High Skilled Immigration and Native Educational Decisions

Christian Lumpe, Benjamin Weigert

1 Introduction

Most of the theoretical literature on immigration argues that low skilled immigration raises incentives for natives to invest into human capital which results in a positive welfare effect for the native population (Fuest et al. 2001). However, in many industrialised countries the introduction of a skill-selective immigration policy is debated while in others this policy had been implemented. Our subsequent analysis gives a rationale for a skill-selective immigration: In an economy characterised by a frictional labour market and native underinvestment in human capital a skill selective immigration policy is able to foster human capital acquisition of natives.

We present a search-theoretic model of the labour market with endogenous human capital investment of natives. Because the human capital investment decision has to be taken at the beginning of working life, the existence of search frictions on the labour market leads to underinvestment in human capital (Acemoglu 1996, Moen 1998, Sato et al. 2003). We combine this strand of the literature with the immigration literature by considering immigration in terms of the total flows (amount of immigrants) and its characteristics (amount of human capital). Mostly related to our approach is Ortega (2000) who also uses a search-theoretic model but discusses migration patterns in a two-country model and its influence on wages and employment. The solely consideration of the host country gives us the possibility to compare our results with the results from previous studies on immigration, human capital and labour market frictions (see Fuest et al. 2001).

Besides the endogenous human capital investment of natives, our modelling approach accounts for the empirical fact that immigrants return to their home

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2 We concentrate on the impact of immigration on the labour market outcome of natives. There is also a strand of the literature which analyses the consequences of immigration on the educational decision of natives and on the welfare system (see Kemnitz 2004).
country. Introducing the possibility of return migration leads to a higher job destruction rate (shorter employment spells) for immigrants than for natives. As a partial result, our model can explain two stylised facts of the labour market: first, immigrants with the same human capital endowment earn lower wages than natives. Second, the unemployment rate of immigrants is higher than the unemployment rate of natives. Immigrants are therefore discriminated ex-post against natives because of their higher probability to leave the match. This has to be distinguished from ex-ante discrimination, because in our model firms do not offer vacancies which are specific to immigrants or natives.

Our main result is that an immigration policy aiming at well-educated immigrants makes it more profitable for firms to increase the number of jobs and advertise more vacancies which in turn increases the wage paid by firms. Higher wages paid per unit of human capital make it more sensible for natives to invest into human capital. Therefore, high skilled immigration leads to rising educational attainment of natives. This is in contrast to the existing literature of immigration and human capital which shows that low skilled immigration may raise educational attainment of natives (see Fuest et al. 2001). Consequently, our result can be seen as an argument in favour of introducing a rather skill-selective immigration policy as discussed currently in many European countries.

The remainder of the paper is structured as follows: in Section 2 we present the basic structure of the model. In Section 3 we derive both the solution of the individual human capital investment decision problem and the equilibrium. Section 4 concludes.

2 Basic Model

2.1 Households

We develop an equilibrium matching model of the Diamond-Mortensen-Pissarides type (Pissarides 2000). The economy is populated by a mass one of identical, risk-neutral, native workers \( N = 1 \) and foreign workers (immigrants) \( I \geq 0 \) adding to a total population \( L = 1 + I \). All individuals and firms discount future payments at the common discount rate \( \rho \). Native workers enter and exit the labour market at a

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3 For a detailed theoretical and empirical discussion about return migration see Dustmann (2003), Müller (2003) also introduces return migration in an efficiency-wage model.
4 This kind of discrimination is similar to the analysis of Müller (2003).
5 The UK has already introduced a point-based immigration law which has been geared towards the immigration laws of New Zealand and Australia.
6 Throughout the paper subscript \( N \) denotes natives and subscript \( I \) denotes immigrants.