Graduate Institute of
International Studies | Geneva
Economics

HEI Working Paper No: 16/2007

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First version: February, 2007; this version: December 2007

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Keywords: New trade theory, multi-country models, economic geography, home market effect, market potential, market access
JEL classification: F12, F14, F17, R11, R12

*I am grateful to T. Mayer and S. Zignago for having kindly provided the data developed at CEPII. I wish to thank Richard E. Baldwin, my thesis supervisor, and Federico Trionfetti for very helpful comments and discussions. Many thanks to Olga Karakozova and Jerome Berset for their valuable suggestions.

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1 Introduction

The home market effect (HME henceforth) has occupied the intellectual thinking for quite some time now. Scholars have analysed its existence in a variety of settings, but despite the considerable empirical research, the relevance of the HME in describing the structure of manufacturing production is still controversial (see for example Davis and Weinstein (1996, 1999, 2003), Behrens *et al.* (2005), Brülhart and Trionfetti (2005), Crozet and Trionfetti (2007), Trionfetti (2001), Feenstra *et al.* (1998), Head and Ries (2001), Head and Mayer (2004)). The foremost challenge in bridging theory with empirics has been identifying a well specified estimable relationship based on the theoretical foundations. The main obstacles are typically related to models' complexity, which in most cases do not allow for analytical solutions with respect to endogenous variables, combined with the great deal of simplifying assumptions including two-country set-ups.

In its nature, the HME describes a phenomenon where a larger home market for manufacturing products translates into an over-proportionate share of output and thus results in home country exporting the good. Building upon Krugman (1980) model, Davis and Weinstein (1996) pioneered the empirical investigation of the HME arguing that its presence serves as a discriminating criterion between the 'traditional' and the 'new' trade and production theories[1]. Their second breakthrough in follow-up papers (Davis and Weinstein 1998, 2003) was to acknowledge the fact that a richer geography structure needs to be introduced into the empirical modelling in order to bring it closer to reality and augment its predictive power. The revised study used an aggregate measure of idiosyncratic demand that in addition to nation's demand also accounted for that of trade partners and their proximity to the home market. The authors however continued to rely on a two-country definition of the HME, which obviously ignores any third cross-country effects of the multi-country world. As pointed out in Behrens *et al.* (2004) the remedy proposed in Davis and Weinstein (1998, 2003) has severe drawbacks.

The key issue is that the measure of an aggregate demand is not derived from formal theoretical predictions so it is not clear how this variable may affect domestic production. Unlike two-nation cases, where by construction a change in home's expenditure share necessarily implies an opposite adjustment for the neighbour, in a multi-country setting there is neither ***a priori*** information nor constraint on the redistribution of demand shares in ***N-1*** countries following a shock to local demand share. Can we at all expect that non-unique perturbations in expenditure shares map into a unique effect on the evolution of industry's output? Extending Krugman (1980) model to ***N*** countries, Behrens ***et al.*** (2004) formally show that Davis and Weinstein (2003) presumption to rely on two-country framework is not safe. They prove that allowing for third country effects, the total impact of an increase in home's demand share on its share of production is not necessarily larger than unity and, in fact, may even be negative if 'HME shadow' arises. Indeed, it can happen that although home market gains some expenditure, foreign countries also gain expenditure and thus manage to attract firms at the expense of domestic industry. This suggests that empirical applications of

[1] The idea is that in the 'traditional' comparative advantage world with perfect competition and constant returns to scale, the HME never arises and larger domestic demand is satisfied by imports. The HME may only appear if production is characterized by increasing returns/imperfect competition, assumed in the 'new' trade models. Of course, the intensity of the HME depends on the strength of returns to scale, trade costs, barriers to entry and elasticity of demand and substitution (see Helpman, 1990, Davis, 1999, and Head ***et al.***, 2002). And although the HME may disappear under certain conditions, it is only present in the 'new' trade theory.

the traditional HME definition to a multi-country framework are problematic. It also invalidates Davis and Weinstein (1998, 2003) approach to construct an aggregate measure of demand, whose changes would necessarily lead to more than proportional changes in production.

The contribution of this paper is twofold. First, we refine the HME search. In particular, we argue that the HME continues to be a valid hypothesis test provided it is properly redefined to account for a multi-nation world. We implement the property developed in Behrens *et al.* (2004) that the direct dynamic HME, defined as the elasticity of industry share with respect to an increase in domestic expenditure share, is always larger than unity between two periods in time within one country[2]. The fact that the HME hypothesis is expressed in terms of partial derivatives without accounting for the behaviour of foreign expenditure shares or the trade costs matrix proves to be crucial for the empirical investigation. More precisely, it suggests that rather than aggregating all countries demand shares into a unique variable as in Davis and Weinstein (1998, 2003), we need to isolate the effects of changes in the share of domestic demand from those in the rest of the world.

Second, we apply the *N*-country model by Behrens *et al.* (2004) to estimate the evolution of manufacturing production in the European Union. The key advantage of this model is that it is easily amenable to empirics and offers a theory-founded empirical specification. Importantly, it provides a theory-defined measure of external market access to depict the effects of foreign nations demand and proximity incentives to trading partners on the domestic production. Note, however, that even with linear well-specified equilibrium conditions, the multi-country analysis remains intricate. For example, it is difficult - if not impossible - to derive clear comparative statics analysis of changes in foreign expenditure and trade costs because their effects on home's production depend on the whole structure of trade costs and initial distribution of expenditure in all countries (see Behrens *et al.* (2005b)). Therefore, in order to get insights about the expected sign of the coefficient on the foreign market access variable we resort to a three-country case of the model, while admitting that these conclusions may not always be generalisable to a larger number of countries.

The theoretical model used to generate the HME hypothesis is taken to the data. The empirical investigation proceeds in two stages. The first step is to estimate trade costs which are necessary to calculate the weighted average of foreign countries demands to construct the theory-suggested proxy of market access. We estimate time and industry specific trade barriers using fixed effects gravity equation that substitutes country and partner dummies for country specific characteristics. At the second stage we incorporate the market access measure into the HME regression. All in all, we pursue three estimation exercises, which only differ in the way the foreign market access variable is specified. In particular, we check the robustness of our main specification based on the *N*-country Krugman (1980) model by drawing upon Davis and Weinstein (1998, 2003) and Redding and Venables (2004) definitions of market access. To accommodate our need to separate the effects of demand perturbations in home and foreign markets, we revise these measures slightly to account only for demand coming from third countries. Both measures are fundamentally the same with the only difference that Redding and Venables (2004) approach takes into account not only bilateral trade costs, but also all idiosyncrasies implied by unilateral trade policies.

[2] The same result was derived independently in my unpublished Master Thesis (see Bourtchouladze, 2002)

We focus on thirteen EU countries in a dataset containing twenty four manufacturing industries for a twenty one year period (1979-1999). To our knowledge, no study has contemplated to explore such an extended dataset in terms of country and time-variation. We find compelling evidence of the presence of increasing returns to scale/monopolistic competition (IRS-MC) production structure in several sectors such as textiles, leather, plastic products and engineering. Our results appear to be in line with findings in the previous literature and particularly so with Behrens *et al.* (2005a) and Brülhart and Trionfetti (2005), which similarly to us use multi-country foundation for the empirical specification.

The remainder of the paper is organized as follows. We start by sketching the theoretical framework as derived in Behrens *et al.* (2004). In Section 3, we introduce a variety of definitions of the HME applicable in a multi-country world and motivate the HME hypothesis test. In Section 4, we map theoretical results into an empirical strategy and define the variables. Section 4.2 covers data sources. After presenting the results from estimation of the gravity model, we review the methodology to estimate the HME equation in Section 4.4. Section 5 discusses our findings. In Section 6 we perform sensitivity analysis with alternative specifications of the foreign market access variable. In the same section, we present the results and compare our findings with the previous literature. Finally we conclude in Section 7.

2 Theory

The departure point for the empirical investigation of the HME in a multi-country world rests on the model developed in Behrens *et al.* (2004) which considers a more general framework by extending Krugman (1980) model to *N* countries. In the following section, we present the model, along with equilibrium conditions and the comparative statics analysis to motivate our empirical specification.

2.1 *N*-country Krugman (1980) Model

2.1.1 Assumptions

The model assumes *N* countries, denoted by subscript '*i*' (*i*=1, 2, …, *N*); one factor of production, labour (*L*); and two sectors, manufacturing (*D*) and agriculture (*H*).

The agricultural sector is perfectly competitive and produces homogeneous good *H* under constant returns to scale, with one unit of labour per unit of output. The manufacturing sector is a standard Dixit-Stiglitz monopolistic competition sector that produces a differentiated good *D* consisting of a continuum number of varieties subject to increasing returns to scale at the level of individual firm. Technology of production is identical for all varieties in all locations with a cost function that involves fixed and constant marginal labour requirements, labeled by *F* and a_m respectively. Contrary to the homogenous good sector which is traded costlessly, international trade in differentiated good is subject to 'iceberg' trade costs. Namely, $t_{ij} > 1$ units of any manufacturing variety must be shipped from country *i* to country

j for one unit to arrive[3]. It is assumed that trade is bilaterally symmetric, $t_{ij} = t_{ji}$, and free within countries, $t_{ii} = 1$.

On the demand side, every individual in all locations shares the same preferences, described by a two-tier Cobb-Douglas utility function:

$$U_i = C_{Di}^{m} C_{Hi}^{1-m}; \quad C_{Di} \equiv \left(\int_{w=0}^{n^w} d_i(w)^{1-1/s} \, dw \right)^{1/(1-1/s)} \tag{1}$$

where C_{Hi} is consumption of agricultural good, C_{Di} is the consumed quantity of the composite of all industrial varieties with $d_i(w)$ the consumption of each available variety w in country i; m is the expenditure share on the industrial good ($0 < m < 1$) and s is the constant elasticity of substitution between each pair of D-varieties ($s > 1$). The mass of varieties available in the world is $n^w = \sum_i n_i$, with n_i varieties produced in country i.

Finally, labour is internationally immobile. We denote by L_i the population in country i. Each consumer is assumed to supply one unit of labour inelastically, meaning that i's endowment of labour is also L_i. The world mass of consumers and the world endowment of labour are given by $L = \sum_i^N L_i$.

2.1.2 Market Equilibrium

Consumer's problem is to maximize utility described in (1) subject to the budget constraint, $p_{Hi} H_i + \int_{w=0}^{n^w} p_i(w) d_i(w) dw = E_i$, with p_{Hi} representing the price of one unit of agricultural good, $p_i(w)$ the price of one unit of variety w and E_i the expenditure in location i. The CES demand function in country j for a variety produced in country i (d_{ij}) takes the following form[4]:

$$d_{ij} = \frac{p_{ij}^{-s} m E_j}{P_j^{1-s}}, \quad P_j^{1-s} = \sum_i n_i p_{ij}^{1-s} \tag{2}$$

where p_{ij} is the delivered price of the variety and P_j^{1-s} is the CES price index in country j.

On the supply side, perfect competition in the homogenous sector yields marginal cost pricing. Provided that the good is produced in all locations (the non-full-specialization (NFS))[5], free trade leads to factor price equalization. In addition, choosing good H as a numéraire means that its price and labour wages are equal to unity across countries.

In the manufacturing sector, increasing returns, costless product differentiation, free entry and love for variety imply that each firm will produce a single, distinct from others, variety. The mass of firms operating in each country is endogenously determined by free entry and exit.

[3] Trade is free when t equals one; trade costs are prohibitive when $t \to \infty$.
[4] To simplify matters we drop the variety index from the notation. The symmetry of the model implies that in the equilibrium firms will only differ by the country they are operating in.
[5] Behrens *et al.* (2004) show that NFS occurs when m is not too large.

Dixit-Stiglitz monopolistic competition market structure also suggests that mill pricing – pricing at the factory gate, with all shipping costs borne by the consumers – is optimal. More precisely, letting x_{ij} be the amount of output produced by a typical firm in *i* shipped to *j* and $x_i = \sum_j x_{ij}$ be the total amount of production by a firm in *i*, each firm maximizes profit $\Pi_i = \sum_j (p_{ij} d_{ij} - a_m x_{ij}) - F$ taking into account the demand for each variety in (2). Noting also that due to trade costs $x_{ij} = d_{ij} t_{ij}$, the profit maximization with respect to p_{ij} yields:

$$p_{ij} = \frac{a_m t_{ij}}{1 - 1/s} \tag{3}$$

Free and instantaneous entry and exit of firms drive profits to zero in the equilibrium. This, in combination with pricing conditions, gives the equilibrium output of a typical manufacturing firm that is the same across all varieties:

$$x_i = \frac{F(s-1)}{a_m}$$

Since $x_i = \sum_j d_{ij} t_{ij}$, the market clearing condition for a typical variety in location *i* becomes:

$$\sum_j d_{ij} t_{ij} = \frac{F(s-1)}{a_m} \tag{4}$$

Using conditions (2) and (3), along with the fact that zero equilibrium profits imply that expenditure and labour income are equal ($E_i = L_i$), (4) can be rewritten as:

$$\sum_l \frac{f_{jl} L_l}{\sum_i n_i f_{il}} = \frac{sF}{m}, \quad j=1, 2 \ldots, N \tag{5}$$

where $f_{il} \equiv t_{il}^{1-s}$ with $0 \le f_{il} \le 1$, since $t_{il} \ge 1$ and $s \ge 1$. Multiplying both sides of (5) by n_i and summing across countries results in $n^w = mL/Fs$, meaning that the world mass of available varieties is constant and proportional to world population. Finally, setting $s_{ni} \equiv n_i / n^w$ and $s_{Ei} \equiv L_i / L$, (5) reduces to:

$$\sum_l \frac{f_{jl} s_{El}}{\sum_i s_{ni} f_{il}} = 1, \quad j=1, 2, \ldots, N \tag{6}$$

Behrens *et al.* (2004) show that market clearing condition (6) translates into the following matrix notation:

$$\Phi diag(\Phi s_n)^{-1} s_E = \mathbf{1} \tag{7}$$

where $s_n \equiv \begin{pmatrix} s_{n1} \\ s_{n2} \\ \vdots \\ s_{nN} \end{pmatrix}$, $s_E \equiv \begin{pmatrix} s_{E1} \\ s_{E2} \\ \vdots \\ s_{EN} \end{pmatrix}$, $\Phi \equiv \begin{pmatrix} f_{11} & f_{12} & \cdots & f_{1N} \\ f_{21} & f_{22} & \cdots & f_{2N} \\ \vdots & \vdots & \ddots & \vdots \\ f_{N1} & f_{N2} & \cdots & f_{NN} \end{pmatrix}$, $s_n' \mathbf{1} = s_E' \mathbf{1} = \mathbf{1}$ and $\mathbf{1}$ is an N-dimensional vector of ones. By assumption, Φ is symmetric with $f_{ij} = f_{ji}$ and $f_{ii} = 1$.

Finally, (7) can be solved for the equilibrium distribution of firms:

$$s_n = \left[(diag((\Phi)^{-1} 1) \Phi \right]^{-1} s_E \tag{8}$$

And equation (8) can be equivalently expressed for each country individually:

$$s_{ni} = \sum_j \frac{f_{ij}}{\sum_l f_{jl}} s_{Ej} \tag{9}$$

with f_{ij} denoting the co-factor of f_{ij}. As demonstrated in Behrens *et al.* (2004), every interior equilibrium is locally stable with a linear relationship between s_{ni} and s_{Ej}.

3 The HME Hypothesis

3.1 Definitions of the HME

According to Behrens *et al.* (2004), in a multi-country framework it is necessary to distinguish between the static and the dynamic HME. The static HME relates to cross-sectional variation in the data at one point in time, where larger countries host a relatively greater share of an IRS-MC industry. In contrast, the dynamic HME describes the evolution of production structure within one country over time and is defined as:

$$\frac{ds_{ni}}{ds_{Ei}} \frac{s_{Ei}}{s_{ni}} > 1 \tag{10}$$

where ds_{Ei} is a small variation satisfying $ds_{Ei} > 0$ and $\sum_j ds_{Ej} = 0$. Plugging in the result of differentiation of the equilibrium industry share of country *i*, $ds_{ni} = \sum_j \frac{\partial s_{ni}}{\partial s_{Ej}} ds_{Ej}$, into (10) yields an equivalent definition of the dynamic HME:

$$\sum_j \frac{\partial s_{ni}}{\partial s_{Ej}} \frac{ds_{Ej}}{ds_{Ei}} \frac{s_{Ei}}{s_{ni}} > 1$$

Our aim is to explore the presence of the dynamic HME. However, in their Proposition 3, Behrens *et al.* (2004) show that unless trade frictions are pairwise symmetric for all countries ($f_{ij} = f \ , \ \forall i \neq j$), there exists a perturbation ds_E, satisfying $ds_{Ei} > 0$ and $\sum_j ds_{Ej} = 0$, for which the dynamic HME may not arise. The result is due to what the authors call 'HME shadow': redistribution of expenditure shares may be such that not only country *i* gains expenditure, but also some other country *j* gains expenditure and thus manages to attract more firms than *i*. This effect can be so strong that the share of production in *i* may overall decrease, despite an increase in country's demand for industry's output. It is of note that an increase in foreign expenditure share is only a necessary condition for the HME shadow to come into force, not a sufficient one.

To see the mechanics of the HME shadow, we consider a three country case of the model. Using the fact that $\sum_{i=1}^{3} s_{Ei} = 1$, equation (9) takes the following form for country 1:

$$s_{n1} = \left(\frac{f_{11}}{\sum_l f_{1l}} - \frac{f_{13}}{\sum_l f_{3l}} \right) s_{E1} + \left(\frac{f_{12}}{\sum_l f_{2l}} - \frac{f_{13}}{\sum_l f_{3l}} \right) s_{E2} + \frac{f_{13}}{\sum_l f_{3l}} \qquad (11)$$

We assume that $f_{ij} > f_{il} f_{lj}$ [6] and $f_{12} > f_{13}$, so that country 3 is a more distant partner of country 1 than country 2. Suedekum (2006) shows that $\frac{f_{11}}{\sum_l f_{1l}}$ is strictly positive and, while both $\frac{f_{12}}{\sum_l f_{2l}}$ and $\frac{f_{13}}{\sum_l f_{3l}}$ are strictly negative, $\frac{f_{12}}{\sum_l f_{2l}}$ is a stronger negative than $\frac{f_{13}}{\sum_l f_{3l}}$. In this case, the coefficients of s_{E1} and s_{E2} in equation (11) are positive and negative, respectively. Then an expenditure shock that increases s_{E1} and s_{E3}, but decreases s_{E2}, will enhance the effect that the increase in country 1 expenditure share has on its share of production. On contrary, the positive effects on industry share in country 1 will be subdued if increase in s_{E1} is paralleled by an increase in s_{E2} and an offsetting decrease in s_{E3}. Depending on the actual level of cross-country expenditure shifts and the degree of trade freeness, country 1 may even lose industry.

Multi-country Krugman (1980) model also shows that the dynamic HME unambiguously holds in case of a positive exogenous expenditure shock in one country only. Yet again, in the real world all expenditure shares change between two periods in time, leaving ground for the HME shadow to occur. So, relying on (10) as a discriminating criterion for the existence of monopolistically competitive industries is not appropriate in empirical investigation.

Albeit no clear predictions can be based on the dynamic HME, the model does provide a valid hypothesis test. The elasticity of country's production share with respect to changes in its expenditure share in (10) can be decomposed into the direct and indirect components:

[6] In what follows we always assume that it is cheaper to export goods directly to the destination, rather than via third countries; i.e. the triangle inequality $t_{ij} < t_{il} t_{lj}$, or equivalently $f_{ij} > f_{il} f_{lj}$, always holds.

$$\frac{ds_{ni}}{ds_{Ei}}\frac{s_{Ei}}{s_{ni}}=\sum_j\frac{\partial s_{ni}}{\partial s_{Ej}}\frac{ds_{Ej}}{ds_{Ei}}\frac{s_{Ei}}{s_{ni}}=\frac{\partial s_{ni}}{\partial s_{Ei}}\frac{s_{Ei}}{s_{ni}}+\sum_{j\neq i}\frac{\partial s_{ni}}{\partial s_{Ej}}\frac{ds_{Ej}}{ds_{Ei}}\frac{s_{Ei}}{s_{ni}} \tag{12}$$

The first term of (12) is the partial derivative of a change in country's expenditure share on its industry share and represents the direct effect; the second term aggregates all the indirect third country effects. In accordance with Lemma 3 (of Appendix 5) in Behrens *et al.* (2004), the direct effect is always greater than one, provided that trade costs matrix is positive definite:

$$\frac{\partial s_{ni}}{\partial s_{Ei}}\frac{s_{Ei}}{s_{ni}}>1 \tag{13}$$

Condition (13) signifies the existence of the direct dynamic HME, which always holds in a multi-country Krugman (1980) model. This valuable property can be employed to test whether an industry is characterized by IRS-MC.

To conclude, the positive impact of increase in expenditure share on country's share of production may be weakened if redistribution in expenditure shares is such that there is an increase in expenditure share in at least one foreign economy. Even more so, the total effect may not only be less than proportional, but also negative. This suggests that a valid hypothesis test should only be defined in terms of the partial effect of home's expenditure share changes isolated from adjustments in foreign markets.

In the next section we build upon these predictions to construct the empirical specification. In many cases we will resort to a three-country version of the model to determine the comparative statics analysis and the expected coefficient signs. Of course, it is important to recognize that a three-country analysis may be insufficient to account for a plethora of effects triggered by N^{th}-country adjustments[7]. But even with linear well specified equilibrium conditions of the only available *N*-country model developed in Behrens *et al.* (2004), it is impossible to derive clear and general results regarding, for instance, the impact of foreign expenditure perturbations on home's production because the outcome depends on the whole structure of trade costs matrix (see Behrens *et al.* (2005b)). Notwithstanding this, we believe that three-country exercise gives a good sense of what dynamics may be present in a more than two-country framework and we do expect some of the mechanisms to extend to more realistic scenarios with a larger set of countries. It is likewise important to emphasize that the direct dynamic HME survives irrespective of the number of countries.

4 Empirical Implementation

4.1 Empirical Strategy and Definition of Variables

To formulate our empirical specification we rely on the market equilibrium conditions (8) re-formulated for time period *t* and industry *k* individually:

[7] See for example Behrens *et al.* (2005b) who analyze Krugman (1980) model with four countries and show that there exists a range of trade costs values for which 'fourth-country effects' overthrow the results of a three-country model.

$$s_{n,t}^{k} = \left[(diag((\Phi_t^k)^{-1}1)\Phi_t^k \right]^{-1} s_{E,t}^{k} \tag{14}$$

where $s_{n,it}^{k}$ is the share of output in country *i* in industry *k* at time *t*, $s_{E,it}^{k}$ is the share of expenditure in country *i* in industry *k*, $s_{n,t}^{k} = \begin{pmatrix} s_{n,1t}^{k} \\ s_{n,2t}^{k} \\ \vdots \\ s_{n,Nt}^{k} \end{pmatrix}$, $s_{E,t}^{k} = \begin{pmatrix} s_{E,1t}^{k} \\ s_{E,2t}^{k} \\ \vdots \\ s_{E,Nt}^{k} \end{pmatrix}$ and $\Phi_t^k = \begin{pmatrix} f_{11t}^k & f_{12t}^k & \cdots & f_{1Nt}^k \\ f_{21t}^k & f_{22t}^k & \cdots & f_{2Nt}^k \\ \vdots & \vdots & \ddots & \vdots \\ f_{N1t}^k & f_{N2t}^k & \cdots & f_{NNt}^k \end{pmatrix}$. Φ_t^k is assumed to be symmetric with $f_{ijt}^k = f_{jit}^k$ and $f_{iit}^k = 1$.

Equation (14) can be expressed for each country *i* as:

$$s_{n,it}^{k} = \sum_j \frac{f_{ijt}^{k}}{\sum_l f_{jlt}^{k}} s_{E,jt}^{k} \tag{15}$$

with f_{ijt}^k denoting the co-factor of f_{ijt}^k, as before.

We can further break (15) into two components stripping out the effect of domestic expenditure share and the aggregate effect of the rest of the world demands[8]:

$$s_{n,it}^{k} = \frac{f_{iit}^{k}}{\sum_l f_{ilt}^{k}} s_{E,it}^{k} + \sum_{j \neq i} \frac{f_{ijt}^{k}}{\sum_l f_{jlt}^{k}} s_{E,jt}^{k}$$

Defining the variable measuring the access to foreign markets as:

$$FMA_{it}^{k} = \sum_{j \neq i} \frac{f_{ijt}^{k}}{\sum_l f_{jlt}^{k}} s_{E,jt}^{k}$$

we can readily construct a testable equation of the evolution of production in country *i*:

$$s_{n,it}^{k} = b_o^k + b_1^k s_{E,it}^{k} + b_2^k FMA_{it}^{k} + e_{it}^{k} \tag{16}$$

where e_{it}^k is the stochastic error term. This specification goes hand in hand with our argument of isolating the domestic expenditure share from third countries demands in the regression due

[8] Using matrix notation, this amounts to rewriting the RHS of (14) as a sum of 2 terms, where the first one is the multiplication of $s_{E,t}^{k}$ and the diagonal of $((diag((\Phi_t^k)^{-1}1)\Phi_t^k)^{-1}$ and the second is the multiplication of $s_{E,t}^{k}$ and $((diag((\Phi_t^k)^{-1}1)\Phi_t^k)^{-1}$ with the diagonal set to zero.

to the potential 'HME shadow', which dampens some or all positive effects of home's expenditure share rise with an ultimate result that an over-proportional effect on the share of domestic industry may not be discernible once changes in all expenditure shares are accounted for.

Denoting by x_{jt}^{k} the quantity produced by industry *k* in country *j*, share of country *i*'s production in good *k* becomes:

$$s_{n,it}^{k} = \frac{x_{it}^{k}}{\sum_{j}^{N} x_{jt}^{k}}$$

Given that real quantities produced are not observed, we proxy them by the volumes of production: $x_{jt}^{k} = X_{jt}^{k} / p_{jt}^{k}$, where X_{jt}^{k} and p_{jt}^{k} correspond to the value of production and its price, respectively. Similarly, share of demand in industry *k* in country *i* is defined as:

$$s_{E,it}^{k} = \frac{E_{it}^{k} / p_{it}^{k}}{\sum_{j}^{N} E_{jt}^{k} / p_{jt}^{k}}$$

where E_{jt}^{k} is country *j*'s domestic demand for good *k*. Domestic expenditure E_{jt}^{k} is calculated by subtracting country's net exports from production.

To construct the FMA_{it}^{k} we resort to trade costs estimated in a gravity model. The gravity equation we choose to work with substitutes origin and destination fixed effects for country-specific variables[9]. To this end, the value of bilateral trade flows depends on exporting and importing country characteristics and the bilateral trade frictions:

$$\begin{aligned}\ln(X_{ijt}^{k}) = d_{0t}^{k} + \sum_{i=1}^{N} l_{it}^{k}\Lambda_{i} + \sum_{j=1}^{N} m_{jt}^{k}\mathrm{M}_{j} + \\ d_{1t}^{k}\ln(dist_{ij}) + d_{2t}^{k} contig_{ij} + d_{3t}^{k} comlang\_off_{ij} + d_{4t}^{k} EU_{ijt} + u_{ijt}^{k}\end{aligned} \qquad (17)$$

where X_{ijt}^{k} is the value of exports from country *i* to partner *j* in industry *k* at time *t* $(j \neq i)$. Λ_{i} is the exporter-specific fixed effect which is a dummy equal to one when country *i* is exporter and zero otherwise and M_{j} is analogously defined importer-specific fixed effect; $dist_{ij}$ is the distance between *i* and *j*, $contig_{ij}$ is a dummy equal to one if countries *i* and *j* share a common border, $comlang\_off_{ij}$ is a dummy equal one if *i* and *j* share a common official language and EU_{ijt} is a dummy equal one if countries *i* and *j* are members of the European Union at time *t*[10] and u_{ijt}^{k} is a stochastic error term. The generality of this approach mitigates the problem of omitted variables bias as it allows to account for a complete spectrum of country and partner specific effects, observable or not, including relative prices – the so-called 'multilateral

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[9] As in Chen (2004), Hillberry and Hummels (2002), Hummels (1999), Redding and Venables (2004) and Rose and van Wincoop (2001).

[10] From 1995 onwards, all countries in the analysis became members of the EU; the EU_{ijt} is thus dropped from estimation for 1995-1999 year range.

resistance' term[11], trade policies common to all trade partners for a particular exporting country or common across all suppliers of an importing country and market sizes.

The gravity model is estimated separately for each industry and year and the coefficients from this regression are then used to compute bilateral trade barriers:

$$f_{ijt}^{k} = (dist_{ij})^{d_{1t}^{k}} e^{d_{2t}^{k} contig_{ij} + d_{3t}^{k} comlang\_off_{ij} + d_{4t}^{k} EU_{ijt}}$$

To determine whether the direct dynamic HME is prevalent in the data, we estimate (16) and test the hypothesis that $\frac{\partial s_{n,it}^{k}}{\partial s_{E,it}^{k}} \frac{s_{E,it}^{k}}{s_{n,it}^{k}} = b_{1}^{k} \frac{s_{E,it}^{k}}{s_{n,it}^{k}} > 1$. Interpreting the coefficient on the foreign market access is somewhat trickier, as the variable is a composite index of third countries demands and bilateral trade frictions. Therefore, to know what the sign of b_{2}^{k} should be, we need to determine whether changes in the underlying variables affect the FMA_{it}^{k} and the domestic share of production in a similar manner. It is easiest to illustrate the effects in a three country case, but we assume the same holds in settings with more nations, at least under certain parameter values.

To see the outcome of expenditure reallocation from one trading partner to another, we note that for country 1, for example, we have the following expression:

$$FMA_{1t}^{k} = \frac{f_{12t}^{k}}{\sum_{l} f_{2lt}^{k}} s_{E,2t}^{k} + \frac{f_{13t}^{k}}{\sum_{l} f_{3lt}^{k}} s_{E,3t}^{k}$$

Provided that $f_{ijt}^{k} > f_{ilt}^{k} f_{ljt}^{k}$ holds, Suedekum (2006) show that both $\frac{f_{12t}^{k}}{\sum_{l} f_{2lt}^{k}}$ and $\frac{f_{13t}^{k}}{\sum_{l} f_{3lt}^{k}}$ are strictly negative and $\frac{f_{12t}^{k}}{\sum_{l} f_{2lt}^{k}}$ is a stronger negative than $\frac{f_{13t}^{k}}{\sum_{l} f_{3lt}^{k}}$ if $f_{12t}^{k} > f_{13t}^{k}$ and vice versa. Therefore, a reallocation of expenditure from a more distant (closer) partner towards a closer (more distant) one reduces (enhances) the foreign market access variable and the share of domestic industry. By construction, the effect is identical on both variables and, as long as trade costs are correctly estimated, b_{2}^{k} should be equal to one. However, to the extent that trade costs are not precise, the coefficient b_{2}^{k} may take positive or negative values. Assuming that relative trade costs are correctly estimated, i.e. a more distant partner is estimated as a more distant one, we expect a positive b_{2}^{k} in (16). It is also worth mentioning that a reallocation of expenditure between equidistant partners will not affect domestic industry in anyway, because $\frac{f_{12}^{k}}{\sum_{l} f_{2l}^{k}} = \frac{f_{13}^{k}}{\sum_{l} f_{3l}^{k}}$, if $f_{12}^{k} = f_{13}^{k}$. The FMA_{1t}^{k} variable also takes value of zero in this case[12].

[11] See Anderson and van Wincoop (2003)

[12] Additionally, when countries are equidistant ($f_{12t}^{k} = f_{13t}^{k} = f_{23t}^{k}$), all countries host the same amount of industry and multilateral reduction in trade barriers plays no role in the location of production.

It is also straightforward to see that an increase (decrease) in foreign expenditure share which comes along with a decrease (increase) in the domestic expenditure share depresses (enhances) the share of domestic industry further. It also decreases (increases) the foreign market access variable. Then, if trade costs are properly estimated, b_2^k should not be different from unity; otherwise we should expect it to be positive.

To determine the effects of changes in trade costs we assume that all expenditure shares are equal, so that all locational advantages derive from differences in trade costs only. We simulate two scenarios of f_{ijt}^k changes under the assumption that $f_{13t}^k = f_{23t}^k$ and the requirements that $f_{ijt}^k > f_{ilt}^k f_{ljt}^k$ holds and $s_{n,it}^k$ is positive. First we assume that f_{12t}^k increases, while $f_{13t}^k = f_{23t}^k$ remains constant. As countries 1 and 2 become closer to each other relative to country 3, they attract a higher share of industry at the expense of region 3, as expected. The effect on the foreign market access variable for countries 1 and 2 may be twofold depending on the initial simulation values of trade costs f_{ijt}^k: as f_{12t}^k increases, the variable either always decreases or first increases for lower values of f_{12t}^k and then decreases for higher values of f_{12t}^k. The FMA_{3t}^k remains unchanged. Second, when $f_{13t}^k = f_{23t}^k$ increases with f_{12t}^k fixed, the share of industry in countries 1 and 2 first increases and then decreases with an opposite effect on country's 3 industry. The foreign market access variable declines in all locations.

Although the three-country analysis simplifies the reality, it is apparent that changes in trade costs can affect the domestic share of industry and the market access variable in the same or opposite directions. Combining these with the effects of expenditure shares changes, the coefficient b_2^k will be determined by which changes prevail and may be positive, negative or zero.

4.2 Data Sources

Our empirical analysis concentrates on the EU countries. Data on production, bilateral trade flows and prices at exporter's level come from CEPII database (see Mayer and Zignago, 2005). The dataset was compiled from various sources and includes compatible trade and production data for 26 manufacturing industries (3-digit level of ISIC Rev. 2 classification) for a large number of countries over 1976-2001. Data on total exports and imports, as well as input-output tables, at the compatible 3-digit industry level are taken from Trade and Production 1976-1999 database made available by Nicita and Olarreaga (2001) at the World Bank. Information on measures of bilateral geographical characteristics, such as bilateral distances, existence of common border and official language, are obtained from CEPII's distance measures dataset made available by Godefroy *et al.* (2004)[13]. Due to numerous missing values, the final sample we work with includes 13 EU countries and 24 industries for 1979-1999[14].

[13] For definitions of *dist*, *contig* and *comlang_off* variables, see www.cepii.fr/anglaisgraph/bdd/distances.pdf Database is available at www.cepii.fr
[14] A detailed description of country and industry sets are given in Appendix1. The resulting dataset is quite complete. Approximately 0.2% of observations for production was missing or had implausible magnitude in

4.3 Estimation of the gravity model

Bilateral exports are equal to zero for some observations in the sample. We therefore add one to all bilateral trade flows before taking logarithms[15]. For large values of flows, $\ln(1+X_{ijt}^{k}) \cong \ln(X_{ijt}^{k})$, while for those observations with $X_{ijt}^{k}=0$ adding one means that $\ln(1+X_{ijt}^{k})=0$. The model can be then estimated by a Tobit procedure.

We begin by running trade equation (17) for each 3-digit industry pooled over 1979-1999 years. Pooling the data across years allows us to increase the degrees of freedom and assess the average trade barriers effects in each industry. The results are reported in Table 1. The model provides a good fit to the data in all industries and the signs and magnitudes of the estimated coefficients agree with economic priors. The coefficient on distance is always negative and has a significant amount of variation across sectors, ranging from -0.38 for beverages (ISIC 313) to -1.33 in petroleum refineries (ISIC 353). Coefficients on EU, contiguity and common official language dummies are also in line with expectations, with the exception of the tobacco industry (ISIC 314) for which contiguity is negative, but statistically insignificant, and the common language and adjacency display the largest coefficient values. Imposing identical coefficients across years is restrictive and so we estimate gravity model separately for each industry and year. The time-variant industry-specific estimates of trade barriers are used for the construction of foreign market access variable in the next step[16].

4.4 Estimation of the HME Equation and Empirical Issues

Generally speaking, production structure can be considered at three different levels of aggregation: varieties, goods and industries. Varieties constitute the most disaggregated level of production and are produced subject to increasing returns to scale within a Dixit-Stiglitz monopolistic competition sector. At the intermediate level, there are goods. Within 'new economic geography' framework, a good consists of a number of varieties, whereas in a comparative advantage world, good is just a simple homogeneous commodity. Industries represent the broadest level of production, each of which is comprised of a number of goods produced using the same technology. With these in mind, the HME will be expected to arise at the goods level.

To identify the true production structure, it is therefore important to use data at the correct level of aggregation. Yet, the division between varieties, goods and industries is not as evident in practice as it is in theory and this is why it becomes a matter of judgement and data availability. The most complete disaggregated data available is 3-digit level of ISIC Rev. 2 classification and we assume that at this level, production may be monopolistically competitive.

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some years. We used figures from the UNIDO Industrial Statistics Database 2001 3-digit ISIC to substitute for missing values. Where this was not possible, we used average value of the nearest available years.

[15] This means adding $1000, since bilateral trade data is expressed in thousands of dollars.

[16] We focus on unadjusted Tobit coefficients as the number of zero trade flows is very small making the adjustment factor close to one and hence unimportant. For example, the industry 314 has the largest number of zeros but the adjustment factor ranges from 0.97-0.99 depending on the year (see Wooldridge (2002)).

We estimate a pooled version of model (16) by pooling the dynamic data on the evolution of production structure for 1979-1999 over thirteen EU countries. Our dataset allows us to estimate the HME equation for each 3 digit industry separately with 260 observations given that explanatory variables are lagged. We restrict the coefficient on domestic expenditure share to be the same across countries, following our belief that if the industry is IRS-MC in one location, it should also be such in another. To simplify matters, we calculate $b_1^k \frac{s_{E,it}^k}{s_{n,it}^k}$ at sample means, which by construction of the model means that $\bar{s}_{n,i}^k = \bar{s}_{E,i}^k$ over the whole set of cross sections in the pool, rendering $\frac{\partial s_{n,it}^k}{\partial s_{E,it}^k}\frac{\bar{s}_{E,i}^k}{\bar{s}_{n,i}^k} = b_1^k$. Consequently, our search for IRS-MC industries reduces to checking whether b_1^k is statistically larger than one. With regard to the foreign market access variable (FMA_{it}^k), we must allow the coefficient b_2^k to differ for each cross section *i*, since identical changes in underlying variables yield dissimilar outcomes, in terms of magnitude and direction, on the dependent variable in various countries. Before presenting the results, several further issues warrant discussion.

The model is estimated by OLS. The error term e_{it}^k is likely to be heteroskedastic because larger countries tend to have higher production levels in all goods, causing positive correlation between variance of errors and country size. We thus report and base our hypothesis tests on White-type robust standard errors[17]. In addition, the market access variable is a generated regressor, whose presence, according to Pagan (1984), may lead to bias in some or all estimated coefficients and invalid OLS standard errors. In such cases, empirical literature suggests to resort to bootstrap techniques for the reason that there exists no analytically derived formula to obtain unbiased and consistent estimators[18]. Yet, bootstrap procedure rests on the assumption that the observed distribution of the sample is a good estimate of the underlying population distribution. The accuracy of the method to estimate the sampling distribution depends on the number of replications in the bootstrap and the number of observations in the original sample. We apply bootstrap technique, but we remain cautious about the results given that the set of countries in the sample may not be very representative of the true population. We resample the data 3000 times with replication and re-estimate coefficients and their standard errors. According to Efron (1982), the bias is not a serious concern unless the estimated bias is larger than 25% of the standard error[19]. Since in none of the cases the estimated bias exceeds the threshold, we retain OLS coefficient estimates and confirm our significance tests using bias-corrected bootstrapped confidence intervals.

In our main specification, domestic demand for industry's output is calculated by subtracting net exports from production. This creates a simultaneity problem if contemporaneous demand is used in the regression. Taking lagged values of domestic demand share will attenuate this problem. This is also more realistic, because contrary to theoretical assumptions where entry/exit of firms is instantaneously driven by changes in demand, we allow changes in demand to affect production with a time lag – time needed to set up production facilities. Unfortunately, there is no guidance on what should be the correct time lag at each 3-digit

[17] See Wooldridge (2002)
[18] See for example Brülhart and Trionfetti (2005) and Redding and Venables (2004)
[19] Estimated bias is defined as the difference between the average of bootstrapped statistic and the observed statistic.

industry levels. Thus we decide to take one year lag for all explanatory variables in the estimation.

Another potential for simultaneity between demand and production lies in the fact that production of good *k* may use the same good *k* as intermediate input or other intermediate goods that in turn use good *k* as intermediate, meaning that higher production of *k* will necessarily imply larger demand. To tackle this problem, Brülhart and Trionfetti (2005) suggest using expenditure from sources that use industry's output for final consumption only, excluding expenditure from those sources that use the output as intermediate inputs. From available input-output tables we compute net final demand as:

$$\begin{aligned} Final\_E_{it}^{k} &= x_{it}^{k} * (1 - s\_int\_sales_{it}^{k}) \\ &- exports_{it}^{k} + imports_{it}^{k} - (x_{it}^{k} * s\_int\_imp_{it}^{k} * s\_int\_out_{it}^{k}) \end{aligned}$$

where $s\_int\_sales_{it}^{k}$ is the share of output sold to other sectors as intermediate inputs, $s\_int\_imp_{it}^{k}$ is the share of intermediates used that is imported and $s\_int\_out_{it}^{k}$ is the own sector intermediates needed to produce one unit of output value. Again, we use lagged values of share of final demand in the analysis.

Nicita and Olarreaga (2001) aggregated the input-output tables to reflect the 3-digit ISIC level. The original data comes from Global Trade Analysis Project (GTAP) database version 4, which utilized data from early 90's in constructing the tables. It should be noted that while we do not expect the input-output intensities to change significantly over time, it is a concern that the coefficients are not year specific. Yet, to our knowledge, there exists no other database that provides input-output tables compatible with ISIC classification on a yearly basis.

5 Econometric Results

5.1 The HME in pooled regressions

We start by presenting results for pooled estimations. While it would be too restrictive to run pooled estimation over all industries in the sample, it is fairly reasonable to pool the data across 3-digit industries that fall into the same 2-digit category. Pooling allows us to increase the number of observations and see whether the HME could on average describe the industrial structure within 2-digit classification. The estimation output in Table (2) shows that the IRS-MC paradigm is present in textiles and clothing (ISIC 32) and engineering (ISIC 38) sectors, in which the coefficient on the share of domestic demand is larger than one. However, the HME is statistically significant only in textiles and clothing sector (ISIC 32) in specifications with total demand.

We should acknowledge the fact that our results are susceptible to too much structure implied in the pooled regressions. Imposing equal coefficients across industries contradicts the basic premise of our research that sectors differ with respect to their production patterns. This is why the main focus of our empirical exercise is on the individual 3-digit industry level.

5.2 The HME in individual industry regressions

The results for individual 3-digit industry runs appear in Tables (3) and (4). Overall the fits are reasonable, with R^2 between 0.66 and 0.99. A more than proportional relation between demand and production shares appears to hold in eleven industries[20] and the results are robust to both definitions of demand. Specifically, strong evidence in favour of the HME production structure is present in seven industries "textiles" (ISIC 321), "leather and products of leather, leather substitutes and fur, except footwear and wearing apparel" (ISIC 323), "other chemicals" (ISIC 352)[21], "plastic products" (ISIC 356), "machinery except electrical" (ISIC 382), "transport equipment" (ISIC 384) and "professional and scientific equipment" (ISIC 385), for which the coefficient on the share of domestic demand is statistically larger than unity in all specifications. IRS-MC pattern is somewhat debatable for "rubber products" (ISIC 355), "fabricated metal products, except machinery and equipment" (ISIC 381) and "electrical machinery apparatus, appliance and supplies" (ISIC 383), in that the significance of an over-proportional relationship is inconsistent across specifications. For the industry "glass products" (ISIC 362) an over-proportional pattern appears in the estimated coefficient, but not in the statistical significance[22].

Third countries demands matter for all the identified increasing returns industries. As expected the coefficient signs on the foreign market access variable differ across countries and in the majority of cases they are statistically significant at 95% level. Access to foreign markets is also important on the overall basis: using a standard Wald test, the null hypothesis that country specific coefficients of the market access are altogether equal to zero is easily rejected at the 99% confidence level.

It is reassuring that industries such as textiles, leather, machinery and engineering display the HME. These industries are the most common examples of monopolistically competitive sectors and have repeatedly supported this paradigm in the empirical literature. What is also remarkable is the fact that we generally find IRS-MC characteristics in industries under the same 2-digit sector heading (ISIC 32, ISIC 35 and ISIC 38).

6 Sensitivity analysis

6.1 Alternative Specifications of *FMA* Variable

It might be useful to provide some robustness checks for the results presented so far. Following methodology developed in the literature, a variable that measures ***i***'s market access to third countries can be constructed as a weighted average of trade partners' share of demands[23]:

[20] ISIC 321, ISIC 323, ISIC 352, ISIC 355, ISIC 356, ISIC 362, ISIC 381, ISIC 382, ISIC 383, ISIC 384, ISIC 385

[21] 'Other chemicals' industry includes manufacture of paints, varnishes, laquers, drugs and medicine as well as soap, perfumes and cosmetics.

[22] Bias corrected bootstrap confidence intervals support the results in majority of the cases (the results are not included in the tables but are available on demand).

[23] See for example Davis and Weinstein (1998 and 2003), Redding Venables (2004) and Leamer (1997).

$$FMA_{it}^{k} = \sum_{j \neq i} f_{ijt}^{k} s_{E,jt}^{k} \quad (18)$$

where f_{ijt}^{k} is a measure of bilateral trade freeness between *i* and *j*, that includes a variety of bilateral trade frictions in addition to distance. Even though market access variable is not based on clear cut theoretical foundations, it has been frequently used in the literature to account for the effect of distance on demand. As in Davis and Weinstein (1998 and 2003), the weights f_{ijt}^{k} correspond to estimated trade costs from a gravity model, but rather than using only distance coefficients, we augment the specification of weights with coefficients on all bilateral trade barriers that are included in the gravity model.

A slightly different specification of measuring access to markets was put forward by Redding and Venables (2004). Given the fact that exporter and importer specific fixed effects absorb all country and partner specific characteristics, market access variable can be defined as:

$$FMA_{it}^{k} = \sum_{j \neq i} f_{ijt}^{k} e^{m_{jt}^{k} M_{j}} \quad (19)$$

The use of importer dummy allows controlling for all factors that determine countries' propensities to demand imports from all partners. As such, in addition to capturing bilateral trade costs, (19) incorporates partner *j*'s demand effects and its unilateral trade policy characteristics that are common across all its suppliers[24]. We resort to both measures to check the robustness of our results.

As above, we allow the coefficient on the foreign market access variable, b_2^k, to vary across cross sections. Note however that in contrast to the empirical specification in Section 4.1 it is expected to have an opposite sign. Here, a reallocation of expenditure from a more distant country towards the closer one has opposite effects on the domestic industry share and the foreign market access variable constructed according to (18) and (19). More precisely, if country 3 is a more distant partner than country 2, $f_{13t}^{k} < f_{12t}^{k}$, then the increase in $s_{E,2t}^{k}$ will overweight the decrease in $s_{E,3t}^{k}$ driving FMA_{1t}^{k} higher, since now $FMA_{1t}^{k} = f_{12t}^{k} s_{E,2t}^{k} + f_{13t}^{k} s_{E,3t}^{k}$. $s_{n,1t}^{k}$ however decreases. Likewise, an expenditure shift from a closer to a more distant partner has a positive impact on domestic industry share and a negative one on the foreign market access variable. It was also shown that an increase in foreign expenditure share that counterbalances a decrease in domestic expenditure share exacerbates the negative effect on domestic industry share comparing to the result from a decrease in domestic expenditure only. This increase however boosts the market access variable by construction. In all these cases the coefficient b_2^k ought to be negative. Also note that a reallocation of expenditure between equidistant partners will not affect domestic industry in any way, so b_2^k may well be zero. Our discussion above also makes it clear that a reduction in trade barriers may have a positive, negative or zero effect on the domestic share of industry, while it always has a positive effect on the market access variable. As a consequence, the relationship between FMA_{it}^{k} and the dependent variable $s_{n,it}^{k}$ is not restricted in any way and the estimated coefficient b_2^k can be greater, smaller or equal to zero.

[24] Note that the use of import dummy incorporates the demand effects, so there is no need to explicitly account for expenditure shares of foreign countries in (19).

Finally, we resort to FE estimation where external market access and other country specific characteristics are proxied by countries' fixed effects. In this way we can avoid the necessity of constructing the market access variable to account for third countries effects.

6.2 Econometric Results

6.2.1 The HME in individual industry regressions

The estimation of (16) with FMA_{it}^{k} defined according to (18) and (19) provides vigour to the conclusions drawn in Section 5.2. The results are displayed in Tables (6)-(9) and continue to provide support for the HME in eleven industries that we identified previously. The coefficients on the market access are globally statistically significant at the individual level and as a subset and display an opposite sign compared to our main specification in Tables (3) and (4), as expected.

The results appear robust across various specifications of the foreign market access variable. With the exception of "glass products" (ISIC 362), "fabricated metal products, except machinery and equipment" (ISIC 381) and "electrical machinery apparatus, appliance and supplies" (ISIC 383) the point estimates for coefficients on domestic demand in eight sectors are in excess of one in all four specifications. The significance tests based on White-type robust standard errors suggest that the HME structure unambiguously matters for six out of 24 industries and depending on the definition of variables for another four industries.

The six sectors that exhibit a statistically significant HME (at 95% or 90% level) in all four specifications include "textiles" (ISIC 321), "leather and products of leather, leather substitutes and fur, except footwear and wearing apparel" (ISIC 323), "plastic products" (ISIC 356), "machinery except electrical" (ISIC 382), "transport equipment" (ISIC 384) and "professional and scientific equipment" (ISIC 385). We therefore conclude that the HME is unambiguously present in these industries.

Weaker support for IRS-MC production structure is found for industries "other chemicals" (ISIC 352), "rubber products" (ISIC 355), "fabricated metal products, except machinery and equipment" (ISIC 381) and "electrical machinery apparatus, appliance and supplies" (ISIC 383). In these industries the presence of the HME depends on the regression. In "other chemicals" (ISIC 352) and "rubber products" (ISIC 355) the correlation between demand and production is always above one, but is not statistically significant in all specifications. For "fabricated metal products" (ISIC 381) and "electrical machinery" (ISIC 383) sectors, only specifications with the share of total demand do not reject the HME test. It is of note though that in "fabricated metal products" (ISIC 381) the coefficient b_{1}^{k} is statistically insignificant in the net final demand specification.

The fixed effects estimation is presented in Table (10). The results confirm our findings for "textiles" (ISIC 321) and "leather" (ISIC 323) industries. The discrepancies with the above results may be due to the fact that fixed effects which proxy for the external market access, force it to be constant over time. This is not the case in the reality because factors that determine access to third markets, i.e. foreign expenditure shares and trade costs, are changing from one period to another. Therefore we take results from the fixed effects estimation with a grain of salt.

As a final step of our empirical investigation we estimate the models with variables expressed in values instead of volumes. The reason is that price figures, which were used to construct volumes, are proxied by the relative price levels of country's GDP to the United States. This creates potential for measurement error, because the price figures do not reflect the true exporters' prices at the aggregation level used in the analysis. Tables (11) – (18) summarize the results. In general, the use of values does not qualitatively alter the results.

To conclude, we compare our results with the previous work in this area. The summary of findings appears in Table 19. The studies are similar in that they use 3-digit ISIC level of aggregation or pool 4-digit industries within 3-digit classification, though the country sets, time periods and testing equations are different. The concordance with the literature is quite substantial. Our predictions for the HME sectors strongly agree with Behrens *et al.* (2005a) and Brulhart and Trionfetti (2005) for all engineering sectors (ISIC 381-385), as well as other chemicals, rubber and plastic products. The overlap with Davis and Weinstein (2003) is slightly more limited. Concurring to our results, the authors find significant support for IRS-MC paradigm in manufacturing of textiles, leather and fabricated metal products. Importantly, Brülhart and Trionfetti (2005) also detect the HME in the textiles industry. Crozet & Trionfetti (2007) confirm our findings for electrical machinery, transport equipment and other chemicals sectors. All in all, it is encouraging to observe such a good overlap, especially with Behrens *et al.* (2005a) and Brülhart and Trionfetti (2005) whose econometric specifications account for multi-country framework.

7 Conclusions

Since the seminal work by Davis and Weinstein (1996, 1998, 2003) there have been a few empirical studies that examined the importance of the HME in industrial production. The analysis is usually hindered by stringent data availability constraints and by the complexity of new economic geography models. In addition, the theoretical world lacks multi-country models, whereas two-country versions are unable to portray the whole diversity of cross-country effects present in the real multi-country world. More importantly, the results for the traditionally defined HME may not be innocuous. As 'third country' effects come into force, the positive outcome of a pick up in domestic expenditure may not be sufficient to increase country's production in a more than proportional manner. The paper aimed to overcome these limitations and introduce a theory-based geographical structure into the empirical analysis.

Based on the *N*-country version of Krugman (1980) model analysed in Behrens *et al.* (2004), we revised the principles of the HME testing for cases that involve more than two countries and proposed three ways of specifying an empirical model to estimate the evolution of production structure in a multi-country world. The common feature in all approaches is that in order to be able to discern the HME in the data, domestic expenditure on the good ought to enter the estimation separately from the variable that aggregates trade partners' demands. This is necessary because swings in third country expenditures may sweep away an over-proportional effect that local demand shifts have on country's production. The models only differ in the way foreign countries demands are combined into a unique measure of market access. The first one draws upon the Behrens *et al.* (2004) model. The other two formulations are based on specifications used in Davis and Weinstein (1998 and 2003) and Redding Venables (2004). Comparative statics analyses are based on three-country version of the theoretical model, which despite some loss of generality, pin-point a variety of mechanisms which hold in a multi-country framework, at least under certain parameter values. This exercise allows us to determine possible signs of the correlation between the constructed aggregate measure of access to foreign markets and the domestic production.

We examined data for a set of thirteen EU countries in 1979-1999 for a broad range of industries classified according to 3-digit ISIC level. Our findings highlight the presence of the HME in eleven sectors used in the study. The IRS-MC mechanisms appear to govern production structure in industries such as textiles, leather, chemical, rubber and plastic products, fabricated metal products as well as engineering sectors. The allocation of industries looks plausible as they constitute the most usual examples of increasing returns sectors. The results also provide strong evidence for the role and importance of demand coming from foreign markets and the evolution of trade policies among all trade partners. Finally, we find a fair amount of overlap in the HME industries identified in this study with the findings of previous literature.

Table 1: Trade Equation

Time period: 1979-1999

Dependent Variable: ***X_ij*** (value of exports from country *i* to partner *j*)

INDUSTRY	*ln(dist)*	*contig*	*comlang_off*	*EU*	*R-squared*	*Log-likelihood*	*Left-censored obs*	*Uncensored Obs*	*Observations*	*Estimation*
311	-0.80* (0.04)	0.56* (0.05)	1.18* (0.08)	1.26* (0.04)	0.87		0	3276	3276	OLS
313	-0.38* (0.07)	0.27* (0.09)	1.70* (0.12)	1.60* (0.07)		-5609.26	34	3242	3276	Tobit
314	-1.12* (0.12)	-0.19 (0.16)	3.37* (0.25)	2.31* (0.12)		-6429.3	675	2601	3276	Tobit
321	-0.51* (0.04)	0.33* (0.06)	1.21* (0.07)	0.78* (0.04)	0.83		0	3276	3276	OLS
322	-0.67* (0.07)	0.56* (0.08)	1.15* (0.12)	1.03* (0.07)		-5351.77	7	3269	3276	Tobit
323	-0.77* (0.06)	0.08 (0.08)	1.54* (0.10)	0.61* (0.07)		-5257.7	10	3266	3276	Tobit
331	-0.77* (0.07)	1.01* (0.09)	0.51* (0.16)	0.66* (0.06)		-5316.18	42	3234	3276	Tobit
332	-0.87* (0.07)	0.72* (0.09)	1.45* (0.12)	1.50* (0.06)		5388.23	58	3217	3275	Tobit
341	-0.70* (0.06)	0.58* (0.07)	0.36** (0.13)	1.03* (0.05)		-4730.73	21	3255	3276	Tobit
342	-0.70* (0.06)	0.59* (0.07)	1.82* (0.10)	0.92* (0.05)		-4651.58	6	3270	3276	Tobit
351	-0.84* (0.04)	0.10*** (0.05)	0.84* (0.07)	0.68* (0.03)		-3533.78	1	3275	3276	Tobit
352	-0.46* (0.05)	0.22* (0.07)	1.18* (0.09)	1.23* (0.04)		-4588.2	1	3275	3276	Tobit
353	-1.33* (0.10)	0.40* (0.11)	2.27* (0.15)	0.12 (0.10)		-6738.72	123	3153	3276	Tobit
355	-0.59* (0.05)	0.27* (0.07)	0.77* (0.08)	1.13* (0.05)		-4598.81	11	3265	3276	Tobit
356	-0.79* (0.05)	0.36* (0.07)	1.06* (0.09)	1.29* (0.04)		-4408.36	1	3275	3276	Tobit
362	-0.91* (0.06)	0.41* (0.07)	0.78* (0.10)	0.88* (0.05)		-4597.62	37	3239	3276	Tobit
369	-0.91* (0.06)	0.53* (0.07)	0.89* (0.10)	0.84* (0.05)		-4777.23	13	3263	3276	Tobit
371	-0.87* (0.06)	0.45* (0.07)	0.55* (0.10)	0.75* (0.06)		-5081.22	12	3264	3276	Tobit
381	-0.76* (0.04)	0.35* (0.06)	1.15* (0.07)	0.98* (0.03)	0.87		0	3276	3276	OLS
382	-0.60* (0.04)	0.11** (0.05)	0.93* (0.08)	1.06* (0.03)	0.89		0	3276	3276	OLS
383	-0.45* (0.05)	0.13** (0.06)	0.91* (0.09)	1.39* (0.04)	0.83		0	3276	3276	OLS
384	-0.77* (0.06)	0.15** (0.07)	1.34* (0.10)	1.38* (0.05)		-5044.61	8	3268	3276	Tobit
385	-0.51* (0.05)	0.01 (0.06)	0.89* (0.08)	1.05* (0.03)		-3994.63	7	3269	3276	Tobit
390	-0.58* (0.04)	0.31* (0.06)	0.87* (0.08)	0.86* (0.04)		-3981.74	5	3271	3276	Tobit

Notes: *,**,***: respectively significant at 1%, 5%,10%. White/Huber-White heteroskedasticity robust standard errors in parenthesis

Table 2: Estimation of the HME Equation Pooled within 2-Digit Industries (Quantities)

Dependent Variable: *Share of Domestic Production*

Industry	Estimation of equation (25)							
	Explanatory Variables use total demand=production-net export				Explanatory Variables use net final demand (see equation (27))			
	Beta 1		**R2**	**OBS**	**Beta 1**		**R2**	**OBS**
31	0.95*	(0.01)	0.95	780	0.92*	(0.01)	0.94	780
32	1.08* >1*	(0.03)	0.90	780	1.02*	(0.04)	0.83	780
33	0.89*	(0.01)	0.92	520	0.67*	(0.02)	0.80	520
34	0.88*	(0.02)	0.94	520	0.59*	(0.04)	0.71	520
35	1.00*	(0.01)	0.97	1300	0.93*	(0.02)	0.78	1300
36	0.98*	(0.01)	0.96	520	0.61*	(0.04)	0.66	520
37	1.00*	(0.01)	0.99	260	0.72*	(0.02)	0.66	260
38	1.01*	(0.02)	0.94	1300	0.39*	(0.05)	0.55	1300
39	0.90*	(0.05)	0.92	260	0.41*	(0.04)	0.76	260

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 3: Estimation of the HME equation (eq (25)) - Quantities

Dependent Variable: *Share of Domestic Production*
Explanatory Variables use *total demand=production-net export*

INDUSTRY	Beta 1		COEFFICIENTS ON FOREIGN MARKET ACCESS VARIABLE: AUS	DNK	FIN	FRA	GER	GRC	IRL	ITA	NLD	PRT	ESP	SWE	GBR	R2
IND 311	0.93*	(0.01)	0.20* (0.04)	-0.16* (0.02)	0.74* (0.14)	-0.18* (0.05)	-0.15 (0.10)	0.43* (0.07)	-0.02* (0.01)	0.58* (0.08)	-0.22* (0.03)	0.40* (0.09)	-0.27* (0.09)	0.82* (0.14)	0.30* (0.07)	0.99
IND 313	0.88*	(0.01)	0.00 (0.00)	0.00* (0.00)	0.01* (0.00)	-0.01 (0.01)	0.00 (0.00)	0.00* (0.00)	0.00* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.03 (0.05)	0.01 (0.01)	0.94
IND 314	1.00*	(0.02)	0.00 (0.00)	0.00 (0.00)	0.00 (0.01)	0.00* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.01)	0.00* (0.00)	0.00* (0.00)	-0.01 (0.01)	0.01 (0.02)	-0.02 (0.02)	0.96
IND 321	1.09* >1*	(0.03)	-0.03* (0.01)	-0.06 (0.04)	-0.09 (0.11)	0.25* (0.08)	1.07* (0.31)	-0.22* (0.07)	-0.03 (0.02)	-1.62* (0.35)	0.01 (0.02)	-0.58* (0.10)	-0.04 (0.06)	0.01 (0.09)	0.69* (0.17)	0.95
IND 322	0.93*	(0.03)	0.12* (0.05)	0.17** (0.09)	-0.13 (0.20)	-0.15 (0.11)	1.83* (0.71)	-0.58 (0.35)	0.10* (0.04)	-5.42* (1.64)	0.44* (0.14)	-2.01* (0.72)	-0.29* (0.12)	1.45* (0.31)	0.60* (0.28)	0.86
IND 323	1.21* >1*	(0.04)	-0.12* (0.05)	-0.39* (0.13)	-1.07* (0.33)	0.67** (0.37)	3.37* (0.85)	1.09* (0.32)	-0.31* (0.09)	-3.50* (1.20)	-0.12* (0.05)	0.01 (0.24)	-0.99** (0.51)	-0.94* (0.25)	0.99* (0.31)	0.93
IND 331	0.83*	(0.01)	-0.41* (0.19)	1.40* (0.43)	-2.41* (0.69)	-0.19 (0.30)	-1.26* (0.47)	5.53* (1.20)	1.45* (0.38)	1.26 (2.03)	1.43* (0.31)	-0.87* (0.28)	-0.38* (0.19)	-3.97* (0.96)	6.87* (1.23)	0.94
IND 332	0.93*	(0.02)	0.66* (0.22)	-1.43* (0.53)	2.43* (0.90)	3.39* (0.92)	-0.25 (1.18)	4.67* (1.61)	0.41* (0.15)	-27.03* (8.20)	1.42* (0.35)	2.15* (0.62)	-1.22 (1.32)	1.08** (0.60)	3.88* (1.80)	0.94
IND 341	0.82*	(0.01)	-0.34** (0.18)	2.85* (0.60)	-12.56* (1.53)	0.11 (0.25)	-3.95* (0.56)	6.51* (1.39)	2.07* (0.39)	0.50 (0.73)	1.05* (0.23)	0.53 (0.55)	0.99** (0.57)	-9.83* (0.86)	5.34* (1.10)	0.97
IND 342	1.00*	(0.01)	0.04* (0.01)	0.03 (0.03)	0.00 (0.01)	0.25* (0.08)	-0.30* (0.12)	0.12 (0.10)	0.01** (0.00)	-0.63** (0.38)	0.07* (0.03)	0.05 (0.08)	-0.37* (0.12)	0.05* (0.02)	0.03 (0.18)	0.99
IND 351	0.99*	(0.04)	0.57 (0.59)	1.88** (1.06)	1.00 (1.41)	1.87** (0.96)	-26.72* (5.49)	6.59* (2.58)	-3.61* (1.08)	26.27* (4.53)	-7.13* (0.94)	5.57* (1.87)	10.47* (1.88)	2.93* (1.41)	-0.56 (2.98)	0.98
IND 352	1.04* >1*	(0.01)	0.00** (0.00)	0.00* (0.00)	0.07* (0.03)	-0.01* (0.00)	-0.01 (0.04)	0.03 (0.02)	0.00* (0.00)	0.33* (0.08)	0.00* (0.00)	0.02 (0.02)	0.11 (0.07)	-0.01 (0.02)	-0.03* (0.01)	0.98
IND 353	0.93*	(0.02)	2.12* (0.98)	9.21* (2.95)	10.12** (5.20)	7.32 (4.64)	11.05 (11.72)	18.40* (6.84)	3.06* (1.16)	-15.77 (46.01)	-11.82* (1.76)	23.46* (7.63)	-10.16 (8.39)	13.60** (7.20)	-31.46* (14.82)	0.97
IND 355	1.02*	(0.02)	-0.01* (0.00)	0.04* (0.01)	0.12* (0.05)	-0.14* (0.05)	0.24 (0.15)	0.09* (0.04)	-0.01 (0.01)	-0.21* (0.08)	0.02* (0.01)	0.15* (0.05)	-0.41* (0.11)	0.26* (0.06)	0.18* (0.07)	0.98
IND 356	1.01* >1**	(0.01)	0.11 (0.21)	-0.73* (0.22)	-0.30 (0.40)	2.26* (0.60)	0.21 (0.82)	0.90* (0.29)	0.17* (0.07)	-13.44* (2.68)	0.31* (0.06)	0.58* (0.19)	0.53 (0.69)	-0.44 (0.58)	3.23* (1.03)	0.99
IND 362	1.01*	(0.01)	-0.42* (0.12)	0.35** (0.21)	-0.41 (0.40)	-1.80* (0.88)	-0.99 (0.70)	1.39** (0.78)	-0.20** (0.10)	-1.65 (1.29)	0.51 (0.42)	-0.22 (0.26)	1.34* (0.49)	0.26 (0.32)	3.60* (1.40)	0.98
IND 369	0.93*	(0.02)	0.35* (0.13)	0.78* (0.27)	2.61* (0.83)	0.91 (0.66)	0.09 (1.38)	0.75 (0.66)	0.66* (0.19)	-11.59* (3.01)	0.69* (0.16)	1.13* (0.43)	-3.21* (1.11)	2.70* (0.77)	1.82 (2.41)	0.95
IND 371	1.00*	(0.01)	-0.11* (0.03)	0.13* (0.04)	-0.02 (0.04)	-0.09* (0.04)	-0.29 (0.30)	0.21* (0.05)	0.05* (0.02)	0.12 (0.23)	0.04* (0.02)	0.28* (0.08)	-0.45* (0.18)	-0.31* (0.09)	0.42* (0.13)	0.99
IND 381	1.03* >1*	(0.02)	0.02 (0.13)	-0.33** (0.18)	-0.32 (0.34)	1.12* (0.32)	-0.51 (0.59)	0.75* (0.37)	-0.04 (0.09)	-5.68* (1.37)	0.20* (0.04)	-0.03 (0.30)	1.39* (0.46)	0.02 (0.31)	1.57* (0.39)	0.98
IND 382	1.09* >1*	(0.01)	-0.01 (0.02)	-0.14* (0.05)	-0.30* (0.10)	0.72* (0.21)	-0.67* (0.31)	0.02 (0.05)	-0.20* (0.06)	-1.53* (0.41)	0.05* (0.02)	0.21* (0.05)	0.76* (0.17)	-0.43* (0.13)	0.61* (0.22)	0.98
IND 383	1.04* >1*	(0.02)	-0.01 (0.02)	-0.05 (0.03)	-0.30* (0.06)	0.04 (0.06)	-0.34* (0.13)	0.10 (0.07)	-0.11* (0.03)	0.21 (0.16)	-0.02 (0.03)	0.00 (0.04)	0.40* (0.13)	-0.36* (0.07)	0.60* (0.12)	0.99
IND 384	1.10* >1*	(0.01)	-0.08 (0.07)	-0.29 (0.21)	-1.13* (0.37)	-0.80** (0.42)	-5.79* (1.32)	1.13* (0.35)	-0.22* (0.08)	3.96* (1.02)	0.54* (0.12)	0.32 (0.22)	-0.43 (0.60)	-2.43* (0.75)	4.54* (1.38)	0.97
IND 385	1.09* >1*	(0.03)	0.05* (0.02)	-0.18* (0.02)	-0.03 (0.07)	0.25* (0.06)	-1.28* (0.44)	0.10** (0.05)	-0.10* (0.03)	1.05* (0.23)	-0.08* (0.01)	0.10** (0.05)	0.84* (0.19)	-0.07 (0.07)	-0.17 (0.20)	0.95
IND 390	0.90*	(0.05)	0.09 (0.10)	0.40* (0.09)	0.88* (0.24)	0.85* (0.39)	0.36 (0.22)	1.08* (0.25)	0.10* (0.05)	-6.17* (0.59)	0.35* (0.07)	0.61* (0.19)	0.92* (0.12)	1.16* (0.23)	1.26* (0.33)	0.92

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 4: Estimation of the HME equation (eq (25)) - Quantities

Dependent Variable: *Share of Domestic Production*
Explanatory Variables use *net final demand (see equation (27))*

			COEFFICIENTS ON FOREIGN MARKET ACCESS VARIABLE:													
INDUSTRY	Beta 1		AUS	DNK	FIN	FRA	GER	GRC	IRL	ITA	NLD	PRT	ESP	SWE	GBR	R2
IND 311	0.91*	(0.01)	0.28* (0.06)	-0.13* (0.02)	0.61* (0.14)	-0.20* (0.05)	-0.10 (0.10)	0.59* (0.09)	-0.03* (0.01)	0.98* (0.10)	-0.32* (0.04)	0.58* (0.13)	-0.23* (0.08)	1.25* (0.19)	0.07 (0.07)	0.98
IND 313	0.83*	(0.02)	0.00 (0.00)	0.00* (0.00)	0.01* (0.00)	-0.01 (0.01)	0.00 (0.00)	0.00* (0.00)	-0.01* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.04 (0.08)	-0.01 (0.01)	0.91
IND 314	1.00*	(0.02)	0.00** (0.00)	0.00 (0.00)	0.00 (0.01)	0.00* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.01)	0.00* (0.00)	0.00* (0.00)	-0.01 (0.01)	0.01 (0.02)	0.00 (0.02)	0.95
IND 321	1.15* >1*	(0.03)	-0.03* (0.01)	-0.11* (0.05)	-0.06 (0.09)	0.77* (0.17)	0.46** (0.26)	-0.30* (0.08)	-0.04* (0.02)	-2.09* (0.45)	0.06* (0.02)	-0.83* (0.12)	0.23** (0.13)	0.11 (0.07)	0.71* (0.17)	0.93
IND 322	0.83*	(0.04)	0.17* (0.07)	0.39* (0.15)	0.53* (0.27)	-0.57* (0.13)	2.02* (0.81)	-0.25 (0.29)	0.19* (0.07)	-7.13* (2.16)	0.53* (0.17)	-1.89* (0.75)	-0.54* (0.15)	2.08* (0.41)	0.36 (0.23)	0.78
IND 323	1.24* >1*	(0.04)	-0.08 (0.06)	-0.41* (0.15)	-1.21* (0.40)	1.22* (0.53)	3.96* (1.03)	2.00* (0.43)	-0.42* (0.13)	-4.33* (1.41)	-0.08 (0.05)	0.48 (0.38)	-1.05** (0.53)	-1.04* (0.28)	-0.29 (0.19)	0.89
IND 331	0.68*	(0.01)	-0.46* (0.17)	2.75* (0.77)	-4.84* (1.24)	-0.73* (0.31)	-2.16* (0.75)	10.89* (1.93)	2.50* (0.64)	2.22 (3.44)	2.29* (0.49)	-1.28* (0.43)	-0.77* (0.32)	-7.82* (2.08)	6.54* (1.36)	0.89
IND 332	0.70*	(0.03)	1.57* (0.50)	-0.25 (0.48)	11.49* (3.67)	4.21* (1.12)	-4.39* (1.19)	17.23* (5.33)	1.44* (0.48)	-45.26* (13.68)	3.03* (0.76)	8.77* (2.38)	-1.01 (1.21)	5.45* (1.95)	-3.26** (1.75)	0.82
IND 341	0.57*	(0.02)	-0.56** (0.33)	8.58* (1.58)	-25.63* (3.43)	0.14 (0.41)	-16.38* (2.28)	17.22* (3.01)	4.39* (0.62)	1.40 (1.12)	3.42* (0.56)	1.76* (0.85)	2.54* (1.19)	-18.45* (1.83)	10.31* (1.95)	0.85
IND 342	0.96*	(0.02)	0.53* (0.12)	-0.35* (0.17)	0.59* (0.14)	2.06* (0.46)	-3.24* (0.78)	0.60* (0.24)	0.03* (0.01)	-1.37* (0.28)	0.36* (0.08)	0.62* (0.19)	-0.89* (0.24)	0.62* (0.15)	-1.87* (0.61)	0.87
IND 351	0.59*	(0.07)	10.45* (1.65)	20.40* (2.76)	18.85* (2.59)	-3.64 (3.19)	-101.21* (11.72)	36.40* (5.28)	3.52* (1.71)	28.18* (11.13)	-13.52* (2.33)	26.25* (3.69)	21.48* (3.94)	21.80* (2.84)	-17.17* (5.80)	0.90
IND 352	1.07* >1**	(0.05)	0.01* (0.00)	0.00 (0.00)	0.21* (0.09)	-0.01* (0.00)	-0.86* (0.32)	0.11** (0.06)	0.00* (0.00)	0.95* (0.23)	-0.01* (0.00)	0.10 (0.06)	0.43* (0.20)	0.13* (0.06)	-0.04* (0.02)	0.88
IND 353	0.84*	(0.02)	5.76* (2.42)	23.14* (5.68)	9.62 (5.85)	40.25* (5.58)	-57.79* (22.71)	38.86* (7.31)	7.50* (2.48)	30.95 (46.31)	-33.96* (3.52)	56.91* (12.34)	-6.55 (9.89)	31.31** (17.66)	-27.84** (14.30)	0.92
IND 355	1.15* >1*	(0.02)	-0.05* (0.01)	0.08* (0.02)	0.12* (0.04)	-0.30* (0.12)	-0.43* (0.18)	0.13* (0.05)	-0.05* (0.02)	0.07 (0.12)	0.05* (0.02)	0.31* (0.09)	-0.83* (0.12)	0.75* (0.14)	1.10* (0.29)	0.94
IND 356	1.03* >1*	(0.01)	0.61* (0.27)	-0.40 (0.27)	-0.03 (0.50)	7.55* (1.12)	-14.46* (2.30)	2.48* (0.42)	0.42* (0.11)	-23.53* (2.74)	1.19* (0.17)	1.83* (0.34)	3.77* (0.69)	0.37 (0.80)	13.45* (2.12)	0.96
IND 362	0.94*	(0.03)	-1.72* (0.34)	4.13* (1.45)	0.98** (0.58)	-9.42* (3.40)	-13.13* (4.03)	11.53* (4.46)	-0.10 (0.25)	-8.46* (4.07)	7.96* (2.36)	1.14 (0.79)	11.14* (4.11)	3.44* (1.19)	16.74* (4.32)	0.72
IND 369	0.52*	(0.03)	4.24* (0.89)	6.67* (1.31)	15.41* (2.89)	2.80* (1.26)	-11.71* (2.19)	11.07* (3.22)	3.83* (0.88)	-33.09* (7.48)	3.96* (0.71)	9.49* (2.16)	-8.58* (2.35)	13.71* (2.60)	-4.16* (2.06)	0.73
IND 371	0.72*	(0.02)	-0.11* (0.05)	1.92* (0.37)	1.34* (0.25)	0.15** (0.09)	-6.69* (1.08)	1.93* (0.35)	0.57* (0.11)	1.34* (0.59)	0.96* (0.19)	2.12* (0.44)	-0.51 (0.35)	0.75* (0.10)	0.95* (0.15)	0.66
IND 381	-0.07	(0.05)	-4.17 (4.61)	17.44* (1.90)	12.21* (1.12)	-26.81* (3.59)	-16.33* (3.21)	27.23* (3.91)	4.34* (0.70)	-9.61* (4.19)	7.85* (1.35)	11.48* (1.54)	-2.20* (0.98)	11.44* (1.30)	-13.59* (2.11)	0.71
IND 382	1.16* >1*	(0.02)	0.01 (0.03)	-0.28* (0.08)	-0.58* (0.17)	1.65* (0.47)	-2.31* (0.74)	0.12** (0.07)	-0.35* (0.10)	-2.42* (0.66)	0.14* (0.04)	0.50* (0.11)	1.66* (0.42)	-0.34* (0.13)	1.26* (0.44)	0.93
IND 383	0.94*	(0.03)	-0.01 (0.02)	0.22* (0.07)	0.13 (0.14)	-0.88* (0.28)	-0.03 (0.15)	0.64* (0.20)	-0.08** (0.04)	-1.26* (0.46)	-0.13* (0.02)	0.30* (0.11)	0.57* (0.16)	0.19 (0.15)	2.15* (0.28)	0.97
IND 384	1.10* >1*	(0.03)	0.21 (0.20)	-0.13 (0.23)	-1.06* (0.30)	-2.81* (0.55)	-12.18* (2.71)	3.41* (0.99)	-0.07 (0.08)	5.95* (1.37)	1.34* (0.29)	1.59* (0.59)	-1.51** (0.82)	-0.91* (0.39)	6.90* (2.15)	0.92
IND 385	1.08* >1**	(0.05)	0.19* (0.05)	-0.18* (0.04)	0.38* (0.13)	-0.02 (0.07)	-2.26* (0.68)	0.39* (0.10)	-0.17* (0.05)	1.04* (0.29)	-0.15* (0.03)	0.35* (0.10)	1.75* (0.40)	0.56* (0.14)	0.23 (0.32)	0.91
IND 390	0.41*	(0.04)	1.15* (0.20)	1.58* (0.19)	3.02* (0.39)	-2.44* (0.37)	-1.75* (0.24)	4.63* (0.62)	0.32* (0.06)	-6.97* (0.81)	0.86* (0.11)	2.42* (0.31)	0.66* (0.10)	3.33* (0.38)	2.87* (0.70)	0.76

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 5: Estimation of the HME Equation Pooled within 2-Digit Industries (Quai

Dependent Variable: *Share of Domestic Production*

	Estimation of eq. (25) with FMA variable defined in (28)							
	Explanatory Variables use total demand=production-net export				Explanatory Variables use net final demand (see equation (27))			
Industry	**Beta 1**		**R2**	**OBS**	**Beta 1**		**R2**	**OBS**
all	0.98*	(0.01)	0.93	5980	0.73*	(0.03)	0.60	5980
31	0.94*	(0.01)	0.95	780	0.91*	(0.02)	0.94	780
32	1.08* >1*	(0.03)	0.90	780	1.03*	(0.05)	0.83	780
33	0.90*	(0.01)	0.92	520	0.67*	(0.02)	0.79	520
34	0.88*	(0.02)	0.94	520	0.57*	(0.04)	0.73	520
35	1.00*	(0.01)	0.97	1300	0.91*	(0.02)	0.79	1300
36	0.98*	(0.01)	0.96	520	0.61*	(0.04)	0.67	520
37	0.99*	(0.01)	0.99	260	0.72*	(0.02)	0.67	260
38	1.01*	(0.02)	0.94	1300	0.37*	(0.05)	0.57	1300
39	0.90*	(0.05)	0.92	260	0.41*	(0.04)	0.78	260

	Estimation of eq. (25) with FMA variable defined in (29)							
	Explanatory Variables use total demand=production-net export				Explanatory Variables use net final demand (see equation (27))			
Industry	**Beta 1**		**R2**	**OBS**	**Beta 1**		**R2**	**OBS**
all	0.98*	(0.01)	0.93	5980	0.73*	(0.03)	0.60	5980
31	0.94*	(0.01)	0.95	780	0.91*	(0.02)	0.94	780
32	1.08* >1*	(0.03)	0.90	780	1.03*	(0.05)	0.84	780
33	0.90*	(0.02)	0.92	520	0.67*	(0.02)	0.79	520
34	0.87*	(0.02)	0.94	520	0.56*	(0.04)	0.73	520
35	1.00*	(0.01)	0.97	1300	0.91*	(0.02)	0.79	1300
36	0.98*	(0.01)	0.96	520	0.60*	(0.04)	0.66	520
37	0.99*	(0.01)	0.99	260	0.72*	(0.02)	0.67	260
38	1.01*	(0.02)	0.94	1300	0.33*	(0.06)	0.55	1300
39	0.90*	(0.05)	0.93	260	0.44*	(0.04)	0.80	260

	Fixed Effects esitmation							
	Explanatory Variables use total demand=production-net export				Explanatory Variables use net final demand (see equation (27))			
Industry	**Beta 1**		**R2**	**OBS**	**Beta 1**		**R2**	**OBS**
all	0.94*	(0.03)	0.94	5980	0.21*	(0.03)	0.85	5980
31	0.91*	(0.05)	0.96	780	0.83*	(0.05)	0.95	780
32	1.03*	(0.04)	0.96	780	0.90*	(0.05)	0.94	780
33	0.86*	(0.04)	0.94	520	0.22*	(0.07)	0.89	520
34	0.98*	(0.04)	0.96	520	-0.01	(0.02)	0.90	520
35	0.65*	(0.04)	0.97	1300	0.13*	(0.03)	0.96	1300
36	0.80*	(0.08)	0.97	520	0.04	(0.03)	0.93	520
37	0.75*	(0.09)	0.99	260	0.02	(0.10)	0.98	260
38	0.71*	(0.05)	0.95	1300	0.08*	(0.02)	0.90	1300
39	0.77*	(0.06)	0.98	260	0.38*	(0.07)	0.95	260

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 6: Estimation of the HME equation (eq (25)) with *FMA* variable defined in (28) - Quantities

Dependent Variable: *Share of Domestic Production*
Explanatory Variables use *total demand=production-net export*

INDUSTRY	Beta 1		COEFFICIENTS ON FOREIGN MARKET ACCESS VARIABLE: AUS	DNK	FIN	FRA	GER	GRC	IRL	ITA	NLD	PRT	ESP	SWE	GBR	R2
IND 311	0.93*	(0.01)	-0.27* (0.05)	0.21* (0.03)	-0.68* (0.13)	0.26* (0.07)	0.18 (0.12)	-0.44* (0.07)	0.04* (0.01)	-0.61* (0.09)	0.33* (0.04)	-0.40* (0.09)	0.31* (0.09)	-0.76* (0.13)	-0.32* (0.08)	0.99
IND 313	0.87*	(0.01)	-0.02* (0.00)	-0.01* (0.00)	-0.08* (0.02)	0.04* (0.01)	-0.01 (0.01)	-0.01* (0.00)	0.00* (0.00)	0.00 (0.00)	-0.01* (0.00)	0.00** (0.00)	0.00 (0.00)	-0.09* (0.02)	0.01** (0.00)	0.95
IND 314	1.00*	(0.02)	0.00 (0.00)	0.00 (0.00)	0.00 (0.01)	-0.01* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.01* (0.00)	0.00* (0.00)	0.00 (0.00)	0.00 (0.01)	0.01* (0.00)	0.96
IND 321	1.10* >1*	(0.04)	0.07* (0.03)	0.11 (0.07)	0.11 (0.12)	-0.43* (0.12)	-1.35* (0.37)	0.27* (0.08)	0.07 (0.04)	1.74* (0.36)	-0.01 (0.03)	0.62* (0.10)	0.03 (0.07)	0.02 (0.10)	-0.87* (0.20)	0.96
IND 322	0.93*	(0.04)	-0.23* (0.07)	-0.27* (0.13)	0.08 (0.22)	0.14 (0.20)	-2.19* (0.79)	0.58 (0.37)	-0.20* (0.07)	5.44* (1.61)	-0.75* (0.17)	2.04* (0.72)	0.23* (0.12)	-1.41* (0.32)	-0.74* (0.32)	0.86
IND 323	1.21* >1*	(0.04)	0.18* (0.07)	0.47* (0.15)	0.98* (0.31)	-0.88* (0.43)	-3.52* (0.87)	-1.14* (0.35)	0.41* (0.12)	3.65* (1.25)	0.17* (0.07)	-0.01 (0.26)	1.02** (0.53)	0.90* (0.24)	-1.04* (0.33)	0.93
IND 331	0.83*	(0.01)	0.49* (0.21)	-1.57* (0.47)	2.55* (0.70)	0.21 (0.38)	1.27* (0.48)	-5.19* (1.25)	-1.55* (0.39)	-1.26 (1.46)	-1.68* (0.33)	0.90* (0.28)	0.39* (0.19)	4.02* (0.96)	-6.71* (1.22)	0.94
IND 332	0.93*	(0.02)	-0.81* (0.27)	1.53* (0.55)	-2.53* (0.94)	-3.85* (1.03)	0.13 (1.26)	-4.87* (1.71)	-0.49* (0.18)	26.42* (8.03)	-1.65* (0.39)	-2.29* (0.68)	1.10 (1.31)	-1.19** (0.64)	-3.98* (1.82)	0.94
IND 341	0.82*	(0.01)	0.33** (0.18)	-2.99* (0.60)	12.42* (1.53)	-0.12 (0.26)	4.01* (0.56)	-6.63* (1.39)	-2.19* (0.40)	-0.53 (0.73)	-1.14* (0.23)	-0.60 (0.55)	-1.04** (0.57)	9.76* (0.86)	-5.38* (1.10)	0.97
IND 342	1.00*	(0.01)	-0.09* (0.02)	-0.05 (0.05)	-0.02 (0.03)	-0.39* (0.13)	0.38* (0.14)	-0.15 (0.12)	-0.02** (0.01)	0.58** (0.34)	-0.11* (0.05)	-0.08 (0.09)	0.38* (0.12)	-0.11* (0.04)	-0.02 (0.22)	0.99
IND 351	0.99*	(0.04)	-0.56 (0.60)	-1.85** (1.07)	-0.94 (1.40)	-1.85** (0.99)	26.93* (5.52)	-6.51* (2.58)	3.70* (1.09)	-26.21* (4.53)	7.33* (0.94)	-5.52* (1.87)	-10.44* (1.87)	-2.86* (1.40)	0.62 (3.01)	0.98
IND 352	1.02* >1**	(0.02)	-0.06* (0.02)	0.04* (0.01)	-0.06** (0.03)	0.16* (0.03)	0.10 (0.09)	-0.10* (0.04)	0.07* (0.02)	-0.39* (0.12)	0.06* (0.01)	-0.09* (0.04)	-0.22* (0.08)	0.02 (0.03)	0.21* (0.05)	0.98
IND 353	0.93*	(0.02)	-2.19* (1.00)	-9.31* (2.98)	-10.20** (5.23)	-7.40 (4.71)	-11.07 (11.76)	-18.41* (6.85)	-3.15* (1.17)	15.87 (45.44)	12.03* (1.78)	-23.50* (7.65)	10.161 (8.41)	-13.66** (7.22)	31.42* (14.80)	0.97
IND 355	1.02*	(0.02)	0.02 (0.02)	-0.08* (0.02)	-0.12* (0.05)	0.36* (0.09)	-0.26 (0.18)	-0.11* (0.05)	0.01 (0.02)	0.23* (0.09)	-0.07* (0.02)	-0.17* (0.06)	0.43* (0.11)	-0.24* (0.06)	-0.22* (0.07)	0.98
IND 356	1.01* >1**	(0.01)	-0.12 (0.22)	0.75* (0.22)	0.29 (0.39)	-2.35* (0.62)	-0.22 (0.83)	-0.91* (0.29)	-0.18* (0.07)	13.48* (2.68)	-0.33* (0.07)	-0.59* (0.19)	-0.537 (0.70)	0.43 (0.58)	-3.26* (1.03)	0.99
IND 362	1.01*	(0.01)	0.47* (0.13)	-0.38** (0.23)	0.39 (0.38)	2.01* (0.96)	1.05 (0.74)	-1.41** (0.79)	0.21** (0.11)	1.67 (1.30)	-0.59 (0.49)	0.218 (0.26)	-1.35* (0.49)	-0.25 (0.31)	-3.66* (1.41)	0.98
IND 369	0.93*	(0.02)	-0.39* (0.14)	-0.83* (0.28)	-2.60* (0.83)	-0.99 (0.70)	-0.10 (1.42)	-0.79 (0.68)	-0.71* (0.20)	11.70* (3.01)	-0.75* (0.17)	-1.17* (0.44)	3.24* (1.12)	-2.69* (0.77)	-1.850 (2.43)	0.95
IND 371	0.99*	(0.01)	0.16* (0.03)	-0.18* (0.04)	0.02 (0.04)	0.12* (0.06)	0.32 (0.33)	-0.22* (0.05)	-0.06* (0.02)	-0.12 (0.24)	-0.06* (0.03)	-0.29* (0.08)	0.46* (0.18)	0.29* (0.08)	-0.43* (0.14)	0.99
IND 381	1.03* >1*	(0.02)	-0.02 (0.14)	0.35** (0.19)	0.32 (0.35)	-1.22* (0.34)	0.50 (0.62)	-0.76** (0.39)	0.04 (0.10)	5.79* (1.37)	-0.22* (0.05)	0.03 (0.31)	-1.43* (0.47)	-0.02 (0.31)	-1.60* (0.40)	0.98
IND 382	1.09* >1*	(0.01)	0.02 (0.04)	0.18* (0.05)	0.29* (0.10)	-1.02* (0.21)	0.76* (0.34)	-0.03 (0.05)	0.28* (0.06)	1.68* (0.41)	-0.07* (0.02)	-0.23* (0.05)	-0.85* (0.17)	0.40* (0.12)	-0.71* (0.23)	0.98
IND 383	1.04* >1*	(0.02)	0.02 (0.03)	0.06 (0.04)	0.31* (0.06)	-0.06 (0.08)	0.38* (0.14)	-0.10 (0.08)	0.15* (0.04)	-0.22 (0.17)	0.03 (0.04)	0.00 (0.05)	-0.44* (0.13)	0.35* (0.07)	-0.64* (0.13)	0.99
IND 384	1.10* >1*	(0.01)	0.08 (0.08)	0.30 (0.22)	1.11* (0.37)	0.85** (0.45)	5.96* (1.35)	-1.16* (0.36)	0.24* (0.08)	-4.02* (1.04)	-0.60* (0.12)	-0.34 (0.23)	0.446 (0.62)	2.33* (0.73)	-4.59* (1.40)	0.97
IND 385	1.09* >1*	(0.03)	-0.06** (0.04)	0.23* (0.03)	0.04 (0.08)	-0.38* (0.08)	1.57* (0.50)	-0.10 (0.06)	0.22* (0.03)	-1.24* (0.23)	0.13* (0.02)	-0.11** (0.06)	-0.98* (0.19)	0.08 (0.07)	0.21 (0.23)	0.95
IND 390	0.90*	(0.05)	-0.12 (0.13)	-0.46* (0.11)	-0.84* (0.24)	-1.12* (0.55)	-0.46** (0.27)	-1.11* (0.27)	-0.14** (0.07)	6.77* (0.63)	-0.45* (0.08)	-0.64* (0.21)	-1.02* (0.14)	-1.12* (0.23)	-1.45* (0.39)	0.92

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 7: Estimation of the HME equation (eq (25)) with *FMA* variable defined in (28) - Quantities

Dependent Variable: *Share of Domestic Production*
Explanatory Variables use *net final demand (see equation (27))*

INDUSTRY	Beta 1		COEFFICIENTS ON FOREIGN MARKET ACCESS VARIABLE: AUS	DNK	FIN	FRA	GER	GRC	IRL	ITA	NLD	PRT	ESP	SWE	GBR	R2
IND 311	0.91*	(0.01)	-0.37* (0.06)	0.18* (0.03)	-0.54* (0.13)	0.28* (0.07)	0.12 (0.12)	-0.60* (0.09)	0.07* (0.02)	-1.06* (0.11)	0.48* (0.05)	-0.59* (0.13)	0.27* (0.09)	-1.15* (0.18)	-0.06 (0.08)	0.98
IND 313	0.82*	(0.02)	-0.02* (0.00)	-0.01* (0.00)	-0.10* (0.02)	0.05* (0.02)	0.00 (0.01)	-0.02* (0.01)	0.00* (0.00)	0.01 (0.01)	-0.01* (0.00)	0.00* (0.00)	0.00 (0.00)	-0.13* (0.03)	-0.01 (0.00)	0.93
IND 314	1.00*	(0.02)	0.00** (0.00)	0.00 (0.00)	0.00 (0.01)	-0.01* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.01* (0.00)	0.00* (0.00)	0.00 (0.00)	-0.01 (0.01)	0.00 (0.00)	0.96
IND 321	1.18* >1*	(0.04)	0.08* (0.03)	0.18* (0.08)	0.11 (0.10)	-1.29* (0.23)	-0.73* (0.33)	0.35* (0.10)	0.10* (0.04)	2.24* (0.45)	-0.09* (0.04)	0.89* (0.12)	-0.31* (0.15)	-0.07 (0.08)	-0.94* (0.21)	0.93
IND 322	0.83*	(0.04)	-0.34* (0.09)	-0.63* (0.20)	-0.61* (0.29)	0.80* (0.17)	-2.43* (0.91)	0.18 (0.31)	-0.37* (0.11)	7.06* (2.11)	-0.92* (0.21)	1.86* (0.75)	0.47* (0.14)	-2.07* (0.42)	-0.47** (0.27)	0.78
IND 323	1.25* >1*	(0.04)	0.11 (0.08)	0.49* (0.17)	1.11* (0.36)	-1.57* (0.61)	-4.19* (1.07)	-2.09* (0.47)	0.54* (0.16)	4.54* (1.47)	0.12 (0.07)	-0.51 (0.40)	1.07** (0.56)	1.00* (0.27)	0.29 (0.20)	0.89
IND 331	0.68*	(0.01)	0.53* (0.18)	-3.12* (0.84)	4.45* (1.22)	0.81* (0.40)	2.12* (0.75)	-10.08* (2.15)	-2.71* (0.67)	-2.33 (2.02)	-2.75* (0.52)	1.28* (0.43)	0.75* (0.31)	7.39* (1.97)	-6.41* (1.35)	0.89
IND 332	0.70*	(0.03)	-1.91* (0.60)	0.13 (0.53)	-11.50* (3.75)	-4.79* (1.25)	4.56* (1.29)	-17.76* (5.59)	-1.72* (0.57)	44.48* (13.46)	-3.53* (0.85)	-9.16* (2.55)	0.80 (1.18)	-5.79* (2.09)	3.14** (1.72)	0.82
IND 341	0.57*	(0.02)	0.51 (0.34)	-8.82* (1.57)	23.74* (3.29)	-0.13 (0.43)	16.66* (2.24)	-17.47* (3.03)	-4.66* (0.64)	-1.43 (1.11)	-3.63* (0.57)	-1.90* (0.86)	-2.63* (1.20)	17.77* (1.79)	-10.40* (1.95)	0.85
IND 342	0.96*	(0.03)	-0.83* (0.17)	0.24 (0.17)	-1.38* (0.23)	-2.72* (0.57)	4.10* (0.84)	-0.84* (0.30)	-0.10* (0.03)	1.30* (0.30)	-0.55* (0.11)	-0.80* (0.22)	0.82* (0.21)	-1.41* (0.27)	2.20* (0.61)	0.89
IND 351	0.59*	(0.07)	-10.59* (1.67)	-20.48* (2.77)	-18.84* (2.60)	3.66 (3.24)	100.99* (11.69)	-36.55* (5.31)	-3.60* (1.74)	-28.33* (11.21)	13.72* (2.34)	-26.42* (3.71)	-21.64* (3.97)	-21.74* (2.85)	17.14* (5.81)	0.90
IND 352	1.03*	(0.06)	-0.22* (0.06)	0.00 (0.05)	-0.23* (0.11)	0.26* (0.08)	1.58* (0.33)	-0.33* (0.11)	0.15* (0.05)	-1.21* (0.22)	0.11* (0.03)	-0.28* (0.10)	-0.75* (0.20)	-0.14** (0.08)	0.28* (0.10)	0.91
IND 353	0.84*	(0.02)	-5.95* (2.47)	-23.37* (5.73)	-9.59 (5.88)	-40.76* (5.68)	57.77* (22.67)	-38.81* (7.33)	-7.70* (2.51)	-30.61 (45.95)	34.52* (3.55)	-56.94* (12.37)	6.56 (9.91)	-30.54** (17.45)	27.87** (14.33)	0.92
IND 355	1.14* >1*	(0.02)	0.13* (0.02)	-0.16* (0.03)	-0.11* (0.04)	0.74* (0.20)	0.55* (0.21)	-0.15* (0.06)	0.13* (0.03)	-0.05 (0.13)	-0.15* (0.05)	-0.32* (0.10)	0.87* (0.13)	-0.71* (0.13)	-1.31* (0.29)	0.95
IND 356	1.03* >1*	(0.01)	-0.64* (0.28)	0.39 (0.28)	0.00 (0.50)	-7.85* (1.16)	14.60* (2.31)	-2.52* (0.43)	-0.45* (0.11)	23.63* (2.74)	-1.26* (0.18)	-1.87* (0.34)	-3.82* (0.69)	-0.38 (0.79)	-13.60* (2.14)	0.96
IND 362	0.94*	(0.03)	1.82* (0.36)	-4.34* (1.50)	-0.98** (0.56)	10.16* (3.58)	14.04* (4.23)	-11.64* (4.50)	0.08 (0.29)	8.43* (4.07)	-8.84* (2.46)	-1.17 (0.81)	-11.09* (4.07)	-3.35* (1.17)	-16.72* (4.27)	0.73
IND 369	0.52*	(0.03)	-4.50* (0.93)	-6.97* (1.34)	-15.42* (2.89)	-2.94* (1.34)	12.13* (2.21)	-11.20* (3.25)	-4.11* (0.91)	33.57* (7.46)	-4.26* (0.73)	-9.68* (2.17)	8.75* (2.38)	-13.77* (2.61)	4.26* (2.10)	0.73
IND 371	0.72*	(0.02)	0.12* (0.06)	-1.98* (0.37)	-1.31* (0.24)	-0.17** (0.10)	7.15* (1.13)	-2.04* (0.36)	-0.73* (0.13)	-1.50* (0.66)	-1.08* (0.20)	-2.22* (0.44)	0.56 (0.37)	-0.73* (0.10)	-0.97* (0.16)	0.67
IND 381	-0.06	(0.04)	-0.99 (5.73)	-15.98* (1.79)	-12.42* (1.16)	26.12* (3.65)	17.33* (3.19)	-26.67* (3.95)	-4.76* (0.71)	10.30* (4.19)	-7.49* (1.09)	-11.60* (1.53)	2.21* (1.08)	-11.41* (1.37)	13.85* (2.18)	0.72
IND 382	1.17* >1*	(0.02)	-0.02 (0.05)	0.35* (0.09)	0.57* (0.17)	-2.28* (0.49)	2.64* (0.76)	-0.13** (0.08)	0.49* (0.10)	2.68* (0.67)	-0.21* (0.05)	-0.55* (0.12)	-1.88* (0.42)	0.32* (0.12)	-1.45* (0.45)	0.94
IND 383	0.94*	(0.03)	0.05 (0.04)	-0.25* (0.08)	-0.12 (0.14)	1.28* (0.29)	0.13 (0.19)	-0.64* (0.20)	0.11 (0.07)	1.34* (0.49)	0.20* (0.04)	-0.29* (0.12)	-0.56* (0.15)	-0.16 (0.14)	-2.15* (0.28)	0.97
IND 384	1.10* >1*	(0.03)	-0.24 (0.23)	0.12 (0.24)	1.03* (0.29)	3.02* (0.58)	12.54* (2.80)	-3.49* (1.02)	0.07 (0.09)	-6.00* (1.39)	-1.47* (0.30)	-1.65* (0.61)	1.56** (0.84)	0.85* (0.37)	-6.94* (2.17)	0.92
IND 385	1.08* >1**	(0.05)	-0.24* (0.07)	0.25* (0.06)	-0.33* (0.14)	0.06 (0.10)	2.68* (0.69)	-0.41* (0.11)	0.40* (0.06)	-1.19* (0.30)	0.25* (0.05)	-0.38* (0.11)	-2.02* (0.39)	-0.48* (0.14)	-0.21 (0.34)	0.92
IND 390	0.41*	(0.04)	-1.35* (0.23)	-1.82* (0.21)	-3.07* (0.40)	3.21* (0.46)	2.04* (0.28)	-4.49* (0.61)	-0.50* (0.08)	7.51* (0.87)	-1.13* (0.14)	-2.57* (0.32)	-0.71* (0.11)	-3.36* (0.39)	-3.20* (0.88)	0.78

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 8: Estimation of the HME equation (eq (25)) with *FMA* variable defined in (29) - Quantities

Dependent Variable: *Share of Domestic Production*
Explanatory Variables use *total demand=production-net export*

INDUSTRY	Beta 1		COEFFICIENTS ON FOREIGN MARKET ACCESS VARIABLE: AUS	DNK	FIN	FRA	GER	GRC	IRL	ITA	NLD	PRT	ESP	SWE	GBR	R2
IND 311	0.93*	(0.01)	-0.31* (0.06)	0.24* (0.03)	-0.52* (0.10)	0.26* (0.06)	0.17 (0.14)	-0.42* (0.07)	0.04* (0.02)	-0.81* (0.11)	0.42* (0.05)	-0.47* (0.11)	0.33* (0.10)	-0.81* (0.13)	-0.40* (0.09)	0.99
IND 313	0.86*	(0.01)	-0.02* (0.00)	-0.01* (0.00)	-0.04* (0.01)	0.06* (0.02)	-0.01 (0.01)	-0.02* (0.01)	0.00* (0.00)	0.00 (0.01)	-0.01* (0.00)	0.00** (0.00)	0.00 (0.00)	-0.09* (0.02)	0.01** (0.01)	0.95
IND 314	1.00*	(0.02)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.01* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.01* (0.00)	0.00* (0.00)	-0.01 (0.01)	-0.01 (0.01)	0.01* (0.00)	0.96
IND 321	1.09* >1*	(0.04)	0.08* (0.03)	0.11 (0.07)	0.06 (0.08)	-0.41* (0.12)	-1.05* (0.28)	0.27* (0.08)	0.05 (0.04)	1.83* (0.39)	-0.01 (0.04)	0.68* (0.12)	0.04 (0.06)	0.01 (0.08)	-0.89* (0.20)	0.96
IND 322	0.93*	(0.04)	-0.26* (0.08)	-0.28* (0.13)	0.05 (0.10)	0.14 (0.21)	-1.90* (0.73)	0.61 (0.39)	-0.16* (0.06)	5.51* (1.58)	-0.81* (0.18)	2.43* (0.86)	0.24* (0.12)	-1.31* (0.28)	-0.77* (0.34)	0.86
IND 323	1.21* >1*	(0.04)	0.18* (0.07)	0.44* (0.14)	0.49* (0.15)	-0.86* (0.42)	-3.09* (0.77)	-1.16* (0.35)	0.35* (0.10)	3.70* (1.27)	0.17* (0.07)	-0.05 (0.31)	1.02** (0.53)	0.72* (0.19)	-1.14* (0.35)	0.93
IND 331	0.83*	(0.01)	0.47* (0.21)	-1.63* (0.48)	3.24* (0.93)	0.15 (0.48)	1.00* (0.45)	-5.94* (1.21)	-1.25* (0.31)	-1.28 (1.98)	-1.68* (0.32)	1.30* (0.42)	0.42** (0.22)	4.30* (1.03)	-7.34* (1.14)	0.94
IND 332	0.93*	(0.02)	-0.96* (0.31)	1.66* (0.58)	-0.99* (0.36)	-4.22* (1.11)	-0.12 (1.20)	-5.10* (1.80)	-0.43* (0.16)	28.53* (8.55)	-1.87* (0.42)	-2.37* (0.70)	1.15 (1.39)	-1.07** (0.57)	-4.08* (1.84)	0.94
IND 341	0.82*	(0.01)	0.35** (0.19)	-3.07* (0.60)	13.43* (1.64)	-0.16 (0.26)	3.41* (0.50)	-6.81* (1.43)	-1.92* (0.35)	-0.51 (0.77)	-1.19* (0.23)	-0.64 (0.56)	-1.01** (0.53)	10.99* (0.97)	-5.59* (1.08)	0.97
IND 342	0.99*	(0.01)	-0.07* (0.02)	-0.05 (0.05)	-0.01 (0.02)	-0.36* (0.12)	0.38* (0.14)	-0.16 (0.12)	-0.02** (0.01)	0.59** (0.34)	-0.10* (0.05)	-0.08 (0.10)	0.40* (0.12)	-0.13* (0.05)	-0.02 (0.24)	0.99
IND 351	1.01*	(0.04)	-0.73 (0.73)	-2.06** (1.22)	-1.00 (1.32)	-3.15* (0.98)	21.78* (4.80)	-6.61* (2.69)	3.86* (1.15)	-29.98* (5.00)	8.53* (1.13)	-6.09* (1.99)	-11.04* (2.16)	-3.04* (1.50)	-0.94 (2.86)	0.97
IND 352	1.03* >1*	(0.02)	-0.07* (0.02)	0.05* (0.02)	-0.05** (0.03)	0.17* (0.03)	0.08 (0.07)	-0.10* (0.04)	0.08* (0.02)	-0.42* (0.13)	0.07* (0.02)	-0.10* (0.04)	-0.22* (0.08)	0.02 (0.03)	0.22* (0.05)	0.98
IND 353	0.93*	(0.02)	-3.87* (1.64)	-11.47* (3.71)	-3.17* (1.25)	-9.06 (5.94)	-9.72 (8.45)	-17.98* (6.21)	-2.81* (0.71)	12.44 (54.16)	20.91* (2.65)	-24.03* (6.93)	12.37 (10.56)	-14.14** (7.70)	35.04* (16.43)	0.97
IND 355	1.01*	(0.02)	0.02 (0.02)	-0.09* (0.03)	-0.08* (0.03)	0.45* (0.11)	-0.16 (0.12)	-0.13* (0.05)	0.01 (0.02)	0.23* (0.09)	-0.09* (0.03)	-0.19* (0.06)	0.42* (0.10)	-0.22* (0.06)	-0.22* (0.07)	0.98
IND 356	1.01* >1**	(0.01)	-0.15 (0.26)	0.73* (0.24)	0.13 (0.25)	-2.71* (0.70)	-0.25 (0.69)	-1.03* (0.32)	-0.25* (0.09)	12.82* (2.61)	-0.39* (0.08)	-0.72* (0.22)	-0.60 (0.68)	0.29 (0.47)	-3.17* (0.89)	0.99
IND 362	1.01*	(0.01)	0.61* (0.16)	-0.44** (0.26)	0.24 (0.25)	2.24* (1.01)	0.98 (0.73)	-1.49** (0.83)	0.14* (0.06)	1.66 (1.30)	-0.69 (0.54)	0.25 (0.30)	-1.33* (0.51)	-0.21 (0.26)	-4.82* (1.86)	0.98
IND 369	0.93*	(0.02)	-0.40* (0.14)	-0.82* (0.28)	-1.44* (0.49)	-1.12 (0.72)	-0.10 (1.40)	-0.93 (0.74)	-0.89* (0.27)	12.54* (3.13)	-0.76* (0.16)	-1.66* (0.63)	3.20* (1.09)	-2.55* (0.70)	-2.05 (2.55)	0.95
IND 371	0.99*	(0.01)	0.16* (0.03)	-0.16* (0.04)	0.02 (0.03)	0.12** (0.06)	0.32 (0.35)	-0.23* (0.05)	-0.05* (0.02)	-0.11 (0.23)	-0.06* (0.02)	-0.34* (0.10)	0.46* (0.18)	0.28* (0.08)	-0.43* (0.13)	0.99
IND 381	1.03* >1*	(0.02)	-0.06 (0.18)	0.39** (0.21)	0.16 (0.22)	-1.42* (0.37)	0.45 (0.52)	-0.83* (0.41)	0.03 (0.11)	6.59* (1.51)	-0.28* (0.07)	-0.02 (0.35)	-1.58* (0.51)	-0.06 (0.27)	-1.79* (0.44)	0.98
IND 382	1.09* >1*	(0.01)	0.02 (0.04)	0.19* (0.05)	0.24* (0.08)	-1.03* (0.23)	0.71* (0.30)	-0.03 (0.05)	0.30* (0.07)	1.78* (0.43)	-0.08* (0.03)	-0.24* (0.06)	-0.90* (0.18)	0.40* (0.12)	-0.74* (0.25)	0.98
IND 383	1.04* >1*	(0.02)	0.02 (0.03)	0.06 (0.04)	0.26* (0.05)	-0.06 (0.08)	0.35* (0.13)	-0.11 (0.08)	0.15* (0.04)	-0.23 (0.17)	0.03 (0.04)	0.00 (0.05)	-0.45* (0.14)	0.34* (0.07)	-0.66* (0.14)	0.99
IND 384	1.10* >1*	(0.01)	0.11 (0.09)	0.32 (0.22)	0.92* (0.27)	0.84** (0.43)	5.54* (1.30)	-1.13* (0.36)	0.27* (0.09)	-4.20* (1.11)	-0.65* (0.14)	-0.33 (0.24)	0.44 (0.65)	2.20* (0.66)	-4.97* (1.49)	0.97
IND 385	1.07* >1*	(0.03)	-0.08** (0.05)	0.22* (0.03)	0.02 (0.07)	-0.35* (0.08)	1.57* (0.39)	-0.13** (0.07)	0.23* (0.03)	-1.16* (0.24)	0.14* (0.03)	-0.13** (0.07)	-1.01* (0.20)	0.07 (0.08)	0.22 (0.23)	0.95
IND 390	0.90*	(0.05)	-0.08 (0.12)	-0.42* (0.11)	-0.58* (0.19)	-0.89** (0.46)	-0.44 (0.28)	-0.98* (0.27)	-0.15** (0.09)	8.54* (0.78)	-0.49* (0.09)	-0.67* (0.25)	-1.03* (0.12)	-1.02* (0.23)	-1.49* (0.41)	0.93

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 9: Estimation of the HME equation (eq (25)) with *FMA* variable defined in (29) - Quantities

Dependent Variable: *Share of Domestic Production*
Explanatory Variables use *net final demand (see equation (27))*

INDUSTRY	Beta 1		COEFFICIENTS ON FOREIGN MARKET ACCESS VARIABLE: AUS	DNK	FIN	FRA	GER	GRC	IRL	ITA	NLD	PRT	ESP	SWE	GBR	R2
IND 311	0.91*	(0.01)	-0.44* (0.07)	0.21* (0.03)	-0.42* (0.10)	0.29* (0.07)	0.10 (0.13)	-0.57* (0.09)	0.07* (0.02)	-1.39* (0.15)	0.62* (0.07)	-0.68* (0.15)	0.30* (0.10)	-1.19* (0.18)	-0.08 (0.09)	0.98
IND 313	0.81*	(0.02)	-0.03* (0.01)	-0.02* (0.01)	-0.05* (0.01)	0.08* (0.03)	0.00 (0.01)	-0.02* (0.01)	-0.01* (0.00)	0.01 (0.01)	-0.01* (0.00)	-0.01* (0.00)	0.00 (0.00)	-0.13* (0.03)	-0.01 (0.01)	0.93
IND 314	1.00*	(0.02)	0.00** (0.00)	0.00 (0.00)	0.00 (0.00)	-0.01* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00* (0.00)	0.01* (0.00)	0.00** (0.00)	-0.01 (0.01)	-0.01 (0.01)	0.00 (0.00)	0.95
IND 321	1.17* >1*	(0.03)	0.08* (0.03)	0.18* (0.07)	0.06 (0.07)	-1.22* (0.21)	-0.59* (0.27)	0.34* (0.10)	0.08* (0.04)	2.38* (0.50)	-0.10* (0.04)	0.96* (0.14)	-0.30* (0.13)	-0.07 (0.07)	-0.98* (0.21)	0.93
IND 322	0.83*	(0.04)	-0.41* (0.11)	-0.65* (0.21)	-0.27** (0.14)	0.84* (0.18)	-2.06* (0.82)	0.20 (0.33)	-0.30* (0.09)	7.28* (2.12)	-1.05* (0.24)	2.22* (0.89)	0.49* (0.14)	-1.97* (0.38)	-0.50** (0.30)	0.79
IND 323	1.24* >1*	(0.04)	0.12 (0.09)	0.46* (0.16)	0.56* (0.18)	-1.50* (0.58)	-3.72* (0.96)	-2.08* (0.46)	0.40* (0.12)	4.72* (1.54)	0.11 (0.07)	-0.63 (0.47)	1.08** (0.57)	0.80* (0.22)	0.31 (0.22)	0.89
IND 331	0.68*	(0.01)	0.57* (0.21)	-3.16* (0.86)	4.09* (1.20)	0.89** (0.49)	1.68* (0.63)	-10.53* (2.12)	-2.26* (0.55)	-2.26 (2.20)	-2.88* (0.56)	1.88* (0.65)	0.81* (0.34)	6.94* (1.74)	-6.82* (1.27)	0.89
IND 332	0.70*	(0.03)	-2.27* (0.69)	0.31 (0.58)	-4.01* (1.24)	-5.14* (1.37)	4.38* (1.41)	-17.30* (5.37)	-1.53* (0.49)	55.13* (16.44)	-4.20* (0.97)	-9.41* (2.56)	1.16 (1.44)	-5.53* (1.85)	3.51** (1.86)	0.83
IND 341	0.57*	(0.02)	0.60** (0.32)	-7.45* (1.26)	17.13* (2.17)	-0.08 (0.45)	17.23* (2.18)	-17.49* (3.12)	-4.96* (0.74)	-1.20 (1.07)	-3.14* (0.47)	-1.94* (0.97)	-2.48* (1.19)	16.29* (1.52)	-10.32* (1.82)	0.86
IND 342	0.95*	(0.03)	-0.34* (0.07)	0.17 (0.14)	-1.42* (0.23)	-1.95* (0.43)	4.93* (0.99)	-0.90* (0.31)	-0.09* (0.03)	1.39* (0.34)	-0.37* (0.08)	-0.87* (0.24)	0.88* (0.22)	-2.98* (0.54)	2.62* (0.65)	0.89
IND 351	0.58*	(0.08)	-10.49* (1.81)	-20.25* (3.25)	-20.25* (3.51)	2.32 (2.81)	89.82* (11.48)	-41.11* (6.84)	-5.85* (1.80)	-29.64* (10.74)	11.37* (1.90)	-32.16* (4.91)	-23.24* (4.40)	-23.42* (3.63)	12.55* (4.27)	0.88
IND 352	1.04*	(0.06)	-0.23* (0.06)	0.00 (0.05)	-0.19* (0.09)	0.25* (0.08)	1.37* (0.30)	-0.34* (0.11)	0.15* (0.05)	-1.23* (0.21)	0.12* (0.04)	-0.32* (0.11)	-0.76* (0.20)	-0.13** (0.08)	0.26* (0.09)	0.91
IND 353	0.85*	(0.02)	-9.60* (3.74)	-26.35* (6.29)	-2.30** (1.24)	-45.92* (7.23)	31.28* (10.24)	-37.65* (6.65)	-7.15* (1.37)	-44.90 (57.87)	58.12* (5.51)	-57.62* (10.51)	9.19 (12.89)	-17.21** (10.32)	34.05** (17.29)	0.92
IND 355	1.15* >1*	(0.02)	0.15* (0.03)	-0.17* (0.03)	-0.08* (0.03)	0.88* (0.22)	0.37* (0.16)	-0.16* (0.06)	0.12* (0.03)	-0.06 (0.12)	-0.19* (0.05)	-0.34* (0.11)	0.83* (0.12)	-0.68* (0.12)	-1.28* (0.29)	0.95
IND 356	1.02* >1*	(0.01)	-0.66* (0.27)	0.24 (0.28)	-0.17 (0.33)	-8.24* (1.20)	13.90* (2.28)	-2.83* (0.48)	-0.71* (0.16)	23.21* (2.73)	-1.30* (0.20)	-2.32* (0.41)	-3.91* (0.69)	-0.61 (0.68)	-12.32* (1.72)	0.96
IND 362	0.94*	(0.03)	1.77* (0.37)	-4.29* (1.48)	-0.74** (0.39)	11.11* (3.82)	18.47* (6.03)	-11.57* (4.47)	0.12 (0.21)	7.55* (3.69)	-7.34* (2.02)	-1.41 (0.99)	-9.43* (3.53)	-2.92* (1.00)	-17.79* (4.72)	0.73
IND 369	0.52*	(0.03)	-3.65* (0.74)	-6.65* (1.27)	-9.52* (1.91)	-2.92* (1.23)	16.18* (2.77)	-10.78* (3.14)	-5.65* (1.25)	43.33* (9.70)	-4.15* (0.71)	-13.03* (2.85)	9.79* (2.73)	-14.50* (2.46)	4.58** (2.42)	0.74
IND 371	0.72*	(0.02)	0.09* (0.04)	-1.28* (0.25)	-0.93* (0.19)	-0.13** (0.07)	9.79* (1.42)	-2.09* (0.38)	-0.71* (0.11)	-1.33* (0.58)	-0.58* (0.11)	-2.52* (0.48)	0.61 (0.41)	-0.67* (0.10)	-0.88* (0.14)	0.67
IND 381	-0.08**	(0.04)	-7.98* (0.69)	-11.50* (1.91)	-14.18* (1.89)	12.31* (2.30)	27.26* (3.69)	-25.88* (4.76)	-7.33* (1.24)	10.87* (4.68)	-3.78* (0.55)	-19.07* (3.02)	0.19 (1.28)	-14.76* (1.86)	12.77* (2.27)	0.76
IND 382	1.16* >1*	(0.02)	-0.02 (0.04)	0.34* (0.09)	0.46* (0.13)	-2.14* (0.50)	2.76* (0.75)	-0.15** (0.08)	0.53* (0.12)	2.94* (0.73)	-0.22* (0.05)	-0.58* (0.13)	-1.98* (0.45)	0.30* (0.12)	-1.43* (0.47)	0.94
IND 383	0.93*	(0.03)	0.04 (0.04)	-0.28* (0.09)	-0.15 (0.14)	1.36* (0.32)	0.12 (0.15)	-0.66* (0.21)	0.12 (0.08)	1.35* (0.51)	0.22* (0.05)	-0.31* (0.13)	-0.56* (0.16)	-0.19 (0.15)	-1.94* (0.30)	0.97
IND 384	1.11* >1*	(0.03)	-0.21 (0.22)	0.16 (0.24)	0.94* (0.25)	2.81* (0.51)	12.13* (2.89)	-3.41* (1.01)	0.10 (0.10)	-6.29* (1.45)	-1.49* (0.32)	-1.61* (0.63)	1.51** (0.86)	0.80* (0.33)	-7.49* (2.25)	0.92
IND 385	1.06*	(0.05)	-0.23* (0.08)	0.23* (0.06)	-0.32* (0.15)	0.09 (0.09)	2.70* (0.54)	-0.43* (0.13)	0.43* (0.05)	-1.05* (0.29)	0.24* (0.05)	-0.40* (0.13)	-1.96* (0.39)	-0.48* (0.16)	-0.15 (0.29)	0.92
IND 390	0.44*	(0.04)	-0.87* (0.18)	-1.72* (0.18)	-2.45* (0.31)	2.93* (0.47)	2.52* (0.35)	-3.13* (0.45)	-0.91* (0.15)	12.30* (1.38)	-1.26* (0.13)	-2.65* (0.32)	-0.63* (0.08)	-3.32* (0.37)	-3.02* (0.82)	0.80

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 10: Fixed Effect Estimation (Quantities)

Dependent Variable: *Share of Domestic Production*

INDUSTRY	Explanatory Variables use *total demand=production-net export*			Explanatory Variables use *net final demand (see equation (27))*		
	Beta 1		R2	Beta 1		R2
IND 311	0.94*	(0.09)	0.99	0.93*	(0.09)	0.99
IND 313	0.78*	(0.12)	0.98	0.74*	(0.13)	0.98
IND 314	0.89*	(0.10)	0.97	0.85*	(0.10)	0.97
IND 321	1.10*	(0.08)	0.98	1.27* >1*	(0.08)	0.97
IND 322	1.10* >1**	(0.06)	0.98	1.09* >1**	(0.06)	0.97
IND 323	1.09* >1**	(0.06)	0.97	1.09* >1**	(0.06)	0.96
IND 331	0.84*	(0.04)	0.97	0.72*	(0.07)	0.96
IND 332	0.89*	(0.07)	0.98	0.66*	(0.12)	0.97
IND 341	0.79*	(0.03)	0.99	0.41*	(0.03)	0.99
IND 342	0.85*	(0.07)	0.99	0.74*	(0.03)	0.99
IND 351	0.39*	(0.07)	0.99	0.15*	(0.07)	0.99
IND 352	0.91*	(0.07)	0.99	0.80*	(0.07)	0.98
IND 353	0.79*	(0.07)	0.97	0.58*	(0.07)	0.97
IND 355	0.83*	(0.10)	0.99	0.75*	(0.09)	0.99
IND 356	0.83*	(0.04)	0.99	0.67*	(0.07)	0.99
IND 362	0.73*	(0.09)	0.99	0.37*	(0.04)	0.98
IND 369	0.75*	(0.14)	0.97	0.39*	(0.10)	0.95
IND 371	0.75*	(0.09)	0.99	0.02	(0.10)	0.98
IND 381	0.96*	(0.04)	0.99	0.05	(0.05)	0.94
IND 382	0.88*	(0.08)	0.99	0.79*	(0.08)	0.99
IND 383	0.90*	(0.09)	0.99	0.71*	(0.12)	0.99
IND 384	0.32*	(0.10)	1.00	0.10**	(0.06)	0.99
IND 385	0.73*	(0.14)	0.97	0.50*	(0.13)	0.96
IND 390	0.77*	(0.06)	0.98	0.38*	(0.07)	0.95

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 11: Estimation of the HME Equation Pooled within 2-Digit Industries (Values)

Dependent Variable: *Share of Domestic Production*

Industry	Estimation of eq. (25) with FMA variable defined in (28)								Estimation of eq. (25) with FMA variable defined in (29)							
	Explanatory Variables use total demand=production-net export				Explanatory Variables use net final demand (see equation (27))				Explanatory Variables use total demand=production-net export				Explanatory Variables use net final demand (see equation (27))			
	Beta 1		R2	OBS	Beta 1		R2	OBS	Beta 1		R2	OBS	Beta 1		R2	OBS
31	0.94*	(0.01)	0.96	780	0.91*	(0.02)	0.94	780	0.94*	(0.01)	0.96	780	0.91*	(0.02)	0.94	780
32	1.06* >1*	(0.03)	0.90	780	1.00*	(0.04)	0.84	780	1.05* >1*	(0.03)	0.90	780	1.00*	(0.04)	0.84	780
33	0.90*	(0.01)	0.93	520	0.69*	(0.02)	0.82	520	0.89*	(0.01)	0.93	520	0.69*	(0.02)	0.82	520
34	0.87*	(0.02)	0.93	520	0.54*	(0.04)	0.69	520	0.87*	(0.02)	0.93	520	0.53*	(0.04)	0.69	520
35	1.00*	(0.01)	0.97	1300	0.94*	(0.02)	0.80	1300	1.00*	(0.01)	0.97	1300	0.94*	(0.02)	0.80	1300
36	0.96*	(0.01)	0.96	520	0.67*	(0.04)	0.71	520	0.97*	(0.01)	0.96	520	0.66*	(0.04)	0.70	520
37	0.99*	(0.01)	0.99	260	0.73*	(0.02)	0.64	260	0.99*	(0.01)	0.99	260	0.73*	(0.02)	0.65	260
38	1.02* >1*	(0.01)	0.95	1300	0.39*	(0.06)	0.58	1300	1.02*	(0.02)	0.95	1300	0.35*	(0.07)	0.56	1300
39	0.91*	(0.04)	0.93	260	0.48*	(0.04)	0.81	260	0.90*	(0.04)	0.94	260	0.50*	(0.04)	0.83	260

Industry	Fixed Effects esitmation								Estimation of equation (25)							
	Explanatory Variables use total demand=production-net export				Explanatory Variables use net final demand (see equation (27))				Explanatory Variables use total demand=production-net export				Explanatory Variables use net final demand (see equation (27))			
	Beta 1		R2	OBS	Beta 1		R2	OBS	Beta 1		R2	OBS	Beta 1		R2	OBS
31	0.90*	(0.04)	0.96	780	0.83*	(0.05)	0.95	780	0.94*	(0.01)	0.96	780	0.92*	(0.01)	0.94	780
32	1.06* >1**	(0.04)	0.97	780	0.96*	(0.05)	0.94	780	1.05* >1*	(0.03)	0.90	780	0.99*	(0.04)	0.84	780
33	0.87*	(0.05)	0.95	520	0.27*	(0.06)	0.90	520	0.89*	(0.01)	0.93	520	0.69*	(0.02)	0.83	520
34	0.92*	(0.05)	0.95	520	-0.06*	(0.02)	0.89	520	0.88*	(0.02)	0.93	520	0.56*	(0.04)	0.67	520
35	0.63*	(0.05)	0.98	1300	0.11*	(0.03)	0.96	1300	1.00*	(0.01)	0.97	1300	0.96*	(0.02)	0.80	1300
36	0.77*	(0.07)	0.97	520	0.06*	(0.03)	0.94	520	0.96*	(0.01)	0.96	520	0.67*	(0.04)	0.71	520
37	0.73*	(0.08)	0.99	260	0.08	(0.08)	0.98	260	0.99*	(0.01)	0.99	260	0.73*	(0.02)	0.63	260
38	0.77*	(0.05)	0.96	1300	0.09*	(0.02)	0.91	1300	1.02* >1**	(0.01)	0.95	1300	0.41*	(0.06)	0.56	1300
39	0.80*	(0.07)	0.98	260	0.43*	(0.08)	0.95	260	0.90*	(0.03)	0.93	260	0.48*	(0.04)	0.80	260

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 12: Estimation of the HME equation (eq (25)) - Values

Dependent Variable: *Share of Domestic Production*
Explanatory Variables use *total demand=production-net export*

INDUSTRY	Beta 1		COEFFICIENTS ON FOREIGN MARKET ACCESS VARIABLE: AUS	DNK	FIN	FRA	GER	GRC	IRL	ITA	NLD	PRT	ESP	SWE	GBR	R2
IND 311	0.93*	(0.01)	0.18* (0.04)	-0.20* (0.02)	0.64* (0.12)	-0.18* (0.06)	-0.20* (0.10)	0.43* (0.07)	-0.01* (0.01)	0.47* (0.10)	-0.22* (0.03)	0.42* (0.09)	-0.17* (0.07)	0.78* (0.14)	0.36* (0.07)	0.99
IND 313	0.88*	(0.01)	0.00 (0.00)	0.00* (0.00)	0.01* (0.00)	-0.01 (0.01)	0.00* (0.00)	0.00* (0.00)	0.00* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.02 (0.04)	0.00 (0.01)	0.94
IND 314	1.00*	(0.02)	0.00 (0.00)	0.00 (0.00)	0.00 (0.01)	0.00* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.01)	0.00* (0.00)	0.00* (0.00)	-0.01 (0.01)	0.02 (0.01)	-0.03 (0.02)	0.97
IND 321	1.06* >1*	(0.03)	-0.02** (0.01)	-0.02 (0.03)	0.05 (0.10)	0.20* (0.08)	0.92* (0.34)	-0.16* (0.08)	-0.01 (0.02)	-1.72* (0.36)	0.03* (0.01)	-0.42* (0.09)	-0.11* (0.03)	0.16* (0.08)	0.58* (0.12)	0.95
IND 322	0.91*	(0.02)	0.11* (0.05)	0.20* (0.09)	-0.15 (0.15)	-0.34* (0.09)	1.32* (0.56)	-0.21 (0.18)	0.11* (0.05)	-5.16* (1.73)	0.44* (0.14)	-0.92* (0.39)	-0.24* (0.11)	1.73* (0.32)	0.43* (0.21)	0.86
IND 323	1.17* >1*	(0.04)	-0.07 (0.05)	-0.24* (0.11)	-0.71* (0.30)	0.72* (0.36)	3.35* (1.06)	0.64* (0.24)	-0.24* (0.08)	-3.74* (1.16)	-0.05 (0.04)	-0.32* (0.16)	-0.99* (0.37)	-0.58* (0.22)	0.85* (0.21)	0.92
IND 331	0.84*	(0.02)	-0.45* (0.20)	1.19* (0.39)	-2.84* (0.72)	-0.03 (0.33)	-0.80 (0.49)	5.22* (1.21)	1.34* (0.36)	0.97 (1.99)	1.37* (0.29)	0.02 (0.15)	0.02 (0.11)	-4.96* (1.18)	6.94* (1.02)	0.94
IND 332	0.91*	(0.02)	0.65* (0.20)	-1.58* (0.59)	2.39* (1.01)	3.19* (0.80)	-1.03 (0.89)	5.11* (1.83)	0.51* (0.20)	-24.66* (7.40)	1.41* (0.34)	2.93* (0.93)	-1.10 (0.91)	0.92 (0.64)	2.54 (2.02)	0.95
IND 341	0.82*	(0.01)	-0.43* (0.19)	2.74* (0.58)	-13.67* (1.54)	0.44 (0.34)	-3.66* (0.48)	5.98* (1.28)	2.01* (0.40)	0.72 (0.80)	1.02* (0.24)	1.67* (0.63)	1.55* (0.61)	-11.71* (0.95)	5.56* (0.68)	0.96
IND 342	0.99*	(0.01)	0.04* (0.02)	0.03 (0.05)	-0.01 (0.02)	0.35* (0.09)	-0.33* (0.10)	0.10 (0.13)	0.01 (0.00)	-0.77** (0.41)	0.08 (0.05)	0.04 (0.09)	-0.29** (0.15)	0.08* (0.02)	-0.14 (0.41)	0.98
IND 351	1.01*	(0.04)	0.42 (0.52)	1.80** (0.96)	0.72 (1.17)	3.85* (1.05)	-24.74* (5.39)	3.49 (2.40)	-3.79* (1.13)	24.60* (4.71)	-6.81* (0.82)	2.54 (1.77)	9.14* (1.81)	3.56* (1.19)	1.36 (3.44)	0.98
IND 352	1.03* >1*	(0.01)	0.00* (0.00)	0.00* (0.00)	0.10* (0.03)	-0.01* (0.00)	0.00 (0.05)	0.01 (0.01)	0.00* (0.00)	0.33* (0.09)	0.00* (0.00)	0.01 (0.01)	0.08 (0.06)	0.02 (0.03)	-0.04* (0.01)	0.98
IND 353	0.93*	(0.02)	1.97* (0.92)	9.15* (2.72)	9.49* (4.05)	4.14 (4.45)	1.84 (9.83)	21.30* (6.61)	3.38* (1.20)	-1.94 (39.08)	-11.34* (1.54)	22.46* (6.08)	-4.52 (8.54)	15.38* (6.34)	-25.82* (12.24)	0.97
IND 355	1.01*	(0.02)	-0.01* (0.00)	0.04* (0.02)	0.15* (0.05)	-0.14* (0.05)	0.15 (0.13)	0.07* (0.03)	0.00 (0.01)	-0.25* (0.08)	0.02* (0.01)	0.10** (0.05)	-0.30* (0.08)	0.35* (0.08)	0.20* (0.06)	0.98
IND 356	1.00*	(0.01)	0.18 (0.23)	-0.64* (0.24)	0.11 (0.51)	2.26* (0.71)	-0.40 (1.30)	0.90* (0.44)	0.25* (0.11)	-11.93* (2.92)	0.35* (0.08)	0.54 (0.34)	0.56 (0.58)	-0.07 (0.71)	2.31* (0.93)	0.99
IND 362	1.00*	(0.02)	-0.42* (0.11)	0.46** (0.25)	-0.27 (0.39)	-1.96* (0.90)	-1.07** (0.55)	1.16** (0.64)	-0.17 (0.10)	-1.83 (1.33)	0.53 (0.46)	-0.11 (0.30)	1.17* (0.50)	0.54 (0.34)	3.60* (0.76)	0.98
IND 369	0.91*	(0.02)	0.32* (0.15)	0.92* (0.28)	3.07* (0.80)	0.52 (0.59)	-1.82 (1.40)	2.15* (0.81)	0.90* (0.23)	-11.02* (2.67)	0.74* (0.17)	1.93* (0.57)	-2.31* (0.89)	3.31* (0.80)	1.23 (2.19)	0.95
IND 371	0.99*	(0.01)	-0.11* (0.03)	0.15* (0.04)	-0.02 (0.04)	-0.06 (0.04)	-0.32 (0.26)	0.17* (0.05)	0.05* (0.02)	-0.12 (0.21)	0.05* (0.02)	0.19* (0.06)	-0.31* (0.11)	-0.32* (0.11)	0.52* (0.12)	0.99
IND 381	1.02*	(0.02)	0.10 (0.15)	-0.20 (0.18)	0.07 (0.40)	1.17* (0.25)	-0.98 (0.72)	0.60 (0.52)	0.05 (0.14)	-5.10* (1.27)	0.24* (0.05)	-0.03 (0.38)	1.04* (0.41)	0.50 (0.34)	1.20* (0.42)	0.98
IND 382	1.07* >1*	(0.01)	0.02 (0.02)	-0.10* (0.03)	-0.14 (0.09)	0.73* (0.22)	-0.89* (0.33)	-0.02 (0.05)	-0.18* (0.05)	-1.33* (0.36)	0.06* (0.02)	0.06 (0.04)	0.64* (0.12)	-0.29* (0.12)	0.53* (0.16)	0.98
IND 383	1.03* >1**	(0.02)	0.00 (0.02)	-0.02 (0.03)	-0.25* (0.05)	0.06 (0.07)	-0.35* (0.17)	0.08 (0.07)	-0.09* (0.03)	0.19 (0.14)	-0.01 (0.03)	-0.01 (0.05)	0.33* (0.11)	-0.33* (0.07)	0.52* (0.12)	0.99
IND 384	1.10* >1*	(0.01)	-0.05 (0.07)	-0.16 (0.20)	-0.99* (0.29)	-0.37 (0.53)	-5.57* (1.24)	0.26 (0.21)	-0.25* (0.08)	3.89* (1.09)	0.56* (0.14)	-0.36 (0.23)	-0.29 (0.57)	-2.28* (0.69)	4.30* (1.10)	0.98
IND 385	1.09* >1*	(0.03)	0.06* (0.02)	-0.17* (0.02)	0.03 (0.08)	0.32* (0.06)	-1.31* (0.45)	0.03 (0.04)	-0.10* (0.03)	1.00* (0.21)	-0.08* (0.01)	0.01 (0.04)	0.68* (0.14)	0.02 (0.08)	-0.07 (0.17)	0.96
IND 390	0.90*	(0.03)	0.05 (0.08)	0.36* (0.07)	0.81* (0.19)	0.71* (0.32)	0.21 (0.19)	0.92* (0.21)	0.10* (0.04)	-5.45* (0.53)	0.34* (0.06)	0.61* (0.16)	0.77* (0.08)	1.20* (0.19)	1.11* (0.26)	0.93

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 13: Estimation of the HME equation (eq (25)) - Values

Dependent Variable: *Share of Domestic Production*
Explanatory Variables use *net final demand (see equation (27))*

INDUSTRY	Beta 1		COEFFICIENTS ON FOREIGN MARKET ACCESS VARIABLE: AUS	DNK	FIN	FRA	GER	GRC	IRL	ITA	NLD	PRT	ESP	SWE	GBR	R2
IND 311	0.90*	(0.01)	0.26* (0.06)	-0.18* (0.02)	0.47* (0.12)	-0.20* (0.06)	-0.17 (0.10)	0.58* (0.08)	-0.02* (0.01)	0.83* (0.13)	-0.31* (0.04)	0.60* (0.12)	-0.12** (0.07)	1.25* (0.19)	0.14* (0.07)	0.98
IND 313	0.83*	(0.02)	0.00 (0.00)	0.00* (0.00)	0.01* (0.00)	-0.01 (0.01)	0.00 (0.00)	0.00* (0.00)	-0.01* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.03 (0.07)	-0.02 (0.01)	0.91
IND 314	1.00*	(0.02)	0.00 (0.00)	0.00 (0.00)	-0.01 (0.01)	0.00* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.01)	0.00* (0.00)	0.00* (0.00)	-0.01 (0.01)	0.02 (0.02)	0.00 (0.02)	0.96
IND 321	1.11* >1*	(0.03)	-0.02 (0.01)	-0.05 (0.04)	0.11 (0.08)	0.70* (0.17)	0.25 (0.27)	-0.25* (0.09)	-0.02 (0.02)	-2.18* (0.46)	0.08* (0.02)	-0.64* (0.12)	0.07 (0.08)	0.33* (0.08)	0.57* (0.11)	0.93
IND 322	0.81*	(0.03)	0.16* (0.06)	0.40* (0.16)	0.40** (0.23)	-0.81* (0.21)	1.42* (0.61)	0.19 (0.15)	0.19* (0.08)	-6.60* (2.21)	0.52* (0.17)	-0.57 (0.36)	-0.33* (0.12)	2.28* (0.42)	0.17 (0.17)	0.80
IND 323	1.19* >1*	(0.05)	-0.01 (0.05)	-0.22** (0.12)	-0.75* (0.35)	1.27* (0.52)	3.86* (1.25)	1.27* (0.31)	-0.31* (0.12)	-4.51* (1.37)	0.01 (0.05)	-0.07 (0.21)	-1.08* (0.38)	-0.58* (0.25)	-0.37* (0.17)	0.88
IND 331	0.70*	(0.02)	-0.51* (0.20)	2.48* (0.70)	-6.07* (1.37)	-0.68* (0.32)	-1.81* (0.76)	10.77* (1.91)	2.40* (0.60)	2.23 (3.29)	2.21* (0.45)	0.34** (0.18)	0.01 (0.12)	-10.15* (2.74)	6.74* (1.24)	0.89
IND 332	0.72*	(0.03)	1.40* (0.42)	-1.25* (0.62)	9.67* (3.24)	4.28* (1.05)	-4.49* (1.26)	15.73* (4.93)	1.47* (0.51)	-41.21* (12.15)	2.83* (0.69)	9.23* (2.60)	-0.09 (0.82)	3.63* (1.52)	-2.79** (1.64)	0.86
IND 341	0.58*	(0.02)	-0.99* (0.38)	8.31* (1.52)	-34.37* (3.96)	0.90 (0.57)	-16.81* (2.26)	15.86* (2.76)	4.20* (0.61)	2.87* (0.96)	3.30* (0.56)	4.10* (0.99)	3.90* (1.22)	-24.80* (2.34)	11.58* (1.70)	0.84
IND 342	0.92*	(0.03)	0.54* (0.14)	-0.25 (0.18)	0.51* (0.12)	1.67* (0.49)	-3.51* (0.82)	0.85* (0.35)	0.04* (0.01)	-1.47* (0.28)	0.33* (0.11)	0.74* (0.28)	-0.61* (0.24)	0.68* (0.17)	-2.49* (0.86)	0.84
IND 351	0.61*	(0.09)	10.10* (1.60)	20.07* (2.69)	17.06* (2.38)	-0.94 (4.35)	-106.39* (13.15)	33.60* (5.49)	3.24 (1.98)	32.85* (11.91)	-13.66* (2.36)	24.49* (4.00)	23.65* (3.79)	22.12* (2.52)	-10.60** (6.30)	0.90
IND 352	1.12* >1*	(0.05)	0.01* (0.00)	0.00 (0.00)	0.19* (0.08)	0.00 (0.00)	-0.84* (0.34)	0.04 (0.04)	-0.01* (0.00)	1.03* (0.25)	-0.01* (0.00)	0.03 (0.04)	0.37** (0.19)	0.16* (0.05)	-0.03* (0.01)	0.90
IND 353	0.85*	(0.01)	5.25* (2.24)	21.65* (5.42)	4.73 (3.42)	40.29* (5.73)	-68.59* (20.32)	42.37* (7.74)	7.70* (2.50)	47.30 (39.69)	-32.61* (3.35)	51.80* (10.82)	1.24 (10.01)	28.36** (16.31)	-20.45** (12.19)	0.93
IND 355	1.18* >1*	(0.02)	-0.06* (0.01)	0.09* (0.03)	0.13* (0.04)	-0.29* (0.12)	-0.32* (0.14)	-0.02 (0.03)	-0.06* (0.02)	0.02 (0.12)	0.05* (0.02)	-0.05 (0.05)	-0.71* (0.11)	0.97* (0.18)	1.13* (0.28)	0.95
IND 356	1.03* >1*	(0.01)	0.60* (0.29)	-0.38 (0.30)	0.06 (0.53)	8.39* (1.24)	-15.40* (2.55)	1.29* (0.42)	0.37* (0.11)	-20.27* (2.83)	1.19* (0.18)	0.76* (0.34)	3.29* (0.60)	0.71 (0.97)	12.04* (1.85)	0.96
IND 362	1.01*	(0.03)	-2.24* (0.41)	4.08* (1.41)	-0.36 (0.83)	-9.67* (3.38)	-12.61* (3.67)	7.92* (3.16)	-0.45* (0.20)	-6.29* (3.12)	9.05* (2.75)	0.17 (0.66)	10.11* (4.00)	2.98* (0.93)	18.61* (4.09)	0.75
IND 369	0.59*	(0.03)	3.27* (0.77)	5.48* (1.04)	12.99* (2.35)	3.87* (1.20)	-12.79* (2.30)	11.43* (3.04)	3.66* (0.81)	-31.05* (6.64)	3.64* (0.65)	9.96* (2.24)	-5.11* (1.69)	12.02* (2.27)	-2.40 (1.93)	0.79
IND 371	0.73*	(0.02)	-0.14* (0.06)	2.00* (0.39)	1.23* (0.24)	0.37* (0.11)	-6.72* (1.13)	1.77* (0.34)	0.52* (0.11)	1.35* (0.57)	0.98* (0.19)	1.81* (0.37)	-0.06 (0.22)	0.68* (0.07)	1.28* (0.18)	0.63
IND 381	-0.09**	(0.05)	-6.30** (3.40)	17.52* (1.85)	9.97* (0.94)	-34.98* (5.02)	-16.61* (3.57)	29.16* (3.93)	4.69* (0.71)	-6.72** (3.58)	7.27* (1.12)	13.96* (1.79)	0.77 (0.61)	8.19* (1.30)	-11.63* (1.78)	0.72
IND 382	1.15* >1*	(0.02)	0.05* (0.02)	-0.22* (0.06)	-0.37* (0.14)	1.75* (0.52)	-2.47* (0.77)	-0.05 (0.06)	-0.33* (0.09)	-2.10* (0.56)	0.16* (0.05)	0.14* (0.06)	1.39* (0.30)	-0.08 (0.12)	1.16* (0.33)	0.94
IND 383	0.94*	(0.03)	-0.01 (0.02)	0.23* (0.08)	0.15 (0.15)	-0.88* (0.29)	-0.01 (0.20)	0.56* (0.19)	-0.07 (0.05)	-1.05* (0.39)	-0.12* (0.02)	0.29* (0.12)	0.52* (0.16)	0.23 (0.16)	1.93* (0.24)	0.97
IND 384	1.13* >1*	(0.02)	0.17 (0.19)	-0.11 (0.25)	-1.15* (0.26)	-2.01* (0.61)	-11.68* (2.66)	1.51* (0.56)	-0.20* (0.08)	6.15* (1.50)	1.34* (0.32)	0.13 (0.37)	-1.10 (0.73)	-0.50 (0.37)	7.07* (1.83)	0.93
IND 385	1.09* >1*	(0.05)	0.20* (0.05)	-0.19* (0.04)	0.46* (0.15)	0.07 (0.06)	-2.31* (0.68)	0.24* (0.09)	-0.18* (0.05)	1.09* (0.28)	-0.15* (0.03)	0.18* (0.08)	1.48* (0.32)	0.78* (0.15)	0.39 (0.29)	0.92
IND 390	0.48*	(0.04)	0.84* (0.16)	1.46* (0.18)	2.60* (0.33)	-2.47* (0.38)	-1.99* (0.28)	3.83* (0.52)	0.30* (0.05)	-6.89* (0.77)	0.82* (0.10)	2.38* (0.30)	0.94* (0.11)	3.15* (0.35)	3.58* (0.67)	0.80

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 14: Estimation of the HME equation (eq (25)) with *FMA* variable defined in (28) - Values

Dependent Variable: *Share of Domestic Production*
Explanatory Variables use *total demand=production-net export*

INDUSTRY	Beta 1		COEFFICIENTS ON FOREIGN MARKET ACCESS VARIABLE: AUS	DNK	FIN	FRA	GER	GRC	IRL	ITA	NLD	PRT	ESP	SWE	GBR	R2
IND 311	0.92*	(0.01)	-0.25* (0.05)	0.26* (0.03)	-0.60* (0.12)	0.26* (0.08)	0.24* (0.12)	-0.44* (0.07)	0.03* (0.01)	-0.50* (0.11)	0.32* (0.03)	-0.42* (0.09)	0.20* (0.07)	-0.74* (0.13)	-0.37* (0.07)	0.99
IND 313	0.86*	(0.02)	-0.02* (0.00)	-0.01* (0.00)	-0.08* (0.02)	0.04* (0.02)	-0.01 (0.01)	-0.01* (0.00)	0.00* (0.00)	0.00 (0.00)	-0.01* (0.00)	-0.01* (0.00)	0.00 (0.00)	-0.09* (0.02)	0.01** (0.01)	0.95
IND 314	0.99*	(0.02)	0.00 (0.00)	0.00 (0.00)	0.00 (0.01)	-0.01* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.01* (0.00)	0.00** (0.00)	0.00** (0.00)	-0.01 (0.01)	0.00* (0.00)	0.97
IND 321	1.07* >1*	(0.04)	0.04** (0.02)	0.05 (0.06)	-0.02 (0.10)	-0.37* (0.14)	-1.24* (0.41)	0.20* (0.09)	0.03 (0.04)	1.86* (0.36)	-0.05 (0.03)	0.46* (0.10)	0.10* (0.04)	-0.14 (0.09)	-0.74* (0.14)	0.96
IND 322	0.91*	(0.03)	-0.23* (0.07)	-0.33* (0.12)	0.09 (0.17)	0.47* (0.14)	-1.61* (0.63)	0.16 (0.19)	-0.22* (0.07)	5.21* (1.70)	-0.76* (0.17)	0.87* (0.39)	0.19** (0.11)	-1.71* (0.33)	-0.52* (0.24)	0.87
IND 323	1.17* >1*	(0.04)	0.10 (0.07)	0.30* (0.13)	0.66* (0.28)	-0.95* (0.42)	-3.62* (1.12)	-0.66* (0.27)	0.33* (0.11)	3.94* (1.20)	0.07 (0.06)	0.33* (0.17)	1.02* (0.38)	0.56* (0.21)	-0.90* (0.23)	0.92
IND 331	0.84*	(0.02)	0.54* (0.22)	-1.34* (0.42)	3.06* (0.74)	0.02 (0.41)	0.81 (0.51)	-4.84* (1.25)	-1.42* (0.37)	-0.98 (1.37)	-1.62* (0.30)	-0.02 (0.15)	-0.02 (0.11)	5.08* (1.18)	-6.79* (0.99)	0.94
IND 332	0.91*	(0.02)	-0.79* (0.24)	1.70* (0.62)	-2.52* (1.07)	-3.62* (0.89)	0.99 (0.94)	-5.33* (1.94)	-0.62* (0.23)	24.05* (7.22)	-1.64* (0.38)	-3.08* (1.00)	0.99 (0.90)	-1.05 (0.69)	-2.62 (2.04)	0.95
IND 341	0.82*	(0.01)	0.42* (0.20)	-2.88* (0.58)	13.60* (1.54)	-0.48 (0.36)	3.73* (0.49)	-6.09* (1.28)	-2.11* (0.40)	-0.76 (0.79)	-1.11* (0.24)	-1.74* (0.63)	-1.60* (0.62)	11.68* (0.95)	-5.62* (0.68)	0.96
IND 342	0.99*	(0.01)	-0.08* (0.03)	-0.07 (0.07)	0.00 (0.03)	-0.53* (0.13)	0.41* (0.13)	-0.15 (0.15)	-0.02 (0.01)	0.71* (0.35)	-0.14** (0.08)	-0.08 (0.11)	0.29** (0.15)	-0.15* (0.04)	0.22 (0.48)	0.98
IND 351	1.01*	(0.04)	-0.40 (0.53)	-1.78** (0.97)	-0.66 (1.17)	-3.86* (1.08)	25.00* (5.43)	-3.41 (2.40)	3.88* (1.14)	-24.52* (4.71)	7.01* (0.82)	-2.49 (1.77)	-9.10* (1.80)	-3.50* (1.18)	-1.30 (3.47)	0.98
IND 352	1.02*	(0.02)	-0.06* (0.02)	0.04* (0.02)	-0.10* (0.04)	0.15* (0.04)	0.11 (0.11)	-0.07** (0.04)	0.07* (0.02)	-0.40* (0.12)	0.05* (0.01)	-0.05 (0.03)	-0.17* (0.08)	-0.01 (0.03)	0.19* (0.03)	0.99
IND 353	0.93*	(0.02)	-2.03* (0.94)	-9.27* (2.75)	-9.62* (4.09)	-4.19 (4.52)	-1.84 (9.87)	-21.30* (6.63)	-3.47* (1.22)	2.05 (38.57)	11.53* (1.55)	-22.50* (6.11)	4.50 (8.56)	-15.45* (6.36)	25.78* (12.22)	0.97
IND 355	1.01*	(0.02)	0.02 (0.02)	-0.10* (0.03)	-0.16* (0.05)	0.38* (0.10)	-0.14 (0.16)	-0.09* (0.05)	0.01 (0.02)	0.28* (0.08)	-0.07* (0.02)	-0.11** (0.06)	0.31* (0.09)	-0.32* (0.07)	-0.24* (0.07)	0.98
IND 356	1.00*	(0.01)	-0.19 (0.25)	0.65* (0.25)	-0.11 (0.50)	-2.35* (0.73)	0.40 (1.31)	-0.91* (0.45)	-0.26* (0.11)	11.97* (2.92)	-0.37* (0.08)	-0.55 (0.34)	-0.57 (0.58)	0.07 (0.70)	-2.33* (0.94)	0.99
IND 362	1.00*	(0.02)	0.47* (0.13)	-0.50** (0.27)	0.25 (0.37)	2.19* (0.97)	1.14** (0.59)	-1.18** (0.65)	0.18 (0.11)	1.84 (1.33)	-0.62 (0.54)	0.10 (0.31)	-1.18* (0.50)	-0.53 (0.32)	-3.65* (0.77)	0.98
IND 369	0.91*	(0.02)	-0.36* (0.17)	-0.98* (0.30)	-3.07* (0.80)	-0.57 (0.63)	1.86 (1.43)	-2.20* (0.82)	-0.96* (0.24)	11.13* (2.67)	-0.81* (0.18)	-1.98* (0.58)	2.32* (0.90)	-3.31* (0.80)	-1.25 (2.22)	0.95
IND 371	0.99*	(0.01)	0.16* (0.03)	-0.20* (0.05)	0.02 (0.04)	0.08 (0.06)	0.36 (0.30)	-0.18* (0.06)	-0.07* (0.02)	0.118 (0.21)	-0.07* (0.02)	-0.20* (0.06)	0.32* (0.11)	0.31* (0.10)	-0.54* (0.13)	0.99
IND 381	1.02*	(0.02)	-0.11 (0.17)	0.21 (0.20)	-0.08 (0.41)	-1.27* (0.27)	1.00 (0.75)	-0.62 (0.54)	-0.06 (0.15)	5.21* (1.28)	-0.27* (0.06)	0.02 (0.40)	-1.07* (0.41)	-0.51 (0.34)	-1.22* (0.42)	0.98
IND 382	1.07* >1*	(0.01)	-0.03 (0.03)	0.12* (0.04)	0.12 (0.09)	-1.04* (0.23)	1.01* (0.36)	0.01 (0.06)	0.24* (0.06)	1.46* (0.37)	-0.10* (0.03)	-0.08 (0.05)	-0.71* (0.12)	0.27* (0.12)	-0.61* (0.17)	0.98
IND 383	1.03*	(0.02)	0.00 (0.03)	0.03 (0.04)	0.26* (0.06)	-0.09 (0.10)	0.41* (0.20)	-0.09 (0.08)	0.12* (0.04)	-0.19 (0.15)	0.00 (0.04)	0.01 (0.06)	-0.36* (0.12)	0.32* (0.07)	-0.56* (0.13)	0.99
IND 384	1.10* >1*	(0.01)	0.04 (0.08)	0.17 (0.21)	0.97* (0.29)	0.39 (0.56)	5.74* (1.28)	-0.29 (0.22)	0.28* (0.08)	-3.95* (1.11)	-0.63* (0.15)	0.35 (0.23)	0.30 (0.58)	2.19* (0.68)	-4.36* (1.12)	0.98
IND 385	1.09* >1*	(0.03)	-0.08* (0.04)	0.23* (0.03)	-0.02 (0.08)	-0.48* (0.08)	1.61* (0.51)	-0.03 (0.06)	0.21* (0.03)	-1.19* (0.22)	0.13* (0.02)	-0.01 (0.05)	-0.80* (0.15)	-0.01 (0.08)	0.10 (0.20)	0.96
IND 390	0.91*	(0.04)	-0.07 (0.11)	-0.42* (0.09)	-0.78* (0.19)	-0.96* (0.45)	-0.30 (0.23)	-0.95* (0.22)	-0.13* (0.06)	6.00* (0.57)	-0.44* (0.07)	-0.63* (0.17)	-0.85* (0.09)	-1.16* (0.19)	-1.28* (0.31)	0.93

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 15: Estimation of the HME equation (eq (25)) with *FMA* variable defined in (28) - Values

Dependent Variable: *Share of Domestic Production*
Explanatory Variables use *net final demand (see equation (27))*

INDUSTRY	Beta 1			COEFFICIENTS ON FOREIGN MARKET ACCESS VARIABLE: AUS	DNK	FIN	FRA	GER	GRC	IRL	ITA	NLD	PRT	ESP	SWE	GBR	R2
IND 311	0.90*		(0.01)	-0.36* 0.07	0.24* 0.03	-0.42* 0.12	0.30* 0.08	0.20** 0.12	-0.60* 0.08	0.05* 0.02	-0.89* 0.13	0.47* 0.05	-0.60* 0.12	0.15* 0.07	-1.17* 0.18	-0.13** 0.08	0.99
IND 313	0.82*		(0.02)	-0.02* 0.00	-0.01* 0.00	-0.09* 0.02	0.05* 0.02	0.00 0.01	-0.01* 0.01	0.00* 0.00	0.01 0.01	-0.01* 0.00	-0.01* 0.00	0.00 0.00	-0.13* 0.03	0.00 0.00	0.93
IND 314	1.00*		(0.02)	0.00** 0.00	0.00 0.00	0.00 0.01	-0.01* 0.00	0.01 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.01* 0.00	0.00 0.00	0.00** 0.00	-0.01 0.01	0.00 0.00	0.96
IND 321	1.14*	>1*	(0.04)	0.04 0.03	0.09 0.06	-0.08 0.09	-1.24* 0.25	-0.53 0.37	0.30* 0.11	0.06 0.04	2.35* 0.46	-0.14* 0.04	0.69* 0.13	-0.12 0.10	-0.31* 0.08	-0.77* 0.15	0.93
IND 322	0.81*		(0.03)	-0.33* 0.09	-0.65* 0.20	-0.51* 0.25	1.22* 0.23	-1.72* 0.70	-0.30** 0.18	-0.38* 0.12	6.57* 2.16	-0.92* 0.21	0.47 0.35	0.26* 0.12	-2.29* 0.43	-0.23 0.20	0.80
IND 323	1.20*	>1*	(0.05)	0.03 0.08	0.27** 0.15	0.70* 0.33	-1.67* 0.60	-4.22* 1.33	-1.32* 0.34	0.41* 0.14	4.75* 1.42	-0.01 0.07	0.07 0.23	1.10* 0.39	0.56* 0.24	0.38* 0.18	0.88
IND 331	0.70*		(0.02)	0.61* 0.22	-2.83* 0.77	5.70* 1.39	0.75** 0.41	1.81* 0.76	-9.88* 2.14	-2.60* 0.63	-2.23 1.87	-2.66* 0.48	-0.39* 0.19	-0.04 0.12	9.67* 2.62	-6.61* 1.17	0.89
IND 332	0.72*		(0.03)	-1.70* 0.50	1.26** 0.64	-9.81* 3.33	-4.87* 1.17	4.71* 1.35	-16.23* 5.17	-1.74* 0.60	40.41* 11.92	-3.29* 0.78	-9.59* 2.77	-0.13 0.83	-3.96* 1.65	2.67 1.62	0.86
IND 341	0.57*		(0.02)	0.94* 0.39	-8.58* 1.51	31.53* 3.77	-0.92 0.60	17.17* 2.24	-16.13* 2.79	-4.46* 0.63	-2.93* 0.97	-3.52* 0.56	-4.29* 1.00	-4.04* 1.23	23.90* 2.26	-11.71* 1.70	0.84
IND 342	0.92*		(0.04)	-0.86* 0.19	0.14 0.21	-1.25* 0.23	-2.31* 0.66	4.43* 0.88	-1.09* 0.42	-0.12* 0.04	1.39* 0.30	-0.54* 0.15	-0.92* 0.32	0.51* 0.22	-1.57* 0.28	2.89* 0.84	0.86
IND 351	0.61*		(0.09)	-10.24* 1.62	-20.17* 2.70	-17.09* 2.41	0.95 4.43	106.31* 13.11	-33.70* 5.53	-3.31 2.02	-32.97* 11.99	13.88* 2.37	-24.61* 4.03	-23.79* 3.81	-22.07* 2.53	10.61** 6.33	0.90
IND 352	1.09*	>1**	(0.06)	-0.21* 0.05	0.04 0.05	-0.20* 0.10	0.13 0.09	1.56* 0.35	-0.15 0.10	0.19* 0.06	-1.33* 0.25	0.13* 0.04	-0.11 0.08	-0.68* 0.21	-0.15* 0.07	0.14** 0.08	0.92
IND 353	0.85*		(0.01)	-5.42* 2.29	-21.89* 5.46	-4.75 3.45	-40.82* 5.80	68.60* 20.28	-42.31* 7.80	-7.90* 2.52	-46.92 39.37	33.15* 3.38	-51.81* 10.85	-1.25 10.02	-27.68** 16.11	20.47** 12.21	0.93
IND 355	1.17*	>1*	(0.02)	0.14* 0.02	-0.18* 0.04	-0.13* 0.04	0.73* 0.20	0.45* 0.17	0.03 0.04	0.15* 0.04	0.00 0.13	-0.15* 0.04	0.06 0.06	0.74* 0.12	-0.94* 0.17	-1.37* 0.28	0.96
IND 356	1.03*	>1*	(0.01)	-0.64* 0.30	0.38 0.31	-0.08 0.52	-8.73* 1.29	15.60* 2.56	-1.33* 0.43	-0.40* 0.11	20.35* 2.83	-1.26* 0.19	-0.79* 0.35	-3.34* 0.61	-0.72 0.96	-12.16* 1.87	0.96
IND 362	1.01*		(0.03)	2.38* 0.44	-4.31* 1.47	0.34 0.80	10.45* 3.55	13.53* 3.87	-8.01* 3.20	0.48* 0.23	6.26* 3.12	-10.11* 2.87	-0.19 0.68	-10.07* 3.97	-2.92* 0.93	-18.67* 4.05	0.75
IND 369	0.59*		(0.03)	-3.48* 0.80	-5.74* 1.07	-13.06* 2.36	-4.08* 1.28	13.27* 2.32	-11.55* 3.06	-3.91* 0.84	31.53* 6.62	-3.93* 0.67	-10.11* 2.26	5.20* 1.71	-12.11* 2.28	2.48 1.97	0.79
IND 371	0.73*		(0.02)	0.15* 0.07	-2.09* 0.39	-1.24* 0.23	-0.43* 0.13	7.38* 1.19	-1.86* 0.35	-0.68* 0.12	-1.53* 0.64	-1.12* 0.21	-1.86* 0.37	0.07 0.24	-0.67* 0.06	-1.34* 0.19	0.64
IND 381	-0.08**		(0.05)	3.04 4.86	-15.86* 1.68	-10.17* 0.96	33.81* 4.59	17.75* 3.60	-28.33* 3.88	-5.08* 0.70	7.41* 3.66	-7.52* 1.13	-13.95* 1.75	-0.77 0.64	-8.20* 1.32	11.91* 1.84	0.73
IND 382	1.15*	>1*	(0.02)	-0.08* 0.04	0.27* 0.07	0.36* 0.14	-2.45* 0.55	2.83* 0.79	0.05 0.07	0.45* 0.09	2.32* 0.57	-0.24* 0.06	-0.16* 0.07	-1.57* 0.31	0.05 0.11	-1.34* 0.35	0.95
IND 383	0.93*		(0.03)	0.04 0.03	-0.27* 0.08	-0.14 0.16	1.30* 0.30	0.11 0.26	-0.55* 0.19	0.10 0.07	1.12* 0.42	0.18* 0.04	-0.28* 0.13	-0.52* 0.15	-0.20 0.16	-1.95* 0.24	0.98
IND 384	1.13*	>1*	(0.03)	-0.20 0.21	0.10 0.26	1.13* 0.25	2.17* 0.65	12.06* 2.75	-1.57* 0.58	0.21* 0.08	-6.21* 1.52	-1.48* 0.33	-0.16 0.38	1.13 0.73	0.46 0.35	-7.13* 1.85	0.93
IND 385	1.09*	>1**	(0.05)	-0.26* 0.07	0.26* 0.05	-0.44* 0.15	-0.07 0.10	2.76* 0.71	-0.25* 0.10	0.39* 0.05	-1.25* 0.28	0.25* 0.05	-0.18** 0.09	-1.70* 0.31	-0.72* 0.16	-0.37 0.31	0.93
IND 390	0.48*		(0.04)	-1.00* 0.19	-1.68* 0.19	-2.67* 0.34	3.24* 0.46	2.32* 0.30	-3.78* 0.52	-0.46* 0.08	7.43* 0.83	-1.06* 0.12	-2.51* 0.31	-1.01* 0.12	-3.18* 0.35	-3.97* 0.83	0.81

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 16: Estimation of the HME equation (eq (25)) with *FMA* variable defined in (29) - Values

Dependent Variable: *Share of Domestic Production*
Explanatory Variables use *total demand=production-net export*

INDUSTRY	Beta 1		AUS	DNK	FIN	FRA	GER	GRC	IRL	ITA	NLD	PRT	ESP	SWE	GBR	R2
			COEFFICIENTS ON FOREIGN MARKET ACCESS VARIABLE:													
IND 311	0.93*	(0.01)	-0.31* (0.06)	0.32* (0.03)	-0.50* (0.10)	0.27* (0.07)	0.23 (0.14)	-0.42* (0.06)	0.03* (0.01)	-0.69* (0.15)	0.44* (0.04)	-0.47* (0.10)	0.21* (0.07)	-0.84* (0.15)	-0.48* (0.08)	0.99
IND 313	0.86*	(0.02)	-0.02* (0.00)	-0.01* (0.00)	-0.04* (0.01)	0.06* (0.02)	-0.01 (0.01)	-0.02* (0.01)	0.00* (0.00)	0.00 (0.01)	-0.01* (0.00)	-0.01* (0.00)	0.00 (0.00)	-0.10* (0.02)	0.02** (0.01)	0.95
IND 314	0.99*	(0.02)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.01* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.01* (0.00)	0.00** (0.00)	-0.01 (0.00)	-0.01 (0.01)	0.00* (0.00)	0.97
IND 321	1.06* >1*	(0.03)	0.05 (0.03)	0.04 (0.06)	-0.02 (0.07)	-0.34* (0.13)	-0.92* (0.31)	0.19* (0.09)	0.02 (0.03)	2.02* (0.41)	-0.06 (0.04)	0.48* (0.12)	0.11* (0.03)	-0.13** (0.08)	-0.76* (0.14)	0.96
IND 322	0.91*	(0.03)	-0.27* (0.08)	-0.33* (0.13)	0.06 (0.08)	0.47* (0.14)	-1.45* (0.60)	0.17 (0.20)	-0.18* (0.06)	5.47* (1.70)	-0.85* (0.19)	1.02* (0.45)	0.21** (0.11)	-1.61* (0.29)	-0.55* (0.26)	0.87
IND 323	1.17* >1*	(0.04)	0.11 (0.07)	0.29* (0.13)	0.35* (0.15)	-0.95* (0.42)	-3.21* (0.97)	-0.67* (0.27)	0.29* (0.10)	4.21* (1.27)	0.07 (0.07)	0.35** (0.19)	1.04* (0.39)	0.47* (0.18)	-1.02* (0.26)	0.92
IND 331	0.84*	(0.02)	0.53* (0.23)	-1.47* (0.46)	4.22* (1.12)	-0.04 (0.48)	0.61 (0.45)	-5.50* (1.23)	-1.15* (0.29)	-1.07 (1.82)	-1.71* (0.32)	-0.05 (0.20)	-0.04 (0.13)	5.66* (1.32)	-7.40* (1.07)	0.94
IND 332	0.91*	(0.02)	-0.99* (0.29)	1.95* (0.69)	-1.06* (0.44)	-4.05* (1.01)	0.65 (0.90)	-5.57* (2.02)	-0.50* (0.18)	26.36* (7.82)	-1.97* (0.43)	-3.01* (0.97)	1.08 (0.99)	-1.02 (0.67)	-2.79 (2.08)	0.95
IND 341	0.82*	(0.01)	0.48* (0.21)	-3.06* (0.60)	15.60* (1.77)	-0.50 (0.36)	3.20* (0.47)	-6.18* (1.29)	-1.81* (0.34)	-0.71 (0.84)	-1.22* (0.25)	-1.71* (0.59)	-1.52* (0.57)	13.80* (1.13)	-5.98* (0.72)	0.96
IND 342	0.99*	(0.01)	-0.07* (0.02)	-0.07 (0.07)	0.00 (0.02)	-0.48* (0.13)	0.41* (0.13)	-0.16 (0.16)	-0.02 (0.01)	0.73** (0.37)	-0.14** (0.07)	-0.09 (0.12)	0.30** (0.15)	-0.19* (0.04)	0.26 (0.52)	0.98
IND 351	1.03*	(0.03)	-0.51 (0.68)	-1.99** (1.15)	-0.70 (1.18)	-5.39* (1.07)	20.28* (4.50)	-3.26 (2.46)	4.17* (1.18)	-28.40* (5.52)	8.65* (1.05)	-2.55 (1.85)	-9.37* (2.03)	-3.74* (1.33)	-2.65 (3.34)	0.98
IND 352	1.02*	(0.02)	-0.08* (0.02)	0.04* (0.02)	-0.08* (0.03)	0.16* (0.04)	0.08 (0.08)	-0.07** (0.04)	0.07* (0.02)	-0.43* (0.12)	0.06* (0.02)	-0.05 (0.04)	-0.18* (0.08)	-0.01 (0.03)	0.20* (0.04)	0.99
IND 353	0.93*	(0.02)	-3.80* (1.64)	-11.80* (3.60)	-3.48* (1.08)	-5.82 (5.81)	-4.51 (7.19)	-20.01* (6.21)	-2.82* (0.67)	-4.16 (46.02)	21.39* (2.53)	-21.43* (5.31)	5.61 (10.08)	-16.78* (7.14)	29.84* (14.21)	0.98
IND 355	1.01*	(0.02)	0.02 (0.03)	-0.12* (0.03)	-0.11* (0.03)	0.49* (0.13)	-0.09 (0.11)	-0.10* (0.05)	0.00 (0.02)	0.29* (0.08)	-0.10* (0.03)	-0.12** (0.06)	0.30* (0.09)	-0.30* (0.07)	-0.25* (0.07)	0.98
IND 356	1.00*	(0.01)	-0.25 (0.30)	0.67* (0.27)	-0.13 (0.34)	-2.70* (0.85)	0.32 (1.09)	-1.03* (0.49)	-0.34* (0.14)	11.69* (2.88)	-0.46* (0.11)	-0.65** (0.38)	-0.61 (0.57)	-0.03 (0.61)	-2.29* (0.94)	0.99
IND 362	1.00*	(0.02)	0.63* (0.17)	-0.59** (0.31)	0.16 (0.26)	2.46* (1.04)	1.07** (0.62)	-1.24** (0.68)	0.12** (0.07)	1.87 (1.36)	-0.76 (0.62)	0.11 (0.34)	-1.16* (0.51)	-0.46 (0.28)	-4.86* (1.05)	0.98
IND 369	0.91*	(0.02)	-0.38* (0.17)	-1.00* (0.30)	-1.77* (0.52)	-0.66 (0.66)	1.97 (1.48)	-2.38* (0.89)	-1.13* (0.30)	12.22* (2.87)	-0.87* (0.18)	-2.59* (0.79)	2.31* (0.89)	-3.25* (0.75)	-1.44 (2.38)	0.95
IND 371	0.99*	(0.01)	0.16* (0.04)	-0.19* (0.05)	0.01 (0.03)	0.08 (0.05)	0.37 (0.32)	-0.19* (0.06)	-0.06* (0.02)	0.12 (0.21)	-0.07* (0.02)	-0.23* (0.07)	0.32* (0.11)	0.30* (0.10)	-0.56* (0.12)	0.99
IND 381	1.02*	(0.02)	-0.16 (0.23)	0.25 (0.23)	-0.08 (0.28)	-1.49* (0.32)	0.86 (0.68)	-0.67 (0.57)	-0.06 (0.14)	5.96* (1.42)	-0.36* (0.08)	0.00 (0.43)	-1.20* (0.44)	-0.49 (0.31)	-1.43* (0.48)	0.99
IND 382	1.07* >1*	(0.01)	-0.04 (0.03)	0.13* (0.04)	0.10 (0.08)	-1.05* (0.26)	0.91* (0.30)	0.01 (0.06)	0.25* (0.06)	1.54* (0.39)	-0.11* (0.04)	-0.08 (0.05)	-0.75* (0.13)	0.27* (0.12)	-0.64* (0.18)	0.98
IND 383	1.03*	(0.02)	0.00 (0.03)	0.03 (0.04)	0.22* (0.06)	-0.09 (0.10)	0.37* (0.19)	-0.09 (0.09)	0.12* (0.04)	-0.21 (0.15)	0.01 (0.05)	0.01 (0.06)	-0.37* (0.12)	0.32* (0.07)	-0.59* (0.13)	0.99
IND 384	1.10* >1*	(0.01)	0.07 (0.10)	0.19 (0.22)	0.85* (0.24)	0.40 (0.55)	5.24* (1.23)	-0.25 (0.22)	0.29* (0.09)	-4.19* (1.19)	-0.70* (0.17)	0.36 (0.22)	0.29 (0.64)	2.12* (0.63)	-4.83* (1.24)	0.98
IND 385	1.07* >1*	(0.03)	-0.10* (0.05)	0.22* (0.03)	-0.04 (0.08)	-0.44* (0.08)	1.56* (0.38)	-0.05 (0.06)	0.21* (0.03)	-1.14* (0.23)	0.13* (0.03)	-0.02 (0.06)	-0.83* (0.16)	-0.02 (0.09)	0.12 (0.21)	0.96
IND 390	0.90*	(0.04)	-0.04 (0.11)	-0.39* (0.09)	-0.56* (0.15)	-0.78* (0.38)	-0.28 (0.25)	-0.84* (0.22)	-0.14* (0.07)	7.60* (0.72)	-0.48* (0.08)	-0.64* (0.20)	-0.88* (0.08)	-1.08* (0.19)	-1.39* (0.33)	0.94

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 17: Estimation of the HME equation (eq (25)) with *FMA* variable defined in (29) - Values

Dependent Variable: *Share of Domestic Production*

Explanatory Variables use *net final demand (see equation (27))*

INDUSTRY	Beta 1		AUS	DNK	FIN	FRA	GER	GRC	IRL	ITA	NLD	PRT	ESP	SWE	GBR	R2
			COEFFICIENTS ON FOREIGN MARKET ACCESS VARIABLE:													
IND 311	0.90*	(0.01)	-0.44* (0.08)	0.29* (0.03)	-0.37* (0.10)	0.30* (0.08)	0.18 (0.14)	-0.58* (0.08)	0.05* (0.02)	-1.22* (0.18)	0.64* (0.06)	-0.66* (0.14)	0.16* (0.07)	-1.28* (0.20)	-0.17** (0.09)	0.99
IND 313	0.82*	(0.02)	-0.03* (0.01)	-0.02* (0.01)	-0.04* (0.01)	0.08* (0.03)	0.00 (0.01)	-0.02* (0.01)	-0.01* (0.00)	0.01 (0.01)	-0.01* (0.00)	-0.01* (0.01)	0.00 (0.00)	-0.13* (0.03)	0.00 (0.01)	0.93
IND 314	1.00*	(0.02)	0.00* (0.00)	0.00 (0.00)	0.00 (0.00)	-0.01* (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00** (0.00)	0.01* (0.00)	0.00 (0.00)	-0.01 (0.00)	-0.01 (0.01)	0.00 (0.00)	0.96
IND 321	1.13* >1*	(0.03)	0.04 (0.03)	0.08 (0.06)	-0.08 (0.06)	-1.16* (0.22)	-0.37 (0.29)	0.29* (0.11)	0.05 (0.03)	2.56* (0.53)	-0.16* (0.04)	0.73* (0.14)	-0.11 (0.09)	-0.29* (0.07)	-0.81* (0.15)	0.94
IND 322	0.81*	(0.03)	-0.40* (0.11)	-0.68* (0.21)	-0.23** (0.13)	1.26* (0.24)	-1.51* (0.65)	-0.30 (0.19)	-0.31* (0.09)	6.95* (2.20)	-1.07* (0.24)	0.57 (0.41)	0.28* (0.12)	-2.22* (0.40)	-0.25 (0.22)	0.80
IND 323	1.19* >1*	(0.05)	0.03 (0.09)	0.26** (0.15)	0.37* (0.17)	-1.61* (0.57)	-3.81* (1.18)	-1.33* (0.34)	0.32* (0.12)	5.18* (1.55)	-0.02 (0.07)	0.04 (0.26)	1.13* (0.41)	0.47* (0.20)	0.43* (0.21)	0.88
IND 331	0.69*	(0.02)	0.66* (0.24)	-3.01* (0.84)	5.45* (1.51)	0.83** (0.48)	1.44* (0.61)	-10.20* (2.11)	-2.17* (0.53)	-2.29 (1.98)	-2.95* (0.56)	-0.50* (0.23)	-0.04 (0.14)	9.30* (2.38)	-7.07* (1.22)	0.88
IND 332	0.73*	(0.03)	-2.16* (0.62)	1.64* (0.78)	-3.65* (1.17)	-5.35* (1.35)	4.54* (1.39)	-15.91* (4.98)	-1.42* (0.46)	50.56* (14.72)	-4.14* (0.93)	-9.32* (2.65)	0.09 (1.02)	-4.10* (1.59)	3.11** (1.84)	0.87
IND 341	0.58*	(0.02)	1.01* (0.40)	-7.50* (1.29)	21.23* (2.31)	-0.81 (0.60)	18.41* (2.26)	-16.15* (2.91)	-4.76* (0.74)	-2.71* (0.98)	-3.22* (0.52)	-4.58* (1.14)	-4.03* (1.26)	21.87* (1.86)	-12.02* (1.64)	0.85
IND 342	0.92*	(0.03)	-0.36* (0.08)	0.09 (0.17)	-1.56* (0.27)	-1.60* (0.46)	5.35* (1.06)	-1.15* (0.43)	-0.11* (0.04)	1.49* (0.35)	-0.37* (0.11)	-0.97* (0.32)	0.53* (0.22)	-3.58* (0.63)	3.38* (0.88)	0.86
IND 351	0.60*	(0.09)	-10.41* (1.93)	-20.72* (3.41)	-20.02* (3.65)	-0.27 (3.96)	97.41* (12.91)	-37.90* (7.35)	-5.53* (2.22)	-35.69* (11.72)	12.30* (2.08)	-29.33* (5.39)	-25.35* (4.44)	-24.67* (3.57)	7.65 (5.05)	0.88
IND 352	1.10* >1**	(0.06)	-0.23* (0.06)	0.04 (0.06)	-0.17* (0.09)	0.11 (0.08)	1.33* (0.33)	-0.16 (0.10)	0.18* (0.05)	-1.38* (0.24)	0.15* (0.04)	-0.12 (0.09)	-0.71* (0.21)	-0.15* (0.07)	0.12 (0.08)	0.92
IND 353	0.85*	(0.01)	-9.42* (3.73)	-25.84* (6.41)	-1.31 (0.91)	-48.06* (7.75)	36.85* (8.73)	-40.48* (7.11)	-6.77* (1.29)	-66.38 (49.96)	59.75* (5.84)	-50.30* (8.63)	-0.42 (12.15)	-14.97** (9.05)	25.53** (15.17)	0.93
IND 355	1.17* >1*	(0.02)	0.17* (0.04)	-0.20* (0.04)	-0.11* (0.03)	0.89* (0.23)	0.31* (0.13)	0.03 (0.04)	0.15* (0.04)	0.00 (0.12)	-0.19* (0.05)	0.06 (0.06)	0.71* (0.12)	-0.92* (0.17)	-1.36* (0.28)	0.96
IND 356	1.03* >1*	(0.01)	-0.71* (0.31)	0.25 (0.32)	-0.23 (0.37)	-9.25* (1.37)	14.89* (2.50)	-1.62* (0.49)	-0.60* (0.16)	20.42* (2.90)	-1.38* (0.21)	-1.11* (0.41)	-3.47* (0.62)	-0.95 (0.86)	-11.53* (1.77)	0.96
IND 362	1.01*	(0.03)	2.43* (0.44)	-4.42* (1.51)	0.18 (0.53)	11.53* (3.84)	18.45* (5.82)	-8.00* (3.20)	0.44* (0.18)	5.68* (2.85)	-8.77* (2.51)	-0.22 (0.78)	-8.65* (3.47)	-2.66* (0.85)	-20.48* (4.73)	0.76
IND 369	0.59*	(0.03)	-2.91* (0.67)	-5.60* (1.05)	-8.54* (1.69)	-3.85* (1.14)	18.15* (2.95)	-11.03* (2.95)	-5.02* (1.11)	41.14* (8.62)	-3.93* (0.66)	-12.65* (2.77)	5.85* (1.91)	-13.30* (2.20)	2.79 (2.35)	0.79
IND 371	0.73*	(0.02)	0.10* (0.04)	-1.39* (0.28)	-0.94* (0.19)	-0.31* (0.09)	10.68* (1.54)	-1.90* (0.37)	-0.70* (0.11)	-1.45* (0.60)	-0.62* (0.12)	-2.06* (0.39)	0.09 (0.25)	-0.63* (0.07)	-1.24* (0.18)	0.65
IND 381	-0.09*	(0.04)	-7.71* (0.68)	-11.11* (1.84)	-13.61* (1.85)	13.97* (2.45)	30.21* (4.23)	-27.14* (4.92)	-7.39* (1.24)	7.39** (3.84)	-3.60* (0.54)	-20.99* (3.36)	-3.36* (0.80)	-12.18* (1.78)	11.21* (2.10)	0.77
IND 382	1.14* >1*	(0.02)	-0.09* (0.04)	0.28* (0.07)	0.30* (0.12)	-2.29* (0.56)	2.90* (0.75)	0.04 (0.07)	0.47* (0.10)	2.54* (0.63)	-0.26* (0.07)	-0.17* (0.07)	-1.64* (0.33)	0.05 (0.12)	-1.34* (0.38)	0.95
IND 383	0.93*	(0.03)	0.04 (0.04)	-0.29* (0.09)	-0.17 (0.16)	1.39* (0.34)	0.10 (0.20)	-0.56* (0.20)	0.11 (0.08)	1.14* (0.44)	0.21* (0.05)	-0.29* (0.14)	-0.52* (0.16)	-0.23 (0.17)	-1.81* (0.27)	0.98
IND 384	1.14* >1*	(0.02)	-0.18 (0.22)	0.15 (0.27)	1.08* (0.25)	2.01* (0.60)	11.53* (2.82)	-1.48* (0.57)	0.25* (0.09)	-6.58* (1.61)	-1.55* (0.37)	-0.11 (0.36)	1.09 (0.79)	0.44 (0.33)	-7.83* (2.01)	0.93
IND 385	1.06*	(0.05)	-0.27* (0.08)	0.24* (0.06)	-0.43* (0.17)	-0.03 (0.09)	2.71* (0.54)	-0.27* (0.12)	0.40* (0.05)	-1.13* (0.28)	0.24* (0.06)	-0.20** (0.11)	-1.66* (0.32)	-0.72* (0.19)	-0.30 (0.27)	0.93
IND 390	0.50*	(0.04)	-0.66* (0.14)	-1.61* (0.17)	-2.23* (0.27)	2.94* (0.46)	2.85* (0.39)	-2.80* (0.40)	-0.79* (0.13)	11.49* (1.28)	-1.18* (0.12)	-2.53* (0.29)	-0.96* (0.08)	-3.21* (0.34)	-3.70* (0.74)	0.83

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 18: Fixed Effect Estimation (Values)

Dependent Variable: *Share of Domestic Production*

	Explanatory Variables use *total demand=production-net export*			Explanatory Variables use *net final demand (see equation (27))*		
INDUSTRY	**Beta 1**		**R2**	**Beta 1**		**R2**
IND 311	0.86*	(0.08)	0.99	0.85*	(0.08)	0.99
IND 313	0.79*	(0.13)	0.98	0.74*	(0.14)	0.98
IND 314	0.87*	(0.10)	0.98	0.83*	(0.10)	0.98
IND 321	1.11* >1**	(0.08)	0.98	1.30* >1*	(0.08)	0.97
IND 322	1.14* >1*	(0.06)	0.97	1.16* >1*	(0.06)	0.97
IND 323	1.10* >1**	(0.06)	0.97	1.11* >1*	(0.06)	0.96
IND 331	0.80*	(0.06)	0.97	0.69*	(0.08)	0.96
IND 332	0.81*	(0.10)	0.98	0.56*	(0.14)	0.97
IND 341	0.72*	(0.04)	0.99	0.34*	(0.04)	0.99
IND 342	0.79*	(0.06)	0.99	0.72*	(0.04)	0.99
IND 351	0.35*	(0.10)	0.99	0.11**	(0.07)	0.99
IND 352	0.87*	(0.06)	0.99	0.72*	(0.06)	0.98
IND 353	0.82*	(0.07)	0.98	0.57*	(0.07)	0.97
IND 355	0.85*	(0.10)	0.99	0.78*	(0.09)	0.99
IND 356	0.73*	(0.09)	0.99	0.58*	(0.10)	0.99
IND 362	0.72*	(0.09)	0.99	0.36*	(0.04)	0.98
IND 369	0.72*	(0.11)	0.97	0.41*	(0.07)	0.96
IND 371	0.73*	(0.08)	0.99	0.08	(0.08)	0.98
IND 381	0.96*	(0.04)	0.99	0.05	(0.04)	0.95
IND 382	0.82*	(0.08)	0.99	0.72*	(0.08)	0.99
IND 383	0.87*	(0.11)	0.99	0.68*	(0.14)	0.99
IND 384	0.31*	(0.09)	1.00	0.12*	(0.05)	1.00
IND 385	0.60*	(0.18)	0.98	0.37*	(0.14)	0.97
IND 390	0.80*	(0.07)	0.98	0.43*	(0.08)	0.95

Notes: *,**: respectively significant at 5%,10% level. >1*,>1**: respectively greater than one at 5%,10% level. White heteroskedasticity robust standard errors in parenthesis

Table 19: Comparison with Previous Studies

ISIC	Industry	This paper	Davis and Weinstein (2003)*	Davis and Weinstein (2003)**	Brülhart and Trionfetti (2005)	Crozet and Trionfetti (2007)	Behrens et al. (2005b)	Expected HME - Behrens et al. (2005b)	Trionfetti (2001)***
311	Food products		strong support	weak support		PW HME	-	low	
313	Beverage industries		weak support				-	uncertain	
314	Tobacco		NA				-	uncertain	
321	Textiles	strong support	strong support	strong support	strong support		-	low	
322	Wearing apparel, except footwear		NA				-	low	
323	Leather and products of leather, leather substitutes and fur, except footwear	strong support	strong support				-	low	
324	Footwear except rubber or plastic	NA	NA				-	low	
331	Wood and wood and cork products, except furniture		strong support			PW HME	-	uncertain	
332	Furniture, except metal		NA				HME	uncertain	
341	Paper and paper products			weak support		PW HME	+	low	IRS-MC
342	Printing and Publishing		NA	NA		SNL HME	+	low	IRS-MC
351	Industrial chemicals		weak support		weak support		HME	high	
352	Other chemicals	weak support			weak support	SNL HME	+	high	
353	Petroleum Refineries		NA			PW HME	+	high	
354	Misc. petroleum and coal products	NA	NA	NA			NA	NA	
355	Rubber products	weak support	NA		weak support		HME	high	IRS-MC
356	Plastic Products	strong support	NA	weak support	weak support		HME	uncertain	IRS-MC
361	Pottery, china earthenware	NA	NA	weak support			-	low	
362	Glass products		NA			PW HME	+	uncertain	
369	Other non-metallic mineral products			weak support			-	low	
371	Iron and steel		NA	weak support			HME	uncertain	
372	Non-ferrous metals	NA	NA		strong support	PW HME	+	low	
381	Fabricated metal products, except machinery and equipment	weak support	weak support		strong support		+	uncertain	IRS-MC
382	Machinery except electrical	strong support			strong support		HME	high	IRS-MC
383	Electrical machinery apparatus, appliance and supplies	weak support		NA	strong support	PW HME	HME	high	IRS-MC
384	Transport equipment	strong support		weak support	strong support	PW HME	HME	high	IRS-MC
385	Professional and scientific equipment	strong support	NA	weak support	strong support		HME	high	
390	Other manufactured products		NA	NA	strong support		HME	uncertain	IRS-MC

Notes: NA= industry not included in the analysis

In column 3, "strong support": HME which is statistically significant in all specifications / "weak support": HME which is statistically insignificant in some specifications (at 95% or 90% confidence level)

* based on Table 3 of the article (4 digit data pooled for each 3 digit industry) / ** based on Table 4 of the article (dependent variable is 3-digit output)

In columns 4 and 5, "strong support": HME statistically significant / "weak support": HME statistically insignificant (at 95% or 90% confidence level)

In column 6, "strong support": IRS-MC structure significant at 95% confidence level / "weak support": IRS-MC structure significant at 90% confidence level

In column 7, "PW HME": Piecewise HME (HME effect weak or absent for average countries but strong for large and small ones) / "SNL HME": Smooth non-linear HME (strong evidence for HME; HME is stronger for large and small countries than for average ones) / HME": linear HME

In column 8, "+": more support in favor of HME / "-": less support in favor of HME

*** The concordance between definitions of industries is approximate; Trionfetti (2001) uses Eurostat industry classification

Data Appendix 1

Industries (ISIC Rev. 2)

ISIC	Industry
311	Food products
313	Beverage industries
314	Tobacco
321	Textiles
322	Wearing apparel, except footwear
323	Leather and products of leather, leather substitutes and fur, except footwear and wearing apparel
331	Wood and wood and cork products, except furniture
332	Furniture, except metal
341	Paper and paper products
342	Printing and Publishing
351	Industrial chemicals
352	Other chemicals
353	Petroleum Refineries
355	Rubber products
356	Plastic Products
362	Glass products
369	Other non-metallic mineral products
371	Iron and steel
381	Fabricated metal products, except machinery and equipment
382	Machinery except electrical
383	Electrical machinery apparatus, appliance and supplies
384	Transport equipment
385	Professional and scientific equipment
390	Other manufactured products

Countries
Austria
Denmark
Finland
France
Germany
Greece
Ireland
Italy
Netherlands
Portugal
Spain
Sweeden
United Kingdom

References

Anderson J.E. and E. van Wincoop (2003), “Gravity with gravitas: a solution to the border puzzle”, American Economic Review 93 (1), March 170-192

Baldwin R. E., R. Forslid, P. Martin, G. Ottaviano and F. Robert-Nikoud (2003), “Economic geography and public policy”, Princeton University Press.

Behrens K, A. Lamorgese, G. Ottaviano and T. Tabuchi (2004), “Testing the ‘home market effect’ in a multi-country world: the theory”, CEPR Discussion Paper, No. 4468

Behrens K, A. Lamorgese, G. Ottaviano and T. Tabuchi (2005a), “Testing the ‘home market effect’ in a multi-country world”, CORE Discussion Paper 2005/55

Behrens K, A. Lamorgese, G. Ottaviano and T. Tabuchi (2005b), “Changes in infrastructure and tariff barriers: local vs. global impacts”, CEPR Discussion Paper 5103

Bourtchouladze N. (2002), “Spatial distribution of firms across asymmetric nations”, Graduate Institute of International Studies, mimeo

Bourtchouladze N. (2007), “The home market effect in a three-country Footloose Capital model”, HEI working papers, *forthcoming*

Brülhart M. (1998), “Economic Geography, Industry Location and Trade: The Evidence”, World Economy, Vol. 21 (6)

Brülhart M. and F. Trionfetti (2005), “A test of trade theories when expenditure is home-biased”, CEPR Discussion Paper 5097

Chen N. (2004), “Intra-national versus international trade in the European Union: why do national borders matter?”, Journal of International Economics 63, 93-118

Ciccone A. (2002) ‘‘Agglomeration effects in Europe’’, European Economic Review 46, pp. 213-227

Crozet M. and F. Trionfetti (2007), “Trade costs and the home market effect”, CEPII Discussion Paper 2007-05

Davis D. R. and D.E. Weinstein (1996), “Does economic geography matter for international specialization?”, National Bureau of Economic Research, Working Papers, No 5706

Davis D. R. and D. E. Weinstein (1998), “Market access, economic geography and comparative advantage: an empirical assessment”, National Bureau of Economic Research, Working Paper, No 6787

Davis D. R. and D. E. Weinstein (1999), “Economic geography and regional production structure: an empirical investigation”, European Economic Review, Vol. 43 (2), pp. 379-407

Davis D. R. and D. E. Weinstein (2003), "Market access, economic geography and comparative advantage: an empirical test", Journal of International Economics 59, pp. 1-23

Davis D. R. (1999), "The home market, trade and industrial structure", American Economic Review 88, pp. 1264-1276

Efron (1982), "The Jackknife, the Bootstrap and other resampling plans", Society for Industrial and Applied Mathematics, Philadelphia

Feenstra R. C., J. R. Markusen and A. K. Rose (1998), "Understanding the home market effect and the gravity equation: the role of differentiated goods", Centre for Economic Policy Research, Discussion Paper, No. 2035

Fontagné L., Th. Mayer and S. Zignago (2004), "Trade in the Triad: how easy is the access to large markets?", CEPII No. 2004-04

Fujita M., P. R. Krugman and A. Venables (1999), "The spatial economy: cities, regions and international trade", Cambridge, MA, MIT Press

Greene W. H. (2000), "Econometric Analysis", Prentice Hall International

Godefroy C., G. Gaulier, T. Mayer and S. Zignago (2004) "Notes on CEPII's distances measures", CEPII, www.cepii.fr/francgraph/bdd/distances.pdf

Haaland J. I., H. J. Kind, K. H. Midelfart Knarvik, J. Torstensson (1999), 'What determines the economic geography of Europe?' CEPR 2072

Head and Mayer (2004), "The empirics of agglomeration and trade", CEPR Discussion Paper 3985; also in J.V. Henderson and J-F. Thisse (eds), *Handbook of Urban and Regional Economics*, *Vol. 4.* Ch.59, North Holland

Head K., T. Mayer and J. Ries (2002), "On the pervasiveness of home market effects", Economica 69, p. 371-390

Head K. and J. Ries (2001), "Increasing returns versus national product differentiation as an explanation for the pattern of U.S.-Canada trade", American Economic Review, Vol. 91, No. 4, 858-876

Helpman E. (1990), "Monopolistic competition in trade theory", Special Paper in International Economics 16, Princeton University, International Finance Section

Helpman E. and P. R. Krugman (1985), "Market Structure and Foreign Trade", Cambridge (Mass.), MIT Press

Hillberry R. and D. Hummels (2002), "Intra-national home bias: some explanations", National Bureau of Economic Research, Working Paper, No 9022

Hummels D., (1999) "Toward a geography of trade costs", Purdue University, mimeo

Krugman P. R. (1980), “Scale economies, product differentiation, and the pattern of trade”, American Economic Review, 70, pp.950-959

Krugman P. R. (1991), “Geography and Trade”, MIT Press

Krugman P. R. (1993), “The hub effect: or, threeness in interregional trade”, in W. J. Ethier, E. Helpman and J. P. Neary, “Theory, Policy and Dynamics in Interregional Trade”, Cambridge, pp. 29-37

Leamer E. (1997), “Access to western markets and eastern effort”, In Salvatore Zecchini, ed., Lessons from the Economic Transition, Central and Eastern Europe in the 1990’s, Dordrecht, 1997, pp. 503-526

Martin P. and C. A. Rogers (1995), “Industrial location and public infrastructure”, Journal of International Economics 39, pp. 335-351

Mayer Th. and S. Zignago (2005), “Market access in global and regional trade”, CEPII Working Paper No. 2005-02

Midelfart-Knarvik K. H., H. G. Overman, S. J. Redding and A. J. Venables (2000), “The location of European industry”, Economic Papers No. 142, European Commission, D-G for Economic and Financial Affairs, Brussels

Midelfart-Knarvik K. H., H. G. Overman and A. J. Venables (2000), “Comparative advantage and economic geography”, Centre for Economic Policy Research, Discussion Paper, No 2618

Midelfart-Knarvik K. H., H. G. Overman and A. J. Venables (2001), “Comparative advantage and economic geography: estimating the determinants of industrial location in the EU”, Centre for Economic Performance, LSE

Nicita A. and M. Olarreaga (2001), “Trade and production, 1976-99”, World Bank

Ottaviano G. and D. Puga (1998), “Agglomeration in the global economy: a survey of the “New Economic Geography””, World Economy, Vol. 21 (6)

Pagan A. (1984), “Econometric issues in the analysis of regressions with generated regressor”, International Economic Review, Vol. 25, No. 1, 221-247

Redding S. and A. J. Venables (2004), “Economic geography and international inequality”, Journal of International Economics, 62, 53-82

Rose A. K. and E. van Wincoop (2001), “National money as a barrier to international trade: the real case for Currency Union”, American Economic Review 91 (2), 386-390

Suedekum J. (2005), “Does the home market effect arise in a three-country model?” Center for Globalization and Europeanization of the Economy (CeGE), Discussion Papers 42

Trionfetti F. (2001), “Using home-biased demand to test trade theories”, Weltwirtschaftliches Archiv 137, 404-426

Wooldridge J. M. (2002), "Econometric analysis of cross section and panel data", Massachusetts Institute of Technology Press