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Social Assistance and the Employment Rate of Lone Mothers: An Analysis of Ontario's Live Experiment

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1. Introduction

The percentage of lone mothers who are working (employment rate) is of particular policy interest for two important reasons: First, lone mothers are at high risk of relying on social assistance and changes in their employment rate can have a significant impact on welfare caseloads. Second, a large percentage of poor children live in households with a female sole supporter. Consequently, the employment rate of lone mothers affects both welfare costs and child poverty.

The objective of this study is to provide further insight into the effect of changes in social assistance benefit rates on the employment rate of lone mothers, by taking into account the impact of recent changes in social assistance benefit rates.

A previous study by this author (Kapsalis, 1996), based on regression of data from the 1988-1990 longitudinal Labour Market Activity Survey (LMAS) and data on social assistance benefit rates, estimated that an increase of \$1,000 in annual benefit rates was associated with a reduction of 1.9 percentage points in the employment rate of lone mothers with young children (under age 16).

But if benefit increases produce *declines* in the employment rate, would benefit reductions produce equivalent *increases*? A live experiment of this scenario has just occurred in Ontario, with the annual social assistance benefit rate for a lone parent with one young child falling from \$14,652 in 1994 to \$11,484 in 1996, as a result of a 21.6 per cent reduction in benefit rates by the Ontario government in October 1995.

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Based on the results of the author's previous study, a reduction of this magnitude (\$3,168) should have been associated with an increase in the employment rate of lone mothers in Ontario by 6.0 percentage points (3,168 * (1.9/1000)) -- i.e. from 46.6 per cent in 1994 to 52.6 per cent in 1996. The increase actually observed was 5.7 percentage points, very close to the predicted increase. This result is particularly noteworthy since the employment rate of mothers of young children in two-parent families rose by only 0.5 percentage points over the same period.

The success of the author's previous study in correctly predicting the change in the employment rate of lone mothers in Ontario, and the confirmation of the empirical coefficients by this study, provide compelling evidence of the effect of social assistance benefits on the employment rate of lone mothers.

This study updates the results of the previous study by incorporating Ontario's most recent experience. The study uses Labour Force Survey and benefit rate time-series data covering the period 1986-1996.

While cross-sectional data -- e.g. LMAS or Survey of Consumer Finances (SCF) -- are more powerful, time series data are more timely. It is for this reason that time series data were employed in this study to be able to provide an immediate assessment of the recent changes in social assistance benefits in Ontario. However, it should be pointed out that, despite the different type of data and different period covered, the results of this study and the previous one based on LMAS are virtually identical.

In what follows, Section 2 provides a selective review of related literature. Section 3 examines trends in social assistance benefits and employment rates. Section 4 presents the empirical findings. Section 5 concludes the study.

2. Literature Review

The issue of work effort of social assistance recipients has attracted particular attention in the economic literature. To a large extent this has been in response to the significant increase in welfare caseloads during the last 15 years.

There is considerable dissatisfaction with social assistance and social programs in general. A recent study concluded that social assistance programs focus on the immediate problem of income need and do little to encourage self-reliance. There is a lack of emphasis on training and the benefit structure discourages work effort, acting as a 'welfare trap. The situation is exacerbated by a focus on the non-working poor and the neglect of the working poor (Grady, 1995).

A number of hypotheses have been put forward to explain the increase in case load rates -- such as, rapid skill deterioration and labour replacement due to technological change and globalization; shift of macroeconomic policy emphasis from economic stability to controlling inflation and reducing the deficit; and changing social values (Richards, 1995; Brown, 1995).

However, welfare caseloads are also sensitive to program changes. A recent study of the determinants of welfare participation of female heads of households (i.e., lone females and lone mothers) in Canada, using the LMAS data for 1990, found that the elasticities of welfare participation with respect to both welfare benefits and earned income exemption are relatively high (Charette and Meng, 1994).

The study by this author quoted above concluded that, while economic conditions are a significant determinant of welfare caseloads and the work effort of social assistance recipients:

"what can be said with considerable certainty is that higher social assistance benefits do have a negative effect on the employment rates of lone mothers. Therefore, efforts to improve the income situation of lone mothers should be combined with work incentives to avoid a self-defeating reinforcement of long-term dependency on social assistance" (Kapsalis, 1996: 23).

Several previous studies, although limited in number and with less than ideal data, have reached similar conclusions. Dooley (1994-b), using data from the Survey of Consumer Finances for three different years, found that a 10 percent increase in the benefit rate would lead to a 2-to-4 percentage point reduction in the proportion of lone mothers who work at least one week in the market. Similarly, Allen (1993) analyzed the likelihood of market work using a single cross-section from the 1986 census. Most of his estimates are similar to Dooley's.

It is important, however, to recognize that lone mothers are not a homogeneous group and there are significant differences between younger and older mothers. In particular, Dooley (1995) found that over the last 15 years lone mothers over age 34 exhibited growing wages, market work and earnings along with a falling incidence of both poverty and social assistance income. The picture for the younger age group, on the other hand, was one of stagnant wages, declining market work and earnings accompanied by unchanging poverty rates and rising reliance on social assistance. Because of data limitations, this study did not explicitly take into account the age of the mother. However, this was done to some extent indirectly by controlling for the age of the youngest child, which is correlated with the age of the mother.

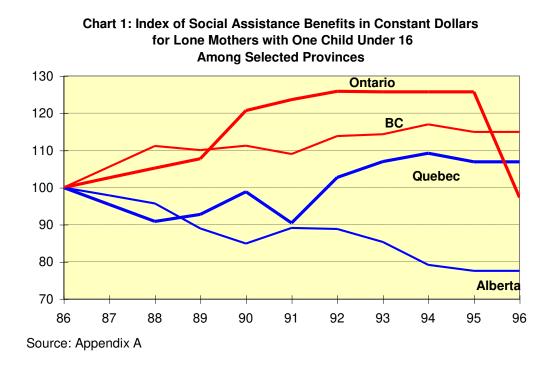
It is also important to point out that, while the results of this study confirm that cutting benefits would lead to greater market work and earnings by lone mothers, there may be better ways to achieve the same results. Dooley (1995), for example, suggests various 'financial strategies' -- lowering the tax-back rate on welfare payments, extending non-cash welfare benefits to other low-income families, and replacing child-based benefits with an enriched child tax credit. He also suggests 'service strategies', in the form of providing clients with training, counselling and other employment services.

3. Model Description

This study develops a model that allows to explore the relationship between social assistance benefit rates and the employment rate of lone mothers. In this section the model is explained against the backdrop of recent trends in employment rates and benefit rates. In the following section the model is estimated empirically using time series data.

Over the period 1986-96, the social assistance benefit rates, in constant dollars, for single parents with one young child followed a much different pattern among the provinces. In particular:

- (a) rates in constant dollars remained virtually unchanged in Newfoundland, Nova Scotia and New Brunswick, while they declined by about 10 per cent in PEI, Manitoba and Saskatchewan (see Appendix A);
- (b) rates increased by 15 per cent in BC and declined by 22 per cent in Alberta (Chart 1); and
- (c) rates ended up just below where they started in Ontario and somewhat higher in Quebec, but both provinces experienced wide swings, especially Ontario (Chart 1).



Generally, assuming there is no change in labour market conditions, an increase in social assistance benefit rates is expected to lead to a decrease in the number of working lone mothers.

There are two types of lone mothers to consider. First, some lone mothers who were already on social assistance might choose to "spend" part of the increase in benefits by devoting more hours to child care, their own education, or other personal activities and, therefore, fewer hours to market work. Some of these mothers might even withdraw from the labour force altogether.

Second, an increase in social assistance benefits might also affect the behaviour of some lone mothers in low wage jobs who were not initially on social assistance. Such lone mothers might now deem it in their best interest to reduce their hours of work so as to qualify for benefits. And once on social assistance, the high implicit tax rates on earned income may further influence them to reduce their hours of market work.

In reality, the connection between the level of social benefits and the employment rate of lone mothers is much more complex than the above simple exposition may suggest. For example, changes in work effort may take the form of an adjustment in the hours of work rather than a withdrawal from the labour force. In that regard, the employment rate is a cruder measure of work effort than the hours of work. The main attraction of the employment rate is the more ready availability of data.

Also, changes in work effort may be affected by changes in labour market conditions. For example, higher benefits in an environment of improving labour markets would be less likely to create work disincentives.

Finally, the negative effect of higher benefit rates on work effort would be muted by work incentives (such as the exemption of part of earnings from the calculation of need or the provision of subsidized daycare).

In its simplest form, the basic model predicts that the difference between the employment rate of mothers with a spouse minus the employment rate of lone mothers will tend to move in the same direction as changes in the level of social assistance benefits.

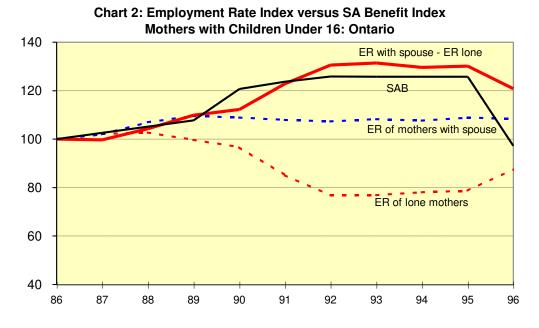
The underlying rationale is straightforward. The basic premise is that the labour market conditions facing both groups of mothers are similar and that, in the absence of changes in the level of social assistance benefit rates, the employment rates of the two groups would move in the same direction.

On the other hand, the potential effect of changes in social assistance benefits would be quite different between the two groups because of their different exposure to social assistance. For example, while 3 per cent of mothers with younger children and a spouse present received social assistance in Ontario in 1990, the corresponding rate among lone mothers was 35 per cent.¹

The employment rates of lone mothers and mothers with spouses may move in different direction for other reasons. For example, the employment rate of married mothers will be affected by changes in the earnings of their spouses (a phenomenon known in the economic literature as "second earner effect"). However, when major changes in social assistance benefits take place, one would expect the effect of the benefit change to dominate other factors and provide a more clear picture of the effect of benefits on the employment rate of lone mothers.

¹ Estimates based on the 1990 Labour Market Activity Survey. While the incidence of social assistance is underreported in the LMAS, the above estimates do provide an indication of the wide difference in incidence between the two groups of mothers.

Chart 2 shows that, even in its simplest form, the model conforms with Ontario's experience over the period 1986-96. All numbers in Chart 2 are expressed as an index with 1986 as the base year. As stipulated, an increase in the level of social assistance benefits is associated with an increase in the gap between the employment rate of mothers with a spouse over the employment rate of lone mothers.



The above depiction of the model also conforms with the experience of the rest of the provinces whose benefit rates experienced significant changes, that is Quebec, Alberta and BC. However, the simple model breaks down in the case of the remaining provinces whose benefit rates in constant dollars did not experience significant changes.²

² See Appendix B for the same type of charts for the remaining nine provinces.

4. Model Estimation

In this section, the basic model described above is used as the basis for developing a time series model that estimates the relation between the employment rate of lone mothers on the one hand, and social assistance and labour market conditions on the other. The basic specification of the various time series models estimated here was the following:

 $ERATE = b_0 + b_1^*SAB + b_2^*MERATE + b_3^*CHILD<3 + b_4^*CHILD2-5$

where: ERATE is the percentage of lone mothers who worked for some time during the year; SAB is the level of social assistance benefit rates for a single parent with one child, in constant dollars; MERATE is the employment rate of mothers <u>with</u> a spouse and similar age of youngest child; CHILD<3 is a dummy variable that equals 1 if the youngest child is under 3, and zero otherwise; and CHILD3-5 is a dummy variable that equals 1 if the youngest child is 3 to 5, and zero otherwise.

The source of data, except for benefit rates, was the Labour Force Survey annual averages. The source of data for benefit rates was the National Council of Welfare and Sarlo (1992).³ The regression results were weighted by the number of lone mothers in each province.

The data are pooled cross-sectional time series. For each province and each year, three types of lone mothers were selected depending on the age of the youngest child: under 3; age 3-5; and age 6 or over. The total number of observations was 330 (10 provinces; times 11 years covering the period 1986-96; times three types of lone mothers).

The time-series model bears several similarities to the cross-sectional model developed by the author in the previous study (Kapsalis, 1996). Although fewer control variables are used in the time-series model than in the cross-sectional model, the time series model has the advantage of exploiting data from a longer period and providing more up-to-date results.

Table 1 presents the results of two alternative estimates of the time-series regression models -- one based on data from all provinces, and one based on data from provinces that experienced significant changes in their social assistance benefit rates over the period 1986-96:

³ For details see Table A1 in Appendix A.

- (a) According to the first regression, an increase in social assistance benefits by \$1,000 (in \$1995) will lead to a reduction in the employment rate of lone mothers with young children by 1.2 percentage points.
- (b) According to the second regression, the decrease in the employment rate will be 1.9 percentage points -- identical to the result previously found using the 1988-1990 LMAS data (Kapsalis, 1996).

Several additional models were estimated and tested. However they all led to similar results. For example:

- (a) The inclusion of the provincial unemployment rate in the regression reduced the effect of MERATE but had virtually no effect on the SAB coefficient.
- (b) The restriction of the sample to Ontario and Quebec only produced very similar results to those including Alberta and B.C. as well.

Multiple Regression Results											
Period covered: 1986-1996											
Dependent Variable: ERATE (Employment Rate of Lone Mothers)											
Provinces Included in Regression											
		ŀ	All	Quebec, Ontario,							
		prov	inces	Alberta and B.C.							
Independent	Variables	B coeffic.	t-statistic	B coeffic.	t-statistic						
SAB	Benefit rate in thousands 1995\$	-1.21	-6.20	-1.90	-9.09						
MERATE	ERate of mothers with spouse	0.78	12.45	0.93	12.35						
CHILD<3	Presence of child under age 3	-22.48	-19.43	-19.90	-15.25						
CHILD3-5	Presence of child age 3-5	-8.82	-9.05	-7.39	-7.09						
CONSTANT		22.32	5.67	20.43	4.58						
Adjusted R-s	quare	0.84		0.86							
Standard Err	or	5.98		5.50							
F-statistic		427.67		421.00							
Observations	3	330		132							

Table 1Multiple Regression Results

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The results were sensitive to the inclusion or not of provinces with no significant change in social assistance benefits (i.e., Atlantic provinces, Manitoba, and Saskatchewan). This is not surprising. Effectively, the results suggest that the model does not perform well when there are no significant changes in social assistance benefits. However, the model appears to work well when benefits increase (B.C.), decrease (Alberta), or swing up and down (Quebec and Ontario).

Also, not surprisingly, the presence of young children was found to have a very substantial impact on the employment rate of lone mothers. On the other hand the inclusion of the provincial unemployment rate (not shown here) had virtually no effect on the coefficient of social assistance benefits, but considerably reduced the coefficient of the employment rate of mothers with a spouse (MERATE).⁴

5. Conclusion

The results of this study largely confirm the results of the author's previous study (Kapsalis, 1996). In fact, one of the two regression models estimated here produced an identical coefficient for the effect of social assistance benefits on the employment rate of lone mothers -- i.e. each \$1,000 of an increase in social assistance benefit rates (expressed in 1995 dollars) was found to lead to 1.9 percentage point decline in the employment rate of lone mothers with young children.

The fact that this study, using a different source of data over a different period of time, came up with similar results provides further confidence about the relation between social assistance benefit rates and the employment rate of lone mothers.

At the same time, the study also shows that labour market conditions have a strong effect. Each percentage point increase in the employment rate of mothers with a spouse (which can be viewed as an indicator of the labour market conditions faced by lone mothers) is associated with a virtually equivalent (0.93 percentage points) increase in the employment rate of lone mothers.

Looking ahead, while the connection between social assistance benefit rates and employment rates appears to be well established, a better understanding of the employability of lone mothers will be constructive. Two areas of investigation are particularly promising:

⁴ The inclusion of the provincial URATE in the first regression (all provinces) reduced the coefficient of social assistance benefits from -1.21 to -1.05. In the case of the second regression model, the coefficient was reduced from -1.90 to -1.72. By contrast, the reduction of the MERATE coefficient was significant: from .778 to .398 in the first regression, and from .935 to .629 in the second regression.

- The recently completed International Adult Literacy Survey (IALS) provides a unique opportunity for linking poverty and reliance on social assistance to the level of literacy.
- Similarly, analysis of Survey of Consumer Finance data at the 78 economic region level provide an opportunity for disentangling provincial benefit rates from local labour market conditions.

The results of the study have important policy implications. Lone mothers are at high risk of relying on social assistance and changes in their employment rate can have a significant impact on welfare caseloads. Moreover, because a large percentage of poor children live in households with a female sole supporter, the employment rate of lone mothers affects both welfare costs and child poverty.

While the study confirms that cutting benefits would lead to greater market work and earnings by lone mothers, there may be better ways to achieve the same results. This may include lowering the tax-back rate on welfare payments, extending non-cash welfare benefits to other low-income families, replacing child-based benefits with an enriched child tax credit, or providing lone mothers with training, counselling and other employment services.

Appendix A: Social Assistance Benefit Rates

 Table A1

 Constant Dollar Social Assistance Benefit Rates for Single Parents with One Child Under 16 (1995\$)

YEAR	NFLD	PEI	NS	NB	QUE	ONT	MAN	SASK	ALTA	BC
86	11,342	11,582	10,695	9,142	10,781	12,263	10,496	11,669	11,849	10,410
87	11,186	11,291	10,802	9,371	10,288	12,583	10,156	11,459	11,595	10,990
88	11,030	11,000	10,909	9,600	9,795	12,902	9,816	11,249	11,341	11,570
89	11,108	11,206	11,017	8,928	10,000	13,210	10,286	11,625	10,546	11,457
90	11,090	11,296	10,938	8,789	10,656	14,804	10,161	11,293	10,060	11,577
91	11,211	11,204	10,804	8,591	9,749	15,164	9,990	10,869	10,556	11,343
92	11,168	11,379	10,803	8,653	11,069	15,439	11,064	10,744	10,528	11,851
93	11,532	11,317	10,617	8,684	11,534	15,422	9,930	10,630	10,113	11,898
94	11,499	11,088	10,754	9,030	11,770	15,415	9,838	10,599	9,385	12,176
95	11,262	10,564	10,560	9,476	11,528	15,415	9,636	10,381	9,192	11,964
96	11,262	10,564	10,560	9,476	11,528	11,930	9,636	10,381	9,192	11,964

Note: When changes in benefit rates occur in the middle of the year, the annual rate is estimated by taking a weighted average.

Sources:

1986, 1989-95: National Council of Welfare. "Welfare Incomes 1995." Winter 1996-97.

1988: Based on Sarlo, A. Christopher. "Poverty in Canada." 1992.

1986,1987: Estimates obtained through interpolation between 1986 and 1988.

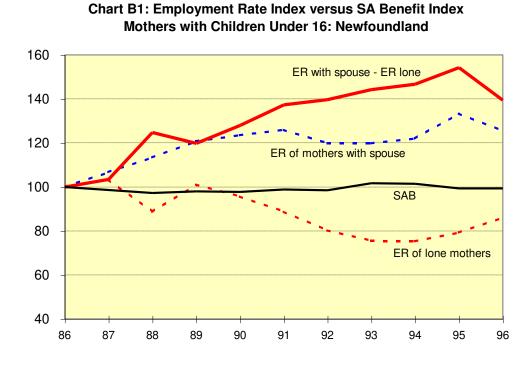
1996: It was assumed benefit rates remained the same in all provinces except Ontario. In Ontario

the benefit rate was set equal to the level introduced in October 1995

(1986=100)											
YEAR	NFLD	PEI	NS	N	В	QUE	ONT	MAN	SASK	ALTA E	3C
86	100	10	0	100	100	100	100	100	100	100	100
87	99	ç	7	101	103	95	103	97	98	98	106
88	97	ę	5	102	105	91	105	94	96	96	111
89	98	ę	7	103	98	93	108	98	100	89	110
90	98	ę	8	102	96	99	121	97	97	85	111
91	99	g	7	101	94	90	124	95	93	89	109
92	98	ę	8	101	95	103	126	105	92	89	114
93	102	ę	8	99	95	107	126	95	91	85	114
94	101	g	6	101	99	109	126	94	91	79	117
95	99	g	1	99	104	107	126	92	89	78	115
96	99	ç	1	99	104	107	97	92	89	78	115

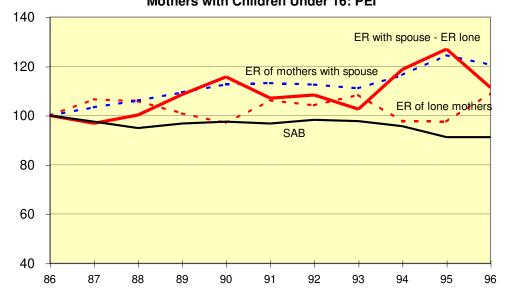
 Table A2

 Constant Dollar Social Assistance Benefit Rates Index for Single Parents with One Child Under 16



Appendix B: Employment Rates versus Benefit Rates

Chart B2: Employment Rate Index versus SA Benefit Index Mothers with Children Under 16: PEI



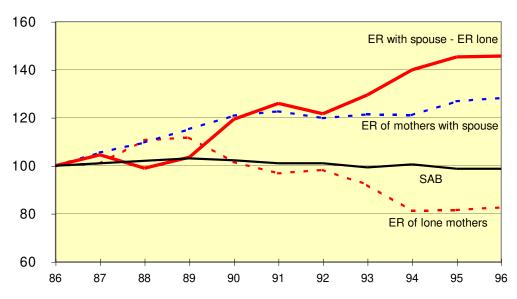
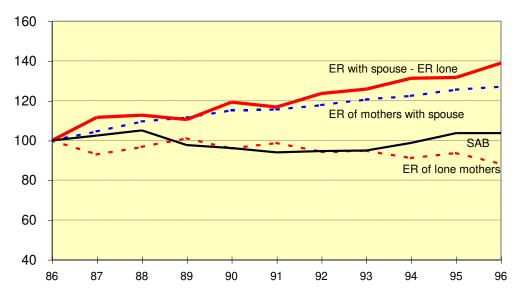


Chart B3: Employment Rate Index versus SA Benefit Index Mothers with Children Under 16: Nova Scotia

Chart B4: Employment Rate Index versus SA Benefit Index Mothers with Children Under 16: New Brunswick



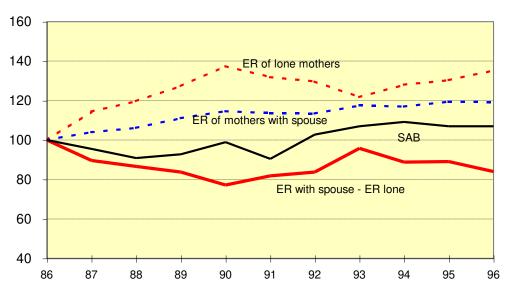
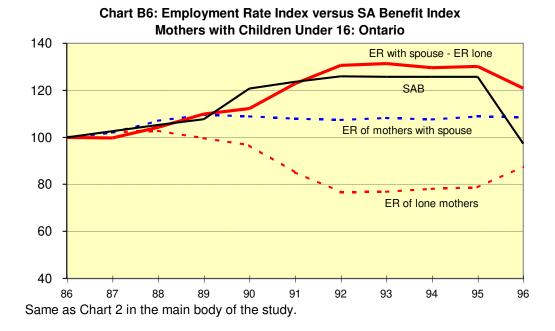


Chart B5: Employment Rate Index versus SA Benefit Index Mothers with Children Under 16: Quebec



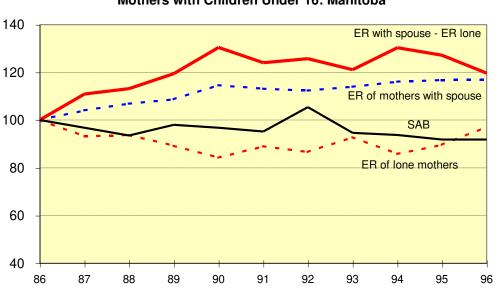
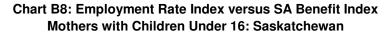
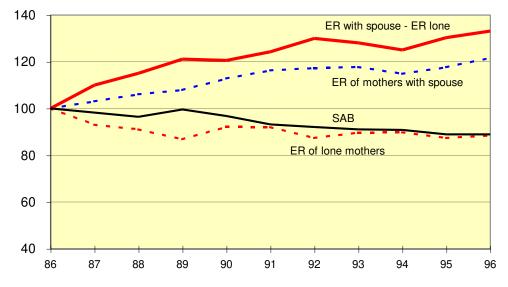


Chart B7: Employment Rate Index versus SA Benefit Index Mothers with Children Under 16: Manitoba





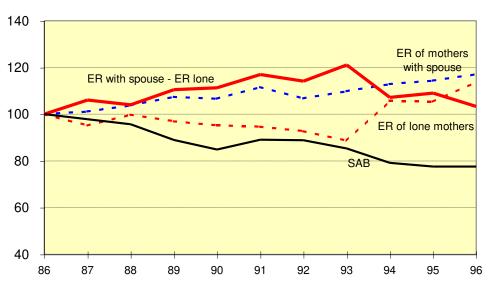
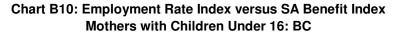


Chart B9: Employment Rate Index versus SA Benefit Index Mothers with Children Under 16: Alberta



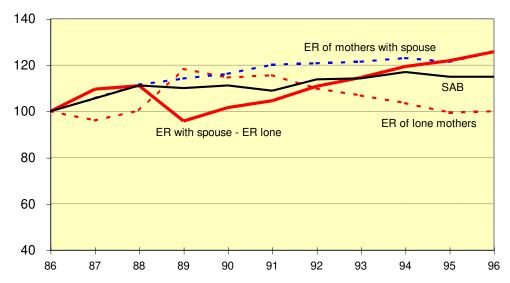


	Table C1: Employment Rate of Lone Mothers With Children Under 16, 1986-96										
		NFLD	PEI	NS	NB	QUE	ONT	MAN	SASK	ALTA	BC
1	986	38.9	53.2	46.1	46.5	39.2	59.7	57.6	59.2	61.6	50.7
1	987	40.2	56.7	46.5	43.2	44.8	61.0	53.7	55.1	58.6	48.7
1	988	34.5	56.3	51.0	45.0	46.9	61.3	54.0	53.9	61.5	50.9
1	989	39.3	53.7	51.5	47.0	49.9	59.5	51.4	51.4	59.7	60.0
1	990	37.2	51.6	46.8	44.6	53.9	57.7	48.5	54.6	58.7	58.1
1	991	34.5	56.5	44.6	45.9	51.7	50.8	51.3	54.5	58.3	58.6
1	992	31.2	55.4	45.3	43.8	50.8	45.8	49.9	51.7	57.1	55.7
1	993	29.4	57.7	42.4	44.1	47.7	45.9	53.5	53.1	54.6	54.2
1	994	29.3	52.0	37.4	42.4	50.2	46.6	49.4	53.2	65.1	52.5
1	995	30.8	51.9	37.6	43.6	51.1	47.0	51.6	51.7	64.9	50.4
1	996	33.5	58.1	38.1	41.0	53.0	52.3	56.0	52.4	70.1	50.7

Appendix C: Employment Rates

Source: Statistics Canada, Labour Force Survey, Annual Averages (CD 71F0004xCB)

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