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An Empirical Investigation of the Effects of Foreign Direct Investment on the Skill Intensity of Host Country Employment

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Abstract

It has been argued that the effects of inward FDI on skill upgrading and wage inequality depend on the outcome of specialisation according to comparative advantages. However, predicting the overall impact of FDI on wage inequality is complex depending on country specific effects, namely how large are differences in skilled and unskilled wages and the skill intensity of employment in foreign-owned firms compared to domestic ones, as well as the relative size of employment in domestic and foreign-owned firms (Zulfiu-Alili, 2014). Hence, the effect of foreign ownership on relative wages and skill intensity will vary between sectors, across countries and over time. The effect of FDI on the skill intensity of employment in transition economies is analysed using the Business Environment and Enterprise Performance Survey (BEEPS) undertaken in three waves 2002, 2005 and 2009. The question to be addressed is whether foreign-owned firms employ a more educated and skilled workforce in comparison to domestic-owned firms. Results suggest that foreign-owned firms have a better educated labour force but have a lower share of skilled and unskilled employees compared to domestic firms.

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Keywords: wage inequality; FDI; skill intensity of employment

1. Introduction

The empirical evidence on the impact of FDI on wage inequality suggests that FDI might increase inequality between countries and worsen the wage distribution within countries (Feenstra and Hanson, 2001; Onaran and Stockhammer, 2008). It has been argued that the effects of inward FDI on skill upgrading and wage inequality depend on the specialisation according to comparative advantages. Hence, according to Heckscher-Ohlin theory, specialisation in goods intensive in unskilled labour would raise the relative demand for unskilled labour. A different

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strand of the theoretical literature argues that FDI plays an important role in the transfer of new technology (OECD-ILO, 2008; Franco and Gerussi, 2010). Since foreign-owned firms are usually more capital intensive and have more advanced technologies and management skills, granting them a productivity advantage over domestic-owned firms, it is likely they employ a more skilled workforce. However, predictions of FDI on wage inequality are fairly complex depending on country specific effects, namely how large are differences in skilled and unskilled wages and the skill intensity of employment in foreign-owned firms compared to domestic ones, as well as the relative size of employment in domestic and foreign-owned firms (Zulfiu-Alili, 2014). Hence, the effect of foreign ownership on relative wages and skill intensity will vary between sectors, across countries and over time. Foreign-owned firms tend to locate in skill-intensive sectors which may improve the relative position of skilled workers and increase wage inequality. According to Fajnzylber and Fernandes (2009), even when FDI is concentrated in unskilled labour-intensive sectors, the demand for skilled labour may be still higher than that of domestic firms in the host country. The empirical evidence on the effect of FDI on the demand for skilled labour indicates that the impact of FDI on skilled labour demand depends on the country size and in the case of transition countries it depends also on the progress of the transition process in these countries.

The effect of FDI on the skill intensity of employment in transition economies is analysed using the Business Environment and Enterprise Performance Survey (BEEPS) undertaken in three waves 2002, 2005 and 2009. The question to be addressed is whether foreign-owned firms employ a more educated and skilled workforce in comparison to domestic-owned firms. Several measures of the skill intensity of labour are used: the share of skilled production workers, the share of unskilled production workers, the percentage of employees with tertiary education, and the share of non-production employees to total employees. These data have two dimensions, a pooled cross-section of firms randomly selected in each wave and a panel dimension of firms that participated in the survey in all three waves. Using the pooled cross-section dimension of BEEPS data we examine if foreign-owned firms employ a more skilled workforce than domestic-owned ones, after controlling for other firm characteristics. The panel dimension of the data allows testing whether the relationship between foreign ownership and skill intensity of employment is robust. Tobit and Craggit Models are estimated for both pooled cross-section and panel data.

This paper is organised in the following way. Section 2 describes the data. The model specification on the skill intensity of employment is presented in Section 3. The empirical methodology used in estimating Tobit, double hurdle models and panel Tobit models is presented in Section 4. Section 5 presents the estimation results of the skill intensity models and section 6 concludes and summarises the main findings.

2. Data description

This empirical analysis uses firm level data from the Business Environment and Enterprise Performance Survey (BEEPS) 2002-2009. The survey was conducted by the European Bank of Reconstruction and Development (EBRD) in partnership with the World Bank Group covering information on firms' performance and examining the quality of the business environment in transition countries. These three waves use standardised questionnaires, though with some differences, and uniform sampling methods providing broadly comparable data.

In BEEPS 2005 and 2009 priority was given to respondents who participated in previous waves and had agreed to participate in future rounds of the BEEPS, hence creating a panel component. BEEPS 2002-2009 contains three cross-sections: 2002, 2005 and 2009 where we have a combination of pooled cross-section and panel data. For the pooled component only the group that was randomly selected in 2002, 2005 and 2009 is kept and the panel components are deleted to obtain a random sample and prevent the overrepresentation of these firms. Whereas for the panel component, only firms that participated in all three waves of the survey are included in the dataset, hence obtaining a balanced panel. Hence the pooled data now contains 6153 firms for 2002; 7691 firms for 2005 and 7773 for 2009 survey. The balanced panel data contains 374 firms for each wave (2002, 2005 and 2009), hence 1122 observations in total.

Since pooled cross-section gives the highest number of observations further data description and empirical analyses will be based on this group. Considering the advantages of panel data, that dataset is also used for a robustness check but keeping in mind that the number of observations is considerably smaller.

Four measures of skill intensity of labour are used: share of skilled production employees, share of unskilled production employees, share of non-production employees and share of employees with tertiary education. The main