The Minimum Wage in

Canada's Provinces

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Abstract

The minimum wage and its effects on employment, participation, and poverty rates in Canada's provinces from 1987 to 2007 is the primary focus of this study. The goal of studying these rates is to determine the consequences of reinstating the federal minimum wage in Canada. Other factors such as GDP per capita and the generosity of government benefits will also be considered to see if they are greater determinants of employment, participation, and poverty rates than the minimum wage. Specific focus will also be given to the lowest paying occupations, the occupations that traditionally are the most influenced by the minimum wage.

The Minimum Wage in Canada's Provinces

After letting the federal minimum wage erode away to inflation, Jean Chrétien's Liberal government essentially abolished the federal minimum wage in 1996 by setting it equal in each province to their provincial minimum wages (Battle, 2003, p. 3). This decision had little impact on most Canadians since the federal minimum wage only applies to the 10% of occupations falling under federal jurisdiction. Most federally regulated occupations are generally well paying and so only about 0.1% of Canadian jobs were directly affected by the federal minimum wage (Gunderson, 2005, p. 47).

In 2006 Peggy Nash, a New Democratic Party MP, introduced a private member's bill that is still supported by the NDP. This bill would reset the federal minimum wage at $10 per hour and be indexed to inflation. (Canada. House of Commons, February 20, 2007, p. 7032; New Democratic Party of Canada, 2009). Recognizing that the federal minimum wage only applies to a small share of workers, the goal of this bill was to set a minimum wage precedent for the other provinces to follow.

Minimum wage legislation has been applauded in both the political and academic arenas for many years. Winston Churchill supported implementing minimum wage laws in the United Kingdom saying, "It is a serious national evil that any class of His Majesty's subjects should receive less than a living wage (…) the good employer is undercut by the bad, and the bad employer by the worst." (Campbell, 1995 as cited in Eyraud and Saget, 2005, p. 40). Furthering this, Article 23 in the United Nations Declaration of Human Rights states that workers have the right to a "favourable remuneration" for their labours (Schenk, 2001, p. 19). Others support high

minimum wages because, "wage rates below a certain level are incompatible with human dignity" (Heath, 2009, p. 250).

There are numerous reasons why some advocate for high minimum wages. One often touted advantage is that they are an effective anti-poverty tool that can help many of the working poor and reduce income inequality (Waltman, 2004; Luce, 2004). The wages of those who already earn slightly above the minimum wage may also increase as minimum wage rise, a process that is known as the spillover effect (Card and Krueger, 1995, p. 3; Hamermesh, 1993, p. 186). On top of this, a higher minimum wage will give minimum wage earners a greater feeling of self worth and demonstrates that their labours are valued by society.

There are even advantages to employers if minimum wages are high. One such advantage is reduced shirking and turnover by employees (Hamermesh 1993, p. 243-244; Raff and Summers, 1987, p. S79). Indeed, Adam Smith observed this tendency saying, "Where wages are high, accordingly, we shall always find the workmen more active, diligent, and expeditious, than where they are low." (Smith, 1776 as cited in Waltman, 2004, p. 84). Another possible benefit to employers and firms if minimum wages are raised is an increase in aggregate demand. This could occur because higher minimum wages give more disposable income to low-income earners, and low-income earners tend to spend most of their incomes which would result in the overall demand for goods and services to increase and in further economic growth (Prasch, 1996, p. 3).

All of these benefits may be gained from increasing the minimum wage but they could come at a cost. Basic economic theory dictates that higher minimum wages force employers up along their downward sloping labour demand curves and result in a lower quantity of labour being demanded than before minimum wages were implemented (McConnell et al. 2005b, p.

114). Some detractors of the minimum wage feel this disemployment effect outweighs any potential gains. In a 2008 book by Neumark and Wascher, the authors found overall, from a variety of studies, that minimum wages have an adverse effect on employment and are a "relatively ineffective social policy for aiding the poor" (2008, p. 249).

One explanation for minimum wages supposed inability to reduce poverty is that wages are paid on an individual basis and do not take into account varying family and financial circumstances. Indeed, even if minimum wages were set at a level where a single person working full time was not living in poverty, this level of income certainly would be lower than the income needed to keep a family of five above the poverty line. Another reason that higher minimum wages do not tend to help the poorest is there is a weak link between low-income and low-wages. This is because many of the poor do not work and so would not be helped by a higher minimum wage and that many low-wage earners live in high income homes (Benjamin et al., 2007, p. 229).

Higher minimum wages also may not increase aggregate demand. Since wages just transfer income from an employer to an employee, a higher minimum wage simply results in less income for an employer and more income for employees. The employee, who probably earns less than an employer, may very well have greater propensity to consume than the employer but any disemployment effect created by the minimum wage could offset any additional expenditures by the now wealthier employees.

The raging debate between academics about the advantages and disadvantages of minimum wages will be covered extensively in the literature review below. The real question for this paper is whether minimum wages have a significant influence on employment, participation, and poverty rates in Canada's provinces between 1987 and 2007. A further question to be

answered is whether minimum wages or other determinants are the greatest influences of these rates.

The measure of employment in this project will be the ratio of those employed in a variety of occupations to the labour force. One specific measure of employment that is especially important to minimum wage earners is the ratio of those employed in the nine occupations paying the lowest median hourly wages to the labour force. These nine occupations were specifically chosen since they include many of the occupations that traditionally pay the minimum wage and their median hourly wages are below the Canadian median (Statistics Canada, No date h). Participation rates will be measured in the normal fashion, while "poverty rates", which lack an authoritative definition, will be estimated by the percentage of various family types with incomes below the Low Income Cut Off (LICO).

There are three different measures of the minimum wage that will be used in this study. The first measure is the average real minimum wage for each province in each year while the other two are relative measures of the minimum wage. One such relative measure is the percent difference between the minimum wage and the median hourly wage for each province in each year. This will determine how a "relatively" high minimum wage compared with other wages influences employment, participation, and low-income rates. Another relative measure of the minimum wage will be the percent difference between the minimum wage and the hourly wage needed to earn the Market Basket Measure (MBM) for each province's largest city. The MBM is a measure of poverty created by Human Resources Development Canada that calculates the cost of a basket of goods and services for a family of any size (HRDC, 2003).

Another major determinant of the dependent variables may be the generosity of government transfer payments to individuals, notably in the form of social assistance, employment insurance, and child tax benefits. It will be especially interesting to include government transfers for their disincentive effects towards employment seeking but also for their poverty reducing capabilities.

GDP per capita's influence on employment, poverty, and low-income rates will also be of interest in this study. It is expected that the level of GDP per capita will be the main cause of fluctuations in employment, participation, and low-income rates.

A variable that will only be included while focusing on low-income rates will be the unemployment rate. As seen in Figure 1, these two rates tend to be heavily associated with each other (Picot and Myles, 2005, p. 16). Another variable that will only be used in low-income regressions is the median income of a province during a year. The median level of income is a better reflection of the "average" income for a province, as opposed to the mean income which becomes exaggerated because of the inclusion of very high incomes. It is also a better measure of family income than GDP per capita since it actually measures incomes received by families instead of a province's output.

It may be the case that the minimum wage is an overrated and uninfluential policy instrument, one whose effects on employment, participation, and poverty rates are dwarfed in comparison to other factors. Certainly, the minimum wage is not a silver bullet for improving the economic and social health of Canada, but a higher minimum wage is only one choice from many potential poverty reducing and economy enhancing policy options.

The rest of the report is divided into six sections. The following section is a summary of the statistics concerning minimum wage and low-wage earners and their occupations. Following that section is a review of the literature and sources used in the creation of this report. After the literature review is a detailed explanation of the dependent and independent variables focused on in this report, along with a description of the data and methodology used in the econometric models. The next section presents the results of the econometric models. The results are quite lengthy since employment, participation, and low-income rates were all broken down into various age and sex categories. Conclusions and explanations of the results are then subsequently provided. The report closes with a brief section about possible policy implications for governments.

Statistical Profile of Minimum Wage Earners and Occupations

In 2004 almost 550,000 Canadians, 4.1% of the workforce, earned the minimum wage, down from 5.7% in 1997. The percentage of the workers earning the minimum wage is highest in Newfoundland and Labrador at 8.5% of employees and lowest in Alberta at 1.1% (Sussman and Tabi, 2004, p. 6). Women make up a larger share of minimum wage earners than men at 62.1%, despite only comprising 48.1% of the workforce. In accordance with stereotypes, most minimum wage earners are young, with teenagers making up 47.1% of minimum wage workers while those over 45 comprise only 13.4%. Adult women cover 34.4% of minimum wage earners, followed by teenage girls at 27.7%, then teenage boys at 19.3%, and finally adult men at 18.5% (Battle 2003, pp. 36, 37).

Minimum wage workers are most overrepresented in the accommodation and food service industry where 19.4% of employees earn minimum wages. Following this is agriculture and then

trades at 15.4% and 8.8% respectively. Trade is the industry where the most minimum wage workers are employed at 30.2%, followed by accommodation and food services at 28.9% (Battle, 2003, p. 45). Sixty percent of minimum wage workers are part time workers, defined as working less than 30 hours per week. Throughout the entire workforce, only 20% of workers are part time (Sussman and Tabi, 2004, p. 10).

Unsurprisingly, minimum wage earners tend to be concentrated at the lower end of the educational spectrum. Sixty-three point four percent of minimum wage earners have at most a high school diploma but 5.5% do have a university degree (Battle, 2003, pp. 40, 41).

The nine lowest paying occupations in Canada (Table 1) specifically focused on in this report made up about 40% of Canadian employees in 2008 (Statistics Canada, No date f). About 45% of employees in these occupations are male and 55% are female. Within these nine jobs, there are some that employ mostly one sex. For example, childcare and home support workers are 93% female while trades helpers are 88% male (Table 2). Some occupations employ far more full time employees than part time, such as machine operators where 96% of workers are full time, as opposed to retail salespeople where only about 54% of employees work 30 hours or more per week (Table 3).

Real minimum wages in Canada have not consistently increased or decreased since 1965. The average minimum wage in Canada (in 2001 dollars) rose during the late 1960s to the mid-1970s, hitting a peak of $8.58 in 1976. After that, it began to fall until it bottomed out at $5.96 in 1986 and then leveled off until the early 1990s. The average minimum wage in Canada rose until the end of the 1990s but started to decrease again in the early 21st century, sinking to $6.76 in 2001 (Battle, 2003, p. 6). In the very recent past, provincial governments have shown renewed

enthusiasm for raising the minimum wage, especially in Ontario and Newfoundland and Labrador where the minimum wages will be at least $10 per hour by July 2010 (HRSDC, 2009). See Figure 2 for a graph of the real provincial minimum wages in 2002 dollars between 1987 and 2007.

Literature Review

Minimum Wages

Perhaps one of the most influential and frequently cited works on the minimum wage is the 1995 book by Card and Krueger, *Myth and Measurement.* The principle study in this book is the effects of an increase in New Jersey's minimum wage on teenage fast-food employment in New Jersey and Eastern Pennsylvania. Using this survey and a host of others, the authors concluded that higher minimum wages have a negligible if not positive effect on employment, contrary to what is predicted by economic theory (Card and Krueger, 1995, p. 1). Card and Krueger also found that minimum wages were a powerful policy option that could help to reduce poverty, decrease income inequality, raise the wages of many via spillover effects, and they may also benefit employers by reducing turnover and increasing worker productivity.

The following two reports were both published by the Canadian Centre for Policy Alternatives. "The Case for a Strong Minimum Wage Policy" proposed that higher minimum wages will not only help to reduce poverty but are also a medium for every worker to live and participate in the community with dignity (Black and Shaw, 1998, p. 3). Other potential benefits of high minimum wages were also lauded, such as more productive workers and efficient firms (Black and Shaw, 1998, pp. 9, 10). Michael Goldberg and David Green also released a report for the Canadian Centre for Policy Alternatives titled, "Raising the Floor". This report included an empirical analysis of employment and minimum wages in Ontario, Québec, Alberta, and British

Columbia. The authors found that minimum wages only had a negative and significant effect on the employment of 20 to 24 year old males but were statistically insignificant for all other groups studied (Goldberg and Green, 1999, p. 17, 18). The authors also felt that labour demand was inelastic and minimum wage increases would be beneficial by raising the overall wage bill for employees (Goldberg and Green, 1999, p. 20).

Jerold Waltman published *The Case for the Living Wage* in 2004. This book was a passionate plea not just for higher minimum wages, but instead for "living wages" that would give all workers a respectable level of income and decrease income inequality (Waltman 2004, p. 117). Citing studies that found insignificant or positive employment effects after minimum wage increases, Waltman believed that paying living wages could also result in more productive workers and reduced turnover (2004, p. 133). While setting the living wage rate, Waltman argues, relative incomes should be taken into account. Waltman proposed setting the living wage at 20% of the top vigintile's income which, according to his calculations, would set the minimum wage at $17.84 per hour (2004, pp. 124, 125).

Published by the International Labour Office, *The Fundamentals of Minimum Wage Fixing* took an international perspective on the minimum wage. One major section covered in this book was the way that minimum wages are set and altered around the world. Several countries have regulations that dictate when minimum wages should be raised based on inflation, while others tend to look at the overall economic conditions while altering theirs (Eyraud and Saget, 2005, pp. 31-39). Further regard was also given to the connection between minimum wage increases and further wage increases in occupations that are not associated with the minimum wage (Eyraud and Saget, 2005, pp. 62, 63). This book considered the possible negative employment effects caused by the minimum wage, but it concluded that minimum wages are

beneficial since the vast majority of gains from their increases minimum wages go towards lower income families (Eyraud and Saget, 2005, p. 99).

Another international perspective on minimum wages that specifically focused on Latin America is *Minimum Wages and Social Policy*, published by the World Bank. This book specifically explored the issue of introducing minimum wages and their effects on poverty in some of South and Central America's poorest countries. Just like in developed countries, policy makers have to walk a fine line between improving the welfare of the poorest while not creating unemployment. Cunningham found that especially vulnerable workers are hurt the most if minimum wage are increased, especially if there is only one earner in a household (2008, p. 3). Similar to developed countries, minimum wages do not tend to help many of the poorest since they are already unemployed, but they do help those with incomes marginally below the poverty line (Cunningham, 2008, p. 53).

Daniel Hamermesh's 1993 book, *Labor Demand* provided useful insights into a previously underexplored field. A major topic covered in this book was the elasticity of labour demand. Labour demand was found to be generally inelastic, with elasticities somewhere between -0.15 and -0.75, but -0.30 is probably the best estimate (Hamermesh, 1993, p. 135)**.** Hamermesh also included a section on labour demand and minimum wages. Several topics receiving attention in this section were the impact of minimum wages on the uncovered sector, spillover effects and the elasticity of labour demand in minimum wage occupations (Hamermesh 1993, pp. 182-187). Hamermesh joins the chorus of authors who think that minimum wages will only have a slight disemployment effect on adult workers since it is much lower than most wages (1993, p. 191).

Neumark and Wascher presented arguments against the minimum wage in *Minimum Wages*. Supporting traditional economic theory, the authors argued that an increased minimum wage will either cause capital and other means of production to be substituted for labour causing disemployment or for price increases to be passed along to the consumer (Neumark and Wascher, 2008, p. 39). The minimum wage was also debunked for other reasons, notably because it causes some students to drop out of school and reduces on the job training (2008, pp. 192, 199). Overall, the authors concluded that minimum wages were a "relatively ineffective social policy for aiding the poor" (Neumark and Wascher, 2008, pp. 249).

Baker, Benjamin, and Stranger (1999) gave yet another perspective on the effects of minimum wage legislation that could settle some of the debate surrounding the subject. By taking low frequency samples, these authors found that there tends to be a long run rather than immediate adjustment in teenage employment after minimum wages are increased (Baker et al., 1999, p. 320). In the long run, there is a negative elasticity of about 0.25 for teenage employment (Baker et al., 1999, p. 320). A 2.5% disemployment effect for a 10% increase in the minimum wage has been cited by the Canadian Chamber of Commerce as a reason to keep the minimum wage low (CCC, 2005, p. 8). Negative elasticities for teen labour may mean that teens are substituted for adult labour or other factors of production in the longer run.

Morley Gunderson, on behalf of Human Resources and Skills Development Canada, created a summary of American and Canadian minimum wage research along with a discussion about many of the issues surrounding minimum wages. Several Canadian reports that were summarized include that of Fortin and Maki from the late 1970s. These authors found a small and sometimes significant disemployment effect caused by the minimum wage, as did Gruebel and Maki, and Schaafsma and Walsh in the early 1980s (Gunderson, 2005, pp. 33-36). Later on in the

1980s, Mercier established that there were negative elasticities in the -0.1 to -0.3 range for teenage labour in Québec (1985 as cited in Gunderson, 2005, p. 37). Around the beginning of the 21st century, several other studies generally concluded that disemployment effects were greater for youth than adults and that the minimum wage is not an ideal anti-poverty tool, although most gains from minimum wage increases flow towards lower income households (Shannon and Beach, 1995, Fortin and Lemieux, 2000, Baker, 2005, and Fortin and Lemieux, 2002, as cited in Gunderson, 2005, pp. 38-47). Gunderson finished his report with a profile of the federal minimum wage that focused on the political aspects of its possible reintroduction (2005, pp. 47-49).

Another issue usually associated with the minimum wage is the topic of efficiency wages. "Did Henry Ford Pay Efficiency Wages?" chronicled the decision made by Ford Motor Co. in 1914 to raise its wages from $2.34 to $5 per day, approximately double the daily wages of most workers at that time (Raff and Summers, 1987, p. S59, S69). Annual labour costs at Ford rose by about half of the previous year's profits after this increase, but Ford's profits still soared by over $10 million (in real 1910 dollars) from 1913 to 1915 (Nevins, 1954 as cited in Raff and Summers, 1987, pp. S68, S75). This profit increase can be largely attributed to decreased turnover, which dropped from 370% in 1913 to 16% in 1915 for very repetitious and monotonous assembly line jobs (Raff and Summers, 1987, p. S78). Henry Ford boasted about his decision to increase wages saying:

> There was…no charity in any way involved…We wanted to pay these wages so that the business would be on a lasting foundation. We were building for the future. A low wage business in always insecure… The payment of five dollars a day for an eight-hour day was one of the finest cost cutting moves we ever made. (1922 as cited in Raff and Summers, 1987, p. S59)

An interesting perspective by David Green and Kathryn Harrison on minimum wage setting practices by provincial governments was presented in "Racing to the Middle". This report demonstrated that provincial governments strive to set minimum wages in the middle of the provincial minimum wage distribution. Governments make an effort to remain in the middle of the minimum wage range in an attempt to show that both the interests of employees and employers are taken into account while minimum wages are being altered. Indeed, the word "balance" is frequently used in press releases regarding changes in the minimum wage (Green and Harrison, 2006, p. 10). The notion of finding a balance between competing groups was exemplified further by a Manitoba public servant who said that, "The minimum wage is mostly symbolic.": a symbol of how government is trying to be fair to both employers and employees by balancing their interests (Green and Harrison, 2006, p. 25). Ideologically extreme parties tend to resist the allure of setting minimum wages in the middle of the range and instead aim for either extreme (Green and Harrison, 2006, p. 9, 10).

Relative Wages

Robert Frank gave an interesting perspective on relative and nominal wages in his 2007 book, *Falling Behind.* Frank argues that relative, not absolute, income is a better predictor of individual happiness (p. 21). This is readily exemplified in all communities, where everyone is trying to keep up with what is deemed "normal" consumption patterns (Frank, 2007, p. 52). Relative wages pertain to the study of the minimum wages since workers and employers may decide to provide their services or hire based on whether minimum wages are relatively ''high'' or ''low''.

Low-Income and Government Assistance

Reports by Human Resources Development Canada and Statistics Canada were useful for demonstrating the ambiguity that surrounds the definition of the word ''poverty''. HRDC introduced the Market Basket Measure (MBM) approach to measuring poverty in 2003, an approach that calculates the cost of a basket of goods and services going beyond the essentials of food, clothing, and shelter to include footwear, transportation, personal and household needs, furniture, telephone, and modest amounts of reading, recreation, and entertainment (HRDC, 2003, p. 4). This measure also emphasizes the returns to scale for expenses as family size increases. HRDC, however, explained that the MBM or any other single low-income indicator cannot determine what constitutes a poverty line (2003, p. 2). The Chief Statistician of Canada, Ivan Fellegi, was also unyielding in stating that LICO has never been considered as a poverty line by Statistics Canada (2005). The LICO is a measure of poverty that considers a family to be living in "low-income" if 63.6% or more of their after-tax income is spent on food, clothing, and shelter (Statistics Canada, No date d).

Written in 1974, Peter H. MacRae created a report for the Council of Maritime Premiers titled, "Social Assistance and Work Effort". Although this report is now slightly dated, it discussed the timeless topic of whether social assistance recipients legitimately need assistance or are deliberately cheating the system. Since 75% of social assistance recipients in the time period studied were considered unemployable, MacRae concluded that there was no mass abuse of the program (1974, pp. 9, 158). The social assistance system also does not create a "leisure inducing bonanza" since its benefit payments are actually quite small. However, some will always be lured away from participating in the labour force and towards social assistance benefits, especially

those with the lowest education and skills whose salaries minus childcare and travel costs are less than what would be received through social assistance (MacRae, 1974, pp. 158-160).

Two reports about social assistance usage by Canadians include those by Card and Robins in 1996, and Lemieux and Milligan in 2006. Both studies concluded that there is an incentive for those receiving social assistance to not work. Card and Robins found that only 20% of single parents receiving social assistance in New Brunswick and British Columbia reported any additional income. However, many of those receiving social assistance face limited work opportunities and low-wages which could result in their family incomes decreasing if they find employment, an undesirable outcome for a single parents (Card and Robins, 1996, pp. vii, 1). Lemieux and Milligan found further evidence of higher social assistance benefits acting as a disincentive towards potential employees. Using Census data, the authors found that increasing social assistance benefits in 1980s by a few hundred dollars as recipients reach age 30 reduced employment rates by between three and five percent (Lemieux and Milligan, 2006, pp. 14, 15).

Christofides, Stengos, and Swidinsky gave another interesting perspective on the relationship between social assistance usage and employment. The authors found that it is not just the gross amount of social assistance payments given to recipients that determine whether someone seeks employment or not, but the level of exempt earnings are important too (Bailey, 1994, Charette and Meng, 1994 as cited in Christofides et al., 1997, pp. 596-597). Exempt earnings are the amount of private sector income that a social assistance recipient can earn before benefits start to be deducted. Raising the level of exempt earnings may actually lead to an increase in the labour supply, while the magnitude of basic allowances did not have a significant effect on labour force participation at the 95% significance level (Christofides et al. 1997, pp. 609-611).

Baker and Tippin (1999) wrote a book that focused on the employability of mothers. The most relevant aspect of the book to this report was the relationship between the minimum wage and social assistance. Several sources found that many mothers will be made worse off financially if they work for the minimum wage rather than receive benefits (Lord 1994, Armstrong 1996, and Lewis, 1997 as cited in Baker and Tippin, 199, p. 14). Baked and Tippin lauded a possible alternative to choosing between employment and social benefits used in the United Kingdom. Both the government and private sector participate in this solution, with government benefits being added on top of market earned wages to boost earnings for a single mother working full time from the minimum wage of £3.60 per hour to the equivalency of £6.00 per hour (Guardian, 1998 as cited in Baker and Tippin, 1999, p. 202).

Low-income mobility was an especially important topic covered by Picot and Myles in a 2005 report for Statistics Canada. In Canada, 38% those who find themselves earning low-incomes will generally escape the predicament after one year but 24% of low-income earners will be in the same situation five years later (Corak et al., 2003 as cited in Picot and Myles, 2005, p. 22). About half of those who experience low-income for five years or more have some sort of work-limiting disability, which partially accounts low-income's persistence in Canada (Hatfield, 2003 as cited in Picot and Myles, 2005, p. 25). Overall, the authors found that low-income incidence generally follows the unemployment rate; with an obvious exception in the mid-1990s where the low-income rate kept climbing as unemployment fell (2005, p. 16).

Data, Variables, and Methodology

Data for this project was acquired primarily from Statistics Canada's CANSIM tables. Employment, labour forces, populations, median incomes, low-income rates, participation rates,

GDP, average social assistance, child tax benefits, employment insurance benefits, unemployment rates, and inflation rates were all gained directly from these tables. HRSDC's minimum wage database was the source for the federal, provincial, and territorial minimum wages in Canada since 1965.

Dependant Variables

A central dependent variable in this study is employment rates from 1987 to 2007. All measures of employment are a ratio of employment in a group of workers to some subsection of the labour force. The size of the labour force depends on whether both sexes, women, men, those between ages 15 and 24, 25 to 54, or 15 to 64 are being studied. The broadest measure of employment used in this study is the ratio of all employed workers each year in each province to the labour force between ages 15 and 64 from 1987 to 2007.

A more focused measure of employment pertaining to the lowest wage earners was also used in this study. The sum of those employed in the nine lowest paying occupations (Table 1) was divided by the labour force between ages 15 and 64 in each province from 1987 to 2007. This variable was also broken down by sex and type of worker.

The different effects that the minimum wage has on youth and adults was found by measuring the ratio of those employed in the four NAICS occupations that employ the most minimum wage workers (agriculture, trade, retail trade, accommodation and food services) to the labour force from 1987 to 2007. This measure was broken down by sex and ages 15 to 24, and 25 to 54. The nine NOC-S occupations only had data divided by age and sex from 1997 to 2007, and so they were substituted for the four NAICS occupations in regressions involving different age groups.

Several regressions involving the nine NOC-S or the four NAICS occupations had issues with data suppression. Statistics Canada suppresses Labour Force Survey data in order to maintain respondent confidentiality if it does not project that there will be a sufficient amount of employees in a particular occupation (Statistics Canada, No date f). For example, in Prince Edward Island if the Labour Force Survey finds that there are less than two hundred employees working in a particular occupation in a given year, then that data is suppressed. In Ontario, Québec, Alberta, and British Columbia fifteen hundred employees are needed to ensure data availability. Newfoundland and Labrador, Nova Scotia, New Brunswick, Manitoba, and Saskatchewan require five hundred (Statistics Canada, 2008, No date f). For the purposes of this study, two different regressions were performed when data was suppressed. Maximum possible values were substituted for suppressed data in the first regression. That is, for Prince Edward Island, all suppressed data was denoted as two hundred, in the four most populous provinces they were denoted as fifteen hundred and the remaining provinces had suppressed values denoted as five hundred. The subsequent regression had all suppressed values given a value of zero. Exact estimates are therefore not available for regressions using suppressed data, but a range that the estimates will fall into is presented. The author is more confident in the estimates that used maximum values since it is more likely that the number of actual respondents was closer to the maximum values than zero. For example, in Alberta it is probably more likely that there were between 750 and 1499 male childcare and home support workers in 2005 than zero, since in the following year Alberta had 1700 male childcare and home support workers (Statistics Canada, No date f).

An alternative perspective to measuring employment was given by including the average weekly hours worked by members of the labour force as an independent variable. This was a

similar study to Michel (1999) which focused on hours worked by minimum wage employees rather than the amount of people employed. Average weekly hours worked by each member of the labour force was calculated by summing the products of the average weekly hours worked by employees in each NOC-S occupation as found by the Labour Force Survey by the number of employed persons in that occupation, and then dividing that sum by the labour force aged 15 to 64. This procedure was done for all occupations and the nine NOC-S occupations for both sexes. Breakdowns by each sex were also included, but men had childcare and home support workers dropped from the nine occupations while women excluded trades helpers, occupations unique to primary industry, and machine operators. These occupations were dropped because of the data withholding issues mentioned above. Withheld values were not replaced with maximum or minimum values as was done in previous regressions because this would introduce an even wider range for estimates to fall into, since the dependent variable is a product of the number of employees by the average hours worked over the labour force rather than just the number of employees over the labour force.

Provincial participation rates from 1987 to 2007 are another dependent variable in this study. NDP MP Peggy Nash claimed while introducing her private member's bill on the federal minimum wage that, "It (the minimum wage) increases labour market participation." (Canada. House of Commons, February 20, 2007, p. 7032). Christofides et al. found evidence to support this statement when they found that higher wage rates provided a significant incentive for single men, single women, and lone mothers to re-enter the labour force (1997, p. 610). However, participation rates may decrease when the minimum wage is raised if a significant disemployment effect is created, which could discourage even more people from trying to find a job. Participation rates were measured in the usual fashion by Statistics Canada and were broken

down into age and sex groups. Age breakdowns were from 15 to 19, 20 to 24, 25 and up, and 15 to 64.

Low-income rates were included as a proxy variable for poverty rates. A proxy variable for poverty rates was required because, as previously discussed, there is significant ambiguity that surrounds the term "poverty line". Low-income incidence for all families, families with a male head or major earner under 65, families with a female head or major earner under 65, and families with the family head 24 years of age or less were measured for the years of 1987 to 2006.

Independent Variables

The principal independent variable of this project is the minimum wage. The minimum wage was defined as the average minimum wage each year in each province adjusted for inflation by the CPI to 2002 dollars. Two other measures of the minimum wage were also included. One other measure was the percent difference between the minimum wage and the median hourly family income for all family types. The median hourly family income was calculated by dividing the median family income adjusted for inflation to 2002 dollars by 2000 hours per year (40 hours per week, 50 weeks per year). Comparing the minimum wage to the median hourly wage reflects the tendency for workers, as emphasized by Tobin, to be "more concerned with relative than absolute real wages" (1972, p. 2).

Another measure of the minimum wage is the percent difference between the minimum wage and the hourly wage needed for a single adult to earn the MBM requirements for a province's largest city. The hourly wage needed to earn the MBM was calculated by dividing the MBM for a reference family by two and adjusting to 2002 dollars, and then divided by 2000 hours per year. This measure will be especially interesting for regressions concerning low-income

rates since it involves a direct comparison between what a worker must earn to achieve the MBM income level, which is a measure of poverty, and the minimum wage. For the two alternative measures of the minimum wage, a negative percent difference means that the minimum wage is less than its comparison, while a positive percent difference means that the minimum wage is the greater of the two.

Another variable that may have a greater effect on employment, participation, and low-income rates than the minimum wage is the average government transfer payments to recipients, all adjusted to 2002 dollars. This is not only an attempt to determine whether government benefits create employment disincentives to potential employees, but also to monitor the extent of their poverty mitigating abilities. The main government transfer included is the natural logarithm of the average social assistance benefits. Another included government transfer is the average child tax benefits paid per recipient. The natural logarithm of this variable may be especially important to the employment decisions and incomes of females, who are the heads of 80% of single parent families (Bergman, 2007). A final government transfer that will only be included in low-income regressions is the average employment insurance (EI) benefits paid to individuals. EI will not be included in employment or participation rate regressions since EI benefits are based upon employment during the previous 52 weeks. Employment and participation data is annual and EI benefits last less than a year, therefore someone receiving EI benefits would have had to work either sometime during the year before receiving benefits or after benefits expire, and so the level of EI benefits would not make a difference in employment and participation rates (Service Canada, 2009). Other government transfers such as GST and HST credits, and provincial and territorial tax credits were excluded since they usually only amounted to a few hundred dollars and raised significant issues with withheld data (Statistics Canada, No date b).

The variable that may have the greatest influence on employment, participation, or low-income rates is the natural logarithm of GDP per capita, adjusted to 2002 dollars. When an economy is going through a recession it is characterized by declining output, reduced employment and participation rates, and increasing low-income incidence. A recovering economy has increasing output, employment and participation rates which should then reduce the amount of people in low-income (McConnell et al., 2005a, p. 131). Cyclical fluctuations in the economy, as approximated by a rising or falling GDP per capita, is probably the principal determinant of the dependent variables.

Another independent variable that may be useful while studying low-income rates is the natural logarithm of the median income for all families in a province, adjusted to 2006 dollars. This variable was included for two reasons: one is that it is better than GDP per capita at measuring the actual income received by a family rather than just measuring the output of a province. If families are receiving, on average, more income then low-income rates should decrease. The second is that the percent difference between the hourly minimum wage and the median hourly family income might be large not because the minimum wage is so low but rather because the median family income is so high.

A final independent variable included in this report is the unemployment rate. Unemployment rates will only be included in regressions focusing on low-income rates. They are not included when studying employment and poverty rates since if the unemployment rate is increasing then the employment and participation rates are most certainly decreasing, which makes this variable uninteresting to include in those regressions. Picot and Myles found that unemployment and low-income rates tend to closely follow each other, except during the mid-1990s when low-income rates were rising as unemployment rates fell (Picot and Myles, 2005, p.

16-17; Figure 1). This general trend may mean that unemployment rates are a major determinant of low-income rates in Canada.

See Table 4 for a summary of the data used in this report.

Methodology

An Arellano and Bond estimator was used for all regressions. This estimator is a type of dynamic panel model that permits lagged values of the dependent variable to be used as right-hand side variables, all the while still controlling for fixed effects (Arellano and Bond, 1991 as cited in Baltagi, 2005, pp. 136, 137). One lag of the dependent variable was included for each regression to allow for delayed responses in the dependent variables. A generic example of the Arellano and Bond model for this report resembles:

$$y_{i,t} = \alpha_1 y_{i,t-1} + \mathbf{x}\boldsymbol{\beta} + a_i + u_{i,t}$$

The models for the employment regressions included the independent variables of a year's lag of the dependent variable, a measure of the minimum wage along with a year's lag of that measure, and the natural logarithms of social assistance, child tax benefit, and GDP per capita. Regressions were performed three times: once with each definition of the minimum wage. The employment model resembles the following:

$$\text{Employment}_{x,i,t}/\text{Labour Force}_{x,i,t} = \beta_0 + \alpha_1 \text{Employment}_{x,i,t-1}/\text{Labour Force}_{x,i,t-1} + \beta_1 \text{minimumWage}_{x,i,t} + \beta2\text{minimumWage}_{x,i,t-1} + \beta_3 \ln(\text{socialAssistance}_{i,t}) + \beta_4 \ln(\text{childTaxBenefit}_{i,t}) + \beta_5 \ln(\text{GDP}_{i,t}/\text{Population}_{i,t}) + a_i + u_{i,t}$$

Models with participation rates as the dependent variable almost mirrored the employment models:

$$\text{Participation}_{x,i,t} = \beta_0 + \alpha_1 \text{Participation}_{x,i,t-1} + \beta_1 \text{minimumWage}_{x,i,t} + \beta_2 \ln(\text{socialAssistance}_{i,t}) + \beta_3 \ln(\text{childTaxBenefit}_{i,t}) + \beta_4 \ln(\text{GDP}_{i,t}/\text{Population}_{i,t}) + a_i + u_{i,t}$$

However, lags of previous minimum wages were not included in participation regressions because previous levels of the minimum wage should have no influence on present decisions to participate in the labour force. Deciding to participate in the labour force should depend upon the present's and not the past's possible earnings. Regressions were again performed for each definition of the minimum wage.

For low-income rate regressions, the independent variables that were included in the participation regression were used but also included were the additional regressors of the natural logarithms of average EI benefits and median family incomes, and the unemployment rate. The model was:

$$\text{LowIncome}_{x,i,t} = \beta_0 + \alpha_1 \text{LowIncome}_{x,i,t-1} + \beta_1 \text{minimumWage}_{x,i,t} + \beta_2 \ln(\text{socialAssistance}_{i,t}) + \beta_3 \ln(\text{childTaxBenefit}_{i,t}) + \beta_4 \ln(\text{EI}) + \beta_5 \ln(\text{GDP}_{i,t}/\text{Population}_{i,t}) + \beta_6 \ln(\text{medianIncome}_{i,t}) + \beta_7 \text{UnemploymentRate}_{x,i,t} + a_i + u_{i,t}$$

Past values of the minimum wage were not considered since many minimum wage earners spend most of their incomes and cannot afford to have savings. Therefore, even if minimum wages were high in the past, all earnings would be spent by the next year and so only the present minimum wage would have any effect on present low-income levels. Regressions with the regressand of low-income levels for families with a head of household 24 years of age and under involved minor changes in the regressors: one used the unemployment rate for 15 to 24 year olds and another used the unemployment rate for all ages. This was done to determine whether it is the overall unemployment rate or the unemployment rate only for 15 to 24 year olds that matters for low-income levels in this age group.

Results

The results are divided into six sections. The first section's results are from regressions involving employment in all occupations. These occupations are then broken down by sex and type of worker to determine how the minimum wage affects different workers. Following that is the results for regressions focusing on the nine lowest paying occupations. These, too, were broken down by sex and type of worker. The third section presents the results of the regressions involving the four NAICS occupations. The final employment section pertains to the regressions focusing on hours worked by members of the labour force. Following the employment results are the results for the participation rates. Participation rates were also broken down by age and sex. The results section of this report closes with low-income rate regressions.

Employment: All Occupations

The ratio of employment in all occupations to the labour force between ages 15 and 64 was negatively correlated with the minimum wage, especially in the short run (Table 5). However, as will be seen throughout the results, one year's lag of the minimum wage had a positive and statistically significant coefficient. This may mean that there are excessive immediate firings or layoffs after the minimum wage is raised but over time hirings and replacements occur which result in a smaller long run than short run elasticity. The overall employment to labour force ratio had a short run elasticity from the minimum wage of about -0.04, but after a year the elasticity diminished to -0.0026. The short run elasticity for the percent difference between the minimum wage and the median hourly wage was also very small at -0.0018, but a year's lag for this variable was not significant at the 90% significance level. GDP per capita was the most economically and statistically significant variable with a coefficient of approximately 0.3 in each

regression, which yields an elasticity of about 0.34. Government transfers were not statistically significant determinants of overall employment.

Past levels of employment are very strong indicators of the present. As seen in Table 5, with all else held equal the employment to labour force ratio will be about 55% of its level in the previous year.

Tables 6 and 7 show the results for the regressions with the ratio of employment in all occupations for male and female workers to the male and female labour forces between ages 15 and 64 as the dependent variable. Men have a greater coefficient on the lagged value for the dependant variable, possibly meaning that male employment is more stable than female. The percent difference between the minimum wage and the median hourly wage was slightly negative for both men and women, but the other measures of the minimum wage had a positive influence on male employment but they were statistically insignificant for women.

Not surprisingly, the social assistance and child tax benefits are more important to women than men. Government benefits, especially the child tax benefit, had a great influence on women's employment with elasticities of around -0.05 and -1.23 for social assistance and the child tax benefit respectively. The extra few thousand dollars of income required to support a child rather than the larger social assistance benefits are very important to some mothers' employment decisions. Women also seemed to be more susceptible to job losses than men when the economy starts to decline.

There is considerable discrepancy between the determinants of employment for full and part time workers (Tables 8 and 9). Notably, there is more consistency in the level of part time employment than full time, signified by the larger coefficient for a year's lag of part time

employment. Another opposite effect for the two types of work is the impact of the minimum wage. Full time occupations have a short term negative elasticity of around 0.07 for the minimum wage itself, but in the longer run the elasticity diminishes to about -0.028. The percent difference between the minimum wage and the median hourly wage had a short term elasticity of approximately -0.05 and lacked a statistically significant lagged value. For part time employment, only the minimum wage relative to the median hourly wage had a statistically significant relationship at the 90% significance level but this relationship was actually positive. A small positive impact on part time employment as full time employment decreases may represent that some employees are not necessarily laid off after the minimum wage increases, but rather that their hours are cut below 30 hours per week.

Full and part time occupations also differed in their relationship with GDP per capita. GDP per capita had an elasticity of about 0.42 for full time employment, making it a far more influential factor of employment than the minimum wage. Part time employment, on the other hand, had a statistically insignificant relationship with GDP per capita. Child tax benefits also were a significant determinant of full time employment, with a coefficient of about -0.13. As average child tax benefits increase, parents can afford to cut down their working hours and spend more time with their families. Alternatively, higher child tax benefits could persuade some to not work full time and thus not earn the higher incomes which could disqualify them from receiving child tax benefits. No form of government assistance had a statistically significant relationship with part time employment.

Based on the lagged coefficient of the dependent variable, female full time employment appears to be more stable than men's (Tables 10 and 11). However, the minimum wage had approximate short term elasticities of -0.075 for women as compared to -0.05 for men. No lags

for any definition of the minimum wage for either sex were statistically significant. Men were also more dependent than women on the state of the economy to determine whether they found full time employment.

Minimum wages were not a significant influence of male part time employment at the 90% significance level, but they may have a positive effect on women's (Table 12 and 13). This seems to run contrary to the findings of McKee and West (1984) who found that minimum wages disproportionately affect part time workers (as cited in Gunderson, 2005, pp. 36, 37). Indeed, the elasticity for the percent difference between the minimum wage and the median hourly wage is -0.15 for women's part time employment.

Surprisingly, male part time employees were more prone to be influenced by social assistance and child tax benefits than women. Since there is no relationship between government benefits and male full time employment and there is a negative and significant relationship between part time employment and government benefits, this may mean that some men choose unemployment over part time employment if they have dependents. Women, on the other hand, still seem to choose part time employment over just government benefits as a means of supporting their families.

Employment: Nine Occupations

For employees in the nine lowest paying occupations there is an immediate negative influence on employment after the minimum wage is increased, with a short term elasticity around -0.092 (Table 14). Surprisingly for these low paying occupations, the elasticity becomes a positive 0.03 after a year. On top of this, the two other minimum wage measures both have positive long run elasticities. Predictably, employment in these nine occupations has a more

pronounced negative relationship with social assistance payments than did all occupations. These occupations are also more pro-cyclical too, with GDP per capita having the greatest elasticity of all the variables at approximately 1.05, while social assistance had a statistically significant elasticity of almost -0.2.

There are differences between the influences of men's and women's employment in these nine occupations (Tables 15 and 16). In the short run, men's employment has a negative reaction to minimum wage increases, but in the long run this relationship becomes positive. Women, however, do not have a statistically significant relationship between any measure of the minimum wage and employment in these nine occupations. Males display some sensitivity to changes in GDP per capita, but females are even more reactive to economic fluctuations and government transfers. Also, as denoted by the year lags of the dependent variable, there is more stability in these nine jobs for males than females. This can probably be attributed to higher stability in the occupations that are heavily male dominated and lower stability in female-centric jobs.

Full and part time workers also react differently to the minimum wage in these nine occupations (Tables 17 and 18). The immediate negative elasticity of -0.17 caused by the minimum wage for both sexes' full time employment is eventually offset for a long run elasticity of about -0.018. For part time employment in these jobs, there is an immediate positive impact for both sexes, and a year's lag of the minimum wage is statistically insignificant at the 90% significance level for all definitions of the minimum wage. Part time employees also have a more statistically and economically significant relationship with social assistance benefits than full time workers, possibly because government benefits can yield higher incomes than what could be earned working part time for the minimum wage.

The short run impact of the minimum wage on male full time employment in these nine occupations is quite uncertain based on these results (Table 19). Only for the percent difference between the minimum wage and the hourly MBM income are both the maximum and minimum estimates of employment significant at the 90% significance level, while only the minimum values of the real minimum wage are significant at this level, too. There is more certainty in the long run, with the lagged values of both the real minimum wage and the MBM measure being positive and significant at over the 99% significance level. GDP per capita has a significant and positive relationship with male full time employment, the opposite of its relationship with part time (Tables 19 and 20). Part time male employment may also have (at low levels of significance) a negative relationship with the natural logarithm of GDP per capita. This would certainly not mean that part time workers are laid off as an economy expands, but rather that their hours are increased to 30 hours or more per week. Government transfers have no statistically significant relationship with male full time employment, but social assistance benefits do have a negative relationship with male part time employment that is significant between the 90 and 95 percent significance levels. To a less significant degree, child tax benefits have the same effect on male part time employment.

Minimum wages have opposite impacts on female full and part time employment within the nine jobs (Tables 21 and 22). The elasticity of the minimum wage for female full time employment in these nine jobs is around -0.19, while part time employment has a positive elasticity of about 0.22. This may mean that some women working in these nine occupations have their hours cut below 30 hours per week after minimum wage is increased. Lags for any definition of the minimum wage are not statistically significant to women. Higher child tax benefits and a shrinking economy also decrease female full time employment in these jobs, while

part time employment tends to be more so influenced by social assistance benefits, but not at a level of significance greater than 95%.

Age Comparisons

Switching from the nine NOC-S occupations to the four NAICS occupations, comparisons could be made between youth and adult workers. The most striking initial finding about the employment of youths between ages 15 and 24 is the small coefficient on the lag of the dependent variable (Table 23). This small coefficient demonstrates that young adult and teen employment is very dynamic and unstable. However, the minimum wage did not have a statistically significant relationship with this measure of employment at the 90% significance level, while social assistance benefits were the only statistically significant independent variable. Teens and young adults may not be the actual recipients of social assistance themselves, but if their parents or relatives are receiving high levels of social assistance benefits then dependents are less obliged to seek employment. This may be the case since about 74% of those aged 15 to 24 live with their parents or another relative (Statistics Canada, 2009).

Adults between ages 25 and 54 (Table 24) employed in the four NAICS occupations behave in a different fashion. There is considerably more stability in these occupations when compared with their younger co-workers, but no other independent variables are significant at the 90% significance level. The differences in employment stability could mean that young workers are not substituted for older workers because of minimum wage increases, but any sort of shock or change that occurs in these industries will likely result in young workers bearing the brunt of its effects, while older workers are more likely to continue being employed.

A degree of ambiguity still exists about the determinants of young adult employment for either sex in the four NAICS occupations (Tables 25 and 26). The level of stability in these occupations is about the same for both men and women, while the minimum wage is not statistically significant in any case. Young males' employment in these occupations is more dependent on social assistance benefits than females', while females are possibly more influenced by levels of child tax benefits. Child tax benefits, however, lacked consistent statistical significance for females.

As seen in Tables 27 and 28, older (especially male) adults employed in the four NAICS occupations exercise more stability in employment than their younger counterparts. Men may actually be more inclined to be employed in these occupations after the minimum wage increases, but women's employment is still largely uninfluenced by the minimum wage. Women's employment has a more statistically and economically significant relationship with GDP per capita than men's.

Hours Worked

Average weekly hours worked per member of the labour force tends to decrease as the minimum wage increases (Tables 29-31). For all occupations, there is an immediate downturn in hours worked as the minimum wage is raised, but after a year this effect is mostly offset. There are other, greater determinates of weekly hours worked, especially GDP per capita and child tax benefits.

Men, a year after the minimum wage is increased, may actually be working more hours than before but women are definitely working less. Weekly hours worked by males tends to be

more pro-cyclical than female's, but women's hours are heavily influenced by government benefits.

Surprisingly for the nine occupations, minimum wages have a long term positive effect on average weekly hours (Tables 32-34). As seen in Table 33, this effect may be largely driven by males who, after an increase in the minimum wage, certainly are working more hours in the long run in their eight occupations while women are working fewer hours in their six occupations. Not surprisingly for these low-wage occupations, social assistance benefits are an important factor when deciding how many hours to work. Men's hours of employment in these nine occupations seem to be even more reliant upon social assistance benefits than women's, but women are more sensitive to child tax benefits. Men's hours are also very pro cyclical with an average elasticity of about 1.1 for GDP per capita, while there is not a statistically significant relationship between GDP per capita and weekly hours worked by women employed in the six occupations.

Participation

The results do not signal a significant positive relationship between the participation rate and the minimum wage, contrary to the statements made by former MP Peggy Nash (Canada. House of Commons, February 20, 2007, p. 7032; Table 35). The largest influence of overall participation is GDP per capita, which had an approximate elasticity of 0.9. Males are actually negatively influenced by increases in the minimum wage, while women who do not seem to be significantly influenced by the minimum wage at all (Tables 36 and 37). Men's participation is susceptible to changes in the state of the economy and their participation is unresponsive to government transfers. Women, on the other hand, are significantly affected by the level of social assistance payments and to a lesser extent, the state of the economy.

Higher minimum wages create the most severe disincentives to participate in the labour force among the youngest workers, especially of the male variety (Table 38-40). Teenage males are more reactive to social assistance benefits than teenage women, but teenage women are more heavily influenced by child tax benefits. Child tax benefits may be significant for females since more females are single parents than males, even at a young age. Overall, teens are the most susceptible to make their participation decisions based on the state of the economy.

As teenagers become young adults the participation situation changes slightly (Tables 41-43). The minimum wage is no longer a significant determinant for 20 to 24 year olds' overall participation but it still is a significant deterrent for male participation at the 90% significance level. This age group is less responsive to fluctuations in GDP per capita than teenagers, but the coefficients of GDP per capita are still large and significant in all situations. Unlike teenagers, women are now more reactive to changes in GDP per capita than men. None of the regressions involving young adults yielded statistical significance for the government benefit variables.

For adults over age 25, participation stabilizes as seen by the large coefficient for lagged values of the participation rate (Tables 44-46). As workers age, a year's lag of the dependant variable becomes larger, representing that workers are more inclined to consistently participate in the labour force, probably because older workers generally have more stable employment than younger ones. The minimum wage is no longer a significant deterrent or incentive for either sex to participate in the labour force while the state of the economy has become a less significant but still important indicator of participation. For older women, higher social assistance benefits become a significant deterrent to participate in the labour force.

Low-Income

Low-income abatement is a hotly contested point when it comes to minimum wage discussions. The results with low-income rates for all family types as the regressand (Table 47) solidify the statement by Neumark and Wascher that, "the minimum wage is a relatively ineffective social policy for aiding the poor" (2008, p. 249). Indeed, the results in Tables 47 to 51 show that minimum wages are not in any way significant to low-income reduction. What does seem to be important for overall low-income rates is the prevalence of low-income in the previous year. The lagged values of the dependant variable show that there is a persistent level of low-income in Canada, which may partially consist of people with disabilities (Hatfield, 2003 as cited in Picot and Myles, 2005, p. 25). Surprisingly, although Figure 2 demonstrates a connection between the unemployment rate and the low-income rate, the unemployment rate was not significant at the 90% significance level. However, there is definitely a correlation between the natural logarithm of the median income and the low-income level for all families in a province, since this variable had an elasticity of almost -8, possibly demonstrating that a rising tide raises all ships.

As expected, there are differences between the determinants of low-income in households with male or female heads or major earners. As shown in Tables 48 and 49, households with a male head under 65 tend to have less persistent low-income incidence than households with female heads, which may indicate that there are more opportunities for men to escape poverty. More women than men acting as single parents may also create this trend. Social assistance programs also are more effective in reducing male than female low-income rates. Women's low-income has a much more pro-cyclical relationship with low-income rates, but overall the greatest

reducer of low-income rates was the median income which has an elasticity around -10 for both sexes.

Low-income rates for households with a head or major earner less than or equal to 24 years of age have the least persistent poverty of any age group (Tables 50 and 51). New opportunities are always developing for youths as they age, notably in the form of work experiences and pay raises which may lift a family with a relatively young head out of poverty. It was also interesting to note that the unemployment rate for those between ages 15 and 24 was not statistically significant but the unemployment rate for all ages was. The unemployment rate for those aged 15 to 24 may be insignificant since it represents the unemployment of youths who live independently and youths who live with parents or relatives. Since 74% of those between 15 and 24 live with parents or relatives, unemployment rates for this age group may not be heavily associated with low-income rates for households with a head or major earner under 24 (Statistics Canada, 2009). Another possible explanation for the insignificance of youth unemployment rates and the significance of overall unemployment rates is that household heads in this age group could receive substantial financial contributions from parents or relatives. If the unemployment rate for all ages increases, parents and relatives may have less means to support youths that have recently moved out and so the low-income rates for youths increases.

Employment insurance benefits were also significant at the 90% significance level, but had the opposite impact than expected. This could mean that there are instances where youths or their supportive parents work for a period of time and then seek EI. EI benefits are presently only worth 55% of previous earnings, a level of income which could leave many below the low-income threshold (Service Canada, 2009). Therefore, EI benefits may create disincentives to

work the full year for these young adults or their relatives, and after seeking EI benefit their incomes are below the LICO.

Conclusion and Explanations

Employment

As demonstrated by the results, the minimum wage does appear to have an overall disemployment effect throughout the economy, but this effect is quite small and has possibly been excessively emphasized in the past. It was consistently found that a small initial decrease in employment created by raising the minimum wage would be largely offset after a year. Although only 4.1% of the workforce earns the minimum wage, these disemployment effects may seep to other sectors of the economy that are not directly affected by the minimum wage. Wage negotiations occurring after minimum wages increase can spread disemployment outside of the minimum wage realm if other wages go up by an even greater proportion than the minimum wage. This is best exemplified in Brazil where up to 20% of employees receive wage increases as a multiple of the minimum wage (Lemos, 2003 as cited in Eyraud and Saget, 2004, pp. 62, 63).

The actual effects of the minimum wage are complicated further as employment is broken down by sex and type of worker. As minimum wages rise, the results found that there is a tendency for minimum wage workers to have their hours cut below 30 hours per week. For all occupations, females are mostly unresponsive to the minimum wage, but more males may actually be working after the minimum wage is raised.

One of the more surprising results of this project was that the minimum wage had a positive employment effect in the long run for the nine occupations, but for all occupations it had a long run negative impact. This could be caused by minimum wage paying entry level jobs in

otherwise well paying occupations that are still classified as an occupation paying wages, on average, far above the median. Another possible explanation is that the lower paying occupations become more appealing to potential employees once the minimum wage is raised, and so there is more employment in the lower paying occupations than before.

Although there is a slight employment gain in the nine lowest paying occupations as the minimum wage increases, these gains are primarily made by males, while women and full time workers face most of the job losses. This could mean that male dominated industries paying low wages are less inclined to lay off workers as minimum wages increase, but some largely female occupations such as clerical work or childcare may face higher layoffs as minimum wages rise.

The results also do not indicate a systemic firing of younger workers as the minimum wage increases. Lagged values of youth employment in the four NAICS occupations were very small, indicating that there is significant fluidity in this age group's employment that may not be correlated with the minimum wage. The substitution of adult labour for youth labour is not based solely upon minimum wages increases, but this substitution is caused by all sorts of shocks and occurrences in an industry.

Average weekly hours worked by members of the labour force gave another interesting insight into the repercussions of the minimum wage. The real minimum wage and its one year lag were statistically significant but it only had a long term elasticity of about -0.015 for all occupations. This small elasticity mirrors the findings of Michl (1999), where a 17% increase in the minimum wage caused a 5% decrease in hours worked by teenage fast food employees in New Jersey. An overall decrease in working hours may mean more people switch from full to

part time status as the minimum wage increases, which was a prominent trend especially in the nine lowest paying occupations.

A possible explanation for the tendency of short term disemployment to be largely offset in the longer run as minimum wages increase is proposed by Figure 3. This figure models the labour market with frictions. Hansen (1970) proposed including frictions alongside the supply and demand curves, stating that "actual employment is never *on* the supply curve, or the demand curve, but, let us assume, to the left of both the demand and supply curve" (p. 6). These curves represent the ever present frictions that exist in the labour market since it takes time for employees to move from job to job and for employers to fill vacancies. These frictions never become infinitely small (Hansen, 1970, p. 6). Frictions diminish as time passes, represented by the shift from the short run (SR) to the long run (LR) friction curves. The equilibrium price for labour in this market is P_A with the corresponding quantity demanded of Q_A found along the long run frictions curve. However, as argued by Shapiro and Stiglitz (1984) price P_{A*}, which is slightly above the original equilibrium, P_A, is the equilibrium price in reality, and so Q_{A*} units of labour are demanded at the real equilibrium (as cited in Akerlof and Shiller, 2009, p. 104). P_{A*} is the equilibrium price rather than P_A since the equilibrium wage, P_{A*}, will always be above the wage that yields close to zero unemployment, P_A. This occurs in order to encourage workers to give effort while at work. If wages were at the level that yields zero unemployment, workers would shirk while working knowing that if they are fired they can immediately find another job, since there is zero unemployment. Paying slightly higher wages causes some unemployment to develop and so encourages workers to give effort while working (Shapiro and Stiglitz, 1984 as cited in Akerlof and Shiller, 2009, p. 104). As a minimum wage is implemented, in the short run the price of labour will move from P_{A*} to P_B and the quantity demanded will move from Q_{A*} to

Q_B. Workers will then see that higher minimum wages increased the opportunity cost of not working, and as frictions to diminish over time the quantity of labour purchased in the market will move towards Q_C. As mirrored in the results for this paper, the initial quantity demanded will be greater than the long run quantity demanded after a minimum wage is implemented, but this quantity will be greater than the intermediate quantity demanded, therefore $Q_{A*}>Q_C>Q_B$.

There is a slightly different explanation for the effects of the minimum wage on full time employment. The results of this project indicate that there is a tendency for employers to cut workers' hours and demand less full time employees as minimum wages increase. In Figure 4, if the minimum wage were to increase the demand curve for full time labour would shift backwards from D_0 to D_1. Equilibrium prices and quantities will move from the original point (Q_{A*},P_{A*}) to (Q_B,P_B). Once again, as frictions diminish in the long run, the new long run equilibrium quantity demanded at P_B will be Q_C, with $Q_{A*}>Q_C>Q_B$.

The demand for part time employment shifts in the opposite direction of full time as minimum wages grow. Employers are inclined to offer more part time employment when the price of labour is forced to move from P_{A*} to P_B. The quantity of part time labour demanded increases as the demand curve, D_0, shifts outwards to D_1. In the part time labour market there is no long run frictions curve since there tends to be an ever-present level of turnover in part time employment, largely because the opportunity cost of not taking a part time job is lower than that of a full time job and so employees would move more freely in and out of the market as their financial and family circumstances change. After a minimum wage is implemented, the quantity of part time labour demanded moves from Q_{A*} to Q_B.

The principal finding in the results is that the minimum wage is not the greatest determinant of employment in an economy and its influence may be highly overrated. Although weekly hours worked may decrease and some employees may be laid off as the minimum wage increases, other factors like GDP per capita and government benefits were consistently more significant (both economically and statistically) for determining employment in low paying and all occupations.

Participation

Overall, participation rates are largely uninfluenced by the minimum wage. It was originally thought that higher minimum wages will encourage more people to participate in the labour market since the opportunity cost of not finding a job would increase as the minimum wage increased. However, higher minimum wages cause a slight disemployment effect which could increase the number of discouraged workers. Young men are not as inclined to join the labour force when the minimum wage is higher, while women of any age are uninfluenced by the minimum wage when deciding whether to participate in the labour force.

Other factors than the minimum wage were the greatest determinants of participation rates and its fluctuations. Unsurprisingly, the state of the economy was the most important indicator of whether someone joined the labour force.

One conclusion that may be drawn from employment and participation regressions is that there is no systemic abuse of the government benefits programs. Social assistance and child tax benefits decreased employment in some circumstances, especially within the lowest paying occupations, but only women between ages 15 and 64 and women aged 25 and over had a negative and statistically significant relationship between social assistance benefits and

participation rates. Some women may choose to not participate in the labour force out of necessity and not to abuse the system, simply because their families would receive less income if they worked for the minimum wage. Overall though, people may choose to not work based on government benefits that could be received, but they still are looking for work and participating in the labour force.

Low-Incomes

Finally the minimum wage proved to be an ineffective piece of social policy for reducing low-income levels. However, it would be ludicrous to think that many families could be brought out of poverty if the minimum wage were to increase simply because wages are paid to individuals and do not take into account the size of a family or its financial needs. Teenagers living with relatives without dependents and single mothers with two children hardly have the same financial needs and so would require drastically different wages to enjoy similarly comfortable existences. A minimum wage that is a few dollars higher will not be an effective means of bringing a single earner with dependents out of poverty. Only those who were previously marginally below the poverty line could possibly be brought above it after a minimum wage increase. Benjamin et al. explained that a minimum wage cannot significantly decrease poverty largely because there is a weak correlation between low-income and low-wages (Benjamin et al., 2007, p. 229).

Other variables seemed to be much more effective policy options for poverty reduction. The median income of a province had the greatest influence on low income rates of all the independent variables, but higher social assistance benefits, lower unemployment and a higher

GDP are other avenues that are more worthwhile exploring than minimum wages in the field of poverty reduction.

Policy Implications

The NDP still continues to support the reintroduction of the federal minimum wage. Reinstating the federal minimum wage is not so much about raising the wages of the 0.1% of employees that earn it, but rather to use it as a precedent for the other provinces to follow. This strategy was effective in the past where from 1965 to the mid-1980s the federal minimum wage was generally higher than any province's, but the provinces usually matched the federal level soon thereafter (HRSDC, 2009). However, from the mid-1980s until the federal minimum wage was essentially abolished in 1996, the federal minimum wage suffered from a lack of political will to increase it as inflation rose and so it languished away to irrelevance. If the NDP were to bring back the federal minimum wage it is unlikely that it will have any great influence outside of the political arena. When the bill to reinstate the federal minimum wage was introduced in February 2007, the highest minimum wage in a Canadian province was $8.00 per hour in Ontario. In the August 2009, Ontario once again had the highest minimum wage at $9.50 per hour. By July 2010, the minimum wages of both Newfoundland and Labrador and Ontario will be at least $10.00 per hour and the other provinces will surely be following suit in the near future (HRSDC, 2009). This renders the NDP's usage of the federal minimum wage as a signal essentially useless since the most populous province has already almost achieved the desired level and the other provinces will increase theirs soon too, lest their governments be viewed as socially irresponsible.

The NDP also claimed that it will keep the federal minimum wage indexed to inflation if it was reinstated, but in the two years since its own bill was first read the NDP has failed to keep

its proposed new federal minimum wage from already declining in real terms (New Democratic Party of Canada, 2009). All minimum wages should be indexed to some measure of inflation. Card and Krueger opposed indexing the minimum wage to the CPI, since this measure tends to rise faster than the wages of many occupations that pay wages above the minimum wage (1995, pp. 394, 395). Some employers may also be more influenced by changes in the GDP deflator than the CPI. Therefore, in the interest of finding a balance between employers and employees (which is quite popular among those setting minimum wages), some sort of weighted average of the two measures of inflation may be ideal for annual increases (or even decreases) of the minimum wage. This would make minimum wage increases more predictable and they would also not be as influenced by political meddling, benefitting both employers and employees.

The results of this project seem to indicate that the minimum wage is unimportant, but a higher minimum wage may still have many benefits that are impossible to quantify. It would instill feelings of self worth into many employees and shows them that their labours are valued by the rest of society. Paying higher minimum wages may also increase worker productivity and decrease turnover, increasing firms' profits as demonstrated by Ford Motor Co. in the early 20th century (Raff and Summers, 1987). Wages are also not paid merely to make an employee come to work but instead to give effort and show enthusiasm while there. Paying minimum wage workers a fair wage will create benefits in the form of workplace morale and better motivation (Akerlof and Shiller, 2009, pp. 98, 99)

A relatively high minimum wage in comparison to other incomes would have benefits to minimum wage workers in a society where everyone is always "trying to keep up with the Joneses". Minimum wage earners will achieve similar levels of consumption as their peers if their wages are relatively higher. Indeed, Adam Smith noted that people need not only essentials to

live and enjoy life but instead they require similar goods and services as their neighbours, saying, "By necessities I understand, not only the commodities necessary for the support of life, but whatever the country renders it indecent for credible people, even of the lowest order, to be without" (Smith, 1776 as cited in Waltman, 2004, p. 20).

However, in terms of having an effect on employment, participation, and low-income rates, the minimum wage may not be of much value. For many low-income earners with little education or skill, the employment opportunities afforded at the minimum wage are sometimes insufficient to replace social assistance or other government transfers as a form of income (Battle, 2003, pp. 27-32). One possible solution to this problem would be for the social assistance system to play a more active role in the lives of more working poor. A major drawback to the social assistance system is the dollar-for-dollar deduction of social assistance payments as earnings rise above the earnings exemption level, essentially a 100% tax rate. In many of Canada's provinces, the level of exempt earnings only amounts to, at most, a few hundred dollars per month (National Council of Welfare, 2008, pp. 32, 33). Christofides et al. found that a more gradual deduction of social assistance benefits from private incomes may actually increase labour force participation and employment (1997, p. 609-611). Topping up wages with government subsidies tailored to family circumstances, as seen in the UK, may be another policy option for governments to explore (Guardian, 1998 as cited in Baker and Tippin, 1999, p. 202). This policy could be altered in Canada to keep the minimum wage at a low but dignified level, but to increase via social assistance the incomes of those actually needing additional income, such as single parents. Author Joseph Heath supports actions such as these saying, "Often it is better to give people money (typically through the tax system) than to fiddle around with the wage that they're paid." (2009, p. 230). A measure similar to the above approach is the followed by the Working Income

Tax Benefit (WITB), introduced in Canada in 2009. Although the WITB may seem like a paltry sum, only amounting to at most a $1044 annual tax credit for families in most Canadian provinces compared with the £2.40 per hour wage top-up for a single mother in the UK in 1998, it is a first step in the right direction for getting extra income to the working poor that reflects their financial circumstances. This tax credit requires candidates to make incomes in the workforce and fall into an income bracket between $3,000 and $13,403 for single people and $3,000 and $22,105 for a family (CRA, 2009). Further pursuit of strategies such as this by governments will result in the minimum wage not being a blunt instrument for poverty reduction, alleviate employers from bearing the burden of poverty reduction, and could decrease the stigma associated with receiving government benefits.

Although reinstating the federal minimum wage will hardly have any positive influences on Canadians, abolishing minimum wages would be a mistake. Removing the minimum wage could (although unlikely) bring about a return of Dickensian workhouse conditions or create an economy where some workers are paid embarrassingly low wages. Indeed, although the minimum wage has its defects, it is still one policy option of many for improving the social and economic well being of Canada's provinces.

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Appendix

Figure 1: Low Income and Unemployment in Canada, 1980-2002
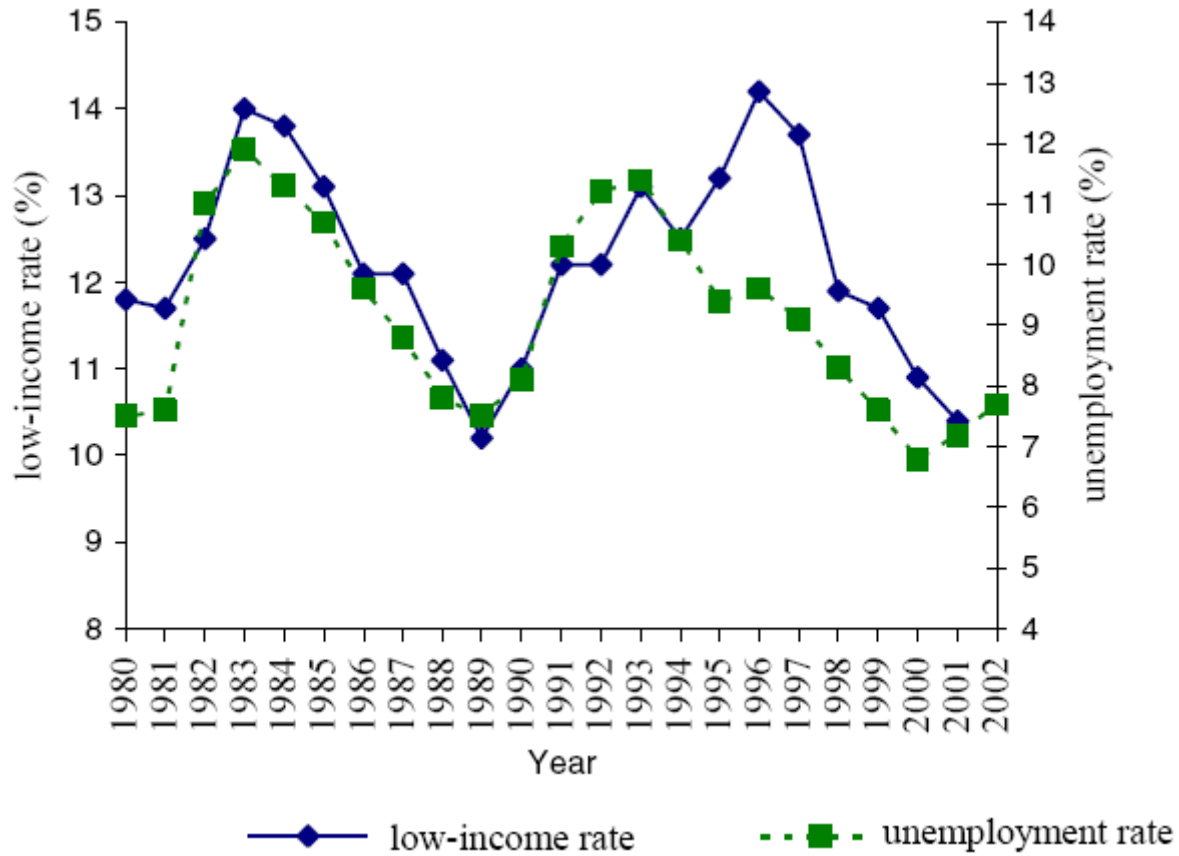
Survey of Consumer Finances, Survey of Labour and Income Dynamics, and the Labour Force Survey as cited in Picot and Myles, 2005, p. 17.

Figure 2: Real Provincial Minimum Wages, 1987-2007
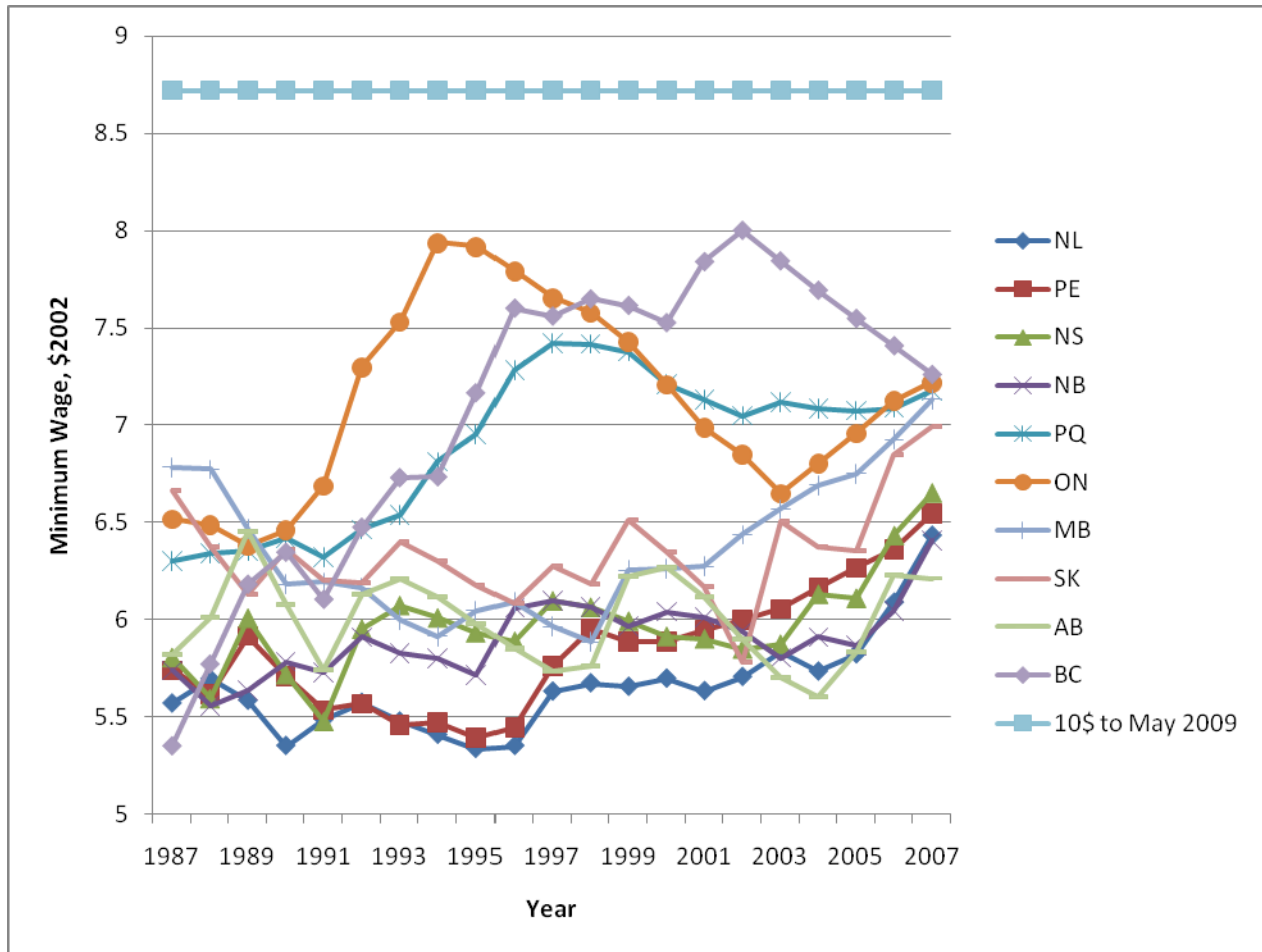
Figure 3: Supply and demand for labour

Quantity
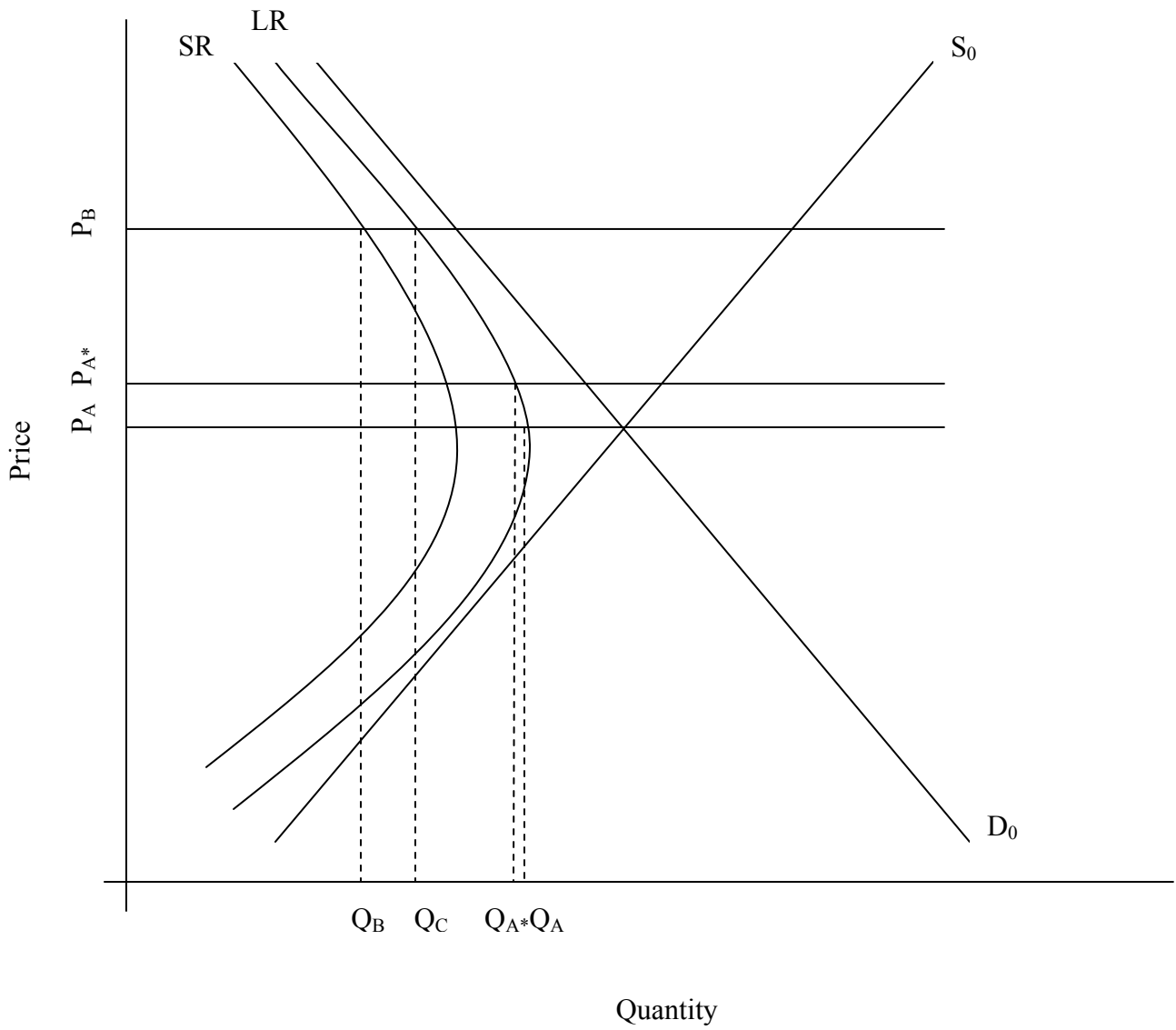
Figure 4: Supply and demand for full time labour
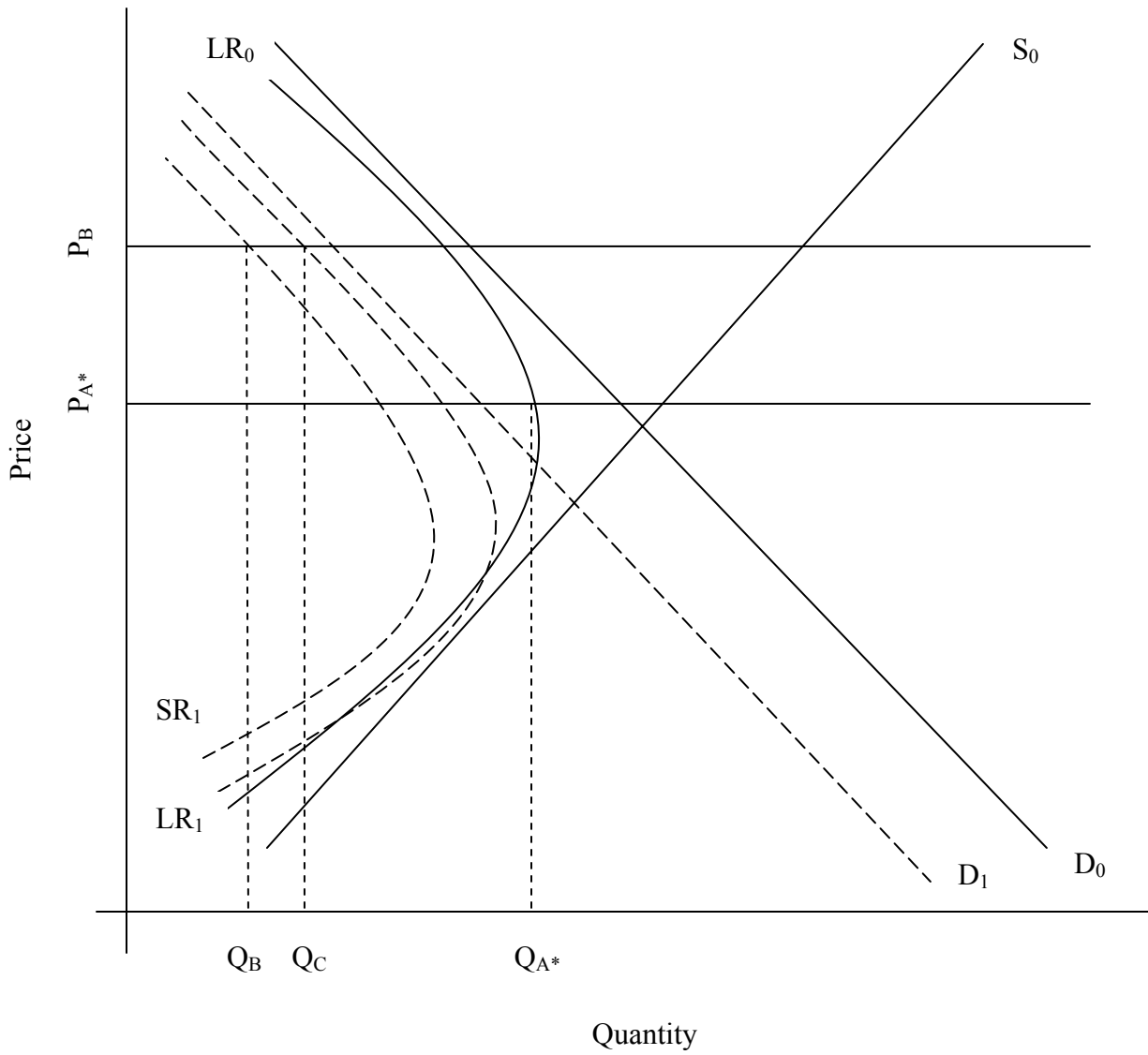
Figure 5: Supply and demand for part time labour
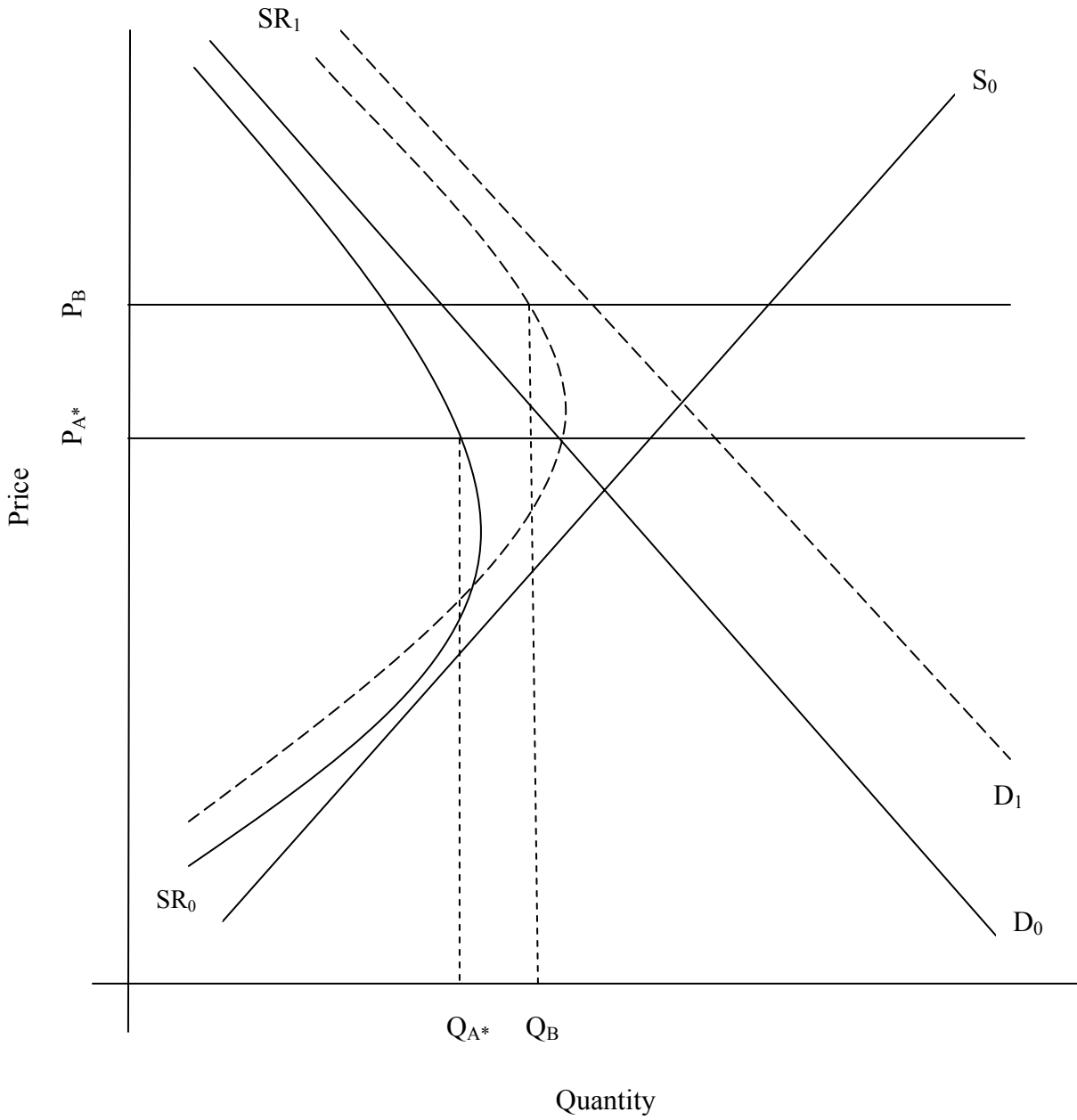
Table 1: The nine lowest paying occupations

Occupation	NOC-S Code
Clerical occupations, including supervisors	B411-B576
Retail salesperson, sales clerks, cashiers, including retail trade supervisors	G011, G211-G311
Chefs and cooks, and occupations in food and beverage service, including supervisors	G012, G411-G513
Childcare and home support workers	G811-G814
Sales and service occupations, not elsewhere classified, including occupations in travel and accommodation, attendants in recreations and sport, as well as supervisors	G013-G016, G711-G732, G911-G983
Trades helpers, construction and transportation labourers and related occupations	H811-H832
Occupations unique to primary industry	I011-I216
Machine operators and assemblers in manufacturing, including supervisors	J011-J228
Labourer in processing, manufacturing , and utilities	J311-J319

Table 2: The nine occupations and their breakdown by sex

Occupation	Percent Men	Percent Women
All occupations	53	47
Nine occupations	45	55
Clerical occupations, including supervisors	29	71
Retail salesperson, sales clerks, cashiers, including retail trade supervisors	32	68
Chefs and cooks, and occupations in food and beverage service, including supervisors	39	61
Childcare and home support workers	7	93
Sales and service occupations, not elsewhere classified, including occupations in travel and accommodation, attendants in recreations and sport, as well as supervisors:	44	56
Trades helpers, construction and transportation labourers and related occupations	88	12
Occupations unique to primary industry	82	18
Machine operators and assemblers in manufacturing, including supervisors	71	29
Labourer in processing, manufacturing , and utilities	58	42

Table 3: The nine occupations and their breakdown by type of worker

Occupation	Percent Full Time	Percent Part Time
All occupations	82	18
Nine occupations	73	27
Clerical occupations, including supervisors	83	17
Retail salesperson, sales clerks, cashiers, including retail trade supervisors	54	46
Chefs and cooks, and occupations in food and beverage service, including supervisors	58	42
Childcare and home support workers	60	40
Sales and service occupations, not elsewhere classified, including occupations in travel and accommodation, attendants in recreations and sport, as well as supervisors:	60	40
Trades helpers, construction and transportation labourers and related occupations	88	12
Occupations unique to primary industry	87	13
Machine operators and assemblers in manufacturing, including supervisors	96	4
Labourer in processing, manufacturing , and utilities	91	9

Table 4: Summary of the data

Variable Name	Number of Observations	Mean*	Standard* Deviation	Minimum *	Maximum*
Employment, All occupations/Labour Force, 15-64	210	.916842	.0431844	.8034826	.9926805
Employment, All Male Occupations/Male Labour Force, 15-64	210	.9167698	.0473357	.7940252	1.002973
Employment, All Female Occupations/Female Labour Force, 15-64	210	.9167765	.0391993	.8105561	.9813796
Full time employment/Labour Force, both sexes, 15-64	210	.7499898	.0292065	.67868	.8311996
Full time male employment/Male Labour force	210	.8228046	.03941	.7083333	.9097781
Full time female employment/Female Labour force	210	.6634084	.0288419	.6074458	.7382774
Part time employment/labour force, both sexes	210	.1668747	.0246288	.0998697	.223617
Part time employment/labour force, male	210	.0939562	.015249	.0531682	.1302911

Part time employment/labour force, female	210	.2533636	.0378552	.1633508	.3383388
9 Occupations/Lf, both sexes both times	210	.4094905	.0311981	.3548253	.4942966
9 Occupations/Lf, Male both times	210	.3621338, .3609284	.039556, .0392858	.3068862, .3068095	.4729159, .4729159
9 Occupations/Lf, Female Both times	210	.4662172, .4655566	.0273766, .0275708	.4014575, .4014575	.5354746, .5354746
9 Jobs/lf full time, both sexes	210	.3041564	.0234436	.2591829	.3655738
9 jobs/lf full time, male	210	.3020465, .300404	.0323594, .0320673	.2447969, .2434217	.3830031, .3810976
9 jobs/lf full time, female	210	.3080917, .3068654	.0232161, .0228264	.2543728, .2543728	.3674242, .3631436
9 jobs/lf part time, both sexes	210	.1058995, .1045703	.0158603, .016285	.0664351, .0664351	.153617, .1523628
9 jobs/lf part time, male	210	.0647683, .0576044	.0116109, .0123997	.0415771, .0215134	.1035826, .0977414
9 jobs/lf part time, female	210	.1631572, .1556441	.0215907, .0235677	.1204188, .104712	.2238734, .2166826
4 jobs/lf, 15-24 both sexes	210	.6041059, .6030456	.0417169, .0429812	.4576271, .4482109	.704642, .704642
4 jobs/lf, 25-54 both sexes	210	.2981536	.0339031	.2427958	.4262091

4 jobs/lf, 15-24 male	210	.5618497, .5595883	.0422902, .044249	.4379562, .419708	.6721992, .6721992
4 jobs/lf, 25-54 male	210	.2774113, .2773138	.0464864, .0466041	.1861167, .1861167	.4395604, .4395604
4 jobs/lf 15-24 female	210	.655283, .6473815	.0593104, .0618068	.4939271, .4736842	.8428571, .8142857
4 jobs/lf, 25-54	210	.3231678, .3225553	.0301606, .0298847	.2614679, .2614679	.4086643, .4086643
All jobs, both sexes, hours	210	33.07648	1.532622	29.22293	37.62759
All jobs, male, hours	210	36.15954	1.962234	31.5393	41.34625
All jobs, females, hours	210	29.69253	1.218702	26.42413	33.41959
9 jobs, both sexes, hours	210	14.02767	1.23176	11.90225	17.3691
8 jobs, male, hours	210	13.77592	1.756595	10.89575	18.8
6 jobs, female, hours	210	13.23922	.8931706	11.41335	15.22015
Participation, both sexes, 15-19	210	52.1119	8.366606	23.6	65.2
Participation, both sexes, 20-24	210	77.73333	5.117322	59.5	84.5
Participation, both sexes, 25+	210	64.84667	4.312773	54	74.5
Participation, both sexes, 15-64	210	75.10762	5.172707	59.4	82.5

Participation, male, 15-19	210	52.70333	8.536314	25.8	66.1
Participation, male, 20-24	210	80.89524	5.406993	63.3	89.8
Participation, male, 25+	210	73.12619	4.492027	61.5	83.2
Participation, male, 15-64	210	81.32619	4.994459	65.6	88.2
Participation, female, 15-19	210	51.46667	8.569889	21.8	64.1
Participation, female, 20-24	210	74.4819	5.216743	54.4	83
Participation, female, 25+	210	56.98333	4.839407	44.5	67.2
Participation, female, 15-64	210	68.88857	5.895117	50.7	77.6
Low income rates, all ages	200	15.8795	3.155967	8.5	24.8
Low income rates, male head under 65	200	12.324	2.657917	6.2	20
Low income rates, female head under 65	200	27.3215	5.137829	11.5	38.4
Low income rates, head 24 or under	200	47.6805	8.4437	21.4	71.6
Minimum Wage	210	6.318078	.6371628	5.337079	8
Percent Difference, Minimum Wage and Median Wage	200	-87.55558	12.37313	-119.1919	-60.40419

Percent Difference, Minimum Wage and MBM	210	-3.364924	10.31799	-29.67025	21.65509
Ln(Average Social Assistance Payments)	200	8.648385	.3097714	7.600903	9.071078
Ln(Average Child Tax Benefit Payments)	200	7.61353	.2625584	7.090077	8.34284
Ln(Average EI Benefit Payments)	200	8.678222	.1739119	8.34284	9.047821
Unemployment rate, all ages	200	9.896	3.755261	3.4	20.1
Unemployment rate, ages 15-24	200	15.6135	4.794014	6.8	30.8
Ln(GDP per capita)	210	10.29233	.2292045	9.813859	10.90668
Ln(Median Income)	200	10.38003	.1832427	9.925247	10.80452

* If more than one value is given for a variable, this represents the maximum and minimum possible values used for the variable.

Table 5: Independent variable: Ratio of employment for both sexes, both types of work in all occupations to the labour force aged 15-64

Lag of Independent	.5609576*** (.0604226)	.5371274*** (.0620575)	.5629281*** (.0604079)
MinWage	-.0060619*** (.002215)	---	---
LagMinWage	.0056855*** (0.0021206)	---	---
DiffMedian	---	-.0002578** (.0001063)	---
lagDiffMedian	---	.0001572 (.0001001)	---
DiffMBM	---	---	-.0003776*** (.0001408)
lagDiffMBM	---	---	.0003422** (.0001347)
lnSA	-.0026741 (.0019747)	-.002901 (.0019957)	-.0027385 (.0019757)
lnCTB	-.0073368 (.0058295)	-.0054617 (.0059014)	-.0073707 (.0058243)
lnGDP	.0300349*** (.0095528)	.027032*** (.0095881)	.0299638*** (.0095121)
Constant	.000401 (.0003234)	.0003969 (.000322)	.0004036 (.0003234)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 6: Independent variable: Ratio of employment for males, both types of work in all occupations to the male labour force aged 15-64

Lag of Independent	.5772033*** (.0616721)	.5706705*** (.064983)	.5797128*** (.0617395)
MinWage	-.0086563*** (.0029734)	---	---
LagMinWage	.0090792*** (.0028291)	---	---
DiffMedian	---	-.0002742* (.0001474)	---
lagDiffMedian	---	.0002665* (.0001367)	---
DiffMBM	---	---	-.0005303*** (.0001892)
lagDiffMBM	---	---	.0005402*** (.0001799)
lnSA	-.0007468 (.0026234)	-.0010925 (.0026892)	-.0008651 (.0026301)
lnCTB	-.0028116 (.0077893)	-.0011792 (.0080622)	-.0027868 (.0077966)
lnGDP	.0278312** (.0127992)	.023907* (.0131763)	.0275591** (.0127639)
Constant	-.000077 (.0004185)	-.0001223 (.0004237)	-.000072 (.0004194)
Time dummies	Yes	Yes	Yes

* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 7: Independent variable: Ratio of employment for females, both types of work in all occupations to the female labour force aged 15-64

Lag of Independent	.4702462*** (.0723798)	.4327183*** (.0721183)	.4730949*** (.072339)
MinWage	-.0031265 (.0025541)	---	---
LagMinWage	.0007335 (.0024359)	---	---
DiffMedian	---	-.0002299* (.0001186)	---
lagDiffMedian	---	-.0000222 (.0001125)	---
DiffMBM	---	---	-.000202 (.0001626)
lagDiffMBM	---	---	.0000469 (.0001549)
lnSA	-.0047949** (.0023533)	-.0051749** (.002322)	-.0048092** (.0023552)
lnCTB	-.0147525** (.0067624)	-.0126076* (.0066632)	-.0149956** (.0067659)
lnGDP	.0330259*** (.0114866)	.0336122*** (.01125)	.033486*** (.011479)
Constant	.0012635*** (.0003807)	.0012544*** (.0003683)	.0012584*** (.0003809)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 8: Independent variable: Ratio of employment for both sexes, full time work in all occupations to the labour force aged 15-64

Lag of Independent	.71343*** (.0491881)	.6806708*** (.0514896)	.7137919*** (.0489611)
MinWage	-.0083495*** (.0027176)	---	---
LagMinWage	.005019* (.0026398)	---	---
DiffMedian	---	-.0004206*** (.0001285)	---
lagDiffMedian	---	.000129 (.0001235)	---
DiffMBM	---	---	-.0005442*** (.0001721)
lagDiffMBM	---	---	.0003096* (.0001669)
lnSA	-.0024539 (.0024466)	-.0022824 (.0024288)	-.0025385 (.0024432)
lnCTB	-.017383** (.0070141)	-.014004** (.0070258)	-.0177051** (.0069963)
lnGDP	.0389195*** (.0119433)	.0346168*** (.0118496)	.0394516*** (.0118716)
Constant	.0003941 (.0003618)	.0003023 (.0003521)	.0004073 (0.260)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 9: Independent variable: Ratio of employment for both sexes, part time work in all occupations to the labour force aged 15-64

Lag of Independent	.7864758*** (.0531222)	.7632111*** (.0540524)	.7882136*** (.052948)
MinWage	.002651 (.0020912)	---	---
LagMinWage	-.0004756 (.0020829)	---	---
DiffMedian	---	.0002454** (.0000963)	---
lagDiffMedian	---	-.0000327 (.0000955)	---
DiffMBM	---	---	.0001851 (.0001324)
lagDiffMBM	---	---	-.0000422 (.0001316)
lnSA	-.0025052 (.0019549)	-.002826 (.0019124)	-.0024531 (.0019556)
lnCTB	.0075383 (.0054167)	.0053105 (.0053675)	.0078137 (.0054028)
lnGDP	-.0037066 (.0089898)	-.0021018 (.0088672)	-.0041491 (.0089505)
Constant	-.000296 (.0002864)	-.000204 (.0002777)	-.0003043 (.0002867)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 10: Independent variable: Ratio of employment for males, full time work in all occupations to the male labour force aged 15-64

Lag of Independent	.6073757*** (.0608995)	.578146*** (.0639332)	.6072674*** (.0608612)
MinWage	-.0069383** (.0035152)	---	---
LagMinWage	.0055953 (.0034037)	---	---
DiffMedian	---	-.0002846* (.0001709)	---
lagDiffMedian	---	.0001018 (.0001618)	---
DiffMBM	---	---	-.0004266* (.0002235)
lagDiffMBM	---	---	.0003171 (.0002162)
lnSA	.0033876 (.0032591)	.002951 (.00325)	.003237 (.0032615)
lnCTB	-.013132 (.0094987)	-.0116561 (.009569)	-.0132988 (.0094995)
lnGDP	.0456294*** (.0154122)	.0431885*** (.0154034)	.045571*** (.0153467)
Constant	-.0004914 (.000485)	-.0005296 (.000476)	-.0004757 (.0004856)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 11: Independent variable: Ratio of employment for females, full time work in all occupations to the female labour force aged 15-64

Lag of Independent	.7017111*** (.0589607)	.6729376*** (.0589374)	.7042387*** (.0586063)
MinWage	-.0078926* (.0042817)	---	---
LagMinWage	.0041692 (.0041033)	---	---
DiffMedian	---	-.0006043*** (.000195)	---
lagDiffMedian	---	.0001728 (.0001864)	---
DiffMBM	---	---	-.0005486** (.000271)
lagDiffMBM	---	---	.000303 (.000259)
lnSA	-.0067774* (.0037266)	-.0049535 (.0036204)	-.0068089* (.0037196)
lnCTB	-.0173036 (.0108122)	-.0120963 (.0105874)	-.0179464* (.0107885)
lnGDP	.0409877** (.0191293)	.0323216* (.0186754)	.0420547** (.018994)
Constant	.0012353** (.000567)	.0012056** (.0005365)	.0012435** (.0005667)
Time dummies	Yes	Yes	Yes

* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 12: Independent variable: Ratio of employment for males, part time work in all occupations to the male labour force aged 15-64

Lag of Independent	.6047047*** (.0673464)	.5709022*** (.0685983)	.6074683*** (.0672219)
MinWage	-.0013908 (.0020865)	---	---
LagMinWage	.0029485 (.0020252)	---	---
DiffMedian	---	.0000559 (.0000964)	---
lagDiffMedian	---	.0001471 (.0000927)	---
DiffMBM	---	---	-.0000906 (.0001327)
lagDiffMBM	---	---	.000187 (.0001279)
lnSA	-.0034743* (.0019106)	-.0033569* (.0018848)	-.0034507* (.0019137)
lnCTB	.0127559** (.0053773)	.0114306** (.005358)	.0128354** (.0053767)
lnGDP	-.0132989 (.0086128)	-.0125074 (.0085319)	-.0135818 (.0085854)
Constant	.0001902 (.0002774)	.0002189 (.0002699)	.000191 (.000278)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 13: Independent variable: Ratio of employment for females, part time work in all occupations to the female labour force aged 15-64

Lag of Independent	.6670488*** (.0658617)	.6457494*** (.0659327)	.6692073*** (.0656335)
MinWage	.0056341 (.0037586)	---	---
LagMinWage	-.0009425 (.0035981)	---	---
DiffMedian	---	.0004303** (.0001682)	---
lagDiffMedian	---	-.0000684 (.0001628)	---
DiffMBM	---	---	.000399* (.0002365)
lagDiffMBM	---	---	-.000086 (.0002266)
lnSA	-.0034442 (.0032614)	-.0038629 (.0031821)	-.0034097 (.003259)
lnCTB	.0053037 (.0092799)	.0016083 (.0091925)	.0058791 (.0092448)
lnGDP	-.0015896 (.0157428)	.0030874 (.0154819)	-.0027074 (.0156564)
Constant	-.0007447 (.0004851)	-.0006267 (.0004659)	-.0007572 (.0004851)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 14: Independent variable: Ratio of employment for both sexes, both types of worker in the nine occupations to the labour force aged 15-64

Lag of Independent	.5546634*** (.0588794)	.5536291*** (.0591892)	.5548927*** (.0588952)
MinWage	-.0059712** (.0029366)	---	---
LagMinWage	.0079167*** (.0027957)	---	---
DiffMedian	---	-.0001263 (.0001363)	---
lagDiffMedian	---	.000331** (.0001304)	---
DiffMBM	---	---	-.000386** (.0001862)
lagDiffMBM	---	---	.0005081*** (.000177)
lnSA	-.0097274*** (.0026244)	-.0092631*** (.0026268)	-.0097279*** (.0026248)
lnCTB	-.0067882 (.0079297)	-.0060826 (.0079703)	-.0068055 (.007923)
lnGDP	.0422724*** (.0124564)	.040951*** (.0124628)	.0422063*** (.0124103)
Constant	-.0008986** (.0003933)	-.0009749** (.0003832)	-.0008953** (.0003937)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 15: Independent variable: Ratio of employment for males, both types of work in the nine occupations to the male labour force aged 15-64

Lag of Independent	.5052251*** (.063019)	.5449772*** (.0613508)	.5207407*** (.0654097)	.5589217*** (.0641981)	.5084936*** (.063059)	.5469106*** (.0614214)
MinWage	-.0078973** (.0032942)	-.0077331** (.0032222)	---	---	---	---
LagMin Wage	.0120802*** (.0030781)	.012406*** (.0030543)	---	---	---	---
DiffMedian	---	---	.0000287 (.0001569)	.0000603 (.0001539)	---	---
lagDiff Median	---	---	.0003044** (.0001466)	.0002993** (.0001459)	---	---
Diff MBM	---	---	---	---	-.0005182** (.0002083)	-.0005148** (.0002038)
lagDiff MBM	---	---	---	---	.0007829*** (.0001943)	.0008133*** (.0001929)
lnSA	-.0087742*** (.0029037)	-.0077855*** (.0028136)	-.0081052*** (.0029725)	-.0072869** (.0028913)	-.00871*** (.0029037)	-.0077684*** (.0028103)
lnCTB	.0037211 (.0083771)	.0017085 (.0082328)	.0035712 (.0087586)	.0009144 (.0086479)	.0039332 (.0083453)	.0017964 (.0082001)
lnGDP	.0404714*** (.0136163)	.0453602*** (.0453602)	.0389677*** (.0140916)	.044536*** (.0142062)	.0400506*** (.0135171)	.045093*** (.0134976)
Constant	-.0014123*** (.0004298)	-.0014837*** (.0004286)	-.0014593*** (.0004308)	-.0015132*** (.000432)	-.0014089*** (.0004302)	-.0014784*** (.0004284)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes

† Note: Leftmost values for the same independent variables are for the maximum values of the dependent variable, rightmost values are for the minimum values of the dependent variable.
* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 16: Independent variable: Ratio of employment for females, both types of work in the nine occupations to the female labour force aged 15-64

Lag of Independent	.3588621*** (.0737968)	.3804898*** (.0734188)	.369508*** (.0737393)	.3873983*** (.0733253)	.3597347*** (.0738003)	.3812141*** (.0734026)
MinWage	-.0036758 (.0042137)	-.0030407 (.0042672)	---	---	---	---
LagMin Wage	.0014049 (.0039113)	.0011715 (.0040021)	---	---	---	---
DiffMedian	---	---	-.0002721 (.000198)	-.0002216 (.0002011)	---	---
lagDiff Median	---	---	.0001643 (.0001814)	.0001091 (.0001848)	---	---
Diff MBM	---	---	---	---	-.0002313 (.000268)	-.0001881 (.0002715)
lagDiff MBM	---	---	---	---	.0000935 (.0002477)	.0000779 (.0002536)
lnSA	-.0107715*** (.0037746)	-.0107334*** (.0038574)	-.0104353*** (.0038115)	-.0105225*** (.0038837)	-.0107491*** (.0037772)	-.0107056*** (.0038607)
lnCTB	-.0301535*** (.0109363)	-.0321296*** (.0112089)	-.02778** (.0110417)	-.0295365*** (.0113069)	-.0304245*** (.0109402)	-.0323251*** (.0112208)
lnGDP	.0528317*** (.0187599)	.0493657** (.0190957)	.0497263*** (.0189554)	.0465003** (.0192871)	.0534033*** (.018742)	.049879*** (.0190889)
Constant	-.0003799 (.0005466)	-.0002395 (.0005573)	-.0004599 (.0005328)	-.0003166 (.0005434)	-.0003836 (.0005479)	-.0002463 (.0005586)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes

† Note: Leftmost values for the same independent variables are for the maximum values of the dependent variable, rightmost values are for the minimum values of the dependent variable.
*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 17: Independent variable: Ratio of employment for both sexes, full time work in the nine occupations to the labour force aged 15-64

Lag of Independent	.5640192*** (.0615399)	.5429064*** (.0628633)	.5637965*** (.0613786)
MinWage	-.0083204*** (.0029937)	---	---
LagMinWage	.0074753*** (.0028161)	---	---
DiffMedian	---	-.0002129 (.0001407)	---
lagDiffMedian	---	.0001873 (.0001324)	---
DiffMBM	---	---	-.0005551*** (.0001892)
lagDiffMBM	---	---	.0004986*** (.0001775)
lnSA	-.0051321* (.0026649)	-.0051058* (.0026985)	-.005154* (.0026586)
lnCTB	-.010349 (.0076974)	-.0074189 (.0078815)	-.0106977 (.0076614)
lnGDP	.0420582*** (.012143)	.037524*** (.0121594)	.0427291*** (.0120496)
Constant	-.0006108 (.0003919)	-.0007406* (.0003868)	-.0006055 (.0003914)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 18: Independent variable: Ratio of employment for both sexes, part time work in the nine occupations to the labour force aged 15-64

Lag of Independent	.7617385*** (.0593003)	.7152777*** (.0640107)	.715828*** (.0602965)	.675091*** (.0644874)	.7625652*** (.0590554)	.7170688*** (.063786)
MinWage	.0029829* (.0017295)	.0038247** (.0018077)	---	---	---	---
LagMin Wage	-.0017232 (.0017267)	-.0021023 (.0017848)	---	---	---	---
DiffMedian	---	---	.0001259 (.0000807)	.0001434* (.0000846)	---	---
lagDiff Median	---	---	.0000203 (.0000784)	6.29e-06 (.0000815)	---	---
Diff MBM	---	---	---	---	.0002002* (.0001094)	.0002589** (.0001142)
lagDiff MBM	---	---	---	---	-.0001191 (.000109)	-.0001466 (.0001125)
lnSA	-.0035853** (.0015874)	-.0036217** (.0016526)	-.0038863*** (.001569)	-.0037901** (.0016465)	-.0035681** (.0015861)	-.0035847** (.00165)
lnCTB	.0011541 (.0044548)	.0002747 (.0046098)	-.0005573 (.0044778)	-.001510 (.0046643)	.0013776 (.004437)	.0005656 (.0045872)
lnGDP	-.0031079 (.0075404)	-.0025602 (.007833)	-.0007833 (.0075478)	-.0003205 (.0078716)	-.003553 (.0074883)	-.0030845 (.0077719)
Constant	-.0001617 (.0002311)	-.000127 (.0002397)	-.0001081 (.000225)	-.0000543 (.0002355)	-.0001639 (.0002311)	-.0001321 (.0002396)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes

† Note: Leftmost values for the same independent variables are for the maximum values of the dependent variable, rightmost values are for the minimum values of the dependent variable.
* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 19: Independent variable: Ratio of employment for males, full time work in the nine occupations to the male labour force aged 15-64

Lag of Independent	.4949833*** (.0656864)	.4992169*** (.0661005)	.5011898*** (.0664348)	.4963326*** (.066723)	.4939454*** (.0657786)	.4975337*** (.0662172)
MinWage	-.0055043 (.0034132)	-.0057175* (.0034606)	---	---	---	---
LagMin Wage	.0085078*** (.0031869)	.0087671*** (.0032487)	---	---	---	---
DiffMedian	---	---	.0000556 (.0001588)	0000894 (.00016)	---	---
lagDiff Median	---	---	.0001613 (.0001482)	.0001544 (.0001512)	---	---
Diff MBM	---	---	---	---	-.0003659* (.0002154)	-.0003847* (.0002185)
lagDiff MBM	---	---	---	---	.0005637*** (.0002011)	.0005864*** (.0002053)
lnSA	-.0032037 (.0030441)	-.003002 (.0030151)	-.0028283 (.0030996)	-.0026507 (.0030523)	-.0031937 (.0030399)	-.003008 (.0030101)
lnCTB	-.0020367 (.0087835)	-.0029323 (.0087484)	-.0011838 (.0090428)	-.0021866 (.0089494)	-.0020319 (.0087494)	-.0029847 (.0087074)
lnGDP	.0432304*** (.0134047)	.0455928*** (.0139048)	.0393236*** (.0134474)	.0440671*** (.0139958)	.0432163*** (.0132823)	.0456668*** (.013781)
Constant	-.0014031*** (.0004543)	-.0014413*** (.0004635)	-.0014096*** (.0004479)	-.001502*** (.0004545)	-.0014039*** (.000454)	-.0014413*** (.0004632)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes

† Note: Leftmost values for the same independent variables are for the maximum values of the dependent variable, rightmost values are for the minimum values of the dependent variable.
*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 20: Independent variable: Independent variable: Ratio of employment for males, part time work in the nine occupations to the male labour force aged 15-64

Lag of Independent	.6224853*** (.0657548)	.5690981*** (.0670245)	.5917992*** (.0670501)	.5455619*** (.0682848)	.6247072*** (.0656712)	.5699512*** (.0668425)
MinWage	-.0007918 (.0016549)	-.000324 (.0017862)	---	---	---	---
LagMin Wage	.0024905 (.0016501)	.0018787 (.0017854)	---	---	---	---
DiffMedian	---	---	.0000101 (.0000775)	.000026 (.0000843)	---	---
lagDiff Median	---	---	.0001528** (.0000747)	.0001361* (.0000823)	---	---
Diff MBM	---	---	---	---	-.0000527 (.0001054)	-.00002 (.0001134)
lagDiff MBM	---	---	---	---	.0001595 (.0001046)	.000121 (.000113)
lnSA	-.002954* (.0016507)	-.0041932** (.0016277)	-.002893* (.0016213)	-.004081** (.0016078)	-.0029508* (.0016531)	-.0041716** (.00163)
lnCTB	.0086831* (.0045076)	.0048832 (.004943)	.0077666* (.0044878)	.0042443 (.0049199)	.0087568* (.0045108)	.0049394 (.0049455)
lnGDP	-.0122619* (.0072581)	-.0105408 (.007852)	-.0120768* (.0071824)	-.0103052 (.0078198)	-.0125557* (.0072417)	-.0107486 (.0078415)
Constant	-.000051 (.0002247)	.0000559 (.0002438)	-.0000262 (.0002164)	.000071 (.000236)	-.0000479 (.0002251)	.0000561 (.0002441)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes

† Note: Leftmost values for the same independent variables are for the maximum values of the dependent variable, rightmost values are for the minimum values of the dependent variable.
* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 21: Independent variable: Ratio of employment for females, full time work in the nine occupations to the female labour force aged 15-64

Lag of Independent	.4536099*** (.0716197)	.4662182*** (.0705305)	.4293465*** (.0726367)	.4457451*** (.0717275)	.4559961*** (.0713342)	.4687266*** (.0702209)
MinWage	-.0091361** (.0042028)	-.0093281** (.0044552)	---	---	---	---
LagMin Wage	.0030771 (.004043)	.0034207 (.0042894)	---	---	---	---
DiffMedian	---	---	-.0005438*** (.0001935)	-.0005385*** (.0002064)	---	---
lagDiff Median	---	---	.0001325 (.0001856)	.0001397 (.0001966)	---	---
Diff MBM	---	---	---	---	-.0006138** (.0002665)	-.0006262** (.0002824)
lagDiff MBM	---	---	---	---	.000212 (.0002552)	.0002384 (.0002706)
lnSA	-.0062967 (.0039165)	-.0059293 (.0042027)	-.0058662 (.0038834)	-.0053603 (.004187)	-.0063761 (.0039177)	-.0059911 (.0042037)
lnCTB	-.0181705* (.0107788)	-.0224938* (.0114656)	-.0125154 (.0107651)	-.0172472 (.0114997)	-.0189271* (.0107639)	-.0232817** (.0114496)
lnGDP	.0458169** (.0185401)	.0468954** (.019652)	.0399324** (.018317)	.0417538** (.0195031)	.0472682** (.0185033)	.0483893** (.0196)
Constant	5.09e-06 (.0005495)	.0002087 (.0005825)	-.0002287 (.0005344)	-.0000257 (.000568)	.0000191 (.0005501)	.000221 (.000583)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes

† Note: Leftmost values for the same independent variables are for the maximum values of the dependent variable, rightmost values are for the minimum values of the dependent variable.
* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 22: Independent variable: Ratio of employment for females, part time work in the nine occupations to the female labour force aged 15-64

Lag of Independent	.6348524*** (.0710057)	.5849611*** (.0739263)	.597285*** (.0708558)	.5385728*** (.0729117)	.6367399*** (.0707701)	.5868185*** (.0737303)
MinWage	.0057315* (.0030411)	.0057688* (.0029759)	---	---	---	---
LagMin Wage	-.0031236 (.00299)	-.0029508 (.002951)	---	---	---	---
DiffMedian	---	---	.0001809 (.0001421)	.000203 (.0001404)	---	---
lagDiff Median	---	---	.0000486 (.0001361)	.0000598 (.0001328)	---	---
Diff MBM	---	---	---	---	.0003859** (.0001923)	.0003915** (.0001883)
lagDiff MBM	---	---	---	---	-.0002157 (.000189)	-.0002061 (.0001867)
lnSA	-.0046891* (.0027666)	-.0048425* (.0026613)	-.0048308* (.0027542)	-.00527** (.0026404)	-.0046328* (.0027636)	-.0047943* (.0026571)
lnCTB	-.0032099 (.0077285)	-.0011111 (.0075601)	-.0061116 (.0078344)	-.0046662 (.0076375)	-.0027535 (.0076973)	-.0006425 (.0075236)
lnGDP	-.0044908 (.0130729)	-.0012793 (.0128748)	-.0013851 (.013162)	.0004857 (.0128617)	-.0054564 (.0129923)	-.0022018 (.0128052)
Constant	-.0002805 (.0003998)	-.0004889 (.0003915)	-.0001878 (.0003928)	-.0003449 (.0003838)	-.0002839 (.0003997)	-.000495 (.0003914)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes

† Note: Leftmost values for the same independent variables are for the maximum values of the dependent variable, rightmost values are for the minimum values of the dependent variable.
* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 23: Independent variable: Ratio of employment for both sexes aged 15-24 in the four NAICS occupations to the labour force aged 15-24

Lag of Independent	.3185066*** (.0762725)	.300895*** (.0768819)	.3135728*** (.0757613)	.2970191*** (.0763323)	.3192376*** (.0763205)	.3015821*** (.0769282)
MinWage	.0049812 (.0100641)	.0045758 (.0100842)	---	---	---	---
LagMin Wage	-.0054362 (.0097227)	-.0050447 (.0097474)	---	---	---	---
DiffMedian	---	---	.0000435 (.0004664)	.0000366 (.0004675)	---	---
lagDiff Median	---	---	.0000368 (.0004455)	-9.57e-06 (.0004467)	---	---
Diff MBM	---	---	---	---	.0002957 (.0006393)	.0002674 (.0006407)
lagDiff MBM	---	---	---	---	-.0003746 (.0006159)	-.0003463 (.0006175)
lnSA	-.0279503*** (.0089508)	-.0266264*** (.0089732)	-.0278207*** (.0089103)	-.0267066*** (.0089293)	-.0280217*** (.0089535)	-.0266926*** (.0089761)
lnCTB	-.0018007 (.0265628)	-.0016589 (.0266531)	-.0045762 (.0268805)	-.0035854 (.0269435)	-.0014293 (.0265168)	-.001312 (.0266081)
lnGDP	-.0154072 (.0423835)	-.0196012 (.0424105)	-.015124 (.042148)	-.0208049 (.0421228)	-.0160974 (.042164)	-.0202511 (.0421945)
Constant	.0032585** (.0013768)	.0033737** (.001385)	.0033918** (.0013581)	.0035128** (.001366)	.0032792** (.0013772)	.0033947** (.0013854)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes

† Note: Leftmost values for the same independent variables are for the maximum values of the dependent variable, rightmost values are for the minimum values of the dependent variable.
* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 24: Independent variable: Ratio of employment for both sexes aged 25-54 in the four NAICS occupations to the labour force aged 25-54

Lag of Independent	.6597355*** (.0597609)	.637073*** (.060926)	.6585999*** (.0597185)
MinWage	-.0010555 (.0045511)	---	---
LagMin Wage	.0052218 (.0044365)	---	---
DiffMedian	---	.0000828 (.0002085)	---
lagDiff Median	---	.0003219 (.0002007)	---
Diff MBM	---	---	-.0000658 (.0002881)
lagDiff MBM	---	---	.0003572 (.000281)
lnSA	-.003446 (.0040672)	-.0028612 (.0040096)	-.0034052 (.0040634)
lnCTB	.0060438 (.0123853)	.0033863 (.0122218)	.0062213 (.0123815)
lnGDP	.0208766 (.0214176)	.0298207 (.0215605)	.0205428 (.0213102)
Constant	-.0008686 (.00064)	-.0009825 (.0006227)	-.0008804 (.0006408)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 25: Independent variable: Ratio of employment for males aged 15-24 in the four NAICS occupations to the male labour force aged 15-24

Lag of Independent	.259207*** (.0774474)	.2491928*** (.0776488)	.2517943** (.0762032)	.241652*** (.0764117)	.2605824*** (.0776164)	.2505473*** (.077808)
MinWage	.001733 (.012667)	.0010546 (.0125857)	---	---	---	---
LagMin Wage	-.0063028 (.0120301)	-.0057982 (.0119374)	---	---	---	---
DiffMedian	---	---	.0002951 (.0005829)	.0002338 (.0005784)	---	---
lagDiff Median	---	---	-.0005335 (.0005456)	-.0004966 (.0005413)	---	---
Diff MBM	---	---	---	---	.0000773 (.0008048)	.0000401 (.0007993)
lagDiff MBM	---	---	---	---	-.0004402 (.0007618)	-.0004136 (.000756)
lnSA	-.0388129*** (.0109912)	-.0386074*** (.0109894)	-.039254*** (.0109248)	-.0390256*** (.0109258)	-.0387844*** (.0109931)	-.0385796*** (.0109928)
lnCTB	.0377062 (.0323124)	.0356708 (.0320489)	.039354 (.0326464)	.0372952 (.0323717)	.0379964 (.0322116)	.0359707 (.0319559)
lnGDP	-.0035475 (.0544131)	.0046492 (.0533193)	-.0067231 (.0541432)	.001263 (.0528869)	-.0039774 (.0540801)	.0042367 (.0529869)
Constant	-.0000692 (.0016411)	-.0001725 (.0016304)	-.0000895 (.0016071)	-.0001926 (.0015961)	-.0000399 (.001643)	-.0001451 (.0016323)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes

† Note: Leftmost values for the same independent variables are for the maximum values of the dependent variable, rightmost values are for the minimum values of the dependent variable.
* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 26: Independent variable: Ratio of employment for females aged 15-24 in the four NAICS occupations to the female labour force aged 15-24

Lag of Independent	.24023*** (.0774073)	.2420908*** (.0781879)	.2407266*** (.0774162)	.2444974*** (.0783555)	.2407531*** (.0774174)	.2426164*** (.0781954)
MinWage	.006008 (.01506)	.0082249 (.0153145)	---	---	---	---
LagMin Wage	.0022753 (.0143924)	.0011141 (.0145892)	---	---	---	---
DiffMedian	---	---	.000069 (.0006911)	.0000818 (.0006994)	---	---
lagDiff Median	---	---	.0006401 (.0006546)	.0005636 (.0006617)	---	---
Diff MBM	---	---	---	---	.000396 (.000953)	.0005281 (.0009686)
lagDiff MBM	---	---	---	---	.0001308 (.0009097)	.0000581 (.0009212)
lnSA	-.0186972 (.013831)	-.0214581 (.0140137)	-.0181145 (.0139208)	-.0214265 (.0141226)	-.018559 (.0138381)	-.021312 (.0140235)
lnCTB	-.0636334* (.0381777)	-.0602851 (.0386633)	-.0698144* (.0388863)	-.0644758 (.0393872)	-.0625555 (.0381052)	-.0698144 (.0388863)
lnGDP	-.0386643 (.0629571)	-.0491062 (.0632998)	-.0421186 (.0631502)	-.0564758 (.0636269)	-.0409762 (.0628067)	-.0421186 (.0631502)
Constant	.0084155*** (.0020487)	.0083057*** (.0020802)	.0087621*** (.0020233)	.0087171*** (.0020567)	.0084119*** (.0020518)	.0087621*** (.0020233)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes

† Note: Leftmost values for the same independent variables are for the maximum values of the dependent variable, rightmost values are for the minimum values of the dependent variable.
*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 27: Independent variable: Ratio of employment for males aged 25-54 in the four NAICS occupations to the male labour force aged 25-54

Lag of Independent	.5809119*** (.0637877)	.5767177*** (.0639887)	.5291013*** (.0617312)	.5290429*** (.061867)	.5793198*** (.0638099)	.5752077*** (.0640157)
MinWage	-.0041563 (.005344)	-.0042895 (.0053488)	---	---	---	---
LagMin Wage	.0100166* (.0052323)	.0102481* (.0052359)	---	---	---	---
DiffMedian	---	---	-.0001401 (.000236)	-.0001777 (.000237)	---	---
lagDiff Median	---	---	.0008808*** (.0002239)	.0009008*** (.0002239)	---	---
Diff MBM	---	---	---	---	-.0002703 (.0003392)	-.0002781 (.0003395)
lagDiff MBM	---	---	---	---	.0006715** (.0003326)	.0006851** (.0003329)
lnSA	-.0033948 (.0048561)	-.003735 (.0048787)	-.0019849 (.0045086)	-.0021975 (.0045355)	-.0033426 (.0048569)	-.0036835 (.0048804)
lnCTB	.0062686 (.0144621)	.0078859 (.0144725)	.0046225 (.0134229)	.0061246 (.0134402)	.0066479 (.0144461)	.0082755 (.0144578)
lnGDP	.0258106 (.0237917)	.0289752 (.0238657)	.0345298 (.0224028)	.0370137 (.0224907)	.0252923 (.0236229)	.0284099 (.0236994)
Constant	-.001246* (.0007549)	-.0013561* (.0007558)	-.0014859** (.0006845)	-.0015735** (.0006853)	-.0012612* (.0007558)	-.0013707* (.0007568)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes

† Note: Leftmost values for the same independent variables are for the maximum values of the dependent variable, rightmost values are for the minimum values of the dependent variable.

* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 28: Independent variable: Ratio of employment for females aged 25-54 in the four NAICS occupations to the female labour force aged 25-54

Lag of Independent	.4455571*** (.0791019)	.4475519*** (.0788218)	.442042*** (.0781868)	.4429431*** (.0778984)	.4455388*** (.0789447)	.4475893*** (.0786688)
MinWage	.0009632 (.0063605)	.0009053 (.0063627)	---	---	---	---
LagMin Wage	.0065246 (.0060435)	.0064624 (.0060404)	---	---	---	---
DiffMedian	---	---	.0004842* (.0002915)	.0004811* (.0002912)	---	---
lagDiff Median	---	---	-.0000272 (.0002775)	-.0000261 (.0002773)	---	---
Diff MBM	---	---	---	---	.000099 (.0004028)	.0000953 (.000403)
lagDiff MBM	---	---	---	---	.0004373 (.0003826)	.0004334 (.0003824)
lnSA	-.0055636 (.0056907)	-.0052242 (.0057052)	-.0065453 (.0056524)	-.006189 (.0056646)	-.0054877 (.0056876)	-.0051524 (.0057021)
lnCTB	.0146399 (.0167453)	.0146175 (.0167472)	.0123298 (.0166539)	.0123976 (.016645)	.0151626 (.0167263)	.0151351 (.0167295)
lnGDP	.0533963* (.0279625)	.0538399* (.0281194)	.0553213** (.0276886)	.0557865** (.0278335)	.0521273* (.0278215)	.0525851* (.0279825)
Constant	-.0019297** (.0008496)	-.0019335** (.0008506)	-.0018129** (.0008313)	-.0018245** (.0008321)	-.0019553** (0.021)	-.001959** (.0008509)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes

† Note: Leftmost values for the same independent variables are for the maximum values of the dependent variable, rightmost values are for the minimum values of the dependent variable.
* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 29: Independent variable: Average weekly hours worked by each member of the labour force aged 15-64, all occupations

Lag of Independent	. .4892162*** (.0729072)	.4482203*** (.0749675)	.490555*** (.0725097)
MinWage	-.4073309*** (.1344762)	---	---
LagMinWage	.3265375** (.1307736)	---	---
DiffMedian	---	-.0184756*** (.0063788)	---
lagDiffMedian	---	.0086124 (.0060271)	---
DiffMBM	---	---	-.0257118*** (.0085261)
lagDiffMBM	---	---	.0200381** (.008292)
lnSA	-.0782574 (.1193436)	-.0704428 (.118072)	-.0817362 (.1192228)
lnCTB	-.880668** (.3557678)	-.7791605** (.3549091)	-.8916587** (.3551611)
lnGDP	2.960456*** (.6397543)	2.927483*** (.6402047)	2.97328*** (.6378506)
Constant	-.0123825 (.0182593)	-.3799414*** (.0375578)	-.0441337** (.0219828)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 30: Independent variable: Average weekly hours worked by each male member of the labour force aged 15-64, all occupations

Lag of Independent	.479635*** (.0743807)	.4673153*** (.0765971)	.4807148*** (.0742604)
MinWage	-.3667868* (.1922766)	---	---
LagMinWage	.4425084** (.1846442)	---	---
DiffMedian	---	-.0125852 (.0092879)	---
lagDiffMedian	---	.0108719 (.0086076)	---
DiffMBM	---	---	-.0218735* (.0122113)
lagDiffMBM	---	---	.0263055** (.0117082)
lnSA	.0093851 (.1665635)	.007 (.1673605)	.0080538 (.1667744)
lnCTB	-.7913765 (.5059329)	-.7249696 (.5137121)	-.7914402 (.5060315)
lnGDP	3.901223*** (.8851529)	3.830781*** (.8921412)	3.879895*** (.884314)
Constant	-.0526726** (.0255835)	-.054278** (.0253067)	-.0524585** (.0256045)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 31: Independent variable: Average weekly hours worked by each female member of the labour force aged 15-64, all occupations

Lag of Independent	.4460698*** (.0726145)	.4231519*** (.0738547)	.4509919*** (.0722656)
MinWage	-.3864489*** (.1322278)	---	---
LagMinWage	.1619201 (.127212)	---	---
DiffMedian	---	-.0187598*** (.006154)	---
lagDiffMedian	---	.0030897 (.0058639)	---
DiffMBM	---	---	-.0257393*** (.0083994)
lagDiffMBM	---	---	.0108813 (.0080648)
lnSA	-.3038852** (.1199727)	-.3010295** (.1193971)	-.3075909** (.1199728)
lnCTB	-1.230321*** (.3418787)	-1.038434*** (.3437627)	-1.259116*** (.3414198)
lnGDP	2.00744*** (.6034381)	1.927109*** (.6071244)	2.057398*** (.6025073)
Constant	.0580207*** (.0183308)	.0502035*** (.0178336)	.0580335*** (.0183181)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 32: Independent variable: Average weekly hours worked by each member of the labour force aged 15-64, nine occupations

Lag of Independent	.479932*** (.0648861)	.4777766*** (.0651503)	.4796001*** (.0648711)
MinWage	-.3231009** (.133251)	---	---
LagMinWage	.3725989*** (.1265323)	---	---
DiffMedian	---	-.0046153 (.0062294)	---
lagDiffMedian	---	.0125422** (.0058923)	---
DiffMBM	---	---	-.0211913** (.0084438)
lagDiffMBM	---	---	.0244678*** (.0080071)
lnSA	-.4093061*** (.1189662)	-.3820515*** (.1192339)	-.4097152*** (.1187967)
lnCTB	-.6074293* (.3432903)	-.6173266* (.3483308)	-.6140758* (.3418162)
lnGDP	2.323652*** (.5692265)	2.266927*** (.5688335)	2.335988*** (.564985)
Constant	-.0404277** (.0177494)	-.0438639** (.0173463)	-.0403731** (.017742)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 33: Independent variable: Average weekly hours worked by each male member of the labour force aged 15-64, eight occupations

Lag of Independent	.5270313*** (.0632792)	.5311311*** (.0636644)	.5273697*** (.0634525)
MinWage	-.2774286* (.1617342)	---	---
LagMinWage	.4332675*** (.1520085)	---	---
DiffMedian	---	.0047645 (.007524)	---
lagDiffMedian	---	.0106768 (.0070544)	---
DiffMBM	---	---	-.0182232* (.0102262)
lagDiffMBM	---	---	.0284562** (.0096146)
lnSA	-.4107688*** (.143027)	-.3660718** (.1449376)	-.4109488*** (.1428733)
lnCTB	-.0174956 (.4091205)	-.0044074 (.4177412)	-.0150383 (.4075928)
lnGDP	2.39236*** (.6506545)	2.335994*** (.6539498)	2.383275*** (.6449638)
Constant	-.070542*** (.0215603)	-.0739948*** (.0211146)	-.07048*** (.0215729)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 34: Independent variable: Average weekly hours worked by each female member of the labour force aged 15-64, six occupations

Lag of Independent	.338385*** (.0771991)	.3160073*** (.078163)	.3419295*** (.0768788)
MinWage	-.2791567* (.1546168)	---	---
LagMinWage	-.0314592 (.1525986)	---	---
DiffMedian	---	-.0174106** (.0073191)	---
lagDiffMedian	---	-.0014151 (.0069319)	---
DiffMBM	---	---	-.0197419** (.0097958)
lagDiffMBM	---	---	-.0010274 (.0096351)
lnSA	-.3250639** (.1428428)	-.3330256** (.1422071)	-.3275745** (.1429027)
lnCTB	-.9650551** (.4098498)	-.8103044** (.412073)	-.9967969** (.4095761)
lnGDP	.932322 (.724321)	.8001724 (.7269134)	.9785503 (.7231778)
Constant	.020673 (.0199079)	.0123898 (.0194065)	.0217352 (.0199333)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 35: Independent variable: Participation rates, both sexes aged 15-64

Lag of Independent	.7323499*** (.0531073)	.734833*** (.0529295)	.7325721*** (.0531393)
MinWage	-.0530571 (.1529028)	---	---
DiffMedian	---	-.006834 (.0088967)	---
Diff MBM	---	---	-.0026012 (.0101398)
lnSA	-.1151238 (.2352104)	-.1228566 (.235063)	-.1140431 (.2355376)
lnCTB	.0905126 (.6275971)	.1711545 (.6360708)	.0790916 (.6257307)
lnGDP	6.812487*** (1.371317)	6.676658*** (1.368168)	6.834978*** (1.369219)
Constant	-.0939*** (.0333039)	-.0945211*** (.0325569)	-.0944189*** (.0333951)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 36: Independent variable: Participation rates, males aged 15-64

Lag of Independent	.5853339*** (.0612342)	.5701968*** (.0617794)	.5878382*** (.0612263)
MinWage	-.3376576** (.1686156)	---	---
DiffMedian	---	-.0252761** (.0099819)	---
Diff MBM	---	---	-.0215439* (.0111998)
lnSA	.1936877 (.2524276)	.1892169 (.2517284)	.1888225 (.2529714)
lnCTB	-.0607366 (.6740046)	.1330437 (.6829654)	-.1072515 (.6726906)
lnGDP	9.145486*** (1.588466)	9.410325*** (1.586315)	9.19529*** (1.590938)
Constant	-.2000228*** (.0435923)	-.2172026*** (.0435866)	-.1990515 (.0437252)
Time Dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 37: Independent variable: Participation rates, females aged 15-64

Lag of Independent	.7319869*** (.0617112)	.7322845*** (.0623045)	.7312116*** (.0617209)
MinWage	.101034 (.2159317)	---	---
DiffMedian	---	.0013172 (.0120829)	---
Diff MBM	---	---	.008204 (.0142838)
lnSA	-.6082784** (.3078261)	-.6266976** (.3085494)	-.6052222** (.3077141)
lnCTB	.2737315 (.8896046)	.2738869 (.8993889)	.2776448 (.8873732)
lnGDP	7.459294*** (1.752499)	7.473613*** (1.77637)	7.474798*** (1.747563)
Constant	-.0440109 (.0433726)	-.0409316 (-.0409316)	-.0450695 (.04338)
Time Dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 38: Independent variable: Participation rates, both sexes aged 15-19

Lag of Independent	.5873611*** (.0580435)	.5799872*** (.0570119)	.5915574*** (.057696)
MinWage	-.8171055* (.4588535)	---	---
DiffMedian	---	-.052284** (.0253817)	---
Diff MBM	---	---	-.0515077* (.0302408)
lnSA	-.4700287 (.6283878)	-.5501028 (.6192662)	-.4740187 (.6304282)
lnCTB	-2.598052 (1.821594)	-2.158193 (1.822314)	-2.686929 (1.825275)
lnGDP	20.00432*** (3.485685)	20.42481*** (3.459721)	20.08522*** (3.498779)
Constant	-.2205894** (.0916694)	-.2555886*** (.0902662)	-.2194279** (.0920466)
Time dummies	Yes	Yes	Yes

* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 39: Independent variable: Participation rates, males aged 15-19

Lag of Independent	.4102515*** (.0653777)	.4070797*** (.0653999)	.4153378*** (.0651368)
MinWage	-1.377807** (.5418629)	---	---
DiffMedian	---	-.0783927** (.0304509)	---
Diff MBM	---	---	-.0894133** (.0359291)
lnSA	-1.343703* (.7690424)	-1.313972* (.7625241)	-1.355527* (.7717122)
lnCTB	-1.509711 (2.199599)	-.9853015 (2.218878)	-1.639575 (2.201866)
lnGDP	27.62327*** (4.234083)	27.92998*** (4.219043)	27.77955*** (4.244082)
Constant	-.4244672*** (.1152219)	-.4752323*** (.1141255)	-.4211977*** (.1157577)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 40: Independent variable: Participation rates, females aged 15-19

Lag of Independent	.4848707*** (.0681309)	.4782229*** (.0661756)	.4878194*** (.0678419)
MinWage	-.0683752 (.5981719)	---	---
DiffMedian	---	-.0249437 (.0343432)	---
Diff MBM	---	---	-.0003895 (.0393512)
lnSA	-.430664 (.8116714)	-.5055855 (.8078904)	-.4191256 (.8122117)
lnCTB	-4.512727** (2.249484)	-4.3242* (2.265846)	-4.55753** (2.249599)
lnGDP	21.94717*** (4.109315)	22.63424*** (4.107683)	21.91523*** (4.116839)
Constant	-.1377636 (.1124682)	-.1493952 (.1106661)	-.1387176 (.1127214)
Time Dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 41: Independent variable: Participation rates, both sexes aged 20-24

Lag of Independent	.5299231*** (.069821)	.5342477*** (.0693583)	.5312079*** (.5312079)
MinWage	-.5094054 (.3950281)	---	---
DiffMedian	---	-.027967 (.0222581)	---
Diff MBM	---	---	-.0334311 (.0259532)
lnSA	-.1457148 (.5521375)	-.1344022 (.5541581)	-.1499976 (.5525977)
lnCTB	-1.652644 (1.618435)	-1.457471 (1.655183)	-1.705401 (1.616674)
lnGDP	11.37836*** (2.855932)	11.45008*** (2.87339)	11.47322*** (2.855973)
Constant	-.1450335 (.0880847)	-.1628453* (.0879886)	-.1441886 (.0882448)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 42: Independent variable: Participation rates, males aged 20-24

Lag of Independent	.4687223***	.4757464***	.4708572***
	(.0714303)	(.0713014)	(.0713777)
MinWage	-.7568965*	---	---
	(.4270982)		
DiffMedian	---	-.0417001*	---
		(.024621)	
Diff MBM	---	---	-.0489184*
			(.0281905)
lnSA	-.0402407	-.0579359	-.0500105
	(.5895779)	(.5917453)	(.5900795)
lnCTB	-2.06326	-1.759014	-2.141477
	(1.714722)	(1.747297)	(1.713531)
lnGDP	12.38502***	12.38894***	12.51933***
	(3.223001)	(3.244968)	(3.220569)
Constant	-.1803142*	-.2040477**	-.1790861*
	(.0981674)	(.0976354)	(.0984183)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 43: Independent variable: Participation rates, females aged 20-24

Lag of Independent	.2883762*** (.0807367)	.2921027*** (.0796522)	.2886894*** (.0805936)
MinWage	-.3619484 (.5786684)	---	---
DiffMedian	---	-.016136 (.0318905)	---
Diff MBM	---	---	-.0242332 (.0381841)
lnSA	-.6254235 (.8325378)	-.6547041 (.8321391)	-.6279194 (.8323292)
lnCTB	.0095018 (2.290694)	.0770985 (2.345949)	-.031149 (2.279513)
lnGDP	14.87104*** (3.779851)	15.10299*** (3.793774)	14.94723*** (3.766697)
Constant	-.2546212** (.121696)	-.2688753** (.1210589)	-.2539056** (.1218672)
Time Dummies	Yes	Yes	Yes

* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 44: Independent variable: Participation rates, both sexes aged 25 and over

Lag of Independent	.68287***	.6859811***	.6819503***
	(.0589727)	(.059091)	(.0591798)
MinWage	-.05682	---	---
	(.1448598)		
DiffMedian	---	-.0058906	---
		(.0083673)	
Diff MBM	---	---	-.0020739
			(.0096095)
lnSA	-.2382307	-.2282028	-.2360979
	(.207211)	(.2076382)	(.207386)
lnCTB	.3242136	.389169	.3133219
	(.5539623)	(.5626432)	(.5527455)
lnGDP	3.418035***	3.30774***	3.453803***
	(1.012055)	(1.011835)	(1.007539)
Constant	-.0479623*	-.0492076*	-.0489755*
	(.0281605)	(.0274887)	(.0281983)
Time dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 45: Independent variable: Participation rates, males aged 25 and over

Lag of Independent	.5244629*** (.0662165)	.5183595*** (.066409)	.5254809*** (.0662957)
MinWage	-.1774096 (.158434)	---	---
DiffMedian	---	-.0106916 (.0093355)	---
Diff MBM	---	---	-.0101826 (.0104957)
lnSA	.2520261 (.2530269)	.2840579 (.25413)	.2509702 (.2534385)
lnCTB	.1856718 (.6298216)	.2628567 (.6422693)	.1573582 (.6283541)
lnGDP	3.736033*** (1.13323)	3.724706*** (1.127292)	3.793685*** (1.128577)
Constant	-.1620382*** (.0380211)	-.1691202*** (.0375185)	-.1625723*** (.0381168)
Time Dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 46: Independent variable: Participation rates, females aged 25 and over

Lag of Independent	.6675573*** (.0614009)	.6710895*** (.0627921)	.6649742*** (.0616966)
MinWage	.0488499 (.1953184)	---	---
DiffMedian	---	.0004925 (.0111598)	---
Diff MBM	---	---	.0055792 (.0129251)
lnSA	-.5695925** (.263994)	-.5640307** (.2651976)	-.5697465** (.2637086)
lnCTB	.5417766 (.7516507)	.5251448 (.7568709)	.5545841 (.7517658)
lnGDP	5.122298*** (1.407228)	5.074698*** (1.425209)	5.140963*** (1.404271)
Constant	.0078908 (.0386317)	.0091443 (.0383194)	.0069658 (.0385651)
Time Dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 47: Independent variable: Low-income rates, all families

Lag of Independent	.4133247*** (.0699234)	.4136815*** (.0698728)	.4127734*** (.0698733)
MinWage	-.064121 (.2901988)	---	---
DiffMedian	---	-.0052746 (.024748)	---
Diff MBM	---	---	-.0017585 (.0192252)
lnSA	-.2951528 (.449083)	-.2969762 (.449222)	-.2948543 (.4487365)
lnCTB	-.3614253 (1.197758)	-.3705452 (1.197225)	-.3689326 (1.196092)
lnEI	2.129518 (1.520529)	2.096684 (1.523935)	2.09708 (1.522202)
lnGDP	1.897898 (2.105201)	1.920913 (2.104053)	1.945032 (2.098427)
Unemployment, all ages	.1949377 (.1288222)	.1941207 (.1287214)	.1936624 (.1286404)
lnMedian Income	-12.11514*** (2.262641)	-12.52045*** (3.234721)	-12.06302*** (2.262051)
Constant	.003934 (.0622897)	.1321406* (.0755472)	.0016584 (.0623234)
Time Dummies	Yes	Yes	Yes

* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 48: Independent variable: Low-income rates, families with a male head or major earner under 65 years of age

Lag of Independent	.2968778*** (.0745361)	.2967326*** (.074417)	.2960093*** (.0743947)
MinWage	.2900674 (.3363141)	---	---
DiffMedian	---	.0250921 (.0287492)	---
Diff MBM	---	---	.0225455 (.0221724)
lnSA	-1.202259** (.5124193)	-1.200212** (.5113135)	-1.195076** (.5115082)
lnCTB	-1.484956 (1.392869)	-1.465785 (1.393281)	-1.448189 (1.390911)
lnEI	2.190547 (1.74322)	2.082589 (1.743524)	2.124921 (1.74355)
lnGDP	-4.182288* (2.396069)	-4.194736* (2.393903)	-4.219649* (2.390231)
Unemployment, all ages	.1040311 (.1521572)	.1079524 (.1518527)	.1028252 (.1518855)
lnMedian Income	-10.87031*** (2.50545)	-8.870108** (3.67605)	-10.81508*** (2.501755)
Constant	.3369318*** (.0941436)	.3359895*** (.0940981)	.3354727*** (.0939713)
Time Dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 49: Independent variable: Low-income rates, families with a female head or major earner under 65 years of age

Lag of Independent	.3751616*** (.0688504)	.377316*** (.0687514)	.375738*** (.0688186)
MinWage	-.921853 (.6589701)	---	---
DiffMedian	---	-.0734384 (.0558902)	---
Diff MBM	---	---	-.0590021 (.0436489)
lnSA	-.5155171 (.9128145)	-.5219153 (.9141712)	-.528055 (.9138338)
lnCTB	1.770458 (2.699584)	1.641891 (2.707573)	1.690416 (2.702973)
lnEI	1.960372 (3.20142)	1.899563 (3.203713)	1.969252 (3.207546)
lnGDP	5.035702 (4.437393)	5.112509 (4.438648)	5.203483 (4.434199)
Unemployment, all ages	.0349448 (.2765663)	.0277231 (.276357)	.0287511 (.276513)
lnMedian Income	-24.85228*** (4.960927)	-30.7956*** (7.372143)	-24.82637*** (4.966486)
Constant	-.1392623 (.1372098)	-.1634724 (.1651911)	-.1630313 (.164911)
Time Dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error

Table 50: Independent variable: Low-income rates, families with a head or major earner under 24 years of age

Lag of Independent	.2129742*** (.0754882)	.2115509*** (.0754652)	.2136833*** (.0754598)
MinWage	.0772256 (.1098344)	---	---
DiffMedian	---	.1126287 (.1418487)	---
Diff MBM	---	---	.0772256 (.1098344)
lnSA	-2.736346 (2.412804)	-2.739341 (2.410269)	-2.736346 (2.412804)
lnCTB	-4.423126 (7.110556)	-4.36592 (7.103365)	-4.423126 (7.110556)
lnEI	14.43823* (8.562265)	14.251* (8.551387)	14.43823* (8.562265)
lnGDP	8.29619 (12.88485)	8.597627 (12.88298)	8.29619 (12.88485)
Unemployment, 15-24	.3945917 (.4570521)	.3949018 (.4569909)	.3945917 (.4570521)
lnMedian Income	-49.59854*** (12.97806)	-40.56463** (18.10908)	-49.59854*** (12.97806)
Constant	.9381555** (.4756085)	.9327359* (.4750141)	.9381555** (.4756085)
Time Dummies	Yes	Yes	Yes

* Statistical significance at the 90% level
** Statistical significance at the 95% level
*** Statistical significance at the 99% level
() Standard error

Table 51: Independent variable: Low-income rates, families with a head or major earner under 24 years of age

Lag of Independent	.1753206** (.0763627)	.1735127** (.0763356)	.1759161** (.0763415)
MinWage	1.2041 (1.610101)	---	---
DiffMedian	---	.1147582 (.137822)	---
Diff MBM	---	---	.0777378 (.1069233)
lnSA	-3.428294 (2.386401)	-3.40796 (2.385632)	-3.403304 (2.388481)
lnCTB	-4.177578 (6.941518)	-4.040088 (6.927713)	-4.103228 (6.936987)
lnEI	11.88056 (8.49219)	11.53534 (8.505685)	11.74156 (8.517315)
lnGDP	10.09141 (11.62551)	10.18169 (11.60173)	9.82591 (11.58469)
Unemployment, all ages	1.775443** (.7757585)	1.78803** (.7741638)	1.776706** (.7760062)
lnMedian Income	-46.42874*** (12.80639)	-37.14198** (17.81682)	-46.42507*** (12.81402)
Constant	.9200539** (.4650465)	.9142869** (.4647065)	.9204208** (.4652798)
Time Dummies	Yes	Yes	Yes

*   Statistical significance at the 90% level
**   Statistical significance at the 95% level
*** Statistical significance at the 99% level
()   Standard error