

# Student Public Policy Essays



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## An Econometric Analysis of the Decline in Welfare Cases in Ontario: 1984 – 2002

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Most students at the undergraduate level have not had the opportunity to publish original pieces of work. The Saskatchewan Institute of Public Policy wanted to reward the top student essay dealing with a significant issue of public policy through this publication. Full details regarding the Student Public Policy Essay Contest are available online at [www.uregina.ca/sipp](http://www.uregina.ca/sipp).

## Director's Introduction

In his paper, Max examines the decline in welfare cases in Ontario and attempts to ascertain the reason behind that decline. Major welfare reforms implemented by the Government of Ontario combined with strong economic growth and a decline in unemployment rates are often cited as reasons for the decline. After performing an analysis of welfare cases in Ontario, Max suggests that 98 per cent of the decline can be attributed to welfare reform, suggesting that the reforms were extremely successful in reducing the number of case loads in the province.

This is an interesting argument and the Saskatchewan Institute of Public Policy is pleased to publish Max's analysis of recent welfare reform in Ontario. It is our hope that this paper will be the first in a series of student policy essays that will showcase the interest of young men and women in public policy issues.

Dr. Raymond Blake  
Director, Saskatchewan Institute of Public Policy

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**An Econometric Analysis of the Decline in Welfare Cases in Ontario:  
1984 - 2002**

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## **Foreword**\*

In Ontario the number of welfare cases has declined by over 300,000 (65 per cent) since June of 1995. Two possibilities are frequently raised as the reason for these declines: the major reforms to welfare carried out by the Mike Harris government, and the strong economic growth and resulting decline in unemployment. In this paper, I use monthly case numbers data from September 1984 to September 2002 to determine the relative importance of welfare reforms and economic growth. This is done by estimating a model of the ratio of welfare cases to the population (case rates) as a function of time-dependent welfare reform variables, unemployment rates, welfare benefit rates, and lagged case rates. Unemployment is used in this model as a proxy for economic factors. I conclude that welfare reforms, particularly benefit cuts, were responsible for much of the decline in welfare rates, and that the decline of unemployment played a largely insignificant role. My results suggest that approximately 98 per cent of the decline was a result of the welfare reforms, and less than 1 per cent due to the decline in the level of unemployment.

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## **Introduction**

Over the last decade, the drive for governments to balance budgets has resulted in large reductions in expenditures. Particularly hard hit have been social programs as they make up a significant portion of spending. As welfare is one of the largest social programs, it has become commonplace to see provincial governments 'reforming welfare.' The nature of these reforms has been simple: cut benefits and limit eligibility in order to reduce the welfare rolls, and thus costs. For the most part, the number of welfare recipients has seen substantial declines during the period of these reforms. In Ontario, where some of the most extensive reforms have occurred, welfare cases have fallen from a high of 522,999 to a low of 191,377. However, the period in which these reforms were carried out, the mid to late 1990s, was one of the most prolonged periods of economic expansion in Canadian history. This period experienced some of the lowest levels of unemployment in decades, and a significant expansion of the labour force.

In this paper, I use monthly case numbers data taken from Ontario to determine the relative importance of welfare reforms and economic growth. This is done by estimating a model of the ratio of welfare cases to the population (case rates) as a function of time-dependent welfare reform variables, unemployment rates, welfare benefit rates, and lagged case rates. I conclude that welfare reforms, particularly benefit cuts, were responsible for the vast majority of the declines in welfare rates, and that the decline of unemployment played a nearly insignificant role.

## **Background**

Ontario had the dubious distinction of having become the national leader in welfare dependence when, in 1994, its welfare rolls peaked at 673,000 cases, which meant that more than 1.3 million men, women and children - or one in eight Ontarians - were dependent on government assistance.<sup>1</sup>

In 1995 when the conservative government took power in Ontario, the annual cost of welfare stood at \$6.8 billion, or approximately 14% of government expenditures.<sup>2</sup> The welfare rolls had grown significantly over the last decade, from just over 400,000 in 1985 to more than

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<sup>1</sup> Emphasizing Work, Not welfare.

<sup>2</sup> Making Welfare Work. P. 1

1.3 million in 1995.<sup>3</sup> To add to the burden, the previous government had continually increased the payments to recipients from an average of \$370 per month in 1985 to \$650 in 1995. Not only were the welfare rolls and costs growing, but welfare was no longer acting as a temporary financial support program. An increasing number of individuals and families were living in a 'cycle of dependence' in which welfare was the way of life. The Harris government believed welfare benefits had become so generous as to provide a disincentive to securing employment.

Previous governments had raised welfare payments to record levels. Instead of supporting self-sufficiency and self-reliance, we were encouraging people to depend on government when they lost a job or couldn't find work.<sup>4</sup>

In addition, the public perception of welfare had been marred by an abundance of incidents of welfare abuse reported in the media. As a result of all these factors, the Harris government made 'retooling welfare' a major part of election platform and spending reductions.

To 'fix' the welfare problem in Ontario, the Government began by cutting benefits by 21.6% in order to eliminate the incentive to remain on welfare. These benefits were then fixed in nominal terms, which caused them to erode further with inflation. Further incentive to work was provided by a supplement for those who found employment. This supplement compensated those who found employment for any discrepancies between their labour income and their former welfare payments. Additional conditions were placed on welfare recipients, including mandating regular school attendance for those recipients less than 18 years of age. To curb incidents of abuse, a welfare fraud hotline was created, as was a database to track welfare recipients and any complaints. Information sharing with the federal government and other provinces was established to catch anyone 'double dipping'. The government also increased the number of welfare fraud investigators from 300 to 400.<sup>5</sup>

The largest program implemented by the government was the introduction of 'workfare' or the Ontario Works program. Ontario Works was designed to meet three main objectives: ensure that people on welfare take responsibility for finding work to become self-sufficient; provide an effective transition to employment; and make welfare fair for people who need help and for the taxpayers who pay the cost.<sup>6</sup> In light of these goals, emphasis was placed on welfare

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<sup>3</sup> The figures cited here include dependents of welfare recipients making them much larger than the figures used in the analysis.

<sup>4</sup> Making Welfare Work. P. 2

<sup>5</sup> Ibid.

<sup>6</sup> Ibid. P. 12

as being a *temporary* program. The Ontario Works program was therefore designed to provide the shortest possible time to reentry into the workforce.

To facilitate workforce reentry, Ontario Works provided people with access to information on prospective employment, and skill/education development opportunities. Ontario Works also provided career counseling and access to services such as phones, computers and faxes for help in job searching. For those with limited skills, Ontario Works had a community placement program which allowed people to obtain new skills and training, by providing work in various public or non-profit organizations. Ontario Works also provided basic education programs, allowing people to complete their secondary education, or to improve basic reading, writing, and mathematical skills. For teen parents under 18, a mandatory high school education program was enforced, and those unwilling to participate have had their benefits terminated.

As a result of the government's cuts to welfare benefits, and its emphasis on quick turnover and work placement, the welfare rolls, and therefore costs have significantly decreased. Since program reforms were initiated, more than 600,000 people have gone off welfare, providing a savings to tax payers in excess of \$8 billion. The governments increased monitoring of welfare fraud resulted in the identification of \$123 million in payments to which people were not entitled. As a result, benefits were terminated or lowered to more than 31,000 people, and 1870 fraud convictions were obtained. The termination of benefits alone resulted in savings of \$75 million to Ontario taxpayers.<sup>7</sup>

Taken by themselves, these figures tend to suggest that the government was on the right path. They appeared to be reducing costs, and the number of welfare dependents. The implication is that these people who go off the welfare rolls are either obtaining employment, or becoming self-sufficient. However, the government's own statistics suggest otherwise. Of those who did leave the welfare rolls in 1998, only 58 per cent left for employment reasons.<sup>8</sup> Further, of those who left welfare for employment 20 per cent were unemployed within a few months, and unemployment rates among welfare leavers were 27 per cent. Of those who maintained employment, 28 per cent were part-time. For the entire group, average gross weekly earnings were a meager \$325.<sup>9</sup> This amounts to an annual income of less than \$17,000, below the Low Income Cut Off level (\$17,571) for a single unattached individual living in a center of greater

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<sup>7</sup> Ibid. PP. 8-10

<sup>8</sup> Workfare Watch Bulletin. Vol. 1 #13

<sup>9</sup> Ibid.

than 500,000 people.<sup>10</sup> However, this compares relatively favorably with the less than \$8,000 annually they would 'earn' on welfare.

One of the major criticisms of the governments approach to welfare reform has been its focus on caseload reduction, and how this focus has inflicted an untold human cost on welfare recipients. The mandatory nature of the new programs has resulted in the termination of benefits to many needy individuals. In 1999, 4,182 people had their benefits terminated for refusing to participate in either education or work placement programs. A survey conducted by the Daily Bread Food Bank of food bank users who participated in Ontario Works programs reveals that there is a perception among those who participate in the mandatory programs that they do little to assist in obtaining employment. This perception seems to increase the longer individuals participate in the programs.

Twenty-two per cent of food bank users who started participating in OWA [Ontario Works Act] programs in 2001 felt the programs were meeting their needs for finding paid employment. For those who started the programs in 2000, 20% felt their needs were being met. But for those who began in 1999, just 9.8% felt the OWA training programs were helpful in finding paid work, and for those who began programs in 1998, a mere 6.9% were satisfied with them.<sup>11</sup>

Though this is partially a reflection of increasing frustration on the part of participants as the welfare term grows, the beginning rate of a mere 22 per cent suggests fundamental problems. With dissatisfaction rates of that magnitude and the high percentage of 'welfare leavers' who lose their employment within a couple of months, it becomes apparent that the Ontario Works programs' emphasis on quick turnover and reentry into the workforce is failing participants. Questions arise as to whether the government is providing effective training, or simplistic and fruitless programs.

Only 15.6% of food bank users participating in OWA programs feel the programs help meet their needs for finding paid work. And those dissatisfied with the program are looking for help: approximately two-thirds of those who feel OWA programs are not preparing them for the paid workforce would like further assistance or training not provided by OWA programs.<sup>12</sup>

Another major criticism of the welfare reforms is that they attempted to portray welfare recipients as lazy, uneducated, unskilled and downright thieves. The government's emphasis on

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<sup>10</sup> Low Income Cut Offs December 1999. Statistics Canada. P. 23

<sup>11</sup> Damned If You Do; Damned If You Don't. P. 7

<sup>12</sup> Ibid.

retraining programs implies that welfare recipients lack the necessary skills to participate effectively in the labour force. However, this is simply not the case. In the above mentioned survey by the Daily Bread Food Bank, it was found that 52 per cent of welfare recipients had more than 10 years of work experience, approximately 70 per cent had 5 years of experience, and that 33 per cent had some college or university education. Only 5 per cent of those surveyed listed lack of skills as the main reason they were unable to obtain employment and in addition, a mere 3 per cent listed lack of education as their main reason.<sup>13</sup>

Many also cited lack of affordable day care for their children as a major barrier to their employment. These results further debunk the government's insistence that simple education and retraining will get people off welfare. It appears that it is not laziness on the part of welfare recipients, but lack of job opportunities, and family concerns that act as barriers to employment.

Debate has been raised as to whether the government's main claim of success, the 600,000 people removed from the welfare rolls over the last 6 years, is in fact the result of welfare reforms or simply the robust economy over that period. The mid-nineties were a time of sustained and unprecedented growth for Ontario and all of Canada. As a result it is argued that the reason the government was able to reduce the welfare rolls was due to the significant number of new jobs created, and thus opportunities for welfare recipients to obtain employment increased.

Despite the 600,000 people moved off welfare since 1995, over 700,000 remain on welfare in Ontario. With the government's cuts to welfare benefits, its insistence upon mandatory attendance at programs of questionable benefit, and its stigmatization of welfare recipients as lazy and uneducated, the situation of those on welfare has severely deteriorated. Not only were benefits reduced by 21.6 per cent in 1995, but they were also frozen at the reduced rate. As a result of inflation, the real value of the meager benefits provided has been eroded over the last 6 years, further reducing the ability of welfare recipients to maintain themselves and their families. By 2002, the maximum real benefits payable to a single employable individual had fallen to \$504, from \$698 in 1994. As stated above, the training programs seem to be providing limited benefits. The mandatory attendance at these programs therefore reduces the time that individuals could spend looking for employment, or improving their skills, without providing

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<sup>13</sup> Ibid. P. 6

any real benefits. This time burden is in addition to the time these individuals must spend on finding affordable food, housing and caring for families.

By stigmatizing welfare recipients as lazy and uneducated, the government is in no way assisting them in obtaining long-term employment. The government has even gone so far as to require drug tests of welfare recipients. In November 2001, when the plan was announced, the Honourable John Baird, Minister of Community and Social Services, delivered a speech which portrayed many welfare recipients as drug addicts.

I recently met with a group of welfare caseworkers here in the City of Toronto. One caseworker told me he sees people in his welfare office high on drugs every single day. I've heard stories of people using their welfare cheques to feed their drug habit - instead of feeding their own children.<sup>14</sup>

The credibility of welfare recipients is significantly damaged by these blanket statements. What firm wants to hire someone who gets high instead of feeding their children? Further, these stereotypes will fuel a negative workplace environment for former welfare recipients. They will be scrutinized in ways normal employees would not, and may have a difficult time earning trust.

### **Survey of Literature**

In conducting my initial search for relevant information in the area of welfare reform, I discovered a paucity of Canadian literature on the topic. As a result research from the United States provided guidance. Since 1996, the U.S. has undergone a country-wide reform of its welfare system. Since these reforms are scheduled for congressional review in 2002, a significant amount of analysis has been conducted by both governments and academics in an effort to adequately explain the declines in welfare caseloads over the 1990s.

The majority of research into declining welfare caseloads was prompted by the 1997 release of the Council of Economic Advisors (CEA) report entitled, "Technical Report: Explaining the Decline in Welfare Receipt, 1993-1996." The model used for this report examined caseload declines, using annual data on the share of people in a state who are welfare recipients. The state unemployment rate was used as a measure of economic conditions, and the

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<sup>14</sup> Notes for Remarks by the Honourable John Baird.

impact of welfare reform was examined using a variable denoting the year statewide reforms were carried out. Unemployment was included with both a one-year lag and at its current rate in order to control for the time it takes to move from employment to welfare. The state level reform initiatives were sometimes aggregated, and in others broken down into the respective initiatives, i.e. 'time limits', 'work requirements', or 'earnings disregards.' (Ziliak P.8) Lead variables were also included to determine if there was any impact on caseloads resulting from the mere proposal of changes. In other words, lead variables were included to see if those individuals currently on welfare responded to the threat of reform by leaving the rolls. For this model, benefit rates were based on real maximum benefits in 1996 dollars for a family of three people, and controls were implemented to account for fixed effects by state and year. The report concluded that a 1 percent increase in unemployment had a lagged effect of a 5 per cent increase in caseload (CEA Table 2). The result of this model was that 44.1 per cent of the decline in welfare roles was caused by economic growth, 30.9 per cent resulted from state welfare reforms, and 25 per cent resulted from other factors (CEA Table 3).

In response to this report, two other important papers extended the model and the data in examining caseload reduction. Ziliak et al. published a paper in 1997 (updated in 2000) which used monthly caseload data in an attempt to better determine the impact of the respective variables on caseload reduction. More specifically, they believed that using annualized data hid "important short-run dynamics" which were better captured with monthly data. This modified model yielded results sharply different than those yielded by the CEA model.

Ziliak et al. attribute the significant variation between their results, and those of the CEA to the different ways their models treated response to macroeconomic factors. Specifically, Ziliak et al. assumed sluggish caseload adjustments to unemployment rates, allowing several years for caseloads to adjust. Ziliak also questioned whether it is best to include benefit rates as an explanatory variable. Thus he runs a regression including benefit rates, and another excluding it. Based on his findings from the two varying models, Ziliak concludes that the impact of benefit rates on caseloads is 'trivial'. In total Ziliak concluded that up to 75 percent of the caseload declines between 1993 and 1996 were the result of 'business-cycle factors,' and at most only 1 percent was the result of government reforms (Ziliak P.2).

The second major paper to respond to the CEA report was Blank (1997). Blank not only included the majority of explanatory variables used by the CEA, but also included data on social

factors, including education and family status. Specifically, Blank included data on the percentage of African Americans, families headed by single mothers, and immigrants in the state. Further, Blank included data on the political affiliation of the governor and state legislature, as well as any political or policy changes. However, Blank does not include any lead variables to determine the impact on caseloads of the proposed changes to welfare.

Blank reaches conclusions similar to those of the CEA. She determines that a 1 percentage point increase in unemployment results in a 3.8 per cent increase in caseloads, or that 15-20 per cent of the caseload declines are attributed to unemployment. However, with the inclusion of data on social conditions Blank determines that child-only cases account for between 35-40 per cent of the rise in basic caseloads between 1984 and 1995 (Blank P.35). Finally, she determines that a majority of the remaining declines are a result of government policy and reforms. As with the other studies, Blank's model shows that a noticeable portion of the declines are due to other or unexplained factors. Particularly, some of the trends predate the reforms, and defy explanation by existing models.

In an attempt to reconcile the conflicting results emerging from these and other papers, the CEA released a revised report in 1999. The new model incorporated many of the criticisms made of the earlier model, including a more detailed examination of social factors, and government policies. Of particular importance, was the incorporation of the 1996 federal increase in the minimum wage. However, the model continued to use the unemployment rate as a proxy for economic conditions, as well as annualized data. The new model made use of updated data, which included the 1996-1998 period. This period saw the implementation of extensive federal and state welfare reforms under the titles of the Personal Responsibility and Work Opportunities Reconciliation Act (PROWORA), and the Temporary Assistance to Needy Families (TANF).

Based on the new model, the CEA concluded that once all factors were taken into consideration, the unemployment rate played a very minor role in caseload reduction. It was found that the impact of current unemployment rates on caseload reductions was -0.36 per cent. Using a one year lag, unemployment displayed a 1.5 per cent effect, and using a 2 year lag it displayed a 4.27 per cent effect. (CEA 1999, P.18) Thus if a one percentage point decline in the unemployment rate persisted for 3 years, the net impact on welfare caseloads would be a reduction of 5.41 percent  $(-0.36 + 1.5 + 4.27)$ .

The model also concluded that the impact of benefit rates was a 1.8 per cent increase in caseloads for every \$50 increase in average monthly benefit payments. Further, the model showed that increases in the minimum wage yielded strong downward effects on the caseload numbers. Specifically, it was shown that a \$0.50 increase in the minimum wage exhibited a 3.7 to 5.9 per cent downward effect on caseloads. Based on this, it can be inferred that a substantial portion of welfare recipients rely on minimum wage jobs for (at least initial) employment. This further suggests that some welfare recipients are willing to work, but are unable to earn enough in the labour force to justify leaving the welfare rolls. One can assume that a similar situation exists in Canada.

The report went into considerable detail about the effects of individual government policies on caseload declines. First, the report found that the policy of extending the amount people were allowed to earn while on welfare (Claw Backs) by \$50 had a very miniscule (less than 1 per cent) negative impact on caseloads. Secondly, the policy of forcing welfare recipients to work while on welfare appears to be very effective in reducing caseloads. This reduction comes from both those who opt to now find employment, as well as those whose benefits are terminated as a result of their unwillingness to participate.

Thus the revised total contribution of each variable for the period 1993-1996 was: welfare reforms, 34.1 per cent; decline in unemployment, 35.6 per cent; and “other”, 45.9 per cent. For the period 1996-1998 welfare reforms contributed 39.5 per cent; declines in unemployment 10.4 per cent; increased minimum wage 15.5 per cent; and “other” 34.5 per cent. These results support the conclusion arrived at by both Blank, and the earlier CEA report: that improving economic conditions and welfare reforms played a near equally important role in reducing welfare caseloads

The point of most contention between these papers is the impact of the unemployment rate or economic factors on caseload reductions. However, based on Ziliak et al.’s arguments and results, I believe it best to include a rich set of lagged explanatory variables for unemployment. It appears that including a lag of up to 2 years provides a more exact description of the impact of unemployment on caseloads. Further, I believe that in its application to Canada there would be a substantial time difference between someone’s initial unemployment and their showing up on the welfare rolls. I base this on our more generous (un)Employment Insurance program, as well as the greater social safety net. Another point of contention seems to be whether to include annual

or monthly data. Given that the majority of papers following the initial CEA report used monthly data, and that the argument can be made that annualized data hides important information, it appears best to use monthly data.

The inclusion of data concerning claw back rates, and policies towards working while on welfare seems intuitive. However, given the findings of the CEA that a \$50 increase in the amount people were allowed to earn while on welfare had less than a one-percent negative impact on caseloads, and that changes to earnings disregards were part of the Ontario welfare reforms, I find it unnecessary and redundant to include claw backs as a separate variable in the model.

Though Ziliak et al. makes the case that the inclusion of benefit rates has minimal impact on the overall model I am inclined to include it. Given that both the CEA and Blank included benefit rates in their models, and found it significant, and that Ziliak finds no problems with its inclusion, I believe it can serve only to improve the model.

Though the inclusion of lead variables, to account for people's anticipation of welfare reforms, may seem intuitive, based on Ziliak et al.'s findings, as well as those of others, it appears that they are of questionable value. Ziliak finds that models which incorporate lead variables show substantial reductions in caseloads in the year prior to reform implementation, but not subsequent to it. Basically it becomes a question of why progress to smaller caseloads would disappear once the reforms were actually implemented.

The question of whether or not to include social factors in this model is a difficult one. The case has been made, particularly by Blank, that the inclusion of social factors provides a greater understanding of welfare caseloads. Intuitively, social factors should play a strong role in determining repeat users and those who make use of welfare for extended periods of time. However, economic factors and welfare reform seem to account for a substantial portion of the caseload declines in all models. Therefore, for the purpose of this paper social factors will be omitted. Despite this present omission, I believe that for a more complete understanding of the causes of welfare dependence, and to arrive at permanent solutions, an examination of social factors would be required. Thus, social factors will be included and further examined in subsequent papers.

In summary, I believe that in surveying this literature I have highlighted the issues of importance when evaluating declines in welfare caseloads following significant reforms in

welfare programs. Clearly, the inclusion of monthly data on benefit rates, and unemployment, both current and lagged, is essential. I believe that the implementation of the welfare reforms in Ontario, aside from benefit rates, is best treated as a single variable. Though there may be some benefit to determining which policies were most influential, I believe that accurately portraying these individual policies would be exceedingly problematic. As such, I believe the true value of this analysis will be in determining whether it was the economy, the reforms as a whole, or both, that brought about the decline in caseload.

### **Theory and Methodology**

The availability of data on welfare caseloads, unemployment rates, and benefit rates over an extended period of time, allows for the effective use of time series tools in estimating the relationship between these variables. In particular, I make use of a linear regression model to determine the relationship between caseload declines and unemployment rates, benefit rates, and welfare reforms.

The choice of the dependent variable is the logical place to begin the construction of the model. For an examination of welfare reforms and their impact on caseloads there are two options for the dependent variable. First, one could choose to use the number of cases, or people directly receiving payments as the dependent variable. The alternative is to use the number of beneficiaries, i.e. all individuals supported by welfare. As many households that receive welfare are composed of a head and several children, and it is unlikely that the children make the decision to receive welfare, it seems more appropriate to examine the number of cases as opposed to total beneficiaries. Furthermore, the emphasis in Ontario, as well as most other locals that implement welfare reforms, appears to be on reducing caseloads. Thus, it appears that using the number of cases would be the best choice for a dependent variable.

In order to remove any impact on welfare caseloads from population growth, the ratio of welfare cases to population, or the case rate, will be used as the dependent variable. The monthly population of Ontario was estimated using a linear trend between yearly population estimates obtained from Statistics Canada, because monthly population data was not readily available. It is also expected that the use of a case rate as the dependent variable will help alleviate some of the nonstationarity that is inevitable in a model of this nature.

In determining which explanatory variables to use, I will be drawing mostly from those variables examined in the survey of literature. In all literature surveyed, the unemployment rate was used as a proxy for the state of the economy. The only point of contention was the inclusion of a lag of unemployment, and the timing of this lag. Given that Okun's law demonstrates a six to eighteen month lag between economic recovery and gains in employment, and that those on welfare rolls are generally the last to obtain employment following an economic recovery given their absence from the current job market, a lag of as much as eighteen months can be expected prior to an economic recovery lowering welfare caseloads. On the entry to welfare side, individuals who find themselves unemployed would most likely first make use of the (un)Employment Insurance program. Once these benefits run out, there would likely be another lag as these individuals use up any savings, or borrow from friends or family to support themselves before turning to welfare. Thus the lags should be symmetrical in that a lag of as much as eighteen months can be expected in either the entry to or exit from welfare following initial unemployment or an economic recovery respectively. However, for the purpose of this paper I will assume that entry and exit is symmetrical in a lag of twelve months given that eighteen months is the maximum that should be used.

Unemployment will be included in the model at its current rate, as well as in a difference form lagged monthly up to twelve months. Given that the unemployment rate generally rises during an economic downturn, and falls in times of economic expansion one would expect the coefficient for the time  $t$  unemployment explanatory variable to be positive. Further, one would expect a larger impact from the lagged variables than from the current variable, as the economic effects work their way through the labour force and welfare rolls over time.

As cutting benefit rates has been a tenant of welfare reform, particularly in the Ontario case, their inclusion as an explanatory variable is necessary. For this model, benefit rates will be based on rates for single employable individuals due to its frequent citation in Canadian literature and availability. Using just the benefit rates for single employable individuals should not pose any problems, as on a percentage basis benefit rates in Ontario have risen and been cut by similar amounts across all groups. Again, benefits will be included in the model at their current rate, as well as in a difference form lagged monthly up to twelve months.

Both benefits and caseloads in Ontario rose substantially during the 1980s and early 1990s. Further, as benefits declined in the mid to late 1990s so did caseloads. One would expect

moral hazard to arise with an increase in benefit rates as it provides an increased disincentive for those on welfare to find paid employment, as well as encouraging the working poor to move to the welfare rolls. Therefore, one would expect a positive sign on the time t coefficient of benefit rates.

The reason nonstationarity is a substantial problem in this model is that time series data is being regressed onto time series data. This is further exacerbated by the fact that strong trends are exhibited by both the unemployment rate and welfare cases. Thus, several different measures will be taken in an attempt to correct for the nonstationarity. First, as mentioned above, the dependent variable will be the case rate as opposed to the actual number of cases. By using a case rate it is expected some of the trends in the cases will be reduced. With respect to the explanatory variables ‘unemployment rates’ and ‘benefits’ differences will be used of the form  $\ln U_{t-i} - \ln U_t$  and  $\ln B_{t-i} - \ln B_t$  where U is the unemployment rate, B is the benefit rate, and for  $i=1, \dots, 12$ . Explanatory variables of this form will reduce some of the trend nature of the data, while also providing information on the impact of these variables over time. The case rate will be also included as an explanatory variable in model in order to further reduce the trend nature of welfare cases. Case rates will be included in the form  $\ln C_{t-1}$  as well as in the form  $\ln C_{t-i} - \ln C_{t-1}$  for  $i=2, \dots, 12$ .

Given that these variables are the difference between past unemployment rates, or benefits, and the present unemployment rates, or benefits, we would expect that the sign of the coefficient would be negative (-). A negative coefficient sign is expected because a positive value for either explanatory variable indicates a *decline* in either the unemployment rate or benefits, which should be associated with a decline in welfare case rates.

Though previously unmentioned, the North American Free Trade Agreement had a significant impact on the Ontario economy. In particular, NAFTA was blamed for the loss of thousands of jobs in Ontario, particularly in the manufacturing sector. Despite this I feel that the inclusion of NAFTA in the model is unnecessary because for all intents and purposes NAFTA can be treated as an ‘economic effect’ and will be reflected in the unemployment rate.

Welfare reform in Ontario was carried out in two separate major initiatives. First, upon the election of Mike Harris and the Progressive Conservatives in June 1995, welfare benefits in Ontario were cut from \$698 to \$580 for an average single employable individual.<sup>15</sup> As well, the

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<sup>15</sup> These figures are in nominal terms.

entire nature and perception of welfare in Ontario changed. This was reflected by the new government's emphasis on catching welfare fraud and cutting caseloads and costs. The second major initiative began in 1996, when the government began to phase in the Ontario Works program which forced welfare recipients to either work for their benefits, or participate in education and training programs. However, the act to fully implement Ontario Works was not introduced until June of 1997, and prior to this the program was in limited use.

To account for these significant changes to the welfare system, two separate dummy variables will be used. The first will become active in the June 1995 period to account for the election of the Mike Harris Conservative party and the subsequent shift in attitudes towards welfare. The second will become active in June of 1997 to account for the shift to a mandatory 'Workfare' system. Given that the entire emphasis of these two initiatives is to reduce welfare caseloads the expected sign of the coefficients of both these explanatory variables is negative.

This model will include data for the time period 1984 to 2002. Given that this period covers a number of economic upturns and downturns as well as several different government policies on welfare, it should provide a more than adequate amount of data. Further, the data will be included in monthly form for the reasons listed above as well as for the fact that it provides additional degrees of freedom.

Therefore the static model including all lags  $i$  ( $i=1, \dots, 12$ )<sup>16</sup> in period  $t$  ( $t=1, \dots, 200$ ) is:

$$(1) C_t = ? + \beta_u U_t - \beta_{uit} U_{it} + \beta_B B_t - \beta_{Bit} B_{it} + \beta_C C_{t-1} - \beta_{Cit} C_{it} - \beta_H H - \beta_W W + e$$

Where  $C_t$  represents the natural log of the ratio of welfare cases to population at time  $t$ ,  $?$  is a constant,  $U_t$  is the natural log of the unemployment rate at time  $t$ ,  $U_{uit}$  is the set representing the difference of the natural log of unemployment at time  $t-i$  and the natural log of unemployment at time  $t$  ( $\ln U_{t-i} - \ln U_t$ ) for all 12 lags,  $B_t$  represents the natural log of real maximum dollar benefits paid to a single employable individual at time  $t$ ,  $B_{it}$  is the set representing the difference of the natural log of benefits at time  $t-i$  and the natural log of benefits at time  $t$  ( $\ln B_{t-i} - \ln B_t$ ) for all 12 lags,  $C_{t-1}$  is the natural log of the case rate at time  $t-1$ ,  $C_{it}$  is the set representing the difference of the natural log of the case rate at time  $t-i$  and the natural log of the case rate at time

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<sup>16</sup> Except for the case rate explanatory variable where the lags run  $i$  ( $i=2, \dots, 12$ ) because  $C_t$  is the dependent variable.

$t-1$  ( $\ln C_{t-i} - \ln C_{t-1}$ ) for all 11 lags, H represents the June 1995 election of Mike Harris, W represents the implementation of workfare in June 1997, and e represents the residual at time t.

## **Results**

Given the form of the lagged variables, the effect of each variable on caseloads was calculated using the function  $\frac{\beta}{1 - \beta L}$  where  $\beta$  is the estimated coefficient, and  $L$  is the lag operator. Table 1

presents estimates for the coefficients of equation (1) as well as results for the function  $\frac{\beta}{1 - \beta L}$ .

The results indicate that welfare reforms, particularly benefit cuts, were responsible for the majority of the decline in the case rate. As expected, the coefficient on the real benefit rates variable is positive. The coefficient implies that for every 1 per cent decline in benefit rates welfare case rates decline by 4.07 per cent.

The introduction of workfare appears to have resulted in a decline of case rates by 20.5 percent. An interesting result is the positive coefficient that is found on the Mike Harris dummy. This 35 percent increase in case rates with his election suggests this variable is actually capturing the effects of another variable not included in this model. Taken together with the offsetting impact of the Mike Harris dummy, welfare reforms including benefit reductions appear to be responsible for approximately 98 percent of the decline in welfare cases.

The unemployment rate has a slight positive effect on the number of welfare cases. The coefficient found for the unemployment variable suggests that a 1 per cent decline in unemployment rates will result in only a 0.00942 per cent decline in case rates. From the election of Mike Harris in June of 1995 to end of the sample period in September of 2002, the unemployment rate declined from 8.7 per cent to 7 per cent. Thus the decline in unemployment accounts for less than 1 per cent of the total decline in welfare cases.

**Table 1**  
**Estimates of Business Cycles and Welfare Reform**  
**Impacts on Monthly Welfare Caseloads**

Unemployment Rate	0.000108 (0.0088)
$\frac{?}{1??}$	0.00942
Benefits	0.046532 (0.0000)
$\frac{?}{1??}$	4.0746
Election of Mike Harris	0.004033 (0.0089)
$\frac{?}{1??}$	0.35314
Workfare	-0.002345 (0.0027)
$\frac{?}{1??}$	-0.20536
$\frac{?}{1??}$	0.98858

† Standard errors are in parentheses. The regression controls for a constant. The number of observations used in the estimation equals 200.

The issue of nonstationarity does not appear to have been corrected given the high value obtained for ? (0.98858). Thus in future work I will attempt to correct for this nonstationarity using a co-integration method.

## Conclusions

I account for the decline in welfare cases in Ontario using an OLS estimated model of the ratio of welfare cases to the population (case rates) as a function of time-dependent welfare reform variables, unemployment rates, welfare benefit rates, and lagged case rates. My results suggest that nearly all of the decline in welfare cases since June of 1995 (98 per cent) can be explained by the decline of benefit rates in real terms, and the implementation of various

program reforms. Therefore, the reform of the welfare system carried out by the Harris government appears to have been extremely successful in reducing welfare cases. The extremely high elasticity attached to the benefit rate variable indicates that there is a very strong moral hazard aspect to welfare caseloads. Thus, by reducing the incentive to being on welfare through cuts to benefit payments, significant reductions in caseloads can be achieved.

The results of this model are different than those obtained by other authors. Results obtained by Blank (1997, 2000) are most similar in that they attribute less than 20 percent of the decline to business cycle fluctuations. One likely explanation for the divergence in the results is that the model employed in this paper is so fundamentally different than those employed in other works. The time period employed in this model is longer, and the structure of the lagged variables, as well as the use of lagged case rates is new to this problem.

Though the extensive welfare reforms carried out by the Government of Premier Mike Harris seem to have been extremely successful in reducing the number of welfare cases, there still remains over 200,000 welfare cases in Ontario. Given that the majority of the declines were achieved by cutting benefit rates by over 25 per cent in real terms, questions arise as to the impact on those who remain on welfare, as well as those who left. I believe it now becomes important to look at the social costs of these reforms. As mentioned in the background, many social advocacy groups had expressed concerns that welfare reforms were inflicting pain, suffering, and an unacceptable burden on those who remained on the welfare rolls. Further, for those who have left the welfare rolls, the question remains as to whether or not they actually improved their quality of life. By cutting benefits so substantially, employment in a menial job at minimum wage, while having to pay for daycare, may actually have become preferable to staying on the welfare rolls. If this is the case then the question becomes how desperate must one be in order to remain on welfare? One must also ask whether this is truly an improvement in the quality of life for those who leave the welfare rolls. Therefore, another future avenue of research would be to track those who move on and off of welfare, as well as to survey those who have left the welfare rolls during the welfare reform period, in order to develop an estimate of the social costs incurred as a result of the reforms. This would allow for a better understanding of the net costs/benefits of welfare reforms, and provide an alternative figure to the billions in savings cited by the Mike Harris government.

In tracking those who enter and exit the welfare rolls we are likely to develop a better understanding of what causes welfare dependence, and what allows people to leave the rolls permanently. Further, the inclusion of the data employed by Blank (1997, 2000), such as the percentage of immigrants, single mothers, and minorities would also provide further insight into welfare dependency. All of this information would be invaluable in the formulation of social policy to reduce welfare caseloads, while at the same time ensuring that those who do leave the welfare rolls are in fact improving their quality of life. I believe that this research would find that education, training, and access to affordable daycare are the major barriers for those who wish to leave the welfare rolls.

As mentioned in the empirical analysis, nonstationarity was a significant problem in the estimation of welfare case declines. Originally for this paper a slightly modified version of the model employed by the CEA (1997) was used. However, this model yielded persistent problems with nonstationarity and autocorrelation. Given the paucity of reference to these problems within their work, one must question whether the authors were at all aware of this problem, or simply ignored it. If indeed nonstationarity and autocorrelation of this degree was ignored, a reevaluation of the results obtained by the CEA may be necessary. Given that the CEA model formed the basis for much of the subsequent research on welfare case declines it is possible that a substantial portion of the research on this topic is fundamentally flawed. Exposing this potential flaw in the econometrics employed in past research is a significant contribution of this paper.

The results of this paper suggest that the Harris government's policies of cutting benefits and instituting workfare were indeed responsible for the decline in welfare cases. In particular, cutting benefit rates and fixing them in real terms appears to be an extremely effective method of reducing caseloads. This result demonstrates to what extent moral hazard plays a role in determining welfare use. However, cutting benefits has repercussions in that one risks forcing individuals on welfare to find employment which normally would not be considered, and cannot support a single individual, let alone a family. In rare cases this may lead to individuals engaging in criminal activity in order to simply make ends meet. Perhaps, in the long run, the social costs of these welfare reform policies will outweigh the short-term cost savings achieved by the Harris government.

The persistence of nearly 200,000 welfare cases, despite the substantial cuts to benefits and relatively low unemployment, suggest that these remaining individuals comprise a core of welfare dependents for whom employment is not an option. Thus these individuals are most likely suffering considerable hardship trying to live on the meager benefits. It therefore appears that current welfare reforms have reduced caseloads as far as they can, and it is now time for careful evaluation of the social aspects of welfare dependency and the creation of policies to address these problems.

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### **About the Author**

Maximilian Schmeiser attended the University of Regina from September 2000 to April 2003 in the Faculty of Arts majoring in Economics. This paper arose out of the course requirements for Economics 400 'Research Methods for Economists', and then became the basis for his honours paper for his Bachelor of Arts Honours in Economics. Maximilian is currently attending McMaster University pursuing his Masters of Arts in Economics.