
1 Introduction

1.1 The broad policy context

Like most other industrialized countries, Australia faces an ageing population. Over the next decade, the baby boomers will reach their retirement age and leave the labour force. Without a significant rise in participation rates, population ageing will lead to a significant slowdown in labour force growth and thus present challenges to the sustainability of economic growth and the standard of living of future Australians (PC 2005).

The scope for increasing participation is logically greatest for those groups that are currently ‘under-represented’ in the labour market (OECD 2003). Many developed countries facing an ageing population have adopted policies to this end.

In Australia, the Council of Australian Government (COAG 2006) has identified women, along with people on welfare and the mature aged, as the groups which currently have relatively low rates of labour force participation – not only in comparison with other groups in Australia, but with other OECD countries.

Developing sound policies to encourage greater female labour force engagement requires a good understanding of the factors affecting the labour supply decisions of women. However, a comprehensive review in 2005 of the literature on the labour supply of Australian women (Birch 2005) pointed out that there remains much to be studied in the field.

Against this background, as noted in the preface, the Productivity Commission is undertaking a series of studies of labour market behaviour to help inform policy development within the human capital stream of the COAG National Reform Agenda (COAG 2006).

1.2 The inter-temporal persistence of female labour supply

A salient feature of female labour market activity — and the focus of this study — is the high degree of ‘inter-temporal persistence’ (Heckman and Willis 1977; Nakamura and Nakamura 1985; Eckstein and Wolpin 1989; Shaw 1994; Hyslop 1999). That is, women tend to remain in the same labour force ‘state’ — whether employed or not employed.

In exploring the reasons for the inter-temporal persistence of female labour market activity, it is important for policy analysts to distinguish persistence due to ‘state dependence’ from that due to ‘persistent individual heterogeneity’ (Heckman 1978, 1981a,b).

State dependence refers to the situation where an individual’s current labour force state depends on his or her past labour force state — so, for example, being employed today improves one’s prospects of being employed in the future (and vice versa).

- State dependence may arise if working leads to accumulation of human capital — skills, know-how, work ethic etc — or not-working leads to depreciation of human capital (Heckman 1981a).
- Differences in ‘search costs’ associated with different labour market states may also cause state dependence (Eckstein and Wolpin 1990; Hyslop 1999). For example, there might be a fixed cost to entering the labour market, raising the cost for individuals who are not employed, relative to those already in the labour market.

Persistent individual heterogeneity refers to a range of other factors, related to individuals’ characteristics rather than their labour market history per se, that may explain persistent labour market behaviour. They include differences in preferences between work and leisure, and differing motivations and abilities among individuals. For example, women who prefer work to leisure, who are highly motivated and/or who have high ability may tend to stay in the work force for their entire working lives, exhibiting high labour supply persistence.

In addition, *transitory shocks* to labour market decisions that are *serially correlated* may also lead to observed persistence of labour market behaviour. For example, deterioration in a person’s health in a year may imply that the person is more likely to experience deterioration in health in subsequent years. If labour force participation is affected by individual health, such positive correlation of health deterioration over time may be reflected in positive correlation in non-participation in the labour force.

The sources of labour market persistence have important policy implications. For example, if there is state dependence in unemployment, it becomes important to act quickly to encourage people who lose their jobs back into employment. In addition, presence of state dependence suggests that policy interventions targeted at those already unemployed need to be tailor-made according to duration of unemployment. On the other hand, if persistence can be explained by other factors, addressing these factors rather than designing policy on the basis of the duration of unemployment should be more effective.

1.3 The study's scope and key findings

This study accordingly examines the influence of different sources of observed persistence in the labour market behaviour of married Australia women. At the same time, the study also investigates the effect of various observed factors, such as education, age, health and children, on the labour supply of married women. The paper focuses on married women, as they make up of the majority of women of working age, and historically have a lower rate of labour force engagement than single women.

The study utilises the panel nature of the Household, Income and Labour Dynamics in Australia (HILDA) survey data. A number of previous Australian studies have also examine these factors, but have used cross-sectional data which cannot easily capture individual persistent heterogeneity, or adjust for serially correlated transitory shocks, and so may result in biased estimates. This study utilises a dynamic Tobit model to explore the effects of these factors in a dynamic labour supply framework to address these estimation problems.

The study finds that there is no evidence that current labour supply of married Australian women is affected by their past labour supply (that is, there is no state dependence in their labour supply). In other words, observed and unobserved individual heterogeneity and serial correlation of transitory shocks play important roles in inter-temporal persistence of labour supply of the women as observed from the data.

Among the control variables examined in the model, the study finds that women's non-labour income, education, health and the number and age of their children have significant effects on their labour supply. And in a model specification that treats wages as exogenous, the study finds that the labour supply of married Australian women is:

- positively associated with their own wages, but negatively associated with their partners' wages

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- complementary to their partner's labour supply. That is, an increase in a partners' labour supply is found to be associated with an increase in the woman's supply of labour.

The next chapter provides a brief overview of the literature, particularly the studies that examine the dynamic feature of women's labour supply. Chapter 3 discusses the econometric models and estimation strategies; assumptions of alternative models and their pros and cons. Chapter 4 describes the data, the model specifications and presents descriptive results. Chapter 5 reports the model estimation results, with conclusions drawn in Chapter 6.