



Economic Modelling

Economic Modelling 24 (2007) 839-858

www.elsevier.com/locate/econbase

## Human capital accumulation in an open labour market: Ireland in the 1990s

Adele Bergin, Ide Kearney\*,1

Economic and Social Research Institute, Whitaker Square, Sir John Rogerson's Quay, Dublin 2, Ireland
Accepted 27 February 2007

#### Abstract

Large-scale investment in education in Ireland began in 1967 and has led to a dramatic increase in the relative supply of skilled labour over the past four decades. Furthermore the supply of labour in Ireland is traditionally highly elastic through migration, which in the 1990s was predominantly high-skilled. This combination of rising education levels and an open labour market meant that employment and incomes rose rapidly in the 1990s, while Ireland still maintained a strong competitive position in terms of relative labour costs.

In this paper we develop a new macro-economic framework to formally analyse these mechanisms. We estimate a small structural model of the Irish labour market, separately identifying high-skilled and low-skilled labour. We find that this model captures key characteristics of the Irish labour market in the 1990s. © 2007 Elsevier B.V. All rights reserved.

JEL classification: E24; J24

Keywords: Human capital; Labour market; Migration

#### 1. Introduction

The 'startling turnaround in Irish economic performance' which began in the mid-1980s and at an accelerated pace into the 1990s saw Irish output per capita more than double between 1985 and 2000. The factors underlying this turnaround are manifold and complex, ranging from the ability of Ireland<sup>3</sup> to attract a growing share of skill-intensive, high-productivity FDI industries

E-mail address: i.kearney@planet.nl (I. Kearney).

<sup>\*</sup> Corresponding author.

<sup>&</sup>lt;sup>1</sup> Tel.: +31 20 6930020.

<sup>&</sup>lt;sup>2</sup> Honohan and Walsh (2002), p.1.

<sup>&</sup>lt;sup>3</sup> Throughout the paper Ireland refers to the Republic of Ireland only.

bargaining in Ireland.

(Barry and Bradley, 1997), through to accommodating domestic policies (Honohan and Walsh, 2002). Most notably this frenzied pick up in activity took place without dramatically affecting competitiveness. The performance of the labour market was central to maintaining competitiveness, the combination of rising education levels and an open labour market meant that while employment increased by one-half between 1985 and 2000 relative unit labour costs remained stable. In this paper we develop a new model of the Irish labour market to capture the key mechanisms through which human capital accumulation and migration ensured that the labour market facilitated Ireland's extraordinary growth performance in the 1990s.

Our model includes equations for the determination of output, labour demand and labour supply in Ireland, where the equation specifications are based on the findings of previous empirical studies of the Irish economy. The key innovation in the model is that we separately distinguish between high-skilled and low-skilled labour in the labour market. This device allows us to trace the impact of human capital accumulation on the behaviour of the Irish labour market. Within the model the demand for output is driven by world demand and international competitiveness, and the demand for labour is in turn driven by this demand for output. We find that the elasticity of substitution between high-skilled and low-skilled labour is zero, and that the demand for high-skilled labour relative to low-skilled labour is driven by a strong time trend which captures the world-wide rise in demand for high-skilled labour (Nickell and Bell, 1995). In modelling the supply of high-skilled labour we assume that all migration is high-skilled, where the migration decision is modelled as a function of the Irish take home wage relative to the UK. There is no migration in the low-skilled labour market, during periods of low labour demand the replacement ratio operates as a floor on low-skilled wages so that the low-skilled labour market does not clear and the unemployment rate rises.

This model captures key features of the Irish labour market in recent years. For high-skilled labour, the model assumes a constant unemployment rate with migration flows<sup>5</sup> ensuring that the high-skilled labour market always clears.<sup>6</sup> For low-skilled labour the situation is more complicated. Until the late 1990s, the replacement rate for low-skilled labour was above the market clearing wage rate,<sup>7</sup> so the low-skilled labour market does not clear.<sup>8</sup> However in more recent years the demand for low-skilled labour has risen, so that wage bargaining has become a feature of the low-skilled labour market.<sup>9</sup> To allow for this change the model includes a threshold replacement rate below which the low-skilled labour market clears.

<sup>&</sup>lt;sup>4</sup> In this paper we measure relative competitiveness using unit labour costs relative to the UK and Germany, these countries are chosen as representative of Ireland's main trading partners.

<sup>&</sup>lt;sup>5</sup> The assumption that all migration is high-skilled is based on a growing body of evidence on the educational characteristics of migrants. Barrett et al. (2006) look at the distribution of educational attainment of the net inflow of migrants over the period 1998–2003 and find that 85% of migrants are high-skilled while Barrett and Trace (1998) show that returning migrants and immigrants to Ireland in the mid-1990s have high levels of educational attainment.

<sup>&</sup>lt;sup>6</sup> A series of empirical studies have found that in the long-run the U.K. unemployment rate is a major determinant of the Irish unemployment rate through migration. For more details see the discussion in Honohan and Walsh (2002, p. 23) "Net emigration has long seemed to place a ceiling on the gap between Irish and U.K. unemployment." Curtis and Fitz Gerald (1996) argue that the links between the Irish and UK labour market – *via* migration – directly affect the Irish wage formation process.

<sup>&</sup>lt;sup>7</sup> Scarpetta (1996) claims that 4.9 percentage points of the 9.7 percentage points increase in Irish structural unemployment over the period 1971–93 were due to the increased generosity of the Irish unemployment benefit system.
<sup>8</sup> Walsh (2000) looking at data from 1974 to 1996 finds evidence of only a weak link between unemployment and wage

<sup>&</sup>lt;sup>9</sup> The unemployment rate among low-skilled labour fell by over eleven percentage points between 1993 and 2000.

### Download English Version:

# https://daneshyari.com/en/article/5056092

Download Persian Version:

https://daneshyari.com/article/5056092

<u>Daneshyari.com</u>