

A Survey of the Differences in Australian and Canadian Women's Involvement in Paid Work

By

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Women in Social & Economic Research

Working Paper No 48

November 2005

Working Paper Series of
Women in Social & Economic Research
Curtin University of Technology
Perth Western Australia
<http://www.cbs.curtin.edu/wiser>

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Women in Social and Economic Research

Women in Social and Economic Research (WiSER) is a research program that spans two divisions of Curtin University: the Curtin Business School (CBS) and the Division of Humanities. WiSER was founded in April 1999 in response to a growing void, both within the Australian and international contexts, in the gendered analysis of the economic and social policy issues that confront women. As such, WiSER is committed to producing high quality quantitative and qualitative research on a broad range of issues which women identify as impeding their ability to achieve equity and autonomy. The gender perspective generated through the work of WiSER has provided a number of key opportunities to inform the policy debates within numerous government departments. WiSER seeks to further its commitment to providing a meaningful gender analysis of policy through pursuing further research opportunities which focus on women's experiences of social and economic policies within the Australian context. The broad objectives of WiSER include:

- To identify the cases and causes of women's disadvantaged social and economic status and to contribute to appropriate policy initiatives to address this disadvantage;
- To demonstrate the way in which social factors, particularly gender, influence the construction of economic theory and policy;
- To extend current theory and research by placing women and their social context at the centre of analysis;
- To contribute an interdisciplinary approach to the understanding of women's position in society. In turn, this should enable the unit to better reflect the interrelatedness of the social, economic and political discourses in policy and their consequent implications for women;
- To foster feminist research both nationally and internationally;
- To expand linkages with industry;
- To establish and support a thriving Curtin University of Technology post-graduate research community with a common interest in feminist scholarship.

Acknowledgments

Nicola Milsom provided valuable research assistance on this project.

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Introduction

This paper addresses the current difference in the labour force participation rate of Canadian and Australian women - of approximately seven percentage points - and the much higher rate of part time employment among employed Australian women. These differences have become more important to economic policy in recent years as the pressures of demographic change have increased the need for countries to maximize the involvement of their communities in paid work¹. The similarity between Canada's and Australia's cultural, economic and political environments suggest that Canada may be a particularly useful reference point for Australia to use as it attempts to find ways of adjusting labour supply in response to population ageing.

The paper assembles evidence on the current economic and social policy environment of the two countries that is potentially relevant to the involvement of women in the paid workforce. In doing so it aims to identify the types of policies and economic circumstances that promote this involvement. However, an important feature of the analysis contained in this paper is that it does not locate the potential source of the differences in women's labour supply solely in the current economic or social/institutional characteristics of the two countries. Rather, women's participation rates and hours of work are viewed as an intrinsic element of each country's social fabric and, accordingly, they are seen to be subject to the influence of both current circumstances and also past patterns of behaviour. Reflecting this perspective, we also pay close attention to the different histories of participation rates in the two countries and how these compare to historical patterns in the various economic and institutional factors that are commonly thought to influence women's involvement in paid work.

The paper is organised into five main sections. In Section 1 a summary is provided of women's participation rates in the two countries and how these have changed over time. The section also contains some background information on women's involvement in part time work in the two countries. Section 2 reviews the

¹ Austen and Giles (2003) provide a discussion of the labour market implications of demographic change

theoretical and empirical background to the study, while Section 3 summarises data on the various possible current economic influences on women's labour supply with a view to identifying possible contributing factors behind the observed differences between the Canadian and Australian participation rates and hours of work. Section 4 provides a discussion of the possible dynamic aspects of labour force participation behaviour. Section 5 is a conclusion that identifies some important questions for ongoing research work.

I: Women's Involvement in Paid Work in Canada and Australia

I.1 Current Patterns

In 2004, the labour force participation rate of women aged 15 and over was 62.1 per cent in Canada and 55.8 per cent in Australia (Statistics Canada, 2005²; ABS, 2005a). The data in Table I show that the differences in the female labour force participation rate (FLFPR) between the countries are particularly dramatic in the traditional child-bearing age group of 25-40 years. In that age range Canadian women record participation rates in excess of 80 per cent, whilst the participation rate falls to below 70 per cent for Australian women in their thirties. However, in the context of discussions in the remainder of this paper, the reader's attention is drawn to the fact that, across these two countries, a difference in the FLFPR exists in each age group. This helps to identify that the source of the difference in the aggregate FLFPR is not simply due to differences in the age distribution of women in each country.

² accessed at: <http://www40.statcan.ca/101/cst01/labor05.htm> on November 17 2005

Table I: Labour Force Participation Rate by Gender and by Age Groups (in %), Selected Countries, 2002

	Australia	Canada	U.K.	U.S.	N.Z.	Sweden	Norway
Women							
15-19	57.3	54.7	58.5	47.3	54.1	39.7	54.3
20-24	76.5	74.8	69.8	72.1	68.6	64.9	71.1
25-29	73.2	80.6	76.9	75.7	69.9	79.4	79.3
30-34	68.4	80.0	73.9	74.6	66.5	84.6	82.6
35-39	68.2	81.5	76.6	75.3	73.8	86.8	85.2
40-44	74.5	82.4	78.9	77.5	80.1	88.8	85.4
45-49	77.3	81.2	79.7	77.8	82.9	87.6	83.9
50-54	69.3	74.5	74.3	74.0	76.6	86.2	80.8
55-59	50.5	54.2	59.6	63.8	62.3	79.7	74.6
60-64	23.6	30.4	28.5	44.1	43.9	53.7	52.0
Men							
15-19	55.8	54.2	60.8	47.5	55.6	32.1	49.1
20-24	84.0	81.1	81.7	80.7	79.4	70.0	77.0
25-29	90.6	90.9	92.8	91.4	89.8	86.3	88.9
30-34	92.4	93.1	93.0	93.4	91.8	91.7	92.7
35-39	90.7	92.8	92.7	92.7	92.4	91.3	92.6
40-44	90.7	92.8	91.7	91.6	92.4	91.0	92.6
45-49	89.8	91.3	90.8	90.2	91.9	90.4	89.9
50-54	85.9	87.7	85.5	86.5	90.1	89.1	88.9
55-59	72.1	73.9	76.1	78.0	85.1	84.7	83.6
60-64	46.7	50.9	50.8	57.6	68.0	60.8	60.0

Source: OECD (2003) Labour Force Statistics - Indicator (LFS by Sex & Age - Standard Labour Market Indicators).
<http://www1.oecd.org/scripts/cde/members/lfsindicatorsauthenticate.asp>

The figures in Table I also indicate that the Canadian FLFPR is high compared to those recorded in other non-Asian, English speaking countries (namely the US, the UK and New Zealand), whilst Australia's FLFPR is amongst the lowest recorded in this group of countries. However, participation rates in Canada still fall short of those recorded in Nordic countries, such as Sweden and Norway.

The figures in the following table show that the current difference in the FLFPR between the two countries is mirrored by a difference in hours of work. In 2002, of all employed Australian women aged between 30 and 34 years, 38.3 per cent were employed on a part time basis. In Canada the equivalent figure was only 20.2 per cent. In the next age group, namely women aged between 35 and 39 years, 47.7 per cent of employed Australian women were working in part time jobs, as compared to only 22.8 per cent of employed Canadian women.

Table 2: Percentage of Employed Workers Engaged in Part-Time Work by Age Group and Gender, Selected OECD Countries, 2002

	Australia	Canada	U.K.	N.Z.	Norway	Sweden
Women						
15-19	74.3	77.8	62.2	67.5	78.7	68.2
20-24	37.1	36.7	25.7	30.7	40.9	32.0
25-29	27.5	19.4	23.4	22.9	25.9	15.7
30-34	38.3	20.2	37.3	33.5	25.7	15.8
35-39	47.7	22.8	43.6	39.4	28.8	17.7
40-44	41.4	21.9	41.7	34.3	29.2	16.3
45-49	37.1	20.5	35.4	29.4	28.3	16.2
50-54	35.0	23.2	38.9	30.7	28.7	16.3
55-59	40.3	28.6	48.7	38.2	35.9	20.6
60-64	47.4	37.3	66.2	46.3	43.1	32.6
Men						
15-19	57.3	65.7	46.7	52.4	59.1	52.4
20-24	26.0	21.8	13.7	16.1	22.1	14.7
25-29	13.3	6.9	4.5	7.6	9.4	6.8
30-34	10.1	4.7	3.5	4.1	4.4	4.3
35-39	10.0	4.4	3.3	4.5	2.5	3.5
40-44	10.4	4.0	3.6	4.9	2.7	3.7
45-49	8.6	4.0	3.6	4.9	3.6	4.1
50-54	10.8	5.0	4.8	6.7	5.3	4.9
55-59	15.3	8.8	10.4	9.3	5.8	6.7
60-64	21.4	13.9	17.2	16.8	12.3	18.1

Sources: OECD (2003) Labour Force Statistics - Indicator (Employment by Full-Time/Part-Time Distinction Based on a Common Definition).

It is not possible to attribute the inter-country differences in the FLFPR and women's average hours of work to differences in the unemployment rate. In 2004, the unemployment rate for women aged 25-54 years was 4.3 per cent in Australia and 5.9 per cent in Canada (OECD, 2004)³, a difference which, although sizeable, is not large enough to suggest employment rates are the same in the two countries.

Direct evidence on employment rates support this conclusion and also show that differences between the rate of labour market involvement of Canadian and Australian women persist when the focus of comparison is only on women with children. In Australia, in 1995, approximately 61 per cent of women with children were engaged in either full or part time work in 1995. By 2001 this rate had increased to 63 per cent (ABS, 1996 and 2001). In Canada, the employment rate of

³ accessed at <http://www1.oecd.org/scripts/cde/members/lfsindicatorsauthenticate.asp> on July 18, 2005

women with children in 1997 was higher again, at 70 per cent (Gornick and Meyers, 2003, figure 3.1).

Canadian women are also more likely than their Australian counterparts to be involved in paid work when their children are young. In 2001, 68.5 per cent of Canadian women with a child aged under 3 years were participating in the paid workforce and 73.4 per cent of women whose youngest child was aged 3-5 years were in the paid workforce (Childcare Resource and Research Unit, 2003). In Australia, the comparative figures for 2000-1 were 45.1 and 51.2 per cent⁴ respectively (author's calculations from ABS, 2001).

1.2 Trends in Labour Force Participation Rates

The difference in the FLFPR between the two countries appears to have emerged in the mid 1970s. Up until that time Canada and Australia recorded similar FLFPRs. In Canada, in 1946, 18.2 per cent of women in the 25-44 year age group were participating in the paid labour market; by 1966 this figure had grown to 34.2 per cent (see also England & Gad, 2002). Volker (1984) estimated the participation rate for all *married*⁵ Australian women (aged 15 and over) at 8.0 per cent in 1947. Across all women in the 20-44 year age group the participation rate had risen to 34.9 per cent in 1966 (Gregory, McMahon and Wittingham, 1985). Among all women over 15 years, the participation rate was 45.7 per cent in Canada in 1976 and 43.0 per cent in Australia.

However, as is shown in Figure 1, by 1981, the FLFPR had grown to 50.4 per cent in Canada, while it had increased to only 44.6 per cent in Australia⁶. A similar difference in participation rates has persisted since that time, with a slightly larger

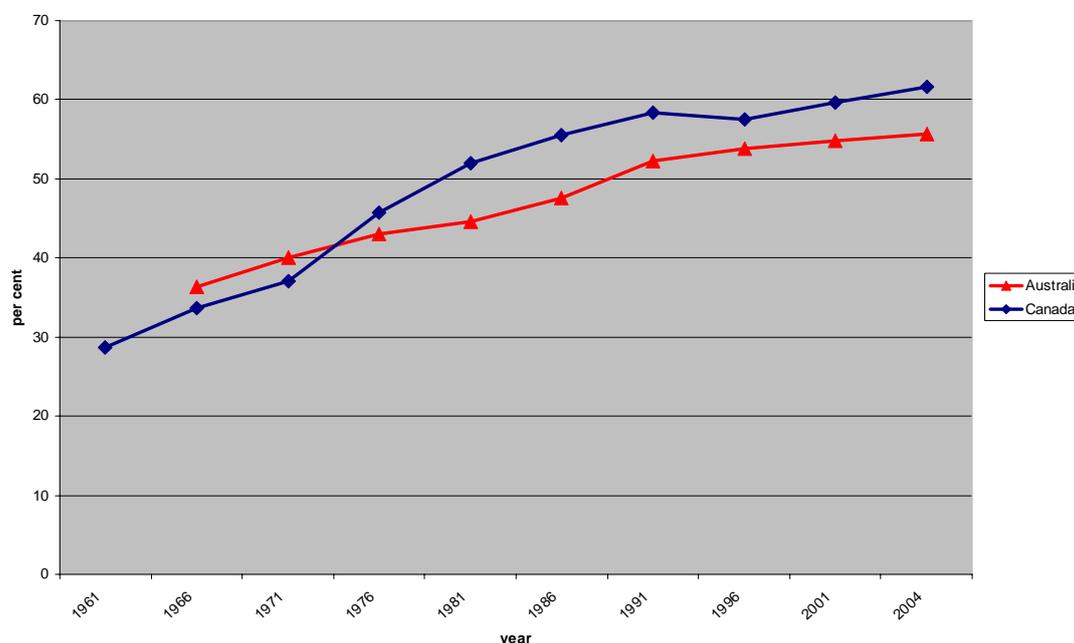
⁴ This figure refers to women with children aged 3 to 4 years.

⁵ The participation rate of married women is typically substantially lower than that of single women.

⁶ Census data on 'activity rates' among women in the 2 countries follows the same pattern. In 1976 the proportion of women aged 15+ classified as economically active was 45.0 per cent in Canada and 43.8 per cent in Australia. By 1981 these proportions were 51.8 per cent and 45.6 per cent respectively; and by 1991 the proportions were 59.9 per cent and 50.9 per cent respectively (ILO, 2005, Laborsta International, accessed at <http://laborsta.ilo.org/> on June 21, 2005)

(10 percentage point gap) existing in the LFPR of women aged between 25 and 44 years.

Figure 1: Women's Labour Force Participation Rates, Canada and Australia, 1961-2004, all age groups



Source: Canadian data provided on request by Statistics Canada, Labour Statistics Division, July 2004, Australian data (1961-1976) from Gregory, McMahon and Wittingham, 1985; remaining data from ABS (2004), Labour Force, Australia, Detailed - Electronic Delivery, Cat. No. 6291.0.55.001

2. Theoretical and Empirical Background to the Analysis of the Differences in Labour Supply

A number of labour supply models provide guidance for the analysis of the differences in women's level of involvement in paid work observed here. The first, most simple, set of models focus attention on current differences in labour supply and on how the features of the current economic environment may affect the financial incentive for individuals to participate in paid work and/or work additional hours⁷. Within this framework it is common to identify a group of 'pull factors' (see Cohen and Bianchi, 1999 and OECD, 2003), that affect the economic opportunities available to individual women from increased involvement in the labour market. They include: wage rates (and, conversely, tax rates, benefit rates and childcare costs), employment opportunities (which can be related to economic activity and the

⁷ Killingsworth (1983) provides a comprehensive overview of labour supply models

degree of tertiarisation), and current levels of education. Another group of economic variables, known as 'push' factors are identified as affecting the financial need for individual women to be involved in the paid workforce. They include the level of spouse earnings, male unemployment rates, social security arrangements and household living standards. In total, these models identify a range of factors that could be expected to affect cross-national differences in female labour supply behaviour at a single point in time.

There are many examples of studies of international differences in women's participation rates that reflect the structure of this model. They include, more recently, Smith, Dex, Vlasblom and Callan (2003), Dex and Joshi (1999), Brusentsev (2002), Pettit and Hook, 2002, and OECD (2003).

An important additional class of labour supply models examines how an individual's labour supply changes over the lifecycle (see Hall, 1980, Heckman and MaCurdy, 1980, and Smith, 1980). One feature of these models that is particularly relevant to the discussion that takes in the later parts of this paper, is their analysis of how current labour market behaviour may be affected by previous periods' labour supply (and, in turn, earlier wage opportunities, unearned income, and so forth). The models also incorporate variables to account for the influence of expected future labour supply decisions (for example, relating to retirement) on current labour market behaviour.

These models have not been widely used to inform an analysis of international differences in women's labour force participation rates. Rather, they have been applied, primarily, to the study within countries of such issues as the impact of intermittent labour force participation on women's labour supply behaviour in later life (see, for example, Chapman, Dunlop, Gray, Lui, and Mitchell, 2001).

3: Possible Current Determinants of Differences in the Labour Force Involvement of Canadian and Australian Women

This section makes use of the first, “simple”, set of labour supply models described above to examine the features of the *current* economic environment in Canada and Australia that might be contributing to the observed differences in female labour market involvement in the two countries. The discussion focuses especially on possible differences in the environmental factors affecting the participation behaviour of partnered women with children in the two countries. These factors include the effective tax rates applying to this group of women, differences in the availability of alternative income sources, and differences in education.

3.1 Effective Rates of Taxation

The potential importance of taxation policies in determining women's involvement in paid work has been highlighted in a number of international studies. Sainsbury (1999, p.185) presents one of the strongest arguments about the role of taxation, asserting that: “the tax system is a crucial nexus of the state, the family and the market. Through tax regulations the state can privilege certain types of families and provide incentives to enter or leave the labour market”.

The types of tax policies that are important to the labour market incentives of partnered women are not simply those governing personal income tax rates. Rather, they also include policies that determine the rate at which entitlements to tax rebates (such as the spouse rebate) and welfare benefits (such as child support payments) are removed as family income increases and/or secondary earners within the family enter the labour market.

Empirical studies have been conducted in both Canada and Australia of these aspects of the effective tax rate affecting partnered women (see, Toohey and Beer, 2004, for an example of an Australian study, and Poschmann, 2004, for a Canadian study). However, the ability to use these studies to compare the size of marginal effective tax rates (METRs) across countries tends to be hindered by each study's tendency to

adopt its own definitions of taxes and benefits included in the calculation of METRs, and for them to use different family types to demonstrate the magnitude of the rates.

In an attempt to minimise these problems, the analysis in this sub-section follows a procedure used by the OECD in its comparative studies, whereby income levels are first expressed as a ratio of the average wage of a manufacturing worker in each country⁸ in order to establish a standard measurement framework. A typical family type is then defined, together with some scenarios relating both to primary and secondary earner income and work status. This scenario-based approach facilitates analysis of how both the sources of tax-related penalties on involvement in paid work and the size of these penalties vary between different groups of women in the two countries.

The 'typical' family used in the scenarios has two dependent children, one aged under five years and the other aged between eight and 17 years. Three scenarios are considered relating to the primary earner's income: the primary earner's income is a) 75 per cent of the average manufacturing worker's wage (AMW); b) equal to the AMW; and c) 1.25AMW. The secondary earner's full time wage is set as equal to 80 per cent of the AMW (reflecting the approximate size of the gender-based wage gap in Australia – see Section 3.7). Three scenarios relating to the secondary earner's involvement in paid work are also considered: the secondary earner a) works zero hours; b) works two days per week (and earns 0.32AMW); and c) works full time (and earns 0.8AMW).

3.1.a) Income Tax Rates

Two important determinants of the marginal income tax rate applying to partnered women are, first, the allocation of tax rates on the basis of household versus individual income levels; and second, the progressivity of tax rates. Both Canada and Australia operate individual taxation systems and, thus, this factor is not in itself a source of difference between the two countries. However, as is summarized in the

⁸ In 2005, this wage was \$54,860 in Australia (\$A) and \$44,054 in Canada (\$CN) (ILO, 2005)

following tables, the level of progressivity of the individual taxation systems of each country does differ, and this affects the tax rates applying to women with different expected wage outcomes.

Table 3: Canadian Income Tax Rates, 2005

Income Level (expressed as a fraction of AMW)	Approximate federal-provincial ^a tax rate (%)
0 - 0.70	22.5
0.70 - 1.6	31.2
1.6 - 2.6	37.2
2.6 +	40.2

Notes: a) based on rates in Ontario

Source: Canadian Revenue Agency (2005), accessed at <http://www.cra-arc.gc.ca/tax/allrates/menu-e.html> on June 24, 2005

Table 4: Australian Income Tax Rates^a, 2005

Income Level (expressed as a fraction of AMW)	Approximate federal tax rate (%)
0 - 0.11	0
0.11 - 0.38	17
0.38 - 1.05	30
1.05 - 1.28	42
1.28 +	47

Notes: Figures exclude the Medicare levy, which equals 1.5 per cent of taxable income for individuals whose family income exceeds APW=0.61

Source: Australian Tax Office (2005), accessed at <http://www.ato.gov.au/individuals/> on June 24, 2005

These figures indicate that Australia's tax system is currently more 'progressive' than Canada's, taxing low personal incomes at a relatively low rate and applying a relatively high tax rate to high incomes. Some recent changes to the Australian tax system will change this latter feature, for example, by increasing the income threshold at which the highest marginal tax rate applies⁹.

Several of the features of the above tax schedules may have relevance to the pattern of women's participation and employment in the two countries. For example, the positive rates of taxation that apply to individuals with very low incomes in Canada potentially create a disincentive to involvement in part time work that (on the basis of this evidence alone) is not present in Australia. However, the lower marginal tax rates that apply to Canadians with incomes close to the AMW may reduce the disincentive to move from part time to full time work.

⁹ see Commonwealth of Australia (2005), '2005-6 Budget at a Glance', accessed on July 18 2005 at http://www.budget.gov.au/2005-06/at_a_glance/html/at_a_glance.htm#tax_cuts

The data in Table 5 summarises these effects. As is evident in column 2 of the table, an Australian woman moving from zero hours of work into a part time job faces a personal tax burden equivalent to 0.04 AMW; a Canadian woman making the same type of labour market move faces a tax burden equal to 0.07AMW. However, an Australian woman increasing her involvement in paid work from part time to full time hours faces an increase in her personal tax burden equal to 0.13AMW, whereas a Canadian woman in the same situation would face an increase tax burden equal to only 0.11AMW.

3.1. b) Spouse Rebates

The financial returns to women from involvement in paid work will depend not only on their wage and individual tax rate, but also, potentially, on the loss in family income via reductions in tax rebates and other benefits as their personal income increases. One important category of rebates is the dependant spouse rebate. Although these tax benefits are often paid to the woman's spouse, they may enter into some women's calculations of the financial benefits from increased involvement in paid work.

Both Canadian and Australian tax payers are entitled to tax benefits when they have a dependent spouse. In Canada, in 2004, a spouse or common-law partner amount could be claimed as an income tax deduction by taxpayers whose spouse earned less than 0.17AMW (\$CN7,484). The maximum amount that could be claimed was 0.15AMW (\$CN6,803), if spouse earnings were close to zero (\$CN681)¹⁰. In Australia, in family situations where dependent children are present, the equivalent of a dependent spouse rebate is paid through the Family Tax Benefit Part B¹¹. As is the case in Canada, the maximum benefit amount is paid to taxpayers whose spouse

¹⁰ Source: Canada Revenue Agency, 2005, accessed at <http://www.cra-arc.gc.ca/tax/individuals/topics/income-tax/return/completing/deductions/lines300-350/303/menu-e.html> on June 24, 2005

¹¹ A spouse *rebate* equivalent to 0.03 AMW (\$A1,535) is available for an individual in a partnered relationship where no dependent children are present *if* the 'dependent' spouse has earnings of less than 0.12 AMW (\$A6,421) in the tax year. When the 'dependent' spouse's earnings rise above this level, the rebate falls to zero

is not engaged in paid work and the benefit is withdrawn as the secondary earner's income increases.

The effect of these benefits and their withdrawal rates on the financial outcomes of families when the second earner's involvement in paid work changes is summarized in Table 5. As is documented in columns 3 and 7, the value of the 'spouse' benefit in families where the primary earner earns at least the AMW and the other partner does not participate in paid work is equal to 0.05AMW in both Canada and Australia. In Canada, because the size of the benefit depends on the primary earner's personal tax rate, the value of the benefit is only 0.03AMW where the primary earner's income is at the lower level (of 0.75AMW).

The withdrawal of these benefits as the second earner increases her/his involvement in paid work causes the benefit to fall to zero in both countries when the second earner's income reaches 0.32AMW. The lower level of rebate paid to Canadian taxpayers with low personal incomes causes the magnitude of this loss to be somewhat smaller. However, only in this sense (and only for the particular family type studied in the scenarios) can the Canadian arrangements relating to these rebates be seen to result in a lower level of financial penalty associated with a secondary earner's engagement in paid work.

3.1. c) Child Support Payments

A further important determinant of the METRs experienced by women with children is the removal of means-tested child support payments as family income levels rise. These payments, which are summarized in appendix A1, comprise a significant proportion of the family income of especially low-income families in both countries.

The changes in child support payments associated with a change in the secondary earner's income under each scenario relating to primary earner income are 'mapped out' in columns 4 and 8 in Table 5. The data show, first, that high financial penalties are incurred by Australian second earners who engage in paid work in circumstances where the primary earner's income is relatively low. The child support payment falls by more than half (from a rate equal to nine per cent of the AMW to a rate equal to

only four per cent of the AMW) when the second earner moves from zero working hours into a part time job. The payment remains unchanged if the secondary earner increases her/his working hours from part time to full time. In Canada the loss of child support payments associated with a secondary earner moving into part time work in these circumstances equals only one per cent of the AMW. A similar change in payments occurs if the secondary earner moves from part time into full time work.

Table 5: Personal Tax Rates on Secondary Earners, Spouse Rebates and Child Support Benefits, Families with 2 Dependent Children, Canada and Australia, 2004

Secondary Earner's Income	Scenario: Primary Earner's Wage is 0.75AMW (\$A41,145) (\$CN33,041)							
	Australia				Canada			
	Personal tax	Spouse Rebate	Child Support Payment	Net	Personal tax	Spouse Rebate	Child Support Payment	Net
Zero	0	0.05AMW (\$A2,928)	0.09AMW (\$A4,913)	0.14AMW (\$A7,841)	0	0.03AMW (\$CN1,531)	0.06AMW (\$CN2,655)	0.09AMW (\$CN4,186)
0.32AMW (\$A17,555) (\$CN14,097)	0.04AMW (\$A1,964)	0	0.04AMW (\$A2,196)	0.32AMW (\$A17,787) MET=0.43 ^a	0.07AMW (\$CN3,172)	0	0.05AMW (\$CN2,169)	0.30AMW (\$CN13,094) MET=0.37
0.8AMW (\$A43,888) (\$CN35,243)	0.17AMW (\$A9,388)	0	0.04AMW (\$A2,196)	0.67AMW (\$A36,696) MET=0.28	0.18AMW (\$CN7,930)	0	0.03AMW (\$CN1,324)	0.65AMW (\$CN28,637) MET=0.27
Secondary Earner's Income	Scenario: Primary Earner's Wage is equal to the AMW (\$A54,860) (\$CN44,054)							
	Australia				Canada			
	Personal tax	Spouse Rebate	Child Support Payment	Net	Personal tax	Spouse Rebate	Child Support Payment	Net
Zero	0	0.05AMW (\$A2,928)	0.04AMW (\$A2,196)	0.09AMW (\$A5,124)	0	0.05AMW (\$CN2,119)	0.05AMW (\$CN2,293)	0.1AMW (\$CN4,412)
0.32AMW (\$A17,555) (\$CN14,097)	0.04AMW (\$A1,964)	0	0.04AMW (\$A2,196)	0.32AMW (\$A17,787) MET=0.28	0.07AMW (\$CN3,172)	0	0.04AMW (\$CN1,729)	0.29AMW (\$CN12,654) MET=0.42
0.8AMW (\$A43,888) (\$CN35,243)	0.17AMW (\$A9,388)	0	0.04AMW (\$A2,196)	0.67AMW (\$A36,696) MET=0.28	0.18AMW (\$CN7,930)	0	0.02AMW (\$CN883)	0.64AMW (\$CN28,196) MET=0.27
Secondary Earner's Income	Scenario: Primary Earner's Wage is equal to 1.25AMW (\$A68,575) (\$CN55,068)							
	Australia				Canada			
	Personal tax	Spouse Rebate	Child Support Payment	Net	Personal tax	Spouse Rebate	Child Support Payment	Net
Zero	0	0.05AMW (\$A2,928)	0.04AMW (\$A2,196)	0.09AMW (\$A7,841)	0	0.05AMW (\$CN2,119)	0.04AMW (\$CN1,852)	0.09AMW (\$CN3,971)
0.32AMW (\$A17,555) (\$CN14,097)	0.04AMW (\$A1,964)	0	0.04AMW (\$A1,957)	0.32AMW (\$A17,548) MET=0.29	0.07AMW (\$CN3,172)	0	0.03AMW (\$CN1,288)	0.28AMW (\$CN12,213) MET=0.42
0.8AMW (\$A43,888) (\$CN35,243)	0.17AMW (\$A9,388)	0	0	0.63AMW (\$A34,500) MET=0.28	0.18AMW (\$CN7,930)	0	0.01AMW (\$CN442)	0.63AMW (\$CN27,755) MET=0.27

Notes: a) METR (Marginal Effective Tax Rate) is calculated with reference to the data from the preceding row. That is, the procedure calculates the equation: $(1 - \text{the change in net income}) / (1 - \text{the change in gross earnings})$ as the second earner's market income increases.

The data relating to the 'central' scenario, where the primary earner's wages are equal to the AMW, conveys a different pattern of effects. Specifically, it indicates that in these circumstances the financial penalty faced by a secondary earner moving into any form of paid work is lower in Australia than it is in Canada. In Australia, if the secondary earner moves into either a part time or a full time job, the child support payment does not change. In Canada, a movement by a secondary earner into a part time job would cause the child support payment to fall by an amount equal to 1 per cent of the AMW. If she/he moves from part time to full time work the payment would fall by 0.02AMW.

The information on child support payment in the last scenario, relating to family circumstances where the primary earner's wage is equal to 1.25 AMW, reveals yet another pattern of effects. In Australia, child support payments to this type of family are not affected when the secondary earner's changes from zero to part time hours, however, the payment is removed if she/he moves into full time work. In Canada, the equivalent changes in child support payments are a reduction of 0.01AMW (when the secondary earner moves into a part time job), and 0.02AMW (if he/she moves from part time to full time employment).

3.1. d) Overview of Marginal Effective Tax Rates

The material in the above sub-sections has identified many similarities in the tax and benefit regimes of the two countries. The regimes do not appear to generate any large differences in the financial incentives for secondary earners to be engaged in paid work per se. However, the two systems do appear to apply different effective rates of taxation on secondary earners moving from part time to full time work. They also produce different rates for secondary earners in particular family income groups.

In Australia, the highest METR (of 43 per cent) apply to secondary earners in low-earner couple families moving from zero hours of work into a part time job. This high rate is largely caused by the targeting of child-support payments at low income families. In Australian families where the primary earner's wage is equal or higher than the AMW, the METR faced by a secondary earner moving into part time work falls to around 30 per cent, and it is largely accounted for by the loss of the spouse rebate and existing rates of personal taxation.

In Canada, the highest METRs (of between 37 and 42 per cent) apply to secondary earners moving from zero hours into part time work regardless of the income status of their family. The high METRs faced by Canadian (as opposed to Australian) secondary earners in medium to high income families as they move into part time work appears to be largely due to the absence of a tax-free threshold in Canada and

its higher personal tax rates at lower levels of income. However, in comparison with Australia, the lower spouse rebate available to low income earners, together with the lower level of child support payments for low income families, contribute to a lower METR for secondary earners from low income families as they move into part time work.

The METR applying to secondary earners moving from part time to full time work is shown to be similar (between 27 and 28 per cent) in the two countries, across all the family types studied here.

In summary, the reasons for Canadian women's higher rate of involvement in paid work cannot easily be attributed to differences in the two countries' taxation and benefit systems. The level of METRs on secondary earners in both countries is high compared to the tax rates of single earners on equivalent market incomes, and they are of a similar magnitude. Thus, neither system appears to actively promote women's involvement in either part time or full time work.

These findings concur with Gauthier's (2002, p. 12) analysis, which describes both Canada and Australia as within the 'Liberal regime', characterized by a "low level of support for families, support that tends to be targeted at the families with greater needs". In comparison to regimes operating in especially Nordic countries, the Liberal regime provides medium-to-low levels of cash support for low income families with children and low levels of support for working parents.

Before this discussion of effective tax rates is finalised, it must be noted that a large part of the broader literature on these tax rates is concerned with the financial penalties incurred by individuals moving from unemployment into paid work. For example, Chaykowski and Powell (1999, p.19) claim that the Canadian tax/benefit system creates strong work disincentives and that high marginal tax rates on earned income for welfare recipients has contributed to a "poverty trap" (see also, CFIB, 1999), Hughes and Hand, (2005) and Poschmann, (2004)). The analysis in the current paper, which is focused on family types where at least one partner is employed, has not canvassed these particular effects.

3.2 Childcare Costs and Subsidies

Thus far the analysis of the financial costs associated with labour market participation by many mothers in partnered relationships has focused on personal tax arrangements and child support payments. However, important additional determinants of the work-related costs of, especially, mothers of young children are childcare costs and/or the limited availability of childcare places. In the following paragraphs the level of childcare costs (net of government subsidies) and data on the availability of childcare places in Canada and Australia are reviewed. At the end of the section, studies that have been conducted in the two countries of the impact of childcare costs and/or availability on women's labour market involvement are also briefly examined.

Australia currently remains within the group of countries that offers no tax relief for childcare costs¹² and very low levels of publicly provided childcare for children under the age of 5. In comparison, Canada records a relatively high level of government support through tax relief measures, but the public provision of childcare places is also considered low by international standards. Both countries provide limited financial subsidies to assist in the reduction of the private childcare expenses incurred by families. Reflecting this, they are both in the group of countries that spend relatively little on childcare. On average, OECD countries spent 0.7 per cent of their GDP on formal day care and pre-primary education in 1999. In 1999, Canada spent 0.3 per cent of its GDP on formal daycare and pre-primary education, whereas Australia spent 0.2 per cent of its GDP (see the following table).

Table 6: Government Mechanisms for Financing Early Childhood Education and Care (ECEC), and Typical Childcare Expenses, Canada and Australia

	Australia	Canada

¹² Recent changes will allow taxpayers to claim a 30% childcare rebate in their tax returns from June 2006 onwards, see Costello (2005), 'New Early Start for Childcare Rebate', Ministerial Press Release, no. 108, Commonwealth of Australia, Canberra, accessed at <http://www.treasurer.gov.au/tsr/content/pressreleases/2004/108.asp> on July 19, 2005

Financing Direct Provision of ECEC	Most ECEC is privately purchased. Public pre-primary programs are available for children in the year they turn 5	Most ECEC is privately purchased. Provinces provide public kindergarten programs
Childcare Fees	Typical unsubsidised fees in 2004 were \$50 per day. This entails an annual cost of full time care of \$A12,000 (or 0.21AMW)	Most fees are assessed on the basis of the child's age. For toddlers and infants the range of fees is currently between approximately \$CN400 and \$CN700 per month. A mid range fee would entail an annual cost of full time care of \$CN7,680 (or 0.17AMW)
Subsidies for Purchase of Private Care	All families can claim a childcare rebate. This reduces the fees payable for childcare places and it varies according to the family's taxable income and the number of children in care. The minimum rebate amount is 16.67 per cent of the childcare cost.	A limited number of means-based subsidies are provided with a combination of Federal funding through Canada Health and Social Transfer block grant to Provinces. Provinces vary in the extent to which they use these funds for childcare and supplement them with provisional funds ^a
Government Incentives or Support for Employer Contributions	None	none
Tax Relief for Purchase of Private Care	None	Deduction (non-refundable) of childcare expenses for working parents to a maximum of \$CN7,000 [0.13AMW] per child under 7 and \$CN4,000 [0.09AMW] per child 7-14 ^b .
Government Spending on Childcare and ECEC as a Percentage of GDP (1999)	0.2	0.3

Sources: Gornick and Meyers, 2003, table 7.3; OECD, 2003; Canadian childcare cost information was accessed at http://www.hrsdc.gc.ca/asp/gateway.asp?hr=en/lp/spila/wlb/wrccc/02table_of_contents.shtml&hs=wncon June 30, 2005; Australian information on childcare rebates was accessed at http://www.facs.gov.au/internet/facsinternet.nsf/childcare/services-ready_reckoner.htm on June 30, 2005

Notes:

a) For example, in 1998, the Ontario government introduced a childcare supplement for working families with a low or modest income who had children aged under seven years. The parents could be either working or studying, or have one stay-at-home parent (White, 2001, p.402). Quebec has introduced a scheme to lower childcare costs to \$5 per day.

b) The parent with the lower income claims the deduction, within certain limitations. The claim for childcare expenses for a year cannot exceed two thirds of the amount the parent earned. Childcare subsidies are taken into account in the calculation of the child support payments, reducing their monetary value

The significance of this information on childcare costs, subsidies and tax concessions for the labour market behaviour of partnered women with children is best assessed with reference to the family type and scenarios for primary and secondary earner incomes that were introduced in the previous section. The cost figures used in this analysis and summarised in the next table are based on a situation where only one child is in formal care. The data on childcare costs takes into account the information contained in Table 6 on typical unsubsidised childcare costs, the availability of public subsidies for childcare expenses and reductions in personal tax liabilities associated with the tax deductibility of childcare costs. The net financial position of secondary earners once childcare costs are taken into account is also examined. This analysis builds on the figures provided in Table 5 and is also used to produce some adjusted measures of the METR experienced by secondary earners as they increase their hours of work.

Table 7: Childcare Costs for One Child and the Net Financial Gains Associated with Additional Work Hours by Secondary Earners, Canada and Australia, 2004

Secondary Earner's Income	Scenario: Primary Earner's Wage is 0.75AMW (\$A41,145) (\$CN33,041)			
	Australia		Canada	
	Childcare Cost ^a	Net Financial Gain ^b	Childcare Cost	Net Financial Gain
Zero	0	0.14AMW (\$A7,841)	0	0.09AMW(\$CN4,186)
0.32AMW (\$A17,555) (\$CN14,097)	0.03AMW (\$A1,844)	0.29AMW (\$A15,943) MET(A) ^c =0.54	0.05AMW(\$CN2620)	0.24AMW(\$CN10,474) MET(A)=0.55
0.8AMW (\$A43,888) (\$CN35,243)	0.17AMW (\$A9,488)	0.50AMW (\$A27,208) MET(A)=0.57	0.14AMW(\$CN6,344)	0.51AMW(\$CN22,293) MET(A)=0.44
Secondary Earner's Income	Scenario: Primary Earner's Wage is equal to the AMW (\$A54,860) (\$CN44,054)			
	Australia		Canada	
	Childcare Cost	Net Financial Gain	Childcare Cost	Net Financial Gain
Zero	0	0.09AMW (\$A5,124)	0	0.1AMW (\$CN4,412)
0.32AMW (\$A17,555) (\$CN14,097)	0.05AMW (\$A2,855)	0.27AMW (\$A14,931) MET(A)=0.44	0.05AMW(\$CN2,620)	0.23AMW(\$CN10,034) MET(A)=0.60
0.8AMW (\$A43,888) (\$CN35,243)	0.20AMW (\$A10,988)	0.47AMW (\$A25,708) MET(A)=0.59	0.14AMW(\$CN6,344)	0.50AMW(\$CN21,852) MET(A)=0.44
Secondary Earner's Income	Scenario: Primary Earner's Wage is equal to 1.25AMW (\$A68,575) (\$CN55,068)			
	Australia		Canada	
	Childcare Cost	Net Financial Gain ^b	Childcare Cost	Net Financial Gain
Zero	0	0.04AMW(\$A2,196)	0	0.09AMW(\$CN3,971)
0.32AMW (\$A17,555) (\$CN14,097)	0.07AMW (\$A3,868)	0.24AMW (\$A13,680) MET(A)=0.51	0.05AMW(\$CN2,620)	0.24AMW(\$CN10,474) MET(A)=0.55
0.8AMW (\$A43,888) (\$CN35,243)	0.20AMW (\$A10,988)	0.43AMW (\$A23,512) MET(A)=0.63	0.14AMW(\$CN6,344)	0.51AMW(\$CN22,293) MET(A)=0.44

Notes: a) childcare costs include unsubsidized childcare fees, reduced income liabilities (net of changes in child support payments) associated with the tax deductibility of childcare expenses and childcare subsidies.

b) The net financial gain refers to the income associated with the secondary earner's work status. The data is derived from Table 5 and the information on childcare costs.

c) MET(A) refers to the marginal effective tax rate adjusted to take account of childcare costs.

The figures in the table demonstrate the large effect that childcare costs have on the financial returns from work for secondary earners. In Australia the costs are a particular burden on secondary earners engaging in full time work because, in this scenario, childcare hours are high and the childcare rebate is reduced as a result of the family's higher income. A typical Australian secondary earner moving from part time work to full time work is likely to recoup only around 40 per cent of his or her market wages once childcare costs, personal taxation and reductions in government benefits are taken into account. In other words an adjusted METR of approximately 60 per cent applies when her/his work status is changed in this way.

Canadian secondary earners moving from part time to full time work face adjusted METRs that are still very high in comparison to the tax rates applying to other workers in the country, but at 44 per cent these rates are substantially lower than those applying to their Australian counterparts. This difference largely derives from the ability that Canadians have to claim childcare costs as a tax deduction.

When attention is focused on the adjusted METRs applying to secondary earners moving from zero hours of paid work into a part time job, Canadians generally appear to fare more poorly. The adjusted METR for this category of worker (in our scenario analysis) is between 55 and 60 per cent. In Australia the equivalent rates are between 44 and 54 per cent.

This particular difference is contributed to by the fact that childcare fee relief is largely delivered in Canada through the tax system, causing the value of the government concession to be relatively small for secondary earners on low incomes and with low childcare costs. In Australia, by contrast, fee relief is inversely related to family income and, thus, the value of the concession in childcare costs is greatest in those circumstances where relatively few hours of paid work are performed.

In summary, across all the scenarios we find evidence of substantial financial disincentives applying to secondary earners' (typically women's) involvement in paid work. Childcare costs contribute substantially to these disincentives, in some cases causing the 'effective tax rate' to more than double and exceed by a large margin the

highest personal income tax rate. In Australia, once childcare costs are included in the calculations, net financial returns are smallest for women moving from part time work into full time work. In Canada, the net gains from paid work are smallest for women moving from zero hours of paid work into a part time job

These figures may have some relevance to the patterns of women's involvement in paid work noted in Section 2. In particular, the substantially higher childcare costs incurred by Australian women as they move from part time into full time work could be viewed as contributing to the much higher incidence of part time work in this country. A similar relationship has been identified in a number of within country studies that have made use of survey data. For example, Powell (1997) found a substantial negative effect of childcare costs on married women's hours of work in her study of Canadian data (see also Cleveland, Gunderson and Hyatt, 1996).

Despite this, the extent to which the information assembled in this section can account for all the observed patterns of labour market involvement of women in the two countries is open to question. The figures summarized in the above table suggest that the magnitude of the adjusted METR applying to partnered women with children moving from zero hours of paid work into a part time job is similar in the two countries. Thus, *assuming that part time jobs are available*, the financial incentives for labour market *participation* appear to be similar in both countries. In this context it is also interesting to consider the conclusions of White's study of the connection between the availability of childcare places in different countries and observed labour market participation rates among women. She found that, although countries with high levels of childcare provision generally had higher female labour market participation rates, Canada was anomalous in that women's labour market participation was relatively high despite low levels of childcare provision (White, 2001, p.391). This suggests that our quest for an explanation of these differences will need to extend to an exploration of an additional set of factors.

3.3 Maternity and Parental Leave

A further factor that may be relevant to the different patterns of labour force participation and hours of work by women in the two countries is the availability of

paid leave associated with maternity and/or parenting. The provision of maternity and/or parental leave is generally expected to exert two contradictory effects on mother's participation behaviour. On the one hand, if the leave provides a replacement income during the period of maternity or child rearing, it is likely to decrease the financial incentive to participate in the labour market. However, if the provision of leave is also associated with a mandated right to return to work after maternity or a period of labour market absence to care for a child, it may act to increase the chances of labour market involvement of women with children (Dex and Joshi, 1999, p. 646).

Some evidence on these effects is provided by Ruhm's (1998) cross-national comparison of the effects of parental leave mandates on labour markets. He found evidence that paid parental leave increased employment rates in nine OECD countries. However, taking parental leave for an extended period was also found to potentially deteriorate labour market skills and damage future career paths and earnings. Ruhm also presented evidence that extended parental leave has a negative impact on the salary of returning mothers.

Gornick and Meyers (2002) present a similar case when they argue for parental leave policies that are structured in such a way that encourage gender equality in the usage of parental leave. They state that long leave that leads to extended absences from the labour market has mixed consequences for gender equality as the leave is largely taken by women. In other words, while parental leave is important to women's employment chances, long leave periods may act to both solidify gender differences in care giving and exacerbate gender inequality in the labour market (Gornick and Meyers, 2002, p. 6).

Canada is, according to the 1997 ILO Maternity Protection at Work Report (ILO, 1997), among the world leaders with respect to maternity and parental leave benefits and among the top ten nations that provide the most paid maternity leave benefits.

In Canada parents may share around 35 weeks of parental leave, of which 15 weeks is for maternity leave (LIS Family Policy Database, Version 2, 2003)¹³. The 15 weeks maternity leave is paid at 55 per cent of previous average insured earnings to a maximum benefit of \$CN413 per week (or approximately 49 per cent of the AMW for the 15 week period). A family supplement for low-income earners (those earning less than \$CN25,921 per annum) raises the income replacement rate to 80 per cent. These benefits are paid by the national government, but rights to take leave are established at the provincial level. Parents may continue to work, earning the greater of \$CN50 per week or 25 per cent of their weekly benefit rate, without this affecting their parental benefits. This scheme is available until the child's first birthday.

In comparison, Australia's maternity leave policy – of providing no legal rights to leave – places it in the group of only six countries (out of 152 surveyed by the ILO) that have no national maternity leave law (ILO, 1999). Furthermore, although standard industrial agreements do provide for 52 weeks of maternity, parental and childcare leave, all of this is unpaid (OECD, 2003)¹⁴.

Some groups of workers in Australia currently do have access to paid maternity and paternity leave. A survey conducted by Australia's Equal Opportunity for Women in the Workplace Agency in 2003 (EOWWA, 2003) found that 36 per cent of surveyed *employers* provided some form of paid maternity leave. This was an increase from the 23 per cent of employers providing paid maternity leave in 2001. The survey also showed that the availability of this provision is far less common in certain industries than in others. Retailing and hospitality, which both have a high concentration of less-skilled, lower-paid and casual female employees, provide paid maternity leave to only 17 per cent and six per cent respectively of their workforce.

¹³ There is some variation in entitlements across provinces

¹⁴ The Conciliation and Arbitration Commission test case of 1979 introduced 52 weeks of unpaid maternity leave following the birth of a child where the employee has had 12 months continuous service with the one employer into Australia's federal awards. This provision is dependent solely on whether the employer is either the federal government or on provisions written into employment agreements with particular employers.

The importance of the difference in the two countries' approaches to maternity leave is difficult to ascertain directly from the available data. However, the correlation between the level leave benefits and the participation rates is interesting to note in the light of evidence from other countries. For example, Joshi, Dex and Macran (1996) found significant effects of maternity leave in their study of British mothers. Specifically, a typical mother with one child under the age of three had an estimated probability of being in paid employment after a period of maternity that was 25 percentage points higher *if she had taken maternity leave*.

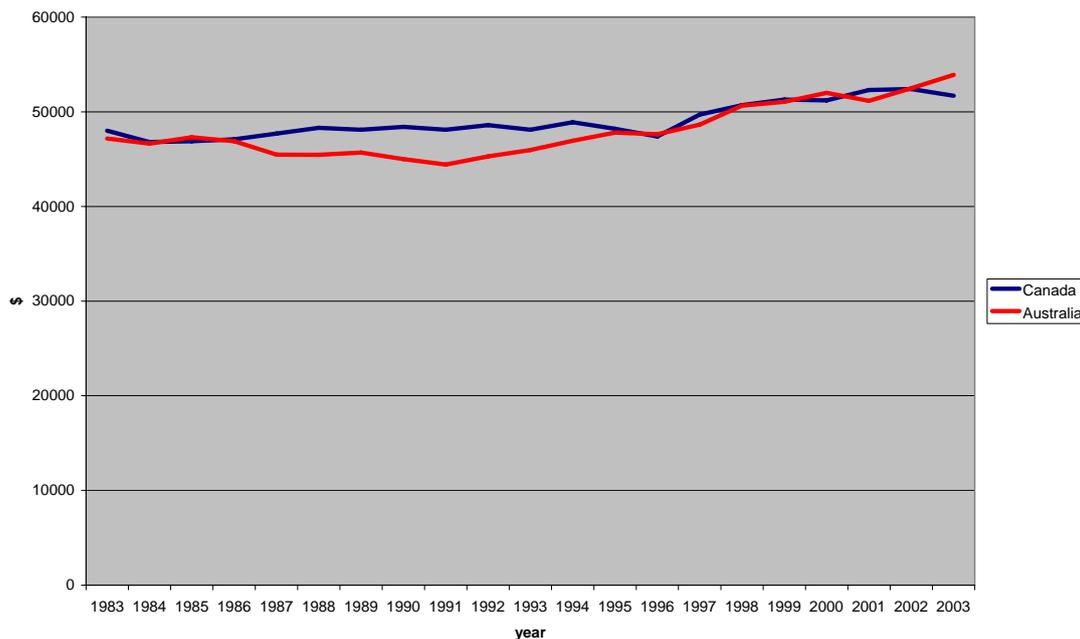
As the level of maternity benefits is one of the few clear differences in the economic environment affecting the participation decisions of Canadian and Australian mothers, its possible role in explaining the differences in participation behaviour becomes more important, and worthy of further investigation.

3.4 Income Needs

At a theoretical level, another possible determinant of, especially, partnered women's participation behaviour is their families' need for a second income. Changes in aggregate FLFPRs, thus, may come about through either a rise in household living standards or a fall in the real earnings or job security of traditional breadwinners (namely men).

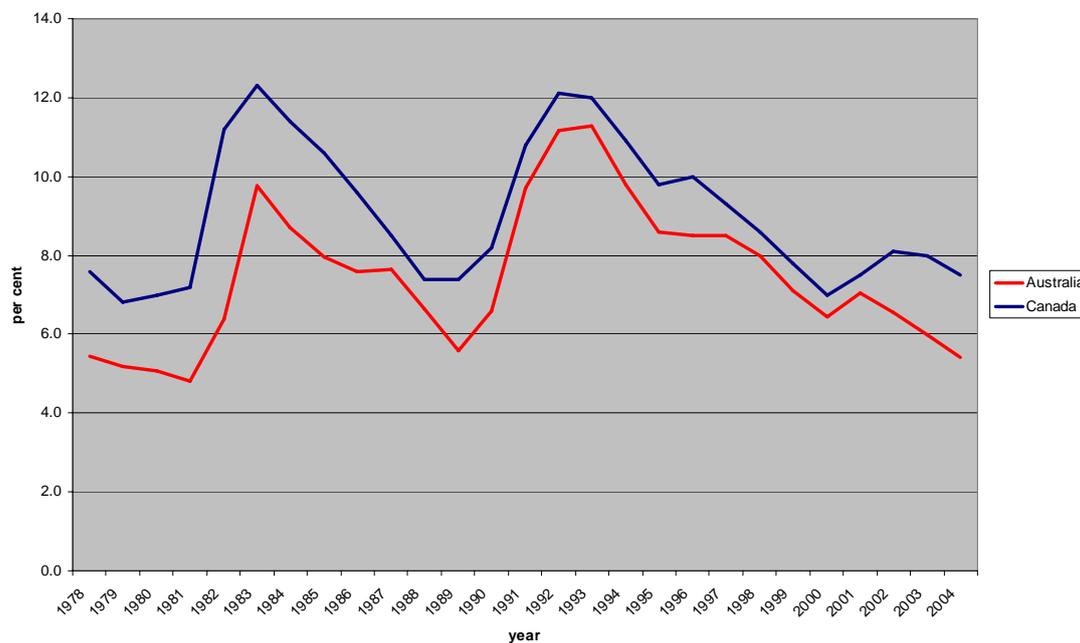
In studies of differences in FLFPRs between countries, the influence of these factors can be taken into account by including data on male real wages and/or unemployment rates. The charts below show recent data on both these variables in Australia and Canada. They point to very similar rates of growth in average male earnings in the two countries over the 1983 to 2001 period. However, male unemployment rates were higher in Canada throughout the period. Specifically, the average real earnings of Canadian and Australian full time male employees grew by approximately 8.5 per cent over the period to 2001. The average annual male unemployment rate over the 1978-2004 period was 9.1 per cent in Canada and 7.5 per cent in Australia.

Figure 2: Real Earnings of Full Time Male Workers, Canada and Australia, 1983-2003, (2003 values in original currencies)



Sources: Statistics Canada, data provided on request from CANSIM, July 7, 2005; ABS, 2005b
 Note: The Canadian data includes only full-year workers; Australian nominal wage data was deflated using ABS, 2005c

Figure 3: Male Unemployment Rates, Canada and Australia, 1978-2004



Sources: Statistics Canada, data provided on request from CANSIM, July 7, 2005; ABS, 2005a

In summary, unemployment data from the two countries provides some indication of weaker labour market prospects for male workers in Canada. These may have contributed to the higher labour force participation rate of Canadian women over the survey period. If this is the case then some of the difference in the FLFPR in the two countries may be attributed to an 'added worker' effect on the participation behaviour of Canadian women.

However, there is a need for further study of this aspect of the participation puzzle before firm conclusions can be drawn on the significance of the influence of male employment patterns. For one, evidence is needed on how the *timing* of changes in the FLFPR in the two countries was related to changes in the male unemployment rate. That is, if the added worker hypothesis is to be proven there should also be evidence of difference in the FLFPR between the two countries becoming more pronounced in those time periods where male labour market conditions are most divergent. There is also a need to reconcile evidence of this type with the typical conclusion of recent national studies using cross-sectional data, namely, that the effect of changes in spouse earnings on the participation behaviour of women is small and has fallen over time (see Matthew, et.al 2002, Hughes and Hand, 2005, Birch, 2002, Cohen and Bianchi, 1999, and Dex and Joshi, 1999).

3.5 Equal Opportunities/Pay Equity

A further possible determinant of the differences in women's level of involvement in the paid workforce is their wage opportunities. As was discussed in earlier sections, standard theory predicts that the incentive for women to supply their labour to the formal economy will be directly related to their perceived wage opportunities. Factors such as wage discrimination and segmented labour markets, thus, are also relevant to the issue of women's labour supply.

Both countries typically perform quite well in studies of gender equity in the labour market, although the persistence of a sizeable wage gap and occupational segregation remains a key policy concern in both countries. In Canada, women's individual earnings increased by more than 10 per cent during the 1990s, whilst, as observed in the above graph, men's earnings recorded little growth. As a result, ratio of female

to male average earnings, for the group of full-time, full-year workers rose from 67.6 per cent in 1990 to 72.8 per cent in 1996. The ratio has remained around this level since that time (Fortin & Schirle, 2003).

In Australia, in 2002, the ratio of female to male average weekly ordinary time earnings for full-time adult managerial employees was 80.4 per cent. The ratio for non-managerial employees was 89.4 per cent (ABS, 2003). Many of the improvements in this ratio were recorded in the 1970s and were attributed by commentators to rising levels of qualification and skill among women over this period. Relatively little improvement in women's relative wage outcomes have been recorded since the 1980s (see Pocock, 1998, pp.593-594, and Preston and Burgess, 2003, p.513).

At face value, this data does not provide additional insights to the observed differences in women's involvement in paid work in the two countries. For one, it suggests that women's wage opportunities (compared to men) might be better in Australia than in Canada, which should, *ceteris paribus*, contribute to higher work incentives.

However, these comments are made cautiously as the female/male wage ratios in the two countries will themselves reflect the patterns of involvement of women in paid work. That is, one of the reasons for the relatively high female/male wage ratio for full time workers in Australia is the low involvement of women in this type of work. Those women who are involved in full time work in Australia are likely to have higher levels of education than their counterparts in Canada (where full time work is more widespread) and this in itself will boost the observed wage ratio. Thus, the 'basic' data on these wage ratios provides a limited (and possibly misleading) view of the labour market opportunities of women in the two countries.

3.6 Education

The final part of this analysis of the current factors that may be contributing to the different levels of involvement of women in paid work in Canada and Australia is focused on the role of education. From an economic perspective, education is

closely linked to employment and earning opportunities and, thus, to the financial incentives to participate in the paid workforce. More generally, education is also seen as affecting the aspirations and expectations of women and, thus, even in the absence of strong financial incentives, it is likely to be associated with higher levels of involvement in paid work.

Applied to cross-national studies of women's labour supply this economic framework suggests that differences in women's labour market behaviour could be due either to differences in the incidence of qualifications across countries, or to differences in the relationship between the level of educational qualifications and labour force behaviour. The following sub-sections explore each of these relationships in turn.

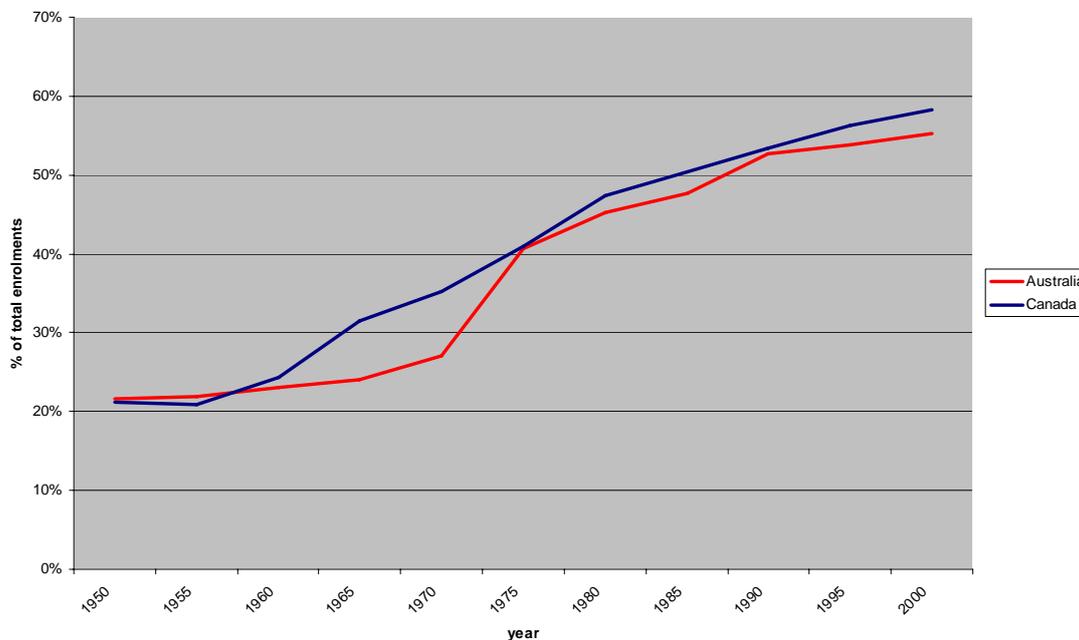
3.6.a) Qualification Levels in Canada and Australia

As with many other OECD countries, Canadian and Australian women currently outnumber men in undergraduate programs at university and other tertiary institutions. In 1999-2000, 175,555 Canadians were granted university qualifications. Of those, 58.6 per cent were women (Statistics Canada, 2004). In 1999-2000 Canadian women gained more university qualifications than men in seven of the nine fields of study. In 2000, 55.2 per cent of all the students enrolled in Australian universities were women. They made up the majority of students in six of 11 fields of study.

The rate of involvement of women in higher education has been similar in the two countries for several decades, as is shown in the following chart. As a consequence, by 2000, the proportion of women in each age group with university level qualifications was similar in the two countries, with the proportion of Australian women in the 'prime age' age group with tertiary qualifications being relatively high (see Figure 5).

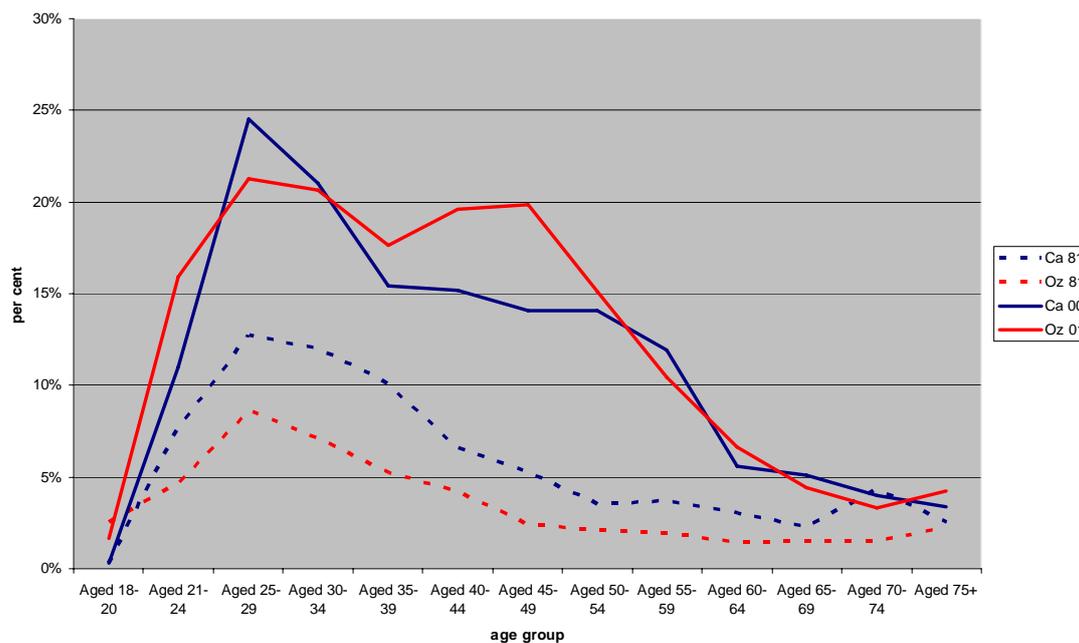
Thus, it would appear that current differences in the level of educational qualifications among 'prime age' women are not the source of the observed current difference in women's labour force involvement.

Figure 4: Women's Share of University Enrolments, Canada and Australia, 1950-2000



Sources: Australian data from DEST (2000); Canadian data from Statistics Canada (1999) and Statistics Canada (2003)

Figure 5: Proportion of Women with University Qualifications, by Age Group, Canada and Australia, 1981 and 2000



Source: LIS (2004) (Australian Income Distribution Survey, 1985, the Canadian Survey of Consumer Finances, 1987, and the Canadian Survey of Labour and Income Dynamics, 2000); ABS, 2001.

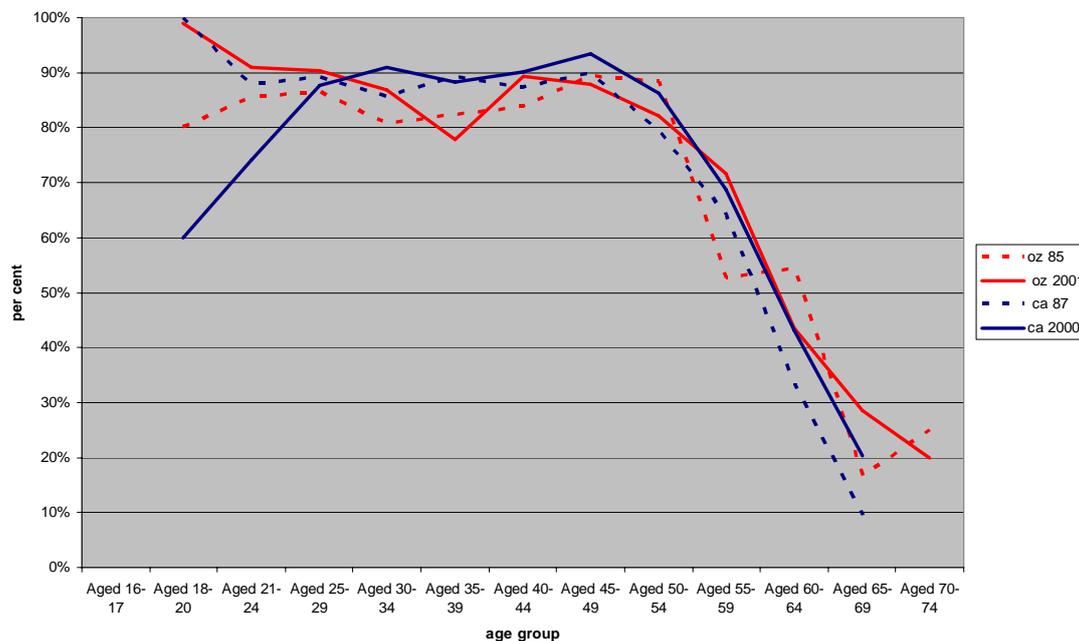
3.6.b) *Education and Labour Market Behaviour in Canada and Australia*

The following charts show the effect of education on the FLFPR in the two countries. In 2001 Australian women with university degrees had a labour force participation rate that was approximately 35.0 percentage points above that recorded by women who had, at most, completed secondary school. In Canada, in 2000, this difference was 28.1 percentage points. In the mid 1980s the differences in labour force participation rates across the education groups were 36.5 and 34.2 percentage points in Australia and Canada respectively¹⁵.

Of particular importance to the topic of the labour market participation rate of partnered women with children is the data in the charts showing the positive effects of higher levels of education on the FLFPR over the life cycle. For example, in Australia, in 2001, the labour force participation rate of women with degrees did not fall below 75 per cent in any age group up to 55 years. In Canada, in 2000, labour force participation rates over 85 per cent were recorded by women with degrees in each age group between 25 and 55 years. In contrast, in the equivalent years, the labour force participation rate of Australian women with school qualifications or less fell below 60 per cent in both the 30-34 year age group and the 50 + age groups. In Canada, women with the lower level of education had a labour force participation rate of 66.6 per cent in the 30-34 year age group, and the rate fell below 65 per cent in the 50+ age group.

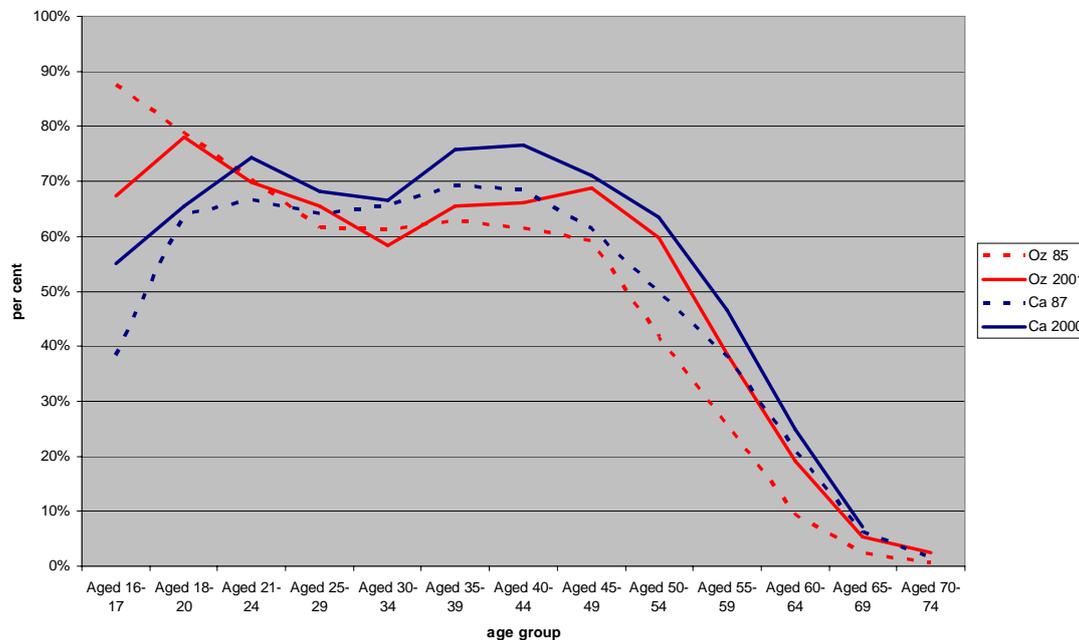
¹⁵ This data points to some convergence in the labour force participation rates of degree holders and school leavers in both countries over the 1990s, brought about largely by more rapid rates of growth in the LFPR of school leavers. In Australia, the labour force participation rate of degree holders increased by only 1 percentage point over the period 1985-2001. In Canada the equivalent increase (over the 1987-2000 period) was 3.9 percentage points. Among the women with lower levels of formal education the percentage point increases in labour force participation rates were 2.5 in Australia and 10.0 in Canada.

Figure 6: Labour Force Participation Rates of Degree Holders, Canadian and Australian Women, mid 1980s and early 2000



Source: as for Figure 5

Figure 7: Labour Force Participation Rates of School Leavers, Canadian and Australian Women, mid 1980s and early 2000



Source: as for Figure 5

The data in these charts indicate that, in 2000, once account was taken of differences in education, a substantial difference still persisted between the countries in the

FLFPR in the 30-45 year age group. For example, in the group of women aged in their mid 30s, Canada's labour force participation rate was at least 10 per cent higher than Australia's across the educational groups. A similar difference was apparent in the labour force participation rates of women in their early 30s and 40s with lower levels of education.

This observation of differences in participation rates *within* each educational group, especially when women are in their thirties, suggests that factors *other* than differences in qualification levels contribute to the observed differences in the labour force participation behaviour of Canadian and Australian women in this part of the life course (when they are most likely to be partnered and have young children).

In summary, the data presented in this sub-section indicates that by 2000 there were few differences in the qualification levels of Australian and Canadian women. The proportion of women with university qualifications is now similar in each age group, reflecting a major 'catch up' in qualification levels by Australian women over recent decades. The level of education acquired by women clearly has a strong influence over their participation behaviour across the life cycle, which accords with the perspective of the life cycle or dynamic models of labour supply introduced in Section 3. However, this effect also appears to be quite similar in the two countries, leaving us still with a question about the sources of the observed differences in the labour force participation rate of women in each educational group.

4. Dynamic Participation Rates?

It is possible that the conclusions of the above discussion on the role of education in explaining the difference between Canada's and Australia's FLFPR (that is has little effect) is over stated. The information presented in the section highlighted that the history of women's involvement in higher education differed substantially between the two countries. Specifically, the data in Figure 4 showed that, although the gender split of university enrolments has been very similar in the two countries since 1975, the involvement of women in universities grew much more strongly in Canada in the

1960s, with Australian women's major gains in representation in the sector occurring approximately one decade later.

It may be possible that the early start that Canadian women made towards higher qualifications produced on-going effects on their labour force involvement. One way this is likely to have happened is via the effects of the 'enrolment bubble' on the incidence of women with higher qualifications over the long term. Women who graduated at the age of 22 in 1965 (when the gap between the two countries' enrolment levels was first apparent) would be aged 37 in 1980. Thus, the 'bubble' in university enrolments that arose in the 1960s could be expected to produce a similar bubble in the proportion of women aged in their 30s with degrees in the early 1980s (This is evident in Figure 5). In turn, due to the effects of education on labour force participation (documented in Figures 6 and 7), FLFPRs in this age group are likely to have been pushed higher in Canada in the early 1980s.

However, by 2001, women who graduated at the age of 22 in 1965 would have been 58 years old (and thus close to women's typical age of 'retirement'). In other words, most of the *direct* effects of the bubble in enrolments on labour force participation rates are likely to have dissipated by this time. As was documented in Figure 5, the two countries recorded similar patterns of educational qualifications across the age groups by early 2000. The search for reasons as to why FLFPRs continued to differ in the two countries after 2000, thus, must continue.

Another *indirect* source of influence of the bubble in educational enrolments is possible via the effect that Canada's early entrants into higher education and paid work had on *attitudes* of other women (from a range of educational backgrounds) towards paid work. It is possible, although hard to prove, that women's involvement in education and paid work began to be perceived as more legitimate at a relatively early part of the last century in Canada (due to their early experience of women in higher education), and that this shift in attitudes has continued to affect Canadian women's involvement in paid work.

4.1 Attitudes to Women's Involvement in Paid Work in Canada and Australia

Although statistical information to prove or disprove the hypothesis described at the end of the last section is not available, we do have some data on community perceptions of the legitimacy of women's engagement in paid work in both countries from the results of the International Social Survey Programme (ISSP). This data provides some evidence on the possible links between a community's experience of women engaged in paid work and their perceptions of the legitimacy of this engagement.

The results of the 1994 ISSP survey of national attitudes to gender role models showed that 77.4 per cent of Canadians surveyed disagreed or disagreed strongly with the statement "A man's job is to earn money; a women's job is to look after the home and family". This was second only to Eastern Germany where the response in the negative was 78.6 per cent. In contrast, the Australian response in the negative was only 55 per cent (OECD, 2003)¹⁶.

These differences in attitudes to gender roles appear to be also reflected in opinions on the employment of mothers. According to Evans and Kelley (2001, p.30), from an international perspective, Australian women are among the most inclined to believe mothers should stay at home when their children are young and least in favour of work. In 1994, 64 per cent of Australian mothers responding to the ISSP favoured staying at home when they had preschoolers, 33 per cent expressed a preference for working part-time and only three per cent for working full-time. In contrast, 45 per cent of Canadian mothers responding to the 1994 ISSP expressed a preference for mothers of young children staying at home, 38 per cent preferred working part-time and 17 per cent favoured full-time work (Evans and Kelley, 2001, p.31).

¹⁶ Similar evidence was produced by the World Values Survey of 1990 and 1995-7. The agreement rate to the question: "when jobs are scarce, men should have more right to a job" was 25.5 per cent in Australia (in 1995-97) and 18.8 per cent in Canada (in 1990) (World Values Survey, accessed at www.worldvalues.org on July 21, 2005)

More recent data on attitudes to women's employment in Australia compiled by Evans and Kelley (2002) suggests that little has changed since the mid 1990s, although there has been a reduction in the perception of conflict between work and family¹⁷. A large proportion of the respondents to Evan's and Kelley's 2001 survey continued to express reservations about the legitimacy of the employment of mothers with young children (Evans & Kelley, 2002, p. 53). In 2001, 71 per cent of Australian mothers thought mothers with young children should not work (Evans & Kelley, 2001, p.28). Rates of disapproval of the involvement of young children in full time work were especially high. The survey respondents were asked: "Do you think women should work outside the home full-time, part-time, or not at all when there are children under the age of six?" 69 per cent of respondents to this question favoured a role for mothers as full-time homemakers, 28 per cent preferred part-time employment and 3 per cent favoured full-time employment. Young women (those born in the 1960s and 1970s) who may have been expected to be strong supporters of working women, did not express views that were substantially different from this 'norm'. Only seven per cent of women in this group favoured the full time employment of mothers with young children. Similarly, better educated mothers in Australia were found to be only slightly more inclined toward maternal employment than women with only secondary education (Kelley and Evans, 2001, p.30).

It is notoriously difficult to interpret the likely relationship between the opinions expressed in survey such as the ISSP and the labour market behaviour of individuals. For one, as Probert and Murphy (2001, p.30) explain, responses to the types of survey questions reported here can simply mirror what women believe society expects of them. However, despite this, the information on attitudes to maternal employment is likely to be important to understandings of the patterns of women's labour market involvement. Several international studies have identified a strong link between gender role attitudes and women's labour market involvement (see Azmat, Guell and Manning, 2004, and Fortin, 2005). Thus, it is likely that the apparent higher preference for maternal care over market-based care of children in Australia has

¹⁷ In 1984, 41 per cent of Australian respondents agreed with the statement: "All in all, family life suffers if the woman has a full time job". By 2001, this positive response rate had fallen to 31 per cent (Evans and Kelley, 2002, p.48).

negatively affected the chances of labour market participation by Australian mothers (see also Dex and Joshi, 1999, pp.647-648).

It is also likely that the higher rates of labour market participation in Canada, and the fact that these higher rates have been a feature of that country's social and economic experience for a number of decades, has (and will continue to) increase the perceived legitimacy of mothers' involvement in paid work. There is a very high correlation between attitudes to the legitimacy of maternal employment and the work status of female respondents (see Evans and Kelley, 2001, p.34)¹⁸. International evidence also points to a positive link between the current rate of women's involvement in paid work in different countries and general community acceptance of this involvement (see, Fortin, 2005, p.5). Thus, it is likely that within countries the perceived legitimacy of maternal employment will increase as the community's experience of this employment grows.

Returning to the paper's theme of the sources of the current differences in the rate of labour market involvement of Canadian and Australian women we can note that in 1994 – the last year that comparable data on attitudes to maternal employment in the two countries was available¹⁹, there were still significant differences in attitudes to maternal employment and these are likely to have contributed to the differences in women's labour market involvement at that time. However, as the attitudes themselves are likely to have been affected by past patterns of women's labour market behaviour, it is possible that earlier changes in this behaviour are producing on-going effects – and, thus, they are a factor in the determination of the current differences between the two countries.

5. Conclusion

¹⁸ Interestingly, these attitudes do not appear to have produced a strong institutional response. As was documented in Section 3, there are few differences in the support given to working mothers via childcare places or fee relief in the two countries. This finding contrasts the findings of Huber and Stephens (2000) who argue that high levels of female employment may precede high levels of welfare state development.

¹⁹ Additional data on these attitudes is likely to become available with the public release of the 1999-2001 World Values Survey and more recent rounds of the ISSP.

This paper started with the observation of substantial differences in participation rates and hours of work by women in Canada and Australia and then considered the range of factors that might contribute to these differences, drawing especially on the insights offered by standard economic models of labour supply. In most cases, few differences in the current economic environments of the countries were found that could easily explain the different work patterns. The two countries currently appear similar in their family tax arrangements, the use of child benefits, the level of expenditure on childcare, levels of education and relative wage outcomes for women. The key differences that currently exist between the two countries appear to be the tax concessions offered for childcare expenses in Canada and the higher level of parental leave available to Canadian families. These features of current Canadian social policy settings provide some guidance for Australia in its attempts to increase its labour force participation rates.

There are clear differences in attitudes to women working in the two countries and, thus, a simple assertion *could* be made that cultural factors underlie the different levels of labour market involvement of Canadian and Australian women. This would tend to support a claim that economic policies have only a limited role to play in changing labour force participation rates. However, this paper has argued that culture alone cannot be seen to be an adequate explanation of Australian women's lower rate of involvement in paid work. For one, beliefs about the legitimacy of women's involvement in paid work are themselves clearly influenced by the pattern of women's actual experiences of paid work.

The complex relationships between perceptions of the legitimacy of engagement in paid work and their actual involvement in paid work by women indicate a need for further investigation of the evolution of the difference in women's involvement in paid work in the two countries. Some preliminary steps in this direction were made in this paper and comprised an analysis of the changes in both women's involvement in higher education and their participation in paid work over a number of decades. It appears that the gap in the labour force participation rate between the two countries emerged in the early 1980s and has been of a relatively constant size since that time. The emergence of this gap also appears to have lagged a gap that

developed in women's enrolments in higher education by a period of about five years.

A key question that emerged from this analysis is why didn't the gap in participation rates close when after the gap in enrolments did, and when many of the features of the economic environment of the two countries became similar? One tentative conjecture of this paper is that the change that occurred in the education and labour force participation rate of Canadian women in the 1970s and 1980s was associated (and helped produce) a shift in attitudes to women's involvement in paid work that has had on-going effects on the female participation rate in that country

This discussion highlights the need for a new type of study of women's labour force involvement. Specifically, it calls for greater understandings of the dynamic pattern of changes in, for example, the FLFPR of different countries and how the labour force behaviour of one generation is affected by patterns of behaviour in preceding generations. However, such an analysis should also proceed with caution, as our evidence also clearly shows that women's participation can break from patterns established by previous generations - the 1970s upswing in Canadian women's education and their subsequent higher rates of involvement in paid work is a good example. Thus, this paper comes with a strong recommendation for ongoing research into the historical, economic, social and political environments affecting women's involvement in paid work in the two countries.

References

- ABS (1996), 'Household Income and Income Distribution, 1995-96', cat.no. 6523.0, CURF, ABS, Canberra
- ABS (2001), 'Household Income and Income Distribution, 2000-2001', cat.no. 6523.0, CURF, ABS, Canberra
- ABS (2003), 'Information Paper: ABS Labour Market Statistics, Australia' (Electronic Publication), March, cat.no. 6106.0.55.001
- ABS (2004), 'Labour Force, Australia, Detailed - Electronic Delivery', cat. no. 6291.0.55.001, ABS, Canberra
- ABS (2005a), 'Labour Force, Australia', spreadsheets, cat.no. 6202.0.55.001, ABS, Canberra
- ABS (2005b), 'Average Weekly Earnings Australia', cat.no.6302, ABS, Canberra
- ABS (2005c), 'Consumer Price Index, Australia', cat.no.6401.0, ABS, Canberra
- Austen, S. and Giles, M. (2003), 'The Likely Effects of Ageing on Women's Involvement in the Paid Workforce', *Australian Bulletin of Labour*, 29(3), September, pp. 253-273
- Azmat, G., Guell, M. and Manning, J. (2004), 'Gender Gaps in Unemployment Rates in OECD Countries', Centre for Economic Performance, London School of Economics
- Birch, E. (2002), 'An Overview of the Australian Literature and New Evidence on the Labour Force Participation of Women', paper presented at the 31st Annual Conference of Economists, Adelaide, Australia, September 2002.
- Busentsev, V. (2002), 'Cross-national Variation in the Labour Market Participation of Married Women in Australia, Canada and the United States', *The Economic Record*, June, 78(241), pp. 224-231
- Canadian Federation of Independent Business (CFIB), 9 August 1999, "Behind the Numbers: The Progressive Poverty Trap", @ www.cfib.ca/research/reports/poverty.pdf

- Chapman, B., Dunlop, Y., Gray, M., Lui, A. and Mitchell, D. (2001), 'The Impact of Children on the Lifetime Earnings of Australian women: Evidence from the 1990s', *Australian Economic Review*, 34 (4), pp. 373-389.
- Chaykowski, R. P. & Powell, L. M., (1999), 'Women and the Labour Market: Recent Trends and Policy Issues', *Canadian Public Policy – Analyse de Politiques*, vol. xxv supplement/numéro spécial I
- Childcare Resource and Research Unit, (2003), *Early Childhood Education and Care in Canada 2001: Summary*, Childcare Briefing Notes, February, Centre for Urban and Community Studies, University of Toronto
- Cleveland, G., Gunderson, M. and Hyatt, D. (1996), 'Childcare Costs and the Employment Decisions of Women: Canadian Evidence', *The Canadian Journal of Economics*, 29(1), February, pp.132-151
- Cohen, P. and Bianchi, S. (1999), 'Marriage, Children and Women's Employment: What Do We Know?' *Monthly Labor Review*, December, pp.22-31
- Department of Employment, Science and Technology, DEST (2000), 'Higher Education Students Time Series Tables, 2000: Selected Higher Education Statistics' accessed at http://www.dest.gov.au/sectors/higher_education/publications_resources/profiles/higher_education_students_time_series_tables_2000.htm, on July 1, 2005.
- Dex, S. and Joshi, H. (1999), 'Careers and Motherhood: Policies for Compatibility', *Cambridge Journal of Economics*, September, 23(5), pp. 641-659.
- England, K. & Gad, G. (2002), "Social Policy at Work? Equality and Equity in Women's Paid Employment in Canada" *GeoJournal*, 56
- Equal Opportunity for Women in the Workplace Agency (EOWWA), 2004, *Equity Statistics 2004*, Australian Government, Canberra
- Evans, M. D. R. & Kelley, J. (2001), 'Employment for Mothers of Pre-School Children: Evidence from Australia and 23 Other Nations', *People and Place*, 9(3), pp. 28-40
- Evans, M. D. R. & Kelley, J., (2002), 'Changes in Public Attitudes to Maternal Employment: Australia, 1984 to 2001', *People and Place*, 10(1), pp. 42-57
- Fortin, N. (2005), 'Gender Role Attitudes and the Labour Market Outcomes of Women Across OECD Countries', April, University of British Columbia

- Fortin, N. M. & Schirle, T. (2003), *Gender Dimensions of Changes in Earnings Inequality in Canada*, Department of Economics, University of British Columbia, Ontario
- Gauthier, A. H. (2002), *Family Policies in Industrialized Countries: Is There Convergence?*, Department of Sociology, University of Calgary, Canada.
- Gornick, J., and Meyers, M. (2003), *Families the Work: Policies for Reconciling Parenthood and Employment*, Russell Sage Foundation, New York
- Gornick, J., Meyers, M. and Ross, K. (1997), 'Supporting the Employment of Mothers: Policy Variation Across Fourteen Welfare States', *Journal of European Social Policy* 7(1): 45-70.
- Gregory, R., McMahon, P. and Whittingham, B. (1985), 'Women in the Australian Labour Force: Trends, Causes, and Consequences', *Journal of Labour Economics*, 3(1), Part 2, pp. S293-S309
- Hall, R. (1980), 'Labor Supply and Aggregate Fluctuations', *Journal of Monetary Economics*, 12 (6), pp. 7-13.
- Heckman, J. (1976), 'Estimates of a Human Capital Production Function Embedded in a Life Cycle Model of Labor Supply', in Terleckyj, N. (ed), *Household Production and Consumption*, Columbia University Press, New York, pp. 227-258.
- Heckman, J. and MaCurdy, T. (1980), 'A Life Cycle Model of Female Labour Supply', *Review of Economic Studies*, 47 (1), pp. 47-74.
- Huber, E. and Stephens, J. (2000), 'Partisan Governance, Women's Employment, and the Social Democratic Service State', *American Sociological Review*, 65, pp.323-342
- Hughes, J. & Hand, K., (2005), "Does Money Matter? Mothers' Views about Money and How it Influences Employment Decisions." Paper presented at "Families Matter", the 9th Australian Institute of Family Studies Conference, Melbourne, 9-11 February 2005
- International Labour Organisation (ILO) (1997), *Maternity protection at work*, Report V(1) (1997), ILO, Geneva, accessed at <http://www.ilo.org/public/english/standards/relm/ilc/ilc87/rep-v-1.htm> on July 4, 2005

- ILO (1999), *Maternity protection at work. Report V(2), Revision of the Maternity Protection Convention (Revised), 1952 (No. 103), and Recommendation, 1952 (No. 95)*, June, International Labour Conference, Geneva.
- ILO (2005), *Laborsta: Labour Statistics Database*, ILO, Geneva
- Joshi, H., Dex, S., and Macran, S. (1996), 'Employment over Childbearing and Subsequent Labour Force Participation: Evidence from the 1959 Birth Cohort', *Journal of Population Economics*, 9, pp.325-48
- Killingsworth, M. (1983), *Labor Supply*, Cambridge University Press, New York
- Luxembourg Income Study (LIS) (2003), *Luxembourg Income Study Family Policy Database, Version 2, 2003*
- Luxembourg Income Study (LIS) (2004), *Luxembourg Income and Employment Study Database, 2004*, Luxembourg
- OECD (2003a), 'Labour Force Statistics', OECD, Paris
- OECD (2004), 'Labour Market Statistics', OECD, Paris
- OECD (2003b), 'Female Labour Force Participation: Past Trends and Main Determinants in OECD Countries', Economics Department Working Paper No. 376, December, OECD, Paris
- Pettit, B. and Hook, J. (2002), 'The Structure of Women's Employment in Comparative Perspective', Luxembourg Income Study Working Paper No. 330, September
- Pocock, B. (1998), 'All Change, Still Gendered: The Australian Labour Market in the 1990s', *Journal of Industrial Relations*, December, pp.580-604
- Poschmann, F. (2004), *Background Issues. Marginal and Average Effective Tax Rates in Ontario*, Institute for Competitiveness & Prosperity, Ontario, July
- Powell, L. (1997), 'The Impact of Childcare Costs on the Labour Supply of Married Mothers: Evidence from Canada', *The Canadian Journal of Economics*, 30(3), August, pp.577-594
- Preston, A. and Burgess, J. (2003), 'Women's Work in Australia: Trends, Issues and Prospects', *Australian Journal of Labour Economics*, 6(4), pp. 497-518
- Ruhm, C. J. (1998), 'The Economic Consequences of Parental Leave Mandates: Lessons from Europe', *The Quarterly Journal of Economics*, 113(1), February, pp.285-317

- Sainsbury, D. (1999), 'Taxation, Family Responsibilities, and Employment', in Sainsbury, D. (ed), *Gender and Welfare State Regimes*, Oxford, Oxford University Press, pp. 185-209
- Smith, J. (1980), 'Assets and Labor Supply', in J. Smith, (Ed.), *Female Labor Supply: Theory and Estimation*, Princeton University Press, New Jersey, pp. 166-205.
- Smith, N., Dex, S., Vlasblom, J. and Callan, T. (2003), 'The Effects of Taxation on Married Women's Labour Supply Across Four Countries', *Oxford Economic Papers*, July, 55(3), pp.417-439
- Statistics Canada (1999), 'Historical Statistics of Canada' accessed at <http://www.statcan.ca/english/freepub/11-516-XIE/sectionw/sectionw.htm> , on July 1, 2005
- Statistics Canada (2003) 'Full-Time Enrolments and Graduates in Postsecondary Community College Programs, by Program Field, Year in Program and Sex, Annual (Number), 1976-1998', accessed at http://cansim2.statcan.ca/cgi-win/CNSMCGI.EXE?CANSIM2=1&DrillIndex=1756&SDDSLOC=//www.statcan.ca/english/sdds/*.htm&ROOTDIR=CII/&C2DB=PRD&DrillAction=0&Lang=E&RESULTTEMPLATE=CII/CII_FLST , on July 1, 2005
- Statistics Canada (2004), 'University Qualifications Granted by Field of Study, by Sex, 1995 to 2000', accessed on 22 July 2004 at <http://www.statcan.ca/english/Pgdb/educ21.htm>
- Statistics Canada (2005), 'Labour Force and Participation Rates by Sex and Age Group' accessed on July 18 2005 at www.statcan.ca/english/Pgdb/labor05.htm
- Toohey, M. and Beer, G. (2004), 'Financial Incentives to Work for Married Mothers under a New Tax System', *Australian Journal of Labour Economics*, March, 7(1), pp.53-69
- Volker, P. (1984), 'Female Labour Supply: An Overview of Research in Australia', in *Women in the Labour Force*, Bureau of Labour Market Research Monograph Series, no. 4, AGPS, Canberra
- White, L. A. (2001) "Childcare, Women's Labour Market Participation and Labour Market Policy Effectiveness in Canada", *Canadian Public Policy*, 28(4)

Table A1: Child Support Payment Schemes, Canada and Australia, 2005

Canada
<p>The Canada Child Tax Benefit (CCTB) is a tax-free monthly payment made to eligible families to help them with the cost of raising children under the age of 18. The CCTB basic annual benefit is 0.027AMW (\$CN1,208) per annum for each child under the age of 18, with an additional supplement of \$CN84 for the third and each additional child. There is a supplement of 0.005AMW (\$CN239) for each child under the age of 7. This supplement is reduced by 25 per cent of any amount claimed for childcare expenses on a parent's income tax return.</p> <p>The National Child Benefit Supplement (NCBS) is an additional benefit for low income families with children. It provides a one-child family with 0.034AMW (\$CN1,511) a year, reduced by 12.2 per cent of the amount of family net income that is greater than 0.51AMW(\$CN22,615). A two child family receives 0.064AMW (\$CN2,806) a year, reduced by 22.7 per cent of the amount of family net income that is greater than 0.51AMW. For families with three or more children the NCBS pays an additional 0.028AMW (\$CN1,215) a year for the third and each additional child. This total is reduced by 32.5 per cent of the amount of family net income that is greater than 0.51AMW.</p>
Australia
<p>The Family Tax Benefit Part A (FTBA) provides a number of different rates of payment to families with children depending on the income of the family and the age of each child. Families with incomes below 0.51AMW(\$A28,200) per annum are eligible for 0.055AMW (\$A3,029.50) per annum for each child under 13 years of age, 0.070AMW (\$A3,839.50) per annum for each child aged 13 years to 15 years of age, 0.018AMW (\$A974.55) per annum for each 16 to 17 year old not receiving the Youth Allowance, and 0.024AMW (\$A1307.70) per annum for each 18 to 21 year old (24 years old if a student) not receiving the Youth Allowance. Families with incomes above the lower threshold amount but less than 1.33AMW (\$A73,000 per annum plus \$A3,000 for each child after the first) are eligible to receive 0.018AMW (\$A974.55 per annum) for each child.</p> <p>A Parenting Payment is also available for low income parents. The maximum rate available to partnered parents is 0.17APW (\$A9,366) per annum ** Thresholds.</p>

Source: Canada Revenue Agency (2005) "About the Canada Child Tax Benefit (CCTB)", accessed at <http://www.cra-arc.gc.ca/benefits/childbenefit-e.html>; Parliament of Australia, Parliamentary Library (2004), "Social Security Payments for People Caring for Children, 1912 to 2004", Dale Daniels – Social Policy Group, last updated 15 October 2004 @ www.aph.gov.au/library/pubs/online/children_parta.htm; Australian Government Family Assistance Office @ www.familyassist.gov.au