AN INVESTIGATION OF DETERMINANTS
OF GENERAL WELFARE ASSISTANCE RECEIPT
FROM 1981 TO 1994

by

M. Jane McMichael

A thesis submitted in conformity with the requirements
for the degree of Doctor of Philosophy
Faculty of Social Work
University of Toronto

© Copyright by M. Jane McMichael 2001
The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author’s permission.

0-612-59083-6
ABSTRACT

An Investigation of Determinants of General Welfare Assistance Receipt from 1981 to 1994,
Doctor of Philosophy, 2001, M. Jane McMichael, Faculty of Social Work, University of Toronto

This dissertation investigates determinants of social assistance receipt in Ontario between 1981 and 1994. A particular confluence of events makes the Ontario short-term welfare program (General Welfare Assistance) an ideal focus for inquiry. During this period substantial policy activity occurred against a backdrop of dramatic labour market changes.

The set of factors that are commonly considered in this area of research include social assistance policy, labour market conditions and individual/family characteristics. This research expands this set to include the influence of unemployment insurance policy and a broader range of labour market variables than is typically considered. The purpose is to see if these additional variables contribute to a better understanding of levels of social assistance receipt.

This research is a hybrid. It combines examination of the details of policy and labour market change along with the development of empirical models, which necessarily simplify the complexity of these changes. The trajectory of policy discourse is mapped in conjunction with the actual policy. Key policy documents are reviewed which articulate the major lines of debate regarding both social assistance and unemployment insurance. This policy activity is then situated within the broader fiscal and economic environment and combined with a review of the relevant labour market changes. Particular attention is devoted to changes in the structure of demand for labour, including growth in non-standard employment and the shift in employment from the goods to the services sector.
Guided by theory and the research question, four empirical models are developed, beginning with a base model, and successively incorporating unemployment insurance policy variables and additional labour market variables. Aggregate-level monthly time series data are utilized and error correction models are estimated.

The results of model estimation indicate the importance of both social assistance and unemployment insurance policy changes in explaining changes in the levels of GWA receipt and support the inclusion of a broader set of labour market variables within such models, in particular, changes in the incidence and average duration of unemployment, in the extent of part-time employment and in the levels of employment in the service sector relative to that in the goods sector.
ACKNOWLEDGEMENTS

Many people contributed to this journey. First and foremost, I would like to thank my parents. Their life-long love and support has been unwavering.

I would also like to thank my supervisor Dr. Ernie Lightman for his energy, flexibility and patience. His contribution went far beyond the call of duty. Special thanks to my committee members, Dr. Pat Evans and Dr. Morley Gunderson, for their timely and insightful comments, and to the external examiner, Professor Allan Moscovitch, for his valuable commentary. I also owe a debt of gratitude to faculty members of the School of Social Work at Lakehead University as well as to other colleagues within the university.

My debt to friends is immeasurable. Words can never adequately capture the many and varied ways that people have contributed to this journey. Special thanks to Jo Forbell, Doug Ramsay, Debbie Grisdale, Lindsay Bryan, Susan McGrath, Stephanie Baker-Collins, Suzanne Dudziak, Mirth Vos, William Cooke, Jean Dryden, Penny Pomeroy, Pat Golian, Carol Riseing, Joan McCurdy-Myers, Fiona McMurrain, Vera Krasovec, Cathy Vollmer, Carol Brown, and finally to C.

I came of age in the era when organizations, such as West Edmonton Social Task Force and Oliver Social Action Committee, and the fledgling co-operative housing movement attracted people with energy and optimism, and a commitment to creating a better society. I continue to be inspired by the people who introduced me to the ideals and practice of community work and social justice. My more recent experience with Niagara Peninsula Homes and my membership in Country Lane Co-op remind me on a daily basis that turning ideals into reality takes courage and commitment and that every citizen has a contribution to
make. Special thanks to Betty Ann Baker, Zena Mundy and Isabel Wilson for sharing their wisdom with me.

This same era gave rise to the creation of the National Welfare Grants, Health and Welfare Canada. Without such a program, doctoral studies would have been out of reach. Many thanks to Evariste Thériault for his contribution to this program and for his generous support to fellowship recipients.

This journey has been a long one. It began in 1976 when Barry Gillies challenged me to conquer my fears, it continued with Starr Curry’s steadfast encouragement to pursue a Master’s degree. It was given further impetus in 1983 by Dr. Albert Legault’s suggestion that I consider doctoral studies, and by my experience at McMaster university, where I was inspired and guided by Dr. David Tucker and Dr. Agnes Meinhard, and intellectually challenged by fellow students, Vivian Randell, Mark Fisher, Maggie Fischbuck, Sandi Preston and Barb Filshie. My experience at the University of Toronto was enriched by faculty members, staff and students, in particular, members of the Dorothy Livesay Collective.

Finally, I wish to acknowledge the people who are forced to rely on welfare and face the hardship and stigma that this entails. It is the discrepancy between the denigrating images of welfare recipients and reality of people’s lives on welfare that spurred me to do this work. What continues to fuel my efforts is the injustice of a society which privileges individual-deficit explanations of poverty and welfare receipt, while making choices at a societal level which support and reinforce the continued existence of poverty and inequality.

While many people contributed to this journey, I acknowledge full responsibility for the errors, omissions and other limitations of this dissertation.
TABLE OF CONTENTS

INTRODUCTION AND POLICY CONTEXT

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Social Assistance Policy (1981-1994)</td>
<td>6</td>
</tr>
<tr>
<td>Residualism Under Pressure</td>
<td>9</td>
</tr>
<tr>
<td>Emergent Institutionalism</td>
<td>16</td>
</tr>
<tr>
<td>Return to Residualism</td>
<td>31</td>
</tr>
<tr>
<td>Summary</td>
<td>42</td>
</tr>
<tr>
<td>Unemployment Insurance Policy (1981-1994)</td>
<td>44</td>
</tr>
<tr>
<td>Institutionalism Under Scrutiny</td>
<td>50</td>
</tr>
<tr>
<td>Emergent Residualism</td>
<td>61</td>
</tr>
<tr>
<td>Summary</td>
<td>69</td>
</tr>
<tr>
<td>Conclusion</td>
<td>71</td>
</tr>
</tbody>
</table>

THEORETICAL FRAMEWORKS AND REVIEW OF EMPIRICAL LITERATURE

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical Frameworks</td>
<td>73</td>
</tr>
<tr>
<td>Human Capital</td>
<td>73</td>
</tr>
<tr>
<td>Rational Economic Choice</td>
<td>74</td>
</tr>
<tr>
<td>Dual Labour Market</td>
<td>75</td>
</tr>
<tr>
<td>Generation of Hypotheses</td>
<td>75</td>
</tr>
<tr>
<td>Labour Market</td>
<td>77</td>
</tr>
<tr>
<td>Social Assistance Policy</td>
<td>77</td>
</tr>
<tr>
<td>Unemployment Insurance Policy</td>
<td>80</td>
</tr>
<tr>
<td>Individual and Family Characteristics</td>
<td>85</td>
</tr>
<tr>
<td>Review of Empirical Results in the Literature</td>
<td>87</td>
</tr>
<tr>
<td>Labour Market</td>
<td>88</td>
</tr>
</tbody>
</table>

vi
<table>
<thead>
<tr>
<th>Social Assistance Policy</th>
<th>98</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI Policy</td>
<td>106</td>
</tr>
<tr>
<td>Individual and Family Characteristics</td>
<td>108</td>
</tr>
<tr>
<td>Conclusion</td>
<td>114</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LABOUR MARKET CONDITIONS (1981-1994)</th>
<th>115</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of Employment</td>
<td>115</td>
</tr>
<tr>
<td>Incidence of Unemployment</td>
<td>115</td>
</tr>
<tr>
<td>Duration of Unemployment</td>
<td>121</td>
</tr>
<tr>
<td>Demand for Labour</td>
<td>125</td>
</tr>
<tr>
<td>Nature of Employment</td>
<td>128</td>
</tr>
<tr>
<td>Non-standard Employment</td>
<td>128</td>
</tr>
<tr>
<td>Distribution of Jobs Across Sectors</td>
<td>140</td>
</tr>
<tr>
<td>Compensation</td>
<td>147</td>
</tr>
<tr>
<td>Polarization of Earnings</td>
<td>149</td>
</tr>
<tr>
<td>Conclusion</td>
<td>153</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DESIGN AND METHODS</th>
<th>155</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>156</td>
</tr>
<tr>
<td>Study Population</td>
<td>156</td>
</tr>
<tr>
<td>Further Conceptualization and Operationalization</td>
<td>158</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>159</td>
</tr>
<tr>
<td>Explanatory Variables</td>
<td>164</td>
</tr>
<tr>
<td>Additional Considerations</td>
<td>179</td>
</tr>
<tr>
<td>Statistical Treatment Considerations</td>
<td>184</td>
</tr>
<tr>
<td>Competing Approaches</td>
<td>186</td>
</tr>
</tbody>
</table>
Stationarity 189
Cointegration 193
Error Correction Models 194

FINDINGS 199
Stationarity and Cointegration Results 198
Model A 202
Model B 212
Model C 218
Model D 225
Comparison of Four Models: A Brief Summary 231

DISCUSSION AND CONCLUSION 238
Discussion and Interpretation of findings 239
Methodological Considerations 255
Conclusion 257

REFERENCES 265
APPENDICES 284
A 284
B 285
C 288
D 290
E 304
F 312
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conceptualization and Operationalization of Variables and Hypotheses</td>
<td>161</td>
</tr>
<tr>
<td>2</td>
<td>Descriptive Statistics of Variables (Level Form)</td>
<td>167</td>
</tr>
<tr>
<td>3</td>
<td>Descriptive Statistics of Variables (Natural Logarithms)</td>
<td>180</td>
</tr>
<tr>
<td>4</td>
<td>Descriptive Statistics of Variables (First Differences of Logarithms)</td>
<td>183</td>
</tr>
<tr>
<td>5</td>
<td>Results of Augmented Dickey-Fuller (ADF) Tests of Stationarity</td>
<td>200</td>
</tr>
<tr>
<td>6</td>
<td>Results of Augmented Dickey-Fuller (ADF) Cointegration Tests</td>
<td>201</td>
</tr>
<tr>
<td>7</td>
<td>Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model A</td>
<td>203</td>
</tr>
<tr>
<td>8</td>
<td>Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model A (ECM)</td>
<td>209</td>
</tr>
<tr>
<td>9</td>
<td>Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model B</td>
<td>213</td>
</tr>
<tr>
<td>10</td>
<td>Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model B (ECM)</td>
<td>216</td>
</tr>
<tr>
<td>11</td>
<td>Summary of Regression Analysis of Variables Predicting GWA Caseload Ratio: Model C</td>
<td>219</td>
</tr>
<tr>
<td>12</td>
<td>Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model C (ECM)</td>
<td>222</td>
</tr>
<tr>
<td>13</td>
<td>Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model D</td>
<td>226</td>
</tr>
<tr>
<td>14</td>
<td>Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model D (ECM)</td>
<td>229</td>
</tr>
<tr>
<td>15</td>
<td>Comparison of Coefficients Across Models A, B, C and D (Base Models)</td>
<td>233</td>
</tr>
<tr>
<td>16</td>
<td>Comparison of Coefficients Across Models A, B, C, D (Error Correction Models)</td>
<td>234</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>------</td>
</tr>
<tr>
<td>A1</td>
<td>Additional UI Benefit Weeks Triggered by Regional Unemployment Rates after the 1990 and 1994 Changes</td>
<td>284</td>
</tr>
<tr>
<td>B1</td>
<td>Specific Sources of Data for Variables in Models</td>
<td>287</td>
</tr>
<tr>
<td>F1</td>
<td>Zero Order Correlations (Logarithms) N=168</td>
<td>312</td>
</tr>
<tr>
<td>F2</td>
<td>Zero Order Correlations (First differences of logarithms) N=167</td>
<td>313</td>
</tr>
</tbody>
</table>


**LIST OF FIGURES**

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of persons employed in Ontario 1981-1994</td>
<td>117</td>
</tr>
<tr>
<td>2</td>
<td>Number of persons unemployed in Ontario 1981-1994</td>
<td>118</td>
</tr>
<tr>
<td>3</td>
<td>Unemployment rate in Ontario 1981-1994</td>
<td>118</td>
</tr>
<tr>
<td>4</td>
<td>Unemployment rate by age in Ontario 1980-1994</td>
<td>120</td>
</tr>
<tr>
<td>5</td>
<td>Unemployment rate by education in Ontario 1981-1994</td>
<td>121</td>
</tr>
<tr>
<td>6</td>
<td>Average duration of unemployment in Ontario 1981-1994</td>
<td>122</td>
</tr>
<tr>
<td>7</td>
<td>Number of persons by duration of interrupted unemployment in Ontario 1981-1994</td>
<td>123</td>
</tr>
<tr>
<td>8</td>
<td>Increase in cumulative person-years of unemployment in Ontario 1981-1994</td>
<td>124</td>
</tr>
<tr>
<td>10</td>
<td>Business bankruptcies in Ontario 1981-1994</td>
<td>128</td>
</tr>
<tr>
<td>11</td>
<td>Number of persons employed full-time and part-time in Ontario 1981-1994</td>
<td>129</td>
</tr>
<tr>
<td>12</td>
<td>Part-time employment among women by age in Ontario 1981-1994</td>
<td>130</td>
</tr>
<tr>
<td>13</td>
<td>Part-time employment among men by age in Ontario 1981-1994</td>
<td>131</td>
</tr>
<tr>
<td>14</td>
<td>Involuntary part-time employment by sex and age in Ontario 1981-1994</td>
<td>132</td>
</tr>
<tr>
<td>17</td>
<td>Jobs by sector in Ontario 1983-1994</td>
<td>141</td>
</tr>
<tr>
<td>18</td>
<td>Jobs in goods sector in Ontario 1983-1994</td>
<td>142</td>
</tr>
<tr>
<td>19</td>
<td>Jobs in manufacturing sector in Ontario 1983-1994</td>
<td>142</td>
</tr>
<tr>
<td>20</td>
<td>Jobs in manufacturing by industry in Ontario 1983-1994</td>
<td>143</td>
</tr>
<tr>
<td>21</td>
<td>Subsectors of service producing sector in Ontario 1983-1994</td>
<td>144</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>22</td>
<td>Jobs in service sector in Ontario 1983-1994</td>
<td>145</td>
</tr>
<tr>
<td>23</td>
<td>Employment by selected occupations in Ontario 1981-1994 (with more than 350,000 persons per occupation)</td>
<td>146</td>
</tr>
<tr>
<td>24</td>
<td>Employment by occupation in Ontario 1981-1994 (with less than 350,000 persons per occupation)</td>
<td>146</td>
</tr>
<tr>
<td>25</td>
<td>Average weekly earnings in traditional and nonmarket services sector in Ontario 1983-1994</td>
<td>148</td>
</tr>
<tr>
<td>26</td>
<td>Average weekly earnings in traditional and dynamic services sectors in Ontario 1983-1994</td>
<td>149</td>
</tr>
<tr>
<td>27</td>
<td>Ratio of GWA cases to population, multiplied by 100, 1981-1994</td>
<td>160</td>
</tr>
<tr>
<td>28</td>
<td>Breakdown of GWA caseload by largest case type, 1981-1994</td>
<td>164</td>
</tr>
<tr>
<td>29</td>
<td>Comparison of actual and predicted values of the GWA caseload ratio from Model A</td>
<td>204</td>
</tr>
<tr>
<td>30</td>
<td>Heteroskedasticity of error term from Model A plotted against the unemployment rate</td>
<td>207</td>
</tr>
<tr>
<td>31</td>
<td>Residuals from Model A</td>
<td>208</td>
</tr>
<tr>
<td>32</td>
<td>Comparison of actual and predicted change in caseload ratio based on Model A (ECM)</td>
<td>210</td>
</tr>
<tr>
<td>33</td>
<td>Residuals from Model A (ECM)</td>
<td>211</td>
</tr>
<tr>
<td>34</td>
<td>Comparison of actual and predicted values for the caseload ratio based on Model B</td>
<td>214</td>
</tr>
<tr>
<td>35</td>
<td>Residuals from Model B</td>
<td>215</td>
</tr>
<tr>
<td>36</td>
<td>Comparison of actual and predicted change in caseload ratio based on Model B (ECM)</td>
<td>217</td>
</tr>
<tr>
<td>37</td>
<td>Residuals from Model B (ECM)</td>
<td>218</td>
</tr>
<tr>
<td>38</td>
<td>Comparison of actual and predicted values for the caseload ratio based on Model C</td>
<td>220</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>39</td>
<td>Residuals from Model C</td>
<td>223</td>
</tr>
<tr>
<td>40</td>
<td>Comparison of actual and predicted change in caseload ratio based on Model C (ECM)</td>
<td>223</td>
</tr>
<tr>
<td>41</td>
<td>Residuals from Model C (ECM)</td>
<td>224</td>
</tr>
<tr>
<td>42</td>
<td>Comparison of actual and predicted values for the caseload ratio based on Model D</td>
<td>227</td>
</tr>
<tr>
<td>43</td>
<td>Residuals from Model D</td>
<td>227</td>
</tr>
<tr>
<td>44</td>
<td>Comparison of actual and predicted change in caseload ratio based on Model D (ECM)</td>
<td>230</td>
</tr>
<tr>
<td>45</td>
<td>Residuals from Model D (ECM)</td>
<td>230</td>
</tr>
<tr>
<td>C1</td>
<td>Comparison of GWA benefit levels for various family types</td>
<td>288</td>
</tr>
<tr>
<td>C2</td>
<td>GWA cases for the month of January 1969 to 1994</td>
<td>288</td>
</tr>
<tr>
<td>C3</td>
<td>Annual unemployment rate in Ontario from 1969 to 1994</td>
<td>289</td>
</tr>
<tr>
<td>D1</td>
<td>GWA real maximum benefit level (logarithm)</td>
<td>290</td>
</tr>
<tr>
<td>D2</td>
<td>Unemployment Insurance benefit ratio (logarithm)</td>
<td>290</td>
</tr>
<tr>
<td>D3</td>
<td>Unemployment rate (x100) (logarithm)</td>
<td>291</td>
</tr>
<tr>
<td>D4</td>
<td>Average duration of unemployment (logarithm)</td>
<td>291</td>
</tr>
<tr>
<td>D5</td>
<td>Real minimum wage (1986 dollars) (logarithm)</td>
<td>292</td>
</tr>
<tr>
<td>D6</td>
<td>Part-time employment as a percentage of the working age population (x100) (logarithm)</td>
<td>292</td>
</tr>
<tr>
<td>D7</td>
<td>Involuntary part-time employment as a percentage of the working age population (x100) (logarithm)</td>
<td>293</td>
</tr>
<tr>
<td>D8</td>
<td>Self-employment as a percentage of the working age population (x100) (logarithm)</td>
<td>293</td>
</tr>
<tr>
<td>D9</td>
<td>Employment in the service sector relative to the goods sector (x100) (logarithm)</td>
<td>294</td>
</tr>
</tbody>
</table>
### LIST OF FIGURES (continued)

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>D10</td>
<td>GWA real maximum benefit level (first difference)</td>
<td>294</td>
</tr>
<tr>
<td>D11</td>
<td>Unemployment insurance benefit ratio (first difference)</td>
<td>295</td>
</tr>
<tr>
<td>D12</td>
<td>Unemployment rate (x100) (first difference)</td>
<td>295</td>
</tr>
<tr>
<td>D13</td>
<td>Average duration of unemployment (first difference)</td>
<td>296</td>
</tr>
<tr>
<td>D14</td>
<td>Real minimum wage (1986 dollars) (first difference)</td>
<td>296</td>
</tr>
<tr>
<td>D15</td>
<td>Part-time employment as a percentage of working age population (x100) (first difference)</td>
<td>297</td>
</tr>
<tr>
<td>D16</td>
<td>Involuntary part-time employment as a percentage of the working age population (x100) (first difference)</td>
<td>297</td>
</tr>
<tr>
<td>D17</td>
<td>Self-employment as a percentage of the working age population (x100) (first difference)</td>
<td>298</td>
</tr>
<tr>
<td>D18</td>
<td>Employment in the service sector relative to the goods sector (x100) (first difference)</td>
<td>298</td>
</tr>
<tr>
<td>D19</td>
<td>Autocorrelation function of GWA caseload ratio (x100) (logarithm)</td>
<td>299</td>
</tr>
<tr>
<td>D20</td>
<td>Autocorrelation function of unemployment rate (x100) (logarithm)</td>
<td>299</td>
</tr>
<tr>
<td>D21</td>
<td>Autocorrelation function of real maximum GWA benefit (logarithm)</td>
<td>300</td>
</tr>
<tr>
<td>D22</td>
<td>Autocorrelation function of real minimum wage (1986) (logarithm)</td>
<td>300</td>
</tr>
<tr>
<td>D23</td>
<td>Autocorrelation function of Unemployment Insurance benefit ratio (logarithm)</td>
<td>301</td>
</tr>
<tr>
<td>D24</td>
<td>Autocorrelation function of average duration of unemployment (logarithm)</td>
<td>301</td>
</tr>
<tr>
<td>D25</td>
<td>Autocorrelation function of part-time employment as a percentage of working age population (x100) (logarithm)</td>
<td>302</td>
</tr>
<tr>
<td>D26</td>
<td>Autocorrelation function of involuntary part-time as a percentage of working age population (x100) (logarithm)</td>
<td>302</td>
</tr>
<tr>
<td>D27</td>
<td>Autocorrelation function of self-employment as a percentage of working age population (x100) (logarithm)</td>
<td>303</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>D28</td>
<td>Autocorrelation function of employment in the service sector relative to the goods sector (x100) (logarithm)</td>
<td>303</td>
</tr>
<tr>
<td>E1</td>
<td>Autocorrelation function for residuals of Model A</td>
<td>304</td>
</tr>
<tr>
<td>E2</td>
<td>Partial autocorrelation function for residuals of Model A</td>
<td>304</td>
</tr>
<tr>
<td>E3</td>
<td>Autocorrelation function for residuals of Model B</td>
<td>305</td>
</tr>
<tr>
<td>E4</td>
<td>Partial autocorrelation function for residuals of Model B</td>
<td>305</td>
</tr>
<tr>
<td>E5</td>
<td>Autocorrelation function for residuals of Model C</td>
<td>306</td>
</tr>
<tr>
<td>E6</td>
<td>Partial autocorrelation function for residuals of Model C</td>
<td>306</td>
</tr>
<tr>
<td>E7</td>
<td>Autocorrelation function for residuals of Model D</td>
<td>307</td>
</tr>
<tr>
<td>E8</td>
<td>Partial autocorrelation function for residuals of Model D</td>
<td>307</td>
</tr>
<tr>
<td>E9</td>
<td>Autocorrelation function for residuals of Model A (ECM)</td>
<td>308</td>
</tr>
<tr>
<td>E10</td>
<td>Partial autocorrelation function for residuals of Model A (ECM)</td>
<td>308</td>
</tr>
<tr>
<td>E11</td>
<td>Autocorrelation function for residuals of Model B (ECM)</td>
<td>309</td>
</tr>
<tr>
<td>E12</td>
<td>Partial autocorrelation function for residuals of Model B (ECM)</td>
<td>309</td>
</tr>
<tr>
<td>E13</td>
<td>Autocorrelation function for residuals of Model C (ECM)</td>
<td>310</td>
</tr>
<tr>
<td>E14</td>
<td>Partial autocorrelation function for residuals of Model C (ECM)</td>
<td>310</td>
</tr>
<tr>
<td>E15</td>
<td>Autocorrelation function for residuals of Model D (ECM)</td>
<td>311</td>
</tr>
<tr>
<td>E16</td>
<td>Partial autocorrelation function for residuals of Model D (ECM)</td>
<td>311</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION AND POLICY CONTEXT

INTRODUCTION

This dissertation investigates the factors which affected short-term welfare in Ontario between 1981 and 1994. It examines the development of social assistance policy and unemployment insurance (UI) policy during this period and reviews the changing labour market conditions. In particular, it assesses whether labour market factors other than those traditionally examined in empirical models of social assistance receipt contribute substantially to a better understanding of GWA receipt.

General Welfare Assistance (GWA) was the Ontario social assistance program designed for short-term receipt. Many recipients were described as employable and many were single individuals with no children, or couples with or without children. Although lone-parent families received GWA, they were usually transferred to the program designed for longer-term receipt, Family Benefits (FBA), which also served people with disabilities. General Welfare Assistance no longer exists. The Social Assistance Reform Act (1997) replaced the General Welfare Assistance Act (1958) and the Family Benefits Act (1967) with two new acts: the Ontario Works Act (1997) and the Ontario Disability Support Program Act (1997). In general, Ontario Works (OW) serves categories of recipients who formerly would have received GWA and single parent families, whereas the Ontario Disability Support Program (ODSP) serves people with disabilities who formerly would have received FBA. However, the new programs are more restrictive and consequently, some recipients who would have previously been able to access GWA or FBA are currently ineligible for social assistance.
Despite the program reconfiguration, the group served by GWA continues to constitute an important segment of social assistance recipients, both in Ontario and other jurisdictions. As such, the lessons derived from the GWA experience continue to be relevant. This group was selected for two reasons. First, historically this group has been less studied in North America, where, up until recently, much of the empirical research into determinants of welfare\(^1\) receipt emanated from the U.S. and focused on Aid to Families with Dependent Children (AFDC) program, a program that primarily served single parent families. Second, arguably this group is the most susceptible to individual deficiency explanations of receipt, in particular, explanations that centre on their labour market behaviour.\(^2\) In the case of Ontario these explanations retained their currency even in the face of the worst recession since the 1930s. This is apparent in the calls to root out abuse despite a dramatic drop in the demand for labour beginning in late 1989 and continuing into the early 1990s, as evidenced by the number of layoffs and bankruptcies.

The time period this research spans (1981 to 1994) is one of considerable change along several key dimensions. Significant policy activity followed a period in which the GWA and FBA Acts had seen little change (Ontario. Social Assistance Review Committee [SARC], 1988).

Not only did policy changes occur, but several key public documents also described and analysed the social assistance programs in a way that elucidated the major lines of debate, rendered the overall system (both the rules and the actual practice) more transparent, and, in some instances, treated the views of recipients as important and legitimate. This was

---

1. *Social assistance and welfare* are used interchangeably. Although *social assistance* may be viewed as less stigmatizing, recipients, particularly of GWA, typically use *welfare*.

2. The transfer of single parents to OW is consistent with the view that single parents have currently become more susceptible to such explanations.
unprecedented in Ontario. Considerable reflection on unemployment insurance policy also occurred in the 1980s and early 1990s, as the series of policy documents to be examined here will attest. These culminated in a series of changes that transformed the program into one that served far fewer of the unemployed. The backdrop to these policy discussions and modifications was dramatic change in the labour market. Levels of unemployment rose and fell, and economic restructuring occurred. Indeed, SARC (1988, p. 42) alluded to the possible effect of this restructuring in attempting to explain the slow decline (relative to the unemployment rate) of the employable caseload after the 1981-82 recession, implying that changes not captured by the unemployment rate were affecting the levels of social assistance receipt.

Historically, empirical research investigating social assistance receipt typically included three types of determinants: individual or family characteristics, program and policy changes, and labour market factors. In general, the labour market dimensions explored were limited. This research seeks to expand the dimensions considered. It was also rare to see any linkages made between unemployment insurance policy and social assistance receipt. This was perhaps understandable given the dominance of U.S. literature, the very restrictive nature of their unemployment insurance program and their predominant focus on the AFDC caseload. Writing in the 1980s, Evans (1987b, p. 41) was one of the few to allude to the relevance of unemployment insurance (UI) policy for social assistance receipt. In the 1990s, more Canadian researchers included a consideration of UI policy in their work (e.g., Fortin & Lacroix, 1998, April; Barrett, Doiron, Green & Riddell, 1996; Bruce, 1994, March; Cragg, 1994, March). This study follows this approach.
As mentioned earlier, the study period is characterized by change in several key areas. The period since 1994 has not been without change. Social assistance policy has taken an abrupt turn, at least when compared to all but the final years of the study period. The lines of debate articulated in the policy documents created in 1980s and early 1990s continue to be relevant. What has changed is that the positions adopted after 1994 were, for the most part, diametrically opposed to those taken previously. In contrast, UI policy has continued the trajectory established prior to 1994, with the consequence that its relevance to social assistance receipt may become less visible.\(^3\) As fewer people have access to the program, changes in it will have a lesser impact on levels of social assistance receipt. Labour market conditions, as measured by the unemployment rate, have improved, although other measures suggest some fundamental changes that detract from this favourable picture.

This study begins with an examination of the trajectory of social assistance policy, followed by a similar review of UI policy. Both analyses situate major policy documents and policy changes within contemporary fiscal and economic conditions. This section marks this dissertation as a hybrid. It combines examination of aspects of policy making processes, namely the interweaving of policy discourse, action and fiscal and economic conditions, with the development of empirical models which seek to explain welfare receipt taking into account some of these policy changes. The dissertation then reviews the three theoretical frameworks which underpin much of the welfare determinants research, identifies selected hypotheses derivable from the theory and examines empirical research reported in the literature (Chapter 2). Next,

\(^3\) This is not to say that the shrinkage of this part of the social safety net may not have an impact, but that the impact may be less obvious as the restricted form of this program may become the baseline against which the effect of changes to it is measured.
changes in the Ontario labour market are examined (Chapter 3), research design and methods are described (Chapter 4) and findings outlined (Chapter 5). Finally, results are discussed and conclusions presented (Chapter 6).

Before beginning, it is important to situate this research within the broader context of human or social well-being. Typically, in the area of social assistance research, it is assumed that increases in levels of receipt are undesirable, that is, they reflect increased levels of human hardship. In a parallel fashion, it is assumed that decreases in levels of receipt reflect decreased levels of human hardship. Most researchers fail to note that the meaning of levels of receipt is dependent on the reasons why people begin or end welfare receipt. For example, to the extent that welfare caseloads are a barometer of labour market conditions, decreases in the caseloads may well reflect decreases in human hardship. In contrast, declines in caseloads which are primarily a function of narrowing access to the program may reflect the opposite.

The discussion of human hardship, with a focus on the recipients, marks this research as one which developed from a concern for recipients, rather than from a concern for managing the caseload on behalf of non-recipients. The experience of social workers in agencies and community organizations who serve people who turn to social assistance provides us with an opportunity (not always taken) to become aware of the faces behind the numbers and to be sensitized to the day-to-day experiences of those most directly affected by policy decisions and labour market changes. This awareness of, and sensitivity to, the reality of people’s lives is a potential contribution that we can bring to this field of research. Also, social work, at its best, is firmly rooted in a macro-level analysis which recognizes the importance of the social, political
and economic environment in relation to individual experiences. In other words, social work has the potential to broaden the focus beyond one of individual deficiency.

The balance of this chapter addresses the immediate policy context, that is, the development of provincial social assistance policy and federal unemployment insurance policy. It does this by juxtaposing policy discourse, as evidenced primarily by key policy documents, and actual policy changes, and situating these within contemporaneous fiscal and economic conditions. This approach is premised on theories of the welfare state that encompass both political actors and socio-economic factors, denying the determinism of socio-economic factors while recognizing their influence through the mediation of political actors (see discussion by Castles, 1988). It is predicated on the position that during this period fiscal and economic conditions were key considerations of decision-makers and variously acted to constrict or expand the perceived range of available policy options.⁴

SOCIAL ASSISTANCE POLICY (1981-1994)

Unprecedented policy activity—both the publication of government policy documents and the implementation of legislative changes—occurs during the study period. Not only is the level of policy activity unparalleled, the triumvirate of government documents which emerge

⁴ Many of the fiscal and economic indicators selected for presentation are those which attained considerable prominence in social policy debates beginning in the early 1980s. While some viewed the need for debt/deficit reduction as an inescapable fact; others argued that the almost exclusive focus on the fiscal debt/deficit, as opposed to the social one, reflected political choices, and even that the deficit/debt hysteria was no more than an ideological tool being used to persuade Canadians of the necessity of dismantling social programs. The inclusion of these indicators here is not intended to reflect the first position. Rather it acknowledges the growing hegemony of debt/deficit considerations during this period.
following the establishment of the Social Assistance Review Committee (SARC) embrace a more institutional (or solidaristic) approach to social welfare than the primarily residual (market-oriented)\(^5\) approach manifested by government in the opening years of the decade and the nascent resurgence of residualism characteristic of the latter part of the study period. Legislative changes also reflect these general orientations. In this section, policy activity is examined within three periods, constructed to parallel these shifts in orientation and the changes in the level of policy activity: residualism under pressure (1981 to mid-1986), emergent institutionalism (mid-1986 to mid-1992) and return to residualism (mid-1992 to 1994). During the second period, three key policy documents are published, namely, *Transitions* (1988), *Back on Track* (1991) and *Time for Action* (1992), and substantial policy change occurs. In addition, the documents are in some respects extraordinary in that they make public and transparent the rules and operation of

---

\(^5\) The association of institutional with *solidaristic*, and residual with *market oriented* follows Guest's (1997, Preface) lead. Guest (1997) identifies the tension between residual and institutional concepts of welfare in the development of social security in Canada. An institutional concept of welfare is typically associated with a combined strategy of full employment, universal programs and social insurance, leaving a minor role for intrusive means-tested programs such as social assistance. However, Guest (1997, Preface) applies the residual/institutional distinction to shifts in orientation in specific programs, including social assistance. In brief, an institutional approach assumes that there are social costs generated by the way urban industrial society is organized (e.g., unemployment) and society should protect and compensate people who experience more than their fair share of the costs. Social security programs should be a first line of defence against these risks (Guest, 1997, pp. 4-5) and hence government adopts an active role. In contrast, the residual approach entails reliance on the market and family to address problems such as unemployment, viewing unemployment as primarily a function of individual deficits. Charitable organizations are the second line of defence and government provision is the last resort. Hence the residual approach sees the government's role as relatively passive.
the programs and elucidate the major lines of debate.6 Hence this period is the centrepiece of the present analysis.

Social assistance legislation encompasses a myriad of rules, and therefore potential changes are innumerable. To simplify this review, it is organized around three principles, which have their roots in the British Poor Laws. These principles are reflected in Ontario practices as early as the 1830s, and "set the pattern for subsequent developments of social assistance in Ontario" (Irving, 1987, p. 7). They are as follows.

**Lesser eligibility.** This principle requires that the income or living conditions of those receiving assistance be less desirable than those of the lowest paid labourer.

**Deservedness.** This principle requires discrimination between those deemed deserving and undeserving and is used to determine who is eligible for assistance and the rigour with which the principle of lesser eligibility is applied.

**Work-test.** This principle requires demonstration of a willingness to work as evidence that the need for assistance is legitimate.

Within each period, policy discourse and practice are assessed in terms of whether they subscribe to, or challenge, these principles. Discussion of benefit coverage and levels falls under the rubric of lesser eligibility; extension and withdrawal of eligibility to certain groups relate to the application of the deservedness principle; and job search/acceptance requirements and treatment of earnings connect to the work-test principle.

While the policy activity of this period often simultaneously addressed the FBA and the GWA programs, the present analysis focuses primarily on discourse and change related to the

---

6 These documents were publicly available, comprehensive, and far easier to understand than the Acts and their accompanying regulations.
GWA program; however, where appropriate, changes which primarily affected the FBA program are included.

**Residualism under pressure (1981 to mid-1986)**

During the decade commencing in 1975 the Conservative government's orientation was one of "curbing increases in social spending and reducing government's role as a provider of social services" (SARC, 1988, p. 77). "This period saw only occasional tinkering with the legislation and regulations of existing programs, usually in the direction of increased selectivity or an erosion in the benefits available to particular groups....the monthly benefit levels of all categories of social assistance recipients were substantially lowered between 1975 and 1981" (SARC, 1988, p. 77).

The early 1980s are characterized by modest increases in real benefit levels which began to approach those of the mid-1970s in 1986 (SARC, 1988, p. 77), the introduction of a provincial shelter subsidy program, and revisions to the GWA Act to comply with the Charter of Rights and Freedoms and the Human Rights Code. (The latter changes suggest that SARC's characterization of the decade following 1975 was perhaps less applicable to the latter part of that period.)

Provincial shelter subsidies were introduced in November 1981 in response to rising shelter costs and to the development of multiple municipal rent supplement programs (SARC 1988, p. 187). The program provided additional income to recipients whose actual shelter costs

---

7 According to *And the Poor Get Poorer* (1983), the mid 1970s are one of two peaks in the real value of benefits in the period from about 1960 onward (SPCMT, 1983).
exceeded a threshold. Recipients received 75 percent of the difference between their actual shelter costs and this threshold, up to a maximum. For a single person, the threshold was $100, the maximum subsidy possible was $50 (Ontario Gazette, Regulation 722/81). While the immediate financial impact of this change on recipients was small in areas where municipal programs already existed, the change formally acknowledged intra-provincial variation in shelter costs and opened the door to further moves to recognize actual shelter costs in calculating welfare entitlements.

Pressure mounted in 1982 to increase welfare rates. A report by the Social Planning Council of Metro Toronto (SPCMT), *The Cost of Raising a Child in Toronto* (1982,1), underlined the inadequacy of welfare benefits and the Metro Toronto Commissioner of Social Services, Ray Tomlinson, echoed this concern (McNenley, 1982, February). In June, a confidential report to Cabinet from the Ministry of Community and Social Services (MCSS) urged across-the-board increases in rates, citing the importance of tying increases to inflation (Hickl-Szabo, 1982, September 28). Both SPCMT and Metro Social Services Committee called for a 10 percent increase in welfare rates (Hickl-Szabo, 1982, July 16 and 1982, September 28). SPCMT noted the dramatic decline in the purchasing power of welfare benefits since 1975 (Hickl-Szabo, 1982, July 16), stating that even with the increases proposed by MCSS, social assistance payments would be the lowest in Canada (Hickl-Szabo, 1982, September 28). Media coverage of NDP MPP Richard Johnston's experience of following a welfare diet brought

---

8 Those with shelter costs between the shelter component of the basic needs allowance and the new threshold for additional subsidy received no additional subsidy. Those with shelter costs below the shelter component continued to receive only an amount equivalent to their shelter costs. Fuel costs were treated separately and covered 100 percent; utilities not included in the rent were not covered (SARC, 1988, p. 187).
additional attention to the plight of welfare families. Finally in October, the Conservative Minister of Community and Social Services, Frank Drea, announced selective increases, noting that "a new type of recipient ha[d] been forced onto welfare, one who ha[d] never had to rely on government assistance" (Crowe, 1982, October 22). Effective November 1, single employable people in the highest rent areas received a 17.8 percent increase up to a maximum of $313 rather than $266 (Crowe, 1982, October 22). GWA recipients with families received only an increase in the maximum shelter subsidy. For a family of three, this would have meant an increase from $70 to $95 (approximately 36 percent) (Ontario Gazette, Regulation 728/82).

Pressure continued for benefit increases in 1983 both from opposition critics and from the Metro Toronto Social Planning Council. The council's report ...And the Poor Get Poorer (1983) again stressed that benefit levels had not kept pace with inflation ("Singles assisted," 1983, November 8). Rate increases of about 5 percent on the basic needs allowance were announced in November. Single employable people once again received a slightly higher increase (7.5 percent) than single unemployables and families because according to the Minister of Community and Social Services, Frank Drea, their benefit levels had been set low on the assumption that assistance would be required for only a short time and the recession was causing more people to rely on assistance for longer periods ("Singles assisted," 1983, November 8).

9 The breakdown of this increase was as follows: the basic needs allowance was increased from $216 to $238, the maximum shelter subsidy, from $50 to $75.

10 These figures do not apply to people categorized as boarders. Boarders received much lower allowances and modest absolute increases. For example, the allowance for single employable persons in not-for-profit accommodation was $11, up from $216 (Ontario Gazette, Regulation 728/82). Rates varied according to whether people lived in for-profit or not-for-profit accommodation. Increases from 1980 to 1982 favoured for-profit boarding situations; however, the example provides a good indication of the general magnitude of rates and increases.
The maximum shelter subsidy was raised by $15. Increases announced October 1984 were in the same range. Opposition Liberal and NDP MPPs criticized the increase as inadequate, the NDP charging that it only covered inflation.

Inflation was extremely high at the opening of the decade (about 10 to 12 percent from 1980 to 1982). SPCMT (1982, July) reported that to restore the real purchasing power of May 1982 GWA benefits to 1975 levels, the rates would have to be increased by 33-37 percent (depending on family type). Inflation began to decrease in 1983 dropping from 6.2 to 4.1 percent in 1985. SPCMT (1986, March) reported that between 1982 and 1985, single employables had increased their real purchasing power by 20.4 percent and two-parent families with two children aged 10-13 had increased theirs by 7.8 percent. These increases, however, still left recipients with real purchasing power below the 1975 levels and despite these increases, SARC (1988, p. 52) noted the rapid expansion of food banks and emergency shelters during the 1980s.

In 1984 reforms of GWA regulations were more dramatic than the changes in benefit levels. A series of changes were prompted by the equality provisions in the new Charter of Rights and Freedoms, which were to come into effect in spring 1985, and by impending legal challenges.11 These changes extended program eligibility to additional groups. For example, the sexual bias in the definition of dependent was eliminated, allowing women to apply as heads of a family even if the family included a man (Ontario Gazette, Regulation 708/84). Automatic ineligibility of some groups (e.g., male heads of families over 21) based on full-time school attendance was eliminated, although eligibility was still discretionary (Ontario Gazette, 1984, October 1).

---

11 See, for example, Dexter, 1981, October 6; Hluchy, 1982, January 21; "Single mom is battling," 1984, October 1.
Regulation 402/84). Single fathers were permitted to receive assistance to allow them to stay home and provide care to their children for more than six months (Ontario Gazette, Regulation 402/84).\(^\text{12}\) (Although this change would affect primarily FBA receipt, it affected GWA receipt by virtue of the requirement that sole-support parents spend three months on GWA before receiving FBA.)\(^\text{13}\)

Another significant change, an expansion in what could be deemed to meet the requirements of the work-test, was the broadening of the types of full-time schooling or training that an individual could pursue and retain eligibility for assistance. On a discretionary basis, full-time attendance at high school equivalency courses offered at community colleges and at other approved educational and training courses was permissible in addition to the previously allowed attendance at elementary and high schools. This change came at a time when people with lower levels of education were becoming more and more disadvantaged in the job market. Although it potentially benefited all recipients, it also was in keeping with the Conservative government's publicly professed concern regarding the disadvantaged status of women. They had appointed the first minister responsible for women's issues in May 1983, and were being publicly taken to task\(^\text{14}\) for not eliminating barriers to improving women's status.

Questions regarding aspects of the social assistance system continued into 1985, as did concern regarding benefit adequacy. For example, two social assistance workers requested that

\(^{12}\) Permission to do this for more than six months was at the discretion of the welfare administrator (Ontario Gazette, Regulation 402/84).

\(^{13}\) This three-month waiting period applied to deserted, unwed and separated mothers only (SARC, 1988, p. 127).

\(^{14}\) See, for example, Platiel, May 12, 1984, p. 21.
the Human Rights Commission investigate policies that, they argued, discriminated on the basis of sex, age, and place of origin (Dineen February 22, 1985) and in the Supreme Court of Ontario a single mother successfully challenged a decision to deny her benefits (Haliechuk, 1985, September 4). While many of the issues focussed on sole-support parents, these challenges contributed to an overall impression that the system needed to be reviewed and updated. The advent of a Liberal government in May 1985 and the signing of the accord with the NDP raised expectations that changes would be forthcoming (Hickl-Szabo, 1985, October 24). Disappointment followed the tabling of the first Liberal budget: the basic needs allowance was raised by only four percent (Speirs, 1985, October 26). This increase was slightly lower than inflation, which was 4.1 percent in 1985, and would be 4.4 percent in 1986 (Ontario. Ministry of Treasury and Economics, 1992, October). However, by July 1986 SARC had been established to undertake the first comprehensive review of the system in over twenty years.

Economic and Fiscal Environment

It is important to note the economic and fiscal backdrop against which these changes took place. The number of unemployed skyrocketed from 304,700 in 1981 to 497,200 by 1983 and was still well above pre-recessionary levels in 1985. The unemployment rate rose in a parallel fashion, from 6.6 to 10.4 percent from 1981 to 1983, and was still at 8.1 percent by 1985 (Canada. Statistics Canada, 1997).

Social assistance cases (combined FBA and GWA) rose from a monthly average of 197,000 in 1981 to 247,000 in 1983, and continued to climb through to 1985 but at a much

Fiscal indicators also reflected the effects of the recession. From $1.3 billion in 1980-81, the budgetary deficit rose substantially reaching $3.2 billion in 1982-83, then remained stable, declined substantially in 1984-85, and rebounded upward slightly to $2.6 billion in 1985-86. The public debt interest-to-revenue ratio, at just over 10 percent for 1980-81 and 1981-82, rose substantially in the next two years, the rate of growth slowing thereafter, with the ratio reaching just over 12 percent in 1984-85 and peaking slightly higher in 1985-86. The debt-to-GDP ratio dropped from 17.0 percent in 1980-81 to 16.2 percent the following year, then rose substantially, reaching 18.0 percent in 1983-84. This increase is attributable to a sharp reduction in the rate of GDP growth from 1981-82 to 1982-83, coupled with a significant debt increase from 1981-82 to 1983-84. The debt-to-GDP ratio remained above pre-recession levels through 1985-86 at 17.7 percent (Treasury, 1989, November).

---

15 In contrast to the combined caseload, the GWA caseload declined following 1983 through to 1985.

16 GWA expenditures grew from $296 million in 1980-81 to $327 million in 1981-82 (about 10 percent), rose steeply to $451 million in 1982-83 (about 38 percent) and continued to rise substantially to $541 million in 1983-84 (about 20 percent). The increase to $572 million in 1984-85 reflected a much slower rate of growth, as did the rise to $620 million in 1985-86 (SARC, 1988, p. 80).
Emergent Institutionalism (mid-1986 to mid-1992)

The late 1980s and the early 1990s were characterized by substantial policy activity. Under the tenure of the Liberal government (1985 to 1990) and the NDP government (1990 to 1995), three major reports were published: Transitions (1988), and Back on Track (1991) and Time for Action, (1992), both of which built on and extended the work of Transitions. Each will be discussed in turn.

Transitions

The Social Assistance Review Committee (SARC) was established by the Liberal government, while still subject to the Liberal-NDP accord. SARC commissioned background studies and conducted public consultations from October 1986 to June 1987. Its voluminous report, Transitions was released in September 1988, during the tenure of a majority Liberal government, who since the 1987 election was no longer dependent on a Liberal-NDP accord. The report and the accompanying consultations and background studies represented the first ever comprehensive review of social assistance in Ontario. It addressed, among other issues, the principles of lesser eligibility, deservedness and work-test requirements.

Transitions emphasized the importance of benefit adequacy, rejecting as it were the "spur of poverty" argument, that poverty or inadequate benefits would serve as an incentive to people to obtain employment (1988, p. 13). Although the report recognized the disincentive posed by wages that were low relative to benefit levels, its solutions were to enhance social assistance benefits and treat earnings in a way that would reduce financial disincentives to employment,
thereby providing income supplementation to the working poor. The report advocated "harmonizing" these elements with minimum wage, with adequacy of benefits "driving" the process (pp. 292-295).

*Transitions* advocated *need* as the primary determinant of eligibility and urged the elimination of recipient categories which reflected a hierarchy of deservedness (p. 145). It provided both short-term proposals and a long-term vision. In the short-term, *Transitions* argued for unifying GWA and FBA legislation, reducing the number of groups who were deemed automatically ineligible prior to financial assessment, and collapsing the 22 recipient categories into three: handicapped persons, people in need who must respond to opportunity planning and those "who are encouraged but not required" to respond (p. 147). Differences in benefit levels, assets ceiling and treatment of earnings were to be restricted to those justifiable on the basis of need (p. 147). For example, those using assistance temporarily might be deemed to have lesser needs and therefore receive lower benefits, but a limit would be set regarding the time a person would receive lower benefits.¹⁷

In the longer term, *Transitions* envisioned the creation of separate programs for the disabled—a comprehensive disability insurance program and an income-tested benefit for those

¹⁷ This reduction in categories also presupposed a shift from multiple disability categories to a handicapped one, based on a particular definition of handicap, and the removal of the handicapped children's benefit and the foster care benefit from social assistance (p. 147). Also in the short-term a category for *aged* and *near aged* would be retained and people in these categories would be entitled to a higher benefit level until basic rates became more adequate (p. 231).

¹⁸ Arguably, this could be viewed as continuing to reflect a hierarchy of deservedness. If this view is accepted, at minimum, it could be argued that the time limit constituted a step toward lessening this hierarchy. Existing legislation allowed lower benefits for people receiving assistance, deemed to be short-term, despite the reality of their long-term receipt, and hence presumably their greater need.
without adequate income from the insurance program or other sources (p. 106). It proposed rationalizing existing child benefits into a single income-tested program so that children would no longer be part of the social assistance caseload (pp. 115-118) and it advocated a separate income supplementation program for people in the labour force (pp. 119-121). The removal of these three groups from social assistance would result in a much smaller program and there would be only one category and entitlement would be based on need.

Although the longer-term vision was presented in the spirit of eliminating a hierarchy of deservedness, it actually had the potential to reinforce this hierarchy. Separate programs for disabled may seem justifiable on the basis of their special or additional needs. However, this change might also be interpreted as an even more extreme application of a hierarchy of deservedness--a move from separate categories within a single program to separate programs for each category. Need seems a less obvious basis for separating out children. In fact, it is difficult to avoid interpretation that this separation reflects the application of the deservedness principle. It is possible to view this recommendation in the spirit of eliminating or reducing a hierarchy of deservedness only if one sees the separate child benefit and the income supplementation measure for those in the labour force as an attempt to reduce the segregation of recipients from the working poor.

Finally, Transitions made promoting the transition to self-reliance its paramount principle (p. 24). Self-reliance was defined primarily in terms of employment, but encompassed other ways of participating in community life and contributing to society (p. 15). For recipients other
than those who were disabled, sole-support parents, elderly or temporarily unemployable, a condition of entitlement was mandatory participation in *opportunity planning*, the work-test. However, *Transitions* stressed that sanctions for non-participation would only be applied if the state had fulfilled its obligation to provide the resources and services to enable recipients to comply with these conditions (p. 211). In addition, the sanctions would take the form of benefit reduction, not termination (p. 235). The report unequivocally rejected a work-for-welfare or workfare strategy (p. 311).

The obligation of the state to provide resources to enable recipients to comply with the conditions attached to receipt was key to distinguishing between an overall approach that conceptualized the problem entirely in terms of individual deficits and one that not only identified features of the social assistance system and the broader society as part of the problem, but also acknowledged *some* collective responsibility for providing opportunities for self-sufficiency. *Transitions* noted that "the objective of self-reliance [would] remain illusory for

---

19 Although participation of sole-support parents was not mandatory, *Transitions* did recommend re-evaluating this position on an ongoing basis (pp. 233-234).

20 *Opportunity planning* is described as the process in which an opportunity planner and a recipient develop an action plan "that builds on the recipient's existing skills and strengths and is in keeping with the resources and opportunities in the community. It will take into consideration the recipient's longer-term goals and aspirations and will identify the activities, services or programs that might enable the recipient to attain his or her personal goals" (p. 206).

21 SARC (p. 311) defines work-for-welfare or workfare as "an approach that requires recipients to work as a condition of receiving welfare benefits. Failure to undertake assigned work activities results in disentitlement to benefits."

22 It is recognized that the acknowledgement, at the level of discourse, of *some* collective responsibility for creating conditions that foster transitions to self-sufficiency, may translate, at the level of practice, into a minimal focus on macro-level conditions. It is also
many recipients" if unemployment rates continued to be high (p. 90). It pointed to the effect of economic, social, and demographic factors on social assistance as well as the program's vulnerability to changes in tax policy and other social programs (pp. 77-79). It also described barriers to self-sufficiency such as the high benefit reduction rate—the rate at which benefits were reduced for each dollar earned—and the lack of support services such as child care, basic literacy courses, job placement services and skills upgrading (p. 300). The report recommended changes to the treatment of earnings which would reduce disincentives, and expansion of support services.

During the course of the review, shelter allowances were improved and perhaps most significantly, the spouse-in-the-house rule was changed. As of November 1986, sexual factors could not longer be considered in determining a spousal relationship (Ontario Gazette, Regulation 639/86) and as of November 1987, the definition of spouse was changed to conform to that contained in the Family Law Act. This meant that a spousal relationship with obligations to support was not automatically assumed when a woman and a man lived together (Ontario Gazette, Regulation 590/87). This affected both eligibility and benefit levels of this group. Here again the impact of the Charter of Right and Freedoms was evident.

Following the release of Transitions, a number of changes were made. In October 1989 the Supports to Employment Program (STEP) was introduced. The amount of earnings that was totally exempt from benefit reduction was raised and the benefit reduction rate (BRR) applied

recognized that the relative power of recipients viz-a-viz social assistance workers and administrators means that recipients have little leverage in establishing the relative weight assigned to individual versus collective responsibility, and hence to micro-level versus macro-level solutions.
to earnings was lowered to 75 from 80 percent. In addition, net earnings replaced gross earnings in the calculation of benefits, which was more advantageous to recipients. The children's benefit was also enhanced. In January 1990, the basic needs allowance was increased by six percent and shelter allowances were raised to 100 percent of shelter costs up to a ceiling. Outside of the social assistance system, but viewed as benefiting GWA recipients, increases in minimum wage were introduced in 1989 and 1990 and together exceeded inflation during this period, which was 5.8 percent in 1989 and 4.8 percent in 1990.

**Back on Track**

In the spring 1989 a special section of MCSS was established to develop unified legislation that would unify GWA and FBA and give reality to some of Transition's recommendations. In May 1990 an Advisory Group on New Social Assistance Legislation was formed (Advisory Group, 1991, p. 26). Their work was delayed due to insufficient political commitment until October 1990, following the installation of the new NDP government (Advisory Group, 1991, p. vii). At that time, the Minister of Community and Social Services, Zanana Akande, requested recommendations regarding actions that could be implemented quickly and that would move the social assistance system in the direction set by SARC.

*Back on Track* represented a compilation of such actions by the Advisory Group. Of the six areas in which short-term reforms were proposed, three are particularly relevant to this paper: benefits, eligibility, job search requirements and work incentives. The report reiterated

---

23 This was extremely important in that net earnings were derived from gross earnings less mandatory employee deductions such as UI and Canada Pension Plan plus an amount allowable for child care expenses.
Transitions's call for the development of a market-basket approach to establish a standard of adequacy for social assistance allowances and benefits. It also recommended a series of minor changes designed to enhance adequacy through improved and more equitable access to allowances for special necessities and personal needs allowances, elimination of minor rate differences among groups and extension of benefits to two additional groups (Advisory Group, 1991, pp. 47-53). Although the report mentioned the decline in purchasing power of the minimum wage and the eligibility of some minimum wage earners for social assistance (pp. 39-40), recommendations regarding minimum wage were not within its mandate.

It affirmed SARC's position of determining eligibility on the basis of need rather than deservedness. Recommendations such as the following exemplified a continuing commitment to this philosophy: equalizing of rates between single employables and temporarily unemployables, extension of eligibility to full-time workers who qualified on the basis of financial need, removal of three month qualifying period on GWA for those categories of single parents to whom it applied, removal of reference to employment history in GWA regulations and reducing the application of automatic ineligibility (pp. 74-79, 137). SARC had been prepared to maintain a distinction between rates on the basis of different needs for short and long-term recipients; however, it did not specify the time period after which people, regardless of their other characteristics, would be considered long-term. Back on Track recommended two years. Back on Track also affirmed SARC's long-term vision of social assistance playing a more residual role in an enhanced income security system comprised of separate programs for children, people with disabilities and the working poor.
Finally, *Back on Track* translated the spirit of opportunity planning into some concrete recommendations. It recommended six pilot projects in opportunity planning despite the recession. It recommended an official endorsement of suspension of job search requirements where warranted. Standard criteria (for example, high unemployment) were to be developed as to what would constitute grounds for such action. It proposed changing the regulation requiring recipients to take any jobs which they were physically capable of doing to stipulating "suitable employment" (p. 90). It recommended that benefits not be denied FBA recipients if they were unwilling to accept employment and that job history be abolished as a basis for denying assistance under GWA (pp. 89-97). From these recommendations and the accompanying rationale, it was apparent that less emphasis was being placed on a work-test as a means of verifying need. Labour market conditions, not just individual characteristics, were viewed as contributing to unemployment and the goal of facilitating longer-term success in the labour market was considered important.

*Back on Track* advocated further reduction in disincentives to employment through enhancements to STEP. These included increasing allowable deductions from earnings, reducing the tax back rate and treating income from job training similarly to earned income. The report also recommended allowing income averaging over six months for all recipients. Like *Transitions*, these recommendations reflect the primacy given to the transition objective as well as the attempt to address the tension between benefit adequacy and work incentives.

Like *Transitions*, *Back on Track* emphasized that social assistance reform alone was insufficient to address the problem of poverty, and that ultimately, issues such as child care, affordable housing, education, labour market strategies and tax policies, had to be addressed (p.
135). *Back on Track* went further than *Transitions* in calling for a commitment by government to full employment (p. 139). In contrast, *Transitions* spoke of a shared responsibility of government, business, labour, the voluntary sector, the community and individuals to pursue maximum employment, which it equated to full employment (SARC 1988, pp.265-267). The latter does not, however, have the same strong association with the ideals of social democracy as the former.

In May 1991, the NDP Minister of Community and Social Services, Zanana Akande, announced that 68 of the 88 recommendations in *Back on Track* would be implemented. By May 1992 *Time for Action* reported that 51 of the 68 recommendations had been implemented in full as of August or October 1991 and that work was in progress on 17 others. Among the 51 recommendations, the most important were the completion of a study of different market-basket approaches and the identification of the preferred approach (p. 208), enhancement of benefit levels and extension of coverage of personal needs allowance, extension of benefits to full-time workers who qualified financially, elimination of the three-month qualifying period for FBA for all single parents, equalization of rates between single employables and temporarily unemployables, removal of job history as a basis for denying assistance and enhancement of STEP. Noteworthy among the 17 remaining recommendations, were the implementation of a market-basket approach, the establishment of a point at which recipients would be eligible for long-term benefits, the reduction of categories of automatic ineligibility, the endorsement of suspending job search requirements, and the requirement that persons accept *suitable employment*, and funding pilot projects in opportunity planning. Even though recommendations regarding minimum wage were not deemed to be within *Back on Track*’s mandate, it is important
to note that the minimum wage was raised substantially in 1991, since benefit levels relative to wage levels are a key consideration embodied in the principle of lesser eligibility.

*Time for Action*

The mandate of the Advisory Committee in preparing *Time for Action* was to provide guidance to new unified legislation. Despite less favourable economic and political conditions\(^{24}\), the report re-affirmed the spirit (Advisory Group, 1992, p. 6) and direction of *Transitions*. Perhaps the most notable differences were presaged by *Back on Track*. *Time for Action* affirmed the mutual responsibilities of society and individuals but specified government as the locus of collective responsibility (p. 33). It was very explicit in its criticism of federal policies which emphasized inflation and deficit reduction over lowering unemployment (pp. 18-19) and underlined the effect of capping federal transfer payments on the provincial treasury (pp. 24-25).\(^{25}\) Absent was such conciliatory, careful phrasing as "those with a primary interest in economic policy have only rarely considered the consequences or implications for income security of macroeconomic changes" (SARC, 1988, p. 265). Like the others, *Time for Action* emphasized that social assistance reform alone was insufficient to address poverty and that reforms in related areas were necessary. It also affirmed the primacy of job creation whether through economic growth or other avenues.

\(^{24}\) Although the NDP was in power, the public attitudes toward welfare recipients had deteriorated (Advisory Group, 1991, p. 25) and the NDP was under considerable pressure to abandon its social democratic orientation.

\(^{25}\) See later discussion on the imposition of a cap on the level of federal funds available through the Canada Assistance Plan.
Time for Action explicitly rejected the spur of poverty approach to social assistance (pp. 26-29), reiterating Transitions' call for the annual indexing of an agreed upon basket of goods and the updating of basket components every five years. Basic allowance rates were to be set in relation to this basket (pp. 90-92). The report also advocated further improvements in shelter allowances (pp. 94-97). Like Transitions, it urged mandating of additional items as special necessities including basic dental care (pp. 98-104). Following Transitions and Back on Track, only three items had been designated as mandatory, and dental coverage had remained an optional item for municipalities. Like the other reports, Time for Action referred to the erosion of the value of the minimum wage, but made no specific recommendations regarding its increase (p. 23).

Time for Action went further than Transitions and called for only two categories of recipients, persons with disabilities and those without, and these categories were based on putative differences in need, not deservedness. This was consistent with the report's position of not distinguishing between those groups required to participate in opportunity planning and those not. Time for Action did reiterate Transitions' position against automatic ineligibility and acknowledged progress in this area for applicants for refugee status. For two other groups, the self-employed and 18-20 year olds living in the family home, it stipulated that eligibility should be determined on the basis of need, and recommended separate assessments of eligibility for 16 and 17 year olds living away from the family home (pp. 42-45).\textsuperscript{26} Those involved in labour disputes were to be eligible on a short-term emergency basis only.

\textsuperscript{26} This constituted a potential restriction of eligibility relative to the Back on Track recommendation for this group.
It is the work-test principle where we see the most significant difference between *Transitions* and *Time for Action*. *Transitions* discussed problems with the current job search and job acceptance requirements, but made no specific recommendations. It advocated mandatory opportunity planning for some recipient groups and the application of sanctions for non-compliance. *Time for Action* proposed that participation in opportunity planning be voluntary with no sanctions in the form of reduction or termination of benefits. The rationale for this position included the following: voluntary participation was more likely to result in positive outcomes, missing out on the supports and services offered through opportunity planning was a form of sanction, and in the foreseeable future those voluntarily participating would demand more resources than the system could provide (p. 85). Within the context of this approach, searching for and taking jobs would be supported and encouraged, but not be conditions of receipt (pp. 82-86). In essence, *Time for Action* advocated the complete elimination of the work-test principle, although it certainly did not suggest that employment was any less desirable from a societal perspective than SARC, nor less desired from an individual viewpoint.

**Economic and Fiscal Environment**

Significant shifts in the economic and fiscal environment occurred between the establishment of SARC in 1986 and the release of *Time for Action* in 1992. In 1986, when SARC was established, real GDP growth had been averaging 5.9 percent from 1983 to 1985, employment growth had hovered around 3.5 percent since 1984 and the unemployment rate had dropped slowly since the 1982-84 recession to 7.0 percent (Treasury, 1992, October). Social assistance beneficiaries (combined FBA and GWA) for June had remained at about 5.8 percent
of the population under 60 from 1983 to 1986 (Advisory Group, 1992, p.19), although their numbers had increased in absolute terms (SARC, 1988, p. 37). The provincial operating deficit was declining, the public debt interest-to-revenue ratio was steady at about 10 to 11 percent and the debt as a percentage of GDP was steady at about 17-18 percent (Ontario. Ministry of Finance [Finance], 1993, May).

By 1988, when Transitions was released, GDP growth was still strong (7.0 percent), as was employment growth (3.7 percent). The unemployment rate at 5.0 percent was lower than it had been since before the 1982-84 recession (Treasury, 1992, October). Despite this, the number of social assistance beneficiaries had continued to expand moderately beginning in 1987. As of June 1987 they had risen to 6.2 percent of the population under 60 from 5.9 percent in June 1986. By 1988 they represented 6.4 percent (Advisory Group, 1992, p. 19). The provincial operating balance (1988-89) was in its second year of surplus, the debt interest-to-revenue ratio had dropped slightly and the debt-to-GDP ratio had also declined during the three-year period (1986-87 to 1988-89) (Finance, 1993, May).

In late 1989 and early 1990, when major changes emanating from SARC were implemented, the 1990s recession had not yet begun, although there were signs that economic conditions were deteriorating. Real GDP growth in 1989 was lower at 2.1 percent and employment growth dropped to 1.8 percent. The unemployment rate was relatively stable, moving only to 5.1 percent; however, this was the first increase since the decline that began in 1984 (Treasury, 1992, October). In 1989 the number of beneficiaries again increased as a percentage of the population under 60 to 6.8 percent (as of June), although a small portion of this increase may be attributable to the SARC changes implemented late in year (Advisory Group,
1992, p. 19). Despite these changes, the fiscal position of the government remained strong. The 1989-90 operating surplus was significant, the debt interest-to-revenue ratio dropped and the debt-to-GDP ratio fell to 14.4 percent (Finance, 1993, May).

By 1990 growth in real GDP and employment had not only stagnated but declined and the unemployment rate rose to 6.3 percent (Treasury, 1992, October). As of June 1990, the number of beneficiaries had risen to 8.1 percent of the population under 60 (Advisory Group, 1992, p. 19). An operating surplus remained in 1990-91, but it had decreased significantly compared to that in 1989-90, as operating expenditures had risen dramatically and revenue dropped sharply. The debt interest-to-revenue ratio had continued to drop from 1989-90 to 1990-91, but the debt-to-GDP ratio had risen from 15.1 to 16.9 percent (Finance, 1993, May).

In March 1991, when Back on Track emerged, the economy was still showing negative real GDP growth. Employment was shrinking more rapidly and the unemployment rate was continuing to rise. The annual rate reached 9.6 percent in 1991 (Treasury, 1992, October). The number of social assistance beneficiaries (FBA and GWA) rose sharply, from 8.1 percent of the population under 60 as of June 1990 to 13.9 percent as of June 1991. The fiscal position changed dramatically from 1990-91 to 1991-92, from a .2 billion surplus to a 7.1 billion deficit. The deficit reflected a decline in revenue and continued growth in expenditures, attributable to a counter-cyclical 1991-92 budget and increased social assistance costs driven by dramatic caseload growth. In 1991-92 debt interest-to-revenue ratio increased to 10.3 percent and debt-to-GDP ratio rose substantially from 15.4 to 19.6 percent (Finance, 1993, May).

Time for Action was released in May 1992. Although there was hope of a modest recovery in 1992, employment was still declining and the unemployment rate was increasing.
Social assistance caseloads were continuing to rise and the government was anticipating another operating deficit. The debt interest-to-revenue ratio would increase in 1992-93 and the debt-to-GDP-ratio would rise dramatically to 24.9 percent (Finance, 1993, May).

It is important to note here that fiscal and economic conditions at the provincial level were affected by decisions at the federal level. The Conservative government, elected in 1984, made reduced government spending and deficit fighting economic priorities (Guest, 1997, p. 218). Restraints to federal transfers began as early as 1986 with limits placed on the growth of Established Programs Financing (EPF). Additional restrictions to the growth in EPF payments were added in 1989 and 1990. Re-elected in 1988, the Conservatives “accelerated” the cutbacks to social spending (Cohen, 1997, p. 49), including reductions in transfer payments to the provinces, and entered into the Canada-U.S. Free Trade Agreement (CUFTA) in 1989. Ontario was doubly hit by the economic restructuring precipitated by CUFTA and the cap placed on federal transfer payments through the Canada Assistance Plan (CAP) in 1990. Growth in payments through CAP to have provinces, including Ontario, was restricted to five percent for two years.27 The fiscal positions of federal and provincial governments were further exacerbated by a restrictive federal monetary policy which resulted in high interest charges on government borrowing. In addition, Cohen (1997, pp. 35-36) argues that as of 1988 the Conservative government engaged in a deliberate campaign to create and sustain the hegemony of deficits and debts in public discourse.

27 Transfers to the provinces had averaged 6.5 percent from 1985 to 1990. The cap on CAP was subsequently extended to 1994-95. The real cash value of EPF transfers continued to decline until CAP and EPF were replaced by the Canada Health and Social Transfer in 1996, the implementation of which essentially resulted in further declines in total provincial transfer payments.
In summary, from 1986 to 1989, traditional economic and fiscal indicators generally reflected positive trends. Based on the premise set out in the introduction, these positive trends expanded the *perceived* range of options available to decision-makers, allowing both the discourse of *Transitions* to occur and enabling the implementation of some of the recommendations that reflected a more institutional approach. Subsequently, economic and fiscal conditions began to deteriorate, constricting the *perceived* latitude available to decision-makers. The work of the Advisory Group on New Social Assistance Legislation, formed in May 1990, was delayed. It was only with the advent of the NDP government in September 1990 that life was restored to the process of implementing reforms that would move the social assistance program in a more institutional direction. For almost two years, policy continued to shift in an more institutional direction, despite what might be *perceived* as fiscal and economic constraints. However, by mid-1992, in the presence of continued fiscal and economic pressures, policy began to shift in a more residual direction, despite the governance of a party who historically had subscribed to social democratic ideals.28 Decisions at the federal level--fiscal, monetary and trade--affected the fiscal and economic climate at the provincial level and arguably contributed to the hegemony of deficit and debt considerations.

---

28 It is recognized that more emphasis could be placed on political factors in this analysis; however, a more in-depth review of these is beyond the scope of the present research. One important area of consideration that would link political and fiscal/economic factors would be the role of the corporate sector in maintaining the hegemony of deficit/debt considerations via, for example, the use of threats to lower Ontario’s credit rating.
**Return to residualism (mid-1992 to 1994)**

It was evident fairly quickly that *Time for Action* would be disregarded. It reflected a more institutional approach, and by the time it was released, the tide had turned. In the month of its release, the NDP Minister of Community and Social Services, Marion Boyd, announced more resources would be devoted to detecting fraud (Ontario. MCSS, 1992, May 6), refocusing the problem on individual behaviour rather than on structural factors such as the labour market. In August changes to STEP were introduced designed to restrict entry onto social assistance while maintaining financial incentives to leave social assistance via employment.\(^{29}\) In November 1992 a draft of a report destined for the Cabinet Committee on Social Development ("Social Assistance," 1992, November 25) was leaked. Its tone differed substantially from *Time for Action’s*.

For example, there was no emphasis on benefit adequacy, although it did advocate minimum wage improvements (p. 2). It also endorsed obligatory participation in opportunity planning for some recipients (pp. 21-24).\(^{30}\) While minimum wages were increased that month, increases in basic allowances were delayed from January to April 1993 and restricted to one percent. The rationale provided was that "rates [had] increased approximately 12.5 percent since 1990, compared to a 6.1 percent increase in the cost of living" (Ontario. MCSS, 1992-93, p.2).

---

29 Applicants with earnings while applying for social assistance were not entitled to use the basic exemption nor entitled to the 25 percent earnings work incentive for the first three months of their assistance.

30 Two options for sanctions were suggested—reduction in basic benefits or loss of access to benefits derived from participating in transitional supports. What is unclear from the proposal is whether the second option, which on the surface paralleled *Time For Action’s* idea that non-participants would be sanctioned by virtue of their lack of access to the resources offered through opportunity planning, was in essence simply a reduction of benefits since some benefits previously included as basic were to be shifted to transitional benefits.
A change in direction was also evident in the April 1993 Expenditure Control Plan. The plan called for the downgrading of benefits through reduction of special benefits, inclusion of additional income sources in calculating entitlements, and reducing STEP earnings exemptions. Eligibility was to be restricted for young people (16-17 years) and immigrants. Sole-support parents whose children were over twelve were to be assisted in preparing to enter the workforce (Finance, 1993, April). These changes became effective July 1 and August 1.31

In July 1993, the long awaited white paper, Turning Point, was released. Billed in the Throne Speech as setting out changes that represented "fundamental reform" (Ontario. Lieutenant-Governor, 1993, April 13), it proposed three programs to replace both GWA and FBA: the Ontario Child Income Program (OCIP), the Ontario Adult Benefit (OAB) and Job Link. OCIP was to provide a monthly benefit to all low-income families with children. The benefit would be available to those with incomes below a maximum, would decline in value as incomes rose and would vary with the number of children. Through OAB, persons eligible on

31 Assets and Income: the cash surrender value of life insurance policies was to be treated as an asset for the purposes of determining eligibility; interest and dividends earned on assets, whether received or not, were to be treated as income (July 1); sponsored or nominated immigrants living in the sponsor's/nominator's home would be deemed to have income such that the maximum assistance they could receive would be $50 except under specified circumstances as assessed by the welfare administrator (August 1). Eligibility: persons for whom a deportation or departure order had been made under the Immigration Act were not eligible, nor were visitors (except those making a claim for refugee status) or tourists (July 1); unemployable persons under 18 living in the parental home were no longer eligible in their own right; employable persons under 18 living away from their parental home were no longer eligible unless they were sole-support parents or there were special circumstances (July 1); both employable and unemployable sole-support parents under 18 living in the parental home were to receive a reduced benefit (August 1). Single persons in receipt of a student loan or not eligible for one due to parental income were no longer eligible nor were family heads or adult dependents in receipt of such loans (August 1). Benefits: the earnings exemption, which was part of STEP, was reduced from $75 to $50 for single persons, $175 to $120 for sole-support parents and $150 to $100 for any other cases (August 1).
the basis of a needs test would receive a monthly benefit designed to cover basic needs and pegged at a level so that people would always be better off working. A long-term supplementary benefit would be provided to recipients who were unable to work and extra financial support would be given to persons with disabilities to cover disability-related expenses. Job Link would be available to all OAB recipients, would assist them in developing an individualized employment plan and would eventually be able to annually place people in 100,000 spaces in high schools, community colleges, training courses and pre-employment programs. It would also connect people to apprenticeship and work placements. Participants would receive an Employment and Training Allowance (ETA), a benefit designed to cover basic needs plus the cost of job preparation and job search activities (Ontario. MCSS, 1993, p. 3). Guiding this approach was the desire to promote independence through encouraging job preparation and to treat all low-income families fairly (p. 3). Turning Point continued the tradition in previous reports of noting the need for reforms beyond those to social assistance in order to support people's transition to work (e.g., employment equity, child care, affordable housing). It also added the transformation of the drug benefit plan to one where subsidy would be based on income rather than social assistance receipt or age.

How did this document compare with earlier ones? First, adequacy of benefits was not given the same primacy. Rather Turning Point implied that this was no longer an issue since benefit levels had increased by 13.5 percent since 1990 and were "among the highest in Canada

---

32 It appears from the report that there will be an expectation that persons with disabilities seek employment and that additional financial assistance will be provided to cover disability related expenses as required based on individual need. Only those who "face severe limitations in earning a living" will be eligible for a long-term supplement (p. 19). The report, however, does not provide sufficient information for this to be clear.
in keeping with Ontario's higher cost-of-living" (p. 7) and that a more major concern was to ensure that people were better off working than collecting social assistance (pp. 3, 19), a strong endorsement of the principle of lesser eligibility. This focus on lesser eligibility seemed in part predicated on the belief that caseloads would drop in response to implementation of this principle. Certainly the report made clear its concern regarding the rise in caseloads and costs. From 1989-90 to 1992-93 caseloads had escalated from 313,500 to an estimated 620,400, provincial costs from 2.6 billion or 6 percent of provincial spending to an estimated 6.1 billion or 11 percent of the provincial budget (p. 10). This principle also seemed to be at the heart of the children's benefit and changes in the drug benefit plan. These would be available to the working poor as well as social assistance recipients, thereby reducing disincentives to leave welfare.

One of the difficulties in assessing Turning Point is that it presented only "broad brush strokes", rather than the "finer points of design, delivery and other operational issues" (Preface, Message from Minister Tony Silipo). As Walkom (1993, July 12, p. A13) commented,

it is a disturbing document—disturbing because it is ambiguous. It could produce progressive reforms that seriously tackle the issue of welfare and poverty. Or it could produce mean-spirited reforms that punish the poor for being poor.

The document gives few clues regarding the level of benefits under the new approach although these would be critical to the final shape of the new system—whether it would be progressive or mean-spirited. Would the total benefit package enshrine the lesser eligibility principle primarily by lowering benefits to social assistance recipients or primarily by providing additional supports to non-recipient working poor?
How did this report reflect the principle of deservedness? Unlike Transitions, Turning Point did not propose a separate program for persons with disabilities. As indicated earlier, such a separation could be justifiable on the basis of need, but it also could be interpreted as an extreme application of a hierarchy of deservedness. Instead, persons with disabilities, sole-support parents, single adults and couples were to receive similar individual basic benefits under OAB, with only "older persons and persons with disabilities who face[d] severe limitations in earning a living" eligible for a top-up (p. 19). All adults receiving the basic benefit could receive an enhanced benefit (ETA) if they participated in the Job Link. The OAB benefit in essence eliminated the hierarchy of deservedness, adopting the principle of need; however, the absence of any indications of benefit levels left open the possibility that those deemed more deserving and receiving higher benefits under the existing system would simply have their benefit levels brought down to the lowest level. In other words, they might all drop to the category of less deserving. Similar to the long-term vision of Transitions, Turning Point proposed a children's benefit which would be available to all low-income families, whether they were eligible for social assistance or not. As discussed earlier, this could be viewed as a measure designed to eliminate the hierarchy of deservedness, by reducing the segregation of welfare recipients from the working poor. It could also be seen as predicated on the additional needs that families with children have. However, it could also be viewed as the application of the deservedness principle, separating poor parents from poor children, and relegating those without children to a lower category of deservedness.

It is in the treatment of the work-test principle that we see potentially the most marked departure from previous reports. Turning Point stipulated that non-participants in Job Link, the
equivalent to Transitions' opportunity planning, would receive a lower OAB benefit. This sanctioning approach was similar to Transitions' recommendation; however, unlike Transitions, Turning Point advocated extending this sanctioning approach to sole-support parents and some persons with disabilities. The contrast between Turning Point and its immediate predecessor, Time for Action, was dramatic. Time for Action opted for no mandatory requirement, and no reduction of basic benefits, for any group. Rather it specified that the lack of access to the resources available through opportunity planning would be a sufficient sanction.

The extension of the sanctioning approach to a broader group could be interpreted as reflecting an expectation that a greater proportion of social assistance recipients (particularly among FBA recipients) would prepare for and seek employment—that is, broadening the application of the work-test principle. However, Turning Point avoided the language of Transitions and did not label the participation in Job Link mandatory. This contributed to the document's ambiguity, which led some to view the OAB as a form of guaranteed annual income since people would be able to receive it unconditionally. Thus, Turning Point reforms could also be seen as a movement away from the work-test principle. Without the actual figures and a comparison of the value of the new package (without ETA) relative to the old, the nature and magnitude of the shift was unclear.

---

33 It appears that persons with disabilities in this group might still be eligible for special mandatory benefits to cover disability related expenses, but eligibility would be determined on an individual basis.

The legislative changes required for the overhaul of the social assistance system proposed in *Turning Point* were to be introduced by the end of 1993, with the new programs to be in operation in 1995 (p. 19). Early in 1994, senior officials with MCSS indicated that the legislation would be delayed until some time in 1994 and the implementation of the new system would not occur until 1996. Revisions to the original plan were to include a special supplement to sole-support parents and an indefinite delay of changes to the Ontario Drug Benefit Plan. Key issues, ambiguously addressed in *Turning Point*, had still not been decided: for example, whether ETA would cover only extra costs of employment and training or whether it would be larger and thus be designed as a financial incentive; whether receipt of even the basic OAB would be conditional on looking for work (Toughill, 1994, January 25).

In March 1994, Premier Bob Rae acknowledged that welfare reform on the scale originally envisioned was unlikely since additional federal monies required to implement the reform would probably not be forthcoming. It appeared that the cap on CAP announced in 1989, which was to expire in 1994-95, would be extended. In addition, the NDP Minister of Community and Social Services, Tony Silipo, indicated that welfare benefits might be cut because of a $2 billion shortfall in provincial revenue (Papp, 1994, March 3). By the end of March, the NDP government announced that welfare rates would be frozen for most recipients35, that OCIP would be dropped and that additional resources would be allocated to reduce fraud in hopes of reducing social assistance expenditure. Steps proposed to reduce fraud included hiring

---

35 Two groups received decreases. The basic needs allowance for couples was reduced by $27 and the minimum shelter allowance (or basic shelter allowance) was eliminated for those residing in places such as a house, apartment, mobile home, or similar structure. Previously, those with low shelter costs received a minimum regardless of their actual costs (Ontario Gazette, Regulation 319/94).
270 additional staff to review files, beginning with *high risk* cases—people with possible undeclared common-law/spousal relationships, those not meeting residency requirements (presumably immigrants) and those with undeclared assets. In addition, more stringent requirements were introduced regarding provision of documentation by recipients ("Province to target", 1994, March 28; Walker, 1994, March 29).36

In June 1994, a much scaled-down version of Job Link was introduced. At an annual provincial cost of $25 million with matching federal monies, it included funding 4000 training spaces rather than the peak 100,000 spaces anticipated in the original plan.

Welfare fraud and overpayments surfaced as an issue in the fall with the release of an MCSS report regarding the results of the in-depth case file review announced in the spring. Both opposition critics and some media reports contributed to an impression of rampant mismanagement and abuse (Walkom, 1994, September 24). *Managing Social Assistance in Ontario: Finding the problems and fixing them* (1994) reported that a review of 40,000 at risk cases had revealed overpayments in 15 percent of cases (FBA/GWA). The report stipulated, however, that overpayments did not all result from fraud but that many were due to client or staff error or to simply incomplete information, and that in some instances the overpayment was extremely small or resulted from failure to report casual gifts of small value (Ontario. MCSS, 1994, p. 7). The report also acknowledged the increases in the caseloads of each worker in the

---

36 One of the problems with *enhanced verification* was that some of the people most in need of welfare were those least able to produce the required documentation (e.g., proof of marital status, residency, sponsorship agreements for immigrants, medical conditions). Some documentation is quite expensive to obtain and/or photocopy (e.g., social insurance number, birth certificate, divorce papers). "Province to target" (1994, March 28) alludes to this problem.
early 1990s, which dovetailed with the observation of the NDP Minister of Community and Social that some of the systems "natural controls" had been overwhelmed by the massive caseload growth (Walker, 1994, September 22).

This focus on alleged fraud and abuse was not new. As early as May 1992 the NDP government announced that additional resources would be allocated to addressing the problem. This was followed by similar statements in the Expenditure Control Plan (Finance, 1993, April), the announcement of a new computer system to assist in detecting fraud in late December 1993, discussion of the possible use of photo or fingerprint ID (Brent, 1993, November 18; Toughill, 1994, February 17; Papp, 1994, October 16), the in-depth case file review announced in March 1994 and the publication of its results. It is arguable that highlighting government actions to address abuse laid the groundwork for the use of welfare abuse as a key element in the Conservative election campaign strategy (Walkom, 1995, May 13) and contributed to their election in June 1995. It also set the stage for cuts to welfare benefits and a punitive approach to entitlement (work-for-welfare).

There was far less policy activity in early 1995 as the NDP's mandate approached an end. Once the Conservatives came to power, restrictions in eligibility were quickly announced as were cuts to benefits for all welfare recipients other than recipients on FBA who were disabled or aged. More specifically, in October 1995, the waiting period for benefits for persons who quit

---

37 In Niagara, for example, reluctance of regional councillors to hire additional staff to cope with the massive and sharp increase in demand resulted not only in slowed intake, which would have served to restrict caseload growth, but also in lesser initial scrutiny of cases and significantly reduced follow-up, both of which would have led to some of the problems identified in the report as well as contributed to increased caseload size. In other words, a regional council unsympathetic to welfare recipients, through its actions to ration service, in fact contributed to an alleged crisis of fraud and mismanagement.
without reasonable cause or were fired for valid reasons was increased to three months and further conditions were added to eligibility requirements for 16 and 17 year old, which included a family assessment, school attendance and adult supervision. Additional measures to address alleged fraud included a snitch line and enhanced information sharing efforts among provincial programs and the federal government (SPCMT, 1995, September). Maximum shelter benefits were cut by 21.6 percent affecting at minimum the 40 percent of people whose shelter costs were above existing maximums. The basic needs benefits was also cut by 21.6 percent. This meant, for example, the combined cuts for a single person with shelter costs at, or above, the previous maximum would result in a drop in benefits from $663 to $520 (the nominal levels as of May 1993).

Economic and Fiscal Environment

As mentioned above, although real GDP growth had turned from negative to positive in 1992 (the year Time for Action was released), it was very low. Employment levels had continued to decline and the unemployment rate had increased. In 1993, the year Turning Point was published, real GDP growth was stronger (2.1 percent), and employment grew for the first time since 1989. The unemployment rate dropped slightly, but remained high at 10.6 percent, still above the 1980s recessionary peak (10.4 percent). It was not until 1994 that GDP growth resumed a level approaching that of the mid-eighties (5.3 percent), although employment growth remained very low at 1.4 percent. The unemployment rate, however, dropped by a full

---

SPCMT (1995, September) provided the estimate of 40 percent. However, this estimate does not include people whose shelter costs were below the previous maximum, but above the new one.
percentage point to 9.6 and the number of unemployed dropped substantially. The combined social assistance caseload continued to climb from 608,000 cases in 1992 to 660,000 in 1993, then rose again in 1994, but at a much slower pace, to an estimated 678,000. (Finance, 1994, November; 1996, May). Thus, there were signs in 1993 that the economy was improving, although job growth seemed to lag behind growth in GDP. To the extent that these improvements translated into increased revenue and decreased demand (or a slowing of growth in demand) for social assistance, it might be expected that the perceived fiscal pressure to reduce expenditures would diminish.

Was there a significant improvement in fiscal indicators? The operating deficit, which had jumped dramatically in 1991-92, and increased further to $8.1 billion 1992-93, showed a downward trend beginning in 1993-94, dropping to $6.7 billion and then to an estimated $6.1 billion in 1994-95. However, debt-interest-to-revenue rose from 10.3 percent in 1991-92 to an estimated 17.3 percent in 1994-95 and the public debt as a percentage of GDP rose from 19.5 to an estimated 30.0 percent (Finance, 1995). Both these indicators could be perceived by decision-makers as dictating continued expenditure restraint and therefore limiting the policy options available to them. In addition, there was every indication that the federal Liberal government would continue to restrict provincial transfer payments, following the direction previously established by the Conservatives.

**Summary**

A period of intensive policy activity which began in July 1986 followed the relatively sparse period of the early 1980s. Social assistance policy shifted toward the institutional end of
the spectrum, with *Time for Action*'s analysis and recommendations representing the culmination of that shift. Proposed and actual changes to social assistance were generally in the direction of enhancing benefit levels, broadening eligibility and reducing the rigour with which the work-test was applied, although fostering transitions to employment was still a paramount consideration. It was not until mid-1992, during the height of the recession, with caseloads higher than ever before, that policy started to shift back toward the residual end of the continuum. Subsequently, policy proposals and actions tended not to emphasize benefit adequacy, to restrict eligibility, to broaden the range of recipients to whom the work-test applied and to increase the rigour with which the work-test was applied.

At the outset, three principles, identified as important historically in shaping social assistance policy in Ontario, were used as a basis for organizing this review of more recent policy development. These principles, or their applications, also tend to be the policy or programmatic features investigated in research regarding the determinants of social assistance receipt—benefit levels, eligibility criteria, work requirements, and treatment of earnings. Theoretical frameworks which incorporate these determinants are discussed in Chapter 2 along with the results of existing empirical research. Before proceeding to this discussion, UI policy is examined.

As indicated earlier, research into determinants of social assistance commonly focuses solely on the parameters of the social assistance program, ignoring the potential impact of other income security programs.\(^{39}\) However, recently, Canadian research has developed that analyses

\(^{39}\) Although the UI program is the only other income security program that is included here, it is recognized that other programs might have an impact. The UI program was selected for inclusion in empirical models based on the precedents of other studies, the practice wisdom
the linkages between the federal UI program and provincial/municipal social assistance programs. Like the Ontario social assistance program, the federal UI program was subjected to considerable scrutiny during the study period and underwent significant policy changes. As such, the program lends itself to a parallel analysis of the intermingling of policy discourse, action and fiscal and economic conditions and the program's trajectory serves as a point of comparison with that of social assistance policy.

UNEMPLOYMENT INSURANCE POLICY (1981-1994)

Unemployment Insurance program components remained relatively stable during the 1980s, despite considerable scrutiny, as evidenced by the policy documents to be examined here. The 1990s ushered in a flurry of significant changes, which reflected the increasingly dominant voices within the 1980s policy discourse, and resulted in a markedly more restricted program. Based on this trajectory, the study period is divided into two periods. The first, described as institutionalism under scrutiny, spans the period from 1981 to 1989. The period is characterized by the emergence of four key policy documents which increasingly called for a more restrictive UI program, but were accompanied by few actual program changes. The second period, called emergent residualism, spans the years 1990 to 1994 and is marked by a series of program cuts that dramatically reduced the scope of the program. Like social assistance, unemployment insurance policy is quite complex and therefore to simplify the review of policy activity,
passive income support versus active labour market measures; and program cost reduction. These themes were derived from the way in which the major lines of debate were cast in the key policy documents to be examined here.

The first theme draws on the important distinctions between private and social insurance. Private insurance is based on the principle of actuarial soundness. In the case of employment, this means that those with higher risk of unemployment pay more (higher premiums) and/or receive reduced benefits (either fewer benefit weeks or a lower earnings replacement rate). Achieving actuarial soundness depends on being able to accurately predict both the likelihood of an event and the number of people who will be affected so that the premium-to-benefit ratio will cover the predicted costs. It also means being able to identify the groups of people who are more likely to be affected by the event and therefore being able to adjust their premium-to-benefit ratio accordingly. If events are entirely predictable for some groups, for all practical purposes, these will be deemed uninsurable (e.g., seasonal unemployment). Similarly, some events may have such a high probability of occurring and/or such a widespread effect, that the premium-to-benefit ratios required to cover the costs are impractical. In addition, accurate prediction may become problematic if people are induced by the availability of the insurance to incur the insured risk. For this reason, either the premium-to-benefit ratio will be set to discourage this, or other strategies to reduce work disincentives will be deemed desirable.

---

40 The premium-to-benefit ratio is likely to be set so high that for all practical purposes, the event will not be covered, particularly, if those most likely to be affected have lower incomes and therefore cannot afford higher premiums.
In contrast, social insurance entails the marshalling of community resources (through taxes or contributions) for a "contingency whose total dimensions are uncertain, but whose appearance in some form or magnitude is certain." Social insurance does not require strict adherence to the private insurance ideal of actuarial soundness. To ensure financial soundness requires only the management of total funds such that revenue (taxes and contributions) adequately cover benefits (Guest, 1980, p. 119 citing the Marsh Report). Adequacy of benefit, in the face of a social hazard, is a more important consideration than ensuring a strict relationship between risk and payment-to-benefit ratio, although the latter may come into play (Guest, 1997, p. 230 citing Hohaus). Income redistribution is viewed as a legitimate function or consequence of the program and as such there may be a strictly income transfer component to the program.

Corak (1994a p.96) argues that stricter adherence to the private insurance ideal is underpinned by a view of unemployment as voluntary "to some significant degree" and as largely frictional or structural in nature. Even temporary lay-offs are considered voluntary in the long-term because they are seen as part of an employment package of wages, work conditions and temporary lay-offs that workers have chosen (Corak, 1994a, p. 98). Implicit in this perspective is the belief that lower wages would allow a firm to avoid temporary lay-offs and that workers and firms are responsible for adjusting to, and bearing the costs of, random

---

41 Taxes and contributions means that social insurance may be subsidized from general government revenue as opposed to being dependent solely on program contributions (e.g., insurance premiums). It is important to note that different definitions of social insurance exist. Indeed the debate over the definition is part of the larger debate about the desirability of social insurance programs.

42 Corak (1994a, 1994b) uses the terminology income transfer scheme versus insurance but his arguments appear to apply to social insurance versus private insurance.
fluctuations in "product and factor markets" and "production technologies" (Corak, 1994a, p. 96).

Corak (1994b, pp. 16, 46) suggests adherence to social insurance principles is premised on a view of unemployment as primarily involuntary and cyclical. In what he deems as an extreme position within this approach, the unemployed are considered victims of broader macroeconomic policy such as the focus on inflation fighting and the failure to maintain full employment (Corak, 1994b, p. 15). As such, the public sector is seen as largely responsible for bearing the costs of adjustment (Corak, 1994a, p. 106).

From the above discussion, it is clear that a stricter adherence to the private insurance ideal in the context of UI would move the program toward the residual end of the spectrum and greater adherence to social insurance principles would move the program toward the institutional end. The first gives primacy to the contribution of individual factors to unemployment and sees a reduced role for government; whereas, the second emphasizes societal factors and advocates a more activist role for government. It is perhaps important to note here that despite repeated calls to return to the private insurance ideal, the UI program had never operated solely on that basis.

The second theme that emerges from the policy documents is the debate concerning the relative merit of passive income support versus active labour market measures. The active measures include assisting individuals in moving to areas with more employment opportunities, providing training opportunities and developing job creation programs (Lazar, 1994, p. 39). This focus on facilitating labour market adjustment tends to assume that unemployment is largely frictional and structural; however, less emphasis seems to be placed
on the voluntary nature of unemployment and government is perceived as having some responsibility to facilitate adjustment and to reduce the hardship resulting from labour market changes. This theme is more difficult to situate with respect to the residual-institutional spectrum. It is arguable that its location would depend on the magnitude and quality of the active measures initiated; the extent to which these measures were substituted for other macro-economic strategies that might reduce the overall amount of labour market dislocation; and the balance achieved between active and so-called passive measures, such that the presence of cyclical unemployment was acknowledged. 43

The third theme, program cost reduction, is self-explanatory. The time period considered here is one in which all social spending is called into question, with the rise of policy discourses that reflect a neo-conservative perspective and the emergence of debts and deficits as a focal point of political discourse. Program cost reduction is also compatible with calls for a return to the private insurance ideal, which tends to imply program downsizing. Overall reduction in social spending and the role of government is consistent with a shift toward the residual end of the spectrum.

What program design features tend to be associated with these themes? Adherence to social insurance principles would not require a strict actuarial relationship between the premium-to-benefit ratio and the level of individual risk. In fact, offering extended benefits to those at higher risk due to high regional unemployment levels would be consistent with these

---

43 The choice of language, in particular, passive, lends itself to the interpretation, or may reinforce an impression, that not only is government playing a passive role, but that the recipients are too. This choice of wording seems to fit well with the ascendancy of the language of dependency which firmly situates the cause of social problems within the individual.
principles. Adherence to the private insurance ideal would entail advocating for a stricter actuarial relationship (e.g., seasonal workers paying higher premiums or receiving lower, or zero, benefits). The latter could be perceived as compatible with the active labour market adjustment stance (e.g., by encouraging people to find full-year employment) and with the program cost reduction objective.

Adherence to social insurance principles would lend itself to coverage of more of the population and a broader range of risks (e.g. part-time and seasonal workers). Adherence to the private insurance ideal would entail more restricted coverage—less of the population (e.g., only those with a substantial labour attachment) and a relatively narrow range of risks: namely those that are unpredictable on an individual basis, but whose risk can be accurately assessed on a collective basis (e.g., not seasonal employment). Program cost reduction is compatible with reduced coverage. Active measures versus passive would likely be associated, at minimum, with narrowing the group eligible for passive income support. Narrowing coverage would necessarily involve instituting more restrictive eligibility criteria.

Adherence to social insurance principles would place less emphasis on developing program features to discourage people (or firms) from choosing unemployment (or lay-offs), since most unemployment would not be construed as insurance-induced. In contrast, adherence to the private insurance ideal and the privileging of active measures and program cost reduction would entail such a focus, and tend to translate into such features as higher qualifying periods, penalties to workers for quitting or being fired, experience-rating for firms to discourage planning lay-offs to take advantage of UI benefits, and reduction in the earnings replacement rate and the duration of benefits.
Institutionalism under scrutiny (1981 to 1989)

The trajectory of the policy activity during the 1980s can best be discerned from the vantage point of the 1971 reforms. Arguably, 1971 represented the point of strongest influence of the social insurance approach. As a result of the reforms, more workers became insured, the contingencies of sickness, maternity and retirement were covered, entrance requirements were lowered, benefits were raised and national and regional unemployment rates were taken into account in the benefit structure. As Pal (1988, p. 33) notes, there has been a steady retrenchment from the expansion and liberalization of UI since the mid-1970s. Three policy documents provide a window on the tenor of the policy discourse during this period: *Unemployment Insurance in the 1980s* by Employment and Immigration Canada, the *Report of the Royal Commission on the Economic Union and Development Prospects for Canada* (1985), or the Macdonald Commission report, and the *Report of the Commission of Inquiry on Unemployment Insurance* (1986), commonly referred to as the Forget Commission report.

*Unemployment Insurance in the 1980s* (1981)

The internal Employment and Immigration Canada (EIC) Task Force on Unemployment Insurance published the first major policy document addressing UI during the study period. According to Pal (1988, p. 88), the report represented an attempt to combine recommendations that appealed to business with ones that appealed to labour. The report described income protection and labour market adjustment as twin objectives that were sometimes complementary and sometimes competing, and identified the balance between these
two objectives as the central feature of the policy debate. It then weighed in on the side of "strengthen[ing] UI's contribution to labour market objectives" (CEIC, 1981, p. 43), although it also noted that any program changes must also take into account equity issues, the need to reduce program complexity and promote public understanding, and cost considerations (p. 44). The private insurance *ideal* was invoked as a rationale for specific recommendations (e.g., elimination of the special retirement benefit) (p. 71).

Recommendations intended to appease labour included the following: improving maternity benefits; reducing the higher qualifying period for new labour market entrants, re-entrants, repeaters and those applying for special benefits (i.e., sickness, maternity and retirement); extending eligibility to those with lower earnings; and raising the maximum insurable earnings level. All were classified as meeting the objective of increasing equitable treatment among claimants; a subset were deemed to also contribute to reducing program complexity and increasing public understanding (pp. 100-101).

Recommendations intended to appeal to business included reducing the duration of benefits and raising the variable entrance requirement. The report advocated continuing to link these to regional unemployment rates, but recommended narrowing the existing regional differences. Other recommendations included doubling the disqualification period for people who voluntarily left their jobs, eliminating the special retirement benefit, and requiring a higher benefit repayment for those with annual incomes above a threshold. The first two recommendations, reducing benefit duration and raising the variable entrance requirement,

---

44 The variable entrance requirement refers to entrance requirements which were lower in regions with higher unemployment rates.
raise the contribution/benefit ratio, which fits with both the principle of actuarial soundness, and objective of reducing program costs. The third recommendation, doubling the disqualification period, attempts to minimize work disincentives, which is consistent with both the private insurance and labour market adjustment models. The rationale provided for the elimination of special retirement benefits is that they are not consistent with the private ideal. The fifth recommendation, linking benefit repayment levels to annual income, actually departs from the private insurance ideal, which does not consider need as a criterion for determining level of benefits; however, its effect is to reduce the after-tax costs of the program to government. All these recommendations would result in program savings.

According to Pal (1988, p. 90), the report became "irrelevant almost the day it was released" because it assumed a transformation of the economy and the need to facilitate industrial and geographic shifts in jobs. Instead, the 1981–83 recession hit hard and the ensuing unemployment was more than simply structural (a. mismatch between worker skills and job requirements), it was also cyclical. Hence the rationale for the overall labour market strategy was weakened (p. 90). Following two major reports concerning child care, Report of the Task Force on Child Care (1982) and Sharing the Responsibility (1987), the Liberal government did, however, implement some of the improvements to maternity provisions recommended in the CEIC report. In January 1984 maternity benefits were extended to adoptive parents and the requirement that women be in employment for at least 10 weeks prior to conception was eliminated.

The next major policy document which addressed UI redesign was the Macdonald Commission's report. Initiated in 1982 under the Liberal government, it was completed in 1985 during the reign of the Conservatives. The ethos which pervaded the document was the need to reduce the scope of government and to give freer rein to the market. Its recommendations regarding UI, which constitute only a small part of the report, are consistent with this overall orientation.

Essentially, the report called for a reduction in the scope of the UI program through strengthening adherence to actuarial soundness and implementing cost-cutting measures, then redeploying savings, estimated at $4 billion, to a separate developmental fund, the Transitional Adjustment Assistance Fund (TAAF). More specifically, the changes were to allow premium reductions for firms and employees, which would then be recouped via increased personal and corporate taxes. This additional tax revenue and government savings from eliminating extended benefits would be channelled into this new fund.

The purpose of the fund was to provide adjustment assistance to workers "who had exhausted their UI benefits, or whose lay-offs appeared to be permanent, provided they were willing to move or to undertake retraining to improve their employment prospects" (p. 816). The assistance could take various forms including portable wage subsidy programs, mobility grants, training program, early retirement and local economic development projects.

---

45 This figure assumes April 1985 rates of unemployment. The report also notes the difficulty of predicting savings possible through some cuts due to the difficulty predicting behavioural change induced by these cuts (p. 815).
Entitlement to TAAF programs was to be proportional to the length of labour force attachment (pp. 815-816).

The proposed changes to UI, along with the creation of TAAF, were to be part of a more comprehensive strategy which included the development of a Universal Income Support Program (UISP). The latter was a form of guaranteed annual income which was to replace both direct spending on selected social programs and a number of tax expenditures. For people not adequately covered by these programs, top-ups were to be provided through provincial social assistance programs, although these programs would not be cost-shared (p. 826).

Specific recommendations regarding the UI program were as follows. The first two, the elimination of the extended benefit based on levels of regional unemployment and the introduction of experience rating of firms, were clearly influenced by private insurance ideals. The last three were arguably simply cost-cutting measures—an increase in entrance requirements to 15-20 weeks, an increase in the ratio of weeks worked to benefit weeks, a reduction in the earnings replacement rate. They could also be viewed as contributing to a more actuarially sound plan through increasing the contribution/benefit ratio.

Reaction to the Commission's interim report (1984)—Challenges and Choices—was negative, according to newspaper clippings gathered by the Commission (Drache and Cameron, 1985, p. xv). The sole labour representative on the Commission submitted a dissenting report and the popular sector published The Other Macdonald Report (Drache and Cameron, 1985).  

Candidates for elimination were as follows: Guaranteed Income Supplement (GIS), Family Allowances, Child Tax Credits, married exemptions, child exemptions, federal contributions to social assistance payments, federal social housing programs.
Cameron, 1985), in which it offered an alternative to the business agenda, which it argued dominated the Commission's report. The final report was tabled in August 1985. By this time, the Forget Commission had been established by the new Conservative government, with a mandate to focus exclusively on the UI program.

Changes to the UI program were introduced during the life of the Macdonald Commission. Shortly after the Conservative election victory in September, Finance Minister Wilson announced in his November 1984 economic statement (Canada. Department of Finance, 1984) changes in the treatment of severance and pension income. Severance payments as of April 1985 and pension income as of January 1986 were to be counted as earnings for the purposes of establishing a claim and benefits were to be reduced accordingly. This resulted in substantial cuts in benefits for those affected (Soboda & Munroe, 1986, p. 433). Neither of these were mentioned specifically in the Macdonald Commission's report, but certainly were consistent with the underlying cost-cutting agenda which appeared to underpin some of the recommendations.

*Forget Commission Report (1986)*

According to Soboda and Munro (1986, p. 433), the Forget Commission was created in July 1985 as a Cabinet compromise between those who wanted to cut the UI program and those who were opposed. The report, completed in December 1986 argued that UI should be part of a comprehensive "human resource development policy" (p. 295). As such the UI program was to be restricted to conform more closely to the private insurance ideal and separate programs were to be developed to address earnings supplementation, training and job
creation.\textsuperscript{47} Savings from the modification of the UI program, estimated at $3.1 billion, were to be channelled to these other initiatives.

The recommendations for the "slimmed down" UI program were somewhat predictable, although they went much further than the Macdonald Commission recommendations in shifting benefits from short-term and seasonal workers to long-term workers. Like the Macdonald Commission, the report advocated the elimination of extended benefits based on regional unemployment rates, but the Forget Commission also proposed the elimination of variable entrance requirements based on these rates. While the report recommended that the lower end of the variable entrance requirement (10 weeks or 350 hours) be adopted, the recommendation must be analysed in conjunction with proposed changes in benefit duration and level. The earnings replacement rate was to be raised from 60 to 66.6 percent; however the de facto rate for many would be lowered. The reason for this was that the new rate would be applied to average earnings over a one-year period, regardless of the number of weeks worked. This was a dramatic change from the previous reference period of as little as 10 weeks and meant a much lower de facto rate for those with less than 52 weeks of work. In addition, all claimants would be eligible for weekly benefits for up to 50 weeks.\textsuperscript{48} The net impact would be to direct more benefits to people with longer employment

\begin{itemize}
\item[47] Although the report emphasizes job creation through economic growth rather than "bureaucratically constrained 'job creation programs'" (p. 295), it does not eschew more direct job creation initiatives entirely. It proposes an industrial and regional development strategy favouring new and small businesses and community economic development initiatives and replacing short-term job creation projects with those geared toward longer-term employment programs (p. 305).
\item[48] Two examples of the new approach are as follows.
\item[a] Under the proposed program, individuals with 52 weeks of employment at $400 a week in the previous 52 weeks, would be eligible to receive a maximum of 50 weeks of benefits at
records followed by lengthier periods of unemployment. Along these same lines, the report recommended cumulative employment credits which long-time workers (30 years and over) could use to top-up their benefits or extend their benefit period while undertaking training, retraining or moving to find work.

In contrast to the Macdonald Commission, the Forget Commission did not call for a greater adherence to the private insurance principle when it came to firms, that is, it did not propose experience rating. The reasons given were the administrative complexity of establishing premium rates on a firm-by-firm basis, the declining importance of sectors with seasonal jobs, and the minimal disincentive effects of premium rates, given relative costs of premium increases versus the cost of transforming a part-year job to a full-year one (p. 125).

Like the CEIC report, but not the Macdonald Commission, the Forget Commission recommended extending coverage to more part-time workers. More specifically, it advocated lowering the minimum insurable earnings required to be eligible for UI coverage and allowing these earnings to be calculated on the basis of earnings from multiple employers. The proposal was that workers with at least eight hours of work per week, regardless of whether this was with the same employer, should be included in the UI plan (pp. 160, 229). Several.

$266 per week. If unemployed for 50 weeks, they would receive a total of $13300; if unemployed for only 30 weeks, they would receive a total of $7980. Under the existing program, in an area of high employment, these same individuals would be eligible to receive $240 per week for 46 weeks. If unemployed for 50 weeks, they would receive $11040; if unemployed for only 30 weeks, they would receive a total of $7200.

b. Under the proposed program, individuals with 30 weeks of employment at $400 a week in the previous 52 weeks would be eligible to receive a maximum of 50 weeks of benefits at $154 per week. If they were unemployed for the full 50 weeks they would receive a total of $7700, for 30 weeks, they would receive $4620. Under the existing program, in an area of high employment, these same individuals would be eligible to receive $240 per week for 35 weeks. If they were unemployed the full 50 weeks, they would receive (35 x $240) $8400 and if unemployed for 30 weeks, they would receive (30 x $240) $7200.
reasons were given: the increase in part-time work and the unfairness of treating two people who worked the same number of hours during a 52-week period differently for eligibility purposes. For example, under existing rules, a person who worked 14 hours per week for 52 weeks was not covered by UI while a person who worked 35 hours per week for 20 weeks of the year was.

The Commission also addressed the disincentive to part-time employment that the benefit reduction rate posed. Earnings above 25 percent of a person’s weekly UI benefit level triggered a dollar for dollar reduction in UI benefits (pp. 227-228). The Commission proposed instead a benefit reduction rate equal to the earnings replacement rate, which they recommended be raised to 66.7 percent. As before, a person employed full-time was not eligible to collect benefits regardless of their level of earnings.

Finally, the Commission challenged the 1985 and 1986 changes in the treatment of pension income and severance pay, vacation pay and lump-sum payments. The problem for pensioners who began employment after retirement was that they had paid premiums on their entire earnings but received benefits based on their earnings less the amount deducted due to their pension. Noting the anger which greeted the 1986 change (p. 226), the Commission recommended the premiums be paid only on the difference between the pension and the new earnings. The proposal for treatment of severance and vacation pay and lump-sum payments was to treat them as income and delay the beginning of UI, but not reduce the UI benefits.

In summary, then, the Forget Commission built on the general orientation of the Macdonald Commission, but introduced some important modifications. It moved further away from taking regional unemployment rates into account in determining benefits and in this
sense went further in separating out what the report characterized as the "income supplementation" function embedded in the UI program. Rather than a UISP, it proposed a narrower earnings supplementation scheme targeted to the working poor.49 Savings from a "slimmed down" version of UI were to be allocated to a broader strategy of earnings supplementation, job creation and training than the TAAF proposed by the Macdonald Commission. According to the Forget Commission (p. 190), it was preferable to direct savings to programs designed to serve more than a narrow group of long-term employees who have exhausted their benefits.

While both the Forget Commission and the Macdonald Commission proposals advocated a reduction in spending on the "slimmed down" UI, the effect of their proposals on the distribution of benefits differed. The Forget Commission proposed a distribution which strongly favoured employees employed year round during the reference period and those with longer unemployment spells. It did not propose eliminating benefits for short-term and seasonal workers, but the new approach to calculating benefits significantly reduced the level of benefits. In addition, the Cumulative Employment Account addressed very long-term employees (30 years or more). In contrast, the Macdonald Commission's proposals reduced the number of short-term and seasonal workers eligible for benefits by raising entrance requirements and also shortened the benefit period for everyone, although TAAF programs were to address the plight of older workers exhausting their UI benefits.

When the Commission's report was tabled, the Conservative government did not endorse it. Following a review of the report by a Commons Standing Committee on Labour, Employment and Immigration, whose 90 recommendations varied somewhat from the Commission's, the government announced it would make no fundamental changes to the UI program (Pal, 1988, p. 47).

Except for a revision to treatment of pension income (April 1987), no immediate changes to UI occurred. Campbell (1992, p. 31) claims that employment and training were "pushed off" the policy agenda in 1987 and 1988 as the economy grew and the unemployment rate dropped to the seven to eight percent range. The UI account also ran annual surpluses from 1984 through to 1988, so that by 1988 the accumulated deficit generated during the recession of the early 1980s was eliminated. Looking at the broader fiscal picture, federal operating deficits declined from 1984-85, became a surplus in 1987-88, and expanded in 1988-89; the budgetary deficit showed a parallel decline.50

Pressure to assist workers displaced by the Free Trade Agreement (FTA) brought the issues back on to the agenda and led to the establishment of the Advisory Council on Adjustment. Submitted in early 1989, their report emphasized the importance of training and called for more active use of the UI fund for training purposes (Campbell, 1992, p. 31). The UI account continued to show a surplus into 1990; the federal operating surplus increased from 1988-89 to 1989-90; however, the budgetary deficit began to rise again.

---

50 Budgetary balances are the sum of operating balances and the debt charges.
Emergent Residualism (1990 to 1994)

Within months of the Advisory Council's report, the Conservative Minister of Employment and Immigration announced a new Labour Force Development Strategy, which reiterated the importance of training. This was followed in June by the introduction of Bill C-21. Bill C-21 proposed restricting UI benefits and channelling savings into developmental uses, in particular, training. The changes were presented as part of a strategy to change UI from a passive to an active labour market support.

For the most part, revisions included in Bill C-21 were not implemented until November 1990, due to opposition from the Senate. The changes were significant. First, the government raised the entrance requirements from between 10 and 14 weeks to between 10 and 20 weeks and raised the regional unemployment rates to which these minimum entrance requirements applied. The net effect was to add six weeks to the minimum entrance requirements in all regions with unemployment rates of 10 percent or less. In 1990 the Canadian unemployment rate was 8.1 percent, an increase from 7.5 percent in 1989.

Second, everyone lost three weeks of benefits due to a reduction in the minimum entitlement, which served as the base to which additional benefit weeks were added. This also reduced the maximum number of benefit weeks. The practice of adding one benefit week for each employment week up to 25 weeks and one for every two employment weeks from 26 to 52 weeks (to a maximum of 13 benefit weeks) continued.

---

51 The weeks added then tapered from six to zero as the unemployment rate rose from this point to 15 percent. Under the previous system, the scale of unemployment rates which determined entrance requirements was 6 percent or less to 9.0 percent or over. Under the new system the scale was extended to over 16 percent.
Those who received regional extended benefits lost additional benefit weeks. People in areas with unemployment rates up to 13 percent lost an additional seven to ten weeks. In areas with higher unemployment rates, the loss tapered off to zero at unemployment rates of over 16 percent. Only those entitled to benefits weeks sufficiently in excess of 50 to offset the drop remained eligible for the maximum of 50 weeks of benefits.

Third, penalties for those who quit their jobs without just cause, lost their job due to misconduct or refused to accept suitable employment were increased: entrance requirements for this group were raised to seven to twelve weeks and the earnings replacement rate was reduced to 50 percent from 60 percent rate.

Fourth, the federal government eliminated its general revenue contribution to the UI program. The introduction of Bill C-21 in 1989 appeared to be timed to coincide with a surplus in the UI account, but by 1991 when the full impact of the legislation was felt, the account would have run a deficit, even with continued federal funding. With the withdrawal, the annual deficit grew to 4.2 billion from the 0.9 billion surplus in 1990 (Statistics Canada, 1995b, p. 56).

---

52 This was done by raising to six percent the de facto threshold at which regional extended benefits were triggered and lengthening the scale to include 16 percent and over. The effect was to change the average weeks added per .5 percent increment above 4 percent (the previous base) from 2 to 1.6. This meant, for example, six percent unemployment triggered extended benefits of zero rather than eight weeks; 11.5 percent triggered 22 rather than 32 weeks; and only unemployment rates over 16 percent triggered the previous maximum of 32 weeks. It appears from a later document (Axworthy, 1994) that four percent unemployment was still the official base upon which regional extended benefits were calculated; however, since the benefit duration schedule for all areas with less than six percent unemployment was the same, for all intents and purposes the base being employed was six percent.
Finally, in contrast to the restrictive direction of other changes, benefits to working parents were enhanced. The government introduced ten weeks of parental benefits and made it possible to receive sickness benefits in combination with maternity and parental benefits up to a maximum. The rationale for this change was "to respond to the needs of working parents" (Canada. Department of Finance, 1989, p. 29). The Conservative government had announced the National Strategy on Child Care in December 1987. Considerable criticism had been levelled at the strategy (Friendly, 1994), including the lack of improvement to UI maternity provisions. In addition, this enhancement in UI was perceived as fitting within a more "active" labour market strategy.53

In April 1993 a second set of changes was implemented: the Conservative government lowered the earnings replacement rate from 60 to 57 percent and completely disqualified individuals who quit their job without just cause or lost their job due to misconduct.

Unemployment which began to rise in 1990 (8.1 percent) leapt by over two percent from 1990 to 1991 to 10.3 percent, and continued to rise in 1992 to 11.3 percent. The annual deficits in the UI account in 1991 and 1992 meant that by 1992 the cumulative deficit had risen to the recessionary levels of the early 1980s. These deficits occurred despite premium increases in both 1991 and 1992. The broader fiscal climate worsened: federal operating surpluses declined slightly from 1989-90 to 1990-91, then dropped substantially in 1991-92 and again in 1992-93. The budgetary deficit rose during the same period, sustaining a significant jump from 1991-92 to 1992-93.

In July 1994 a third set of changes to the UI program came into effect. Under the new Liberal government, benefit duration was again reduced. This was done in two ways. First, as in 1990, the minimum number of benefit weeks was reduced by three (e.g., 20 weeks of work in an area with six percent unemployment earned 14 rather than 17 benefit weeks). Second, the underlying structure of the benefits was changed to tilt the program in favour of full-year workers and away from part-year or seasonal workers. More specifically, people who worked between 24 and 41 weeks lost five to six weeks of benefits. The number of weeks lost decreased as the number of weeks worked beyond 40 increased.54

The regional extended benefit was again scaled back, signalling a further move away from taking into account regional unemployment rates. Each 0.5 percent increase above four percent unemployment triggered only one additional benefit week rather than the previous average of 1.6 weeks55. In a similar vein, the lower boundary of the entrance requirements was raised from 10 to 12 weeks, affecting areas where unemployment exceeded 15 percent.

Finally, the federal government lowered the earnings replacement rate to 55 percent, except for individuals with dependents and low earnings (at or below $390 per week in 1994). The rate for this group was raised to 60 percent. It also introduced some improvements in the application of the 1993 disqualification of people who voluntarily quit their jobs or lost them due to misconduct.

54 The was done as follows. Whereas previously, benefit weeks were added to the minimum at the rate of one for each week worked, up to 25 weeks of work, and thereafter at the rate of one for every two weeks worked, the government reversed this. Benefit weeks were earned at the rate of one for two up to 39 weeks of work, then one for one from 40 to 52 weeks.

55 See Table A1, Appendix A for an overview of the impact of this change coupled with a similar scaling back in 1990.
The unemployment rate had remained high in 1993 (11.2 percent) and the UI account had again run an annual deficit, although significantly lower than the previous year. The operating surplus had turned to a deficit in 1993-94 and the budgetary deficit had continued to increase, although less steeply. Although there were some signs that fiscal pressures might ease, conditions remained unfavourable. It is not surprising that these conditions, coupled with the hegemony of deficit and debt considerations, would give rise to policy discourse and actions that resulted in further cuts to the UI program.


The final major federal policy document produced during the study period emerged from Human Resources Development Canada in October 1994. It followed a consultation process undertaken as part of the Social Security Review initiated after the 1994 budget. It was also one of a series of reports released leading up to the 1995 budget and took its lead from *A New Framework for Economic Policy* (1994). The latter emphasized deficit reduction via spending cuts as a pre-requisite to creating jobs and identified four policy implications deemed to flow from its analysis of unemployment and job creation. Three of the four were especially relevant for social security reform: skills upgrading, reducing employment disincentives in existing social programs and reducing payroll taxes (e.g., UI premiums) to encourage job creation (Canada. Department of Finance, 1994).

Assisting workers in adjusting to changes in the labour market figured prominently in *Improving Social Security*. Among reasons offered to support UI reform were: the need to help workers adjust, the disincentives built into UI that prevent this adjustment, the program's
impact on employment patterns (eg. timing of lay-offs), the negative effect of premium levels on job creation, the lack of coverage of many part-time workers, and the need to use resources cost-effectively.

The report focused on two basic approaches: the first was described as creating a new Employment Insurance (EI) program which would "closely integrate UI with employment development services" (p. 43); the second involved adjustments to the existing program. The first approach, the proposed EI program, consisted of two components, Basic Insurance and Adjustment Insurance. The first was to be available to occasional users of UI and was to be similar, but not identical, to existing UI benefits. It was to include the sickness, parental, maternity and adoption benefits in the existing program. The second component, Adjustment Insurance, was to be available to frequent users and was to involve a lower benefit rate, be subject to an income test or have a shorter duration. It might also involve expanded access to employment development programs, and receipt of benefits could be tied to participation in these programs or other useful community service. Frequent users could be defined in a variety of ways. The report provided a rationale for using three or more claims over a business cycle as the threshold. Comparing claims made by occasional users with those made by frequent users (defined as three or more claims over a business cycle) for the period 1980 to 1991 suggested that occasional users were affected by cyclical unemployment, while frequent users were affected by structural unemployment, which increased over time.

The second approach, adjusting the existing UI program, involved raising the minimum qualifying period and/or reducing the benefits through shortening the duration and/or the earnings replacement rate. The report discussed various alternatives for the
minimum qualifying period besides simply raising it: using a single entrance requirement, developing an entrance requirement based on weeks worked during a two-year period. Alternatives discussed for cutting benefits included removing regional extended benefits, and introducing a graduated benefit which decreases benefits on each subsequent claim.

Other issues raised in the report applied regardless of the approach selected, that is, a new EI or a modified UI. The report noted that both approaches had to address issues of increased nonstandard employment. One option was to remove the upper and lower limits on earnings subject to premiums, thereby eliminating the incentive to create part-time jobs of under 15 hours and to pay over-time rather than create new jobs. Experience rating was raised as a possibility as was reducing premiums for employers that support training of employees to an appropriate level. Finally, concern regarding the shift away from using UI as an automatic economic stabilizer was addressed. The option of building surpluses in the account during growth periods and drawing on it during recessions was presented.

Like the reports of the Macdonald and Forget Commissions, this report discussed allocating savings from the core UI program to developmental purposes, but it presented this as only one of two options, rather than as the sole option. The other option was premium reduction, which was presented as a means of addressing unemployment through encouraging firms to hire as a result of reducing payroll taxes. There was no mention of recouping the premium reductions via the resultant increases in corporate and personal income tax revenue and channelling these monies into a fund for developmental purposes. As mentioned earlier, the latter had been advocated by the Macdonald Commission.
Like previous reports, the discussion paper placed UI reform in the broader context of overall social security reform. It dismissed a UISP-like guaranteed annual income and instead focused on enhancing the working income supplement for low-income families and the child tax benefit.

As early as the 1995 budget, it was announced that legislative changes which would reduce the UI program would be implemented no later than July 1996 (Canada. Department of Finance, 1995, p. 56). These changes, which reflected the overall direction of *Improving Social Security*, were to be introduced despite the improved economic conditions noted in the Budget Plan and despite a decline in the UI account deficit (p. 56). Unemployment, though still high, had dropped to 10.4 in 1994. By August 1995 it was still lower, 9.6 percent compared to 10.3 of the previous August. The federal operating balance returned to a surplus in 1994-95, and the budgetary deficit, although still high, began to decline again.

Although the legislative changes and their impact fall outside the study period, it is important to note them in order to establish the relationship between the policy discourse, as evidenced by a key policy document, and the actual policy changes that occurred. Legislative changes introduced in 1996 which were presaged by *Improving Social Security* included the following. Hours rather than weeks became the bases of calculating benefit entitlement. An *intensity* rule reduced the earnings replacement rate, and raised the benefit repayment rate for people who had collected more than 20 weeks of benefits during the past five years. The de facto earnings replacement rate was also reduced for those with shorter periods of employment by averaging earnings over 16 to 20 weeks regardless of the number of weeks worked. Facilitating labour force adjustment was a major theme of the legislation; many of
the changes tied the level of risk more closely to the benefit-to-payment ratio; two elements of the income transfer function were retained, namely, a family supplement, and the benefit repayment requirement linked to income.

The consequence of these changes, in conjunction with earlier ones, was a dramatic drop in the number of unemployed covered by UI/EI. By 1998, the ratio of regular beneficiaries to unemployed had dropped to .42 compared to .83 in 1989 (Roller, 1999). Lin (1998) attributes more than half of the growing gap between the number unemployed and the number receiving regular UI/EI benefits from 1989 to 1997 to changing labour force composition, but the balance he attributes to UI/EI program changes. Although the actual legislative changes and their consequences fall outside,

**Summary**

In this section the evolution of the UI policy discourse and actions has been reviewed. Clearly, 1980 to the present has been a period of retrenchment, with the bulk of UI cuts occurring in the 1990s; however, calls for such changes have dominated policy documents since the early 1980s, if not earlier. The sacrosanctity of the private insurance ideal or the need for an active labour market strategy has underpinned these calls, with the latter gaining ascendancy in the late 1980s. These two approaches, however, are not necessarily incompatible. Narrowing the core UI program according to the principle of actuarial soundness can be done in conjunction with reallocating savings to developmental uses. Also both approaches tend to assume that the UI program contributes to dependency of workers
and firms and that reduction in core program benefits is therefore advisable. Narrowing the core also fits with a simple cost-cutting orientation.

The element that distinguishes the private insurance and the active labour market orientation is that the latter assumes that government has some responsibility for assisting workers and firms in adjusting to changes in the market, and in doing so, emphasizes less the notion that unemployment is voluntary.

Despite the ascendancy of the active labour market policy, by the end of the study period an element of the social insurance approach, that is, the income transfer function had not been totally submerged. Elements of it are evident in the continuation of the benefit repayment requirement for those with incomes above a threshold (1979); in the introduction of income- and dependents-tests into the determination of the benefit replacement rate (1994); and in the continuation of regional extended benefits, which, although diminished, continued to compensate victims of higher unemployment rates. Improving Social Security at least reiterated that these were policy options.

One of the main questions addressed by the reports has been whether the income transfer function should be retained as part of the UI program, or separated from it. Both the Macdonald and Forget Commissions argued for the latter, although the Forget Commission proposed a narrower earnings supplement as opposed to an income supplement. As a discussion paper, Improving Social Security, was more vague. It reiterated policy options, two of which were an enhanced earnings supplement and child tax benefit, but did not take a clear position on entirely removing income transfer functions from UI. This lack of clarity is
not surprising given that the report emerged when many aspects of the social security system were in the process of being re-examined.

CONCLUSION

The trajectories of policy activity in two program areas deemed of potential relevance to social assistance receipt levels have been reviewed. Both program areas sustained massive changes from 1981 to 1994, the most substantial ones occurring primarily in the late 1980s or the 1990s. In both arenas policy discourse, as evidenced by major policy documents, generally presaged changes to come, perhaps with the exception of Time for Action. The UI arena contrasted with the social assistance one in that multiple UI policy documents appeared during the 1980s, but few actual policy changes were implemented until 1990. In contrast, changes to the social assistance program were interspersed with the creation of the policy documents. During the study period UI policy discourse reflected the growing strength of a more residual orientation to social welfare; whereas from the late 1980s up until mid-1992, social assistance policy discourse continued to include calls for enhancing benefits, broadening eligibility, reducing the rigour of the worktest, and giving weight to the role of societal factors in contributing to levels of social assistance receipt, although discourse regarding the latter two points was more evident in Back on Track and Time for Action, reports produced while the NDP was in power. In other words, policy discourse reflected a shift, at least in some areas, toward the institutional end of the spectrum. An important area where one sees a shift in the opposite direction is the extension of the work test to single parents.
In both social assistance and UI policy formation, major policy changes in the
direction of program restrictions occurred for the most part during the early 1990s as
economic and fiscal conditions worsened. Discourse favouring reductions in UI was
translated into a massive series of cuts beginning in 1990 and the emergent shift toward a
more institutional approach to social assistance was stopped in its tracks.

This review sets the stage for subsequent analysis. It identifies the lines of the debate
as reflected in the policy documents, and underlines the complexity of the programs. The
level of detail provided regarding changes highlights the funneling process that occurs as this
research moves first to a discussion of theoretical frameworks relevant to social assistance
receipt, then to the development of an empirical model, which necessarily involves further
simplification of the program changes that occurred.

---

56 It is recognized that the lines of debate articulated in these documents are situated within a
liberal paradigm, or at most within liberal and social democrat paradigms. See Mullaly, 1993
for a discussion of the meanings ascribed to these terms.
CHAPTER 2

THEORETICAL FRAMEWORKS AND REVIEW OF EMPIRICAL LITERATURE

In this chapter the theoretical frameworks that underpin research into determinants of social assistance receipt are briefly outlined. The conceptual rendition of hypotheses derived from these frameworks are then discussed. (The operational statements of these are presented in the Chapter 4, Design and Methods.) Empirical results in the literature are then summarized. This review focuses on how the empirical evidence compares to the generated hypotheses and lays the groundwork for the selection of potential variables to include in the empirical model. It also identifies the relatively limited descriptors of the labour market that are used in most empirical research and the minor (or non-existent) role assigned to UI policy variables.

THEORETICAL FRAMEWORKS

In general, three theoretical frameworks underpin welfare determinants research: human capital, rational economic choice and dual labour market theory. Both the human capital and rational economic choice frameworks are components of the dominant paradigm—neo-classical economics; the dual labour market is part of the institutional paradigm. None are specific to welfare research but come out of the broader and related questions of earnings determination, earnings distribution and labour supply.

\[^1\] It is arguable that the human capital framework is an elaboration of the rational economic choice framework. It is discussed separately to facilitate the identification and grouping of relevant independent variables.
The primary reason for examining these frameworks is to identify the types of factors that are likely to affect receipt in order to guide selection of the independent variables to be included in the empirical model and to aid in interpretation of the findings.

**Human Capital**

The human capital framework maintains that differences in individual earnings and inequality in the distribution of earnings are attributable to differences in the amount and kind of labour an individual chooses to supply and to unequal investments in schooling and on-the-job-training (by individuals on their own behalf and by parents on behalf of their children). The emphasis in this framework is on the investment part of the equation. Investments vary according to individual opportunities, abilities and preferences (Osberg, 1981, pp. 109, 120-1).

Although human capital theorists tend to see labour economics as the analysis of constrained choices with respect to human resources, they emphasize choices rather than constraints (Osberg, 1981, p.109). In other words, they focus on the pattern of supply of labour rather than the structure of demand for labour in understanding earnings differentials.

Welfare determinants research drawing on this framework tends to investigate the influence of individual characteristics such as age, education, training, health, or motivation as explanatory factors (e.g., Plotnick, 1983; Coe, 1981; Boskin and Nold, 1975).²

---

² Many authors include such characteristics but they are not always explicit regarding the theoretical framework that underpins their inclusion. They may also include race and gender; however, very different interpretations arise from a dual labour market framework as compared to a human capital one.
**Rational Economic Choice**

The rational economic choice framework also emphasizes choices over constraints. It postulates that individuals weigh the costs and benefits (both psychic and monetary) associated with work and leisure and on this basis determine how much labour they are willing to supply. Applied to welfare receipt, this translates into a rational choice between work, welfare, or some combination of the two. Welfare determinants relevant to this framework include expected employment income, access to non-wage income, program or policy features which discourage employment or welfare use and conditions which create potential barriers to employment (e.g. presence of children). Research guided by this framework is the most voluminous as welfare programs have been under continuous scrutiny in the U.S., and American contributions dominate this literature. (See Moffitt 1992 for a review of this literature.)

**Dual Labour Market**


---

Hereinafter, the term nonemployment will be used since leisure has a popular meaning that does not usually evoke the image of caring for children, managing household work and searching for jobs.
Key to this perspective is the argument that in organizations wages are determined to a significant degree by internal labour markets. In these markets, criteria such as credentials, personal contacts, seniority, organizational norms regarding the relative wages of various jobs, and employer preferences for various "background characteristics" come into play (Osberg, 1981, pp.124-131).

In addition, the choice of technology is deemed to influence the type of jobs comprising a firm and results in labour market segmentation. Dual labour market theory limits this segmentation to two spheres--primary and secondary. The primary labour market is comprised of relatively well paid jobs, with good fringe benefits, relatively pleasant working conditions, employment security, clearly defined grievance procedures and work discipline regulations. A secondary labour market is composed of short-term, unstable, low paid jobs with poor working conditions, arbitrary work discipline and few fringe benefits. A significant aspect of this framework is the claim that the nature of the secondary labour market induces attitudes and behaviour on the part of workers that limit their mobility to the primary sector. Although for some, membership in the secondary sector is voluntary, for others, it is not (Osberg, 1981, pp. 133-134).

This framework is less frequently utilized in welfare determinants research. Factors investigated include sex, race, immigrant status, which test for discrimination (e.g., Evans, 1985), and labour market variables such as industry-occupation combinations (e.g., Butler, 1980), wage rates and union membership (e.g., Evans, 1985).
In the 1980s and 1990s concern regarding increased polarization of earnings and earnings inequality\(^4\) has stimulated a re-emergence of interest in this area in both the US and Canada.\(^5\) In 1994 Harrison notes the increased relevance of dual labour market theory. Whereas previously, the segregation of good jobs from bad jobs was seen to occur primarily along industrial sectors or plants, he argues that now firms are increasingly making managerial choices to create cores and peripheries within their own organizational structures as well as within the networks made up of partners, dependent suppliers and subcontractors and these choices have clear implications for the distribution of earnings in the broader society (Harrison, 1994, p. 196).

GENERATION OF HYPOTHESES

Before outlining hypotheses that might be derived from the three theoretical frameworks, it is important to note that the research literature is diverse. Chief among the differences is whether investigators focus on presence on welfare (static participation) versus flows off and on (dynamic participation). The hypotheses generated allude to both. For macro-level or aggregate data, static participation takes the form of caseload size and dynamic participation takes the form of the magnitude of flows onto and out of the caseload. For

\(^4\) Some authors subsume earnings polarization under earnings inequality; whereas other distinguish between the two, reserving earnings inequality to refer to the gap between incomes of the higher paid and the lower paid segments of the labour force, and using earnings polarization to refer to the distribution of people across income levels.

\(^5\) Levy and Murnane (1992, pp. 1334, 1341) note this development in the U.S. See the discussion in Chapter 3 regarding earnings polarization for a sampling of Canadian studies in this area.
micro-data, static participation takes the form of receipt by an individual and dynamic participation takes the form of entry and exit (or the probabilities of each of these).

The hypotheses are discussed in the following order: labour market, social assistance policy, UI policy and individual or family characteristics.

**Labour Market**

According to the rational economic choice framework, individuals weigh the costs and benefits associated with employment and *nonemployment* and on this basis determine how much labour they are willing to supply. (The rational economic choice framework tends to emphasize the choices of individuals rather than constraints on the demand for labour.) It follows then that the lower the benefit/cost ratio associated with paid employment relative to that associated with social assistance (one state of nonemployment), the more likely individuals are to choose social assistance and, therefore, the larger the caseload, the higher the entry and the lower the exit.

Potential income available through employment is a function of hourly wages and the number of hours worked. The lower the wages, ceteris paribus, the lower the benefit/cost ratio of employment. Similarly, the lower the hours of work available, ceteris paribus, the lower the benefit/cost ratio, as the number of hours an individual can choose to work will be constrained. Available hours of work for individuals will be a function of a number of factors including unemployment and employment levels in the labour market.
Hypothesis 1. Lower wages will be associated with higher levels of social assistance receipt, higher entry levels and lower exit levels.⁶

Hypothesis 2. Higher (lower) levels of unemployment (employment) will be associated with higher levels of social assistance receipt, higher entry levels on to social assistance and lower exit levels from it.

Following a similar framework, in the absence of work, a person will weigh the benefits/costs of alternatives to welfare against welfare receipt. Alternatives may include using savings or cash derived from selling assets, and borrowing from friends. As the length of time without employment increases, it is likely that these alternatives will diminish and the relative benefit/costs of social assistance will increase. In addition, using up savings will increase the likelihood that a person will be deemed eligible for social assistance.

Hypothesis 3. Longer duration of unemployment will be associated with higher levels of social assistance receipt, higher levels of entry and lower levels of exit.

As mentioned earlier, dual labour market theory proposes the existence of a segmented labour market in which the nature of the jobs differ across the primary and secondary sectors and in which mobility between sectors is limited. It is argued that people employed in jobs located in the secondary sector, where wages are lower, jobs more irregular and working conditions poorer, are more likely to receive social assistance. Therefore the larger the secondary sector, the higher the level of social assistance receipt. Since the secondary sector is characterized by non-standard jobs, the greater the level of non-standard employment, the higher the level of social assistance. Similarly, the greater the degree of segmentation, as

---

⁶ In all the hypotheses the term *probabilities* replaces *levels* in studies of dynamic participation. All hypotheses assume *ceteris paribus*. 
evidenced by a *hollowing out* of the earnings distribution, the higher the level of social assistance receipt.

**Hypothesis 4.** Higher levels of non-standard jobs will be associated with higher levels of social assistance receipt, higher entry levels and lower exit levels.\(^7\)

**Hypothesis 5.** Greater polarization of earnings will be associated with higher levels of social assistance receipt, higher entry levels and lower exit levels.

**Social Assistance Policy**

Returning to the rational economic choice perspective, potential income available through social assistance is a function of the benefit level and duration of receipt, which are determined by eligibility criteria and administrative practices. These, in turn, affect the benefit/cost ratio associated with welfare.

**Hypothesis 6.** Higher social assistance benefit levels will be associated with higher levels of receipt, higher entry levels and lower exit levels.

**Hypothesis 7.** More restrictive eligibility criteria and administrative practices will be associated with lower receipt levels, lower entry levels and higher exit levels.

The above discussion assumes that paid employment and social assistance receipt are exclusive options. This is not necessarily the case. Some individuals select a third option—combining employment and social assistance incomes. In some jurisdictions programs are

\(^7\) It is arguable that the increase in non-standard employment suggests a phenomenon that affects the entire labour market and thus should not be conceptualized as reflecting increased segmentation or even the expansion of the secondary sector. Rather it might well reflect increased economic security throughout the earnings distribution as jobs become less predictable in terms of number of work hours, duration of employment and remuneration. It is arguable that this second formulation would lead to the same predictions, since economic security might be viewed as an element of the benefit/cost ratio, with greater insecurity reducing the benefit/cost ratio of employment. For example, a person may be less likely to opt for employment over social assistance if a job is likely to be unpredictable in terms of hours of work, wages and length of employment.
designed to provide some incentive for this. For example, recipients may be allowed to earn $50 per month without losing any of their social assistance benefit. For every dollar earned above this, benefits may be reduced by a percentage, for example, 75 percent.

The cost/benefit calculus associated with the combining option is affected by the way earnings are treated. If all earnings result in a dollar-for-dollar reduction in social assistance benefits, there will be strong disincentives to combine. Relative to this, policies which exact less of a penalty for earnings will result in both an income effect and a substitution effect. The income effect refers to the increase in income that would result from less of a tax on earnings (or a de facto BRR), which in turn would translate into a person buying more of all goods, including nonemployment and result in a decline in employment. The substitution effect refers to the increase in the opportunity cost of nonemployment, given the increased net return to employment, and the resulting tendency to substitute employment for nonemployment. As Lightman (1990, p. 604) notes, theory does not allow prediction of which effect will dominate. However, Gunderson and Riddell (1988, p. 58) note a critique that argues that among people with low incomes, the substitution effect is more likely to occur.

How does this effect on labour supply get played out in the short-term on caseload size and flows? If recipients increase their labour supply, that is, non-earners become earners, or earners increase their level of earnings, no change in caseload size or flows would necessarily result. Both sets of recipients could simply remain on assistance. Only if the rise

---

8 For simplicity sake, this argument is developed in the language of caseload size and flows (aggregate data). It could also be presented in terms of probabilities for individual recipients of receipt, entry and exit.
in earnings results in total earnings exceeding the breakeven point, would an increase in labour supply result in reduction in caseload size or increased exit.

If recipients decrease their labour supply, that is, earners become non-earners, or earners lower their level of earnings, no change in caseload size or flows would necessarily result either. Only recipients who reduced their labour supply (in the sense of not taking opportunities for more employment income) to maintain their eligibility and non-recipients who reduced their labour supply to qualify for assistance would contribute to an increase in caseload size, higher entry and lower exit.

In addition, a mechanical effect would occur simply as a result of the rise in the income threshold at which people become eligible for assistance or lose eligibility. Even without any change in labour supply, some people who were previously ineligible would now qualify and some recipients whose earnings would have exceeded the previous breakeven point and hence lost their eligibility would now remain eligible. Through increased entry and decreased exit, caseload size would increase.

The above discussion focuses on the potential short-term effects, in more formal terms, the predictions of a static, partial equilibrium framework. In the longer term, working within a longer-run dynamic model, human capital theory suggests that employment while on welfare maintains and/or enhances recipients' skills, knowledge and abilities and thereby enables them to work their way off welfare. It would follow then that in the medium to long-

---

9 See Gunderson and Riddell (1988, pp. 57-60) for this distinction between static and dynamic, partial equilibrium effects.
term, this outflow would offset the ongoing mechanical effect and the reduction-of-labour-supply effects.

Bane and Ellwood (1983, p. 46), however, suggest that working while on welfare may simply reflect a taste for employment and that this taste may be a proxy for unobserved differences among recipients, differences associated with higher probabilities of exit. The implication is that factors other than policy incentives affect both concurrent earning and the transition from social assistance to employment and that this transition may be abrupt.10 This view is consistent with the rational economic choice framework where taste is simply a non-monetary factor that enters into the employment/nonemployment decision. This view of concurrent earning would predict no changes in labour supply as a result of incentives to earning and hence no ensuing changes in caseload size or flows.

The above discussion outlines theoretical possibilities regarding change or non-change in labour supply. It is useful to note that these theoretical possibilities are consistent with substantive findings which differentiate between subgroups of welfare11 recipients. Rein and Rainwater (1978) identify three distinct groups: those "digging out" of a crisis and using social assistance temporarily; those "locked in" to long-term receipt with few additional sources of income; and those combining employment income and welfare. The first group might move off welfare quickly and abruptly regardless of the incentives; the second might stay on welfare and not respond to the incentives for a variety of reasons. Some combiners

10 Barr and Hall (1981, p. 111) report findings that support the notion that for many families the decision about assistance is all or nothing.

11 Their broad definition of welfare includes federal Aid to Families with Dependent Children (AFDC), AFDC-U and state General Assistance.
might continue to combine over a range of incomes and not leave the caseload and others might benefit from these incentives to make the transition off welfare. This diversity of response is compatible with Lightman's (1990) argument that the way earnings are treated plays a relatively small role in the complex decision to become employed and that other factors such as the availability of jobs, freedom to change hours of work and lack of affordable child care are important.

In summary, in the short-term, one could argue, it is difficult to predict the net impact of policy changes regarding the treatment of earnings since it will be a function of the inflows and outflows precipitated by individual changes in labour supply and the mechanical effects of raising the income thresholds at which people qualify for assistance. However, to the extent that the incidence of changes in labour supply is relatively small, particularly changes that result in crossing the threshold of eligibility, it is argued that the mechanical effect will outweigh all others, resulting in increased net inflows, decreased net outflows and hence increased caseload size. Indeed, several Canadian authors (Charette & Meng, 1994; Dooley, 1998, June; Christofides, Stengos & Swidinsky, 1997) privilege this effect in developing predictions regarding the impact of the tax rate (or de facto BRR). In the long-term, it is difficult to predict whether enhancements to human capital will apply to a sufficiently large segment of the caseload such that these effects dominate.

**Hypothesis 8.**

In the short-term, decreases in the tax on earnings (or the de facto BRR) will be associated with higher levels of social assistance receipt, higher levels of entry and lower levels of exit.
**Hypothesis 9.**

In the longer term, decreases in the tax on earnings (or the de facto BRR) will be associated with changes in the level of social assistance receipt and the levels of entry and exit; however, the direction of the changes is not predicted.

**Unemployment Insurance Policy**

UI and social assistance recipients are not two completely distinct groups.\(^{12}\) The overlap occurs among people who become unemployed. Consider the likely path of this group as some find another job, while others do not and hence seek nonemployment income. Within the latter group, some are eligible for UI; others are not. Some of those not eligible turn to social assistance as a substitute. Among those eligible for UI, some receive social assistance too, either while waiting for UI, when UI benefits are exhausted or as a top-up to UI because their benefits are low.

Changes to UI mentioned previously included restrictions to eligibility and reduction in benefit periods and earnings replacement ratios. Increased restrictions means virtual elimination of the program for those rendered ineligible. Benjamin, Gunderson & Riddell (1998, p. 91-93) outline the work disincentive effects of UI as postulated by the static, partial equilibrium model of the rational economic choice framework. Applying the logic in reverse, the elimination of this program would create incentives to employment for those who worked at least the minimum number of weeks required under the previous regime. At the same time,

---

\(^{12}\) See, for example, Bruce (1994, March, p. 7), who estimates that over 40 percent of all British Columbia Income Assistance (IA) spells begin with an applicant who has either recently finished or is about to start a UI spell. He does not discuss the incidence of individuals receiving top-ups. See also Economic Council of Canada (1990, p. 37) who note that 10 percent of working poor were supported by both programs in each year of their five-year study.
program elimination would decrease incentives for those previously outside the labour force or working fewer than the required weeks who had increased their weeks in order to qualify for the program.\textsuperscript{13} If the incentive effects dominated then more people might \textit{choose} to stay employed or to find work more quickly. (As mentioned earlier, this framework tends to view unemployment as voluntary.) Of those who became or remained unemployed, however, more would look to social assistance as a substitute for UI, add to the pool of potential eligibles for social assistance and hence to the number of actual recipients via increased entry.

Viewed through this same framework, both reduction in benefit periods and replacement ratios would increase employment incentives for the first group and decrease employment incentives for the second group, since the potential gain associated with UI would diminish. However, among those who became or remained unemployed, shorter benefit periods would result in a larger pool of people exhausting their benefit periods and turning to social assistance (assuming their duration of unemployment remained the same as under the previous regime) and lower replacement ratios would result in more people receiving social assistance top-ups on their UI.

The overall impact of downsizing the UI program would depend on the net work incentive effects weighed against the increased propensity of those who became or remained unemployed to turn to social assistance. A critical factor that would affect this balance would be the demand for labour. In the absence of available employment, increasing work incentives through downsizing the program would simply increase the pool of people that would turn to

\textsuperscript{13} See the stylised depiction of the UI effect on the employment-nonemployment choice (Benjamin et al., 1998, pp. 91-93).
social assistance. Based on her analysis of the 1990 UI reform, Phipps (1990) reports that demand for labour alters work incentive effects of programs like unemployment insurance.

**Hypothesis 10.**

Restrictions to eligibility and reduction in the benefit period and replacement ratio in the UI program will be associated with changes in the levels of social assistance receipt and with level of entry, but the direction of the changes cannot be predicted.

**Individual and Family Characteristics**

The potential relationships between five individual/family characteristics and welfare receipt are reviewed here: education, age, absence of health limitations, sex, and presence of children. The reason for selecting these five is that they are commonly included in the empirical literature and the data utilized in this present research has the potential to allow some exploration of their effect.¹⁴ According to the human capital framework, greater human capital is associated with lower levels of welfare receipt and entry, and higher levels of exit. From this perspective, education, age and absence of health limitations would be deemed proxies for human capital and higher levels associated with less receipt, lower entry and higher exit. Within this framework it is quite common to assume that youth and women have less of a *taste* for employment and therefore associated with higher receipt, higher entry and lower exit. From the rational economic choice perspective, the presence of children would affect the potential costs associated with employment and the potential benefits associated with nonemployment. For example, children might require child care while their parents worked

---

¹⁴ Cases are categorized according to reasons for assistance: unable to find employment, temporary ill health, permanent ill health, sole support parent, student, aged, other.
and this might pose a particular problem for lone parents; the typically higher benefit levels available for larger families might be more competitive with wages. From the dual labour market perspective gender could be viewed as one of ascriptive characteristics, unrelated to skills, that increase the probability of being assigned to the secondary labour market. On this basis, it would be anticipated that women would be more likely to use welfare in the presence of a segmented labour market.

**Hypotheses 11 & 12.**

Each of higher education levels, age and the absence of health limitations will be associated with lower social assistance levels, lower entry levels and higher exit levels.

**Hypotheses 13 & 14.**

The presence of children and female status will be associated with higher social assistance levels, higher levels of entry and lower levels of exit.

**REVIEW OF EMPIRICAL RESULTS IN THE LITERATURE**

Literature addressing empirical models of social assistance receipt is voluminous and emanates primarily from the U.S. Up until 1996, the most prominent U.S. federal program was Aid to Family with Dependent Children (AFDC) program, now superceded by Temporary Assistance for Needy Families (TANF). Both these programs serve primarily lone parent families, and hence much of the academic literature has focussed on receipt by this group. Canadian literature has grown quite dramatically in the 1990s, and its focus is broader, although a considerable portion of the work focusses exclusively on lone parent families. Lacroix (1997, April) expresses concern that this focus leaves out a significant number of
people. He notes that in Quebec and B.C. this group represented approximately 25 percent of recipients at any point in time throughout the 1980s and early 1990s.

Several criteria are used in selecting the literature to be reviewed. First, the research is required to estimate an empirical model of determinants of receipt, the methodology must be included in sufficient detail to obtain a clear understanding of it, and the model must include labour market conditions. This does not preclude inclusion of reviews or comments on the empirical literature (e.g., Moffitt, 1992). Second, priority is given to research that focuses on programs that serve a group similar to that served by GWA. Studies exclusively addressing receipt by lone parent families are not ignored. Indeed, many of the studies reported here focus on this group; however, several older studies, of the very few which focus on the U.S. General Assistance programs, are also included. Third, priority is given to Canadian research, particularly among research published from the mid-1990s onward. Fourth, priority is given to studies using time series analysis with aggregate data, since that is the approach utilized in the present research. Other approaches, however, are included, since a growing portion of the research involves micro-level data and investigates dynamic participation.

The literature review is organized as follows. Paralleling the theoretical section, four categories of variables are examined. The relative consistency of findings pertaining to each variable is assessed. Where appropriate, this assessment is done separately for studies

---

15 Literature which focuses primarily on determinants of labour supply, such as the negative income tax experiments (e.g., Canadian work such as Hum & Simpson, 1991) is not included. Also the Canadian Self-Sufficiency Project findings are not included as they pertain primarily to the impact of a wage top-up program offered as an alternative to welfare. See Michalopoulos, C., Card, D., Gennetian, L.A., Harknett, K. & Robins, P. K. (2000) for an overview of this project and the multiple reports it has generated.
grouped according to their use of macro or micro data and their investigation of static or dynamic participation. This approach allows identification of some important differences in conceptualization and operationalization of variables and their effect on the findings.

Canadian results are frequently reported separately from U.S. ones, given their particular interest for the present research and the different configuration of social programs within each country (e.g., health care and unemployment insurance).\(^{16}\)

A few general comments about the literature will provide a context for the variable by variable examination. As mentioned in the Chapter 1, studies which include Unemployment Insurance policy variables in their models are relatively sparse, although recently in Canada more work has been done in this area. The labour market variables included tend to be fairly limited, with Albert (1988) being one of the few to attempt to include more than two indicators. Dual labour market theory has played a minimal role in guiding selection of variables in welfare determinants research or in interpreting results, as has any theory or approach that attempts to focus particular attention on the structure of demand for labour.\(^{17}\) This absence has been sustained in recent years despite the burgeoning of literature concerning earnings polarization. In addition, few attempts have been made to capture the impact of some of the more subtle changes in the labour market, such as the potential increase in personal insecurity accompanying the increased number of non-standard jobs.

---

\(^{16}\) See, for example, Card and Freeman (1993) for a discussion of differences between the U.S. and Canada.

\(^{17}\) The study by Stewart and Dooley (1998, August) is one of the few to include the only index of labour demand published by Statistics Canada—the Help Wanted Index.
Increasingly micro-level data are being used in welfare determinants research. Greater access to more detailed micro-level longitudinal databases has also permitted more questions to be investigated regarding factors which affect dynamic participation. This expands the research arena to include questions about what affects the probability of exit, or a derivation of that, the duration of receipt. Early studies tended to focus on length of first spells on welfare, but more extensive databases and more sophisticated statistical techniques have permitted extension of this research to multiple spells on welfare (and hence estimates of total time on welfare over a set period such as five years). This has in turn allowed an examination of determinants of off-welfare spells. Such a focus potentially opens the door to questions of what supports outside of social assistance programs need to be in place to assist former recipients to remain off welfare. The Canadian Self-Sufficiency Project (SSP) provides an example of such a shift in orientation.\(^\text{18}\)

The focus on supports outside of the social assistance program that need to be in place to assist former recipients remain off welfare contrasts with much of the research that examines duration of receipt. The latter tends to concentrate on the question of whether social assistance programs create a dependency. More specifically, the research investigates whether the likelihood of leaving welfare declines, the longer an individual receives it? The technical term for the shape of the distribution of spell lengths which suggests that across the sample the probability of leaving declines with spell length is duration dependence. Unfortunately, like leisure, the term dependence evokes a popular interpretation, especially in

\(^{18}\) See Michalopoulos et al. (2000).
the context of social assistance programs.\textsuperscript{19} However, this pattern in spell length distribution may simply reflect unobserved heterogeneity among recipients rather than program-induced dependency. That is, recipients with certain characteristics (undescribed in the data) may have a higher fixed probability of leaving, such that over time, those who remain are people with lower fixed probabilities of leaving. In literature investigating dynamic participation, considerable attention is concentrated on the presence of duration dependence and these competing and coincident interpretations.

Canadian research has been hampered by the lack of availability of longitudinal databases. Until recently, British Columbia and Quebec were the only provinces that had micro-level longitudinal data that lent themselves to determinants research. Two major sites of research have developed around these data sets (e.g., Bailey, 1994, March; Cragg, 1994, March; Fortin & Lacroix, 1998, April). In Ontario the historical division of delivery between the province and municipalities contributed to fragmented data collection systems and these in turn created barriers for researchers; however, in the 1990s analysis of micro-level data has emerged (e.g., Stewart & Dooley, 1998, August). Although the findings of SSP are not included in this review of literature, it is important to mention this project in the context of a discussion on data availability. This project not only involves a program initiative, offering earnings supplementation as an alternative to welfare, but also entails a rigorous random-assignment research design and substantial data collection that allows tracking of individuals

\textsuperscript{19} See Fraser and Gordon (1994) for a discussion of the evolution in usage of the term dependency.
over time to assess program impact. About 5000 single parents are involved in either the program or control group.

Finally, before reviewing the empirical findings, it is important to note that most research in this area employs reduced form models. What this means is that single equation models are used rather than simultaneous-equation models. The former assume a unidirectional relationship between the variables deemed to be explanatory and the one designated as the dependent variable. This description of the general orientation of the research is consistent with Moffitt's (1992, p. 19) comment that only two of ten of the static participation studies included in his review estimated models in their structural form. Chapter 4 addresses this issue further.

**Labour Market**

Three major elements of the labour market potentially relevant to social assistance receipt are discussed in this section: availability of employment, wages/earnings and segmentation of the labour market.

*Availability of Employment*

Not all studies of welfare receipt include measures of employment availability. Of those that do, the overall pattern of results are as follows. Among studies of static participation, using macro-level data, McMichael (1995) reports moderate support for a positive (negative) relationship between unemployment (employment) and welfare (e.g.,
Brehm and Saving, 1964; Kasper, 1968; Korpi, 1975; Plotnick and Lidman, 1987). A subsequent Canadian study of particular relevance to the present research is Brown's (1995) examination of selected provincial welfare caseloads. He conducts a separate analysis for the Ontario GWA caseload, reporting that the number of unemployed per population explained 15.3 percent of the growth in General Welfare cases from March 1981 to March 1992 and 17.8 percent of the increase from early 1989 to early 1993.21

Examples of Canadian static participation research employing micro-data include Dooley (1998, June), Charette and Meng (1994), and Allen (1993). Results are mixed. Charette and Meng (1994) find no statistically significant relationships in their six specifications, using cross-sectional data. In contrast, Dooley (1998, June) finds a statistically significant and positive association between the unemployment rate and welfare receipt in five of six specifications. His design incorporates cross-provincial and time series variation in one specification, isolates time-series variation in a second, and isolate cross-provincial variation in three specifications, each for a separate time period. He offers lack of inter-provincial variation as a possible explanation for the non-significance of results in one of the time period specifications. Allen (1993) attempts to capture broader economic conditions with GDP, which have been linked to levels of employment. He finds a negative and significant relationship with welfare participation.

---

20 Studies vary as to unemployment measure (e.g., unemployment rate, number unemployed, a rate derived from unemployment insurance)

21 Limitations to Brown's research (1995) include the use of very few explanatory variables (employment per population, benefit level and time trend), and the incomplete reporting of regression estimates, which he notes.
Studies of dynamic participation using macro-level data are rare. Albert's (1988) is one of the few. In her California study of AFDC recipients, she finds a positive and significant relationship between the number of unemployed and caseload terminations, but no significant relationship with caseload accessions. Another unusual feature of her work is her focus on particular low skill industries. She finds, for example, a negative (positive) and significant relationship between employment levels in the apparel and other textile products industry and caseload accessions (closures). She advisces "careful selection of the types of industries that employ welfare recipients seems to be important" in identifying the segment of the labour market most relevant to recipients (p. 131).

Research investigating dynamic participation via micro-data are more common. McMichael (1995) notes strong support for a negative relationship between unemployment rates and exit when programs encompassing more family types than female-headed are examined (e.g., O'Neill et al., 1984 (case records); Bruce, 1994, March and Bailey, 1994, March); whereas she characterizes support among studies focussing solely on female-headed families as weak. Subsequent Canadian studies, however, show consistent support for such a relationship among lone mothers, or for the inverse relationship with re-entry to welfare (e.g., Barrett, 1996, cited in Stewart & Dooley, 1998, August; Stewart and Dooley, 1998, August; Fortin, Lacroix and Simard, 1997, cited in Lacroix, 1997, April). In contrast, in one of the few studies focussing exclusively on singles, Fortin and Lacroix (1998, April) find that

---

the relationship varies by age and sex: it is negative and statistically significant for all men, but only for a subset of women, aged 18 to 24.

Using related or indirect measures, two Canadian studies (Barrett, 1994, March; Cragg, 1994, March) report expected effects. Business cycles, as measured by year effects, are negatively associated with the probability of exiting from the BC Income Assistance program. Seasonal effects are also present and linked by the authors to the seasonal nature of employment opportunities in BC are also present. The relationships hold across family types.

**Wages/Earnings**

Overall, there is moderate support for a negative relationship between wages and welfare receipt, and the concomitant positive (negative) association with exit (entry or re-entry). The research results, however, are somewhat dependent on the choice of wage/earnings variable. A key challenge then is appropriately conceptualizing and operationalizing this variable, that is, identifying the lower end of the earnings distribution as the appropriate focus theoretically and the finding related indicators. Global wage levels, for example, average state manufacturing wages, yield inconsistent results (e.g., Brehm and Saving, 1964; Kasper, 1968; O’Neill et al., 1984; Plotnick & Lidman, 1987). Results using minimum wage formulations are mixed. Typically this approach is found in dynamic participation studies. Stewart and Dooley (1998, August) and Barrett (1996, cited in Stewart and Dooley, 1998, August) report the expected positive relationship with exit from welfare and, in addition, Stewart and Dooley (1998, August) find a negative relationship with re-entry. They note that Fortin, Lacroix and Thibault (1997) find the opposite for exit and re-

Another common approach, but only with micro-level data, is to impute an expected wage based on characteristics such as age, education, region, visibility minority status. Such an approach again yields considerable consistency in findings (e.g., Christofides et al., 1997; Dooley, 1998, June; Charette & Meng, 1994; Barr & Hall, 1981), as does research that employs actual wages, either prior or during receipt (e.g., Bailey, 1994, March; Hutchens, 1981; Bane & Ellwood, 1983, O’Neill et al., 1984 (NLS)). The results are not completely homogenous as work by those such as Evans (1987a) and Plotnick (1983) attest.

Labour Market Segmentation

The results of two studies which construct labour market variables based on the dual labour market theory are mixed. Evans (1987b) finds no significant relationship between location in the secondary labour market and welfare receipt during the two years 1973-74. Given her concurrent finding of a significant relationship with weeks worked, she offers two possible explanations: the nature of the sample and the increased importance of UI in the work-welfare relationship as women's labour force participation and unemployment rate have increased. Butler (1979) finds that household heads employed in the marginal work world in

---

23 Christofides et al. (1997) report this relationship for singles males and females and one mothers, but not lone fathers.
Canada's Atlantic region are more likely to have an income package containing assistance and to receive a higher percentage of their income from assistance than those working in the central work world. Both studies employ micro-data.

Social Assistance Policy

The theoretical discussion focussed on three major aspects of policy: the benefit level, and other policy and program features and administrative practices that affect the breadth of access and treatment of earnings. Empirical results are reviewed in this order.

Benefit levels

Despite considerable variation in data, time frames, estimating procedures and ways of operationalizing the variable, in the research to date there is considerable consistency in the findings. Benefit levels tend to be positively associated with welfare receipt and negatively associated with exit from welfare. Less research has focussed on entry or re-entry to welfare and findings do not display the same relative consistency.

Moffitt's (1992) review of the literature is widely cited. He reports a positive and significant relationship between the guarantee and welfare participation in seven of ten studies of static welfare participation, a similar relationship between the guarantee and the

\[24\] Moffitt (1992) included only studies which employed multivariate analyses. However, he claims that studies conducting tabular analyses generally find similar results.

\[25\] Guarantee is frequently used in the literature to describe the maximum benefit level, assuming no income from earnings or other sources.

\[26\] The ten studies include Willis, 1980; Barr & Hall, 1981; Moffitt, 1983; Moffitt, 1986; Robins, 1986; Robins, 1987; Hosek, 1980; Butler, 1984; Fraker & Moffitt, 1988. Of the
probability of exiting from AFDC in seven of eight studies of dynamic participation, and a negative and significant relationship between the guarantee and entry in the two studies which examine entry.

The results of the few U.S. studies which examine the program most comparable to GWA, General Assistance, and which utilize aggregate data, are more mixed. In one of four specifications, Kasper (1968) finds a positive and significant relationship; in another he finds a negative and significant one. The choice of cases per state population versus a recipient (all household beneficiaries) ratio affects the findings. Brehm and Saving (1967) find positive and significant relationships (at p < .10) in one of two specifications.

Two additional U.S. studies which use aggregate data examine across-time variation and focus on the AFDC program. The results are mixed. Plotnick and Lidman (1987) find the expected positive relationship with monthly AFDC caseload size, whereas Albert (1988) finds no significant relationship with either monthly caseload accessions or deletions.

three studies where a positive and significant relationship is not reported by Moffitt, two do not provide significance levels (Barr and Hall, 1981; Moffitt, 1983) and one shows a positive and significant level in most but not all specifications (Moffitt 1986).

Blank (1989) finds negative and significant relationships between the guarantee and the probability of exiting from AFDC; however, she notes that this finding may be attributable to the lack of sufficient variation in the guarantee in her study.


He incorporates either cases per state population or recipients per state population in both a simple and enlarged model.

The revised study was in response to Stein and Albin's (1967) criticism that average GAP payments per case was an inappropriate measure since it reflected systematic differences in average case size across states. The critique also pointed out that Brehm and Saving (1964) reported findings regarding recipients, when in fact their data referred to cases.
Canadian literature is also characterized by both static and dynamic participation analyses. Studies of static participation generally show support for expected relationship between benefit level and welfare receipt (Charette & Meng, 1994; Allen, 1993; Dooley, 1998; Brown, 1995). A notable exception is Christofides et al.’s (1997) examination of singles and lone parents, in which they find negative and significant relationships for single males, single females and lone fathers. From a methodological point of view, Brown’s (1995) study is particularly relevant to the present research. He uses aggregate caseload data and does a separate analysis for three provinces, including Ontario, where he focuses on the GWA program. He reports the expected sign for all coefficients of benefit levels (Brown, 1995, p. 82), although there is variation as to statistical significance, apparently according to household type and province.

Studies of dynamic participation evidence considerable support for a negative relationship between benefit levels and exit. Examples include studies of lone mothers in Ontario (Stewart & Dooley, 1998, August), B.C. (Barrett, 1996, cited in Stewart and Dooley, 1998, August) and Quebec (Fortin, Lacroix and Thibault, 1997, cited in Lacroix, 1997, April). In their Quebec study of single people, Fortin and Lacroix (1998, April) report the expected negative relationship with exit for women 18-24 and men under 30, but not for the older age groups, which suggests the importance of examining various segments of recipients.

---

31 Dooley (1998) develops five specifications, two which incorporate multiple time periods and three which encompass single time periods. In the specifications for two of the time periods, the coefficient on benefits are not statistically significant.

32 Limitations to Brown’s research (1995) include the use of very few explanatory variables, and the incomplete reporting of regression estimates, which he notes.
separately. Bailey (1994, March) finds that household type affects the relationship, but his results contrast with those of others: he reports a slight positive association between benefit level and exit for single parents, and no significant effect for single females, single males, and couples with and without children.33 Fewer studies address entry or re-entry: Stewart and Dooley (1998, August) report a positive and significant relationship; whereas, Fortin, Lacroix and Thibault (1997) report none.

In summary, research to-date, both U.S. and Canadian, indicates relatively consistent results: benefit levels tend to be positively associated with welfare receipt and negatively associated with exit. Continued work disaggregating the relationship by household type, age and sex may reveal a more nuanced relationship.

**Breadth of access**

A few studies isolate the impact of specific changes designed to restrict access; however, much of the relevant literature instead focuses on the impact of the Omnibus Reconciliation Act (1981) and thus investigates the combined impact of changes in the treatment of earnings and other restrictions. The latter is reviewed under treatment of earnings. Studies which isolate specific restrictions in eligibility find them associated with lower caseloads or increased probability of exit (Plotnick and Lidman, 1987; O'Neill et al., 1984 (AFDC records); Bruce 1994, March34). Several studies use proxy variables. O'Neill et

---

33 The text (p. 23) reports this finding for single females, but the accompanying table reports it for single parents.

34 In Bruce's study, couples and singles were sent a letter requiring them to demonstrate that active job search. The letter had a positive and significant effect on singles only.
al. (1984 (AFDC records)) use the ineligible case error rate as a proxy for tightness of administrative practices and find it negatively and significantly associated with exit (79). Brehm and Saving (1964) use degree of urbanization to capture the "ease of getting on" welfare\textsuperscript{35} and find modest support for an effect in their multi-state General Assistance study. In a somewhat similar study Kasper (1968) finds no support. He interprets urbanization as reflecting both less rigid eligibility requirements and higher living costs coupled with relatively more economically disadvantaged people.

**Treatment of Earnings**

As indicated in the theory section, the way that earnings are treated has potential effects on the attractiveness of combining earnings and income, and hence on the probability of welfare receipt. Two aspects of treatment of earnings are the benefit reduction rate and the earnings exemption. Together they are key to establishing the overall penalty (or reduction in benefits) exacted for each dollar of earnings.

In general, there is modest support for a negative relationship between the BRR and welfare receipt, although there are sufficient alternative findings to raise questions. Moffitt (1992), in his eighteen-study review, reports that eight of ten static participation studies incorporate BRR into their models. Of these, five report negative coefficients and statistical

\textsuperscript{35} This seems to encompass both levels of stigma and eligibility criteria (rules and their interpretation).
significance; two others report the same sign, but do not report levels of significance. None of the ten dynamic participation studies investigate the BRR.

Findings are mixed among Canadian studies of static participation. Charette & Meng (1994) find no statistically significant relationship between the nominal BRR and welfare participation of lone mothers; however, they find the expected relationship for a "composite tax rate" that incorporates the earnings exemption and the nominal BRR. In contrast, Dooley (1998, June), adopting a similar two-pronged approach, finds no significant relationships with either tax rate formulation for lone mothers. Examining singles and lone parents, Christofides et al. (1997) find a significant relationship for single males only, but the coefficient is positive. They too employ a composite tax rate. Another study of dynamic participation, however, reports the expected relationships between the BRR and exit or duration among Quebec single parents (Fortin, Lacroix & Simard, 1997, cited in Lacroix, 1997, April). Fewer studies isolate the influence of the earnings exemption. Two Canadian studies which incorporate the earnings exemption provide evidence to support a positive relationship with welfare participation (e.g., Dooley, 1998, June; Charette & Meng, 1994).

36 Charette and Meng (1994) use the provincial marginal tax rate on earned income above the exempted level for the benefit reduction rate, then create a second variable, the "composite welfare tax on earned income", which is based on applying the earnings exemption and the tax rate to the first $400 of monthly earnings and computing the percent of these earnings lost because of decreased welfare benefits.

37 Fortin, Lacroix and Simard (1997, cited in Lacroix, 1997, April) include lone mothers and singles; however, there is insufficient variation in the tax rate to assess its impact on singles.
Two related policy parameters are the entry income limit and the break even point. These are a function of the guarantee and the way that earnings are treated. Fewer studies have examined their effect and the results are mixed. Albert (1988) finds no significant relationship between the entry income limit and caseload accessions. Plotnick (1983) discards this variable from his analysis due to its high collinearity with the guarantee and Hutchens (1981) finds a positive and significant relationship with entry, when only this program parameter is included in the model. Albert (1988) finds a negative and significant relationship between the break even level and case closures; Hutchens (1981) finds none with exit.

As outlined in Chapter 1, STEP constituted a major shift in the way earnings were treated. The penalty exacted for earnings was initially reduced via a lower BRR rate, increased earnings exemptions, and the use of net versus gross earnings in calculating the BRR. In sum, changes to key parameters occurred simultaneously, making their separate effects difficult to discern. Studies which attempt to address similar abrupt and simultaneous changes are therefore of particular relevance to this present research. One of the few Canadian studies to do this is Bailey's (1994, March). He uses a period variable to mark the introduction of the 1986 enhanced earnings exemption in the B.C Income Assistance program. He finds a statistically significant and positive relationship with the probability of exiting only among singles. From his point of view, this result is unexpected, and along with other anomalous findings, it prompts him to conclude that his model is misspecified.

---

38 The policy change included a reduction in the benefit reduction rate from 100 to 75 percent, but it also reduced the waiting period for eligibility for an earnings exemption from eight to three months.
The Omnibus Reconciliation Act (1981) (OBRA) constitutes a U.S. counterpart to STEP, that is, it involves abrupt, simultaneous changes in earnings treatment. An important difference is that OBRA raised, rather than reduced, the penalty exacted for earnings. Examples of studies utilizing regression analysis to assess the impact of OBRA include Plotnick and Lidman (1987), Albert (1988) and O'Neill (1984). Plotnick and Lidman's (1987) model suggests that OBRA reduces the caseload. This is consistent with Hutchen's (1986) conclusions based on a review of six studies which follow pre- and post-OBRA cohorts for a year. Albert (1988) distinguishes between short (less than two months) and long term effects (longer than two months). She finds that, in the short term, OBRA is associated with higher (lower) case closures (accessions), but in the long term she finds no significant relationship with accessions, but that OBRA is associated with lower case closures. She believes that her short-term dummy variable captures the immediate loss of eligibility among many recipients due to the change in the breakeven point, while the long-term variable reflects the influence of the increase in the BRR in conjunction with the introduction of a time limit associated with the BRR. O'Neill et al. (1984) (AFDC case records) also find that OBRA is associated with a decline in exits. They surmise that

39 While OBRA is sometimes conceptualized as primarily a change in the treatment of earnings, Hutchens (1986) argues that data from the six studies he reviewed supports conceptualizing OBRA as both reductions in the guarantee via restrictions in access and increases in the penalties for earnings.

40 Social assistance programs may be designed such that the breakeven point is a function of the guarantee, earnings exemption, benefit reduction rate and the use of net versus gross earnings. There can also be a ceiling set on gross earnings, such that a family may be eligible based on the calculations using the guarantee, earnings exemption, benefit reduction rate and net earnings but deemed ineligible because their gross earnings are above a threshold. OBRA instituted a gross earnings ceiling.
although the immediate effect of OBRA is to increase exits, these exits subsequently decline due to changes in caseload composition such that a greater proportion of the caseload reflects recipients with greater barriers to employment. Similarly, Hutchens (1986) suggests that the long term effects of OBRA may differ from the short term effects. He comments that Moffitt (1985) identifies work disincentive effects of OBRA only after he extends his study to include 1983 and 1984 data.

Discussion of the research addressing the effect of OBRA suggests the complexity of predicting the impact of simultaneous and abrupt changes in key program parameters. It also suggests that short-term and long-term effects may differ. This would be consistent with an expectation that STEP might have different short and long term effects. The impact of changes in key earnings treatment parameters on the breakeven point might be more immediate than the incentive effects which might encourage people to engage in employment while on welfare and use that experience as a stepping stone to employment unsupplemented by social assistance.

UI Policy

There is little research which directly examines the interactions between UI and Canadian social assistance programs, despite a substantial empirical UI literature and an emerging body on social assistance (Barrett, Doiron, Green & Riddell, 1996). In the U.S. a focus on this interaction tends to be absent as well, in part due to the fact that the welfare
literature is dominated by studies of AFDC—a program serving single mothers—where there is little movement between welfare and a much more restrictive UI program.\textsuperscript{41}

Recently Canadian studies have begun to examine the overlap in people served by the two programs. Bruce (1994, March) observes that over 40 percent of BC income assistance (IA) spells between 1982 and 1992 begin with an applicant who has either recently finished or is about to start a UI spell. Barrett et al. (1996) report that, in 1992, the proportion of welfare recipients who received UI in the same calendar year as they received welfare ranged from 32 (Alberta) to 55 percent (PEI) across five provinces. Wong (1994) reports that among a random sample of 591 Canadians who lost their jobs in early 1993 and received social assistance at some point within the following five months, 54 percent received it while waiting for UI, 10 percent received it after UI and 11 percent received it at multiple stages. Only 15 percent received no UI.

This overlap provides a basis for anticipating that changes in the UI program might affect social assistance receipt. Cragg (1994, March) alludes to the possible effect on the BC IA caseload of the 1990 UI changes (Bill C-113). The results he reports do not encompass a direct effect of UI policy changes; however, his indirect evidence supports the possibility of such an effect.

Crossley and Kuhn (1994) provide more direct evidence. Recall that theory predicts that if UI benefits become less attractive relative to labour market income, it would be anticipated that fewer people would quit their jobs voluntarily or more would find re-employment more quickly. If either of these effects occurred, then the potential impact of

\textsuperscript{41} Nakamura (1995) notes the lack of movement between welfare and UI.
restrictions in UI on social assistance receipt would be lessened. First, Crossley and Kuhn (1994) find no evidence of a positive incentive effect of Bill C-113 on re-employment rates among those who voluntarily quit their jobs. (Bill C-113 eliminated benefits for this group.) Second, they find a modest increase in the welfare take-up rate among people who voluntarily quit their job after Bill C-113, compared to before, and a more substantial increase, from 18 to 28.6 percent, among the subset of this group who had not become successfully re-employed.

A few Canadian studies incorporate UI policy variables into their welfare receipt models. The results are mixed. In their study of single individuals receiving social assistance in Quebec from 1975 to 1993, Fortin & Lacroix (1998, April) report a statistically significant relationship between the UI benefit/cost ratio and exit for only two groups: women 30-45 and single men 18-24; however, for these two groups the negative sign of the coefficient contradicts their expectations. In contrast, Fortin, Lacroix & Thibault (1997, cited in Stewart and Dooley, 1998, August) found, as expected, that the UI benefit cost ratio and UI coverage were positively associated with exit among lone mothers from 1979 to 1993.

**Individual and Family Characteristics**

Much of the empirical research on welfare participation includes individual or family characteristics as potential determinants. Typically, studies using micro-data incorporate one or more of characteristics such as age, education, race, health, presence of children, age of children in their models. Where a study population encompasses multiple family types, this household composition is often examined as well. Studies employing aggregate data take a
different approach. To illustrate, using age as an example, Plotnick and Lidman (1987) incorporate the number of women of child-bearing age in the population in their initial models of AFDC caseload size. Albert (1988) includes a similar descriptor of the population potentially at risk for AFDC receipt in her entry model as well as the number of mothers under 21 and over 29 receiving AFDC in her exit model.

Our examination of empirical evidence will be confined to those variables most frequently included in research and most relevant to the data that will be utilized in this study: age, health or disability, education, children, family type.

**Age**

A considerable number of studies find that as a person ages, the probability of entry onto welfare decreases and the probability of exit increases (Hutchens 1981 (entry/exit); Plotnick 1983 (entry/exit); O'Neill et al. 1984 (PSID) (exit); Ellwood 1986 (exit); Barrett 1994, March (exit)). Other studies, however, find unexpected or statistically insignificant results (exit: Bane and Ellwood 1983; O'Neill et al. 1984 (NLS); Ellwood 1986; Blank 1989; Fitzgerald 1991). Bruce's (1994, March) results suggest that the relationship with exit may be non-linear. He finds that being under 19 is associated with a lower probability of exiting from IA, but above this age the probability increases with age for several years, then decreases.

Results of studies examining receipt rather than movement on and off are somewhat more consistent in that the relationship is generally negative or non-linear. Barr and Hall
(1981) find age negatively associated with full AFDC dependence\textsuperscript{42}, Hosek (1980) finds the wife's age negatively associated with AFDC-UF receipt and Allen (1993) reports a negative relationship with receipt among low-income Canadian women; however, he also finds a positive and significant relationship with age squared. Charette and Meng (1994) speculate that the relationship is non-linear. In their six models almost all age groupings show a negative relationship with welfare receipt, but only three show significance (age 25-34, 35-44, 55-64).

Among macro-data studies, Plotnick and Lidman (1987) eliminate the number of women of childbearing age from their final caseload size models and Albert (1988) finds no significant relationship between this variable and caseload accessions. Albert (1988) finds an unexpected relationship with age and case closures: the number of mothers under 21 receiving AFDC is positively associated with the number of closures.

\textit{Health Limitations}

Evidence is also mixed regarding the effect of health limitations or the presence of a disability. In some studies these factors are associated with lower probabilities of AFDC exit and higher probabilities of receipt (Barr and Hall, 1981; Ellwood, 1986); in others, no significant relationship is discovered (Boskin and Nold, 1975; Plotnick, 1983; O'Neill et al., 1984 (NLS and PSID); Evans 1987b). When cases are distinguished by employability status, a related characteristic, though more broadly defined, the evidence is more consistent. Being

\textsuperscript{42} The authors examine the determinants of four levels of welfare dependence: zero, partial, substantial and full. They determine the degree of dependence by dividing the benefits received by the total income of a household. Levels of statistical significance are not reported.
categorized as unemployable is associated with a lower IA exit rate (Barrett, 1994, March; Cragg, 1994, March; Bailey, 1994, Mach) and a higher probability of welfare receipt among women (Charette and Meng, 1993). In two of three multi-family type studies, this finding holds across singles, couples and lone-parent families (Barrett, 1994, March; Bailey, 1994, march). In the third (Cragg, 1994, March), it appears to hold, although significance levels are not reported.43

*Education*

Education is the area where the literature is perhaps most consistent. Higher education levels are often associated with higher welfare exit rates, lower entry rates and a lower probability of receipt (Barr and Hall, 1981; Ellwood, 1986; Evans, 1987b; Charette and Meng, 1994; Allen, 1993), although some studies report no significant relationship (Plotnick, 1983; Hutchens, 1981) and some report variation according to type of exit and race (exit type: Bane and Ellwood, 1983; O'Neill, 1984 (NLS); Blank 1989; Fitzgerald, 1995; race: Hosek, 1980; Fitzgerald, 1991).

*Children*

The effect of children is investigated in various ways, for example, the presence of children, the number, the number under six or in various age ranges, and the age of the youngest. Findings are mixed and some vary considerably across exit types, race, family type

---

43 This pattern is observed in Table 3.3—Kaplan-Meier Survivor Functions. T-statistics are reported in Table 4.1—Uniform Spell Effects, but the data presented does not allow verification of a significant relationship across family types.
and, in some instances, models. A number of studies find that a higher number of children is associated with a lower probability of exit (Ellwood, 1986; Fitzgerald, 1991; Blank, 1989). In studies investigating multiple family types, Barrett (1994, March) reports that this is true among both two-parent and one-parent IA recipients and Bruce (1994, March) reports the same for regular and out-of province cases, although not for UI pending and UI exhaustee cases.\textsuperscript{44} Other studies find that the number of children has no significant effects (Plotnick, 1983; Hutchens, 1981; O'Neill et al., 1984 (NLS)\textsuperscript{45}; Evans, 1987b), or mixed or unexpected ones (O'Neill et al., 1984 (PSID); Bailey, 1994, March, respectively).\textsuperscript{46} When exits are disaggregated, findings vary. Blank (1989), O'Neill et al. (1984 PSID) and Bane and Ellwood (1983) find negative and significant relationships only with AFDC exit via earnings or non-marriage; O'Neill et al. (1984 NLS) find the same but only with exit via marriage.

Numerous studies incorporate the presence, or number, of children under six in their models and the findings are quite consistent, before exits are disaggregated as to type and race (O'Neill et al., 1984 (NLS); Evans, 1987b; Fitzgerald, 1991; Blank, 1989; Charette and Meng, 1994). However, when exits are disaggregated, Blank (1989), for example, finds the relationship only holds for exits via earnings. Fitzgerald (1991) finds the relationship holds only among whites and only if marriage market variables are not included in the model. Probing racial differences in conjunction with exit type, he (1995) finds no significant

\textsuperscript{44} Among UI pending cases, the number of children significantly affects two-parent families only and among UI exhaustees, it affects neither family type significantly.

\textsuperscript{45} O'Neill et al. (1984) (NLS) use the number of children from 6 to 17.

\textsuperscript{46} He uses dummy variables for each of two, three and four or more children and finds positive relationships for each with the probability of exit among single parents, although levels of significance decline from the lowest category to the highest. He finds no significant relationships among couples.
relationship with exit via either marriage or earnings when blacks and whites are investigated separately, but a positive and significant one with exit via “other” among blacks and a negative and significant one with exit via “other” among whites.

Among macro-studies, Albert (1988) reports a positive and significant relationship between the number of children under 18 not on welfare and caseload accessions. A related factor, the number of births in each of the previous four months, shows statistical significance (joint F-test), but an unexpected sign. Neither case size nor the number of children under six show statistically significant effects on caseload terminations. Plotnick and Lidman (1987) eliminate all demographic factors except the number of out-of-wedlock births from their final model and find this variable positively and significantly associated with caseload size.

**Family Type**

Finally, several studies examine the differences in welfare participation among family types. Barrett (1994, March) finds higher exit rates among couples (with and without children) relative to singles, and singles relative to lone parent families. Among singles, men have higher exit rates and among lone parent families the same is true. Bailey (1994, March), distinguishing between couples and two-parent families, reports that the exit rate is highest for two-parent families and lowest for lone-parents. Couples without children, single men and single women fall somewhere in between. Comparing the proportion who have left IA within three months of beginning it, he reports that about 53 percent of two-parent families, about 49 percent of each of couples, single men and single women, and about 32 percent of lone parent families have left. Cragg's (1994, March) findings are generally consistent with Bruce's (1994, March) except that he finds that the exit rate for couples is virtually the same
whether they have children or not and his results support Barrett's (1994, March) finding of a differential rate of exit among male compared to female lone-parents.

Not only may the exit rate differ across family types, but there may be variation in the set of factors which affect exit rates. Bailey (1994, March) provides an example of this: business cycles affect single IA recipients, particularly males, more strongly than they do other family types. Bruce (1994, March) also notes differential effects of age and gender specific unemployment rates across family types.

CONCLUSION

The theoretical frameworks that underpin most empirical research in this area have been outlined; fourteen hypotheses have been generated. The parallel empirical research has been reviewed and in general empirical evidence supports the inclusion of these variables in a welfare determinants model, although in some instances research findings are inconsistent, both in terms of existence of a relationship and the direction of that relationship. Typically few UI variables have been included in the empirical models and the labour market variables have usually been limited to two. In Chapter 4 the design and methods for this present research are described. Selection of variables is guided by both theory and empirical findings and the nature of the data available. Before proceeding to Chapter 4, however, labour market conditions in Ontario during the study period are reviewed in more depth. This lays the groundwork for identifying additional labour market variables to include in the empirical model and serves to counterbalance the review of policy in Chapter 1, which might lend itself to the interpretation that program policy is viewed to be the main determinant of social assistance receipt.
CHAPTER 3

LABOUR MARKET CONDITIONS (1981-1994)

This section describes labour market changes that occurred in Ontario in the 1980s and early 1990s. First, levels of un/employment are examined, then the changing nature of jobs, levels of compensation and polarization of earnings. Special attention is given to those changes that would potentially contribute to an understanding of (a) the slower decline in GWA caseload than might have been expected during the mid-1980s economic recovery and expansion and the more dramatic increase in cases in the 1990s recession compared to the 1980s one.

AVAILABILITY OF EMPLOYMENT

Incidence of un/employment

In the 1980s the Ontario labour force averaged 1.9 percent growth annually, then slowed substantially in the early 1990s (Ontario. Ministry of Labour, Economics and Labour Market Research [Economics & Labour], 1991c, p. 10).1 Both these rates were considerably lower than the 1970s average of 3.2 percent. Labour force growth varied from year to year, following a cyclical pattern, with more rapid expansion from 1984 to 1988, slower growth in 1990, declines in 1991 and 1992, and slower growth in 1993 and 1994. This pattern reflected the interplay of business cycles, growth in the working age population and an overall increase in participation rates among women, which outweighed declines among men. Both

---

1 The annual growth rate from 1990 to 1994 was about .47 percent. In this chapter, unless otherwise indicated, the figures are obtained from the Labour Force Historical Review, CD-ROM 1997.
components of the labour force grew overall during this period. The number of employed persons rose from 4.34 million in 1981 to 5.16 million in 1994. The rate of growth again varied cyclically, with the number employed dipping to 4.24 million in 1982, increasing to 5.24 million in 1989, dropping again to 5.0 million in 1992, then rising through to 1994. The number of unemployed climbed from 304,700 in 1981 to 546,800 in 1994. Its countercyclical pattern was roughly the inverse of the employment levels: a sharp increase in 1982, followed by a gradual decline from 1983 to 1988 to below the 1981 level, dramatic increases in 1990 and 1991, peaking in 1992, followed by a modest, then more substantial, decline in 1993 and 1994. The unemployment rate traced a similar pattern.

Labour force patterns differed by sex, age group and educational attainment. The growth in the female labour force outstripped that of the male, as did the female participation rate. The latter rose substantially from 56.2 percent in 1981 to a peak of 61.8 percent in 1990, dropping to 59.3 percent by 1994. For men, the comparable figures were 80.7 percent in 1981 and 73.9 percent in 1994 with the rate being relatively stable at just over 79.0 percent from 1985 to 1989.²

Employed men outnumbered employed women, but growth in employment among women surpassed that of men (30.5 percent versus 10.7 percent). (See Figure 1.) Unemployed men also outnumbered their female counterparts for most of the period, their

² For men and women combined, the participation rates reached 68.2 percent in 1981, peaked at 70.3 percent in 1989 and fell to 66.5 percent in 1994.
numbers growing by 90.0 percent compared to 67.2 percent for women. During both recurrences their numbers grew more dramatically.\(^3\) (See Figure 2.)

![Figure 1. Number of Persons Employed in Ontario 1981-1994](image)

The patterns traced by the unemployment rates differ somewhat from those sketched by the number of unemployed. (See Figure 3.) While the female rate peaked at a slightly lower level in 1983, it exceeded the male rate from 1984 to 1989. Differential rates of labour force and employment growth explain this pattern. Following the 1982-83 recession, the unemployment rate dropped more slowly for women, as higher employment growth was offset by higher labour force growth. Unemployment rates for men and women became equal

---

\(^3\) *Discouraged workers*, as defined by Statistics Canada (1989, 1995), would raise these figures by a maximum of 20,000 and a minimum of 5,000 numbers, with the larger numbers occurring during recessionary periods. Statistics Canada (1989, 1995) bases these estimates on the number of people defined as not in the labour force who looked for work in the past six months, but are not currently (within four weeks of the survey week) looking for work because they believe that no work is available.
Figure 2. Number of persons unemployed in Ontario 1981-1994

Figure 3. Unemployment rate in Ontario 1981-1994
in 1990, then the male rate surpassed the female one, reaching a high of 11.9 percent in 1992 compared to 9.6 percent. This differential was far greater than at the peak of the 1980s recession. After 1992, the male unemployment rate dropped more sharply, but still remained above the female one. The more dramatic changes in the male unemployment rate were not simply a function of a more static labour force participation rate, rather they reflected greater fluctuation in the employment levels among men.

Labour patterns also differed with age. While employment-to-population ratios for all age groups under 65 climbed during the economic expansion in the mid-1980s, youth experienced the greatest absolute increase. By the end of the study period, however, levels among youth (15-19 and 20-24) had dropped below those at the beginning of the period, while among older workers (25-64), they remained at relatively similar levels. The participation rate for the youngest group rose dramatically during the boom, then fell from 1989 onward; the rate for 20 to 24 year olds grew less, began to decline earlier (1987), but ultimately decreased less than that of the younger group. While fluctuations in participation rates among youth may have tempered the volatility in unemployment rates, the rates varied quite dramatically and remained well above the rates for older workers, peaking at 20.3 (15-19 year olds) and 16.8 percent (20-24 year olds) in 1992. (See Figure 4.) Canada-wide the lack of opportunities for youth resulted in substantial increases in the number of full-time students (Cross 1993, p. 4.1-4.2).
Throughout the period, higher levels of education generally reduced the likelihood of unemployment, with the premium being more pronounced during the recessions. (See Figure 5.) Those with elementary or some high school education experienced the highest levels of unemployment. From 1990 onward, when high school graduates were distinguished from non-graduates, the unemployment rates of the graduates approached those of people with some post-secondary education.\footnote{Two series are combined here. The first, from 1981 to 1989, uses the categories \textit{Grades 9 to 10} and \textit{Grades 11 to 13}, rather than \textit{some high school} and \textit{high school graduate} which are used in the second series. The asterisks in the legend of Figure 5 denote this change.} Comments by Cross (1992, p. 3.11-3.12) pertaining to Canadian unemployment during the 1990s recession may also be relevant for Ontario. He reports that the unemployment rate among those with an elementary education or less was moderated by a drop in labour force participation, particularly among older men, and that the unemployment rate among those with some post-secondary education was affected by the fact...
that the number of people with this level of education grew faster than the number of job opportunities, as overall education levels rose. People with completed post-secondary education fared better and those with university degrees experienced the lowest unemployment levels. For every level of education the peak unemployment rate in the 1990s was higher than that in the 1980s, although for those with university degrees the difference was much smaller. One of the most striking differences between the 1980s and 1990s recession was that the gap in unemployment rates between those with completed post-secondary education and those with university degrees widened.

**Duration of unemployment**

To this point, the discussion has concentrated on the levels or incidence of unemployment. However, as mentioned in Chapter 3, the duration of unemployment may be of particular relevance to social assistance receipt. As argued, people experiencing longer
periods of unemployment are more likely to exhaust other resources and hence turn to social assistance. Figure 6 shows the average *interrupted* duration of unemployment for unemployed people at survey time. This average tended to rise during recessions and to decline during recoveries, lagging slightly behind incidence levels. A distinctive difference between the recessions of the 1980s and 1990s was the longer average duration of unemployment during the latter (26.8 weeks in 1993 compared to 20.4 weeks in 1983), even though the annual unemployment rates peaked at relatively similar levels (10.9 percent in 1992 versus 10.4 percent in 1983).

Figure 6. Average *interrupted* duration of unemployment in Ontario 1981-1994

Duration can be measured a second way: the average *completed* duration of unemployment experienced by a cohort of individuals beginning their spell of unemployment at the same time (Corak 1993, p. 4.3). Corak argues that this measure reflects contemporary

---

5 This average is the one commonly computed from the Labour Force Survey and as such measures the average length of interrupted spells, or how long individuals have been unemployed at the time of the survey (Corak, 1993, p. 4.3).
labour market developments whereas the other measure reflects both contemporary and earlier developments. Canada-wide this measure rose much more steeply during the 1990s than the 1980s--from 12.5 weeks to 21.6 weeks from 1989 to 1992 versus from 14.0 to 18.4 weeks from 1980 to 1983. Among those who experienced permanent layoffs, the comparable increases were from 15.7 to 29.0 weeks in the 1990s versus from 20.0 to 25.5 weeks in the 1980s. It is possible that a parallel change occurred in Ontario.

Averages do not provide information about the relative proportion of unemployed who are short, medium or long-term unemployed. Figure 7 disaggregates the unemployed according to length of unemployment. The figure aptly illustrates the strong slightly lagged

![Figure 7. Number of persons unemployed by duration of unemployment in Ontario 1981-1994](image)

counter-cyclical pattern of longer-term unemployment (more than fourteen weeks), the relative dominance of longer-term unemployment during recessions, and the much larger
number of people who experienced longer-term unemployment during the 1990s recession compared to the 1980s recession.\textsuperscript{6}

Computing the cumulative increase in person-months of unemployment, an approach utilized by Picot, Lemaitre and Kuhn (1994, p. 4.3–4.4) combines both the number of unemployed and the duration of unemployment. Figure 8 shows a simple way to compare the two recessions during the study period by looking at specified areas under the line depicting

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{Figure8.png}
\caption{Increase in cumulative person-years of unemployment in Ontario 1981-1994}
\end{figure}

\textsuperscript{6} This appears to be somewhat inconsistent with Corak's (1993, p. 4.4) comments concerning the Canadian economy. He notes that during the onset of a recession large inflows into unemployment result in the stock of unemployed becoming more heavily weighted with people beginning a spell of unemployment. During recovery and expansion, flows into unemployment fall, and the unemployed become more heavily weighted with people who are in the midst of long spells that began during the recession and reflect the economy at that time.
unemployment levels. This measure also underlines the greater severity of the 1990s recession.

The average length of completed spells of unemployment is a composite of the rates at which people leave unemployment after one month, two months and so on. Corak (1993) reports a Canadian pattern that may well apply to Ontario and might provide insight into the fact that GWA receipt declined more slowly after the 1980s recession than might have been expected given strong economic growth from 1983 to 1988. He found that the 1981-82 recession lowered the exit rates at all durations of unemployment, while the subsequent recovery and expansion raised the exit rates only at shorter durations (one and two months). He concludes that "individuals are hired off the unemployment queue according to a 'last in - first out' pattern" (p. 4.11).

**Demand for labour**

The preceding measures do not distinguish between demand for, and supply of, labour. They are thus susceptible to supply-side explanations of unemployment, explanations that suggest that unemployment is voluntary. Indeed, Evans (1987b, p. 34) comments that one of

---

7 Two other lines delimit the area: a horizontal one extending to the right from the unemployment line at the point just before levels increase in recession and a vertical line extending downward from the unemployment line at the point where the levels are the highest.

8 It is recognized that the notion of unemployment being voluntary can be addressed at a number of levels. Indeed, in some instances, all unemployment is deemed to be voluntary since it is argued that the wages that workers accept determine the level of unemployment. See Stanford (1996, p. 14) for a discussion of how neo-classical economics construes labour demand.
"static entity" against which potential recipients make choices. Similarly, Schellenberg and Clark (1996, p. 27) note a tendency to define the unemployment problems in terms of the types of people seeking work. In addition, indicators of demand for labour serve to counter the argument that the availability of social assistance creates the unemployment.

Three indicators that point to changes in the demand for labour during this period are the help wanted index, the number of layoffs and the value of business bankruptcies. The help wanted index\textsuperscript{9} suggests a steady increase in demand for labour following the early 1980s recession, then a dramatic decline from a peak in 1988. (See Figure 9.)

![Figure 9. Help wanted index in Ontario (1991=100) 1981-1994](image)

Permanent and indefinite layoffs followed a cyclical pattern rising dramatically in 1982 and 1990, and remaining high through 1991 and 1992, but they also averaged above

\textsuperscript{9} The Help-wanted Index for Ontario is compiled by Statistics Canada based on volume of help-wanted ads published in 22 newspapers across the country. It tends to be an early indicator of labour market conditions and of general economic activity and is the only indicator of labour demand released on a regular basis by Statistics Canada (Statistics Canada, 1999a).
13,000 per year from 1984 to 1988, a period of strong economic growth. Although total lay-offs in 1990 (31,787) were below the number in 1982 (46,047), permanent layoffs, that is, those attributable to permanent closures of part or all of a plant were higher (20,554 compared to 11,150) and showed an upward trend as early as 1987 (Economics and Labour, 1991a, p. 11; 1993, p. 16; Ontario Training and Adjustment Board, 1995, p. 21-22). The Economics and Labour Market Research group (1991a, p. 8) distinguish permanent and indefinite layoffs from temporary ones, viewing the former as arising primarily from longer-term industrial restructuring and the latter as stemming from reduced demand occurring as a result of a cyclical downturn. They attribute this dramatic rise in permanent layoffs relative to all layoffs to the rise in Canadian interest rates coupled with the substantial appreciation of the Canadian dollar that "tended to coincide with the implementation of the Canada-United States Free Trade Agreement" (p. 11).

The real value of business bankruptcies rose in 1982, declined to 1988, then surpassed the 1982 peak, reaching a high in 1992, dropping and rebounding in the next two years, remaining well above 1982 levels. The significantly higher levels in the 1990s recession is consistent with the higher proportion of permanent layoffs relative to total layoffs. (See Figure 10.) All three of these indicators, then, suggest the important contribution of shifts in labour demand to fluctuations in the unemployment levels.

---

10 These figures only capture layoffs by firms that permanently or indefinitely lay off 50 or more employees within a four-week period, so layoffs among small firms are underreported.
NATURE OF EMPLOYMENT

In the previous section, levels of unemployment were outlined. Now, changes in the nature of employment are reviewed.

Non-standard Employment

In 1990 the Economic Council of Canada (ECC) drew attention to the rise of non-standard employment which it defined as part-time employment, short-term employment, temporary agency work and own account self-employment, with the publication of *Good Jobs, Bad Jobs: Employment in the Service Economy*. In this section, growth in each of these forms of employment is reviewed. In addition, another form of non-standard employment is considered--extended hours.
Part-time employment constitutes the largest share of non-standard employment (ECC, 1991, p. 72). Part-time employment, defined as less than thirty hours per week, increased substantially. From 1981 to 1994 part-time workers increased from about 605,000 to about 888,000 and grew from 14.5 percent of workers to 18.9 percent. While both part-time and full-time employment rose during this period, part-time employment grew more steadily.

Overlaid on this longer term trend are cyclical variations. During the 1980-83 cyclical downturn, part-time employment increased strongly while full-time employment decreased; during the period of strong economic growth between 1983 and 1989, growth in part-time employment was surpassed by growth in full-time employment. Again during the recession beginning in 1989, part-time employment grew while full-time employment diminished. (See Figure 11.)

![Figure 11. Number of persons employed part-time and full-time in Ontario 1981-1994](chart.png)

Part-time workers refer to people who usually work less than 30 hours per week at their main or only job. The number of workers is not equivalent to the number of part-time jobs.
Across age groups, youth (15-24) represented the largest number of part-time workers. Comparing sexes, more women than men were employed part-time. In addition, among women, the dominant group was prime age workers (25-44), followed by women aged 45-64 and 15-19. During the study period, 25 to 44 year olds increased their share slightly. (See Figure 12.) In contrast, among men, the youngest group dominates (15-19) part-time employment; however, prime age workers as well as other age groups increased their share, particularly from 1989 onward, with prime age men experiencing the sharpest increase. (See Figure 13.)

Figure 12. Part-time employment among women by age in Ontario 1981-1994

Involuntary part-time employment generally rises during recessionary periods and falls during expansionary ones and can be considered as an indicator of underutilization of
labour. It increased during the 1981-82 recession and during the initial recovery years of 1983 and 1984, declined through to 1989, then rose significantly through to 1994. As a percentage of part-time employment, it ranged from 16.2 percent in 1981 to 13.6 percent in 1989, grew slightly in 1990, then climbed dramatically through to 1992 and continued to rise to a peak of 32.7 percent in 1994. Among involuntary part-timers, women outnumbered men, and beginning in 1990 prime age workers (25 to 44 years) outnumbered young workers (15-24), despite the overall dominance of youth as part-time workers. (See Figure 14.) Significantly, among prime age workers, the ratio of involuntary part-time employment to part-time employment never descended to the 1981 level, even during the 1980s expansion.

---

The definition of part-time work underpinning these figures is different from that used earlier. The data series for reason for part-time work from which involuntary part-time work is calculated employs the previous definition used by Statistics Canada: workers who usually work less than 30 hours per week at all jobs, excluding those whose weekly hours are limited to less than 30 hours for legislative reasons (Statistics Canada, 1995).
The majority of the growth in part-time jobs occurred within the service sector and resulted in part-time employment constituting a higher proportion of employment. Together, retail trade, health and welfare services, accommodation and food services, finance, insurance and real estate, and services to business management accounted for 80 percent of the growth in part-time jobs from 1980-90. In the goods-producing sector, part-time employment as a share of total employment remained low in manufacturing and construction and declined in agriculture, where the higher proportion of part-time employment was performed (Economics & Labour, 1991b, pp. 9-10).

Data regarding other forms of non-standard employment are more difficult to obtain, particularly data which tracks incidence over time. The Economic Council of Canada (1991, p. 77) provided some cross-sectional estimates for Canada for short-term and temporary employment based on the Labour Market Activity Survey. Short-term employment, defined
as no more than six months, represented 13.1 percent of jobs that existed in the first half of 1987. Jobs described as temporary, with no standard time limit, (excluding seasonal and temporary agency work) constituted 11.3 percent of jobs which terminated in 1987. Using Labour Force Survey data, the ECC (1991, p. 77) found that the incidence of short-term employment ranged between 8.6 percent (1982) and 11.6 percent (1985) from 1981 to 1989.\textsuperscript{13} A similar approach yields comparable figures for Ontario. The incidence drops to 7.9 percent in 1982, rises substantially to 10.9 in 1987, remains above 10 percent through to 1989, then drops to 7.7 in 1993, recovering slightly in 1994 (Statistics Canada, 1989, 1995).\textsuperscript{14} The explanation for the drop in incidence in the 1990s recession may be similar to explanations for related phenomena Canada-wide: lay-offs of those with shortest tenure,\textsuperscript{15}

\textsuperscript{13} The ECC (1991, p. 77) notes that a limitation of these data is that one cannot distinguish between jobs that are "explicitly temporary in nature" and those that end for other reasons. The approach also assumes a "steady state" where the eventual job duration is unrelated to the specific calendar time when the ongoing job tenure is observed and therefore the estimated mean job duration is two times the observed mean tenure (p. 190). The incidences reported for short-term employment, then, are the incidences of job tenure of one to three months, which are interpreted to mean an eventual duration of no more than six months.

\textsuperscript{14} It is important to note that different approaches yield varied results. Schellenberg and Clark (1996, pp. 3-4) use the label temporary to encompass a variety of indicators. They report that five percent of paid employees in Canada were employed in jobs lasting six or less months, according to the 1991 Survey of Work Arrangements, and that eight (1989) and nine percent (1994) of employees were employed in jobs with specified termination dates, according to two General Social Surveys. (These figures do not include freelancers and consultants.) Using Labour Force Survey job tenure data, Schellenberg and Clark report that the percentage of men indicating job tenures of six months or less increased from 15.0 to 17.0 percent between 1981 and 1989. (Unlike the ECC approach, they do not adjust the reported job tenures to reflect eventual duration.) Examination of similar Ontario data by the present author yields similar results for job tenures of six months or less.

\textsuperscript{15} Schellenberg and Clark (1996, p.4) offer this explanation for the drop in incidence of job tenure of six months or less for men in Canada.
freezes on new hiring and reduction in the number of people quitting their jobs to find new ones.  

Characteristics of short-term and temporary employment vary according to the definitions and data utilized. The ECC (1991) reports that in 1989, according to the Labour Force Survey, the highest rates of short-term employment in Canada were in construction, traditional services and primary industries excluding agriculture. They were also highest among youth, slightly higher among women than men, and strongly associated with part-time employment.  

Average hourly wages tended to be lower for short-term and temporary employees, according to the Labour Market Activity Survey. This results in part because the jobs tend to be in sectors of the labour market associated with lower pay (traditional services and small firms) and in part because their hourly wages tend to be lower relative to those of permanent workers in the same broad industry and occupational groups (ECC, 1991, p. 78). This same pattern may also apply to Ontario.

---

16 Cross (1993) suggests this explanation for the drop in the number of people working with the same employer five or less years and the rise the number working more than five years.

17 Findings regarding temporary employment derived from the Labour Market Activity Survey differ somewhat. Among reported job endings in 1987, the incidence of temporary employment was highest among 35 to 44 and 45 to 54 year olds; differed little between men and women and little between the goods and services producing sectors and was highest in construction and nonmarket services (ECC, 1991, pp. 77-78). Schellenberg and Clark (1996) report findings similar to those derived from the Labour Force survey. Using data retrieved from the Survey of Work Arrangements (1991), where temporary employment was defined as lasting six months or less, they find high incidences of temporary employment in construction and primary industries, followed by personal services and public administration, rather than traditional services. They find a high incidence among youth, although most temporary workers are 25 years and over; a strong association with part-time work; and a predominance of men among temporary workers (p. 12), if temporary agency work is excluded. (This does not preclude a higher incidence among women, but this is not reported.)
The third type of non-standard work is temporary agency work. According to Census data this labour force grew at a rate of 79.0 percent from 11,650 in 1981 to 20,865 in 1986. From 1986 to 1991, it grew at a slower pace, reaching 22,895 in 1991 (Statistics Canada 1984, p. 3-55, 1993, p. 90). Women outnumber men by about two to one (See Figure 15.)

Figure 15. Temporary agency employment in Ontario 1981, 1986, 1991

---

18 The present research adopted the approach used by Schellenberg and Clarke (1996). They derived their figures from the number employed with firms classified as Employment Agencies and Personnel Suppliers within the Business Services Industries Division according to the Standard Industrial Classification (1980). Note that the numbers reported are for the labour force (both employed and unemployed). The labour force refers to the experienced labour force, those people who had been employed at some point during the data collection year or the previous year (Statistics Canada 1984, 1993).

19 This is similar to the ratio for Canada cited by Schellenberg and Clark (1996, p. 39), although their ratios were based on the number employed rather than the labour force and slightly lower than the 3:1 ratio in 1989 cited by the ECC (1991, p. 79).
If the Ontario pattern follows the Canadian one, temporary-help workers are concentrated in clerical occupations, although the proportion in professional, transport and general labour positions increased in the 1980s. The highest incidence of temporary-help workers is in government and finance, insurance and real estate, while the largest user is manufacturing and more than half of all temporary-help placements are accounted for by these three industry groups. Compared to workers as a whole, temporary-help workers tend to be younger, more frequently single, and better educated. A substantial minority (36 percent in 1984 and 41 percent in 1987) would have preferred a full-time job; compensation tends to be below that for full-time salaried workers in the same occupational groups and almost three-quarters work on a part-year basis, the average for this group being thirteen weeks (ECC, 1991, pp. 79, 191).

The final type of non-standard employment is own-account self-employment (OASE). Own-account simply means that the person has no paid employees. The self-employed labour force grew by 62.3 percent from 1981 to 1986 and then by another 21.2 percent from 1986 to 1991 to reach 494,075.21 (See Figure 16.) By 1986 OASE accounted for almost 50 percent of self-employment and this percentage had increased to 53.6 by 1991, as OASE growth outpaced that of self-employment as a whole, 32.1 percent compared to 21.2 percent

---

20 The characteristics of temporary help workers and their distribution across occupations and industries outlined by the ECC (1991) may have limited applicability. The reason for this is that the present report derived its figures employing the approach used by Schellenberg and Clark (1996). Their estimate of 42,700 temporary help workers in 1989 (p. 39) differs substantially from the ECC's estimate of 82,000 based on data from Survey of Employment, Payroll and Hours (SEPH).

21 As with temporary agency employment, the data describe the experienced labour force, not just those employed at the time of the census. See footnote 18.

(Statistics Canada 1984, pp. 3-47-3-48; 1993, pp. 90-91). The majority of OASE takes place in unincorporated businesses, although more of the self-employed were in incorporated businesses in 1991 than in 1986 (20.7 versus 15.6 percent). If Ontario patterns follow Canadian ones, traditional services and agriculture together account for over 50 percent of OASE. The incidence of OASE is highest in agriculture (42.1 percent) and above 10 percent in construction and traditional services (ECC, 1991, p. 80). While the incidence of OASE was slightly higher in the goods sector as a whole (9.2 percent compared to 4.7 percent in services), most of the growth from 1975 onward was in the service sector, so the difference diminished. By 1989 almost two-thirds of OASE was in this sector. In 1989 the OASE

---

22 No published data with a breakdown of self-employment into OASE and non-OASE for 1981 was available.

23 The ECC (1991, p. 79) indicated that in Canada in 1989 about 10 percent of the own-account self-employed had incorporated businesses.
population was more likely to work in primary, artistic and literary, sales, and service occupations and much less likely to work in clerical, managerial, processing and fabricating, and professional jobs than other paid workers (ECC, 1991, p. 80). The own-account self-employed tend to be disproportionately men (Statistics Canada 1984, 1993) and to be older than the work force as a whole (ECC, 1991, p. 80). Women and men differed: forty percent of women worked part-time in 1989 and almost two-thirds in traditional services in 1989; whereas only 11 percent of men worked part-time and most worked in the goods sector, particularly in agriculture (26 percent) and construction (17 percent) (ECC 1991, p. 80). There was great variability in hours worked and compensation. Compared to other workers, own-account self-employed working part-time tended to work shorter hours and those working full-time tended to work longer hours. Also median earnings were lower (ECC, 1991, p. 81).

Another phenomenon that occurred in the Ontario labour market was the growth in the number of full-time workers who worked more hours than the norm of 35 to 40 hours per week.25 Among men, the numbers working 50 or more hours grew from 407,000 to 613,000, increasing from 20.1 percent of full-time workers in 1981 to 26.8 percent in 1994.26

---

24 The ECC (1991) indicates that in the 1980s most of the growth of OASE in Canada was among women and that there was little growth among men 45 and over. Ontario data shows higher percentage growth among women, but similar absolute growth for men and women from 1986 to 1991; however, there is no breakdown according to age (Statistics Canada, 1984, 1993).

25 Hours worked refer to the actual number of hours worked in the reference week.

26 The numbers of people working 50 or more hours are used since the data are grouped into the categories 40-49 hours and 50 or more and the lower group includes the upper boundary of the normal work week. For the purposes of establishing the percentage, workers in all categories from 30-39 hours and above are included.
Similarly, among women the numbers grew from 87,000 to 179,000, expanding from 7.7 percent to 11.8 percent. Most of the growth in the percentage of persons working extended hours occurred between 1982 and 1989. The percentage dipped during the 1990s recession then regained 1989 levels in 1993 (Statistics Canada, 1989, 1995).

Growth in extended hours was a Canada-wide phenomenon. Its importance emerges in a study by Morissette, Myles and Picot (1993, pp. 19-20) who argue that changes in the distribution of hours worked between 1981 and 1989 were at the root of changes in earnings inequality. Shifts in hours worked were not just attributable to the growth of part-time work. Morissette et al. (1993, pp. 17, 33) show that earnings inequality increased among both men and women holding the same full-time job all year and that this inequality was largely driven by changes in hours worked, notably growth in extended hours. This finding generalized to all male earners, but not to all female earners: earnings inequality declined as stronger growth in hours among part-time relative to full-time workers narrowed the gap between the two groups (Morissette et al., 1993, pp. 19-20). Although comparable data regarding earnings inequality is not presented for Ontario, the increase in the proportion of full-time workers working extended hours would be consistent with a similar finding regarding changes in earnings inequality for Ontario.

---

27 At an aggregate level, inequality in hourly wages changed little, but this was due to offsetting trends. Increased inter-age inequality was offset by decreased inequality within age groups and the aging of the workforce (Morissette et al., 1993, pp. 18, 20).

28 Morissette et al. (1993) choose this subgroup in order to deal with data compatibility problems encountered in utilizing the Survey of Work History (1981) and the Labour Market Activity Survey (1986-1990). In their study hours worked refers to the number of paid hours usually worked.
Distribution Of Jobs Across Sectors

Another change that occurred was the shift in the distribution of jobs across sectors and industries. A primary feature of this economic restructuring was the shift in output and employment from the goods producing sector to the services producing one. The service sector's share of output rose from 62 to 66 percent from 1980 to 1994; its share of employment grew even more dramatically from 63 percent to 73 percent (OTAB 1995, pp. 15-16). Both sectors experienced employment growth from 1983 to 1989; however, the service sector grew more rapidly. The economic slowdown generally associated with the 1990s struck the goods sector first and lasted longer. From a peak in 1989, employment declined sharply through to 1991, continuing to fall but at a slower pace through to 1994. By 1992, employment levels had dropped below 1983 levels. In the service sector, employment continued to expand until 1990, dropped dramatically from 1990 to 1991, less substantially from 1991 to 1992, then grew slightly in 1993, falling again in 1994. Unlike the goods

---

29 The goods producing sector includes the natural resources, manufacturing and construction subsectors (ECC, 1991, p. 2). Using the ECC's typology, the services sector can be disaggregated into three subsectors—dynamic services, traditional services and nonmarket services. The first consists of two distribution industries (transportation, communications and utilities; and wholesale trade) and two producer-service industries (finance, insurance and real estate; and business services). The second includes of retail trade; accommodation, food and beverages; amusement and recreation; and personal services and the third comprises education, health, social services, and public administration (pp. 8-10).

30 Data describing employment trends in this section are drawn from the Survey of Employment, Payrolls and Hours (SEPH). The reason for choosing this data source as opposed to the Labour Force Survey is SEPH uses jobs as the unit of analysis, not people, and this strengthens the focus on the demand-side of the labour market. Also, employment figures are available for more detailed industry groups. See Statistics Canada (1994) for an explanation of the differences in what is included. Unless otherwise noted, data for 1994 reflects the average of the first three months.
sector, the loss of jobs in the early 1990s was not sufficient to drive service sector employment back to 1983 levels. Figure 17 compares employment trends in the two sectors.

![Graph of Jobs by Sector in Ontario, 1983-1994](image)

Figure 17. Jobs by sector in Ontario, 1983-1994

Manufacturing, which represents over 70 percent of employment in the goods sector, largely determined the pattern of growth exhibited by the sector as a whole. It grew steadily from 1983 onward, fell dramatically from 1989 to 1992, then remained generally constant, at well below 1983 levels, through to 1994. Employment in construction followed a similar pattern, although it continued to fall through to 1994, and logging and mining together exhibited an overall downward trend from 1981 onward. (See Figure 18.)

---

SEPH does not report employment in the agricultural sector and so it is not included in the goods sector total. It does, however, include other utilities, which falls in the industry group—transportation, storage, communication and other utilities—in which the other components are included in the services sector total.
Figure 18. Jobs in goods sector in Ontario 1983-1994

Figure 19. Jobs in manufacturing sector in Ontario 1983-1994
Ontario was harder hit by the 1990s recession than other provinces partly because job losses in manufacturing industries were more severe and manufacturing is heavily concentrated in Ontario (Cross 1992, pp. 3.12-3.13). Industries particularly affected were metal fabrication and primary metals, electrical and electronic products, automotive, clothing, textiles, leather, office and household furniture, meat and poultry and fruit and vegetable processing. Figures 19 and 20 show the trajectory of job losses in these industries. From 1989 onward, jobs declined in all areas, with losses slowing after 1991.

![Chart showing job losses in manufacturing by industry 1983-1994](chart.png)

Figure 20. Jobs in manufacturing by industry 1983-1994

By 1994 employment levels exceeded the 1983 levels in only three industries (automotive, office furniture and meat and poultry processing industries) and remained below the 1989 levels. In several industries job losses occurred during the mid-1980s despite the economic recovery. These included primary metal, clothing, leather products, textile products, fruit and vegetable processing, office furniture and in primary textiles.
Like the goods sector, the service sector includes many different industries. In order to obtain a more nuanced picture of the shift in employment to the service sector, the ECC (1990) proposed examining three subsectors: traditional services, dynamic services and nonmarket services. Figure 21 shows the composition of these subsectors.

<table>
<thead>
<tr>
<th>Services Producing Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dynamic Services</strong></td>
</tr>
<tr>
<td>Transportation, communications, and utilities</td>
</tr>
<tr>
<td>Wholesale trade</td>
</tr>
<tr>
<td>Finance, insurance, and real estate</td>
</tr>
<tr>
<td>Business services</td>
</tr>
<tr>
<td><strong>Traditional Services</strong></td>
</tr>
<tr>
<td>Retail trade</td>
</tr>
<tr>
<td>Accommodation, food and beverages</td>
</tr>
<tr>
<td>Amusements and recreation</td>
</tr>
<tr>
<td>Personal services</td>
</tr>
<tr>
<td><strong>Nonmarket services</strong></td>
</tr>
<tr>
<td>Education services</td>
</tr>
<tr>
<td>Health services</td>
</tr>
<tr>
<td>Social services</td>
</tr>
<tr>
<td>Public administration</td>
</tr>
</tbody>
</table>

Figure 21. Subsectors of service producing sector in Ontario 1983-1994

Employment rose in all three subsectors through to 1990; however, in the dynamic and traditional subsectors it dropped sharply from 1990 to 1991, and by 1994 had not recovered to 1986 levels. Employment in the nonmarket subsector experienced later and less dramatic declines. (See Figure 22.)

Some occupations grew, whereas others sustained overall losses for the period. The first group included managerial and professional jobs (e.g., engineering, computer programming), sales and service jobs (e.g., personal service, food and accommodation) and
jobs denoted as transportation equipment operating, material handling and other crafts and equipment operation. Construction jobs expanded substantially from 1984 to 1989, then began to decline, dropping sharply from 1990 to 1991, remaining relatively stable through to 1993, then dropping again in 1994 to the recessionary levels of the early 1980s. The second group, overall job losers, included jobs classified as processing, machining and product fabricating, clerical and primary sector (eg. farming and logging) jobs. Figures 23 and 24 compare in employment levels in each of these occupation groups.\textsuperscript{32}

\textsuperscript{32} Unlike the industry employment levels, these figures are derived from the Labour Force Survey.
Figure 23. Employment by selected occupations in Ontario 1981-1994 (with more than 350,000 persons per occupation)

Figure 24. Employment by selected occupations in Ontario 1981-1994 (with less than 350,000 persons per occupation)
Commenting on changes from 1981 to 1991 and predicting future trends, OTAB noted that overall employment growth had tended to be in the direction of jobs that required higher levels of education and training and that this trend would continue (1995, p. 27-28). Most of the occupations with above-average growth would be in the managerial, professional and technical and skilled trades categories. Jobs requiring less education or training such as semi-skilled jobs would decline, with the exception of sales and service jobs.

The massive shift of jobs among sectors and industries provides additional evidence of the role that demand for labour played in employment. It also shows that significant changes were occurring in the labour market even during the recovery and expansion period between recessions.

**Compensation**

How did compensation levels change throughout the 1980s and 1990s? From 1983 to 1994 average weekly earnings for all workers rose approximately 58.2 percent, from $377 to $596. This represented an increase of about 4.5 percent in purchasing power. Compensation levels were much higher in the goods sector throughout the period, despite a smaller increase in purchasing power. Average compensation levels grew from

---

33 This contrasts with federal projections for Canada that anticipate that almost one-half of the new jobs created between 1995 and 2000 will require only a high school education or less (Human Resources Development Canada 1995, cited in Sanford 1996).

34 The data is drawn from SEPH. All workers includes three categories of employees, salaried, hourly and other. The latter includes employees whose basic remuneration is in the form of commissions, piece rates, mileage allowances, etc. Excluded are owners or partners of unincorporated businesses and professional practices, the self employed, unpaid family workers, persons working outside Canada, military personnel, and casual workers for whom a T-4 is not required (Statistics Canada, 1981-1995).
$466 to $749 in this sector compared to $339 to $548 in the services sector, increases of approximately 4.8 and 7.0 percent in purchasing power, respectively. Note that both exceed the overall increase, which is lower because it reflects the shift of workers from the higher paid to lower paid sector.

Within the services sector, average weekly earnings varied considerably, with the lowest earnings being in the traditional subsector. Figures 25 and 26 show the discontinuity between the traditional, and the dynamic and nonmarket sectors. Earnings levels overlapped among dynamic and nonmarket services with public administration, education and transportation ranking in the top three and health and social services ranked the lowest.

![Diagram showing average weekly earnings in traditional and nonmarket services sectors in Ontario 1983-1994.]

Figure 25. Average weekly earnings in traditional and nonmarket services sectors in Ontario 1983-1994

Within the goods sector, top ranking industries throughout the period included primary metals, motor vehicles and parts and electronics, with 1994 average weekly earnings
of $888, $794 and $790, respectively. The lowest paying industries included leather and clothing, with comparable figures of $447 and $414 respectively.

Figure 26. Average weekly earnings in traditional and dynamic services sectors in Ontario 1983-1994

POLARIZATION OF EARNINGS

Polarization of earnings\(^\text{35}\) is of particular interest in the present research. Level of earnings is a key dimension of job quality in the dual labour market paradigm and in Chapter 2 it was hypothesized that the presence and deepening of a dual or segmented labour market

\(^{35}\) Polarization is distinguished from earnings inequality by its focus on the change in distribution of people among earnings ranges, rather than the enlargement of the gap between the earnings of those in the lower earnings group and those in the higher earnings group. Polarization is often referred to as the *declining middle* phenomenon.
would be associated with increased social assistance receipt. What then occurred in the 1980s and early 1990s?

The Canadian Council on Social Development (CCSD) (1995) reports that in Ontario the fraction of male earners within the *middle class* declined by 8.4 percentage points from 1981 to 1993 and the percentage in the lower and upper groups increased. Examining a shorter period (1981-1986) and including both men and women, Myles, Picot and Wannell (1988, pp. 76-81) find polarization in the wage distribution among full-time equivalent jobs.

As with other aspects of the labour market, more published research concerning polarization is directed at the national level. The findings, however, may well be indicative of the Ontario experience. ECC (1990) and Myles et al. (1988) report that Ontario polarization patterns have roughly followed the national ones as far as 1986, the endpoint of their research. A similarity between the national and provincial patterns is perhaps not unexpected given that Ontario’s share of the country’s labour force is about 38 percent.

At the national level, there is evidence of earnings polarization among men during the study period (e.g., Picot, 1998; Zyblock, 1996; Beach & Finnie, 1998); not only among all men of working age, but also among the segment of men with earnings, and the even smaller group of men who are employed full-time, full-year. The latter is significant for the purposes of the present research, because it is arguable that full-time, full-year workers are the subset of the labour force least likely to include social assistance recipients and thus earnings polarization among this group is less susceptible to the explanation that social assistance policy changes are at the root of the polarization. Findings vary somewhat according to the comparison years selected. Evidence of increased earnings polarization during the 1981 to
1989 period is more consistent (e.g. Picot, 1998; Zyblock, 1996; Morisette, Myles & Picot, 1993) than it is for the mid-1980s to 1990s period. Findings also vary as to whether polarization occurred among women. Zyblock (1996) and Morisette et al. (1993) report increases among full-time, full-year female workers during the 1980s and Zyblock (1996) finds similar trends among non full-time, full-year workers. In contrast, Picot (1998) reports that increased polarization is an exclusively male phenomenon.36

These researchers typically use comparison years that allow them to control for shorter-term cyclical variation, suggesting that their results provide evidence of a longer term structural change.37 Many use annual earnings data. Beach & Finnie (1998), however, assess polarization based on more permanent earnings status, that is, they examine the likelihood of moving from one earnings group to another within a six-year period and use these shifts as a basis to determine changes in earnings polarization. Comparing transition probabilities from 1982 to 1988 with those from 1988 to 1994, they find evidence of increased polarization among both male and female workers and across all age/sex groups (except older women). When they examine a subset of permanent workers (those with earnings in every year of the transition periods), they find evidence of the same patterns of polarization.

Discussion of polarization within age/sex groups must not obscure significant differences between the earnings experience of younger workers relative to older workers.

---

36 It is important to note that the context of this comparison of changes in polarization levels is that these levels are higher for women than for men at the beginning of the study period and that the earnings categories across which women are distributed are lower, given the lower median earnings of women.

37 In contrast Beach and Slotsve (1996, p. 5) report “very little long-run” polarization of male earnings over the period 1972 to 1992, when cyclical factors are controlled for.
Younger workers experienced a decline in relative hourly wages. According to Picot (1998), the ratio of the hourly wages of male workers under 35 to that of male workers 35 and over dropped from .84 in 1981 to .71 in 1989 and to .67 in 1993. The comparable figures for young women in 1981 and 1993 were .9 and .9 respectively.

Studies of earnings dispersion—both inequality and polarization—investigate various explanations for these shifts. Briefly, one of the earliest, and most prominent, hypotheses, is the deindustrialization one. It argues that middle-wage jobs in the goods sector are being replaced by high- and low-wage jobs in the service sector. Another focuses on technological changes which increase demand for highly skilled labour and widen the wage differential between high and low skilled labour, or alternatively, increase the demand for both low- and high-skill labour and eliminate jobs requiring middle-level skills. Both these demand-side explanations are linked to globalization and its various effects, such as the increased mobility of employers, in particular, their ability to move low-skill production out of countries such as Canada and the U.S. Supply-side explanations include various changes in labour force composition along age, sex and education dimensions. An example of such a hypothesis is that the presence of more women in the labour force, a group that typically has higher levels of polarization, explains the higher overall levels of polarization. Finally, institutional explanations encompass such factors as lower levels of unionization, deemed in some instances to reflect changes in the distribution of power across society, adoption of strategies by employers which involve establishing core and peripheral workforces, and the greater ability of older workers, relative to entry level workers, to reduce the impact of downward wage pressures through such mechanisms as seniority.
Research findings vary. Some findings are consistent with some of these explanations, others are not. Some research suggests that one of these explanations offers a partial account for shifts in earnings dispersion, and other research notes the difficulty of discerning the relative contribution of certain factors, given the nature of the data that is available. The earliest and most prominent hypothesis, deindustrialization, has recently come to be regarded as less important. For example, Morissette (1996, p. 12) claims that shifts in employment by industry can at most account for 22% of the change in male earnings dispersion. Labour force composition explanations are limited in explaining within-group changes, and degree-of-unionization explanations do not address polarization within unionized settings. The contribution of workforce practices and the impact of technological change on the requisite skill-mix are difficult to discern given the available data, according to Morissette et al. (1993, p. 23). In summary, it appears that there are no simple, single-factor explanations of polarization. One of the reasons for addressing these explanations is that a proxy variable for polarization is used in the research. This discussion places the choice of this proxy variable in context.

CONCLUSION

This review has delved below the surface of labour market changes captured by global unemployment rates and average wage indicators. It shows differences in the experience of workers by age, sex, and education level and underlines how differences in the relative importance of incidence and duration of unemployment can underlie apparently similar unemployment rates. It also points to indicators of significant change in the level of
demand for labour as exemplified by the help wanted index, and bankruptcy levels, and in the structure of this demand, as evidenced by the growth of non-standard jobs, the growth of the service sector relative to the goods sector, the differing trajectories of employment and earnings across industries and occupations, and the polarization of earnings across and within some groups. This review also serves to underline the wide range of choices faced in selecting dimensions of the labour market to include in models of social assistance receipt.
CHAPTER 4

DESIGN AND METHODS

This chapter builds on the theoretical frameworks and the empirical literature discussed in Chapter 2, where the theoretical frameworks were outlined and the hypotheses were derived concerning the factors likely to affect, or explain, welfare receipt. The literature review compared theoretical predictions and empirical results and highlighted the diversity of possible research methods used to investigate this question. It also noted the relative paucity of studies which examined the role of other social programs viz-a-viz social assistance receipt and the limited range of labour market variables included in most studies. It further reported the dominance of the rational economic choice and human capital paradigms in guiding the development of empirical models and the minimal utilization of the dual labour market paradigm, which is distinguished by its emphasis on the structure of demand for labour.

In this chapter, the design and methods of the present research are described: the purpose, the study population, the conceptualization/operationalization of variables, the refinement of conceptual/operational hypotheses and the statistical methods. Discussion of statistical methods focuses on the use of regression analysis with time series data, the issue of stationarity of series, the use of error correction models, and the debate about the appropriate method of proceeding in econometric analysis. Substantial attention is given to this because the use of time series analysis is relatively infrequent among social workers and many of the

---

1 It is recognized that this type of discussion is usually situated within the results section, but because of the depth of the discussion and the centrality of the statistical treatment to the research, it is included in this section.
tools and techniques employed by economists are relatively unfamiliar. This discussion also provides the background that allows an understanding of some of the choices made in the design and analysis.

PURPOSE

This research began with the question of how to explain the pattern of GWA receipt in Ontario from 1981 to 1994 and whether an expanded set of labour market descriptors coupled with UI program descriptors might augment understanding of this pattern. The research draws upon existing theory and empirical research to develop hypotheses concerning the factors that might affect receipt and then investigates how useful these are in explaining GWA receipt during the study period. It does this through developing empirical models based on time series regression analysis. The original question is specific to Ontario GWA receipt during a particular period. However, the findings may have broader implications, that is, a more detailed mapping of the labour market and the role of other social programs may prove useful in explaining receipt of welfare among a similar population (or case type) in other programs, in other jurisdictions and/or during different time periods.

STUDY POPULATION

The present study uses macro-level data, specifically monthly GWA caseload size for the period 1981 to 1994. As such the study may be viewed as using a purposive sample, one drawn from either GWA caseloads during all time periods, from all social assistance caseloads, or from those segments of caseloads which have a comparable composition of
individuals and families (e.g., single people who are deemed employable). In welfare determinants research, it is common to focus on one program and/or jurisdiction. With micro-data, the sampling that takes place is frequently to select a subset of recipients from all recipients in a specified program and/or jurisdiction during a particular period. A purposive sample is not viewed as ideal, however, it is argued, that strict generalizability is not necessary to contribute to the knowledge base regarding welfare receipt. This base has developed from the accumulation of multiple studies focusing on different programs, jurisdictions and time periods. The key is perhaps to be conscious of the pitfalls of too exuberantly generalizing analysis from one jurisdiction, program or time period to another, to use the findings to develop working hypotheses to be investigated in these other settings, and to include in the models factors that try to capture potential sources of variation across programs, jurisdictions and time periods.

An alternative way of thinking about generalizability routinely guides economists working with time series data. They view a particular data series as a realization, or random sample, of an underlying process and use the realization to draw inferences about the underlying process. On this basis they use inferential statistics. This is the approach adopted in Chapter 5.

As mentioned earlier, time series regression analysis is used. It was deemed the most appropriate approach given the data available to the researcher and is consistent with a

---

2 Darnell and Evans (1990, pp. 13-25) argue that, in a sense, this is a heuristic device since the repeated sampling implicit in many of the statistical techniques is not possible in social sciences. However, they provide a case for the use of distributional theory within the context of non-experimental data.
segment of the research in this area. Theory, the particular focus of the research, and economists' concerns regarding data mining\(^3\) led to an approach which involved developing (or estimating) four models. Model A represents the most basic, incorporating the minimal number of labour market and social assistance policy variables. This selection of variables is consistent with those commonly included in empirical research in this area. Model B includes an additional variable which reflects changes in the UI program. Model C reflects further expansion of the base model to descriptors of nonstandard employment. Model D encompasses a labour market variable deemed to be a proxy for polarization of earnings, a key aspect of labour market segmentation.

Each model is developed according to theory and the particular foci of the present research. It should not be assumed that results from Model A led to inclusion of the UI variable in Model B and results from Model B led to inclusion of additional variables in Model C and so on, which would lead to a charge of data mining.

**FURTHER CONCEPTUALIZATION AND OPERATIONALIZATION**

In Chapter 2, the detailed description of the programs gave way to abstraction and simplification in the discussion of theory. The empirical literature displayed the range of possible variables that have been incorporated in models and the diverse approaches to operationalization. It also underlined the *paring down* process that occurs in model development, which was contrasted in Chapter 3 with the multiple aspects of the labour market in which change occurred.

\(^3\) See the discussion of this in the statistical treatment section.
In this research the decision to work with aggregate data, in particular, caseload size, narrows the range of possible variables that can be incorporated in the models. A refinement of the conceptualization of variables and the concomitant hypotheses set out in Chapter 2 is thus possible. In Chapter 2 the conceptualization and the hypotheses were retained in a broad form to provide a framework to guide the literature review, since the review encompassed studies with diverse research designs. In this chapter, the conceptualizations are narrowed and the variables are operationalized. These are outlined in Table 1, along with the operational rendition of the hypotheses and the associated conceptual rendition. The accompanying text provides a more detailed discussion of how the variables are operationalized and outlines the sources of the secondary data used in this analysis.

**Dependent Variable**

Welfare receipt is operationalized as monthly GWA caseload size as a percentage of the population over 15 years multiplied by 100.\(^4\) Caseload size is based on the number of *cases*, the term used to refer to an individual or family who receives welfare assistance. A family of three is considered one *case* if they are receiving welfare as a single unit. Trends in social assistance receipt are frequently depicted in ratio form in order to control for the effect

---

\(^4\) The reason that the ratio of GWA caseload size to the population over 15 is multiplied by 100 is that the multiplication transforms the ratio, which is less than one, to number greater than one. As indicated in Chapter 4, in the statistical analysis, the data are transformed into logarithms. In this transformation, fractions become negative values and since these negative values are counter-intuitive, it was deemed appropriate to multiply by 100. This affects the coefficients, but does not affect their t-statistics, and as long as this multiplication is taken into account in the interpretation of the findings, it is not problematic. All variables which take the form of a percentage are treated in the same way.
of population increases (e.g., Moffitt, 1992; Lacroix, 1998; Brown, 1995). Figure 27 depicts this ratio.\footnote{See Figures B1 and B2, Appendix B, respectively, for annual caseload data extending from 1969 to 1994 and for comparable unemployment figures. Both of these show a pronounced rise during the 1982-83 recession. Note the caseload data describes the number of cases, it is not a ratio of cases-to-population.}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure27.png}
\caption{Ratio of GWA cases to population, multiplied by 100, 1981-1994}
\end{figure}

The data employed represent the Ministry of Community and Social Services estimates of the total provincial caseload, based on figures derived from the computerized database, Comprehensive Income Maintenance System (CIMS), in combination with Form 5 data from the Ontario Municipal Social Services Association (OMSSA) for municipalities that were

\footnote{The number of households would be an alternative as a denominator; however, household data was available only on an annual basis and therefore would have required using interpolation. The correlation between the ratio using working age population versus number of households is .99 and preliminary work suggested using households would have little impact on the findings.}
Table 1. Conceptualization and Operationalization of Variables and Hypotheses

<table>
<thead>
<tr>
<th>Concept</th>
<th>Conceptualization (Nominal Definitions)</th>
<th>Operational Definition</th>
<th>Type of Variable</th>
<th>Operational hypotheses</th>
<th>Related conceptual hypotheses (number)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social assistance receipt</td>
<td>Levels or probabilities of social assistance receipt, entry or exit</td>
<td>Level of social assistance receipt</td>
<td>GWA monthly caseload size as a % of population 15+ (x 100)</td>
<td>Continuous</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Labour market</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage levels</td>
<td>Wage levels</td>
<td>Minimum wage</td>
<td>Real minimum wage (1986 dollars)</td>
<td>Continuous</td>
<td>Unpredicted</td>
</tr>
<tr>
<td>Availability of employment</td>
<td>Unemployment and employment levels</td>
<td>Level of unemployment</td>
<td>Monthly unemployment rate (x 100)</td>
<td>Continuous</td>
<td>Positive</td>
</tr>
<tr>
<td>Characteristics of a secondary labour market (non-standard employment)</td>
<td>Level of part-time employment</td>
<td>same</td>
<td>Persons employed part time as a % of population 15+ (x 100)</td>
<td>Continuous</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Level of involuntary part-time employment</td>
<td>same</td>
<td>Persons involuntarily employed part-time as % of population 15+ (x 100)</td>
<td>Continuous</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Level of self employment</td>
<td>same</td>
<td>Persons self-employed as a % of the population 15+ (x 100)</td>
<td>Continuous</td>
<td>Positive</td>
</tr>
<tr>
<td>Concept</td>
<td>Conceptualization (Nominal Definitions)</td>
<td>Operational Definition</td>
<td>Type of Variable</td>
<td>Operational hypotheses</td>
<td>Related conceptual hypothesis (number)</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------------------------------------</td>
<td>------------------------</td>
<td>------------------</td>
<td>------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td><strong>Labour Market (continued)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Segmentation of labour market</td>
<td>Polarization of earnings same</td>
<td>Employment in the services sector as a % of employment in the goods sector (x 100)</td>
<td>Continuous</td>
<td>Positive</td>
<td>#5</td>
</tr>
<tr>
<td><strong>Social Assistance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of benefits</td>
<td>Benefit levels (assuming no earnings or other income) same</td>
<td>Maximum real monthly GWA benefit level for a single employable person (1986 dollars), assuming no other sources of income and no supplementary or special assistance benefits</td>
<td>Continuous</td>
<td>Positive</td>
<td>#6</td>
</tr>
<tr>
<td>Access to benefits</td>
<td>Degree of restrictiveness of program eligibility criteria and administrative practices Policy initiatives that change eligibility criteria and/or administrative practices</td>
<td>Back on Track (less restrictive) Expenditure Control (more restrictive) Enhanced Verification (more restrictive)</td>
<td>Dichotomous</td>
<td>Positive</td>
<td>#7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dichotomous (0,1)</td>
<td>Negative</td>
<td>#7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dichotomous (0,1)</td>
<td>Negative</td>
<td>#7</td>
</tr>
</tbody>
</table>
Table 1 (continued)

<table>
<thead>
<tr>
<th>Concept</th>
<th>Conceptualization (Nominal Definitions)</th>
<th>Operational Definition</th>
<th>Type of Variable</th>
<th>Operational hypotheses</th>
<th>Related conceptual hypothesis (number)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social Assistance (continued)</strong></td>
<td>Broad</td>
<td>Narrow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment of earnings</td>
<td>Penalty exacted for earnings as determined by the earnings exemption, BRR, and/or level of earnings used to calculate benefit reduction (BR) (e.g., gross vs net). Together they form the de facto BRR.</td>
<td>Policy initiatives that change the de facto BRR</td>
<td>STEP (lower penalty)</td>
<td>Dichotomous (0,1)</td>
<td>Positive (Unpredicted) #8, #9</td>
</tr>
<tr>
<td></td>
<td>Back on Track (lower penalty)</td>
<td></td>
<td>Back on Track (lower penalty)</td>
<td>Dichotomous (0,1)</td>
<td>Positive (Unpredicted) #8, #9</td>
</tr>
<tr>
<td></td>
<td>STEP restrictions (higher penalty)</td>
<td></td>
<td>STEP restrictions (higher penalty)</td>
<td>Dichotomous (0,1)</td>
<td>Negative (Unpredicted) #8, #9</td>
</tr>
<tr>
<td></td>
<td>Expenditure Control (higher penalty)</td>
<td></td>
<td>Expenditure Control (higher penalty)</td>
<td>Dichotomous (0,1)</td>
<td>Negative (Unpredicted) #8, #9</td>
</tr>
<tr>
<td><strong>UI</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of benefits</td>
<td>Earnings replacement rate combined with duration of benefits</td>
<td>same</td>
<td>Ratio of earnings replacement rate times duration of benefits to minimum weeks required, given a regional unemployment rate of 6% and 20 weeks worked</td>
<td>Continuous</td>
<td>Unpredicted #10</td>
</tr>
<tr>
<td>Access to benefits</td>
<td>Eligibility criteria</td>
<td>same</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Conceptualization is divided into broad and narrow. The broad definitions were used to generate the conceptual rendition of the hypotheses in a way that allowed empirical literature with various research designs to be reviewed in conjunction with these hypotheses. The narrow definitions pertain to the present study examining static participation using aggregate data. (X 100) indicates multiplied by 100. (Unpredicted) refers to operational hypothesis #9.
not linked to CIMS. The jurisdictions not linked to CIMS included those which processed claims manually, those which operated on a part-time basis and two major municipalities which had their own computerized database (Hamilton-Wentworth and Peel).

Figure 29. Breakdown of GWA caseload by largest case type, 1981-1994

Figure 28 profiles the number of cases within the three largest segments of the GWA caseload, namely, persons deemed employable, sole support parents and students. The presence of sole support parents on the GWA caseload resulted from a combination of legislative requirements and administrative backlogs in the transfer of families to FBA.7

Explanatory Variables

Four categories of potential determinants of social assistance receipt are discussed in Chapter 2. They are addressed here in the following order: labour market conditions, social

7 The proportion of the GWA caseload that these groups comprised varied. Up until 1991, sole support parents who were deserted, unwed or separated had a three-month mandatory waiting period for FBA. Back on Track (1991) addresses the issue of backlogs in transferring people to FBA.
assistance policy, unemployment insurance policy, and individual/family characteristics.

Table 2 provides descriptive data of all the variables.

**Labour Market Conditions**

Seven labour market factors are incorporated within this study: minimum wage, availability of employment, duration of unemployment, characteristics of a secondary labour market and labour market segmentation as reflected in polarization of earnings. All of the variables selected reflect monthly observations and are seasonally unadjusted.\(^8\) With one exception, the data are obtained from Statistics Canada’s Labour Force Historical Review (CD-ROM 1997). The minimum wage data is obtained from the legislative changes reported in the *Ontario Gazette* (1981-1994).

**Wage level (Minimum wage)**

The real minimum wage (using 1986 dollars) is used as a wage variable. This choice is guided by theory, precedent and data availability. Several authors (Albert, 1988; Brown, 1995; Allen, 1993) argue that the labour market alternative to welfare for most recipients is a low-wage job. Therefore variables which capture aggregate earnings levels such as average weekly earnings for workers as a whole are not appropriate. Recent studies tracking recipients who leave welfare provide support for this approach (Loprest, 1999; Brauner &

\(^8\) Seasonal adjustment refers to the use of a smoothing technique such as three-month moving averages. Statistics Canada publishes some data series in this form; however, since some of the data series used in this study are not published in this form, to be consistent, all series reflect unadjusted data.
Loprest, 1999; Parrott (1998); Ekos Research Associates, 1998; Card & Robins, 1996\(^9\).

Indeed, the Ontario study (Ekos Research Associates, 1998, April) found that hourly wages for social assistance recipients who had left welfare in November 1997 ranged from $8 to $10 per hour, in a period when minimum wage was $6.85. Precedents for the use of minimum wage include studies by Albert (1988), Stewart & Dooley (1998, August), and Fortin & Lacroix (1998, April). Another reason that minimum wage is used here, rather than average weekly earnings, for example, is that the relevant monthly data series from SEPH extends only as far back as 1983, because the methodology was changed in that year.

The use of minimum wage as the wage variable, however, adds a complication to the analysis and hence to the prediction of the direction of the relationship between the wage variable and the GWA caseload ratio. Theoretically, it can be argued that minimum wage represents the potential wages available to recipients in the labour market, and thus a higher minimum wage would be associated with a lower GWA caseload ratio. In contrast, it can also be argued theoretically that increases in the minimum wage will reduce the demand for labour and so will be associated with a higher caseload ratio. Empirical evidence also suggests that the effect of the minimum wage on welfare receipt varies with sex and age.

---

\(^9\) Card & Robins (1996) found that approximately 70 percent of single parent recipients (program or control group) received wages of less than $3.00 above the minimum wage. These figures were derived from Table 6, p. 39, which was constructed for purposes that differ from how it is being used here. The social assistance recipients are part of the SSP.
Table 2

Descriptive Statistics of Variables (Level Form)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GWA cases relative to working age population (% \times 100)</td>
<td>2.14</td>
<td>1.08</td>
<td>1.03</td>
<td>4.34</td>
</tr>
<tr>
<td><strong>Explanatory Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment rate (% \times 100)</td>
<td>8.14</td>
<td>2.19</td>
<td>4.40</td>
<td>12.70</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>420.06</td>
<td>65.09</td>
<td>279.43</td>
<td>508.13</td>
</tr>
<tr>
<td>Minimum wage (1986 dollars)</td>
<td>4.33</td>
<td>.32</td>
<td>3.85</td>
<td>5.13</td>
</tr>
<tr>
<td>Supports to employment program (STEP) (d)</td>
<td>.38</td>
<td>.49</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Back on track (d)</td>
<td>.24</td>
<td>.43</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Restrictions to STEP (d)</td>
<td>.17</td>
<td>.38</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Expenditure control (d)</td>
<td>.11</td>
<td>.31</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Enhanced verification (d)</td>
<td>.06</td>
<td>.24</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Unemployment insurance benefit ratio</td>
<td>.99</td>
<td>.33</td>
<td>.42</td>
<td>1.2</td>
</tr>
<tr>
<td>Average duration of unemployment (weeks)</td>
<td>18.28</td>
<td>4.84</td>
<td>11.7</td>
<td>30.8</td>
</tr>
<tr>
<td>Part-time employment (% \times 100)</td>
<td>10.81</td>
<td>.95</td>
<td>8.02</td>
<td>12.18</td>
</tr>
<tr>
<td>Involuntary part-time employment (% \times 100)</td>
<td>2.19</td>
<td>.84</td>
<td>1.07</td>
<td>5.11</td>
</tr>
<tr>
<td>Self-employment (%)</td>
<td>7.98</td>
<td>.49</td>
<td>7.07</td>
<td>9.29</td>
</tr>
<tr>
<td>Services-to-goods employment ratio (% \times 100)</td>
<td>261.13</td>
<td>30.86</td>
<td>221.67</td>
<td>323.47</td>
</tr>
</tbody>
</table>

*Note.* Data are monthly, spanning January 1981 to December 1994 (N=168). Dummy variables are marked with (d). Variables marked with * represent percentages of the working age population. \(\times 100\) indicates multiplied by 100. The variables are presented in the order in which they are included in successive models.
Based on their findings, Fortin & Lacroix (1998, April, pp. 15-16) suggest that among 18 to 24 year olds, the effect on demand dominates, whereas the supply effect (the effect on wages available for those who have jobs) takes precedence for the 25 to 29 year old group and for men 30 to 45. Dooley (1998, June) also suggests that minimum wage may be a better measure of potential wage levels for some groups compared to others.\(^\text{10}\)

The theoretical prediction is thus ambiguous because the relative weight of the demand versus the supply effect is unknown. Arguably, incorporating measures of unemployment and duration of unemployment in the models serves to control for the demand effect, but these overall measures may not adequately capture the experience of those most susceptible to the demand effect (e.g., youth). For this reason, a relationship is predicted to exist between the minimum wage level and the caseload ratio, but the direction of the relationship is not.

\textit{Availability of employment}

The overall unemployment rate, multiplied by 100, is used as a measure of the availability of employment. Use of an overall measure, rather than one specific to age and/or sex, is consistent with other studies (e.g., Fitzgerald, 1991; Klassen & Buchanan, 1997; Dooley, 1998, June; Plotnick & Lidman, 1987; O’Neill et al., 1984 (case records)); however, the male adult unemployment rate is an alternative (Stewart & Dooley, 1998, August; Fortin & Lacroix, 1998, April). Fortin and Lacroix (1998, April) argue that this measure more

\(^{10}\) Dooley (1998) notes this in developing his wage variable; however, the models of welfare participation that he reported do not isolate the impact of his wage variable on lone mothers of different ages.
accurately reflects the tightness of the labour market; however, in light of the presence of males and females in the GWA caseload and the use of a duration of unemployment measure that encompassed both sexes, the overall measure was selected.\footnote{Preliminary work suggested that use of the male unemployment rate would have a minimal impact; however, it was not tested in all models.} Statistics Canada regularly publishes alternative \textit{annual} unemployment rates for each province (Statistics Canada, 2000).\footnote{\textit{Perspectives on Labour and Income} (2000, Spring) indicates that monthly supplementary unemployment measures for provinces are available through the Labour Force Historical CD-ROM (1999), the figures for the measures of most relevance here show as zeros for 1981-1994.} Some of these attempt to take into account \textit{hidden} unemployment, that is, unemployment that the \textit{official} unemployment rate misses. Two groups missed in the \textit{official} rate are discouraged workers, that is, potential workers who have stopped looking for employment because they do not believe they can find it and part-time workers who would like more hours of work (Statistics Canada, 1999). The \textit{official} rate is used here because it is published in \textit{monthly} form, and two other variables that describe non-standard employment (duration of unemployment and involuntary part-time employment) also capture key dimensions of the alternative unemployment rates.\footnote{The Help-Wanted Index is not used since CANSIM provides monthly data for this index in trend cycle or seasonally adjusted form and this format is not compatible with the other data series.}

\textit{Duration of unemployment}

The average duration of unemployment is included in the analysis. To obtain this measure, the Labour Force Survey asks respondents to indicate the number of weeks they
have been continuously unemployed. As mentioned in Chapter 2, the pathway from unemployment to social assistance receipt may involve receipt of unemployment insurance, the use of savings and contributions from family and friends. The likelihood of exhausting these sources increases with the length of unemployment. In other words, the duration of unemployment may affect the incidence of welfare receipt. The use of this variable is also consistent with the effort to capture aspects of the structure of the labour market. Official unemployment rates do not distinguish between their components, incidence and duration, and yet the nature of a recession can differ dramatically according to the relative importance of each. As indicated in Chapter 3, the 1990s recession was characterized by a higher average duration of unemployment than the 1980s recession.

Non-standard employment

The next set of labour market factors are intended to capture changes in the level of non-standard employment. Increased presence of non-standard jobs is viewed here as an indicator of growth in the secondary labour market. As outlined in Chapter 3, the Economic Council of Canada (1991) categorized part-time and own account self-employment as two of four forms of non-standard employment. The Council also included temporary agency and short-term work. These are not included in the model because adequate monthly provincial data were not available.

---

14 Individuals may be on temporary lay-off or without work. To be included in this measure, they must engage in job search activities at least once every four weeks. This information is only collected from those unemployed at the time of the survey.

15 See the discussion regarding short-term employment data in Chapter 3.
Part-time work is defined by Statistics Canada (1997) as employment of less than 30 hours per week in one's main or only job. Although, part-time work is categorized as non-standard, it is arguable that to the extent that non-standard is viewed as less desirable, it is important to include a variable that distinguishes between voluntary and involuntary part-time. For this reason, an involuntary part-time variable is included, although the part-time variable is retained because it captures an important change in the labour market. Individuals are classified by Statistics Canada as involuntary part-time workers if they indicate, as their reason for part-time work, that they could only find such work.\footnote{As discussed in Chapter 3, the definition of part-time worker employed in the data series \textit{reason for part-time work} differs from that utilized in the \textit{part-time} series. It classifies workers as part-time if they usually work less than 30 hours per week at all jobs, excluding those whose weekly hours are limited to less than 30 hours for legislative reasons (Statistics Canada, 1995).} As mentioned above, including this variable has the additional advantage of addressing some of the limitations of the official unemployment rate. Both these variables are formulated as a percentage of the population 15 and above, multiplied by 100.

Own account self-employment (OASE) is a subset of self-employment (where individuals work for themselves). It refers to the situation in which the self-employed person has no paid employees. Monthly provincial data for this subset were not in published form at the outset of this research\footnote{These data are currently available. The correlation between OASE and self employment is .98; .93 (in their logarithm form). The sign of the coefficient in Model C is the same when OASE is used instead of self-employment and the magnitude of the t-statistic is similar.}. For this reason self-employment data are used here. Although not ideal, growth in self-employment roughly parallels that in own account self-employment. In addition, its dramatic growth signals a shift in the labour market that traditional indicators
do not capture and therefore may be worth examining in its own right. This variable is also formulated as a percentage of the population over 15 years, multiplied by 100.

As indicated at the outset, it is very infrequent that the literature explores the nature of the labour market beyond traditional indicators of wages and levels of unemployment, so the literature provides little guidance in this area.

*Polarization of earnings*

Polarization of earnings is the final labour market factor that is investigated. This is done indirectly through examination of the distribution of jobs across the service and goods sectors. The use of this proxy variable is based on the argument that compared to the goods sector, the service sector is typified by a greater polarization of skills (ECC, 1990, p.15), and hence earnings, and therefore a shift to more employment in the services sector translates into increased earnings polarization. (Figures 25 and 26 in Chapter 3 depicted the heterogeneity in the wage structure of the services sector.) This variable is operationalized as the level of employment in the service sector as a percentage of the level of employment in the goods sector, multiplied by 100.

There are limitations to this variable. As discussed in Chapter 3, the shift in the distribution of jobs does not account for *all* earnings polarization. In addition, it was acknowledged in Chapter 3 that evidence regarding the nature and extent of polarization during the study period is contradictory, although Beach’s & Finnie’s (1998) unique work regarding polarization of *longer-term* earnings in Canada has not been contradicted.
The dual labour market paradigm informs few studies regarding social assistance. As indicated in Chapter 2, those studies that are informed by it use micro-level data. For this reason, they provide little guidance regarding how to incorporate labour market segmentation into a model using macro-level data.

Social assistance policy

In the literature primarily three social assistance policy determinants are investigated: benefit levels, treatment of earnings and breadth of access to the program.

Benefit level

Benefit level is operationalized as the real maximum GWA benefit for a single employable person using 1986 dollars. Data were obtained from the Ministry of Community and Social Services. The use of a maximum benefit level for a particular category of recipient is consistent with the approach taken in several studies (e.g. Albert, 1988; Plotnick and Lidman, 1987; Bailey, 1994; Charette & Meng, 1994; Brown, 1995; Christofides, 1997; Fortin & Lacroix, 1998), although the caseloads studied are either more homogeneous (e.g. single recipients only) than the GWA caseload, or the maximum benefit levels are applied to the corresponding household types within the caseload. Despite this heterogeneity, the rationale for selecting the benefit level for single recipients is that it captures general policy

---

Brown's (1995) study is one of the few using macro-level data that alludes to earnings distributions; however, he does not incorporate earnings distribution into his model. He simply notes the decline in wages of workers in the bottom three deciles relative to their counterparts in 1975 and the rise in social assistance benefits-to-wages ratio for male bottom decile earners from 1975 to 1990-92.
shifts and the presence of this group is one of the distinctive features of the GWA caseload. Comparison of the GWA benefit changes across single employables, single parents with one child and two parents with two children indicate fairly similar patterns of relative change. (See Figure C1, Appendix C.) The maximum benefit level includes the maximum basic allowance and the maximum shelter component.\(^\text{19}\) It should not be interpreted as representing what every single employable person receives and it assumes no reduction in benefit level due to earnings.

_Treatment of earnings and breadth of access_

As mentioned earlier, treatment of earnings encompasses several elements, namely the level of earnings that are exempt, the BRR applied to the balance of earnings, and the way earnings are calculated for the purposes of determining a reduction in benefits. Together these determine the breakeven point and sometimes the entry income limit. While some studies examine the exemption and the BRR separately, it is also possible to conceptualize and to calculate an overall _penalty_ or _tax_ rate which combines these two and the use of gross versus net earnings variously defined.\(^\text{20}\) In this research, this is referred to as the de facto BRR.

As indicated in Chapter 2, some studies examine one or more of these parameters separately (see Moffitt, 1992 for a review; also Albert, 1988; Hutchens, 1981; Plotnick, 1983; 

\(^{19}\) The figures used assume that people are renters, not roomers, boarders or home owners. They do not include Supplementary Aid or Special Assistance.

\(^{20}\) The researcher would have to stipulate earnings levels to do this calculation. In their cross-provincial study, Christofides et al. (1997) use imputed earnings to develop a de facto BRR based on earnings exemptions and BRRs.
Bailey, 1994; Charette & Meng, 1994; Christofides et al., 1997; Dooley, 1998)\textsuperscript{21} and each of these parameters can be represented by continuous variables.\textsuperscript{22} However, sometimes changes to these program features occur simultaneously and abruptly and they cannot be easily represented in this manner. The US Omnibus Reconciliation Act (OBRA) is an example of the latter and has been modelled with dummy variables (e.g., Albert, 1988; Plotnick & Lidman, 1987; O'Neill et al. (AFDC), 1984; Enberg et al., 1990). The shifts in treatment of earnings in Ontario are comparable. The introduction of STEP and subsequent revisions to it, entailed both simultaneous and abrupt shifts, that make constructing continuous variables with sufficient variation difficult. For this reason a dummy variable is employed to mark the introduction of STEP in October 1989.\textsuperscript{23} At this time, the exempt earnings were increased, the BRR was reduced and the use of net as opposed to gross earnings in these calculations was introduced. In other words, the overall tax or de facto BRR was to be reduced for a given level of earnings. It is easy to conflate the introduction of STEP with the introduction of other changes in January 1990; however October 1989 is employed in the construction of the STEP variable because arguably the 1990 changes are captured in the benefit level variable.

\textsuperscript{21} In some instances a variable representing a combination of earnings exemption and benefit reduction rate is used (e.g., Charette & Meng, 1994; Dooley, 1998).

\textsuperscript{22} This is particularly true in studies which include multiple jurisdictions with different levels for each of these elements.

\textsuperscript{23} Alternative approaches to representing legislative change in models include the use of a spline function, which allows for the impact of the legislation to vary over time (e.g., increase). See, for example Gunderson (1985). A simple dummy variable approach was selected due to the number of legislative changes included in the model and the relatively short period in which they occurred. This choice was also consistent with other research in this area.
Restrictions to STEP were implemented in August 1992. The basic earnings exemption was eliminated and the benefit reduction rate was raised from 75% to 100% for recipients during their first three months of assistance. In effect, this lowered the income entry limit. These restrictions are operationalized with a dummy variable which reflects the change in August 1992. One of the challenges of operationalizing distinct policy changes is that they often occur simultaneously, so not only is it difficult to isolate the impact of various aspects of changes in how earnings are treated, but it is also a challenge to disentangle changes in earnings treatment from changes in breadth of access.

The next two instances of significant policy activity conflate the treatment of earnings and change in breadth of access. It is for this reason that they appear twice in Table 1. The first set of changes were introduced in August and October 1991. The changes broadened access in terms of eligibility and broadened the definition of deductions that could be used to calculate net income, for the purposes of determining reductions in social assistance benefits. (The latter generally translated into lower reductions in benefits.) These changes are referred to as Back on Track, alluding to the report that recommended them, and are operationalized as a dummy variable that marks a change beginning August 1991. A single dummy variable was employed since these changes were implemented so closely together, and to minimize the number of dummy variables. The details of these changes and the ones described below are provided in Chapter 2.

The second set of changes, introduced as of July and August 1993, narrowed access through changes in eligibility criteria and reduced earnings exemptions. A dummy variable
marks the change as of July and these changes are referred to as Expenditure Control, alluding to the Expenditure Control Plan from which they emanated.

The final policy change incorporated in this analysis operationalizes breadth of access. Enhanced verification involved a change in administrative practices that required provision of more documentation and hence constituted a narrowing of access since some recipients were unable to provide the required documentation. It is operationalized with a dummy variable marking its inception in March 1994.

**Unemployment Insurance Policy**

Unemployment insurance policy during this period is punctuated with abrupt changes as well. However, rather than use dummy variables, these changes are operationalized through a ratio that takes into account the benefits relative to the stringency of the eligibility criteria. This approach is a modification of one utilized by Fortin and Lacroix (1998): the ratio of the number of weeks of benefits relative to the minimum number of weeks necessary to be eligible computed at the overall mean unemployment rate over the sample period for each region within Quebec. The ratio used here is the earnings replacement rate multiplied by the number of benefit weeks (assuming 20 weeks worked) divided by the minimum weeks of employment required to qualify for UI, assuming a fixed unemployment rate of six
One of the disadvantages of this approach is that key changes in the penalties for quitting, losing jobs, or refusing to accept employment deemed suitable are not included in this calibration. However, the variable does reflect the timing of this change and its restrictive direction and it offers calibrations of the other changes. A weakness of the variable is that its variation is more limited than that of others.

*Individual and Family Characteristics*

The decision to work with aggregate data, reduces the possibilities for examining the impact of individual/family characteristics. The particular caseload descriptors available in the GWA data set reduces these possibilities even further. Individual/family variables were excluded from the models after preliminary investigation of two approaches, closer examination of the *reason for assistance* case categories and the data quality. The two approaches included incorporating the proportion of the caseload comprised by various case types in the model or using the case types as separate dependent variables and pooling the data. The case types offered approximations of some of the characteristics discussed in Chapter 2; however, they were relatively rough. For example, _temporary or permanent ill_
health would serve as a proxy for health limitations, aged or student as a proxy for age, and sole support parent and employable would serve as two case types; however, they would not distinguish between differences in marital status, sex, or family size. Another consideration was that MCSS combined two sources of data to develop its estimates and it seemed that figures for the caseload as a whole would be freer from error than those for components of the caseload. On balance, then, it was judged prudent to exclude these proxies for individual/family characteristics.25

ADDITIONAL CONSIDERATIONS

Seasonal dummies are not included in the models. When the data are monthly, including such variables absorbs a lot of degrees of freedom. In addition, a strong model would explain the seasonality via the seasonality within some of the selected explanatory variables.

All variables, except the dichotomous ones, are transformed into natural logarithms for the statistical analysis. Table 3 provides descriptive data for the transformed variables. It is common practice to use logarithms in economics. In some instances, the use of logarithms serves to address non-stationarity of data series and to reduce the possibility of

25 An alternative approach is to incorporate variables that capture the growth pattern among particular segments of the Ontario population who disproportionately receive social assistance, or the combined effect of these growth patterns coupled with the changes in each segments' susceptibility to receiving benefits. Not doing this reflects a number of assumptions, namely, that the growth patterns among such segments of the population combined with any changes in susceptibility to receipt do not differ substantially from the growth rate/susceptibility couplet of the overall population or, that changes in this couplet are counterbalanced by opposing changes among other segments of the population. Recall that the population over 15 years is used to create the dependent variable, thereby controlling for population growth.
Table 3

Descriptive Statistics of Variables (Natural Logarithms)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GWA cases relative to working age population (%)(x 100)</td>
<td>.65</td>
<td>.44</td>
<td>.03</td>
<td>1.47</td>
</tr>
<tr>
<td><strong>Explanatory Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment rate (%) (x 100)</td>
<td>2.06</td>
<td>.28</td>
<td>1.45</td>
<td>2.54</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>6.03</td>
<td>.16</td>
<td>5.63</td>
<td>6.23</td>
</tr>
<tr>
<td>Minimum wage (1986 dollars)</td>
<td>1.46</td>
<td>.07</td>
<td>1.33</td>
<td>1.64</td>
</tr>
<tr>
<td>Supports to employment program (STEP) (d)</td>
<td>.38</td>
<td>.49</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Back on track (d)</td>
<td>.24</td>
<td>.43</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Restrictions to STEP (d)</td>
<td>.17</td>
<td>.38</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Expenditure control (d)</td>
<td>.11</td>
<td>.31</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Enhanced verification (d)</td>
<td>.06</td>
<td>.24</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Unemployment insurance benefit ratio</td>
<td>-.08</td>
<td>.41</td>
<td>-.87</td>
<td>.18</td>
</tr>
<tr>
<td>Average duration of unemployment (weeks)</td>
<td>2.87</td>
<td>.25</td>
<td>2.46</td>
<td>3.43</td>
</tr>
<tr>
<td>Part-time employment (%)* (x 100)</td>
<td>2.38</td>
<td>.09</td>
<td>2.08</td>
<td>2.50</td>
</tr>
<tr>
<td>Involuntary part-time employment (%)* (x 100)</td>
<td>.72</td>
<td>.36</td>
<td>.06</td>
<td>1.63</td>
</tr>
<tr>
<td>Self-employment (%)* (x 100)</td>
<td>2.08</td>
<td>.06</td>
<td>1.96</td>
<td>2.23</td>
</tr>
<tr>
<td>Services-to-goods employment ratio (%) (x 100)</td>
<td>5.56</td>
<td>.11</td>
<td>5.40</td>
<td>5.78</td>
</tr>
</tbody>
</table>

**Note.** Data are monthly, spanning January 1981 to December 1994 (N=168). Dummy variables are marked with (d). Variables marked with * represent percentages of the working age population. Variable names retain their original form (e.g., %), but the data are in logarithms.
heteroskedasticity of error terms. The interpretation of logarithms is also convenient. The estimated coefficient of the independent variables can be interpreted as the percentage change in the dependent variable that results from a one percent change in the independent variable, holding other variables constant.

The models are estimated in single equations, rather than in a system of equations, sometimes referred to as simultaneous equations. This is consistent with the practice cited by Moffitt (1992, p. 19). He notes in his overview of static welfare participation studies that most authors use reduced form equations rather than structural form ones. In addition, such an approach is common among other studies examined in the present research. Further, in the present research, these single equations are used to derive error correction models (ECMs). Granger (1997, p. 176) implies that the use of ECMs has become dominant relative to the use of simple non-dynamic contemporaneous equations and slightly dynamic simultaneous equation systems.26

The use of ECMS means that variables already transformed into logarithms are entered into the models in their first differenced form (e.g. \(X_t - X_{t-1}\)). Given that the variables are already transformed into logarithms, and assuming small changes in \(X\), these first differences may be construed as the relative change in the variable. Table 4 presents descriptive data for the differenced variables.

Use of reduced forms is in essence based on the assumption that the explanatory variables are exogenous, that is, that they are determined "outside the model under consideration" (Harvey & Ericsson, 1991, p. 21). Various levels of exogeneity are required

---

26 Although according to Malley (1990), use of ECMs has become widespread, Taylor and Dixon (1997) introduce a debate regarding appropriate methods in this area.
depending on the purpose of the model construction and more conditions must be met to
achieve each successive level of exogeneity (i.e., weak, strong, super, strict). For the
purposes of the present research, weak exogeneity is deemed sufficient. Weak exogeneity
means that the explanatory variables may be treated as though they are fixed in repeated
samples, or that, at minimum, they are not correlated with the error term.\textsuperscript{27}

\footnotesize
\textsuperscript{27} Note that in the Chapter 5 discussion of patterns in the error terms, no correlations
between the error term and the regressors are reported for any model.
Table 4

Descriptive Statistics of Variables (First Differences of Logarithms)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GWA cases relative to working age population % (x 100)</td>
<td>.0068</td>
<td>.0338</td>
<td>-.0691</td>
<td>.1088</td>
</tr>
<tr>
<td><strong>Explanatory Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment rate % (x 100)</td>
<td>.0005</td>
<td>.0762</td>
<td>-.1542</td>
<td>.2311</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>.0034</td>
<td>.0270</td>
<td>-.0195</td>
<td>.2018</td>
</tr>
<tr>
<td>Minimum wage (1986 dollars)</td>
<td>.0011</td>
<td>.0185</td>
<td>-.0200</td>
<td>.1007</td>
</tr>
<tr>
<td>Supports to employment program (STEP) (d)</td>
<td>.0060</td>
<td>.0774</td>
<td>.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>Back on track (d)</td>
<td>.0060</td>
<td>.0774</td>
<td>.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>Restrictions to STEP (d)</td>
<td>.0060</td>
<td>.0774</td>
<td>.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>Expenditure control (d)</td>
<td>.0060</td>
<td>.0774</td>
<td>.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>Enhanced verification (d)</td>
<td>.0060</td>
<td>.0774</td>
<td>.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>Unemployment insurance benefit ratio</td>
<td>-.0063</td>
<td>.0672</td>
<td>-.8557</td>
<td>.0000</td>
</tr>
<tr>
<td>Average duration of unemployment (weeks)</td>
<td>.0048</td>
<td>.0602</td>
<td>-.1335</td>
<td>.1696</td>
</tr>
<tr>
<td>Part-time employment %* (x 100)</td>
<td>.0009</td>
<td>.0688</td>
<td>-.1754</td>
<td>.2447</td>
</tr>
<tr>
<td>Involuntary part-time employment %* (x 100)</td>
<td>.0048</td>
<td>.1943</td>
<td>-.6685</td>
<td>.4447</td>
</tr>
<tr>
<td>Self-employment % * (x 100)</td>
<td>.0010</td>
<td>.0224</td>
<td>-.0402</td>
<td>.0662</td>
</tr>
<tr>
<td>Services to goods employment ratio % (x 100)</td>
<td>.0012</td>
<td>.0175</td>
<td>-.0360</td>
<td>.0418</td>
</tr>
</tbody>
</table>

*Note. Data are monthly, spanning January 1981 to December 1994 (N=168). Dummy variables are marked with (d). Variables marked with * represent in levels form percentages of the working age population. Variable names retain their original form (e.g., %), but the data are in first differences of logarithms.*
STATISTICAL TREATMENT CONSIDERATIONS

As mentioned earlier, this research uses regression analysis with time series data to estimate empirical models. Since this type of analysis is more common in economics than in social work, this section outlines statistical treatment considerations in more depth than is usual. It identifies some of the choices made and their rationale. This discussion in turn provides a road map to the presentation of findings (Chapter 5)—both what is included and the order of presentation.

Since the discussion which follows is in some depth, an overview of two major issues and the associated design choices is presented. First, after examining the critiques of the three major competing approaches to model specification (outlined below), it was decided to develop four models. As mentioned earlier, each successive model encompasses additional explanatory variables, selected on the basis of theory and the research question. The rationale for this is to try to avoid the criticism of data mining. A decision was also made to both present evidence of patterns in the residuals, which Darnell & Evans (1990) argue should lead to model re-specification rather than application of more sophisticated estimation techniques, and to use alternative estimation techniques which adjust for these patterns as far as they represent particular violations of the assumptions underpinning the use of classical linear regression analysis. Overall, this means that the path taken in the analysis is made explicit.

Second, a major concern when working with times series data is that lack of stationarity in the data series may result in detecting spurious relationships. Each data series is therefore subjected to tests of stationarity. Series found to be non-stationary are differenced
and these differenced series are in turn tested for stationarity. If the differenced series are found to be stationary, some economists develop regression equations using these differenced series. However, others argue that this approach entails the loss of important long-run information and suggest an alternative. The alternative involves a test for cointegration of the original regression equation, in other words, a test to see if the residuals of the regression equation (using levels, or non-differenced, data) are stationary. If this is the case, some advocate the use of an error correction model, which uses differenced data in conjunction with an error correction term, which is the lagged residuals of the original regression equation. The tests for cointegration have their limitations, therefore an alternative is to examine the coefficient of the error correction term in the error correction model and the graph of the residual. A negative and statistically significant coefficient associated with the error correction term and a stability in the graph of the residuals can be interpreted as providing some support for the assumption of cointegration. In the present research the latter is used as a basis for the assumption of cointegration. Four base models (using levels data) are examined. Due to the presence of non-stationarity in individual series, four corresponding error correction models are estimated and these are the focus of subsequent analysis and discussion.

The next three sections address in more depth competing approaches to model specification, stationarity, cointegration, and error correction models and note the choices made to address the issues raised in these areas.
Competing approaches

Debate regarding the manner in which econometric models are specified surfaced during the mid-1970s (Kennedy, 1992). Kennedy (1992) outlines three major approaches to the problem of model specification: average economic regression (AER); test, test, test (TTT); and fragility analysis. AER, commonly referred to as testing up, describes “what is thought to be the usual way in which empirical work in economics is undertaken” (Kennedy, 1992, p. 74). Researchers begin with models derived from theory, which links explanatory variables to a dependent variable. They use their data to determine the size of the parameters (coefficients) for the selected explanatory variables, and if diagnostic statistics, such as Durbin-Watson d, are considered satisfactory, the selected models are deemed acceptable. Alternatively, if diagnostic statistics are problematic, more sophisticated estimation techniques are employed. If these techniques are unable to “solve the problem”, researchers question whether the models are specified correctly and reformulate them to include additional variables, or experiment with different functional forms (Kennedy, 1992, pp. 74-75). In other words, they look for “specific alternative specifications” of the model and use criteria such as expected signs and levels of statistical significance of coefficients and high R²'s to determine which models are better (Kennedy, 1992, p. 75).

The testing down, or TTT, approach involves starting with a general model which includes more variables than the researchers expect to retain in the final model. Tests are undertaken to simplify this model, to derive a specific model. Once that is done, tests for misspecification are conducted. In contrast to the AER approach, these focus on the adequacy of the model rather than on the validity of specific alternatives (Kennedy, 1992, p.
80). It is assumed that unsatisfactory results from diagnostic tests point to model misspecification, rather than the need for more sophisticated estimation techniques (Kennedy, 1992, p. 75). The TTT approach was developed in the context of time series modelling using autoregressive distributed lag models. The general model referred to the inclusion of lagged explanatory and lagged dependent variables (p. 88), although Kennedy contends that the principles are appropriate to other contexts, that is, non-lagged models (p. 82).

The fragility analysis approach involves a Bayesian method and is beyond the scope of this paper; however, it does provide guidance in one area. It suggests the importance of examining the range of values a coefficient for a particular variable assumes when various combinations of explanatory variables are included in models (p. 78) and indirectly underlines the importance of reporting the path taken to the final model specification (p. 78).

All approaches have been criticized and essentially Kennedy argues for following some basic principles, one of which is to test down (Kennedy, 1992, pp. 76-77). However, he also acknowledges that TTT may in practice take on some of the features of AER, that it does not provide an adequate description of the path taken to the ultimate specification, and that there is an “art” component to model specification (p. 85), regardless of approach. In addition, he notes one of the major critiques of testing down, especially in the form of an autoregressive distributed lag model, that is, the substantial number of degrees of freedom utilized by lagged variables.

Darnell & Evans (1990) critique the testing down approach and argue that AER approach, with some modifications, can be strengthened sufficiently to achieve legitimacy. In particular, they argue that diagnostic tests that, for example, point to an error term that is
not white noise, or random, should be interpreted to indicate a need to re-specify the model, and that economic theory should guide the direction of the re-specification. In other words, they argue against defining the lack of white noise as an estimation problem and applying different techniques (such as generalized least squares) to solve that problem. In addition, they criticize the practice of reporting only the final regression equation, a practice which renders invisible many of the decisions made throughout the analysis, decisions which ultimately affect the results and therefore should be open to scrutiny.

The approach taken in this paper is to make explicit the process of analysis. Therefore more than one final equation is presented. Four models, developed on the basis of theory and the research question, are investigated. This approach is used to avoid the criticism at the heart of critiques of the AER methodology, which is the charge of data mining. Patterns in the residuals are acknowledged to suggest lacunae or misspecification of the models; at the same time results of OLS regression analysis are reported along with the results of alternative estimation techniques. The rationale for this is that in the real world of macroeconomic data, it is frequently impossible to map all the important factors and these incomplete models suggest at least provisional ways of understanding phenomena. In the Chapter 6, Discussion and Conclusion, the provisional nature of the findings is discussed along with the directions in which the patterns in the residuals point in terms of re-specification.
Stationarity

One of the first steps in applying regression analysis to time series data is to deal with the issue of the stationarity of the underlying process. "A stochastic process is said to be stationary\(^{28}\) if its mean and variance are constant over time and the value of the covariance between two periods depends only on the distance or lag between two time periods and not on the actual time at which the covariance is computed" [original in italics] (Gujarati, 1995, p. 713). Any time series data can be thought of as one realization, or sample, of an underlying stochastic or random process (Gujarati, 1995, p. 710). Usually researchers have access to only one such realization. This means that the stationarity of the process must be indirectly assessed via the stationarity of the realization or the observed data points. For this reason, the balance of the discussion of stationarity focuses on the observed data series.

An intuitive way to understand the concept of stationarity is to consider two separate segments of the same time series (Gujarati, 1995, p. 23; Gottman, 1981, p. 70). For example, a time series consisting of monthly data from 1976 to 1994 is stationary, if the mean, variance and autocovariance is the same for two segments extending from 1976 to 1985 and 1986 to 1994. Another approach is to compare stationary and nonstationary series plotted against time. According to Kennedy (1992), stationary series "cross the horizontal axis frequently" (p. 258) and the variance is finite. Nonstationary, or integrated, series cross the horizontal axis infrequently and their variance increases as the series is extended. In addition, in

\(^{28}\) Strictly speaking, this is referred to as weak stationarity, but it is sufficient for most practical purposes (see Charemza and Deadman, 1997, p. 85; Gujarati, 1995, p. 713).
stationary series autocorrelations die out as the lag length increases; this is not the case for nonstationary series (p. 258).

Testing for stationarity has become virtually a requirement for working with economic time series data (Charemza & Deadman, 1997, p. 92; Kennedy, 1992, p. 252). At one time, it was common practice to assume stationarity, or at least stationarity around a deterministic time trend. A series of studies demonstrated that stationarity could not simply be assumed, and that traditional statistics were misleading in the presence of nonstationarity (see, for example, Granger & Newbold, 1974; Hendry, 1980; Nelson & Kang, 1984, cited in Kennedy, 1992, p. 265). Running regressions with such data yielded spurious findings (Kennedy, 1992, p. 252).

There are several approaches to testing for stationarity. The simplest is to examine a correlogram which plots the autocorrelation coefficient for each lag length.\(^{29}\) If the series is stationary, the coefficient, which theoretically lies between one and minus one, drops off to zero quite rapidly. A more formal approach is to test for a unit root. If \(Y_t\) represents any time series and \(Y_t = \rho Y_{t-1} + u_t\), then \(Y_t\) has a unit root, if \(\rho = 1\). (\(u_t\) represents a stochastic error term with zero mean and constant variance with no autocorrelation.) A time series with a unit root is nonstationary. Additional forms assumed by nonstationary series are represented by expanding the base equation to include variables such as a constant, a time trend, and the sum of lagged differences of the dependent variable. The latter is included to deal with the presence of autocorrelated errors.

---

\(^{29}\) The autocorrelation coefficient is the covariance of \(Y_t\) and \(Y_{t-k}\), normalized by dividing by the variance of \(Y\).
In general, the test for a unit root is conducted with a transformed equation, that is, the equation \( \Delta Y = \delta Y_{t-1} + u_t \), where \( \Delta Y = Y_t - Y_{t-1} \) (see, for example, Gujarati, 1995, pp. 718-721; Charemza & Deadman, 1997; Kennedy, 1992, p. 265). If \( \delta = 0 \), then \( Y_t \) is deemed to be nonstationary. This transformation is undertaken to address the possibility that the original equation represents a nonstationary series, thus making the testing procedure based on ordinary least squares estimation potentially misleading (Charemza & Deadman, 1997, pp. 98-99).

Variations of the transformed test equation, which take into account various forms of nonstationarity, are as follows.

\[
\Delta Y = \beta_1 + \delta Y_{t-1} + u_t \quad \text{(with constant)} \quad (1)
\]

\[
\Delta Y = \beta_1 + \beta_2 t + \delta Y_{t-1} + u_t \quad \text{(with constant and time trend)} \quad (2)
\]

\[
\Delta Y = \beta_1 + \beta_2 t + \delta Y_{t-1} + \alpha \sum_{i=1}^{m} \Delta Y_{t-i} + \varepsilon_t \quad \text{where } \varepsilon \text{ is serially independent (with constant, time trend and lagged difference terms of the dependent variable)} \quad (3)
\]

Special critical values are used to test the null hypothesis that \( \delta = 0 \). This test is referred to as the Dickey-Fuller (DF) test for the base equation and the first two variations, and as the Augmented Dickey-Fuller (ADF) test for the third variation.\(^{30}\) The critical values vary according to whether a constant and/or trend is included in the equation, but not according to the inclusion of an adjustment for the presence of autocorrelation (Gujarati, 1995, pp. 720-721). If the test statistic is more strongly negative than the critical value, then

\(^{30}\) Philips-Perron unit root tests represent an alternative to the ADF (SHAZAM, 1997).
the null hypothesis of a unit root can be rejected and $Y_t$ deemed stationary. In the present research, the Augmented Dickey-Fuller test is used with the equivalent of Equation 3 (that is, with a constant and a time trend) and on a simpler version of Equation 3, one with no time trend.

The problem of nonstationarity is generally addressed in two ways. If the time series is stationary around a time trend, in other words, the trend is deterministic, then the problem can be addressed by entering a trend variable in the regression equation or by detrending the variable before including it in the equation.\(^{31}\) If the trend, or a component of it, is stochastic, meaning that it shifts over time, then typically, first or second differencing is used to transform the nonstationary series into a stationary one.\(^{32}\) First differencing refers to the transformation of $Y_t$ to $\Delta Y_t$ or $(Y_t - Y_{t-1})$. Second differencing refers to taking the first difference of the first differences, such that $Y_t$ is transformed to $\Delta \Delta Y_t$, or $((Y_t - Y_{t-1}) - (Y_{t-1} - Y_{t-2}))$. Although further differencing is possible, it is unusual to have to difference economic series more than twice (Charemza & Deadman, 1997, p. 103).

While differencing may be useful in addressing the problem of stationarity, working with differenced data ($Y_t - Y_{t-1}$), rather than levels data ($Y_t$), has a drawback. Using differenced data means that valuable information from economic theory regarding long-run

---

31 A series which is stationary around a deterministic time trend can be represented by $Y_t = \alpha_t + \beta_2 t + \varepsilon_t$ (Charemza & Deadman, 1997, p. 89).

32 Series which have a stochastic trend can be represented in the following ways: $Y_t = Y_{t-1} + u_t$; $Y_t = \beta_1 + Y_{t-1} + u_t$; $Y_t = \beta_1 + \beta_2 t + Y_{t-1} + u_t$ (Charemza & Deadman, 1997, pp. 291-292).
equilibrium relationships\textsuperscript{33} is lost (Kennedy, 1992, pp. 250-251), since this body of theory generally assumes the variables are in levels form (Gujarati, 1994, p. 725). Differenced data is viewed as reflecting short-run relationships (Charemza & Deadman, 1997, pp. 40-43)\textsuperscript{34} and little economic theory exists to guide investigation of these relationships (Kennedy, 1992, p. 250). In addition, models developed in differenced data may not "generate plausible long-run properties", as an example by Charemza & Deadman (1997, p. 40-42) demonstrates. To address the problem of working with differenced data, economists have developed an approach based on the concept of cointegration.

**Cointegration**

Nonstationary series are cointegrated if a linear combination of the series exists such that the resultant series is stationary.\textsuperscript{35} If this is the case, the error term of the regression equation, with the variables in levels form, is stationary, and traditional regression

\textsuperscript{33} Long-term equilibrium relationships refer to the relationships that exists between the relevant variables after all the adjustments in Y have occurred in response to changes in X at time t.

\textsuperscript{34} Using the example of consumption (Y) and income (X), Charemza & Deadman (1997) demonstrate how a model using seasonally differenced data reflects short run behaviour only and fails to have a sensible interpretation for both situations of *static equilibrium*, where the variables are assumed to be unchanging between periods, and for *stable equilibrium*, where all variables are changing at some constant rate" (p. 40). They later suggest that concerns such as these have prompted economists to develop models which combine "both short and long run properties" (p. 122).

\textsuperscript{35} An intuitive understanding of cointegration is more easily presented in the case of two variables. Two variables are cointegrated if the *trends* implied by nonstationarity cancel each other out (Griffiths, Hill & Judge, 1993, pp. 700-702, cited in Gujarati, 1995, p. 726); or the series "wander in such a way that they do not drift too far apart" (Kennedy, 1992, p. 254).
methodology is appropriate. The advantage of this approach is that no long run information is lost because the need to use differenced data is eliminated. (Gujarati, 1995, p. 726).

For series to be cointegrated, the series must have particular orders of integration. Orders of integration are derived as follows. If a series in levels form is stationary, it is integrated of the order 0; if the series must be differenced once to achieve stationary, it is integrated of the order 1; and so on. Cointegration is possible if the order of integration of all the variables is the same, or if the order of integration of the dependent variable is lower than the highest order of integration of the explanatory variables and at least two explanatory variables are integrated of this highest order (Charemza & Deadman, 1997, pp. 124-127).

In practice, this means that if individual series are nonstationary, then the researcher should test the stationarity of the residuals of the regression equation. One approach is to use a variation of the DF or ADF test, one that uses critical values specific to testing for cointegration (Kennedy, 1992, p. 267). If the test values are more strongly negative than the critical values, then the null hypothesis of no cointegration may be rejected.

**Error Correction Models**

Cointegration is linked to the use of Error Correction Models (ECM). According to Granger (1997, p. 176), various approaches to modelling have been prominent at different times. His view is that ECM is currently dominant having displaced earlier approaches such as simple non-dynamic contemporaneous equations, slightly dynamic simultaneous equation
systems and vector autoregression. ECMs were developed in response to the critique that Box-Jenkins ARIMA modelling, practised by time series statisticians with no reference to economic theory, often outforecast traditional econometric models informed by theory. The success of ARIMA models pointed to the need to incorporate a more flexible dynamic structure (i.e., include lagged values of dependent variables) into traditional econometric models. At the same time, a drawback of the ARIMA models was that they tended to use differenced data (to achieve stationarity) and therefore made no use of long-run information provided by levels data. ECMs draw on economic theory regarding long-run equilibrium relationships to guide the selection of variables and complement the use of differenced data for these variables with error-correction terms which are derived from levels data and therefore incorporate long-run information. ECMs also assist econometricians in dealing with the problem of nonstationarity of individual series, because these models use differenced data and levels data enters in the form of the error term, which if the variables are cointegrated is stationary.

A simple two-variable form of ECM would be as follows.\(^\text{38}\)

\[
\Delta Y_t = \beta_0 + \beta_1 \Delta X_t + (\beta_3 - 1)(Y_{t-1} - X_{t-1}) + \epsilon_t
\]

\(^{36}\) See Harvey (1997) and Pesaran (1997) for critiques of cointegration and unit roots and advocacy of alternative approaches.

\(^{37}\) Box-Jenkins ARIMA models forecast future values of a dependent variable on the basis of its past values and did not incorporate any other explanatory variables into the model.

\(^{38}\) More complex ECMs may include numerous contemporaneous, and lagged, differenced explanatory variables.
Y and X are measured in logarithms, "with economic theory suggesting that in the long run Y and X will grow at the same rate, so that in equilibrium (Y - X) will be a constant, save for the error" (Kennedy, 1992, pp. 250-251). The term (Y_{t-1} - X_{t-1}) is the error-correction term, which represents the current error in achieving long-run equilibrium. Any change in Y (AY) will be affected not only by a change in X (AX), but also by the extent to which in the previous period, the relationship was out of equilibrium.39

The two-variable form of ECM is derived from an equation of the following form:

\[ Y_t = \beta_0 + \beta_1 X_t + \beta_2 X_{t-1} + \beta_3 Y_{t-1} + \varepsilon_t \]  (5)

In order for the ECM model to be viable, the error-correction term (Y_{t-1} - X_{t-1}) must be stationary, which in turn means that the error term (\varepsilon_t) in Equation 5 must be stationary, or in other words, the variables in Equation 5 must be cointegrated.

Previously, it was mentioned that if variables are cointegrated then traditional methodology can be used. It was implied that one could simply run the regression; however, in some cases estimates of cointegrating regressions are problematic ("have small-sample bias") and estimation of the ECM instead is suggested (Kennedy, 1992, p. 254).

Finally, Engle and Granger (1987) (cited in Charezma & Deadman, 1997, p. 131) have shown that cointegrated variables have an ECM representation and conversely, that for

39 An example to clarify this idea is as follows. In the long-run people may have expenditures which constitute a given ratio of their income. However, if their income increases, they may not immediately increase their expenditures by the expected amount, so that in the short-run the ratio of expenditure to income is less than the long-run ratio. If their income were to change again, any change in expenditure would be affected not only by the change in income, but by the extent to which their expenditure in response to their previous increase was less than expected in the long-run. The difference would be the equilibrating error in the previous period (Gujarati, 1995, pp. 585,729).
ECM models to hold, cointegration must exist. Under certain conditions, tests for cointegration have little power (Dickey, Jansen & Thornton, 1991; Hendry & Ericsson, 1991), so this Granger representation theorem provides another avenue to test for cointegration. Obtaining the requisite negative coefficient on the error-correction term in an ECM model provides support for the assumption of cointegration of variables, when it has been impossible to reject the null hypothesis of no cointegration using traditional statistical tests.

In the present research, ECM versions of each of the four models are estimated. Tests for cointegration, using the ADF tests, are conducted on each of the regression equations from which the ECMs are derived. Secondarily, the coefficient on the error-correction terms are examined to assess support for the assumption of cointegration, given some of the limitations of the ADF tests.
CHAPTER 5

FINDINGS

In this chapter the results of estimating four models of social assistance receipt are reported. The models are addressed in order of increasing complexity (A to D). Each model is presented first in levels form (the base model), then in the form of an error correction model. Each model is assessed on the basis of its ability to map the actual levels of social assistance receipt during the study period and in terms of its violations of the assumptions underpinning classical linear regression, some of which are manifested in patterns in the residuals. In addition, the stationarity of each individual series is evaluated as well as the cointegration of the series combined in each model. The chapter begins with an examination of the stationarity and cointegration results, followed by a description of the results for each model and finally a comparison of the results across models. This comparison serves as a brief summary of the findings (see page 231).

STATIONARITY AND COINTEGRATION RESULTS

The first step in the statistical analysis is to determine whether the data series are stationary. The tests for stationarity are applied to each series in levels form, and where necessary, to series in first and second differences form. The same tests establish the order of integration of series, which is important in determining whether the series in a particular model are cointegrated. Table 5 reports the results of the Augmented Dickey Fuller (ADF) tests
tests and the orders of integration of each series in level form.\(^1\) Corresponding graphs and autocorrelation functions, additional tools to assess stationarity, are included in Appendix D.

According to the results of the ADF, using a critical value at the .10 level of significance, two variables, the GWA caseload ratio and the unemployment rate are stationary. Six variables are integrated of the order one and the two remaining ones (involuntary part-time employment and average duration of unemployment) are integrated of the order two.

Since many of the variables in levels form are nonstationary, the next step is to assess whether the series combined in each of the base models are cointegrated, in other words, whether the residuals of these four models are stationary. If the series are cointegrated, then some economists (e.g. Kennedy, 1992, p. 254) argue that the use of an ECM model is appropriate.

Stationarity of the residuals of the four models is assessed through use of the ADF test for cointegration and through visual inspection of graphs and autocorrelation functions (ACF) of the residuals. Results of the ADF tests are presented in Table 6. The ADF test indicates a lack of cointegration among all the models; however, inspection of the ACFs fails to find patterns common to integrated (or nonstationary) series, that is, a very slow decline in the values of the autocorrelation across the lags (see Appendix E). Graphs of the residuals reveal that for each model they return to the mean and do not wander away from it. (See Figures 31, 35, 39, 43 accompanying the examination of each of the base models). Comparison to

\(^1\) In general, if a series in levels form is stationary, it is deemed to be integrated of the order 0; if the series must be differenced once to achieve stationarity it is deemed to be integrated of the order 1 and so on.
examples of stationary and nonstationary series in texts (Gujarati, 1995, pp. 715-722; Gottman, 1981, pp. 128-130) suggests that these residuals might well be considered weakly stationary, which is sufficient for our purposes.

Table 5

Results of Augmented Dickey-Fuller (ADF) Tests of Stationarity

<table>
<thead>
<tr>
<th>Variables (in logarithms)</th>
<th>T-statistics</th>
<th>Order of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Series with k, with k &amp; t, with k &amp; t, with k &amp; t, with k &amp; t, with k &amp; t</td>
<td></td>
</tr>
<tr>
<td>GWA caseload ratio</td>
<td>-2.96* -4.81</td>
<td>I(0)</td>
</tr>
<tr>
<td>Maximum GWA benefit level</td>
<td>-1.85 -1.62 -3.72* -4.13*</td>
<td>I(1) I(1)</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>-2.68* -2.67</td>
<td>I(0)</td>
</tr>
<tr>
<td>Real minimum wage</td>
<td>.07 -1.92 -2.96* -3.85*</td>
<td>I(1) I(1)</td>
</tr>
<tr>
<td>UI benefit ratio</td>
<td>-.29 -1.85 -5.23* -5.33*</td>
<td>I(1) I(1)</td>
</tr>
<tr>
<td>Part-time employment</td>
<td>-1.66 -2.83 -4.99* -5.12*</td>
<td>I(1) I(1)</td>
</tr>
<tr>
<td>Involuntary part-time employment</td>
<td>-1.49 -1.61 -2.34 -2.31 -10.69* -10.66*</td>
<td>I(2) I(2)</td>
</tr>
<tr>
<td>Self employment</td>
<td>-.88 -3.12 -4.40* -4.40*</td>
<td>I(1) I(1)</td>
</tr>
<tr>
<td>Duration of unemployment</td>
<td>-1.51 -1.67 -2.53 -2.49 -6.66* 6.63*</td>
<td>I(2) I(2)</td>
</tr>
<tr>
<td>Services to goods employment ratio</td>
<td>-.86 -2.14 -3.29* -3.27*</td>
<td>I(1) I(1)</td>
</tr>
</tbody>
</table>

Note. Values that exceed the critical values at the .10 level are marked with an asterisk. The critical values are 2.57, and 3.13. A constant term is designated with k and a trend term, with t. The number of lags included in the ADF test are automatically set by Shazam based on the highest significant lag order from either the ACF or PACF of the first difference of the variable being tested, up to a maximum of the square root of N. For all variables, N = 168. ADF integration tests are not performed on the five dummy variables.
Another source of verification regarding the stationarity of the residuals is the performance of the lagged residual of these models within corresponding ECM models. The coefficients of the lagged residual within the four corresponding ECM models are negative and statistically significant, supporting the view that the residuals of the base models are stationary and that the series in levels form are cointegrated.

Table 6

Results of Augmented Dickey-Fuller Cointegration Tests

<table>
<thead>
<tr>
<th>ADF Cointegration Test</th>
<th>Model A (t-statistic)</th>
<th>Model B (t-statistic)</th>
<th>Model C (t-statistic)</th>
<th>Model D (t-statistic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N=168</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M = 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with constant</td>
<td>-.4.504 (lags=12)</td>
<td>-3.205 (lags=12)</td>
<td>-3.443 (lags=12)</td>
<td>-3.612 (lags=11)</td>
</tr>
<tr>
<td>with constant, after reduction of lags²</td>
<td>-6.523 (lags=2,3,6-8,12)</td>
<td>-5.202 (lag=12th)</td>
<td>-6.314 (lag=12th)</td>
<td>-6.846 (lags=0)</td>
</tr>
</tbody>
</table>

Note. Values which exceed the critical values and hence indicate cointegration would be designated with a *. Critical values for M=8 and N=150 are 5.39 (lower) and 5.30 (upper) for n=150, at the .10 level. Critical values for this test decrease as N increases and increase as M increases, where N is the number of observations and M is the number of independent variables, including the constant, but excluding the lagged differences of the dependent variable (in this case the residual). The number of lagged differences included in the test equation is automatically set by Shazam based on the highest significant lag order from either the ACF or PACF of the first differences of the residual, up to a maximum of the square root of N. To adjust the critical values for M>8, the differences between successive critical values as M increased were computed and an adjustment of .30 made for each independent variable above 8.²

² Lags were omitted if their coefficients were not statistically significant at the .05 level, and if the Durbin's h or the Runs test statistic associated with the revised equation indicated that the null hypothesis of autocorrelation could be rejected. Omission of lags whose coefficients are not statistically significant follows the approach described by Charemza & Deadman (1997, pp. 140, 147-148)

³ The adjustment of .30 was based on the average .312, but reduced slightly for convenience and because the increases in successive values as M increased generally became smaller.
MODEL A

The results of regression analysis for Model A are presented in Table 7. The model is first estimated using ordinary least squares. The t-statistics are reported in column 4 and are labelled original. The results are as follows. The unemployment rate, the GWA benefit level and the minimum wage level are positively correlated with the GWA caseload ratio and are statistically significant. The direction of these relationships is as predicted for the first two, but no prediction of direction was made for the minimum wage level. Three GWA policy change variables are statistically significant, STEP, Back on Track and STEP restrictions, and positively correlated with the caseload ratio. The direction of the relationship is consistent with predictions for the short-term for the STEP and Back on Track variables, but not for the STEP restrictions variable. Remember, no direction was predicted for the long-term.

Recall that Darnell and Evans (1990) argue that any problems identified via diagnostic tests, such as autocorrelation of the error term, should lead to re-specification, rather than re-estimation. However, as indicated in Chapter 4, the present research takes into account Darnell’s and Evan’s (1990) concern, but also uses alternative estimation techniques which adjust for specific patterns in the residuals. In this case, the technique used adjusts for autocorrelation and heteroscedasticity within the error term. These re-estimation techniques do not change the coefficients, only the standard error and hence the t-statistics, which are used to assess statistical significance. The t-statistics which reflect the alternative estimation

---

4 In this report, results of regression analyses are reported using statistics derived from SPSS and SHAZAM. The following types of statistics are from SPSS: \( R^2 \) and \( R^2 \) adjusted, \( F \), Durban-Watson, coefficients, standard error (original), t-statistic (original). The balance of the statistics are derived from SHAZAM, using the same figures but rounded off to a smaller number of decimal places.
technique are in column 5, and they are labelled *adjusted.* The results are modified as follows.

The most substantial change occurs with the minimum wage and expenditure control variables.

Table 7

Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model A

<table>
<thead>
<tr>
<th>Variables (in logarithm form)</th>
<th>Coefficient</th>
<th>Standard Error (original)</th>
<th>t-statistic</th>
<th>Predicted Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (%) (x 100)</td>
<td>.4134</td>
<td>.0205</td>
<td>20.195</td>
<td>7.775</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>1.0634</td>
<td>.0537</td>
<td>19.813</td>
<td>7.459</td>
</tr>
<tr>
<td>STEP (d)</td>
<td>.1667</td>
<td>.0183</td>
<td>9.129</td>
<td>2.642</td>
</tr>
<tr>
<td>Back on Track (d)</td>
<td>.2785</td>
<td>.0278</td>
<td>10.015</td>
<td>3.296</td>
</tr>
<tr>
<td>Restrictions to STEP (d)</td>
<td>.0631</td>
<td>.0267</td>
<td>2.362</td>
<td>2.441</td>
</tr>
<tr>
<td>Expenditure Control (d)</td>
<td>.0385</td>
<td>.0281</td>
<td>1.372</td>
<td>2.975</td>
</tr>
<tr>
<td>Enhanced Verification (d)</td>
<td>-.0036</td>
<td>.0294</td>
<td>-.122</td>
<td>-.067</td>
</tr>
<tr>
<td>Constant</td>
<td>-7.2747</td>
<td>.4594</td>
<td>-15.836</td>
<td>-5.929</td>
</tr>
</tbody>
</table>

*Note.* $R^2 = .9912; R^2$ adjusted = .9816; $F(8, 159) = 1117.02, p = .00; N = 168; D-W = .6257.$ A t-statistic of 1.96 is considered statistically significant at the .05 level. All variables but those which are dummy variables, marked with (d), are in logarithm form. The adjusted t-statistics reflect the use of White's heteroskedasticity consistent estimator and Newey-West's autocorrelation consistent covariance estimator.$^5$ *n.p.* refers to no prediction of the direction of the relationship in the long term.

---

$^5$ These options are available in Shazam. They do not change the estimates of the coefficients, but adjust the standard error to take into account the heteroskedasticity and autocorrelation of the error term derived with the *original* estimation procedure. White's estimation procedure corrects for an unknown form of heteroskedasticity. The Newey-West estimation procedure corrects for an unspecified form of autocorrelation. For the latter, the maximum lag of 13 is selected, following Greene (1996, pp. 590-91).
The minimum wage variable loses statistical significance, and the Expenditure Control variable, whose positive sign is inconsistent with short-term predictions, gains significance.

Figure 29 compares the predicted and actual values of the caseload ratio. The fit is quite good for a considerable portion of the study period, although Model A displays some weakness in capturing the caseload ratio during the period of its most rapid climb, beginning about January 1990 and slowing down about January 1992. Predicted values depart most substantially from actual values in January 1990, and May and July 1991.

Figure 29. Comparison of actual and predicted values of the GWA caseload ratio from Model A.
Diagnostic tests suggest the need for some caution in interpreting the results. The R² adjusted value of .9816 is high, even for time series analysis, and this is coupled with a low Durbin-Watson statistic of .6257 which suggests the possibility of spurious relationships.

There is evidence of collinearity in the zero-order correlations: two correlation coefficients exceed .80 (Table F1, Appendix F), the Condition Index (CI) exceeds 30; however, the Variance Inflation Factor (VIF) are less than 10. Despite evidence of multicollinearity, the problem of a high R² accompanied by an absence of t-statistics that are statistically significant does not occur. The presence of multicollinearity, however, does suggest caution in assessing the share of variation in the dependent variable assigned to each of the collinear variables.

Patterns displayed by the residuals include the following. Heteroskedasticity is present, according to the Breusch-Pagan-Godfrey (B-P-G), Arch, Harvey, and Glejser tests, as is autocorrelation, as indicated by the Durbin-Watson (D-W) statistic. This was the reason for

---

The diagnostics that were used for each model included the following: (from SPSS) examination of histograms, autocorrelation and partial autocorrelation functions of the residuals; plots of the residuals and the squared residuals against the dependent and explanatory variables; normal probability plots; the Durbin-Watson test statistic; VIF, tolerance and condition index as tests for collinearity; (from SHAZAM), the standard battery of tests for heteroskedasticity including Breusch-Pagan-Godfrey, Arch, Harvey, Glejser; and the Ramsay reset test for misspecification of functional form or omission of variables.

These limits are based on guidelines provided in Gujarati (1995, pp. 335-339).

Shazam tests for heteroskedasticity with respect to the predicted Y, predicted Y², and log of predicted Y². In addition, it uses the following tests of heteroskedasticity along a number of dimensions: B-P-G (against X); Arch (autocorrelation of error variance—a from of heteroskedasticity); Harvey (log of e² against X) and Glejser (absolute value of e against X). Where appropriate, the form of heteroskedasticity discovered is identified by reference to the test used.
reporting the results of an alternative estimation technique which adjusted for autocorrelation and heteroskedasticity. Visual inspection of the histogram and the normal probability plot suggest that a normal distribution is approximated, although the Jarque-Bera and Chi squared goodness of fit test statistics indicate otherwise. The Ramsay reset test suggests either omitted variables or a misspecified functional form, but does not identify the nature of the misspecification. As noted in Chapter 4, in the real world of macroeconomic data, it is frequently impossible to map all the important factors. Thus this test result is treated as sounding a cautionary note viz-a-viz the findings.

Visual inspection of the squared residuals plotted against the independent variables reveals that the key to the heteroskedasticity is primarily the months in which the caseload growth was dramatic. This is also the period in which the residuals are the highest (April to July 1991, October and November 1989 and January to March 1990). Figure 30 typifies the pattern of squared residuals across all independent variables although the area of greatest spread varies according to whether it occurs in conjunction with low, middle or high values of the particular variable. Figure 30 uses the unemployment rate.
As indicated in Chapter 4, one way to address the issue of lack of stationary in the data series in levels form is to construct an error correction model. This model includes the variables from the base model, but in first difference form, along with the lagged error term from the base equation. Figure 31 depicts the residuals from the base model, which are incorporated into the error correction model.
Table 8 presents the results of Model A (ECM). Using ordinary least squares, two variables perform as predicted. Both the unemployment rate and the GWA benefit level are positively correlated with the caseload ratio and statistically significant. The lagged residual is negative and statistically significant, as would be the case if the residuals of Model A were stationary. Using an alternative estimation technique, which adjusts for heteroskedasticity and autocorrelation, four additional variables become statistically significant, namely the four social assistance policy initiative variables. The STEP and Back on Track variables carry a positive sign, while the STEP restrictions and Expenditure Control variables carry a negative one. All are consistent with the predictions for the short-term. Note that the minimum wage variable carries a positive sign and is not statistically significant, regardless of estimation method.
The explanatory power of the model ($R^2$ adjusted = .4368) is quite strong for a model in first differences. Figure 32 compares the actual and predicted values.

Table 8

Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model A (ECM)

<table>
<thead>
<tr>
<th>Variables (first differences)</th>
<th>Coefficient</th>
<th>Standard Error (original)</th>
<th>t-statistic original</th>
<th>t-statistic adjusted</th>
<th>Predicted Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (%) (x 100)</td>
<td>.2186</td>
<td>.0279</td>
<td>7.828</td>
<td>7.284</td>
<td>+</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>.3994</td>
<td>.0785</td>
<td>5.089</td>
<td>8.122</td>
<td>+</td>
</tr>
<tr>
<td>Supports to employment program (STEP) (d)</td>
<td>.0247</td>
<td>.0260</td>
<td>.952</td>
<td>3.627</td>
<td>+, n.p.</td>
</tr>
<tr>
<td>Back on Track (d)</td>
<td>.0338</td>
<td>.0263</td>
<td>1.286</td>
<td>2702</td>
<td>+, n.p.</td>
</tr>
<tr>
<td>Restrictions to STEP(d)</td>
<td>-.0138</td>
<td>.0255</td>
<td>-.542</td>
<td>-3.398</td>
<td>-, n.p.</td>
</tr>
<tr>
<td>Expenditure Control (d)</td>
<td>-.0215</td>
<td>.0256</td>
<td>-.842</td>
<td>-4.144</td>
<td>-, n.p.</td>
</tr>
<tr>
<td>Enhanced Verification (d)</td>
<td>.0004</td>
<td>.0254</td>
<td>.015</td>
<td>.134</td>
<td>-</td>
</tr>
<tr>
<td>Lagged residual from Model A</td>
<td>-.1508</td>
<td>.0351</td>
<td>-4.289</td>
<td>-2.755</td>
<td>-</td>
</tr>
<tr>
<td>Constant</td>
<td>.0051</td>
<td>.0020</td>
<td>2.520</td>
<td>1.583</td>
<td></td>
</tr>
</tbody>
</table>

Note. $R^2 = .4674; R^2$ adjusted = .4368; $F(9,157)=15.30$, $p. = .00$; D-W=1.3056, N=167. A t-statistic of 1.96 is considered statistically significant at the .05 level. The adjusted t-statistics reflect the use of Whites' heteroskedasticity consistent estimator and Newey-West's autocorrelation consistent covariance estimator. The latter is based on 13 lags. n.p. means that the direction of the long-term relationship is not predicted.
Figure 32. Comparison of actual and predicted change in caseload ratio based on Model A (ECM)

Diagnostic tests suggest multicollinearity is not problematic (see Table F2, Appendix F), nor are spurious relationships. The Jarque-Bera test suggests normality ($p = .710$), although the Chi squared goodness of fit test is significant at the .031 level. Autocorrelation of the error term ($D-W = 1.3056$) and heteroskedasticity (Harvey test, $p = .00$) are present, hence the use of the alternative estimation technique. The Ramsey reset test statistics are sufficiently small (with $p > .05$) to reject the hypothesis of model misspecification; however, the correlation between the residuals and the dependent variable suggests that the model does not capture all the relevant variables. The specific pattern in the residuals is that the larger the magnitude of the changes in the caseload ratio, whether in a positive or negative direction, the greater the underestimate of this magnitude. Examination of Figure 33 indicates that the pattern of the residuals shifts in the latter part of the study period. The fluctuations are smaller
and the values are closer to zero from early February 1992 to June 1994. This is also a period of relative stability in the caseload with diminished seasonal fluctuation.

Figure 33. Residuals from Model A (ECM)

The presentation of findings for the rest of the models is somewhat abbreviated. It is assumed that some of the explanations (e.g., the use of the alternative estimation technique, the implications of some diagnostic test results) are understood to apply to the other models.
MODEL B

Model B is similar to Model A except that it incorporates a variable intended to capture major Unemployment Insurance policy shifts. The results of the regression for Model B are presented in Table 9. OLS estimation yields the following results. The UI benefit ratio is negatively correlated with the caseload ratio and statistically significant. Recall that the direction of this relationship is not predicted in the hypothesis generated in Chapter 4. As with model A, the unemployment rate, the maximum benefit level carry the predicted positive signs and are statistically significant. Similarly, three social assistance policy variables again carry positive signs and are statistically significant. The results for the first two, STEP and Back on Track are consistent with short-term predictions, while the result for Restrictions to STEP are contrary to them.

Use of an alternative estimation technique which adjusts for heteroskedasticity and autocorrelation yields similar results, except that the Expenditure Control variable becomes statistically significant. Its positive sign is inconsistent with short-term predictions. This is similar to Model A. Unlike Model A, the minimum wage variable does not attain statistical significance regardless of estimation technique. Figure 34 compares the actual and predicted values of the caseload ratio.
### Table 9

Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model B

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Standard Error (original)</th>
<th>t-statistic original</th>
<th>t-statistic adjusted</th>
<th>Predicted Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (%) (x100)</td>
<td>.3325</td>
<td>.0176</td>
<td>18.906</td>
<td>12.447</td>
<td>+</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>.9263</td>
<td>.0434</td>
<td>21.330</td>
<td>11.299</td>
<td>+</td>
</tr>
<tr>
<td>Supports to employment program (STEP) (d)</td>
<td>.0988</td>
<td>.0155</td>
<td>6.370</td>
<td>3.173</td>
<td>+, n.p.</td>
</tr>
<tr>
<td>Back on Track (d)</td>
<td>.2052</td>
<td>.0226</td>
<td>9.091</td>
<td>5.061</td>
<td>+, n.p.</td>
</tr>
<tr>
<td>Restrictions to STEP (d)</td>
<td>.0843</td>
<td>.0207</td>
<td>4.069</td>
<td>2.845</td>
<td>-, n.p.</td>
</tr>
<tr>
<td>Expenditure Control (d)</td>
<td>.0322</td>
<td>.0217</td>
<td>1.485</td>
<td>2.253</td>
<td>-, n.p.</td>
</tr>
<tr>
<td>Enhanced Verification (d)</td>
<td>-.0231</td>
<td>.0228</td>
<td>-1.016</td>
<td>-1.463</td>
<td>-</td>
</tr>
<tr>
<td>UI benefit ratio</td>
<td>-.2776</td>
<td>.0266</td>
<td>-10.450</td>
<td>-5.917</td>
<td>n.p.</td>
</tr>
<tr>
<td>Constant</td>
<td>-5.759</td>
<td>.3829</td>
<td>-15.039</td>
<td>-8.667</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* $R^2 = .9897$; $R^2$ adjusted = .9891; $F(9,158) = 1680.77$, $p = .00$; $D-W = .8678$; $N=168$. A t-statistic of 1.96 is considered statistically significant at the .05 level. All variables but those which are dummy ones, marked with a (d), are in logarithm form. The adjusted t-statistics reflect the use of Whites' heteroskedasticity consistent estimator and Newey-West's autocorrelation consistent estimator, using 13 lags. *n.p.* means that the direction of the long-term relationship is not predicted.
Figure 34. Comparison of actual and predicted values for the GWA caseload ratio based on Model B

Visual inspection of Figure 34 indicates that Model B maps the actual caseload ratio quite well. The pattern of the residuals depicted in Figure 35 suggests Model B is better than Model A at capturing the period of steepest growth in the ratio. Diagnostic tests again suggest caution in interpreting the results for some of the same reasons as for Model A. A high R^2 adjusted (.9891) is coupled with a low D-W (.8678). There is evidence of collinearity (see Table F1, Appendix F for zero-order correlations), with the UI variable showing zero-order correlations above .8 with the minimum wage variable, the STEP and the Back on Track variables. The CI exceeds 30, although the maximum VIF is slightly less than 10. Once again though, multicollinearity does not preclude statistical significance of some t-statistics. Heteroskedasticity is present as evidenced by scores on the B-P-G, Arch and Glejser tests. Visual inspection of the histogram and normal probability plots suggest an approximation to a normal distribution; the Jarque-Bera statistic supports this, although the
Chi-square goodness of fit measure is significant at the .016 level. The Ramsay reset test suggests misspecification.

As with Model A, a corresponding error correction model is constructed. It incorporates the lagged residual of the base model, which is depicted in Figure 35.

Table 10 provides the results of the regression for the Model B (ECM). OLS estimation yields the following results. The UI benefit ratio carries a negative sign and is statistically significant. The unemployment rate and the GWA benefit level carry a positive sign, as predicted, and are statistically significant. The negative and statistically significant coefficient of the lagged residual supports the assumption of stationarity of the lagged residual from the base model. Results are modified when the alternative estimation technique is applied. Four of the social assistance policy variables become statistically significant, all
carrying the signs as predicted in the short-term. The minimum wage variable fails to attain statistical significance.

Table 10

Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model B (ECM)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Standard Error (original)</th>
<th>t-statistic</th>
<th>Predicted sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (%) (x100)</td>
<td>.2150</td>
<td>.0269</td>
<td>7.987</td>
<td>+</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>.4104</td>
<td>.0756</td>
<td>5.448</td>
<td>+</td>
</tr>
<tr>
<td>Supports to employment program (STEP) (d)</td>
<td>.0225</td>
<td>.0249</td>
<td>.908</td>
<td>3.913 +, n.p.</td>
</tr>
<tr>
<td>Back on Track (d)</td>
<td>.0259</td>
<td>.0246</td>
<td>1.053</td>
<td>5.461 +, n.p.</td>
</tr>
<tr>
<td>Restrictions to STEP (d)</td>
<td>-.0076</td>
<td>.0244</td>
<td>-.311</td>
<td>-2.157 -, n.p.</td>
</tr>
<tr>
<td>Expenditure Control (d)</td>
<td>-.0194</td>
<td>.0246</td>
<td>-.791</td>
<td>-5.021 -, n.p.</td>
</tr>
<tr>
<td>Enhanced Verification (d)</td>
<td>.0051</td>
<td>.0244</td>
<td>.208</td>
<td>1.648 -</td>
</tr>
<tr>
<td>UI benefit ratio</td>
<td>-.0691</td>
<td>.0290</td>
<td>-2.373</td>
<td>-5.739 n.p.</td>
</tr>
<tr>
<td>Lagged residual of Model B</td>
<td>-.2567</td>
<td>.0415</td>
<td>-5.865</td>
<td>-6.136 -</td>
</tr>
<tr>
<td>Constant</td>
<td>.0046</td>
<td>.0019</td>
<td>2.394</td>
<td>1.617</td>
</tr>
</tbody>
</table>

Note. $R^2 = .5153; R^2$ adjusted = .4820; $F(10, 156) = 16.583, p = .00; N = 167; D-W = 1.303$. A t-statistic of 1.96 is considered statistically significant at the .05 level. The dummy variables are not in logarithm form. The adjusted t-statistics reflect the use of White’s heteroskedasticity consistent estimator and Newey-West’s autocorrelation consistent covariance estimator, using 15 lags. n.p. means that the direction of the long-term relationship is not predicted.

The explanatory power of Model B (ECM) ($R^2$ adjusted = .4820) is slightly greater than that of Model A (ECM). Like Model A (ECM), it seems to track the latter part of the
study period better than the previous period; in Model B (ECM)'s case, the period extends from May 1991 to July 1994. Figure 36 depicts actual and predicted changes in the GWA caseload ratio.

![Figure 36. Comparison of actual and predicted change in GWA caseload ratio from Model B (ECM)](image)

Diagnostic tests reveal some strengths and some areas which suggest caution.

Multicollinearity is less problematic (Maximum VIF is low (1.185); maximum CI value is low (1.654); see Table F2, Appendix F for zero-order correlations). Autocorrelation of the error term (D-W = 1.303) and heteroskedasticity (Harvey test, p. = .000) are present, hence the use of the alternative estimation technique. The Jarque-Bera tests provides evidence to support an approximation to a normal distribution, the Chi-square goodness of fit measure does not. The Ramsey reset test does not point to misspecification; however, like Model A (ECM), the most salient pattern among the residuals is that their magnitude is larger, the
larger the changes in the caseload ratio, whether in a positive or negative direction. Figure 37 displays the residuals from Model B (ECM).

![Figure 37. Residuals from Model B (ECM)](image)

**MODEL C**

Model C incorporates additional labour market variables, namely, average duration of unemployment, part-time employment, involuntary part-time employment and self-employment. Results from the regression are presented in Table 11. From this point forward, only findings that are statistically significant are discussed. OLS estimates reveal the following. Two of the four additional labour market variables--average duration of unemployment and self-employment--have positive correlations as predicted. As in Model B, the UI benefit ratio carries a negative sign. Similar to Models A and B, the unemployment rate and the maximum benefit level carry the predicted positive signs and three social
assistance policy variables, STEP and Back on Track and Restrictions to STEP, carry positive signs. As before, the signs are as predicted in the short-term for the STEP and Back on Track variables, and contrary to short-term predictions for the Restrictions to STEP variable.

Table 11

Summary of Regression Analysis of Variables Predicting GWA Caseload Ratio: Model C

<table>
<thead>
<tr>
<th>Variables (in logarithms)</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-statistic</th>
<th>Predicted Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (%) (x100)</td>
<td>.2958</td>
<td>.0247</td>
<td>11.959</td>
<td>11.508</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>.8100</td>
<td>.0514</td>
<td>15.755</td>
<td>10.258</td>
</tr>
<tr>
<td>Supports to employment program (STEP) (d)</td>
<td>.0991</td>
<td>.0162</td>
<td>6.116</td>
<td>2.754</td>
</tr>
<tr>
<td>Back on Track (d)</td>
<td>.1844</td>
<td>.0239</td>
<td>7.718</td>
<td>3.541</td>
</tr>
<tr>
<td>Restrictions to STEP (d)</td>
<td>.0454</td>
<td>.0209</td>
<td>2.173</td>
<td>1.616</td>
</tr>
<tr>
<td>Expenditure Control (d)</td>
<td>.0211</td>
<td>.0201</td>
<td>1.051</td>
<td>1.920</td>
</tr>
<tr>
<td>Enhanced Verification (d)</td>
<td>- .0483</td>
<td>.0219</td>
<td>-2.206</td>
<td>-2.200</td>
</tr>
<tr>
<td>Average duration of unemployment (months)</td>
<td>.1618</td>
<td>.0390</td>
<td>4.153</td>
<td>3.064</td>
</tr>
<tr>
<td>Part-time employment (%) (x100)</td>
<td>.0803</td>
<td>.0771</td>
<td>1.042</td>
<td>.926</td>
</tr>
<tr>
<td>Involuntary part-time employment (%) (x100)</td>
<td>-.0369</td>
<td>.0268</td>
<td>-1.376</td>
<td>-1.198</td>
</tr>
<tr>
<td>Self-employment (%) (x100)</td>
<td>.3796</td>
<td>.1167</td>
<td>3.252</td>
<td>2.029</td>
</tr>
<tr>
<td>Constant</td>
<td>-6.4554</td>
<td>.4096</td>
<td>-15.759</td>
<td>-8.213</td>
</tr>
</tbody>
</table>

Note. \( R^2 = .9917; R^2 \text{ adjusted} = .9910; F(13,154)=1421.69, p. = .00; N=168; D-W = .8345. \) A t-statistic of 1.96 is considered statistically significant at the .05 level. All variables except those which are dummy variables, designated by (d), are in logarithm form. The adjusted t-statistics reflect the use of Whites's heteroskedasticity consistent estimator and Newey-West's autocorrelation consistent covariance estimator, using 13 lags. n.p. means the direction is not predicted in the long-term relationship.
Another policy variable, Enhanced Verification, carries a negative sign, which is consistent with predictions. The alternative estimation technique results in only one modification to these results: Restriction to STEP loses its statistical significance.

Figure 38 compares the actual and predicted caseload ratios. As in Models A and B,

the $R^2$ adjusted is high (.9910) and is coupled with a low Durbin-Watson statistic (.8345).

Multicollinearity is present, although again a substantial number of t-statistics are statistically significant. The CI index exceeds 30 and the VIF for Back on Track exceeds 10 (see Table F1, Appendix F for zero-order correlations). Heteroskedasticity is present, as evidenced by results of the B-P-G, Arch, Harvey and Glejser test and the low D-W indicates autocorrelation. Tests are contradictory with respect to normality of the error term (Jarque-Bera $p=.691$; Chi square, $p=.008$; visual inspection of histogram suggests reasonably good
approximation). The Ramsay reset test suggests model misspecification. Figure 39 depicts the residuals from Model C.

Results from constructing an error correction version of Model C are presented in Table 12. OLS estimation produces the following results. Again a positive correlation between each of the unemployment rate and the maximum benefit level and the caseload ratio exists. Two of the additional labour market variables, average duration of unemployment and part-time employment, carry the predicted positive signs, and the lagged residual of the base model carries the predicted negative sign. Notice that part-time employment attains statistical significance in the ECM version compared to self-employment in the base model. Application of the alternative estimation technique results in substantial changes. All the social assistance policy variables become statistically significant and all but Enhanced Verification carry the sign predicted in the short term. Similarly, the negative coefficient carried by the UI benefit ratio becomes statistically significant.
Table 12

Summary of Regression Analysis of Variables Predicting GWA Caseload Ratio: Model C (ECM)

<table>
<thead>
<tr>
<th>Variables (in logarithms)</th>
<th>Coefficient</th>
<th>Standard Error (original)</th>
<th>t-statistic</th>
<th>Predicted sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (%) (×100)</td>
<td>.2741</td>
<td>.0260</td>
<td>10.521</td>
<td>11.949</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>.3418</td>
<td>.0677</td>
<td>5.052</td>
<td>5.642</td>
</tr>
<tr>
<td>Supports to employment program (STEP) (d)</td>
<td>.0277</td>
<td>.0226</td>
<td>1.227</td>
<td>4.177</td>
</tr>
<tr>
<td>Back on Track (d)</td>
<td>.0185</td>
<td>.0223</td>
<td>.833</td>
<td>2.993</td>
</tr>
<tr>
<td>Restrictions to STEP (d)</td>
<td>-.0137</td>
<td>.0219</td>
<td>-.624</td>
<td>-3.321</td>
</tr>
<tr>
<td>Expenditure Control (d)</td>
<td>-.0219</td>
<td>.0220</td>
<td>-.995</td>
<td>-5.442</td>
</tr>
<tr>
<td>Enhanced Verification (d)</td>
<td>.0074</td>
<td>.0217</td>
<td>.340</td>
<td>3.013</td>
</tr>
<tr>
<td>UI benefit ratio</td>
<td>-.0444</td>
<td>.0261</td>
<td>-1.700</td>
<td>-4.606</td>
</tr>
<tr>
<td>Average duration of unemployment (months)</td>
<td>.1612</td>
<td>.0307</td>
<td>5.245</td>
<td>5.914</td>
</tr>
<tr>
<td>Part-time employment (%) (×100)</td>
<td>.1220</td>
<td>.0388</td>
<td>3.145</td>
<td>3.650</td>
</tr>
<tr>
<td>Involuntary part-time employment (%) (×100)</td>
<td>.0032</td>
<td>.0140</td>
<td>.226</td>
<td>.262</td>
</tr>
<tr>
<td>Self-employment (%) (×100)</td>
<td>-.0913</td>
<td>.0804</td>
<td>-1.135</td>
<td>-1.504</td>
</tr>
<tr>
<td>Lagged residual of Model C</td>
<td>-.2485</td>
<td>.0447</td>
<td>-5.560</td>
<td>-4.898</td>
</tr>
<tr>
<td>Constant</td>
<td>.0043</td>
<td>.0017</td>
<td>2.479</td>
<td>1.937</td>
</tr>
</tbody>
</table>

Note. $R^2 = .6261$; $R^2$ adjusted = .5917; $F(14, 152.) = 18.18$, $p = .00$; $N = 168$; D-W = 1.6366. A t-statistic of 1.96 is considered statistically significant at the .05 level. The dummy variables are not logarithm form. The adjusted t-statistics reflect the use of Whites' heteroskedasticity consistent estimator and Newey-West's autocorrelation consistent covariance estimator, using 12 lags. n.p. means the direction in the long-term relationship is not predicted.
The explanatory power of Model C (ECM) is greater than that of Models A (ECM) and B (ECM), as reflected in the $R^2$ adjusted of .5917. Figure 40 compares the actual and predicted values.
Diagnostic tests reveal the following. Multicollinearity indicators suggest this is less problematic than in the base model (see Table F2, Appendix F for zero-order correlations; the highest VIF is 2.645; the highest value on the CI is 3.045). Heteroskedasticity is evidenced by the Harvey test results (p=.000) and the D-W (1.6366) is not sufficiently high to reject the possibility of autocorrelation. Indicators of approximation to normality are contradictory (Jarque-Bera, p=.974, Chi-square goodness of fit, p=.000). Model misspecification is not supported by the Ramsey reset test results; however, again the residuals are correlated with the dependent variable, indicating some variables are omitted from the model, and the correlation is in a positive direction. Figure 41 depicts the residuals from Model C (ECM).

![Figure 41. Residuals from Model C (ECM)](image)
MODEL D

Model D encompasses Model C to and incorporates a proxy for polarization of earnings—the services-to-goods employment ratio. OLS estimation yields the following results, which are summarized in Table 13. The services-to-goods employment ratio carries a positive sign as predicted. The following variables retain the same signs as in previous base models and their coefficients attain statistical significance: unemployment rate, maximum GWA benefit level, UI benefit ratio, average duration of unemployment, self-employment. Among the social assistance policy variables, STEP and Back on Track carry positive signs, as predicted in the short-term; Restrictions to STEP also carries a positive sign, but contrary to short-term predictions. Alternative estimation techniques which adjust for heteroskedasticity and autocorrelation of the error term result in only one change. The predicted negative coefficient on the Expenditure Control variable becomes statistically significant.

The $R^2$ is high (.994) and coupled with a low D-W (.827). Multicollinearity is present (see Table F1 for zero-order correlations). The maximum VIF exceeds 10 and the maximum value on the CI exceeds 30. Notable for Model D are high zero-order correlations of the services-to-goods employment ratio with several social assistance policy variables. The CI also suggests some multicollinearity between this variable and the maximum GWA benefit one. As before, the presence of multicollinearity does not preclude statistically significant t-statistics. Heteroskedasticity is present as evidenced by results of the B-P-G, Arch, Harvey and Glejser tests, as is autocorrelation, as indicated by the previously reported D-W statistic. The results of the Jarque-Bera ($p=.354$) and the Chi square goodness of fit
tests (p=.001) for normality of the error term are contradictory. As with the other base models, the Ramsay reset test points to problems of model misspecification.

Table 13

Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model D

<table>
<thead>
<tr>
<th>Variables (in logarithms)</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-statistic original</th>
<th>t-statistic adjusted</th>
<th>Predicted Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (%) (x100)</td>
<td>.225</td>
<td>.023</td>
<td>9.582</td>
<td>8.945</td>
<td>+</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>.499</td>
<td>.062</td>
<td>8.095</td>
<td>5.492</td>
<td>+</td>
</tr>
<tr>
<td>Supports to employment program (STEP) (d)</td>
<td>.0964</td>
<td>.014</td>
<td>6.880</td>
<td>3.426</td>
<td>+, n.p.</td>
</tr>
<tr>
<td>Restrictions to STEP (d)</td>
<td>.0395</td>
<td>.018</td>
<td>2.184</td>
<td>2.660</td>
<td>-, n.p.</td>
</tr>
<tr>
<td>Expenditure Control (d)</td>
<td>-.0173</td>
<td>.018</td>
<td>-1.954</td>
<td>-1.988</td>
<td>-, n.p.</td>
</tr>
<tr>
<td>Enhanced Verification (d)</td>
<td>-.0323</td>
<td>.019</td>
<td>0.765</td>
<td>-1.707</td>
<td>-</td>
</tr>
<tr>
<td>Average duration of unemployment (months)</td>
<td>.223</td>
<td>.035</td>
<td>6.433</td>
<td>4.651</td>
<td>+</td>
</tr>
<tr>
<td>Part-time employment (%) (x100)</td>
<td>-.113</td>
<td>.072</td>
<td>-1.572</td>
<td>-1.554</td>
<td>+</td>
</tr>
<tr>
<td>Involuntary part-time employment (%) (x100)</td>
<td>-.0434</td>
<td>.023</td>
<td>1.870</td>
<td>-1.932</td>
<td>+</td>
</tr>
<tr>
<td>Self-employment (%)</td>
<td>.283</td>
<td>.102</td>
<td>2.783</td>
<td>2.094</td>
<td>+</td>
</tr>
<tr>
<td>Services to goods employment ratio (%) (x100)</td>
<td>.736</td>
<td>.101</td>
<td>7.290</td>
<td>6.972</td>
<td>+</td>
</tr>
</tbody>
</table>

Note. R² = .994; R² adjusted = .993; F(14, 153) = 1770.96, p. = .00; D-W = .827; N=168. A t-statistic of 1.96 is considered statistically significant at the .05 level. All variables except those which are dummy variables, designated by (d), are in logarithm form. The adjusted t-statistics reflect the use of White's heteroskedasticity consistent estimator and Newey-West's autocorrelation consistent covariance estimator, using 10 lags. n.p. means that the direction of the long-term relationship is not predicted.
Figure 42 indicates the predicted and actual values. As with the other models, the model tracks the actual caseload ratio quite well and the period of steepest caseload ratio growth is the period in which a series of larger residual values occur (e.g. September to November 1990 and May to July 1991). Figure 43 shows the residuals from Model D. Results from constructing a parallel error correction model are displayed in Table 14.

![Figure 42. Comparison of actual and predicted values for the GWA caseload ratio based on Model D](image)

![Figure 43. Residuals from Model D](image)
The unique variable to this model, the services-to-goods employment ratio, is positively correlated with the change in caseload ratio as predicted. Once again the unemployment rate, the maximum benefit level and the average duration of unemployment perform as predicted. Use of an alternative estimation technique adjusting for heteroskedasticity and autocorrelation results in a number of social assistance policy variables and the UI policy variable attaining statistical significance. Three of these have coefficients carrying the predicted sign in the short term: STEP and Back on Track (positive), Expenditure Control (negative). Enhanced Verification carries an unexpected positive sign. The UI benefit ratio carries a negative sign. The explanatory power of this model is stronger than the others, as reflected in the $R^2$ adjusted of .637 and as mentioned earlier, this is quite high for models in first differences.

Diagnostic tests indicate multicollinearity is less problematic in the ECM version of Model D (maximum VIF is 3.153; maximum value on the CI is 3.473). Heteroskedasticity is evidenced by the Harvey test and autocorrelation of the error term cannot be rejected based on the D-W test statistic (1.7556); hence the use of the alternative estimation technique. Evidence regarding normality is mixed (Jarque-Bera, $p=.929$; Chi squared goodness of fit, $p = .000$). The Ramsey reset test does not point to problems of misspecification; however, like Models A (ECM) to C (ECM), the error is correlated with the dependent variable, suggesting that explanatory variable(s) are absent from the model.
Table 14

Summary of Regression Analysis for Variables Predicting GWA Caseload Ratio: Model D (ECM)

<table>
<thead>
<tr>
<th>Variables (in first differences)</th>
<th>Coefficient</th>
<th>Standard Error (original)</th>
<th>t-statistic</th>
<th>Predicted Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (%)</td>
<td>.211</td>
<td>.027</td>
<td>7.710</td>
<td>9.443</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>.311</td>
<td>.064</td>
<td>4.879</td>
<td>6.193</td>
</tr>
<tr>
<td>Minimum wage (1986 dollars)</td>
<td>.080</td>
<td>.090</td>
<td>.893</td>
<td>1.198</td>
</tr>
<tr>
<td>Supports to employment program (STEP) (d)</td>
<td>.0290</td>
<td>.021</td>
<td>1.361</td>
<td>4.981</td>
</tr>
<tr>
<td>Back on Track (d)</td>
<td>.0170</td>
<td>.021</td>
<td>.802</td>
<td>2.873</td>
</tr>
<tr>
<td>Restrictions to STEP (d)</td>
<td>-.0035</td>
<td>.021</td>
<td>-.168</td>
<td>-.656</td>
</tr>
<tr>
<td>Expenditure Control (d)</td>
<td>-.021</td>
<td>.021</td>
<td>-1.001</td>
<td>-5.113</td>
</tr>
<tr>
<td>Enhanced Verification (d)</td>
<td>.00139</td>
<td>.021</td>
<td>.676</td>
<td>3.824</td>
</tr>
<tr>
<td>UI benefit ratio</td>
<td>-.0386</td>
<td>.025</td>
<td>-1.552</td>
<td>-4.434</td>
</tr>
<tr>
<td>Average duration of unemployment (months)</td>
<td>.140</td>
<td>.029</td>
<td>4.736</td>
<td>5.144</td>
</tr>
<tr>
<td>Part-time employment (%)</td>
<td>.0335</td>
<td>.041</td>
<td>.821</td>
<td>.783</td>
</tr>
<tr>
<td>Involuntary part-time employment (%)</td>
<td>-.0028</td>
<td>.013</td>
<td>-.211</td>
<td>-.240</td>
</tr>
<tr>
<td>Self-employment (%)</td>
<td>-.0674</td>
<td>.076</td>
<td>-.887</td>
<td>-1.024</td>
</tr>
<tr>
<td>Services to goods employment ratio (%)</td>
<td>.481</td>
<td>.089</td>
<td>5.402</td>
<td>4.782</td>
</tr>
<tr>
<td>Lagged residual of Model D</td>
<td>-.225</td>
<td>.050</td>
<td>-4.492</td>
<td>-5.254</td>
</tr>
<tr>
<td>Constant</td>
<td>.0035</td>
<td>.002</td>
<td>2.144</td>
<td>1.605</td>
</tr>
</tbody>
</table>

Note. R² = .670; R² adjusted = .637; F (15, 151) = 20.402, p. = .00; D-W = 1.7556; N=167. A t-statistic of 1.96 is considered statistically significant at the .05 level. Are variables with the exception of the dummy variables (d) are in logarithm form. The adjusted t-statistics reflect the use of Whites's heteroskedasticity consistent estimator and Newey-West's autocorrelation consistent covariance estimator, using 12 lags. n.p. means that the direction of the long-term relationship is not predicted.
Figure 44 displays the actual and predicted values for the change in the caseload ratio.

Figure 44. Comparison of actual and predicted change in GWA caseload ratio from Model D (ECM)

Figure 45 displays the residuals from Model D (ECM).

Figure 45. Residuals from Model D (ECM)
Comparison of Four Models: A Brief Summary

As indicated in Chapter 4, the fragility analysis approach emphasizes the importance of examining how coefficient values vary across models which contain a range of explanatory variables. Hence, Tables 15 and 16 compare the coefficient values derived from the alternative estimation technique across the four base models and the four ECM models, respectively. Recall that the alternative estimation technique does not change the coefficient value, but it does change the coefficients which are deemed to be statistically significant. Given the results of the diagnostic tests, the discussion focuses on the ECM models. The most striking finding is that for almost all variables included in more than one model the signs on the coefficients remain stable across the models. The exception is the involuntary part-time employment variable. This applies to coefficients that are deemed statistically significant and those that are not. The attainment of statistical significance also remains relatively stable across models. The exceptions are Restrictions to STEP and part-time employment which lose their significance in Model D (ECM) and Enhanced Verification which attains significance in only Models C (ECM) and D (ECM). The values of the coefficients vary across models, but there is relative consistency among these values, especially for the variables whose coefficients achieve significance in all models, namely, the unemployment rate (.211 to .274), GWA benefit level (.311 to .410), STEP (.023 to .029), Back on Track (.017 to .034), Expenditure Control (-.019 to -.022), UI benefit ratio (-.034 to -.069), and average duration of unemployment (.14 to .161).

The unemployment rate and maximum GWA benefit level are positively correlated with the caseload ratio in all models, as predicted. Four social assistance policy change
variables, namely STEP, Back on Track, Restrictions to STEP and Expenditure Control perform across models as predicted in the short term, although the Restrictions to STEP variable is not statistically significant in Model D (ECM). The Enhanced Verification coefficient is positive, contrary to short-term predictions and statistically significant in only two models, Models C (ECM) and D (ECM). The UI policy coefficient is negative across all three relevant models. The additional labour market variables have a mixed performance. Average duration of unemployment carries a positive sign in the two relevant models; part-time employment behaves as predicted in Model C, but not D. Neither the coefficients of involuntary part-time employment nor of self-employment are statistically significant in Models C (ECM) or D (ECM). The proxy for polarization, the services-to-goods employment ratio, carries the predicted sign in the sole model in which it is included. Further interpretation and discussion of these findings follows in Chapter 6.

The ECM versions of the models progressively explain more of the variation in the dependent variable, with Model A (ECM) explaining about 44 percent, Model B (ECM), 48 percent, Model C (ECM) 59 percent and Model D (ECM), 64 percent. As mentioned earlier, these figures are quite good for models utilizing first differenced data. All models have patterns in their residuals (e.g. heteroskedasticity and autocorrelation), which in this chapter were addressed via alternative estimation techniques. An additional pattern of particular note is the correlation between the error term and the dependent variable. This indicates omission of relevant explanatory variables, which is not uncommon in macro-level models; however, this pattern suggests the findings be treated as provisional.
Table 15

Comparison of Coefficients Across Models A, B, C and D (Base Models)

<table>
<thead>
<tr>
<th>Variables (in logarithms)</th>
<th>Prediction</th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
<th>Model D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (%) (x100)</td>
<td>+</td>
<td>.4134 (7.78)</td>
<td>.3325 (12.45)</td>
<td>.2958 (11.51)</td>
<td>.225 (8.95)</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>+</td>
<td>1.0634 (7.46)</td>
<td>.9263 (11.30)</td>
<td>.8100 (10.26)</td>
<td>.499 (5.49)</td>
</tr>
<tr>
<td>Minimum wage (1986 dollars)</td>
<td>n.p.</td>
<td>.3574 (1.14)</td>
<td>.0123 (.05)</td>
<td>.0610 (.23)</td>
<td>-.0686 (4.7)</td>
</tr>
<tr>
<td>Supports to employment program (STEP) (d)</td>
<td>+, n.p.</td>
<td>.1667 (2.64)</td>
<td>.0988 (3.17)</td>
<td>.0991 (2.75)</td>
<td>.0964 (3.43)</td>
</tr>
<tr>
<td>Back on Track (d)</td>
<td>+, n.p.</td>
<td>.2785 (3.3)</td>
<td>.2052 (5.06)</td>
<td>.1884 (3.54)</td>
<td>.138 (3.20)</td>
</tr>
<tr>
<td>Restrictions to STEP (d)</td>
<td>+, n.p.</td>
<td>.0631 (2.44)</td>
<td>.0843 (2.85)</td>
<td>.0454 (1.62)</td>
<td>.0395 (2.66)</td>
</tr>
<tr>
<td>Expenditure Control (d)</td>
<td>+, n.p.</td>
<td>.0385 (2.98)</td>
<td>.0322 (2.25)</td>
<td>.0211 (1.92)</td>
<td>-.0173 (-1.99)</td>
</tr>
<tr>
<td>Enhanced Verification (d)</td>
<td>+</td>
<td>-.0036 (-.07)</td>
<td>-.0231 (-1.46)</td>
<td>-.0483 (-2.20)</td>
<td>-.0323 (-1.71)</td>
</tr>
<tr>
<td>UI benefit ratio</td>
<td>n.p.</td>
<td>-.2776 (-5.92)</td>
<td>-.2760 (-5.60)</td>
<td>-.2500 (-5.12)</td>
<td></td>
</tr>
<tr>
<td>Average duration of unemployment (months)</td>
<td>+</td>
<td>.1618 (3.06)</td>
<td>.223 (4.65)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-time employment (%) (x100)</td>
<td>+</td>
<td>.0803 (.93)</td>
<td>-.113 (-1.55)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involuntary part-time employment (%) (x100)</td>
<td>+</td>
<td>-.0369 (-1.20)</td>
<td>-.034 (-1.92)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-employment (%) (x100)</td>
<td>+</td>
<td>.3796 (2.03)</td>
<td>.283 (2.09)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services to goods employment ratio (%) (x100)</td>
<td>+</td>
<td>-.7274 (-5.93)</td>
<td>-.5759 (-8.67)</td>
<td>-.6455 (-8.21)</td>
<td>-.7906 (-13.66)</td>
</tr>
</tbody>
</table>

Note. Coefficients are in bold; t-statistics are in italics and parentheses. A t-statistic of 1.96 or greater is considered statistically significant at the .05 level. The t-statistics are adjusted to address heteroskedasticity and autocorrelation.

Table 16
Comparison of Coefficients Across Models A, B, C, D (Error Correction Models)

<table>
<thead>
<tr>
<th>Variables (in first differences of logarithms)</th>
<th>Prediction</th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
<th>Model D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment rate (%) (x100)</td>
<td>+</td>
<td>.2186 (7.28)</td>
<td>.2150 (8.12)</td>
<td>.2741 (11.95)</td>
<td>.211 (9.44)</td>
</tr>
<tr>
<td>Maximum GWA benefit for singles (1986 dollars)</td>
<td>+</td>
<td>.3994 (8.12)</td>
<td>.4104 (7.55)</td>
<td>.3418 (5.64)</td>
<td>.311 (6.19)</td>
</tr>
<tr>
<td>Minimum wage (1986 dollars)</td>
<td>n.p.</td>
<td>.1358 (1.84)</td>
<td>.1234 (1.41)</td>
<td>.0665 (0.88)</td>
<td>.080 (1.20)</td>
</tr>
<tr>
<td>Supports to employment program (STEP) (d)</td>
<td>+, n.p.</td>
<td>.0247 (3.63)</td>
<td>.0225 (3.91)</td>
<td>.0277 (4.18)</td>
<td>.0290 (4.98)</td>
</tr>
<tr>
<td>Back on Track (d)</td>
<td>+, n.p.</td>
<td>.0338 (2.70)</td>
<td>.0259 (5.46)</td>
<td>.0185 (3.0)</td>
<td>.0170 (2.87)</td>
</tr>
<tr>
<td>Restrictions to STEP (d)</td>
<td>- , n.p.</td>
<td>-.0138 (-3.4)</td>
<td>-.0076 (-2.16)</td>
<td>-.0137 (-3.32)</td>
<td>-.0035 (-6.6)</td>
</tr>
<tr>
<td>Expenditure Control (d)</td>
<td>- , n.p.</td>
<td>-.0215 (-4.14)</td>
<td>-.0194 (-5.02)</td>
<td>-.0219 (-5.44)</td>
<td>-.021 (-5.11)</td>
</tr>
<tr>
<td>Enhanced Verification (d)</td>
<td>-</td>
<td>.0004 (.13)</td>
<td>.0051 (1.65)</td>
<td>.0074 (3.01)</td>
<td>.00139 (3.82)</td>
</tr>
<tr>
<td>Unemployment Insurance benefit ratio</td>
<td>n.p.</td>
<td>-.0691 (-5.74)</td>
<td>-.0444 (-4.61)</td>
<td>-.0386 (-4.43)</td>
<td></td>
</tr>
<tr>
<td>Average duration of unemployment (months)</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-time employment (%) (x100)</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involuntary part-time employment (%) (x100)</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-employment (%) (x100)</td>
<td>+</td>
<td>.0032 (.26)</td>
<td>-.0028 (-2.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services to goods employment ratio (%) (x100)</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagged residuals of respective base models</td>
<td>-</td>
<td>-.1508 (-2.76)</td>
<td>-.2567 (-6.14)</td>
<td>-.2485 (-4.90)</td>
<td>-.225 (-5.25)</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>.0051 (1.58)</td>
<td>.0046 (1.62)</td>
<td>.0043 (1.94)</td>
<td>.0035 (1.61)</td>
</tr>
</tbody>
</table>

Note: Coefficients are in bold; t-statistics are in italics and parentheses. A t-statistic of 1.96 or greater is considered statistically significant at the .05 level. The t-statistics are adjusted to address heteroskedasticity and autocorrelation.
As mentioned previously, the correlation between the error term and the dependent variable assumes the following form: the larger the magnitude of the changes in the caseload ratio, whether in a positive or negative direction, the greater the underestimate of this magnitude by the models. The correlation becomes progressively weaker from Model A (ECM) to Model D (ECM) and this is reflected in differences across Figures 33, 37, 41, 45: the shift in the pattern of the residuals from February 1992 onward becomes progressively less pronounced.

A closer examination of the ACFs of the four ECM models suggests the possibility of seasonal integration in at least the first two models, and possibly the third (see Appendix E). The two latter ones, at minimum, show 12th order autocorrelation of the error terms, in other words, a seasonal pattern. This suggests that the ECM models, in general, are less successful in capturing the seasonal fluctuations in the change in the caseload ratio than the base models are in capturing their seasonal counterpart. Recall that seasonal dummies were not included in the model; rather the intent was to identify explanatory variables whose seasonality contributed to an explanation of the seasonality of the dependent variable.

A final comment serves to underline the provisionality of these findings and lay the groundwork for possible directions for re-specification. As mentioned above, the ACFs of the residuals of Models A (ECM) to C(ECM) suggest possible seasonal integration. This is a form of non-stationarity. The shift in the pattern of the residuals in the latter part of the study period, which was mentioned above, in particular, the shift in Models A(ECM) and B (ECM), also suggests a lack of stationarity and possibly a shift in regime, which was not captured by the policy dummies included in the base models. These step dummies become pulses when
differenced. The lack of stationarity sets limits on the applications of the models (e.g. forecasting). It also suggests that with respect to patterns in the residuals, Model D is the best model. A final caveat is that the finding of a lack of stationarity in the residuals of the ECM models weakens the assumption of stationarity of the residuals of the base models, which were entered in lagged form in the ECM versions.

Although the major focus in this section is the ECM version of the models, a brief comparison between findings in the ECM and base models follows. It is important to emphasize here that the base model deals with logarithm data and the ECM with first differenced data. The base and the ECM models share some similar patterns with respect to the performance of explanatory variables. In terms of direction of relationship and statistical significance, similarities exist for the unemployment rate, the GWA maximum benefit level, minimum wage, STEP, Back on Track, UI benefit ratio, average duration of unemployment and the services-to-goods employment ratio. Notable differences are Restrictions to STEP (a positive sign); Expenditure Control (mixed signs); Enhanced Verification (a negative sign, although reaching statistical significance in Model C only); and self-employment (a positive sign reaching statistical significance in two models).

As mentioned in Chapter 4, the fragility analysis approach advocates including the path taken in analysis, rather than the presentation of a single final model. The approach taken here is consistent with this guideline. In addition, it was noted in Chapter 4 that contrasting views exist regarding the use of alternative estimation techniques to adjust for the presence of such problems such as autocorrelation or heteroskedasticity. Darnell & Evans (1990), for example, argue that problems with patterns in the residuals such as
heteroskedasticity should lead to re-specification, rather than re-estimation via more sophisticated techniques. In the present research, alternative estimation techniques were used; however, information, such as graphs of the residuals, was included to provide data that could point to possible re-specifications and that would acknowledge the provisionality of the findings.
CHAPTER 6
DISCUSSION AND CONCLUSIONS

This chapter begins with discussion and interpretation of some of the empirical findings reported in Chapter 5 and ends with conclusions pertaining to the dissertation as a whole. The discussion and interpretation first situates the findings with respect to the theoretical frameworks and empirical research outlined in Chapter 2 and translates the coefficients into more intuitively meaningful form; it then focuses on some methodological considerations. The conclusion links the empirical research to the broader policy discussion outlined in Chapter 1.

The discussion and interpretation of findings focuses on the results of the four ECM models. Recall, however, that Models C and D are more complete and the diagnostics suggest that the residuals are less problematic. The terms change, or relative change, are used in this discussion since first differences of logarithms may be expressed in this way and the figures may be adjusted by 100 to enable the use of the term growth rate. Typically, theoretical frameworks in economics are expressed in terms of levels, not in terms of relative change or first differences. Here, it has been assumed that the same relationships (presence and direction) exist between variables in their relative change form as in their levels form. Thus our results are compared to studies using levels data. Economics distinguishes between short-term and long-term, or equilibrium, relationships. In essence, our use of first

---

1 Recall equilibrium relationships are those that exist after all the adjustments in the Y variable have occurred in response to an adjustment in the explanatory variables.
differences translates into a focus on short term relationships; however, the inclusion of the lagged residuals from the base models in the ECM versions is meant to tie the short term relationships to the long term (as mentioned in Chapter 4). The lagged residual represents the disequilibrium from the previous month, that is, the discrepancy between the actual value of the caseload ratio and the value it would have attained had the system reached equilibrium. The ECM assumes that the short-term change in the caseload ratio that occurs in response to a short-term change in the explanatory variables will be affected by how far out of equilibrium the system was in the previous period, and the model includes a variable to capture this effect. The coefficient of the lagged residual can be interpreted as reflecting the proportion of the disequilibrium error that is corrected for each month, since the change in caseload ratio takes into account the magnitude of the disequilibrium in the previous period.

All models, with the exception of Model A (-.1508) have relatively similar coefficients on the lagged residuals (from -.225 to -.2567). The latter three models suggest that the proportion of the disequilibrium from the previous month corrected for each month is between .22 and .25.

**DISCUSSION AND INTERPRETATION OF FINDINGS**

As indicated above, this section situates the findings with respect to the theoretical frameworks and the empirical literature. Where appropriate, it discusses possible explanations for results which are incongruent with predictions. These explanations are intended to point toward actions that might be taken in future research. The labour market variables are
variables are discussed first and this is followed by the social assistance policy variables and the UI policy variable.

**Labour Market**

*Unemployment*

The positive and statistically significant relationship between the unemployment rate and the caseload is consistent across the models. This is as predicted in Hypothesis 2, and it is not surprising given the nature of the caseload selected for the study. However, one of the reasons for undertaking this research was that despite a severe recession beginning in the late 1980s, early 1990s, public discourse (or at least a segment of it) in the late 1980s and early 1990s focused on individual deficit explanations of welfare receipt. This view was accompanied by great skepticism about the inability of people to find work and a great concern about people defrauding the welfare program. It seems, then, that even with the severity of the lay-offs and bankruptcies as indicators of a significant downturn in the labour market, these explanations persisted. This research attempts to examine the relevance of the labour market as an explanatory feature of caseload growth.

The coefficients for the unemployment rate in Models C and D (ECMs) translate into a month-to-month increase of 346 and 449 cases, respectively, for an increase of 4275 unemployed.²

---

² This is based on a mean unemployment rate of 8.14, a mean labour force of 5,251,327, a mean caseload ratio of 2.14 and a mean working age population 7,661,119.
As indicated in Chapter 2, in general, macro-level studies provide moderate support for the linkage between measures of un/employment and caseload size or flows. Of the Canadian studies using micro-level data, those investigating dynamic participation find stronger support for this relationship, especially among caseloads which encompass more than female-headed families. Those examining static participation display more mixed results. In a study of particular interest to this research, Brown (1995) reports a positive relationship between the number unemployed and growth in GWA cases.

**Minimum Wage**

The minimum wage variable does not perform as predicted in Hypothesis 1, that is, there is no statistically significant relationship. Recall that the direction of the relationship was not predicted, because, on the one hand, minimum wage could represent the level of wages available to welfare recipients and therefore be negatively associated with the caseload ratio, and on the other hand, minimum wage levels could affect the demand for labour and thus be positively associated with the caseload ratio. In addition, the relative weight of these effects could vary across segments of the caseload.

The finding of no statistically significant relationship between wage variables, minimum wage or otherwise, and welfare receipt is not unusual. As discussed in Chapter 2, the research findings are mixed. For example, Plotnick and Lidman (1987) drop their earnings variables from their model; Albert (1988) reports a negative relationship between minimum wage and caseload accessions, but the positive relationship with exits is not statistically significant. Among micro-data studies, results are also mixed; however among
studies which use imputed wages, there is more consistent support for a negative relationship (e.g. Christofides et al., 1997).

The finding of no statistically significant relationship lends itself to multiple interpretations. It is possible that neither the wage effects nor the labour demand effects are sufficiently strong to result in a statistically significant relationship. Alternatively, the wage effects may be offset by the labour demand effects for the caseload as a whole, or the predominance of one of these effects in some segments of the caseload could be offset by the predominance of the other in other segments.

Despite the lack of statistical significance, the positive sign associated with the minimum wage variable is suggestive of the net dominance of the labour demand effects. Another possible interpretation of the positive sign is that the implementation of relatively larger increases in the minimum wage levels, especially in the latter part of the study period, were part of a broader strategy to simultaneously increase the attractiveness of the labour market, to lower the penalty on earnings and to improve benefit adequacy. To the extent that the latter actions are associated with caseload increases, minimum wage may appear to be too.

The results of this study suggest that further research with alternative wage measures are warranted, as are study designs which allow for differential wage effects across age and sex groupings.
Duration of unemployment

Duration of unemployment is positively associated with the caseload ratio, and the coefficients are statistically significant in each model, as predicted in Hypothesis 3. The rationale for this is that the longer one is unemployed, the more likely one is to exhaust alternative resources and hence the greater likelihood of turning to GWA and being deemed eligible. The coefficients in Models C and D indicate that a one percent monthly growth rate in the average duration of unemployment is associated with a .1612 and .140 percent monthly growth rate in the caseload ratio, respectively. This would mean that an increase in the average duration of 1.83 weeks would translate into an increase in GWA cases of 2263 and 2295, respectively.\footnote{This calculation is based on an average duration of unemployment of 18.28 weeks, a mean caseload ratio of 2.14, a working age population of 7,661,119.} Recall that the average monthly duration of unemployment vacillated from 11.7 to 30.8 weeks during the study.

Average duration of unemployment is also included in the models in order to isolate changes in unemployment that the official unemployment rate does not. Longer periods of unemployment distinguish the 1990s recession from the 1980s one and inclusion of this variable attempts to capture that difference. Such a difference might partially explain the higher caseload levels in the 1990s recession despite peak unemployment rates similar to the early 1980s recession. The fact that the duration of unemployment variable performs as predicted suggests that it is indeed capturing an important aspect of the labour market changes that occurred during the study period, changes that were relevant to understanding the changes in the caseload ratio.
Non-standard employment

One of three variables introduced to capture the presence of non-standard employment is statistically significant, namely, part-time employment. This variable is positively associated with the caseload ratio, as predicted in Hypothesis 4; however, it is statistically significant in only one of two models (Model C, ECM). Neither the involuntary part-time employment variable nor the self-employment variable is statistically significant. The sign of the first accords with predictions in Model C (ECM), but not in Model D (ECM) and the sign of the second is contrary to predictions in both models.

Recall that it was argued that location in the secondary sector would be associated with higher levels of social assistance receipt and therefore a larger secondary sector would be associated with higher levels of receipt. One of the characteristics of the secondary sector is the presence of non-standard jobs; therefore, it was hypothesized that higher levels of non-standard jobs would be associated with higher levels of receipt. An alternative perspective posited that an increase in non-standard jobs throughout the earnings distribution would be associated with higher levels of insecurity, which in turn would lower the benefit/cost ratio of employment relative to social assistance, and hence the same relationship would be predicted.

Part-time employment is the dominant form of non-standard employment (ECC, 1991). The coefficient of .1220 in Model C (ECM) means that it is estimated that an increase of 8282 part-time workers would be associated with a rise of 200 GWA cases. The absence of statistical significance in Model D (ECM) is likely due to the level of collinearity between

---

4 This is based on a mean part-time workers to working age population ratio of 10.81 percent, a mean working age population of 7,661,119 and a mean caseload ratio of 2.14.
the services-to-goods employment ratio (STGER) and part-time employment. Although the diagnostics indicate that the level is within acceptable bounds, its presence appears to be sufficient to eliminate statistical significance. The overlap in these two variables is discussed later.

As indicated earlier, involuntary part-time employment is included in the models for two reasons. It utilized to isolate a component of non-standard work that is explicitly involuntary because the involuntary nature of some people's location in the secondary labour market is one of that sector's characteristics. This variable is also used to capture a dimension of hidden unemployment. From a statistical point of view, a likely explanation for the lack of statistical significance is the level of collinearity between this variable and part-time employment, in their first differenced forms. (It is somewhat unusual for differencing to produce higher levels of collinearity.) However, re-estimation of the Model C (ECM) with only the involuntary part-time variable results in an unexpected statistically significant negative coefficient, raising questions about how to understand and explain the role of this variable. Examination of the seasonal pattern of this variable indicates that it moves in the opposite direction to the GWA caseload in the early and late summer months; however, examining these together, controlling for seasonality, does not suggest that this would provide an adequate explanation. Future research could examine this variable more closely in attempt to understand this unexpected relationship.

---

5 The presence of youth suggests this variable is shaped by students seeking more hours of work in the summers and hence identifying themselves as wanting to work more hours.
The self-employment variable also does not perform as predicted. In Chapter 4, it was noted that own account self-employment (OASE) might be a more appropriate indicator of non-standard employment. However, re-estimation of Model C (ECM) with OASE yields similar results. Self-employment was included as a form of non-standard employment, as an indicator of changes in the structure of the labour market. It is possible, however, to think about self-employment on a more micro-level and note that typically the self-employed have had less access to social assistance than other paid workers, despite legislative changes introduced during the study period which ostensibly reduced some of the barriers to receipt for this group. Growth of self-employment relative to other forms of employment, then, might diminish the pool of potential recipients, and hence be negatively associated with caseload growth. Alternatively, the impact of changes to the structure of the labour market that this variable is trying to capture may be offset by the lower likelihood of eligibility for GWA. Although not statistically significant, self-employment growth is negatively associated caseload growth in both models.

Earnings polarization

The services-to-goods-employment ratio (STGER) variable is positively associated with caseload growth, and the coefficients are statistically significant, as predicted in Hypothesis 5. It is utilized in the present research as a proxy for earnings polarization, that is, the hollowing out of the earnings distribution, and this in turn is linked to the idea of labour market segmentation. The coefficient of .481 means that an increase of 33,311 persons
employed in the service sector would be associated with a rise of 788 GWA cases, assuming a stable employment level in the goods sector of 1,512,965 persons.\(^6\)

Earlier it was noted that the introduction of this variable affects the statistical significance of the part-time variable. This is perhaps not surprising given the trend in part-time employment alluded to in Chapter 3, that growth in part-time employment occurred primarily in the services sector, and growth in the part-time share of employment in that sector outpaced that in the goods sector.

The non-standard employment variables and the STGER were introduced into the models in an attempt to capture changes in the labour market not reflected by traditional indicators such as the unemployment rate. Only one of the non-standard employment variables, part-time employment, performs as predicted; however, it is the dominant form of non-standard employment. Non-standard employment was being utilized as a proxy for the presence of a secondary labour market. The earnings polarization variable (STGER) was intended to serve a similar function. Thus two of the four variables employed as proxies for the presence of a secondary labour market perform as predicted.

It was noted in Chapter 4 that there are limitations to the STGER variable in terms of its ability to capture earnings polarization. However, its performance in the models suggests, nevertheless, that it is capturing phenomena not reflected by traditional indicators and that these phenomena seem be related to GWA caseload growth. A part of what it may be capturing is the shift to increased part-time employment; however, this is not likely to be the

\(^6\) This is based on a mean STGER of 220.17 percent, a mean caseload ratio of 2.14 and a mean working age population of 7,661,119.
entire explanation, given the lack of strict correlation between the two variables. One of the secondary purposes of introducing additional labour market dimensions was to try to capture phenomena that suggested changes in the demand for labour, the assumption being that shifts in jobs across sectors would underline changes in demand. This was an important issue given the predominance of the individual-deficit explanation of social assistance receipt, in particular, the emphasis on individual supply decisions rather than the structure of demand for labour in attempting to understand receipt. One of the reasons for the use of the dual labour market theory is that it attempts to emphasize the structure of demand for labour, although it focuses on one aspect of that structure.

The performance of this variable suggests that further work in the area of linking labour market polarization to social assistance receipt may be warranted. In addition, preliminary results with the non-standard employment variables suggest further work in this areas might be fruitful.

Social assistance policy

Benefit level

The positive and statistically significant association between benefit levels and social assistance receipt in all four error correction models is consistent with Hypothesis 6 and the theory which informs it. As indicated in Chapter 2, there is quite strong support for this relationship in the empirical literature, although studies like this one, which use aggregate data, yield less consistent results. The results reported here are akin to Plotnick's and Lidman's (1987) and to some degree Brown's (1995), but contrast with Albert's (1988), and
show more consistency across specifications than those of Brehm & Saving (1966, 1967) and Kasper (1968). Despite the relative consistency of results from micro-data studies, several of these point to differences across age, sex and household types.

Another point to consider is that some other program features are less easy to capture and calibrate than benefit levels. To the extent that the benefit levels are congruent, or move in step, with changes in eligibility rules or administrative practices that are not easily captured, the benefit variable may reflect these other effects. Another possibility is that levels of benefits may reflect degrees of stigmatization of welfare receipt. This may augment or decrease the non-monetary costs of receiving social assistance.

The coefficients for benefit level vary across models, from a low of .311 (Model D (ECM)) to a high of .4104 (Model B (ECM)). These coefficients can be translated as follows. A change of $4.20 in the monthly maximum benefit level is associated with an increase of from 510 to 658 cases, respectively, from one month to the next.

Treatment of earnings and breadth of access

The five social assistance policy variables are proxies for breadth of access or treatment of earnings, or some blend of the two. The variable which most successfully isolates breadth of access is Enhanced Verification (EV). Contrary to Hypothesis 7, all

7 This idea is derived from Dooley’s (1998, p. 5) allusion to Moffitt’s study (1994). It is not a conclusion that flows directly from the study. Moffitt (1994) suggests that differences in benefit levels across states, not across time, may coincide with different levels of stigma attached to lone-motherhood. In the present paper, it is being suggested that changes in levels of stigma toward welfare recipients across time in one jurisdiction may coincide with changes in benefit levels.

8 These figures are based on a mean maximum monthly GWA benefit of $420.06, a mean caseload ratio of 2.14 and a mean working age population of 7,661,119.
models indicate an unanticipated positive relationship between EV, de facto restrictions to access, and the caseload ratio; however, the coefficient is statistically significant in Models C (ECM) and D (ECM) only.

Theory does not explain this positive association. One might question whether increased documentation requirements actually translate into restrictions to access, even though anecdotal evidence from the day-to-day experiences of social assistance and legal clinic workers suggest that that they do. Alternatively, it is perhaps more fruitful to examine the possible limitations of this variable. The variable is constructed as a dummy, taking the value of one beginning in March 1994, the month the Enhanced Verification program was announced. *Managing Social Assistance in Ontario* (October 1994) indicates that action had been taken beginning as early as November 1993 to require more documentation from recipients and the report also suggests that the impact of the introduction of EV was spread over several months following the announcement. A delay in the full implementation of EV is consistent with the fact that EV required the hiring of new staff by municipalities, municipalities that were already experiencing severe budgetary constraints. In other words, there is evidence that the impact was gradual rather than abrupt. While a *step* dummy, such as is used in the base models, has some capacity to allow for that,⁹ in the ECM models the dummy variables are *pulses*, with the value of one occurring in a single month, and hence they capture the change in one month only.

---
⁹ When a step dummy is used, a small discrepancy in the month of introduction shifts only one or two observations into the wrong category (i.e., to 0 or 1) and this imprecision may be balanced off by the rest of the observations.
Two social assistance policy variables--STEP and Restrictions to STEP--best isolate changes in the treatment of earnings. The first lowers the penalty for earnings; the second raises it. Both variables carry the positive sign, expected in the short-term, as set out in Hypothesis 8. The coefficients are statistically significant, with the exception of Restrictions to STEP in Model D (ECM). The signs are consistent with one of the underpinnings of Hypothesis 8, that is, that the mechanical effect of changes in the income threshold at which people gain or lose eligibility would outweigh labour supply effects, at least those which resulted in crossing the income eligibility threshold. However, it is impossible to verify that these effects outweigh the others, only to say that in the short-term, the substitution effect is not sufficient to overcome the combined mechanical and income effects. One of the premises of STEP was that lowered penalties for earnings would encourage people to increase their labour supply (substitution effect) and work their way off of welfare. In the short-term, the evidence suggests that this effect is outweighed by the others.

The remaining two policy variables blend access and treatment of earnings. Back on Track and Expenditure Control perform as predicted in the short-term and the coefficients are statistically significant. Back on Track combines lower penalties for earnings with measures which broaden access; Expenditure Control combines the opposite. Here again, the results suggest that any substitution effects are overwhelmed by mechanical, breadth of access effects and any income effects.

The models provide estimates of the magnitude of the effects of these policy variables. Across the most complete ECM models (Models C and D), the estimates are relatively stable for three policy variables. Examination of ECM Models C and D reveals
that the estimated effect of STEP is the largest. Its introduction contributes to a one-time increase in the monthly caseload of 2122 to 2222 cases, respectively. The effect of Expenditure Control is the second largest, decreasing the caseload by 1677 and 1608, respectively. Back on Track is estimated to increase the caseload by 1417 and 1302, respectively. Restrictions to STEP reaches statistical significance in Model C only, where it is estimated to decrease GWA cases by 1050 cases. Enhanced Verification is estimated to contribute to an addition of 567 and 106 cases, respectively.¹⁰

**Unemployment Insurance policy**

In the three ECM models where UI is included (Models B to D), the policy variable carries a negative sign and the coefficients are statistically significant. In other words, a more restrictive UI policy, that is, lower benefits (duration and/or level) received relative to required weeks of work for eligibility, is associated with higher social assistance caseloads. Estimates of the magnitude of the effect vary across the models, that is, a decrease of about one week in the duration of UI benefits is associated with an increase of 190 (Model D, ECM) to 339 (Model B, ECM) GWA cases.¹¹

As outlined in Chapter 2, theory does not allow prediction of the sign and hence Hypothesis 10 did not include a direction for the relationship. In addition, the limited empirical evidence is mixed, with differences reported according to gender, age and household type (Fortin & Lacroix, 1998, April; Fortin, Lacroix & Thibault, 1997, cited in

---

¹⁰ These estimates are based on a mean caseload ratio of 2.14 and a mean working age population of 7,661,119.

¹¹ This assumes a regime in which the minimum work requirement for eligibility is 20 weeks, the replacement ratio is .6 and the number of weeks actually worked is 20. It also assumes a mean UI ratio of .99, a mean caseload ratio of 2.14 and a mean working age population of 7,661,119.
Fortin & Lacroix, 1998, April). The barrier to predicting the direction of the relationship, identified in Chapter 2, was uncertainty regarding the relative weight of the incentive effect of UI restrictions (to retain jobs or become re-employed more quickly)\(^\text{12}\) versus the growth effect, that is, enlarging the pool of potential social assistance recipients, due to more people exhausting benefits or being eligible for social assistance top-ups. The findings here support the dominance of the latter effect, which is consistent with Crossley and Kuhn's (1994) research regarding the effect of Bill C-113 on a subset of UI recipients, people who voluntarily quit their jobs.

It is appropriate to view the findings with respect to UI with caution because the UI variable has less than an optimal degree of variation. The results, however, suggest that further exploration of the UI-social assistance linkage is worth pursuing, including the development of a better way of capturing critical UI policy changes. It is worth noting, however, that it is possible that once the UI program reaches a threshold degree of restrictiveness, the overlap of UI recipients and social assistance recipients may recede and the effect of further UI restrictions on SA receipt may diminish. As mentioned earlier, the percentage of unemployed who are covered by UI has dropped dramatically in the 1990s. To the extent that this reflects employment that is not covered by UI, fewer people’s pathway to social assistance will include any possibility of UI and hence further restrictions to the program will have little impact.

In Chapter 1, it was acknowledged that changes in income security programs, other than UI, might have an impact on levels of social assistance receipt, but that UI had been

\(^{12}\) This assumes that retaining employment, or obtaining re-employment is voluntary.
selected as our primary focus. Worker's Compensation was an example of such a program. Future research might examine the impact of additional programs. This could include policies outside income security programs, such as immigration policy. One possible way to deal with the logistics of incorporating these multiple policy and program changes into a model, given the limitation of using dummy variables, is to develop an index that might encompass changes in a number of programs/policies. Construction of this index might draw on the work by Osberg and Sharpe (1998, May) in constructing an index of economic well-being. The elements included in their index and the relative weight assigned to each may be subject to debate, but at least the authors attempt to grapple with, and address, the additivity and interaction of a number of different phenomena.

*Overall performance of the models (ECM)*

Models A to D included successively more explanatory variables. Model B added Unemployment Insurance to the base Model A, Model C included additional labour market variables and Model D included a proxy for earnings polarization. Each model (ECM) performed successively better than the previous model, suggesting that the inclusion of the UI policy and additional labour market descriptors was important. All the ECM models tended to be more effective in predicting the latter part of the study period, after the dramatic rise in the caseload at the beginning of the 1990s, than the earlier period; however, the inclusion of the labour market and earnings polarization variables improved the predictions in this earlier
One interpretation of this finding is that the question of why the caseload ratio did not decrease as much as might have been anticipated after the 1980s recession is that changes not captured by the official unemployment rate were having an impact. Alternatively, it can be argued that all the variables in the models contributed to relatively good predictions of the change in caseload ratio immediately following the 1982-83 recession ($R^2$ adjusted ranged from .44 to .63) and more importantly, that the estimates were not systematically skewed toward underestimating or overestimating the change in caseload ratio, suggesting the model performed relatively well during this period.

**Methodological considerations**

While first differences have been used in research in this area, no other research that this author viewed used an ECM model. The choice of ECM came about as a result of the lack of stationarity in the data series, the concomitant concern regarding spurious relationships, and the high collinearity among some of the variables in their levels form. Differencing seemed to be an appropriate approach and ECMs built on this. Additional analysis using simply differences, but no error correction term, yielded somewhat similar results with respect to individual variables, and the residuals were more problematic (not reported here).

Earlier, the issue of exogeneity was addressed and it was argued that for our purposes weak exogeneity was sufficient and that the absence of no correlation between the error term

---

13 This is based on visual inspection of the graph of the predicted versus actual change in caseload ratio and the graph of the residuals.
and the explanatory variables indicated support for weak exogeneity. One of the indicators of stronger exogeneity is the existence of parameter stability. One way to assess this is to examine graphs of recursive coefficient estimates. Lack of stability in the coefficients may suggest a structural break and this in turn may indicate a lack of exogeneity, that is, the existence of bilateral relationships among the explanatory and dependent variable. Since our models included dummy variables, in essence, they presume structural breaks. The introduction of the dummies was theoretically based, that is, the graphs of the coefficients without dummies were not examined and then dummies introduced based on this examination. Subsequent examination of these recursive coefficient estimates revealed that there was much greater stability in the coefficients in the ECM models compared to the base models and that coefficients that were not statistically significant tended to be the ones with the least stability. Also there was marked change among a number of the coefficient estimates (more extreme in the base models) during about the same time period, which tended to be around the time of the dramatic increases in the caseload and the introduction of policy changes, both UI and social assistance. Two reasons for mentioning this are as follows. The relative parameter stability in the ECM models adds to their validity. Second, the timing of the changes in the recursive coefficient estimates might be the focus of further exploration toward model re-specification. Third, it is important to acknowledge that the direction of the relationships posited in this research were theoretically derived; however, there is a basis for suggesting that indeed some of the social assistance policy changes were in response to the caseload ratio. This is particularly true for the introduction of the restrictions to STEP, Expenditure Control and Enhanced Verification. However, it is also
arguable that in fact both the caseload ratio and the policy changes were driven by similar forces—the overall economic conditions which translated into fiscal conditions, perceived as requiring cutbacks to social programs.

CONCLUSION

This research investigated determinants of social assistance receipt. A particular confluence of events from 1981 until 1994 made the Ontario GWA program an ideal focus of inquiry. Unprecedented examination of social assistance policy occurred along with corresponding reforms, longstanding debate regarding the shape of the Unemployment Insurance program culminated in substantial changes, and both of these occurred against a backdrop of dramatic labour market changes. These events created an opportunity to both examine the fundamental lines of debate and to see the specific policy actions that occurred in the wake of these debates. They also invited and enabled empirical research that attempted to model welfare receipt using a richer depiction of the labour market than is usual and to take into account UI policy changes. Although more common in 1990s Canadian research, it was atypical to include UI policy variables in U.S. or Canadian models prior to this. Caseloads with compositions similar to the GWA caseload have historically received much less attention in academic literature than those which include primarily single parents. In the 1990s, this group, the so-called employable, has received more attention particularly in Canada where studies have disaggregated heterogeneous caseloads (e.g., B.C. Income Assistance) and included analysis of this segment of the caseload. One of the reasons for selecting the GWA caseload is that GWA participants have been particularly susceptible to
the application of individual deficiency explanations of receipt and have arguably been the segment of caseloads that is most stigmatized.

This research is a hybrid. It attempts to marry examination of the details of policy and labour market change with the development of empirical models of receipt which necessarily simplify the complexity of policies and labour markets and the changes that occur within them.

Multiple models were developed to ascertain whether taking into account aspects of labour market not typically captured by traditional labour market indicators would contribute to a better understanding of social assistance receipt. The results here suggest this area is worthy of further pursuit particularly if the period in question is characterized by restructuring. The models successively encompassed a UI policy variable, additional labour market variables (duration of unemployment, non-standard employment) and a proxy for earnings polarization and successively generated better predictions of the change in GWA caseload ratio.

One of the motivations for this approach was a desire to focus attention on the structure of demand for labour as a counterbalance to the emphasis on supply-side explanations of receipt, which in some instances blur into individual deficit explanations of receipt. This was what in part led to the use of dual labour market theory and the inclusion of a variable intended to measure earnings polarization. The inclusion of such a variable is unusual in studies of social assistance receipt. An area to be strengthened in future research is the selection of a better proxy for earnings polarization. This could entail following the lead of researchers such as Zyblock (1996). He used micro-data from the Survey of
Consumer Finances to capture changes in the proportion of individuals (or families) in one of three income groups (lower, middle, upper), and also employed a more sophisticated measure (Foster-Wolfson Polarization Index), which is the equivalent of the Gini coefficient used to measure income inequality. It is important to note, however, that although the ratio of employment in the services sector relative to the goods sector may be improved upon as a reflection of earnings polarization, it does reflect an important aspect of the change in the structure of demand for labour.

It is striking the paring down process that occurs in translating the specifics of policy and labour market changes into a set of variables that are necessarily limited, given the requirements of an empirical model. GWA legislation, regulations and the accompanying administrative practices are complex. In the modelling, they are reduced to six variables, five of which are dummy variables. These attempt to capture significant changes in treatment of earnings and breadth of access (or eligibility criteria); however, they are not calibrated to reflect differences in the degree of change that each represents. In addition, if the use of many dummy variables were advisable, it would be possible to include many more to mark additional social program shifts such as those that occurred in the 1980s which were precipitated by the introduction of the Charter of Rights and Freedoms. (Some of these were described in Chapter 1 and included such changes as eliminating the sexual bias in the definition of dependent, which allowed women to apply as heads of a family even if the family included a man and changing the spouse-in-the-house rule.) It is also the case that theory attempts to tease out the differential influence of such elements as the benefit reduction rate, the level of exempt income and the entry income limit. In practice, changes in
all of these may occur simultaneously, and in conjunction with other changes, making it
difficult to isolate their separate impacts. For example, the task of isolating the impact of
specific changes ushered in by U.S. Personal Responsibility and Work Opportunity
Reconciliation Act (PRWORA) (1996) is herculean, if not impossible.

Arguably, the elements of the UI program are less complex than the GWA program.
Nevertheless, it is a challenge to capture all of the salient changes, to calibrate them
effectively and construct variables with a level of variability approximating the ideal. This is
particularly difficult in light of the fact that the most significant UI changes occurred
primarily at three points in time and that a ratio approach which attempts to distinguish
between the magnitude of changes at these three points cannot assign a mathematical value to
changes such as increased penalties for voluntary quitters.

Similarly, multiple changes occur within the labour market and may differ across
groups characterized by different ages, education levels, sex, occupations and industries. The
challenge is to identify the most salient features of the labour market, those most relevant to
the question of social assistance receipt and discover how best to integrate them into models,
given in some cases, relatively nuanced differences in their trajectory.

The discussion of social assistance and UI policy changes identified the major lines of
debate articulated in these policy arenas. With respect to social assistance, the lines of the
debate can be summarized as follows: the relative weight given to benefit adequacy versus
lesser eligibility; the use of the deservedness versus need in establishing eligibility for
benefits, and if the former prevails, which groups are deemed deserving and which are not;
and the groups to whom the work test is applicable and the rigour with which the work test is
applied. With respect to UI, the arguments centre around the degree to which a social
insurance program should adhere to aspects of the private insurance *ideal*, the relative weight
to be assigned to *active* labour market measures versus *passive* income support and the
desirability of program cost reduction. The outcomes of the debates in each of these areas
determine the location of these programs along the residual-institutional spectrum.

In addition to describing the major lines of debate, the discussion of the social
assistance and UI programs identified the timing of the debates, as evidenced by key
documents, and the timing of related policy changes. It situated these in the broader fiscal
and economic context, predicated on the position that this context was a key consideration of
decision-makers, and that it acted to variously constrict or expand the perceived range of
available policy options. Since the study period and the inception of this research, the fiscal
and economic environment has changed substantially. The constraints imposed by this
environment have loosened. Yet this loosening has not elicited a concomitant re-investment
in social programs, in particular in social assistance and UI.\(^{14}\) This gives some credence to
the position that the deficit/debt hysteria was simply a tool used to achieve a broader agenda
of reducing investment in social programs and limiting government activism.

As mentioned in the introduction, it is important to situate any discussion of welfare
receipt within the broader context of human well-being. It is inappropriate, for example, to
assume that declines in social assistance caseloads necessarily reflect decreases in human
hardship, and similarly it is inappropriate to assume that the opposite is true. Whereas during
periods of program stability, caseload levels may reflect changes in labour market

\(^{14}\) Some re-investment in UI occurred in the pre-election period of fall 2000.
opportunities (and hence potential changes in well-being); during periods of program flux, this interpretation can be misleading. Sensitivity to this issue underlines the need to couple investigation of welfare determinants with investigation into the meaning of receipt or non-receipt in terms of well-being. With micro-data, this would translate, at minimum, into distinguishing reasons for exiting social assistance (e.g., became employed versus lost eligibility due to program changes). It would further translate into considering caseload figures in conjunction with other indicators such as food bank use, and homelessness. Workfare Watch (1999, p. 33), for example, noted the increased usage of Ontario foodbanks in the presence of caseload decline. Similarly, Osberg (2000, May) studied changes in poverty intensity in multiple Canadian and U.S. jurisdictions from 1994 to 1997. He concluded that Ontario’s 21 percent cut to social assistance payments in 1996 largely accounted for the rise in the province’s poverty intensity during that period (p. 21). This was a period of caseload decline, heralded by the Conservative government as evidence of improvements to people’s well-being. Not acknowledged was that loss of eligibility through the mechanical effects of benefit reduction would contribute to some of the caseload decline, and this would not mean that the people affected were necessarily better off.

Recently, U.S. research that examines levels of well-being of persons no longer receiving assistance has burgeoned. The trigger for this increased emphasis is the massive 1996 reshaping of the U.S. welfare program, which replaced AFDC with a much more restrictive program. Concern for the well-being of former recipients prompted follow-up studies. Brauner and Loprest (1999) review eleven of them. In general, they found that half to two-thirds of the people who left welfare were employed at a point in time during the
follow-up period\textsuperscript{15}, that most had earnings below the poverty line and about a third reported problems providing enough food, paying utility bills and paying rent. However, despite low-wage jobs and continued use of other forms of income support, a few studies found that most perceived themselves as better off (p. 8).\textsuperscript{16} The point here is to emphasize the importance of research that attempts to discern the impact on recipients of leaving social assistance, to examine evidence regarding whether \textit{off welfare} necessarily translates into being \textit{better off}, and to identify examples of research that can provide guidance to future work in this area.

A related development is research that investigates the determinants of \textit{off welfare} spells (for example, the Canadian research by Stewart and Dooley, 1998). This has the potential to broaden the focus to what conditions, other than social assistance program features, need to be in place to enrich the benefits and reduce the costs of the labour market, or other alternatives to welfare. The Canadian Self-Sufficiency Project (Michalopoulos et al., 2000) involved experimentation with such an approach, offering wage top-ups over a period of three years as an alternative to social assistance and tracking whether the longer-term outcomes for this group (e.g., wage levels) exceeded those of people who received social assistance. This approach in a sense focuses attention on the capacity of the labour market to provide adequate and secure incomes and opts for dealing with the relative attractiveness of

\textsuperscript{15} The follow-up period(s) varied across studies.

\textsuperscript{16} Brauner and Loprest (2000) emphasize the diversity of methodologies employed by these studies, the variation of the findings across states, and the need for caution in interpretation.
social assistance, not by lowering social assistance benefits, but by enhancing the benefits derivable from the labour market.¹⁷

Such a focus, that moves beyond simply individual deficit explanations of social assistance receipt, is in keeping with the overall orientation of this research. The impetus for the research was the apparent hegemony of individual deficit explanations of receipt in the presence of one of the most severe economic downturns since the 1930s and the consequences of such explanations, when translated into policy. These consequences not only include financial hardship for people forced to resort to social assistance, but also stigmatization. Stigma has been identified as a possible determinant of social assistance receipt (Moffitt, 1983), and in the eyes of those who subscribe to this individual deficit explanation, raising stigma may be viewed as a legitimate policy action to reduce levels of receipt. It should never be forgotten, however, that such stigmatization translates into daily experiences such as discrimination in housing, humiliation in grocery stores, and exclusion in school playgrounds and may well diminish the potential contribution that all citizens can make to their society, whether they rely on social programs and/or the labour market for their incomes.

¹⁷ The long-term success of the program hinges on the conditions being in place that enable participants to move into adequate paying work so that the benefits that participants can derive from the labour market alone are improved by the time the top-up ends.
REFERENCES


Corak, M. (1993). The duration of unemployment during boom and bust. Canadian Economic Observer (September) 4.1-5.1. (Statistics Canada Cat. No. 11-010)


APPENDIX A

Table A1

Comparison of Additional UI Benefit Weeks Triggered by Regional Unemployment Rates after the 1990 and 1994 Changes.

<table>
<thead>
<tr>
<th>Benefit weeks with 20 weeks worked</th>
<th>Pre-1990 changes</th>
<th>After 1990 changes</th>
<th>After 1994 changes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20</td>
<td>17</td>
<td>10</td>
</tr>
<tr>
<td>4%</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6%</td>
<td>8</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>10%</td>
<td>24</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>14%</td>
<td>32</td>
<td>26</td>
<td>16</td>
</tr>
<tr>
<td>16%</td>
<td>32</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>over 16%</td>
<td>32</td>
<td>32</td>
<td>22</td>
</tr>
</tbody>
</table>

Notes:

a. Read Table A1 as follows. Prior to the 1990 UI changes, a person residing in an area with a 10 percent unemployment rate would be eligible for 44 weeks of benefits (20+24).

b. Canadian unemployment rates were as follows: 1989 (7.5), 1990 (8.1), 1991 (10.3), 1992 (11.3), 1993 (11.2), and 1994 (10.4 percent).

c. Axworthy (1994, p.7) claimed that the reduction in actual benefits paid would be less than suggested by the 1994 schedule because only 25 percent of claimants collected all the benefits to which they were entitled.
APPENDIX B

Data Sources

The source of all the labour market variables, with the exception of the minimum wage, was Statistics Canada. The two major surveys used by Statistics Canada to collect the data were the Labour Force Survey (LFS) and the Survey of Employment, Payrolls and Hours (SEPH).

Briefly, the Labour Force Survey is a monthly household survey of a sample of individuals who are representative of the civilian, non-institutionalized population 15 years of age or older in ten provinces. Data are usually collected the week after the reference week, which is usually the week that contains the 15th of the month. The initial contact is face-to-face, subsequent interviews are frequently by phone, if the household has one and agrees to this. Each household selected for the sample remains in the sample six months. The LFS data utilized in the present study were obtained from the Labour Force Historical Review, 1997 CD-Rom. Statistics Canada revises its data series periodically. This means that the data provided for a series in the 1999 CD-Rom may not match data for that series in the 1997 CD-Rom. More detailed information on the survey methodology and detailed explanations of concepts used in the LFS are published in the Guide to the Labour Force Survey (2000)(Catalogue No. 71-543-GIE). The guide reports the concepts and methods that apply to earlier data series (e.g., 1997) as well as those that apply to the current data series.

The SEPH collects monthly data from all employers in Canada except those primarily concerned with agriculture, fishing and trapping, private household services, religious organizations and defence services. The sample of employers is drawn from the Business
Register maintained by Statistics Canada. Data are collected through questionnaires, telephone interviews, submission of computerized payroll systems and administrative data. The reference period is the last seven days of each month, but the survey asks for information on the last pay period and then adjustments are made to derive uniform data. The concept of employee includes those for whom an employer must complete a T-4. It excludes owners or partners of unincorporated businesses and professional practices, the self employed, unpaid family workers, person working outside Canada, military personnel and casual workers for whom a T-4 is not required. The industry code assigned to each establishment is based on the 1980 Standard Industrial Classification. For more information on the methodology of SEPH, see Employment, Earnings and Hours (1992, January) (Catalogue No. 72-002).

The SEPH data used in Chapter 3 were downloaded from the Canadian Socio-economic Information Management System (CANSIM), which is Statistics Canada's online electronic database. Statistics Canada collaborates with the Computing in the Humanities and Social Sciences Facility (CHASS) at the University of Toronto to make data accessible to academic institutions. These data were initially used in the models for the services-to-goods employment ratio, but replaced by LFS data because the latter extended for the full study period, whereas the former series began in 1983.

Table B1 contains the specific data sources for each variable used in the models, other than the dependent variable and the level of real maximum GWA benefit levels. The latter were obtained from the Ministry of Community and Social Services. A fuller explanation of the data used for the dependent variable was provided in the text. Also included in Table B1
are data sources used in the construction of some variables (e.g., consumer price index, labour force).

Table B1

Specific Sources of Data for Variables in the Models

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
<th>Survey</th>
<th>Identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Labour Market</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment rate for 15 years and over</td>
<td>Statistics Canada</td>
<td>LFS</td>
<td>Table 01MN</td>
</tr>
<tr>
<td>Minimum Wage</td>
<td>Ontario Gazette</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Part-time employment</td>
<td>Statistics Canada</td>
<td>LFS</td>
<td>Table 01MN</td>
</tr>
<tr>
<td>Involuntary part-time employment</td>
<td>Statistics Canada</td>
<td>LFS</td>
<td>Table 13MN</td>
</tr>
<tr>
<td>Average duration of unemployment</td>
<td>Statistics Canada</td>
<td>LFS</td>
<td>Table 32MN</td>
</tr>
<tr>
<td>Self-employment</td>
<td>Statistics Canada</td>
<td>LFS</td>
<td>Table 12MN</td>
</tr>
<tr>
<td>Employment in goods sector</td>
<td>Statistics Canada</td>
<td>LFS</td>
<td>Table 10MN</td>
</tr>
<tr>
<td>Employment in services sector</td>
<td>Statistics Canada</td>
<td>LFS</td>
<td>Table 10MN</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population 15 and over</td>
<td>Statistics Canada</td>
<td>LFS</td>
<td>Table 01MN</td>
</tr>
<tr>
<td>Labour force</td>
<td>Statistics Canada</td>
<td>LFS</td>
<td>Table 01MN</td>
</tr>
<tr>
<td>Consumer Price Index (1986=100) All items</td>
<td>Statistics Canada</td>
<td></td>
<td>CS-P706000</td>
</tr>
</tbody>
</table>

Note: CS refers to CANSIM
APPENDIX C

A. Comparison of alternatives indicators for GWA benefit levels

![Graph showing comparison of GWA benefit levels for various family types.]

Figure C1. Comparison of GWA benefit levels for various family types

B. Extension of series from 1969 to 1994: GWA cases for the month of January and the annual unemployment rate

![Graph showing GWA cases for January 1969 to 1994.]

Figure C2. GWA cases for the month of January from 1969 to 1994
Figure C3. Annual unemployment rate in Ontario from 1969 to 1994.
APPENDIX D

GRAPHS OF VARIABLES

Independent Variables (logarithms)

Figure D1. GWA real maximum benefit level (logarithm)

Figure D2. Unemployment Insurance benefit ratio (logarithm)
Figure D3. Unemployment rate (x100) (logarithm)

Figure D4. Average duration of unemployment (logarithm)
Figure D5. Real minimum wage (1986 dollars) (logarithm)

Figure D6. Part-time employment as a percentage of the working age population (x100) (logarithm)
Figure D7. Involuntary part-time employment as a percentage of working population (x100) (logarithm)

Figure D8. Self-employment as a percentage of the working age population (x100) (logarithm)
Figure D9. Employment in the service sector relative to the goods sector (x100) (logarithm)

Independent Variables: First Differences of Logarithms

Figure D10. GWA real maximum benefit level (first difference)
Figure D11. Unemployment Insurance benefit ratio (first difference)

Figure D12. Unemployment rate (x100) (first difference)
Figure D13. Average duration of unemployment (first difference)

Figure D14. Real minimum wage (1986 dollars) (first difference)
Figure D15. Part-time employment as a percentage of working age population (x100) (first difference)

Figure D16. Involuntary part-time employment as a percentage of the working age population (first difference)
Figure D17. Self-employment as a percentage of the working age population (first difference)

Figure D18. Employment in the service sector relative to the goods sector (first difference)
Autocorrelation Functions (ACF) for all variables in logarithm form

Figure D19. Autocorrelation function of GWA caseload ratio (x100) (logarithm)

Figure D20. Autocorrelation function of unemployment rate (x100) (logarithm)
Figure D21. Autocorrelation function of real maximum GWA benefit (logarithm)

Figure D22. Autocorrelation function of real minimum wage (1986 dollars) (logarithm)
Figure D23. Autocorrelation function of Unemployment Insurance benefit ratio (logarithm)

Figure D24. Autocorrelation function of average duration of unemployment (logarithm)
Figure D25. Autocorrelation function of part-time employment as a percentage of working age population (x100) (logarithm)

Figure D26. Autocorrelation function of involuntary part-time employment as a percentage of working age population (x100) (logarithm)
Figure D27. Autocorrelation function of self-employment as a percentage of working age population (x100) (logarithm)

Figure D28. Autocorrelation function of employment in the service sector relative to the goods sector (x100) (logarithm)
APPENDIX E

AUTOCORRELATIONS AND PARTIAL AUTOCORRELATIONS OF RESIDUALS FROM VARIOUS MODELS

Models A to D (Base)

Figure E1. Autocorrelation function for residuals of Model A

Figure E2. Partial autocorrelation function for residuals of Model A
Figure E3. Autocorrelation function for residuals of Model B

Figure E4. Partial autocorrelation function for residuals of Model B
Figure E5. Autocorrelation function for residuals of Model C

Figure E6. Partial autocorrelation function for residuals of Model C
Figure E7. Autocorrelation function for residuals of Model D

Figure E8. Partial autocorrelation function for residual of Model D
Models A to D (ECM versions)

Figure E9. Autocorrelation Function for Residuals from Model A (ECM)

Figure E10. Partial Autocorrelation Function for Residuals from Model A (ECM)
Figure E11. Autocorrelation Function for Residuals of Model B (ECM)

Figure E12. Partial Autocorrelation Function for Residuals of Model B (ECM)
Figure E13. Autocorrelation function for residuals of Model C (ECM)

Figure E14. Partial autocorrelation function for residuals of Model C (ECM)
Figure E15. Autocorrelation function for residuals of Model D (ECM)

Figure E16. Partial autocorrelation function for residuals of Model D (ECM)
### APPENDIX F

Table F1. Zero Order Correlations (Logarithms) N=168

<table>
<thead>
<tr>
<th>Variables (in logarithms)</th>
<th>GW</th>
<th>UR</th>
<th>MB</th>
<th>MW</th>
<th>ST</th>
<th>BT</th>
<th>RS</th>
<th>EX</th>
<th>VE</th>
<th>UI</th>
<th>DU</th>
<th>PT</th>
<th>IN</th>
<th>SE</th>
<th>SG</th>
</tr>
</thead>
<tbody>
<tr>
<td>GWA caseload (GW)</td>
<td>1.0</td>
<td>.59</td>
<td>.83</td>
<td>.78</td>
<td>.86</td>
<td>.81</td>
<td>.77</td>
<td>.59</td>
<td>.42</td>
<td>-.95</td>
<td>.79</td>
<td>.46</td>
<td>.63</td>
<td>.74</td>
<td>.95</td>
</tr>
<tr>
<td>Unemployment rate (UR)</td>
<td>.59</td>
<td>1.0</td>
<td>.18</td>
<td>.40</td>
<td>.35</td>
<td>.52</td>
<td>.41</td>
<td>.27</td>
<td>.14</td>
<td>-.55</td>
<td>.73</td>
<td>.13</td>
<td>.63</td>
<td>.12</td>
<td>.43</td>
</tr>
<tr>
<td>Maximum benefits (MB)</td>
<td>.83</td>
<td>.18</td>
<td>1.0</td>
<td>.53</td>
<td>7.9</td>
<td>.68</td>
<td>.56</td>
<td>.42</td>
<td>.31</td>
<td>-.74</td>
<td>.49</td>
<td>.52</td>
<td>.38</td>
<td>.78</td>
<td>.91</td>
</tr>
<tr>
<td>Minimum wage (MW)</td>
<td>.78</td>
<td>.40</td>
<td>.53</td>
<td>1.0</td>
<td>.65</td>
<td>.85</td>
<td>.83</td>
<td>.83</td>
<td>.71</td>
<td>.80</td>
<td>.66</td>
<td>.34</td>
<td>.50</td>
<td>.61</td>
<td>.71</td>
</tr>
<tr>
<td>STEP (ST)</td>
<td>.86</td>
<td>.35</td>
<td>.79</td>
<td>.65</td>
<td>1.0</td>
<td>.73</td>
<td>.59</td>
<td>.45</td>
<td>.32</td>
<td>-.84</td>
<td>.49</td>
<td>.43</td>
<td>.38</td>
<td>.74</td>
<td>.84</td>
</tr>
<tr>
<td>Back on Track (BT)</td>
<td>.91</td>
<td>.52</td>
<td>.68</td>
<td>.85</td>
<td>7.3</td>
<td>1.0</td>
<td>.80</td>
<td>.61</td>
<td>.44</td>
<td>-.88</td>
<td>.80</td>
<td>.32</td>
<td>.64</td>
<td>.64</td>
<td>.82</td>
</tr>
<tr>
<td>STEP restrictions (RS)</td>
<td>.77</td>
<td>.41</td>
<td>.56</td>
<td>.83</td>
<td>.59</td>
<td>.80</td>
<td>1.0</td>
<td>.76</td>
<td>.55</td>
<td>-.73</td>
<td>.75</td>
<td>.27</td>
<td>.60</td>
<td>.66</td>
<td>.70</td>
</tr>
<tr>
<td>Expenditure control (EX)</td>
<td>.59</td>
<td>.27</td>
<td>.42</td>
<td>.71</td>
<td>.45</td>
<td>.61</td>
<td>.76</td>
<td>1.0</td>
<td>.73</td>
<td>-.58</td>
<td>.61</td>
<td>.18</td>
<td>.49</td>
<td>.57</td>
<td>.55</td>
</tr>
<tr>
<td>Enhanced verification (VE)</td>
<td>.42</td>
<td>.14</td>
<td>.31</td>
<td>.58</td>
<td>.32</td>
<td>.44</td>
<td>.55</td>
<td>.73</td>
<td>1.0</td>
<td>-.44</td>
<td>.45</td>
<td>.10</td>
<td>.35</td>
<td>.49</td>
<td>.37</td>
</tr>
<tr>
<td>UI benefit ratio (UI)</td>
<td>-.95</td>
<td>-.55</td>
<td>-.74</td>
<td>-.80</td>
<td>-.84</td>
<td>-.88</td>
<td>-.73</td>
<td>-.58</td>
<td>-.44</td>
<td>1.0</td>
<td>-.73</td>
<td>-.38</td>
<td>-.61</td>
<td>-.70</td>
<td>-.87</td>
</tr>
<tr>
<td>Average duration of Unemployment (DU)</td>
<td>.79</td>
<td>.73</td>
<td>.49</td>
<td>.66</td>
<td>.49</td>
<td>.80</td>
<td>.75</td>
<td>.61</td>
<td>.45</td>
<td>-.73</td>
<td>1.0</td>
<td>.21</td>
<td>.77</td>
<td>.45</td>
<td>.65</td>
</tr>
<tr>
<td>Part-time employment (PT)</td>
<td>.46</td>
<td>.13</td>
<td>.52</td>
<td>.34</td>
<td>.43</td>
<td>.32</td>
<td>.27</td>
<td>.18</td>
<td>.10</td>
<td>-.38</td>
<td>.21</td>
<td>1.0</td>
<td>-.24</td>
<td>.38</td>
<td>.60</td>
</tr>
<tr>
<td>Involuntary part-time employment (IN)</td>
<td>.63</td>
<td>.63</td>
<td>.38</td>
<td>.50</td>
<td>.38</td>
<td>.64</td>
<td>.60</td>
<td>.49</td>
<td>.35</td>
<td>-.61</td>
<td>.77</td>
<td>-.24</td>
<td>1.0</td>
<td>.42</td>
<td>.47</td>
</tr>
<tr>
<td>Self employment (SE)</td>
<td>.74</td>
<td>.12</td>
<td>.78</td>
<td>.61</td>
<td>.74</td>
<td>.64</td>
<td>.66</td>
<td>.57</td>
<td>.49</td>
<td>-.70</td>
<td>.45</td>
<td>.38</td>
<td>.42</td>
<td>1.0</td>
<td>.77</td>
</tr>
<tr>
<td>Services to Goods Ratio (SG)</td>
<td>.95</td>
<td>.43</td>
<td>.91</td>
<td>.71</td>
<td>.84</td>
<td>.82</td>
<td>.70</td>
<td>.55</td>
<td>.37</td>
<td>-.87</td>
<td>.65</td>
<td>.60</td>
<td>.47</td>
<td>.77</td>
<td>1.0</td>
</tr>
</tbody>
</table>
Table F2. Zero Order Correlation (First difference of logarithms) N=167

<table>
<thead>
<tr>
<th>Variables (in logarithms)</th>
<th>GW</th>
<th>UR</th>
<th>MB</th>
<th>MW</th>
<th>ST</th>
<th>BT</th>
<th>RS</th>
<th>EX</th>
<th>VE</th>
<th>UI</th>
<th>DU</th>
<th>PT</th>
<th>IN</th>
<th>SE</th>
<th>SG</th>
</tr>
</thead>
<tbody>
<tr>
<td>GWA caseload (GW)</td>
<td>1.0</td>
<td>.56</td>
<td>.46</td>
<td>.04</td>
<td>.05</td>
<td>.02</td>
<td>-.02</td>
<td>-.03</td>
<td>-.00</td>
<td>-.10</td>
<td>.03</td>
<td>.25</td>
<td>-.14</td>
<td>-.13</td>
<td>.61</td>
</tr>
<tr>
<td>Unemployment rate (UR)</td>
<td>.56</td>
<td>1.0</td>
<td>.35</td>
<td>-.02</td>
<td>.02</td>
<td>-.01</td>
<td>.01</td>
<td>.07</td>
<td>-.02</td>
<td>-.12</td>
<td>-.36</td>
<td>-.09</td>
<td>.18</td>
<td>-.01</td>
<td>.35</td>
</tr>
<tr>
<td>Maximum benefits (MB)</td>
<td>.46</td>
<td>.35</td>
<td>1.0</td>
<td>-.09</td>
<td>-.03</td>
<td>.03</td>
<td>.03</td>
<td>-.02</td>
<td>-.00</td>
<td>.03</td>
<td>-.11</td>
<td>.06</td>
<td>-.02</td>
<td>-.08</td>
<td>.20</td>
</tr>
<tr>
<td>Minimum wage (MW)</td>
<td>.04</td>
<td>-.02</td>
<td>-.09</td>
<td>1.0</td>
<td>.18</td>
<td>-.00</td>
<td>-.02</td>
<td>.01</td>
<td>.03</td>
<td>.04</td>
<td>.08</td>
<td>-.10</td>
<td>.08</td>
<td>.08</td>
<td></td>
</tr>
<tr>
<td>STEP (ST)</td>
<td>.05</td>
<td>.02</td>
<td>-.03</td>
<td>.19</td>
<td>1.0</td>
<td>-.01</td>
<td>-.01</td>
<td>-.01</td>
<td>-.01</td>
<td>.01</td>
<td>-.15</td>
<td>.03</td>
<td>.00</td>
<td>-.10</td>
<td>.02</td>
</tr>
<tr>
<td>Back on Track (BT)</td>
<td>.02</td>
<td>-.01</td>
<td>.03</td>
<td>-.00</td>
<td>-.01</td>
<td>1.0</td>
<td>-.01</td>
<td>-.01</td>
<td>-.01</td>
<td>.01</td>
<td>.09</td>
<td>.04</td>
<td>.03</td>
<td>-.09</td>
<td>-.00</td>
</tr>
<tr>
<td>STEP restrictions (RS)</td>
<td>-.02</td>
<td>.01</td>
<td>.03</td>
<td>-.00</td>
<td>-.01</td>
<td>-.01</td>
<td>1.0</td>
<td>-.01</td>
<td>-.01</td>
<td>.01</td>
<td>.08</td>
<td>-.03</td>
<td>-.01</td>
<td>-.06</td>
<td>-.05</td>
</tr>
<tr>
<td>Expenditure control (EX)</td>
<td>-.03</td>
<td>.07</td>
<td>-.02</td>
<td>-.02</td>
<td>-.01</td>
<td>-.01</td>
<td>1.0</td>
<td>-.01</td>
<td>-.01</td>
<td>.01</td>
<td>-.03</td>
<td>-.09</td>
<td>.11</td>
<td>-.11</td>
<td>-.02</td>
</tr>
<tr>
<td>Enhanced verification (VE)</td>
<td>-.00</td>
<td>-.02</td>
<td>-.00</td>
<td>.01</td>
<td>-.01</td>
<td>-.01</td>
<td>.01</td>
<td>1.0</td>
<td>.01</td>
<td>.00</td>
<td>.01</td>
<td>.01</td>
<td>.01</td>
<td>.01</td>
<td>-.09</td>
</tr>
<tr>
<td>UI benefit ratio (UI)</td>
<td>-.10</td>
<td>-.12</td>
<td>.03</td>
<td>.03</td>
<td>.01</td>
<td>.01</td>
<td>.01</td>
<td>.01</td>
<td>.01</td>
<td>1.0</td>
<td>-.04</td>
<td>-.01</td>
<td>-.05</td>
<td>.01</td>
<td>-.08</td>
</tr>
<tr>
<td>Average Duration of Unemployment (DU)</td>
<td>.03</td>
<td>-.36</td>
<td>-.11</td>
<td>.04</td>
<td>-.15</td>
<td>.10</td>
<td>.08</td>
<td>-.03</td>
<td>.00</td>
<td>-.04</td>
<td>1.0</td>
<td>.03</td>
<td>-.07</td>
<td>-.03</td>
<td>-.01</td>
</tr>
<tr>
<td>Part-time employment (PT)</td>
<td>.25</td>
<td>-.09</td>
<td>.06</td>
<td>.08</td>
<td>.03</td>
<td>-.04</td>
<td>-.03</td>
<td>-.09</td>
<td>-.01</td>
<td>-.01</td>
<td>.03</td>
<td>1.0</td>
<td>-.76</td>
<td>.03</td>
<td>.47</td>
</tr>
<tr>
<td>Involuntary part-time employment (IN)</td>
<td>-.14</td>
<td>.18</td>
<td>-.02</td>
<td>-.10</td>
<td>.00</td>
<td>.03</td>
<td>-.01</td>
<td>.11</td>
<td>.01</td>
<td>-.05</td>
<td>-.07</td>
<td>-.76</td>
<td>1.0</td>
<td>.12</td>
<td>-.29</td>
</tr>
<tr>
<td>Self employment (SE)</td>
<td>-.13</td>
<td>-.01</td>
<td>-.08</td>
<td>.08</td>
<td>-.10</td>
<td>-.09</td>
<td>-.06</td>
<td>-.11</td>
<td>.01</td>
<td>.01</td>
<td>-.04</td>
<td>.03</td>
<td>.12</td>
<td>1.0</td>
<td>-.10</td>
</tr>
<tr>
<td>Services to Goods (SG)</td>
<td>.61</td>
<td>.35</td>
<td>.20</td>
<td>.08</td>
<td>.02</td>
<td>-.00</td>
<td>-.05</td>
<td>-.02</td>
<td>-.09</td>
<td>-.08</td>
<td>-.01</td>
<td>.47</td>
<td>-.29</td>
<td>-.10</td>
<td>1.0</td>
</tr>
</tbody>
</table>