of variables other than education.

This paper is organized as follows. Section 2 provides a review of the literature. Section 3 describes the data. Section 4 presents the econometric methodology. Section 5 discusses

¹ Harell, Soroka, and Mahon (2008) and Harell and Soroka (2010) also use Canadian data on preferences for redistribution. They do not, however, explore their determinants.

the regression results, and Section 6 conduct a series of robustness checks. Finally, Section 7 concludes.

Literature Review

In this section, I present papers that look at the determinants of preferences for redistribution. The main determinants examined include education, employment status, gender, age, region, and income. Although researchers have examined the relationship between education and preferences for redistribution, no study has focused on whether college degree and university degree backgrounds affect preferences differently. However, we may expect university graduates tend to have different preferences for redistribution than college graduates, since university graduates tends to have higher income than college graduates according to Gary Becker's Human Capital theory, i.e., they have accumulated more human capital. So university graduates tend to wealthier and have higher income than college graduates. According to many studies, there is positive relationship between income and preference for redistribution.

Alesina and Ferrara (2005) use General Social Survey (GSS) and Panel Study of Income Dynamics (PSID) data to explore how individual preferences depend on future income prospects, social background and perception of future mobility. They have several findings: First, they find that current income affects preferences for redistribution. The wealthier the person, the less favorable he is to redistribution. Second, they find that there is a positive and statistical significant relationship between having an unemployed experience in the past few years and preferences for redistribution, since being

unemployed will increase their risk aversion. Third, they find that there is strong negative relationship between expectation of future living standard and preferences for redistribution. The higher on the social ladder individuals believe their position will be in the future, the less they support redistribution. Finally, they find that a more educated individual is less favorable to redistribution, even after controlling for income. This final result is consistent with the findings of Alesina and Giuliano (2009), which I explain below.

Alesina and Giuliano (2009) provide a comprehensive review of determinants of redistribution preference by using GSS data for the United States, and World Values Survey data for other developed and developing countries. The data includes personal characteristics such as age, gender, race, political ideology, perception of fairness, and socioeconomic status. They find that the richer the respondents are, the less they favour redistribution; marital status, employment status, age, and race also have very strong effects on supporting preference for redistribution. Woman, youth and African-Americans are more in favour of redistribution. Social mobility has a negative effect on preferences for redistribution; if individuals believe that they will be climbing the social ladder, they favour less redistribution. They also find that people who believe luck is more important than hard work are more in favour of redistribution. To look at education, Alesina and Giuliano (2009) used two education dummy variables: education 12 years or less and education 16 years and up. They find that a respondent who has 12 years or less education (which means having at most a high school degree) is much more favorable to redistribution. However, respondents who have 16 years or more education are averse to

redistribution.

Busemeyer (2010) explores how a person's income and education background affect public opinion towards government spending on public education. He uses a large survey data of OECD countries from the International Social Survey Programme (ISSP) "Role of Government IV". He finds that higher educated people are more likely to support government spending in education, but they do not want to pay higher taxes to support poor people's education. The lower educated poor people also support government spending in education, which I believe is not surprising. Poorer educated parents may strongly encourage their children to get more education, so that they can achieve a higher standard of living that they did. Since there is support from both high and low educated people, one may see spending on education by government increase. This will lead to an increase in overall education level which will accelerate economic development and reduce inequality.

Guillaud (2011) uses International Social Survey Program (ISSP 2006) "Role of Government IV" data which covers 33 countries, and an average of 1,500 respondents per country, to examine what determine people's preference for redistribution. He focuses on occupation, risk aversion and experience of social mobility. The question he uses to measure the preference to redistribution is "On the whole, do you think it should or should not be the government's responsibility to reduce income differences between the rich and the poor?" He has the following findings: First, the higher the family income is,

the less they favour redistribution. Second,² he finds that self-employed people who are assumed to be less risk-averse are less favorable to redistribution. However, more risk-averse people, i.e., public employees, are strongly and significantly in favour of redistributive policies. Third, he finds that people who experienced upward mobility within the past ten years are less favorable to redistribution; however, people who experienced downward mobility within the past ten years are more in favour of redistribution. Finally, he finds that the types of occupation are strongly and significantly related to attitudes towards redistribution. Respondents with less skilled occupation tend to favour redistribution. For example, managers and professionals are less in favour of redistribution than clerks. Guillaud (2011) did not include education in the regression analysis, since he believes that there is a strong link between education and occupation.

Two studies (Harell, Soroka and Mahon (2008) and Harell and Soroka (2010)) have looked at opinions on redistribution using Canadian data; both of which are descriptive in scope. Harell, Soroka, and Mahon (2008) use Environics Focus Canada and Canadian Election data to study how Canadians feel about social assistance policy over the 1984-2006 period. They focus on two questions. The first question is “Do you think the federal government should spend more, less, or the same on welfare and services for the poor?” They find that there are similar preferences to both welfare and service for the poor for the above question. However, there is a consistent 50 percent difference in net preference³ for spending on welfare and service for the poor. The second question is “Do

² The employment status is used as a proxy for risk aversion. Self-employed workers are supposed to be less risk-averse on average, and public employees are supposed to be more risk-averse.

³ Net preference is the percentage difference between people who support government increase spending on welfare and services for the poor and people who favour reduce spending on them.

you think the federal government should spend more, less or the same on each of the following: welfare, employment insurance, job creation, services for the poor, homelessness and child poverty?" They find that Canadians are much more supportive of increasing spending on services for the poor, but less so for welfare. Canadians are more likely to support government spending on welfare and social services during economic recessions. In addition, they find that public opinions are strongly related to current levels of government spending and how they feel about the developments of social assistance policy. It should be noted that Harell, Soroka and Mahon (2008) do not carry out any regression analysis. Nor do they explore the links between education and preferences for redistribution.

Harell and Soroka (2010) use data from a series of experiments carried out on a random selection of 182 university students at the Centre interuniversitaire de recherche en analyse des organisations (CIRANO) in Montreal, Quebec. They examine the effect of race on support for both cash-based and service-based assistance in Canada. They find that there is no significant relationship between the race of the recipient and the race of the survey participant. Results shows that white recipients receive cash benefits and services among White respondents and visible minority (Black and Arab) respondents are similar; and similar results for visible minority recipients. Aboriginal recipients receive the lowest support for cash benefits and services.

In summary, there exists a fairly extensive literature that has looked at the determinants of preferences for redistribution. The most commonly explored determinants include

gender, age, marriage status, education, employment status, region and annual family income. I have identified two holes in the literature. First, Canadian aggregate preferences, and how they have changed over time, have been examined, but not their determinants. Second, the literature has yet to make a clear distinction between a community college degree and a university degree in exploring the determinants for redistribution. This paper will address both limitations of the literature.

Data Description

This paper uses Canadian Gallup Poll data from 1988 to 1997. Canadian Gallup Poll mainly collects public opinion data on economic beliefs, political behavior, and social problems, and has done this for almost 70 years. Each survey interviews approximately 1,000 respondents, age 18 and up, on a wide range of issues including socio-economic information. The polls do not follow individuals over time, as such the 8 years of data that I rely on (i.e. 1988, 1989, 1990, 1993, 1994, 1995, 1996, and 1997) are treated as repeated cross sections.

There are two questions that are particularly relevant for this study. The first question is “Do you believe that federal government spending on poorer regions in Canada should increase, remain the same, decrease or be eliminated?” Another question is “Do you believe that federal government should give financial assistance to unemployed people in Canada’s poor regions who wish to stay in their home area, encourage them to move to a more prosperous regions, or not become involved in such matters?”

I create a binary variable for each question. The first binary variable (`pro_poor`) will be coded as one if the respondent's answer is "Increase" or "Remain the same" (favorable to redistribution), and zero for "decrease" and "be eliminated" (averse to redistribution). The second binary variable (`assist_unemployed`) will be coded as one if responses are "government should give financial assistance to help to stay" or "government should encourage unemployed to move to a more prosperous region" (favorable to redistribution); and zero if the answer is "government should not involved" (averse to redistribution). Those two variables have been asked in the following surveys: August 1988, August 1989, August 1990, August 1993, August 1994, August 1995, August 1996, and November 1997.⁴ I create two graphs for both variables which will be shown in the Figures 1 and 2.

Figure 1 shows how preferences for spending on poorer regions have changed over time from 1988 to 1997. As we can see, almost over 80% Canadians are supportive to increasing (or leave unchanged) government spending on poorer region. The support is relative higher in 1989, 1990 and 1997. There is an approximately 20% increase from 1988 to 1989. In addition, there was an early 1990 economic recession which affects much of the world from the late 1980s to the early 1990s.

Figure 2 shows the changes of preferences on whether government should give financial assistance to unemployed people to help them stay at their home area or move to a more prosperous region. As we can see, almost 70% of people think the government should give financial assistance to unemployed people; however, this preference is decreasing

⁴ The question is also asked in August 1991, but the data is not available.

over time. The support is about 90% in 1988 and 1990, but drops to 70% by the late 1990s. The early 1990 recession affects much of the world in the late 1980s and the early 1990s. In 1990-1992, many people lost their job; particularly in the Ontario manufacturing sector. As seen in the Figure 2, there is 12% decrease in support from 1990 to 1993. Canadians are less supportive of government giving financial assistance to unemployed people when they feel insecure to their own job, since that will make them feel more insecure, and labour market could be more competitive.

Figures 3 and 4 show the weighted mean level⁵ of “pro_poor” and “assist_unemployed” with supported by different types of post-secondary education: university and community college. Both “pro_poor” and “assist_unemployed” have similar proportion of university advocators and college advocators. As seen in Figure 3, there are about 20% university advocators and 20% college advocators⁶ support government to increase/remain the same spending on poorer regions. So the majority of advocators have high school or less education. Before 1992, the proportion of college students who support redistribution is a little bit higher than university student. However, after 1992, university students take a little bit more proportion for redistribution. As seen in Figure 4, same thing happened to the issue whether government should give financial assistance to unemployed people. Both college students and university students increased from approximately 15% to 28%. Half of advocators have post-secondary education and another half of advocators have high school or less education.

⁵ I use weights in all subsequent analysis.

⁶ 1989 is an exception. The support is much lower in 1989 due to the early 1990 recession.

Table 1 presents summary statistics of my data for the 1988-1997 period. More precisely it presents the (weighted⁷) means and standard deviations of the binary and categorical variables used in my econometric analysis. It should be noted that the choice to weight or not weight the data does not materially affect my summary statistics, nor the results of my regression analysis in the next section.

As seen in the Table 1, females represent 49.4% of my sample which is the representative of the Canadian population. I defined my married variable to also include those who are in common-law relationships. In my sample, they represent 61.8% of all individuals.

Since I am interested in finding if there is a difference in preference for redistribution between respondents who have a college and university education, I present a detailed breakdown of education. I classify education as: high school graduate or less (*hs_below*), some community college (*college*), college graduate (*college_grad*), some university (*university*), and university graduates (*univ_grad*). This last group includes those who have bachelors, masters and PhDs. It should be noted that my community college variables include those that attended CEGEP⁸. Community college graduates and university graduates represent 16.4% and 19.7% of my sample, respectively. As such, I have enough observations to see whether completing a community college degree or university degree affect preferences for redistribution differently. Figure 5 shows the mean values of university graduates and college graduates; it shows that the number of university students increased significantly in eight years, but community college

⁷ I am using the weights provided by the survey to carry out weighted analysis.

⁸ Quebec has a different education system than in the rest of Canada. They do not have community college. What they have is CEGEP. In addition CEGEP plays a different role than a community college.

graduates did not have much change. This means that the overall education level increased over the period. However, the support to redistribution decreased as seen in Figures 1 and 2. Previous research (e.g. Alesina and Ferrara (2005), Alesina and Giuliano (2009)) show that there is a negative relationship between overall education level and preference for redistribution, as a lot of researchers have proved it. Particularly, as number of university graduates increased, the preference for redistribution decreased more than college graduates.

I break down age to three age categories: 18 to 29, 30 to 49, and 50 and up. 47.9% of respondents are between 30 and 49 years of age. In my sample, 74.2% are working either part-time or full-time, which is again representative of the Canadian population. I have four family annual income categories: less than 10,000, 10,000 to 29,999, 30,000 to 49,999, and 50,000 and up. Finally, I classified provinces into four regions: Atlantic, Quebec, Ontario, and West. Atlantic includes New Brunswick, Newfoundland, Nova Scotia, and Prince Edward Island, and the West includes BC, Alberta, Saskatchewan, and Manitoba.

Methodology

In my econometric analysis I use a Linear Probability Model (LPM). It takes the following form,

$$P_r(Y = 1|X) = \beta_0 + X\beta \quad [1]$$

where Y represents the attitude towards redistribution, i.e., `pro_poor` and

assist_unemployed. I will be using the two attitude measures that were presented earlier, i.e., pro_poor and assist_unemployed. X represents the vector of socio-economic variables: gender, marital status, education, work status, annual family income and region. The parameter of interest is β_j which measures how a one unit change in X_j affect the probability of having a positive attitude towards redistribution.

Regression results analysis

I start by estimating equation [1] using a similar set of explanatory variables as in Alesina and Ferrara (2005). There are three key differences. They include race, self-employed, and parental education that are not available in my data. In order to replicate the Alesina and Ferrara's methodology, I collapse education into three categories: 12 years of education or less, 13 to 15 years of education, and 16 years and up. Later on in the analysis, I will further breakdown education to see if making a distinction for community college and university graduates makes a difference.

Tables 2 and 3 report the LPM results for pro_poor and assist_unemployed, respectively. The comparison of columns (1) and (2), in each table, shows that the choice to include (or not include) year fixed effects does not materially affect the findings. The coefficients have the same sign, similar magnitudes, and similar significance levels. I therefore focus on the results that include fixed effects.

Table 2 shows the regression result when using `pro_poor` as the dependent variable. Table 2 shows that women tend to support more government spending on poorer regions than men, a 3.3% point difference. This difference is statistically significant at the 99% significance level. This result is consistent with Alesina and Giuliano (2009). There is negative relationship between the married variable and the `pro_poor` attitude variable, which means that if people are married or common-law, they tend to support less government spending on poorer regions. The relationship is, however, not statistically significant. These findings are in line with those of Alesina and Ferrara (2005) and Alesina and Giuliano (2009). There is a negative age profile, but the coefficients are typically small and not statistically significant. However, Alesina and Giuliano (2009) find that age have very strong effects on supporting preference for redistribution.

The education profile is inverse U shaped. Students who went to college are 4.7% point more likely to support spending on poorer regions. It is statistically significant at 99% significance level. The gap between college and university is 3.8% point, which I believe is economically significant. I find that the types of post-secondary education do affect the preference for redistribution. That people with university education tend to support less redistribution than people with college education is in line with the literature.⁹ The fact that college educated individuals are more in favour of redistribution than those with high school or less is at odds with the literature. Previous literatures (e.g. Alesina and Ferrara (2005), Alesina and Giuliano (2009)) find that there is a negative relationship between

⁹ I had mentioned why there would be a difference between university and college at the start of the project. We should expect university graduates have different preferences for redistribution than college graduates, since university graduates tend to have higher income than college graduates according to Gary Becker's Human Capital theory, i.e., they have accumulated more human capital.

education and preference for redistribution, but they did not compare the differences between college and university.

In Table 2, I find that whether you work or not does not appear to affect preferences. For income, there is no clear pattern, and the coefficients are not statistically significant. This result is contrary to the findings of the literatures (e.g. Alesina and Giuliano (2009)). This could be due to measurement issues, as my income brackets are very broad.¹⁰ Another limitation is that by using income brackets, I do not account for inflation. After adding consideration of inflation, there is a negative relationship between annual income and preference for redistribution. Previous literatures (e.g. Alesina and Ferrara (2005)) have proved that richer people are less favorable to redistribution.

Now I discuss the results of Table 3 where I use the `assist_unemployed` as dependent variable. All explanatory variables are the same as in Table 2. The results are similar to those of Table 2 with respect to gender, marital status, age, and income. With respect to education, I find a negative relationship. If the individual is more educated, the less he tends to support to redistribution. An individual with a college education is 2% less likely to support redistribution than an individual with high school or less; for the university educated, the gap is even larger, it stands at 5% point. The university gap is statistically significant at 99% significance level. The results for working are different in Table 3 with respect to Table 2. I find that individuals that are working are 3.5% point less likely to

¹⁰ In the 1980s surveys, the income is categorized up to \$50,000 and up, and they are categorized up to \$80,000 and up in the 1990s surveys.

support the government providing financial assistance to unemployed people, and the difference is statistically significant at the 95% level.

In the following analysis I refine my education categories, i.e., I go from three to five education categories. I now more clearly identify individuals who complete a college education as opposed to those that have some college and some university, but no degree.

In Tables 4 and 5, I show the results when I expand the education categories for `pro_poor` and `assist_unemployed` variables, respectively. The results are very similar to those of Tables 2 and 3 for all coefficients other than education. University graduates tend to support less to redistribution than college graduates. The gap between college graduates and university graduates is even bigger. University graduates are 4.1% point less likely to support redistribution than college graduates for `pro_poor` variable; and for `assist_unemployed` variable, the difference is 3.5% point.

Robustness check

Since the probability is linear in X in equation [1], the predicted probabilities can be less than zero or greater than one. This problem can be solved by estimating a nonlinear probability model, i.e., a probit model. The Probit Model takes the following form:

$$Pr(Y = 1|X) = \Phi(\beta_0 + X\beta) \quad [2]$$

Where Φ is the cumulative normal distribution function, which ensure that the predicted probability stays in the closed 0 to 1 interval.

I estimate equation [2] for both attitudes to redistribution. The results for `pro_poor` and `assist_unemployed` are shown in Tables 5 and 6, respectively. I use the same set of controls as in Tables 2 and 3. The probit model results are very similar to those of the LPM results. The sign and magnitudes of the marginal effects are similar, and so is the level of statistical significance. Table 6 shows that women tend to support more government spending on poorer regions than men, a 3.4% point difference. This difference is statistically significant at the 99% significance level. Tables 6 and 7 show that there is a negative relationship between the married or common-law and dependent variable. They also find that university graduates tend to support less to redistribution than college graduates. Although not reported, the probit results are also similar to LPM results when I use the more expanded set of education controls.

Conclusion

There are three main findings in my paper. First, I find that females are more in favour of redistribution. Married individuals are less supportive to redistribution. There is a negative age profile, but it is not statistically significant. These findings are generally in line with those of literature.

Second, the impact of working and types of education depends on the form of redistribution that is proposed. For the regression that focuses on whether an individual would support redistribution to poorer regions, the fact that an individual works or not does not matter. When it comes to assistance for those that are unemployed, workers who are working are much less open to redistribution than unemployed people. For the pro

poor regression the education profile is inverse U shaped. For the assistance to the unemployed regressions, there is a negative education profile.

Third, a finer breakdown of education categories to more precisely identify the college educated does not materially affect the findings of variables other than education. For the education variables the results are amplified. I distinguish the effects on preference for redistribution between university graduates and people with university education without degrees, and same for college. University graduates and college graduates tend to support less to redistribution than people with university and college education but did not graduate.

References

- [1] Alesina, A. & Ferrara, E. (2005) "Preferences for redistribution in the land of opportunities", *Journal of Public Economics*, 89 (5-6): 897-931.
- [2] Alesina, A. & Giuliano, P. (2009) "Preferences for redistribution", NBER Working Paper 14825.
- [3] Busemeyer, M. (2010) "Redistribution and the political economy of education: an analysis of individual preferences in OECD countries", CES Working Papers Series 178.
- [4] Drolet, M. (2005) "Participation in post-secondary education in Canada: Has the role of parental income and education changed over the 1990s?", *Statistics Canada, Analytical Studies Branch Research Paper Series*, 11F0019MIE No.243, ISSN: 1205-9153, ISBN: 0-662-39525-5.
- [5] Dur, R.A.J. & Teulings, C.N. (2001) "Education and efficient redistribution", CESifo Working Paper 592.
- [6] Guillaud, E. (2011) "Preferences for redistribution: an empirical analysis", CES Working Papers, ISSN 1955-611X
- [7] Harell, A. & Soroka, S. (2010) "Race of recipient and support for welfare in Canada", *Scientific Series*, ISSN 1198-8177.
- [8] Harell, A., Soroka, S., & Mahon, A. (2008) "Is welfare a dirty word? Canadian public opinion on social assistance policies", *Policy Options*, 29 (8): 53-56.
- [9] Keely, L. & Tan, C. (2008) "Understanding preferences for income redistribution", *Journal of Public Economics*, 92 (5-6): 994-961.
- [10] Rehm, P. (2005) "Citizen support for the welfare State: determinants of preferences for income redistribution", Discussion Paper SP II 2005-02 Wissenschaftszentrum Berlin.
- [11] Statistics Canada (2008) "Canadian economic observer: historical statistical supplement 2007/2008", *Statistics Canada catalogue no. 11-210-X*, Ottawa.

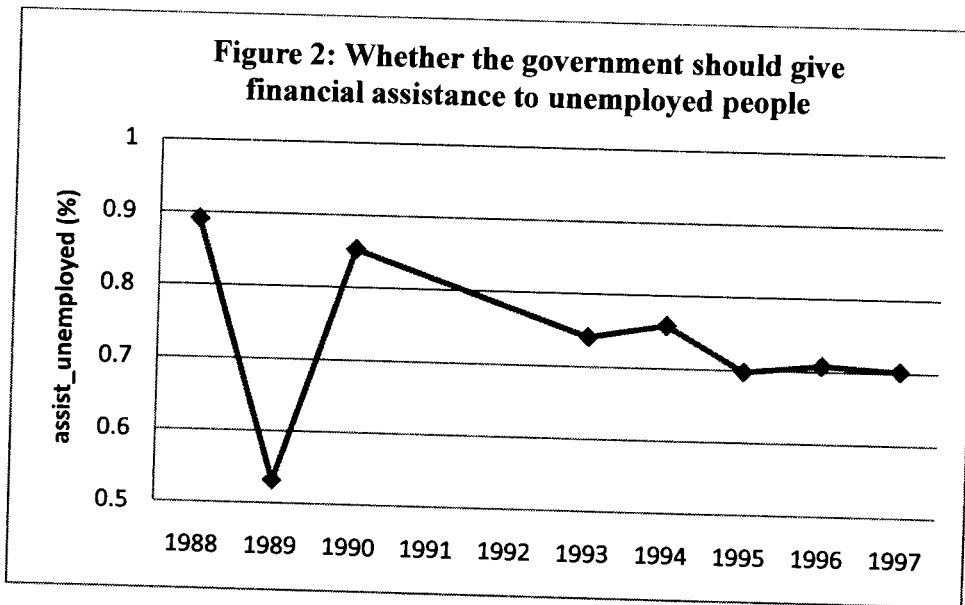
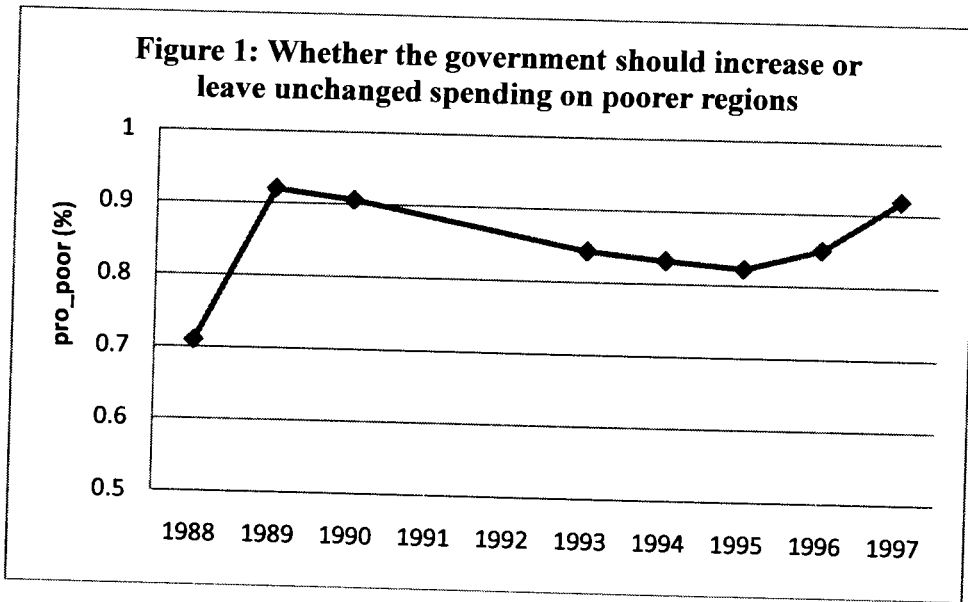


Figure 3: Whether the government should increase or leave unchanged spending on poorer regions, by education

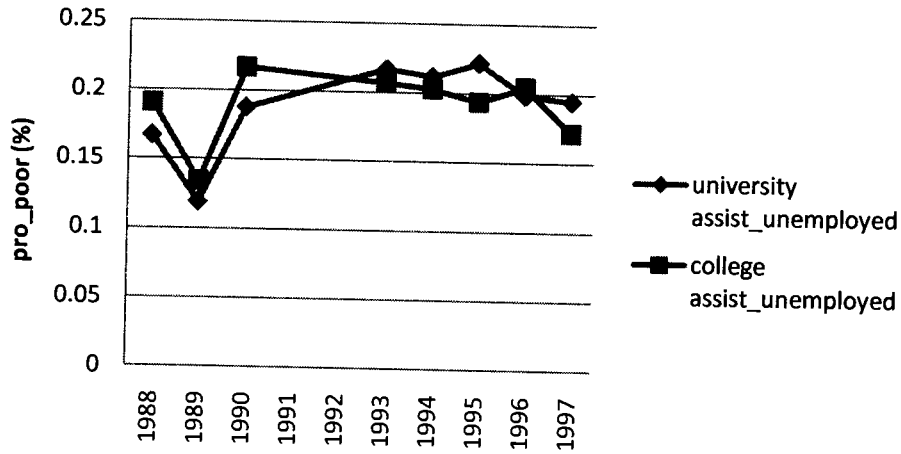
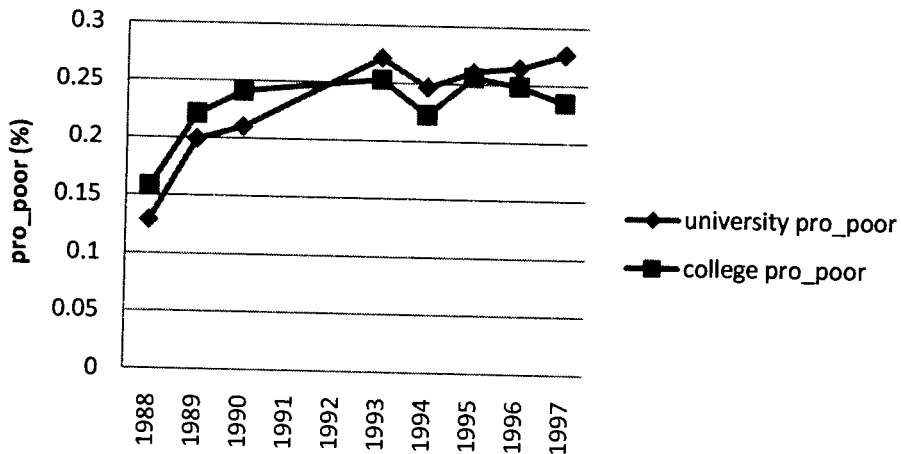


Figure 4: Whether the government should give financial assistance to unemployed people, by education



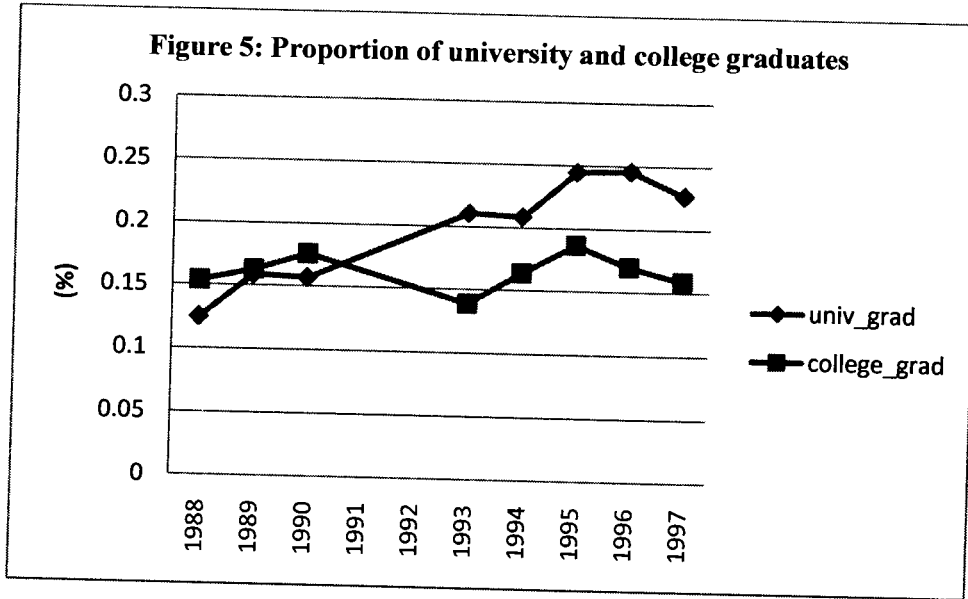


Table 1: Summary Statistics

Variables	Mean	Standard Deviation
Female	0.494	0.500
Married	0.618	0.486
University	0.082	0.275
Univ_grad	0.197	0.398
College	0.062	0.241
College_grad	0.164	0.370
High school or less	0.424	0.494
Age 18 to 29	0.300	0.459
Age 30 to 49	0.479	0.500
Age 50 and up	0.220	0.414
Working	0.742	0.438
Income less than 10,000	0.052	0.222
Income 10,000 to 29,999	0.231	0.421
Income 30,000 to 49,999	0.260	0.439
Income 50,000 and up	0.339	0.473
Atlantic	0.091	0.288
Quebec	0.277	0.448
Ontario	0.352	0.478
West	0.280	0.449
Pro_poor	0.851	0.356
Assist_unemployed	0.738	0.440
Observations	6,100	

Note: All means are weighted.

Table 2: LPM results for the pro_poor variable

Dependent variable=Whether government should increase/remain the same spending on poorer region

	(1)	(2)
Female	0.033*** (0.010)	0.033*** (0.010)
Married	-0.015 (0.011)	-0.011 (0.011)
Age 18 to 29	0.011 (0.012)	0.011 (0.012)
Age 50 and up	-0.003 (0.013)	-0.004 (0.013)
Working	0.004 (0.012)	0.004 (0.012)
University	0.014 (0.012)	0.009 (0.012)
College	0.051*** (0.011)	0.047*** (0.011)
Income less than 10,000	-0.019 (0.024)	-0.016 (0.024)
Income 10,000 to 29,999	0.020 (0.012)	0.021* (0.012)
Income 50,000 and up	0.004 (0.012)	0.006 (0.012)
Region fixed effect	Yes	Yes
Year fixed effect	No	Yes
Observations	5,599	5,599

Note: *Significant at the 90% level; **Significant at the 95% level; ***Significant at the 99% level. Weighted standard errors are in parenthesis.

Table 3: LPM results for the assist_unemployed variable

Dependent variable= Whether government should give financial assistance to unemployed people.

	(1)	(2)
Female	0.034** (0.012)	0.034*** (0.012)
Married	-0.019 (0.014)	-0.023* (0.14)
Age 18 to 29	0.028* (0.015)	0.025* (0.015)
Age 50 and up	0.027* (0.015)	0.028* (0.015)
Working	-0.036** (0.014)	-0.035** (0.014)
University	-0.055*** (0.015)	-0.050*** (0.015)
College	-0.024* (0.015)	-0.020 (0.015)
Income less than 10,000	-0.004 (0.028)	-0.006 (0.028)
Income 10,000 to 29,999	0.012 (0.016)	0.011 (0.016)
Income 50,000 and up	-0.024 (0.015)	-0.026* (0.015)
Region fixed effect	Yes	Yes
Year fixed effect	No	Yes
Observations	5,576	5,576

Note: *Significant at the 90% level; **Significant at the 95% level; ***Significant at the 99% level. Weighted standard errors are in parenthesis.

Table 4: LPM results for the pro_poor variable, with expanded education categories

Dependent variable=Whether government should increase/remain the same spending on poorer region

	(1)	(2)
Female	0.034*** (0.010)	0.033*** (0.010)
Married	-0.015 (0.011)	-0.011 (0.011)
Age 18 and 29	0.009 (0.012)	0.012 (0.012)
Age 50 and up	-0.004 (0.013)	-0.004 (0.013)
Working	0.006 (0.012)	0.005 (0.012)
University	0.045*** (0.017)	0.042** (0.017)
Univ_grad	-0.005 (0.014)	-0.010 (0.014)
College	0.035* (0.020)	0.035* (0.020)
College_grad	0.052*** (0.013)	0.051*** (0.013)
Income less than 10,000	-0.022 (0.024)	-0.019 (0.024)
Income 10,000 to 29,999	0.019 (0.012)	0.020 (0.012)
Income 50,000 and up	0.006 (0.012)	0.008 (0.012)
Region fixed effect	Yes	Yes
Year fixed effect	No	Yes
Observations	5,596	5,596

Note: *Significant at the 90% level; **Significant at the 95% level; ***Significant at the 99% level. Weighted standard errors are in parenthesis.

Table 5: LPM results for the assist_unemployed variable, with expanded education categories

Dependent variable= Whether government should give financial assistance to unemployed people.

	(1)	(2)
Female	0.035*** (0.012)	0.035*** (0.012)
Married	-0.018 (0.014)	-0.023 (0.14)
Age 18 to 29	0.025* (0.015)	0.022 (0.015)
Age 50 and up	0.027* (0.015)	0.027* (0.015)
Working	-0.035** (0.014)	-0.035** (0.014)
University	-0.030 (0.023)	-0.031 (0.023)
Univ_grad	-0.067*** (0.017)	-0.062*** (0.017)
College	-0.033 (0.027)	-0.033 (0.026)
College_grad	-0.029* (0.017)	-0.027 (0.017)
Income less than 10,000	-0.005 (0.028)	-0.007 (0.028)
Income 10,000 to 29,999	0.012 (0.016)	0.011 (0.016)
Income 50,000 and up	-0.023 (0.015)	-0.025* (0.015)
Region fixed effect	Yes	Yes
Year fixed effect	No	Yes
Observations	5,579	5,573

Note: *Significant at the 90% level; **Significant at the 95% level; ***Significant at the 99% level. Weighted standard errors are in parenthesis.

Table 6: Probit model results for the pro_poor variable (marginal effects reported)

Dependent variable = Whether government should increase/remain the same spending on poorer region

	(1)	(2)
Female	0.033*** (0.010)	0.034*** (0.010)
Married	-0.015 (0.011)	-0.011 (0.011)
Age 18 to 29	0.012 (0.012)	0.014 (0.012)
Age 50 and up	-0.002 (0.012)	-0.004 (0.012)
Working	0.005 (0.012)	0.004 (0.012)
University	0.014 (0.011)	0.010 (0.012)
College	0.050*** (0.011)	0.047*** (0.011)
Income less than 10,000	-0.019 (0.025)	-0.016 (0.024)
Income 10,000 to 29,999	0.020 (0.012)	0.021 (0.012)
Income 50,000 and up	0.004 (0.011)	0.005 (0.011)
Region fixed effects	Yes	Yes
Year fixed effects	No	Yes
Observations	5,599	5,599

Note: *Significant at the 90% level; **Significant at the 95% level; ***Significant at the 99% level. Weighted standard errors are in parenthesis.

Table 7: Probit model results for the assist_unemployed variable (marginal effects reported)

Dependent variable= Whether government should give financial assistance to unemployed people

	(1)	(2)
Female	0.034*** (0.012)	0.035*** (0.012)
Married	-0.019 (0.014)	-0.023* (0.014)
Age 18 to 29	0.028* (0.015)	0.025 (0.015)
Age 50 and up	0.026* (0.015)	0.027* (0.015)
Working	-0.037** (0.015)	-0.036** (0.015)
University	-0.055*** (0.016)	-0.050*** (0.016)
College	-0.025* (0.015)	-0.021 (0.015)
Income less than 10,000	-0.003 (0.031)	-0.004 (0.031)
Income 10,000 to 29,999	0.012 (0.016)	0.012 (0.016)
Income 50,000 and up	-0.023 (0.015)	-0.025* (0.015)
Region fixed effect	Yes	Yes
Year fixed effect	No	Yes
Observations	5,576	5,576

Note: *Significant at the 90% level; **Significant at the 95% level; ***Significant at the 99% level. Weighted standard errors are in parenthesis.