Antecedents to international student inflows to UK higher education: A comparative analysis ☆

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ABSTRACT

This study explores the antecedents of international student flows into UK higher education and the variations in the antecedents between home countries of origin. The results suggest that home country economic wealth and demographics, historic/linguistic link and UK government preferential policies are the important antecedents for international students from worldwide flows into the UK. However, a comparative analysis shows that a wide variety of economic, social and political factors are all important to the UK international students originally from developing economies, while home country economic wealth and population, and bilateral trade are more important than other factors in determining the students from developed countries studying in the UK. The UK government should formulate effective and flexible policies and UK HEIs should develop specific marketing strategies to attract a growing number of international students in general and from key target countries and regions in particular.

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1. Introduction

Globalization has manifested itself not only through international trade and foreign direct investment (FDI) but strongly through the increasing trend of international student mobility in higher education (HE) (Bennell & Pearce, 2003; OECD, 2004; Zammuto, 2008). The competition in vying to attract international students has become fierce between the host (receiving) countries (Binsardi & Ekwulugo, 2003; British Council, 2011; Hemsley-Brown & Goonawardana, 2007). Internationalized higher education can promote not only a country's economy but also its social and cultural diversity, political democracy, and international trade and cooperation (Marginson, 2010). However, the literature gives scant attention to the globalization of higher education (Doh, 2010; Marginson, 2010).

As a traditional higher education destination for international students, the UK attracts students from around the world for decades (Lee & Tan, 1984). UK HE has become one of the UK's major exporting industries (Bennell & Pearce, 2003; Naidoo, 2007). The UK maintains its position as the second largest host country for international students behind only the US (IIE, 2010; OECD, 2011). However, the UK government and higher education institutions (HEIs) are now facing serious challenges in their attempt to maintain or increase international student numbers. UK HEIs have come increasingly to rely on international

students from a financial point of view due to the reduction in funding for domestic students, combined with the effects of the current financial crisis and recession (Ryan, 2011).

The situation is made worse by the intensification of competition from other host countries such as the USA, Canada, Australia, and New Zealand, which share the advantage of an English-speaking environment (Green & Boone, 2005; Hemsley-Brown & Goonawardana, 2007). The UK market share of international students fell from 16% in 1998 to 13% in 2003 and further down to 10% in 2009 (Green & Boone, 2005; OECD, 2011). In order to attract more international students and remain competitive in the global HE market, it is essential for the UK government to formulate effective policies and UK HEIs to develop efficient marketing strategies. For doing so, they need a good knowledge and understanding of the nature of UK international student mobility. However, this issue has not been addressed adequately by literature to date, and little research has been conducted to investigate the impact of home (sending) country characteristics on and the variations in the antecedents of UK international student inflows from a home country perspective.

This study addresses these literature gaps by tackling the following questions: What factors attract international students coming to the UK for their HE? Do the antecedents differ across home countries of origin due to their difference in economic development (measured by GDP per capita)? If so, what should the UK government and HEIs do to attract more international students from different countries? The study contributes to the literature in two ways. First, using a large panel dataset and an expanded estimate model, considering push and pull factors, combining economic, social and political elements, the study provides a more robust empirical analysis and more generalized results than those that can be generated from a time series or a cross-sectional dataset (Baltagi, 2005; Hsiao, 2003). Second, exploring the variations between two home

country groups classified by economic development level, the study leads to a better knowledge and understanding of the antecedents of UK international student inflows originating from worldwide in general, and from developed and developing economies in particular. More importantly, the study sheds light on the literature with a comparative analysis between the two home country groups, identifying the factors that are most significant in each case.

The rest of the paper is organized as follows. Section 2 reviews the literature and models developed in previous studies. Section 3 discusses the research methodology. Section 4 presents the results and discussions, and the final section summarizes the key findings, explores the policy and managerial implications, and discusses the research limitations and future studies.

2. Literature and models

A country can benefit from exporting its HE service to international students through financial effects, employment and spillover effects, and economic growth effects (Adnett, 2010; Bashir, 2007; Chellaraj, Maskus, & Mattoo, 2008; Gribble, 2008). Exporting HE service to international students can improve the host country's trade position and the current account of its balance of payments which is one of the most important policy issues for every government (Bashir, 2007). The income generated from international students can ease financial pressures on the host country government and HEIs arising from the government's HE budget cuts and other public funding shortages. International students can also create employment opportunities for the host country in HE industry directly, and in other sectors such as the property, retail and tourism industries, indirectly through spillover effects.

From the long-term perspective, the immigration of international graduates can promote host country human capital stock, which has positive impact on the country's innovation, productivity and economic growth (Adnett, 2010; Chellaraj et al., 2008; Gribble, 2008). As a long-term impact, successful international graduates — one day's world business elites, may invest in, import from and export to the countries in which they have studied for their university degrees, boosting the country's FDI and economy (Wylie, 2011).

From a university perspective, a HEI can benefit from recruiting and educating international students from all over the world who can enrich the cultural and intellectual diversity of the academic community (Doh, 2010; Marginson, 2010; Ryan, 2011; SCONUL, 2007; Turner, 2008). Paying high tuition fees, international students can also contribute to a bulk of income, which is even more essential for HEIs to survive from the current recession. A HEI can make itself "more global" by increasing the number of foreign students, which has became a core international strategy for some UK elite universities (Turner, 2008). Success in attracting large numbers of international students particularly at postgraduate level, can also demonstrate a university's world-class reputation, which will in turn attract even more international students in the future (Hemsley-Brown & Goonawardana, 2007; SCONUL, 2007).

Within the existing literature, three main models have been developed to analyze the antecedents of international student mobility: the gravity model (see Bessey, 2007; Gonzalez, Mesanza, & Mariel, 2011; Karemera, Oguledo, & Davis, 2000; Sa, Florax, & Rietveld, 2004); the push–pull model (see Cantwell, Luca, & Lee, 2009; Li & Bray, 2007; Mazzarol & Soutar, 2002; McMahon, 1992) and the three-category model (see Naidoo, 2007).

2.1. A gravity model

Tinbergen (1962) first introduces a gravity model to predict and describe international flows of trade including goods and services between two countries i and j as:

$$Fij = C \frac{E_i E_j}{D_{ij}}$$

where F is the trade flow, E is the economic size of each country and D is the distance between the two countries. The gravity model is later widely used to explain international capital (FDI) flows (see Buckley et al., 2007; Dunning, 1980; Grosse & Trevino, 1996; Sethi, Guisinger, Phelan, & Berg, 2003; Zheng, 2009; Zwinkels & Beugelsdijk, 2010), labor migration (see Karemera et al., 2000), and international student mobility (see Gonzalez et al., 2011; Sa et al., 2004). Zwinkels and Beugelsdijk (2010, p102) note "Gravity models postulate that the magnitude of merchandise trade and FDI flows between countries is conditional on several characteristics of these countries, notably their economic size and level of economic development, and on factors stimulating or discouraging the movement of merchandise or investment between countries" including geographic and cultural distance, and institutional factors. They claim that the popularity of a gravity model used in international business literature owes to two reasons: the model has "firm theoretical foundations" and "produced some of the clearest empirical results in international economics and business" (Zwinkels & Beugelsdijk, 2010, p. 102). Karemera et al. (2000, p. 1746) argue that "a gravity model is a reduced form equation derived from a system of demand and supply relationships." They develop a model of migration between two countries based on potential supply and demand factors. The supply factors include home country income, population and other push considerations, while demand factors include host country income and population and the pull factors arising from them. They modify Tinbergen's gravity equation as follows:

$$Fij = c \frac{S_i^{a1} D_j^{a2}}{R_{ij}^{a3}}.$$

In this equation, S represents supply factors, D refers to demand factors and R regards to natural and artificial factors influencing migration between the two countries, such as distance, travel costs and host country visa regulations. All of these factors reflect the specific political, economic and demographic characteristics of the home and host countries (Karemera et al., 2000).

Using the modified gravity model, Karemera et al. (2000) investigate the antecedents of international migration to North America between 1976 and 1986. They find that the population of the home country is the most significant determinant of migration flows. The income and political factors also have significant influence on the size and composition of migration flows. Sa et al. (2004) employ a similar approach to examine the antecedents of regional demand for HE in the Netherlands. They conclude that distance and accommodation costs deter the geographic mobility of students. They find that the distance effect is heterogeneous, even between the regions of a relatively small country: more elastic in the south-west, and the more remote northern areas of the Netherlands, as compared with the central and eastern areas of the country. Gonzalez et al. (2011) study student mobility within the European Region Action Scheme for the Mobility of University Students (ERASMUS) Program using the gravity model, they argue that the cost of living, distance, population and language are the important factors in explaining Erasmus student mobility.

2.2. A push–pull model

Based on the gravity model, the push–pull model classifies all factors into "push" and "pull" categories in explaining the antecedents of international student mobility. The "push factors" refer to the home country characteristics of international students which motivate and push them to go abroad for their HE. The push factors include home country economic wealth, population and HE capacity (especially in the developing countries). The "pull factors" refer to the specific host country characteristics attracting foreign student inflows. These characteristics include exchange rate, geographical and cultural proximity, common language and the policies of the host county's government with regard to international