# HOST COUNTRY EFFECTS OF FOREIGN DIRECT INVESTMENT IN THE UK

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## Topic of PhD thesis

The aim of this research is to examine the potential benefits from the presence of multinational enterprises (MNEs) in the United Kingdom. The UK is a particularly interesting case to take, being the second most important host of foreign direct investment (FDI) after the US, with an 11 per cent share of the global inward FDI stock, United Nations (1997). As a result, foreign multinationals play an important role in its economy.

**Inward FDI stock as % of gross domestic product**
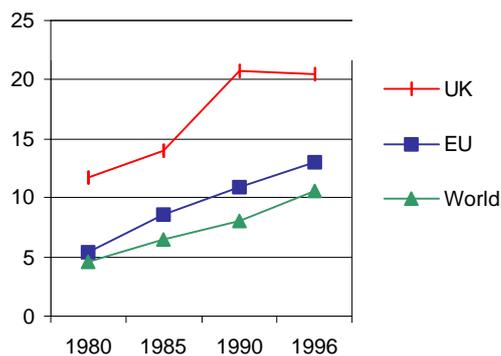


**Employment in foreign MNEs as % of total employment**
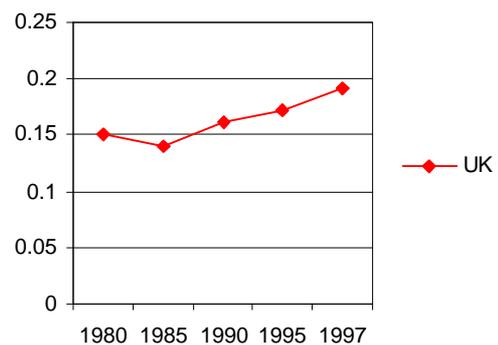


## Motivation

The literature on FDI suggests that firms become MNEs to fully explore intrinsic competitive advantages such as ownership of better technology, see Kindleberger (1969), Caves (1971), Buckley and Casson (1976), Hymer (1976), Hirsch (1976) and Dunning (1977). This in turn leads to the belief that foreign firms may not be able to fully internalise these advantages and therefore their presence leads to spillovers to the domestic firms. The expectation of such benefits from the presence of foreign MNEs explains the increasing competition among governments to attract inward investment by providing a range of incentives to these firms such as tax allowances, duty drawbacks, investment allowances, grant in aid and so on.

# MULTINATIONALS AND EXPORT SPILLOVERS

This paper explores the impact of MNEs on the export behaviour of domestic firms. The existence of potential export spillover effects from the presence of MNEs has been under-explored in the literature so far. This is the first firm-level study of its kind for the United Kingdom.

## Motivation

The importance of the export-enhancing role of FDI in host countries has been recognised by for example, Blake and Pain (1994) for the United Kingdom, O'Sullivan (1993) and Barry and Bradley (1997) for Ireland, and Cabral (1995) for Portugal. This literature typically focuses on the export performance of foreign affiliates themselves. However, this export promotion effect need not be limited to the foreign affiliates. It is possible that domestic firms become more export-oriented in response to the presence of multinationals, i.e. there is a spillover to domestic firms.

These export spillovers may thus be associated with structural changes resulting from FDI. MNEs can provide a channel for the introduction of new technology, diffusion of information, as well as an important competitive stimulus; as a result they may promote efficiency in domestic firms, economies of scale and increasing international specialisation. This in turn provides a stimulus to long-run economic growth in the host country (see Balasubramanyam *et al* (1996) and Borensztein *et al* (1998)). Moreover, this reduces potential instability from over-dependence on FDI. It is often argued that MNEs' strategies are more volatile than domestic firms in reacting to changes in external conditions, see Ruane and Görg (1997) and Jones (1980).

## Hypothesis

We develop a model, which is an extension of Aitken, Hanson and Harrison (1997) to provide the theoretical underpinning for our empirical analysis. We present three main channels through which export spillovers may occur:

➢ export information externalities

➢ demonstration effects

➢ competition effects

## Data set
▪ 3,662 UK-owned manufacturing firms from 1992 to 1996
▪ data taken from:
  - Onesource- data set of individual firms active in the UK
  - Office for National Statistics- for sector-level UK data

## Empirical Methodology

We use a Heckman two-stage strategy to model the export behaviour of domestic firms, which involve both the decision of whether or not to export and the export propensity of firms. We include as regressors variables controlling for the presence of foreign MNEs' activity in the UK as a well as other firm and sector-level characteristics that we think are important to determine the firm's export behaviour.

## Results

Our results are consistent with the predictions of the model and provide a comprehensive and robust analysis of links between MNEs and the export performance of indigenous firms.

➢ We found that the probability of domestic firms exporting was positively influenced by the intensity of foreign R&D expenditure, the relative importance of MNEs' production and the MNEs' export activities in the host market.

➢ With respect to the export propensity of domestic firms we again found evidence of a positive impact associated with MNEs. The variables controlling for the intensity of R&D expenditure and the relative importance of MNE production in the domestic market are found to be positively and significantly correlated with the export propensity of domestic firms. There is however no significant evidence of export information externalities.

➢ In both models the most important channel for this export-enhancing effect is by far the increased competition resulting from foreign MNEs.

## Conclusions

We present evidence that the export-enhancing effect of FDI for the host country is not limited to the export performance of foreign affiliates. It is also associated with higher export orientation of domestic firms. This in effect means a structural change in the economy, which can have long lasting effects. Since we expect this export promotion effect to be the product of improved international competitiveness as a result of technological transfer, information externalities and especially reduced inefficiency due to increased competition, we argue that it is an important contribution for the long-term economic growth of the host country.

# MULTINATIONAL AND TECHNOLOGY TRANSFER TROUGH LABOUR TRAINING

## Motivation

The objective of this paper is to examine whether rising wage inequality, which has been occurring in most developed economies, acts as an incentive for MNEs to use their technological leadership to train cheaper less skilled labour. From this perspective, wage inequality would enhance the potential benefits from FDI by promoting the transfer of technology into the host country, through the training of labour.

## Model

We analyse a firm's decision to invest in the training of labour abroad given the labour market characteristics of the host country, namely the degree of wage inequality. We thus present a model where:

-there is one differentiated good X characterised by a monopolistically competitive market without any barriers to entry;

-there are two internationally immobile factors of production: skilled labour (Ls) and unskilled labour (Lu);

-the host country is characterised by a given degree of wage inequality, i.e. skilled labour wages are higher than unskilled labour.

-the MNE is assumed to be a technological leader in the sector, which is reflected in higher factor productivity than their domestic rivals' in the host country. Since this technological advantage is to a great extent embodied in the foreign firm's workforce we also assume it has the necessary expertise to transfer this knowledge to new workers in the host country.

-domestic firms are in turn assumed not to be innovative. They do not develop the technology they use. Thus they do not have the necessary technological know-how to train internally workers in an efficient fashion. They rely exclusively on standardised technology embodied in the skilled workers available in the host country.

$\phi_1$ - quantity of skilled labour used by the MNE to produce a unit of good *X*

$\phi_2$ - quantity of unskilled labour trained by the MNE to produce a unit of good *X*

$\phi_2 > \phi_1$ -due to losses in productivity associated with the training of new workers

Ws - wage for skilled labour (unskilled wage is normalised to 1)

$\pi$ - cost of training one unskilled worker

$C_F{}^{MNE}$ - extra fixed cost for a MNE to enter domestic market, reflecting existing barriers to FDI

We analyse a foreign MNE's decision to enter a host market producing an extra variety of good X. Consumers are assumed to have identical preferences among several varieties $(n+1)$ available in the host market. The foreign firm faces two options for the production of X: it can either produce it using the skilled labour available in the country at a given market price Ws, or it can employ and train the unskilled labour at cost $\pi$ per worker.

The foreign firm will invest in the host country if and only if it manages to achieve at least zero profits. There are thus two entry conditions depending on whether the foreign firm chooses to train unskilled labour or not.

If the MNE decides to transfer technology through training:

$$X^{MNE} * P - f_2 * p * X^{MNE} - C_F{}^{MNE} = 0 \qquad (1)$$
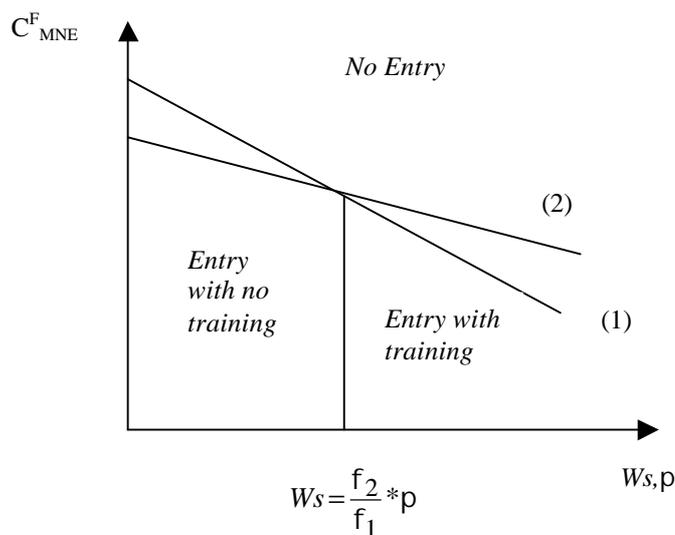
In the second case it is:

$$X^{MNE} * P - f_1 * Ws * X^{MNE} - C_F{}^{MNE} = 0 \qquad (2)$$

where,

$P$- price

$X^{MNE}$- MNE's output of good X

We can then show graphically the decision of the MNE:

## Empirical Hypotheses

1) Once established, foreign firms will tend to invest more in the training of unskilled labour the higher the degree of wage inequality in the host country.

2) For a given level of wage inequality, the foreign MNEs will invest more in the training of unskilled labour in the host country the lower the cost of training labour.

3) For a given level of wage inequality, the foreign MNE will invest more in training unskilled labour in the host country the smaller the loss in labour productivity associated with the use of newly trained unskilled labour rather than skilled labour.

## Data set

The data set is constituted by 1760 firms present in the UK, 346 of which are foreign-owned. This sample was taken from the cross-sectional firm-level database *Workplace Employers' Relations Survey* for 1998 (WERS98).

## Empirical Methodology

We estimate two models to analyse a firm's decision to provide training to its workers using two different training measures: an incidence measure and a measure of intensity. The first model takes a dichotomous variable as the dependent variable and is estimated using a probit technique. The second model uses the training intensity variable and is estimated as an ordered multinomial logit model. Following the model as regressors we combine variables controlling for characteristics of the host country, such as sectoral degree of wage inequality and technological profile as well as firms' characteristics including their ownership status.

## Results and Conclusions

The empirical work is underway.