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A Meta-Analysis of the Robustness of Market Size and Labour Cost Determinants of FDI

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Abstract

This paper applies a meta-regression analysis to systematically summarise, integrate and synthesise the results of empirical studies that include market size and labour costs as determinants of FDI. Random effects panel estimation is employed separately for the sample of primary studies that use OLS estimation to analyse the effect of market size and labour costs on FDI and for the sample of primary studies that employ discrete choice models to estimate the effect of market size and labour costs on FDI. A number of factors related to model specifications, dataset characteristics and methodologies in the primary studies explain the variation in the estimated t-statistics of the effect of market size and labour costs on FDI across the studies. Most tests for publication bias indicate that the empirical literature on the effect of market size on FDI favours positive estimates while empirical literature on the effect of labour costs on FDI favours negative estimates. None of the literature, however, favours statistical significance.

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"The foundation of science is the cumulation of knowledge from the results of many studies"
(Hunter and Schmidt, 1990)

I. Introduction

Arguably the two main reasons why multinational enterprises (MNEs) locate their investment abroad are access to foreign markets (mainly in the case of horizontal foreign direct investment (FDI)) and reducing productions costs (mainly in the case of vertical FDI). Market access may be good because the host country has a large, high-income population. When investing and investment receiving countries are of different factor endowments, the prices of inputs, for example labour, are lower in the host country than at home, MNEs split the production across borders, accessing low-cost inputs abroad. As a result, FDI is usually positively affected by the market size and negatively affected by the labour costs in the host country, and at least the former is an established and well-known relationship in empirical FDI literature.

A large number of empirical papers have analysed the determinants of FDI and nearly all of them control for market size and labour costs in the host country, however, the estimates do not only vary in magnitude, but also in sign. The heterogeneity of studies in respect to statistical methods, model specifications and data used make it very difficult to simply compare the results from different studies. Meta-analysis, on the other hand, can capture the variation in estimated results by comparing the studies in a systemic way. According to Torgerson (2003), the value of meta-analysis lies in the fact that it reduces the random errors experienced by a single study and therefore it can lead to a more precise estimate of the overall effect.

Although Meta-analysis has been widely used in sciences with experimental settings, such as in educational, psychological and medical research, applications in economics have been limited. Recently, however, it has been used to analyse, *inter alia*, the effect of an increase in a minimum wage on employment of low-wage workers in the US (Card and Krueger, 1995), multinational companies and productivity spillovers (Gorg and Strobl 2001), the impact of taxes on economic development (Phillips and Goss,

1995), the Ricardian equivalence theorem (Stanley 1998, 2001), the rate of return on schooling investment (Ashenfelter et al. 1999) and gender wage discrimination (Weichselbaumer and Winter-Ebmer 2005). This is, however, the first paper to synthesise and integrate the empirical literature that analyses market size and labour costs determinants of FDI.

This paper is structured as follows. Section II explains the Meta-analysis technique. Section III discusses the dataset based on 85 recent empirical papers and Section IV examines the results partitioned according to the econometric methodology employed. Section V tests for publication bias and Section VI concludes, arguing that neither the market size nor labour costs determinants of FDI are robust across this wide range of studies.

II. The Meta-Regression Analysis

Meta-analysis is a statistical technique that systematically summarises, integrates and synthesises conceptually comparable quantitative results of empirical studies that analyse a particular relationship expressed in the same statistical form and it represents the best scientific estimate of the underlying effect found in the literature (Stanley and Jarrell 2005). There are three main reasons why different studies and different specifications within studies generate different estimates (Disdier and Head 2008). The first reason is sampling error, which arises while estimating a population parameter from a finite sample drawn from that population. The second is "structural" heterogeneity caused by differences in parameters across sub-populations. The final reason for different estimates is "method" heterogeneity, which is caused by differences in statistical techniques, miss-measurement of the explanatory variables or omission of important control variables. Meta-analysis is able to control for "structural" and "method" heterogeneity by the inclusion of particular explanatory variables.

The meta-regression model explaining the variations in the results across primary studies in the meta-samples is simply:

$$Y_i = \beta_0 + \sum_{k=1}^{K} \beta_k X_{ik} + e_i \qquad i = 1,2,...,N \tag{1}$$

where Y_i is the estimated parameter of the effect of market size or labour costs on FDI in original study i from a total sample of N studies. β_0 is the 'true' value of the parameter of interest, β_k is the meta-regression coefficient which reflects the biasing effect of particular study characteristics, k, e_i is a meta-regression disturbance term, and X_{ik} is a set of meta-independent variables which take into account the relevant characteristics of the primary empirical study and explains its systemic variation from other results in the literature.

Meta-analysis is superior to narrative literature reviews, which do not take into account the magnitude of the effect in primary studies. Narrative literature reviews are usually based on so called vote-counting when studies with different signs and significance are divided in separate groups and the largest group is thought to reveal the true effect, implying that studies reporting the estimated effects of opposite signs cancel-out. Meta-analysis, on the other hand, takes into account different specifications, estimation techniques and dataset characteristics in original studies to explain the variation of the sign and magnitude of the effect under investigation across studies. Furthermore, in narrative or vote-counting review some papers can be discarded due to personal beliefs and prejudice towards the author and data used or due to the assumption that the paper is of lower quality, therefore, a narrative literature review is more "subjective". With Meta-analysis lower quality studies do not have to be discarded but the quality can be evaluated and accounted for, for example, with the help of weights.

One of the major disadvantages of Meta-analysis is publication bias, when the numerical size of the effect is overestimated due to missing studies with low and insignificant results (Weichselbaumer and Winter-Ebmer 2005). Publication bias arises when referees and editors are more inclined to select papers with statistically significant results, leading to studies that find small or statistically insignificant effects to remain unpublished. Authors will perceive those conventionally expected results as criteria for the acceptance of papers for publication. Therefore, studies that find small or statistically insignificant effects remain in the 'file drawer'. As a result, the studies that have been published may constitute a biased sample of what has been found (De Mooij and Ederveen 2005). For that reason it is important that the meta-sample includes results from unpublished work. There is also a bias towards internationally published research leading

to studies in non-English language being underrepresented. While any form of review of empirical work, including narrative reviews, cannot avoid the publication bias problem, meta-analysis can employ statistical methods that can help identify and accommodate those biases (Stanley 2005).

It can be argued that unpublished work is usually perceived to be of lower quality, as compared to articles published in top international journals. In order to take the quality of a primary study into account, various quality characteristics can be included in the meta-regression as independent variables. Another approach to control for primary study's quality is to weight good quality studies published in top journals more heavily than the rest, assuming that the peer-review process allows only reliable studies be published in the best journals. If there are more than one estimate reported per study, (Weichselbaumer and Winter-Ebmer 2005) suggest weighing studies with the inverse of the coefficient of variation among the estimates in one study. If the results are the same for different specifications, the study should be judged as more reliable. Furthermore, sample size, the number of regressors in the equation and R-squared of the original regression can be used as weighting schemes.

It is common in the literature that applies meta-analyses to base the search of the presence of a publication bias on the fact that studies with larger samples (degrees of freedom) are more likely to find statistically significant effects, as the standard errors are usually larger in smaller samples. So, if there is no publication bias, the t-statistics of the estimated coefficient in question should be positively related to the size of the sample (Card and Krueger 1995; Doucouliagos and Laroche 2003; Gorg and Strobl 2001). If the studied effect is zero, however, then the larger sample will not tend to make the reported t-statistic larger in absolute terms (Stanley 2005). As a result, the absence of the relationship between a primary study's reported t-statistic and the study's degrees of freedom, would not necessarily indicate the publication bias, as the non-existence of the estimated effect, even where there is no publication selection, produces the same results.

Graphical tests can also be employed to detect and analyse publication bias. The simplest and most common graphical method to detect publication bias is an informal examination of a *funnel plot*. A funnel plot is a scatter diagram of precision (measured either by the inverse of the standard errors or the sample sizes or their square root) versus

non-standardised effects (estimated elasticities, regression coefficients or correlation coefficients). When there is no publication bias, estimates will vary randomly and symmetrically around the mean. The plot will be spread out more at the bottom than at the top, as smaller samples, which are usually at the bottom of the plot, typically have larger standard errors and hence less precision. If publication selection favours a particular direction, the plot will be biased towards one side or another in respect to its mean. If publication selection favours statistical significance, regardless of direction, the funnel would tend to be hollow and excessively wide. However, the disadvantage of the funnel plot is that its visual inspections are inherently subjective and prone to ambiguity. In order to avoid the subjectivity in the visual investigation of a funnel plot, Stanley (2005) suggests regressing the inverse of the standard errors on the t-statistics in original studies. The presence of the statistically significant intercept would indicate publication bias in the funnel plot.

The second disadvantage of funnel graphs is the assumption that there is a single underlying 'true' effect common to all studies or its variation is assumed to be random and hence symmetric. This assumption may be valid for experimental studies; however, in empirical research in economics the publication selection may not be the only source for asymmetry, as the heterogeneity of true effects across studies may be due to the use of different datasets, different time periods, different countries, and different estimation techniques and omitted variables.

III. The Dataset

The meta-sample consists of studies collected through a comprehensive search of articles that investigate the effect of market size and labour costs on the decision as to how much and where to invest. The search for original studies is conducted in Google, Google Scholar, EconLit and Web of Science using keywords "determinants", "foreign direct investment", "multinational enterprises", "foreign firms", "market size", "GDP", "labour costs" and "wages"[2]. Furthermore, economic journals published in the last couple of years have been searched. Only the papers that conduct empirical analysis have been

[2] The list of primary papers is included in Table I.

selected. The meta-sample includes 52 (44) studies with a total of 306 (249) meta-observations of the effect of market size (labour costs) on FDI. 19 out of 53 (26 out of 44) studies that estimate the effect of market size (labour costs) on FDI are published in the international academic journals and the rest 34 (18) are working papers and policy reports. The description of primary studies is given in Table II.

The studies in the sample estimate the effect of market size on FDI using different methodologies: 28 studies use Ordinary Least Squares (OLS), including fixed and random effects, one study uses Generalised Least Squares (GLS), one study applies the Error Component model, three studies employ Generalised Method of Moments (GMM), two studies use a Negative binomial model and, finally, 21 studies use a discrete choice methodology, Conditional logit, Nested logit, Tobit and Probit models in particular. 18 studies (103 observations) use OLS to estimate the effect of labour costs on FDI, another 18 studies (97 observations) use a discrete choice methodology, while the rest of the studies use GMM estimation, negative binomial model, error component model, GLS and weighted least squares (WLS).

The construction of the dependent variable in an original study depends on the methodology used. For example, when OLS estimation is used to analyse the effect of market size and labour costs on FDI, FDI can be measured, for example, either as a flow or a stock. When a discrete choice methodology is used in an original study, the dependent variable is a choice of an investment location (country or region). Accordingly, in the sample of primary studies that estimate the effect of market size (labour costs) on FDI, 19 studies with 132 observations (13 studies with 82 observations) define FDI as a flows, 11 studies with 74 observations (8 studies with 53 observations) define FDI as stock and in 19 studies with 85 observations (18 with 97 observations) the dependent variable is defined as a choice of a country, state or region to locate foreign investment.

13 studies with 74 observations (7 studies with 40 observations) that analyse the effect of market size (labour costs) on FDI include developing countries in their samples, 27 studies with 127 observations (23 with 109 observations) include developed countries and 22 studies with 180 observations (18 studies with 128 observations) include transition countries in their samples. The majority of studies (49 studies with 279

observations that analyse the effect of market size on FDI and 38 studies with 138 observations that analyse the effect of labour costs on FDI) use panel data, and the remaining studies employ time-series and cross-sectional data. 28 studies with 214 observations (22 studies with 149 observations) use only country-level data to estimate the effect of market size (labour costs) on FDI, while the rest of the studies also employ less aggregate data. In 28 studies with 108 observations that analyse the effect of market size on FDI (in 6 studies with 42 observations that analyse the effect labour costs on FDI) the time period covered starts before 1990 and for the rest of the studies it starts after 1990.

A number of characteristics of the original studies are accounted for in order to explain the variation in the parameter values of market size and labour cost variables in the original studies. Meta-independent variables are usually dummy variables that reflect whether important explanatory variables are included in the primary study, specification variables that take into account different functional forms, variables that reflect different types and quality of data, etc. The meta-independent variables and their descriptions are listed in Table III.

The differences in time periods are taken into account by including a dummy variable to differentiate between samples that start before 1990 and after 1990 and a variable of the number of years covered in the dataset of a primary study. To distinguish between different aggregations of data a dummy variable is included to control for whether the data employed in a primary study are only country-level or if they also include an industry and/or firm-level dimension. In respect to the type of data it is taken into account whether the data are panel data or only time-series or cross-sectional. In order to account for regional coverage of the data in an original study, three dummy variables are included for three groups of countries: developing, developed and transition countries[3].

In order to take into account the nature of the dependent variable in an original study a dummy variable is included to distinguish between the dependent variable being defined as a stock of FDI or a flow in primary studies that use OLS estimation. In the meta-analysis for the effect of market size on FDI, different definitions of the market size

[3] Original studies include countries from one, two or all the three groups.

variable are controlled for by including a dummy variable for GDP as a proxy for the market size in the host country versus population and GDP per capita. In the meta-analysis for the effect of labour costs on FDI, the specification of the labour cost variable is controlled for by including a dummy variable to distinguish between primary studies that use labour cost variable adjusted for productivity and studies that do not. Different specifications are taken into account by controlling for the inclusion of certain host country characteristics in the original studies, for example, labour costs (if meta-analysis is conducted for the effect of market size on FDI), openness, corporate income tax rate, FDI policy, return on capital, risk, infrastructure, agglomeration effect, natural resources, the quality of human capital and distance between investing and investment receiving countries.

Methodological differences are accounted for by distinguishing between studies that employ OLS and the rest of the methodologies, mainly discrete choice models. The dynamic nature of the equation estimated in the original study is taken into account by including a dummy variable for the presence of a lagged dependent variable in the original study. The size of the meta-dependent variable may also depend on whether the functional form in a primary study is logarithmic or linear. As a result, a dummy variable is included to take this effect into account. To control for a primary study's quality, a dummy variable is constructed and it takes a value of 1 if the study is published in an academic journal and 0 if it is a working paper or policy report. Finally, a dummy variable is included to control for whether a primary study includes country and time fixed effects.

IV. Estimation and Results

The values of the meta-dependent variable (the estimates of the effect of market size and labour costs on FDI) come from different primary studies that employ different methodologies to estimate the effects. If OLS estimation is used in the primary study, a regression coefficient shows the size of the change in the dependent variable per unit change in the independent variable, which can be measured in different monetary units. With a discrete choice methodology, the magnitude of the estimated coefficient does not have much explanatory power, as further estimation of elasticities and marginal effects is

needed to reveal the effect of the explanatory variable on the probability of selecting a particular investment location. Furthermore, the OLS equation is linear in both variables and estimation, and although discrete choice models are usually linear in variables, they are non-linear in estimation, as the maximum likelihood estimation is used. As a result, the estimated coefficients from different original studies may not be comparable.

One of the ways to avoid the problems is to use t-statistics instead of regression coefficients, as t-statistics have no dimensionality and it is a standardised measure of the effect of interest (Stanley and Jarrell 2005). Furthermore, the estimated coefficients reflect only the size and direction of the effect, but not the significance of the effect, while the t-statistics do not only reflect the significance, but also the direction of the effect. As a result, the estimated t-statistics of the effect of market size and labour costs on FDI in primary studies are used as a meta-dependent variable, however, two separate regressions are run for primary studies that use the OLS and the discrete choice methodology to estimate the effect of market size and labour costs on FDI, as the two groups of methodologies are two different to be meta-analysed jointly[4].

In economics researchers usually report a number of estimates based on different specifications but the same datasets. If every estimate is treated as a separate observation in the meta-sample, studies with multiple estimates are given more weight and disproportional importance than studies with just one estimate. There is also a risk that multiple estimates from one study may not be independent. Stanley and Jarrell (1998) in their meta-analysis on the gender wage differentials in the U.S account for this problem by only selecting one estimate per paper, which is considered by the authors as the best. Weichselbaumer and Winter-Ebmer (2005), however, criticise this approach on the basis that the principle of replicability is violated and suggest including all estimates provided by each study, but weighting them with the inverse of the number of estimates per study. Even if the right approach were to use only one estimate per study, it would be difficult to decide which one should be chosen. Furthermore, if only one estimate per paper is used, information is lost, as different estimates are usually based on different sample periods or

[4] The results of the joint meta-analyses where the results of primary studies that use different methodologies are pooled together are available upon request.

different specification, and those differences could be controlled for with independent variables, which can be used to investigate within-study variation.

In order to keep useful information by including all estimates per study, but to deal with the problem of dependence and heterogeneity at the same time, the random effect panel estimation is employed. While the OLS regression gives as much weight to between-paper variation as it does to within-paper variation, the random effects method places greater emphasis on within-paper variation than cross-paper variation (Disdier and Head 2008). Fixed effects estimation is not used due to the loss of a large number of degrees of freedom. For illustrative purposes, the results of OLS estimation where t-statistics are weighted with the number of estimates per study are reported.

The results of the meta-regression are presented in Table IV for primary studies that use OLS estimation to analyse the effect of market size on FDI. Table V shows the results for primary studies that use a discrete choice methodology to analyse the effect of market size on FDI. Table VI shows the results for primary studies that use OLS estimation to analyse the effect of labour costs on FDI and, finally, Table VII reports the results for primary studies that use discrete choice methodology to analyse the effect of labour costs on FDI. Columns 3 and 4 present the results of the random effects panel estimation, where all the meta-independent variables regardless of the statistical significance are included in Column 3, while Column 4 presents the preferred specification that includes only statistically significant meta-independent variables. For comparison reasons, the results of meta-regression estimated by OLS, where t-statistics are weighted with the number of estimates per study, are presented in Columns 1 and 2, where Column 1 includes all the meta-independent variables and Column 2 includes only statistically significant explanatory variables.

Following the results presented Table IV Column 4, primary studies that employ OLS to analyse the effect of market size on FDI and that are published in international journals tend to report, on average, higher t-statistics. This may indicate that the publication process may influence the findings of papers to be published in international journals, as positive and statistically significant market size effects on FDI may be preferred by editors and referees. Although, the length of the period covered in the datasets of the original studies that employ OLS estimation to analyse the effect of

market size on FDI does not appear to have a statistically significant effect on t-statistics, studies with datasets going back to earlier years than 1990 tend to find, on average, lower t-statistics, than studies using more recent data. This may imply an increase of the importance of the positive market size effect on FDI over time.

The measurement of both the FDI variable and the market size variable in the primary studies that employ OLS estimation to analyse the effect of market size on FDI has a statistically significance influence on the t-statistics. FDI measured as a flow tends to result in lower t-statistics, as compared FDI measured as a stock. Market size in the host country proxied by GDP results in higher t-statistics, than marker size proxied by population or GDP per capita. However, it does not appear to matter how aggregated the data are in the primary studies. This may be due to the fact that country-level data include all relevant factors that explain the size of investment at the country level. While the decision where to locate investment is made by individual firms and it can be explained by country-, industry- and firm-level factors by employing a discrete choice methodology, the size of investment at the country level estimated by OLS is usually explained by factors at the same level of aggregation.

Original studies employing OLS estimation to analyse the effect of market size on FDI that control for the openness, FDI policy, risk, infrastructure, natural resource and human capital in the host economy tend to report, on average, lower t-statistics than studies that exclude this set of variables from the analysis. Studies that fail to control for openness, FDI policy, risk, infrastructure, natural resource and human capital, risk overestimating the importance of the market size effect on FDI. On the contrary, the original studies that control for labour costs, distance and agglomeration effects in the host country tend to report, on average, higher t-statistics than studies that do not include those variables in the estimation. The inclusion of the tax variable in the primary study does not appear to have a significant effect on t-statistics. This may be due to the fact tax systems are highly complex and proxies used in the primary studies do not capture the real effect of taxation on FDI, as they are subject to measurement errors.

The inclusion of the lagged dependent variable does not appear to have a statistically significant effect on t-statistics. On the other hand, studies that convert variables into logarithm and studies that express variables in real terms tend to report, on

average, lower t-statistics than studies, which estimate linear specifications or express variables in nominal terms. It is more likely that the effect closer to the true one is revealed when variables are expressed in real terms, as inflationary effects are removed. Primary studies that apply random effects estimation tend to get, on average, lower t-statistics, as compared to studies that employ basic OLS estimation or fixed effects estimation. However, it does not appear to matter if original studies control for country or time fixed effects or if the datasets in original studies include developing, developed or transition countries, which is surprising, as market size effect on FDI should be more important for the investment in developed countries and, to some extent, transition countries, as compared to developing countries. MNEs usually invest in developing countries to take advantage of cheaper production factors rather than better market access.

Studies that use OLS estimation to analyse the effect of market size on FDI and employ panel data as compared to time-series or cross-sectional data tend to report, on average, higher t-statistics. Gorg and Strobl (2001) suggest that this difference across the results may be due to unobserved time invariant effects. For example, if there are time-invariant effects across individual industries and firms, which are not captured in the explanatory variables but which are correlated with the FDI variable then the cross-sectional studies may produced biased and inconsistent results, while such time-invariant effects may be removed from panel data studies if, for example, fixed or random effects estimation techniques are used.

The results of the meta-regression for primary studies that employ a discrete choice methodology to analyse the effect of market size on FDI show that the longer is the period covered in the datasets of the original studies, the higher t-statistics, on average, they tend to report (Table V, Column 4). Original studies that control for the openness of the host economy tend to get, on average, higher t-statistics, while the studies that control for the corporate income tax rate and agglomeration effects in the host country, tend to report, on average, higher t-statistics. Original studies that fail to control for openness (taxation and agglomeration effects) tend to underestimate (overestimate) the t-statistics of the effect of market size on FDI. Finally, primary studies that control for time fixed effects, tend to report, on average, higher t-statistics.

The meta-regression for primary studies that use OLS estimation to analyse the labour cost on FDI indicate that original studies which employ country level data tend to report, on average, lower t-statistics than studies that use less aggregate data (Table VI, Column 4). Primary studies that include transition countries in their datasets tend to report, on average, lower t-statistics than studies that include developed countries but higher t-statistics than studies that include developing countries. This implies that the effect of labour costs on FDI are stronger in developing countries, as compared to developed and transition countries. This result supports the fact that inward FDI to developed countries and, to some extent, transition countries are expected to be characterised by the horizontal pattern of internationalisation and it is expected to be mainly driven by the access to foreign markets. Inward FDI to developing countries and to a certain extent, transition countries, on the other hand, are characterised by the vertical pattern of internationalisation, when MNEs tend to locate labour-intensive stages of production in less-skilled labour abundant countries in order to take advantage of lower input costs. Consequently, the results of the meta-regression analysis show that the labour cost effect on FDI is stronger in developing countries and, to a limited degree, transition countries as compared to FDI in developed countries.

The measurement of both the dependent variable and the explanatory variable in the primary studies that apply OLS estimation to analyse the effect of labour costs on FDI can influence t-statistics. Most of the original studies define FDI as a flow and report, on average, lower t-statistics than studies that define FDI as a stock. Furthermore, studies that adjust labour costs for productivity or use unit labour costs obtain, on average, higher t-statistics than studies that do not adjust labour costs for productivity. The adjustment of labour costs for productivity may make the labour cost differences among countries smaller mitigating the labour cost effect on FDI.

Regarding specification differences, studies that control for market size, human capital, infrastructure in the host country and distance between investing and investment receiving country, tend to report, on average, lower t-statistics than studies that fail to account for these effects. Studies that do not control for market size, human capital, infrastructure in the host country and distance between investing and investment

receiving country tend to overestimate t-statistics. On the other hand, controlling for natural resources in the host country tends to increase the reported t-statistics.

In respect to the time period covered in the original studies that use OLS estimation to analyse the effect of labour costs on FDI, estimates that are based on the data that start before 1990 are, on average, higher than those obtained from more recent data. The negative labour cost effect on FDI has become stronger with the time. Original studies that employ random effect estimation, as compared to basic OLS or fixed effects estimation, report, on average, higher t-statistics. Primary studies that use variables expressed in real terms obtain, on average, lower t-statistics, as compared to studies that use variables expressed in nominal terms. Finally, the fit of the models in the original studies (proxied by the R-squared) is negatively related to the estimated t-statistics, which indicates that better specified models tend to report more negative t-statistics of the labour cost effect on FDI. On the other hand, due to publication selection bias researchers may expect that papers with negative and statistically significant estimates of the effect of labour costs on FDI have more chance to be published. Therefore, they will refine and improve the model in order to get the desired results, increasing the fit of the model.

Primary studies that employ a discrete choice methodology to analyse the effect of labour costs on FDI and control for human capital and FDI policies tend to report, on average, lower t-statistics than studies that fail to include the effects into account (Table VII, Column 4). The failure to control for human capital and FDI policies tends to overestimate t-statistics. Primary studies that convert variables into real terms tend to yield, on average, lower t-statistics, as compared to studies that use variables in nominal terms. Finally, studies that use logarithmic specifications tend to report, on average, lower t-statistics.

V. Testing for Publication Bias

Various tests can be applied in order to test for publication bias in the literature that analyses the effect of market size and labour costs on FDI. First, the logarithm of the absolute value of the primary study's t-statistics is regressed on the logarithm of the square root of the study's sample size. The estimated parameters are positive and statistically significant only for primary studies that use OLS estimation to analyse the

effect of market size on FDI[5], indicating the absence of publication bias in that literature. Primary studies that use a discrete choice methodology to analyse the effect of market size and labour costs on FDI and primary studies that apply OLS estimation to analyse the effect of labour costs on FDI appear to be prone to publication bias.

The funnel plot of precision (inverse of standard errors) against non-standardised effects (estimated coefficients) is also examined to test for publication bias. The funnel plot for primary studies that apply OLS estimation and a discrete choice methodology to estimate the effect of market size on FDI are presented in Figures I and II respectively. The funnel plot for primary studies that apply OLS estimation and a discrete choice methodology to analyse the effect of labour costs on FDI are presented in Figures III and IV respectively. The funnel plots in Figures I and II stretch more on the right side than on the left, indicting a potential publication bias towards positive estimated coefficients of the effect of market size on FDI. On the other hand, the funnel plots in Figures III and IV are slightly biased towards the left indicating that publication selection favours a negative labour cost effect on FDI. Publication bias, however, is not the only reason for the asymmetry of the funnel plot, as there may be heterogeneity in the true effect of market size and labour costs on FDI.

None of the funnel plots are hollow indicating that, although, publication selection may favour a particular direction, it does not favour statistical significance. The figures are more spread out at the bottom because studies with smaller samples and therefore larger standard errors have less precision and the reported estimates will be more variable. In order not to rely only on the visual inspection of the funnel plots, the inverse values of standard errors from the primary studies are regressed on the t-statistics. The intercept is statistically significant only for primary studies that analyse the effect of market size on FDI. The statistically insignificant intercept for the two samples of primary studies that analyse the effect of labour costs on FDI, indicate an absence of publication bias.

These different tests for publication bias show different results and, therefore, it is difficult to concluded whether or not the empirical literature that analyses the effect of market size and labour costs on FDI is prone to publication bias. However, more tests

[5] The estimated coefficient is 0.9109 and the t-statistic is 5.69

confirm the existence for publication bias in the literature that analyses the effect of market size on FDI as compared to the literature that analyse the effect of labour costs on FDI. It may be explained with the fact that the negative effect of market size on FDI is counter-intuitive and more difficult to explain. While, labour costs can have a small effect on FDI especially if they are adjusted for productivity. Furthermore, firms may as well locate their capital abroad and employ more skilled labour and pay higher wages that would reflect skill premium. In that case, labour costs may have a positive effect on FDI.

VI. Conclusions

Meta-regression analysis is used to systematically summarise, integrate and synthesise the quantitative results of the empirical literature regarding the effect of market size and labour costs on FDI. Access to foreign markets (mainly in the case of horizontal FDI) and lower production costs (mainly in the case of vertical FDI) are probably the main factors that drive FDI. The meta-sample of primary studies is divided into two groups in order to distinguish between the original studies that employ OLS estimation and a discrete choice methodology to estimate the effect of market size and labour costs on FDI. The random effects panel estimation is applied for each sample. A large number of factors related to model specifications, dataset characteristics and methodologies in the primary studies explain the variation in the estimated t-statistics of the effect of market size and labour costs on FDI across the studies.

A number of tests for publication bias are employed in order to investigate if the empirical literature on the effect of market size and labour costs on FDI favour a particular direction or statistical significance. It cannot be concluded that the empirical literature of the effect of market size and labour costs on FDI is prone to publication bias, as different tests for publication bias provide contradicting results, although, more tests indicate publication bias with respect to the market size. This may be explained by the fact that a negative effect of market size on FDI is counter-intuitive and more difficult to explain, while, on the other hand, labour costs can have a small negative or positive effect on FDI especially if they are adjusted for productivity. Furthermore, firms investing in, for example, science-based industries, may as well employ more skilled labour and pay higher wages that would reflect skill premium.

Appendices

Table I Studies included in meta-analysis of the effect of market size and labour costs on FDI

Author	Year	Type of work	Number of specifications	Sample size
Agostini	2004	Working paper	3	1555
Anghel	2006	Working paper	8	3863
Barrell and Pain	1996	Review of Economics and Statistics	1	504
Roberto	2004	Regional Science and Urban Economics	2	1330
Basile et al.	2003	Working paper	8	5761
Becker et al.	2005	Review of World Economics	4	39427
Becker et al.	2005	Review of World Economics	4	2610
Bekes	2005	Working paper	4	1405
Bellak and Leibrecht	2005	Working paper	11	449
Bevan and Estrin	2004	Journal of Comparative Economics	4	981
Buch et al.	2006	Economic Policy	6	126595
Buch et al.	2006	Economic Policy	1	193
Buch et al.	2006	Economic Policy	1	80
Buch et al.	2003	Journal of Comparative Economics	1	349
Buch et al.	2003	Journal of Comparative Economics	5	30
Clausing and Dorobantu	2005	Economics of Transition	9	228
Coughlin et al.	1991	Review of Economics and Statistics	6	736
Crozet et al.	2004	Regional Science and Urban Economics	4	3902
De Santis et al.	2001	Working paper	5	1209
di Giovanni	2005	Journal of International Economics	4	2002
Disdier and Mayer	2004	Journal of Comparative Economics	6	1228
Disdier and Mayer	2004	Journal of Comparative Economics	5	262
Disdier and Mayer	2004	Journal of Comparative Economics	3	1046
Disdier and Mayer	2004	Journal of Comparative Economics	5	788
Driffield and Munday	2000	Journal of International Business Studies	1	918
Figueiredo et al.	2002	Working paper	1	109560
Habib and Zurawicki	2002	Journal of International Business Studies	5	405
Head and Mayer	2004	Review of Economics and Statistics	5	452
Head et al.	1999	Regional Science and Urban Economics	5	760
Jakubiak and Markiewicz	2005	Working paper	14	30

Kim et al.	2003	The Review of Regional Studies	1	631
Lee and Mansfield	1996	The Review of Economics and Statistics	4	100
Merlevede and Schoors	2005	Working paper	24	595
Pain	1997	Manchester School of Economic and Social Studies	10	168
Lansbury et al.	1996	National Institute Economic review	1	728
Pusterla and Resmini	2005	Working paper	12	2269
Resmini	2000	Economics of Transition	3	124
Sethi et al.	2002	International Business Review	4	294
Singh and Jun	1995	Working paper	35	233
Wei et al.	1999	Regional Studies	4	256
Wei	2000	The Review of Economics and Statistics	7	426
Allomonte and Guagliano	2001	Working paper	1	2735
Allomonte and Guagliano	2001	Working paper	1	2871
Bénassy-Quéré and Lahrèche-Révil	2005	Working paper	24	1842
Bénassy-Quéré et al.	2003	Working paper	1	1163
Billington	1999	Applied Economics	1	56
Brunetti et al.	1997	Working paper	6	18
Chung and Alcacer	2002	Management Science	1	1784
Coughlin and Segev	2000	Journal of Regional Science	3	2316
Eaton and Tamura	1994	Journal of the Japanese and International Economics	8	561
Edmiston et al.	2003	Fiscal Studies	4	125
Ford and Strange	1999	Transnational Corporations	1	520
Friedman, Gerlovski and Silberman	1992	Juornal of Regional Science	1	338
Garibaldi et al.	2001	Working paper	1	170
Janicki and Wunnava	2004	Applied Economics	1	126
Campos and Kinoshita	2003	Working paper	7	76
Nigh	1986	Managerial and Decision Economics	1	162
Sader	1993	Working paper	1	1100
Schneider and Frey	1985	World Development	1	54
Woodward et al.	2000	Book section	2	854
Woodward and Rolfe	1993	Journal of International Business Studies	1	187
Yeaple	2005	Working paper	1	31426

Table II The descriptive statistics of primary studies that analyse the effect of market size and labour costs on FDI

Primary studies	Market size effect on FDI		Labour cost effect on FDI	
	OLS	Discrete Choice Models	OLS	Discrete Choice Models
	Number of studies (obs)	Number of studies (obs)	Number of studies (obs)	Number of studies (obs)
Total	28 (160)	19 (85)	18 (108)	19 (99)
Published in international journals	12	11 (45)	9 (30)	12 (66)
Apply basic OLS estimation	20 (101)		14 (78)	
Apply fixed effects OLS	6 (51)		2 (23)	
Apply random effects OLS	2 (8)		2 (7)	
Define FDI as a flow	18 (22)		12 (78)	
Define FDI as a stock	9 (36)		6 (30)	
Adjust wages for productivity			8 (31)	
Employ country-level data	20 (137)	6 (32)	13 (86)	6 (32)
Employ less aggregate data	8 (23)	13 (53)	5 (22)	13 (67)
Employ panel data	25 (148)	18 (76)	16 (101)	17 (89)
Developing countries are included	10 (56)	1 (1)	4 (34)	1 (1)
Developed countries in the sample	13 (66)	14 (63)	6 (22)	15 (80)
Transition countries in the sample	13 (99)	5 (35)	11 (56)	4 (31)
Datasets start before 1990	13 (57)	12 (35)	6 (42)	13 (57)
Use logarithmic equation	15 (93)	10 (68)	9 (49)	10 (68)
Include lagged dependent variable	5 (50)	4 (25)	4 (41)	4 (19)
Covert variables in real terms	8 (58)	6 (13)	11 (63)	6 (13)
Apply Conditional logit model		16 (55)		17 (70)
Apply Nested logit model		4 (26)		4 (27)

Table III The List of Meta-independent variables

Published	a dummy variable that takes a value of 1 if a study in a meta-sample is published in an international journal and 0 otherwise
Country-level	a dummy variable that takes a value of 1 if a primary study uses only country-level variables and 0 otherwise
Panel	a dummy variable that takes a value of 1 if a primary study uses panel data and 0 it uses either time-series or cross sectional data
Developing	a dummy variable that takes a value of 1 if country(ies) that receive investment in a primary study include developing countries and 0 otherwise
Developed	a dummy variable that takes a value of 1 if country(ies) that receive investment in a primary study include developed countries and 0 otherwise
Transition	a dummy variable that takes a value of 1 if country(ies) that receive investment in a primary study include transition countries and 0 otherwise
Before1990	a dummy variable that takes a value of 1 if the dataset in a primary study covers the period before 1990 and 0 otherwise
Period	a number of year covered in the dataset of a primary study
Dynamic	a dummy variable that takes a value of 1 if the equation estimated in an original study includes a lagged dependent variable and 0 otherwise
Random	a dummy variable that takes a value of 1 if the estimated equation in a primary study include random effects and 0 otherwise
OLSbasic	a dummy variable that takes a value of 1 if the equation estimated in a primary study does not include fixed effects, random effects and lagged dependent variable and 0 otherwise.
Flows	a dummy variable that takes a value of 1 if the dependent variable in a primary study is measured as an FDI flow and 0 otherwise
Stock	a dummy variable that takes a value of 1 if the dependent variable in a primary study is measured as a stock of FDI and 0 otherwise
R-squared	an R-squared of the estimated model in a primary study
GDP	a dummy variable that takes a value of 1 if the market size in a primary study is measured as a GDP and 0 otherwise
Logs	a dummy variable that takes a value of 1 if the variables in a primary study are converted into natural logarithm and 0 otherwise
Real	a dummy variable that takes a value of 1 if the variables in an original study are expressed in real terms and 0 otherwise
Wage	a dummy variable that takes a value of 1 if a primary study controls for labour costs in the investment receiving country/industry/firm and 0 otherwise
Humancap	a dummy variable that takes a value of 1 if a primary study controls for human capital and 0 otherwise
Openness	a dummy variable that takes a value of 1 if a primary study controls for openness of the investment receiving country and 0 otherwise
Tax	a dummy variable that takes a value of 1 if a primary study controls for corporate income taxes of the investment receiving country/industry/firm and 0 otherwise
Distance	a dummy variable that takes a value of 1 if a primary study controls for distance between investing and investment receiving countries and 0 otherwise
FDIpolicy	a dummy variable that takes a value of 1 if a primary study controls for the policy towards FDI in an investment receiving country and 0 otherwise

Intrate	a dummy variable that takes a value of 1 if a primary study controls for the return on capital in an investment receiving country and 0 otherwise
Risk	a dummy variable that takes a value of 1 if a primary study controls for the risk in an investment receiving country and 0 otherwise
Infrastructure	a dummy variable that takes a value of 1 if a primary study controls for the infrastructure in an investment receiving country and 0 otherwise
Agglomeration	a dummy variable that takes a value of 1 if a primary study takes into account agglomeration effect and 0 otherwise
Natresources	a dummy variable that takes a value of 1 if a primary study controls for the natural resources in an investment receiving country and 0 otherwise
Ceffects	a dummy variable that takes a value of 1 if a primary study controls for country or region effects and 0 otherwise
Teffects	a dummy variable that takes a value of 1 if a primary study controls for time effect and 0 otherwise
Random	a dummy variable that takes a value of 1 if a primary study employs random-effects estimation and 0 otherwise
Fixed	a dummy variable that takes a value of 1 if a primary study employs fixed-effects estimation and 0 otherwise
Clogit	a dummy variable that takes a value of 1 if a primary study employs Conditional logit model and 0 otherwise
Nlogit	a dummy variable that takes a value of 1 if a primary study employs Nested logit model and 0 otherwise

Table IV MRA results for the market size effect on FDI estimated by OLS

	OLS				Random Effects			
	1		2		3		4	
Variables	**Coeff**	**t-stats**	**Coeff**	**t-stats**	**Coeff**	**t-stats**	**Coeff**	**t-stats**
Published	3.510*	{6.93}	3.600*	{8.50}	2.161*	{3.06}	1.552**	{1.93}
Clevel	-1.700*	{-2.87}	-1.570*	{-2.90}	-0.306	{-0.34}		
Panel	8.850*	{6.60}	9.070*	{7.85}	11.640*	{7.37}	11.277*	{6.95}
Developing	0.150	{0.39}			0.047	{0.23}		
Developed	-2.630*	{-3.16}	-2.190*	{-4.47}	-0.618	{-0.68}		
Transition	-0.250	{-0.18}			0.019	{0.01}		
B1990	-4.070*	{-2.84}	-4.020*	{-5.13}	-2.545	{-1.58}	-2.468**	{-2.15}
Period	0.150**	{2.49}	0.140**	{2.50}	-0.081	{-0.79}		
Random	-1.370	{-1.06}			-2.058***	{-1.77}	-1.774***	{-1.81}
OLSbasic	-0.470	{-0.73}			0.018	{0.02}		
Flows	-2.100**	{-2.00}	-3.540*	{-4.60}	-3.554*	{-3.00}	-3.089**	{-2.03}
Stock	0.290	{1.26}			0.123	{0.48}		
GDP	2.330*	{2.65}			4.489*	{3.96}	4.676*	{3.64}
Log	-4.490*	{-5.38}	-5.200*	{-8.25}	-4.304*	{-4.24}	-4.831*	{-3.73}
Real	-2.860**	{-2.42}	-3.060*	{-4.67}	-3.188*	{-3.07}	-3.737*	{-3.18}
Wage	-0.170	{-0.19}			2.101**	{2.17}	2.744**	{2.44}
Openness	-2.770*	{-4.19}	-2.530*	{-4.76}	-2.656*	{-3.06}	-2.174**	{-2.35}
Tax	1.010***	{1.67]	1.540*	{3.14}	-0.134	{-0.22}		
Distance	3.490*	{5.02}	3.270*	{5.91}	2.208*	{2.67}	2.344**	{2.40}
FDIpol	-7.420*	{-5.63]	-7.770*	{-6.29}	-7.663*	{-4.96}	-4.616**	{-2.24}
Intrate	2.810*	{2.85]	1.520**	{2.51}	2.063	{1.62}		
Risk	-3.000*	{-5.70}	-2.860*	{-5.79}	-1.245*	{-2.42}	-1.092**	{-2.33}
Infrastr	-2.060**	{-1.60}	-2.700*	{-2.93}	-3.151**	{-1.98}	-4.457*	{-3.17}
Agglom	5.520*	{1.92}	7.280*	{3.53}	8.670**	{2.34}	11.783*	{3.25}
Natresourc	-5.290*	{-3.76}	-6.600*	{-7.42}	-4.944*	{-3.34}	-5.196*	{-2.71}
Ceffect	1.900***	{1.63}			0.782	{1.07}		
Teffect	1.410**	{2.03}	1.170***	{1.82}	0.916	{1.59}		
Dynamic	-1.330	{-1.38}			-1.552	{-1.34]		
Humcap	-2.300*	{-3.05}	-2.670*	{-4.25}	-2.671*	{-3.02}	-3.061**	{-2.43}
R-sqr	0.000	{-1.00}			-0.002	{-0.79}		
Constant	2.270	{0.91}	3.090*	{2.73}	-0.810	{-0.31}	-1.6755	{-0.67 }
R-sqr	**0.8526**		**0.8325**					
Adj R-sqr	**0.8169**		**0.8097**					
R-sqr within					**0.2446**		**0.2846**	
R-sqr between					**0.78**		**0.745**	
R-sqr overall					**0.7743**		**0.6894**	
# of obs	**106**		**106**		**106**		**106**	

t-statistics in parenthesis

* Significant at 1 percent level ** Significant at 5 percent level *** Significant at 10 percent level

Table V MRA results for the market size effect on FDI for the studies that use discrete choice methodology

	OLS				Random effects			
	1		2		3		4	
Variables	**Coeff**	**t-stats**	**Coeff**	**t-stats**	**Coeff**	**t-stats**	**Coeff**	**t-stats**
Published	-19.107**	{-2.10}	-14.148*	{-5.32}	-17.806**	{-1.96}		
Clevel	2.928	{0.54}			4.588	{0.65}		
Panel	35.532***	{1.93}	27.491*	{5.59}	32.202***	{1.88}		
Developing	15.207	{0.73}			8.365	{0.39}		
Developed	-3.535	{-0.33}			-6.135	{-0.53}		
Transition	-0.250	{-0.05}			0.025	{0.00}		
B1990	-2.511	{-0.38}			-1.253	{-0.22}		
Period	0.519	{0.83}	0.714*	{3.35}	0.416	{0.75}	0.737*	{3.64}
Clogit	12.531	{0.87}	22.020*	{4.58}	11.236	{0.85}		
Nlogit	10.594	{0.72}	23.097*	{4.33}	9.490	{0.71}		
GDP	6.620	{0.75}	8.469*	{3.03}	5.406	{0.79}		
Log	3.063	{0.45}			4.912	{0.80}		
Real	-5.643	{-0.71}			-4.146	{-0.46}		
Wage	9.322	{1.29}			7.731	{1.19}		
Openness	7.545	{0.44}			6.091	{0.35}	24.096*	{3.20}
Tax	-15.879	{-3.13}	-8.619*	{-3.60}	-11.136**	{-2.45}	-5.160*	{-2.71}
Distance	-10.777	{-1.61}			-8.819	{-1.53}		
FDIpol	2.583	{0.20}			2.696	{0.23}		
Risk	-16.530	{-1.52}			-16.045	{-1.30}		
Infrastr	0.526	{0.09}			-0.843	{-0.18}		
Agglom	-11.502**	{-2.09}	-11.861*	{-4.82}	-11.180**	{-2.34}	-4.150**	{-2.56}
Natresourc	-11.962	{-0.76}			-12.231	{-0.83}		
Ceffect	10.189	{1.32}	11.628*	{2.62}	7.532	{1.31}		
Teffect	11.740**	{2.25}	14.151*	{3.26}	14.822***	{1.67}	22.850*	{5.30}
Dynamic	-13.545***	{-1.90}	-10.983*	{-2.93}	-10.657	{-1.35}		
Humcap	6.306	{0.92}	5.891**	{2.29}	4.694	{0.67}		
Constant	-22.827	{-0.97}	-33.923*	{-4.92}	-19.368	{-0.90}	2.449	{1.12}
R-sqr	**0.7202**		**0.6793**					
Adj R-sqr	**0.5948**		**0.6259**					
R-sqr within					**0.2266**		**0.1459**	
R-sqr between					**0.9872**		**0.8968**	
R-sqr overall					**0.6535**		**0.5678**	
# of obs	**85**		**85**		**85**		**85**	

t-statistics in parenthesis

* Significant at 1 percent level ** Significant at 5 percent level *** Significant at 10 percent level

Table VI MRA results for labour costs effect on FDI for the studies that use OLS

	OLS				Random Effects			
	1		2		3		4	
	Coef	t-stats	Coef	t-stats	Coef	t-stats	Coef	t-stats
Published	0.250	{0.19}			0.347	{0.22}		
Clevel	-3.385	{-1.16}	-2.892*	{-3.21}	-5.536***	{-1.66}	-4.747*	{-2.78}
Panel	-4.287	{-1.43}	-2.636***	{-1.81}	-4.265	{-0.93}		
Developing	-0.024	{-0.05}			-0.006	{-0.02}		
Developed	6.543*	{4.58}	6.171*	{6.70}	6.638*	{3.96}	6.321*	{5.38}
Transition	10.319**	{2.47}	9.958*	{3.73}	12.400***	{1.94}	9.738**	{2.56}
B1990	11.430	{1.61}	10.512*	{2.94}	17.016**	{2.11}	11.390*	{2.91}
Period	0.055	{0.15}			-0.223	{-0.59}		
OLSbasic	0.695	{0.42}			0.894	{0.52}		
Random	10.425*	{5.20}	9.753*	{5.93}	10.429*	{5.38}	9.345*	{5.51}
Flows	-7.295*	{-2.59}	-8.633*	{-5.46}	-5.356***	{-1.69}	-3.929**	{-2.17}
R-squared	-9.069*	{-2.94}	-9.498*	{-3.72}	-6.827*	{-3.01}	-6.107*	{-3.02}
MarketSize	-1.904	{-0.89}	-2.419***	{-1.93}	-2.412	{-0.91}	-4.421*	{-3.68}
Logs	-0.487	{-0.44}			-1.383	{-0.59}		
Real	-5.959	{-2.45}	-5.585*	{-6.99}	-4.546***	{-1.64}	-3.466*	{-2.95}
ULC	9.282*	{3.53}	7.874*	{6.47}	9.749*	{2.68}	6.571*	{4.38}
HumCap	-6.924***	{-1.86}	-6.494*	{-6.77}	-9.377**	{-2.40}	-6.732*	{-3.76}
Openness	0.725	{0.55}			1.579	{0.76}		
Tax	-3.074	{-1.30}	-3.739*	{-3.69}	-0.449	{-0.20}		
Distance	-5.875*	{-3.14}	-5.407*	{-6.10}	-6.934**	{-2.35}	-6.483*	{-3.71}
IntRate	-14.117*	{-3.75}	-13.164*	{-5.90}	-12.537*	{-2.72}	-8.663*	{-3.77}
Risk	-0.252	{-0.20}			-0.640	{-0.63}		
Infrastr	-0.849	{-0.54}			-1.032	{-0.36}		
Agglom	-1.758	{-0.42}			-4.551	{-0.74}		
Natresourc	4.269	{0.53}			12.063	{1.31}	7.782**	{1.97}
Ceffect	0.270	{0.14}			0.032	{0.02}		
Teffect	0.154	{0.15}			0.249	{0.23}		
Dynamic	0.188	{0.43}			0.082	{0.28}		
Constant	13.654**	{2.39}	15.424*	{4.95}	10.804	{1.61}	7.551***	{1.81}
R-squared	**0.7721**		**0.7627**					
Adj R-sq	**0.687**		**0.7223**					
Within R-sq					**0.3442**		**0.3206**	
Betw R-sq					**0.991**		**0.8321**	
Overall R-sq					**0.652**		**0.6132**	
# of obs.	**104**		**104**		**104**		**104**	

t-statistics in parenthesis

* Significant at 1 percent level ** Significant at 5 percent level *** Significant at 10 percent level

Table VII MRA results for the labour costs effect on FDI for the original studies that employ discrete choice methodology

	OLS				Random Effects			
	1		2		3		4	
	Coef	t-stats	Coef	t-stats	Coef	t-stats	Coef	t-stats
Published	6.074*	{3.51}	7.896*	{9.95}	5.402**	{2.42}		
Clevel	-3.650*	{-4.02}	-4.363*	{-9.18}	-3.720*	{-2.61}		
Panel	-10.359*	{-3.37}	-13.628*	{-10.49}	-11.587*	{-3.49}		
Developing	0.124	{0.04}			2.098	{0.51}		
Developed	-11.802*	{-4.08}	-13.240*	{-9.60}	-7.733**	{-2.33}		
Transition	0.346	{0.42}			0.593	{0.54}		
B1990	-0.126	{-0.11}			1.216	{1.02}		
Period	-0.027	{-0.25}			-0.133	{-1.11}		
Clogit	-0.194	{-0.28}			0.003	{0.00}		
MarketSize	-1.275	{-1.34}			-0.475	{-0.48}		
Logs	-0.655	{-0.73}	-0.921**	{-2.38}	-1.400	{-1.49}	-2.236**	{-2.49}
Real	2.623**	{2.08}	2.677*	{4.12}	0.212	{0.11}	-3.436**	{-2.35}
HumCap	-0.590	{-0.61}	-1.072**	{-2.07}	-2.045*	{-2.57}	-2.165*	{-2.82}
Tax	0.920	{1.02}	0.887***	{1.79}	1.015	{0.95}		
Distance	0.242	{0.23}			0.008	{0.01}		
FDI policy	-12.635*	{-6.83}	-13.154*	{-10.53}	-9.241*	{-3.70}	-5.161***	{-1.80}
Risk	-12.678*	{-6.20}	-13.317*	{-10.01}	-9.278*	{-3.69}		
Infrastr	4.376*	{4.23}	4.629*	{6.80}	2.162***	{1.74}		
Agglom	2.970*	{3.13}	4.135*	{8.47}	3.283*	{3.32}		
Ceffect	0.971	{0.82}			0.227	{0.18}		
Teffect	3.221	{1.32}	4.586*	{3.38}	7.164**	{2.45}		
Dynamic	-0.445	{-0.37}			2.601	{1.58}		
Constant	16.669*	{4.83}	18.176*	{12.05}	14.738*	{4.26}	2.021**	{2.22}
R-squared	**0.8236**		**0.8413**					
Adj R-squared	**0.7711**		**0.8168**					
Within R-sq					**0.1352**		**0.1397**	
Between R-sq					**0.8974**		**0.5017**	
Overall R-sq					**0.8036**		**0.5597**	
# of obs.	**98**		**98**		**98**		**98**	

t-statistics in parenthesis

* Significant at 1 percent level ** Significant at 5 percent level *** Significant at 10 percent level

Figure I Funnel plot for primary studies that use OLS estimation to analyse the market size effect on FDI without outliers

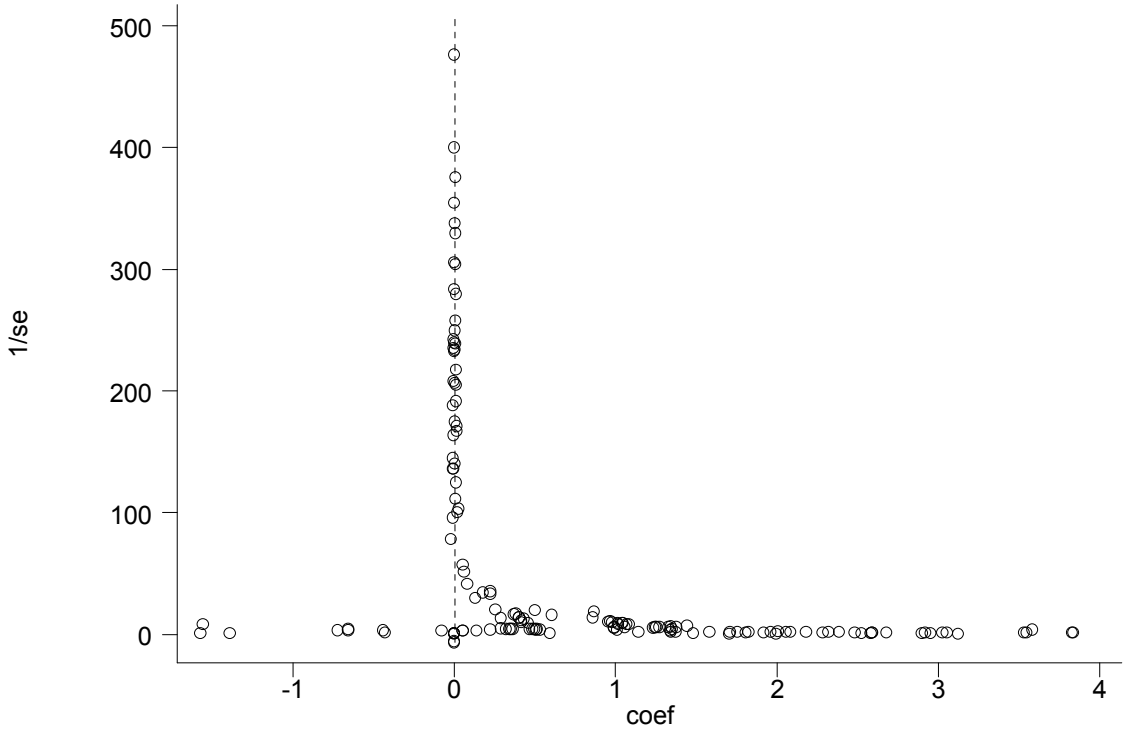


Figure II Funnel plot for primary studies that use discrete choice methodology to estimate the market size effect on FDI

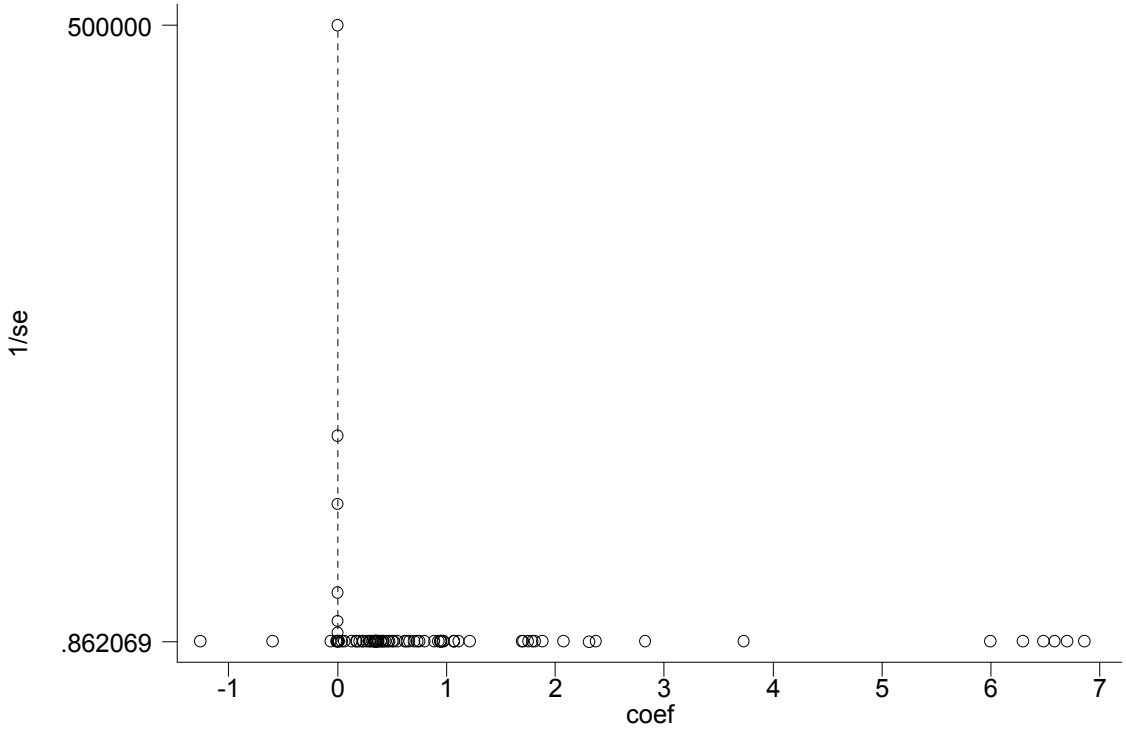


Figure III Funnel plot for primary studies that use OLS estimation to analyse the labour cost effect on FDI without 7 outliers

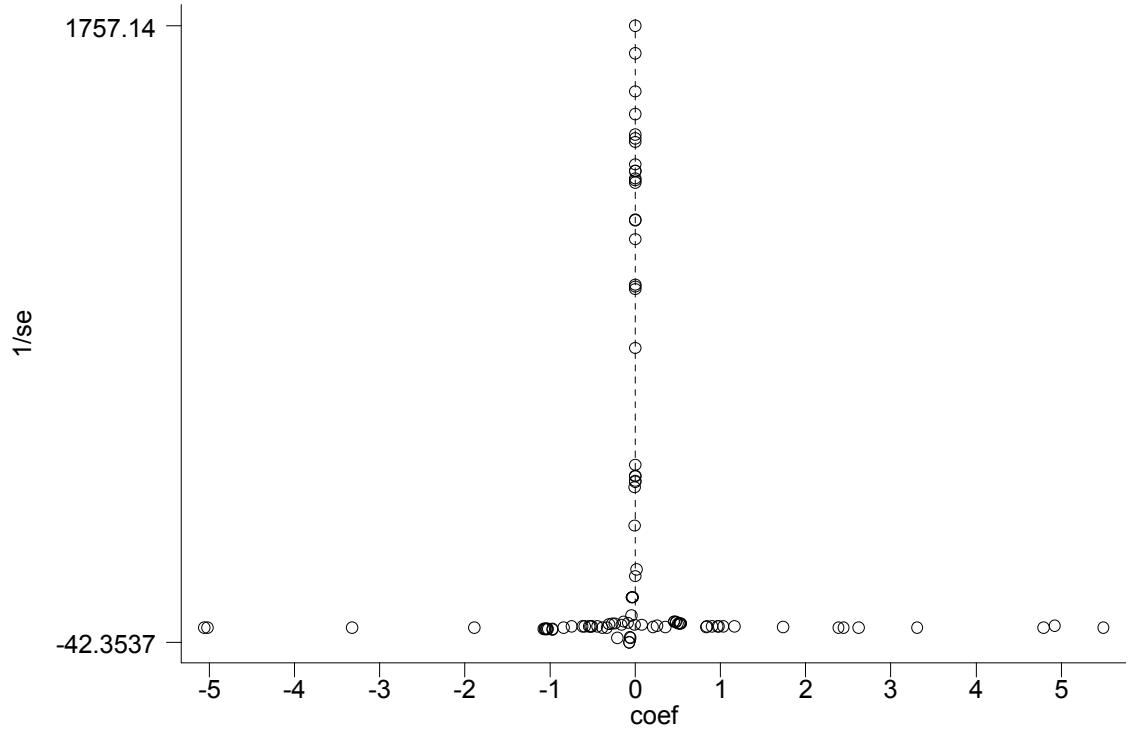
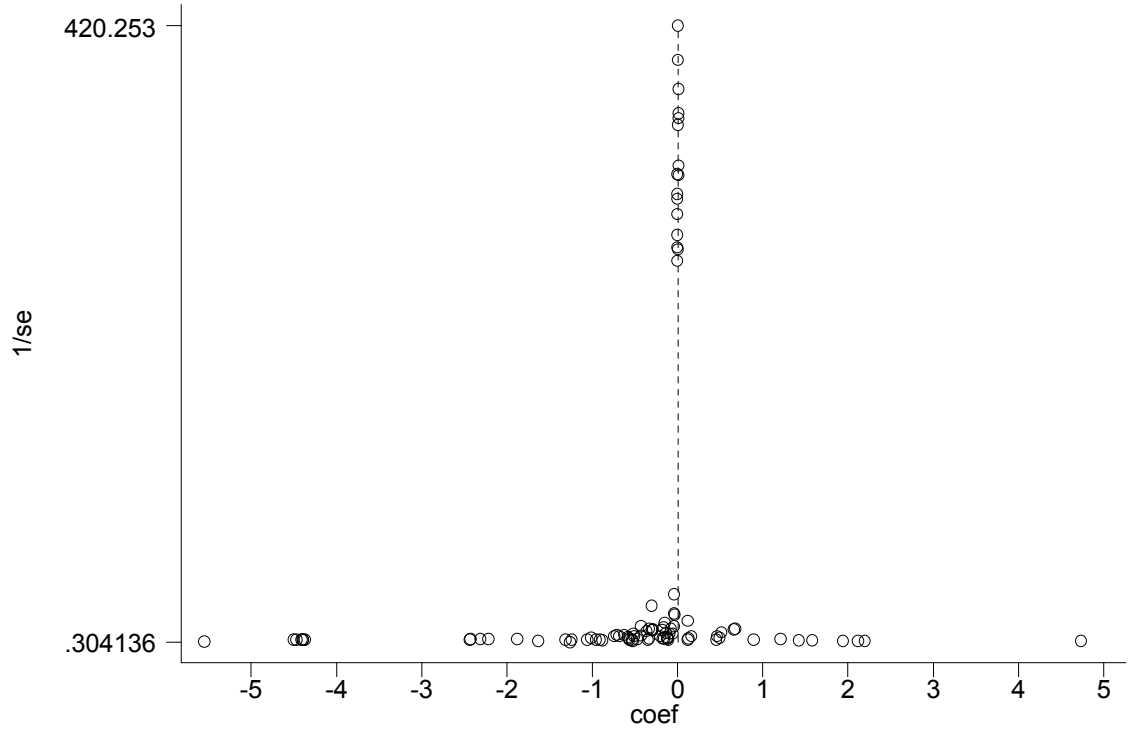


Figure IV Funnel plot for primary studies that use discrete choice methodology to estimate the labour cost effect on FDI without 4 outliers



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