

# **PROPOSTA: Geography, structural change and development**

## **Distinzione nella metodologia (Lavori Teorici/Empirici)**

### **1. Lavori prevalentemente teorici; 2. Lavori prevalentemente empirici.**

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6. Gualerzi (2): Crescita, investimento e settori a alto contenuto di conoscenza (Workshop PISA)
7. Guarini (2): "Produttività del lavoro e conoscenza: un'analisi econometria per le regioni italiane" (Workshop Siena 25-27 January 2007)

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## Geography, Structural Change and Development

### **Introduction**

In his 1971 Nobel lecture Simon Kuznets (*AAR*, 1973) identified six main features which characterise quantitatively modern economic growth. Two of these features relate to aggregate rates, that is, the growth rate of income and the rise in productivity; two relate to structural transformation, that is, sectoral and societal change; and two relate to international diffusion, that is, the improvements in transport and communication and the uneven spread of economic development. Remarkably, the main object of investigation of the abstracts assigned to this project refers to: 1) the impact of geographical factors and location on growth; 2) the process of structural change of economies and the role of dualism in development; 3) international trade and specialization. Moreover, other issues of economic development such as the role of technological progress and productivity change, improvements in communication and transport, the process of convergence and the role of institutions are dealt with in detail within subgroups of abstracts. In particular, the role of economic change (technological or structural change or in the location of the productive activity) is a theme which runs through all of them.

We grouped the abstracts in three headings (whose names are temporary): 1) LOCATION/GEOGRAPHICAL FACTORS; 2) STRUCTURAL CHANGE; 3) INTERNATIONAL TRADE AND SPECIALISATION.

The first set of abstracts dealing with location and geographical factors are COMMENDATORE, PETRAGLIA & KUBIN, TALAMO and LO TURCO. COMMENDATORE, PETRAGLIA & KUBIN propose a model in which industrial location and capital are both endogenous and in which the government sector plays a crucial role. In TALAMO's abstract the topic is the FDI and the theoretical framework is the gravity model. Talamo intends to clarify the role of a country's institutional factors (and in particular of their quality) on its ability to attract foreign investors. Finally, LO TURCO aims to empirically evaluate the relation between regional trade agreements, industrial location and per capita income inequality across countries.

The second set of abstracts dealing with structural change are CAPASSO&CARRILLO, BILANCINI&D'ALESSANDRO, GUALERZI and GUARINI. CAPASSO&CARRILLO propose to frame a dual economy in an endogenous growth model. Their objective is to analyse and reinterpret the process of convergence between economies (North and South of Italy), if there is

any, in the light of the traditional theory of dualism. BILANCINI&D'ALESSANDRO propose to model a two sector-economy (agriculture and manufacture) in the attempt to clarify how productivity changes in agriculture may affect the process of industrialisation (intended as an endogenous switch in manufacture to an increasing returns technology) via changes in income distribution. GUALERZI intends to clarify with an empirical analysis 1) how variations in the level of investment in the US ICT sector, before and after the bursts of the speculative bubble in 2000, affected the structural evolution of that sector; 2) how such an evolution in turn impinged upon the structural transformation of other sectors strictly linked to the diffusion of knowledge. Finally, GUARINI proposes an empirical work in order to investigate which factors affect the change in labour productivity and if and how Italian regions adjusted their productive structure to the accelerating process of international competition by increasing the weight innovation and technological progress. The theoretical underpinnings of Guarini empirical investigation are the classical-post-Keynesian Smith-Verdoorn-Kaldor law and the Sylos-Labini technological capability approach.

The third set of abstracts dealing with international trade and specialisation are MARIUTTI, TAMBERI&LO TURCO and CUTRINI. MARIUTTI aims to build a model of multisectoral (and multi-country) model of structural change à la Pasinetti in which the possibility of international trade is explicitly taken into account. TAMBERI&LO TURCO aim to investigate empirically the long-run relationship between international productive specialisation and economic growth, especially in order to evaluate if and how much the first (specialization) can be a conditioning factor of the second (growth). Finally, CUTRINI puts forward a work on the methodology of the empirical investigations on growth and regional specialization. Looking at the EU and taking into account some institutional and geographical aspects such as the degree of urbanization, the quality of the transport infrastructure and the degree of trade integration in the European markets she will also present an application.

Follow abstracts

## **SEZIONE 1 - LOCATION/GEOGRAPHICAL FACTORS**

### **13) Commendatore-Petraglia-Kubin (1)**

#### ***“Productive Public Expenditure, Endogenous Capital and Agglomeration”***

By Pasquale Commendatore<sup>a</sup>, Ingrid Kubin<sup>b</sup> and Carmelo Petraglia<sup>a</sup>

<sup>a</sup> University of Naples ‘Federico II’, Italy

<sup>b</sup> Department of Economics, Vienna University of Economics and Business Administration, Austria

#### **Abstract**

One of the central concerns in international tax policy is the fear that tax competition leads to a loss of industrial capital to competing countries. Recently these issues have also been analysed from a New Economic Geography perspective, which stresses agglomerative processes and circular causation. Small differences between otherwise identical regions may trigger a self-reinforcing process leading to agglomeration of industrial activity in one region.

In the models of the New Economic Geography, countries or regions are separated by transport costs and agglomeration is brought about by factor mobility due to differences in regional economic incentives. Because of decreasing average costs in production, factor rewards are the higher, the higher the local demand is. A high share in total expenditure thus leads to an even higher share in industrial capital. This indicates obvious points at which public policy, i.e. taxation and public expenditures can affect this mechanism:

1) Factor mobility motivated by differences in net factor income is directly affected by tax policy. Most studies of public policy within the New Economic Geography take this aspect on board (e.g. the literature on tax competition: Baldwin and Krugman, 2004, *Europ. Econ. Rev.*, and Borck and Pflüger, 2006, *Europ. Econ. Rev.*, among the others).

2) The provision of public goods can also impact upon the migration decision (see for this aspect Baldwin et al., 2003, Princeton University Press). However, public policy is also a central factor determining both the level and the composition of local demand. In a framework with decreasing average costs this directly influences gross factor rewards. Income taxes change the disposable income and thus private expenditures; public expenditures are typically different from the private ones as far as their regional and sectoral structure is concerned. Brülhart and Trionfetti (2004, *Europ. Econ. Rev.*) study the former aspect, while the latter is at the core of Commendatore and Kubin (2006, Center for Nonlinear Dynamics in Economics and Finance (CeNDEF) Working paper 06-08, University of Amsterdam). In the latter contribution, it is explored whether sectoral differences in public policy may lead to industry agglomeration.

3) Transport costs can be reduced by public expenditures for infrastructure (see Martin and Rogers, 1995, *J. Int. Econ.*; Martin, 1999, *J. Public Econ.*).

4) Public expenditure can also affect factor rewards in a region via its effect upon productivity. This aspect is important but to our knowledge not yet studied in the New Economic Geography models.

In our paper, we pursue the latter question whether and how differences in productive public expenditure impacts on industrial location. We adopt a special variant of the Footloose Capital model known as Constructed Capital (CC) model (see Baldwin 2001 *Europ. Econ. Rev.*). The CC model allows us to distinguish neatly the impact of public expenditure in infrastructure on the fixed cost (acting upon variable costs in the investment sector) and the variable cost components of firms in the Dixit-Stiglitz monopolistically competitive sector. The public sector, which operates with a balanced budget constraint, finances its expenditures taxing profits (this has a different impact on agglomeration depending on the degree of capital mobility) on the basis of the residence principle of capital taxation (that is, capital income is taxed on the basis of the country in which capital owners reside). Since the introduction of productive public expenditures and taxation affects in opposite direction the cost-linked and the demand-linked circular causality processes, results are very sensitive to the specific parameter constellation assumed. That is, it is not straightforward that following an increase in productive public expenditure in a country, that country will necessarily enjoy stronger agglomeration and capital accumulation. As a major contribution to the literature, our approach considers jointly two effects arising from public policy decisions on expenditures: the demand effect and the productivity effect. The interplay of these two effects determines the final impact of an increase in productive public spending in one region on the spatial distribution of firms. Furthermore, the latter result is influenced by the way in which tax payers of the two regions contribute to the financing of productive public expenditures.

A preliminary conclusion is the following: assuming that productive expenditures could be used effectively to enhance factors' productivity in a backward region, policy measures aimed at reducing regional inequalities could work only if advanced regions contribute to the financing of such policies.

JEL: R1 - General Regional Economics

R12 - Size and Spatial Distributions of Regional Economic Activity

C62 - Existence and Stability Conditions of Equilibrium

F12 - Models of Trade with Imperfect Competition and Scale Economies

Keywords: core-periphery, constructed capital, productive public expenditures, taxation

### 31) Lo Turco (2)

Alessia Lo Turco  
Università Politecnica delle Marche  
South-South RTAs and Industrial Location  
Abstract

Aim of this paper is to empirically evaluate the relation between regional trade agreements, industrial location and inequality.

Location of production is determined by country specific features, such as factor endowments, policy framework, technological advance and the size of the internal market. Though, having care only to country specific characteristics would not allow to explain why countries with a similar starting factor endowment, often show different production structures: *ceteris paribus*, some countries show higher shares of industrial production than others. This can be referred to the existence of industry specific characteristics which, together with geography, cause agglomeration forces to operate. In this sense, the presence of trade or transport costs, economies of scale and backward and forward linkages can cause production to concentrate in a few locations and only by time, when wages become unsustainable, let it spread to lower wage economies. Thus, as Puga and Venables (1998) point out, "growth in world manufacturing relative to other tradable industries does not lead to a steady development of low wage economies, but instead to rapid industrialization of countries in turn". While Puga and Venables(1998) focus on the role of developing countries unilateral trade policy for industrial development, Venables(2002) analyzes the effect of the negotiation of a Customs Union(CU) on industrial development both in symmetrical(South-South, North-North) and asymmetrical agreements. The idea is that preferential tariffs would affect production location via their effect on the structure of regional comparative advantages. The change in regional comparative advantage together with the above mentioned country and industry characteristics then determine income and production patterns. The main implication is that, via their effect on partners' comparative advantages, symmetric integration schemes bring about an unequal industrial location and, eventually, divergence in income levels, while asymmetric RTAs cause income convergence.

From an empirical point of view it is important to highlight how the regional integration process together with a pre-existing different trade specialization among partners can affect the location of production and to compare industrial structures in symmetric and asymmetric integration schemes. Lo Turco(2005), partially explores the relation between regional partners' trade specialization patterns, localization of industry and inequality across Latin American sub-regions, especially the Andean Community and the Central American Common Market, before and after the negotiations of the early 90s.

In line with this strand of research, the paper is an empirical work and represents an improvement on the existing literature in that it more deeply deals with the construction of measures of integration directed to specifically test theory predictions. Furthermore, the availability of higher quality industry-level data will allow for better panel data estimation techniques. Finally, while the main focus remains the Latin American region and especially the Mercosur sub-region the paper will be addressed at compare patterns of industrial location in North-South and North-North agreements too, e.g NAFTA and the EU.

The first part of the work will be devoted to the construction of measures of integration, starting from simple measures of revealed comparative advantage and tariffs. Part of this section will be devoted to the analysis of within agreement trade patterns in order to highlight how and if trade patterns among partners have changed after the formation of the RTA. Subsequently an empirical

model will be estimated with the precise aim to put at a trial both the measures of integration obtained in the first part and the typical factors which usually affect industry location. The second part of the work, instead, will be based on the detection of the impact of trade agreements on overall inequality using aggregated country data on real GDP per capita.

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## Keywords:

RTAs, Industrial Location, Convergence, Dynamic Panel Data Models.

## **Institutions, FDI and the Gravity model**

Over the recent past, the importance of international trade and foreign direct investment flows (FDI) has been increasing at an exponential rate. In the light of these developments, a large number of papers have attempted to analyse the nature of international flows of goods and capital. Recently, a popular and empirically successful stream of research has built on the gravity model to investigate bilateral trade flows across a large number of countries.

According to the gravity model of international trade, the amount of trade flows between two countries is assumed to increase in their sizes (GDP or Population), and decrease in the cost of transport, as measured by their geographical distance. Furthermore, several other variables have been introduced in the basic gravity equation to control for linguistic, cultural and historical similarities, regional integration, common financial development, quality of institutions, common currency, and trade agreements. In the traditional gravity model, trade is expected to be positively influenced by the countries' sizes, common language, the presence of trade agreements, and geographical proximity (indicated by variables such as common border). On the other hand, bilateral trade flows are expected to be negatively correlated with geographical distance, which is considered as a proxy for trade costs or informational asymmetries.

Recently, the gravity approach has been used to model the international pattern of foreign direct investment flows, as an evolution to the literature on trade. When considering foreign direct investment flows we expect to find that, other things equal, an increase in the host countries' size leads to an increase in FDI flows. Common language, the presence of trade agreements, adjacency have a positive impact on FDI. The correct sign of the coefficient of distance is more open to debate.

One important characteristic of the gravity model is the possibility of introducing several independent variables such as quality of domestic institutions, level of education, political instability, transparency, quality of the legal system, control of corruption, level of freedom and civil rights. In particular, after the Asian financial crisis, commentators have focused their attention on these factors as important determinants of international trade and foreign direct investment location. Recent empirical studies suggest that the quality of domestic governance has a quantitatively important impact on a country's ability to attract foreign investors, who prefer to invest in countries with better governance. Indeed, host countries could compete by improving the quality of their institutions, their labour force, their infrastructures, their investment climate, the level of corporate tax, the quality of corporate

governance practices and systems. In general, a better domestic quality of governance should be associated with more efficient financial integration and positive spillovers to the receiving countries.

**1. NATURA METODOLOGICA:**

**A. The Gravity Model and its Origins**

**B. Forms, Applications and Econometric Properties of the Gravity Model**

**2. BIBLIOGRAFIA:**

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**3. PAROLE CHIAVE:** Gravity model, Trade, Foreign Direct Investment, Institutional Variables.

## SEZIONE 2- STRUCTURAL CHANGE

### 23) Carrillo-Capasso (1)

#### *Mezzogiorno d'Italia: A New Theory of Dual Economy to reinterpret and old issue*

S. Capasso, M.R. Carillo - University of Naples "Parthenope"

The main objective of the paper is to analyse and reinterpret the process convergence between economies, if there is any, in the light of the traditional theory of dualism. The main idea is that the traditional framework of a dual economy à-la-Lewis, engineered in an endogenous growth model, can add significant insights to the analysis of the dynamics of growth. Indeed, by focusing on the issue of structural change and market imperfections a dual economy model can explain specific features of poverty traps and non convergent capital accumulation paths which a standard endogenous growth framework cannot fully explain. In a recent work Caselli and Coleman JPE 01 interpret the process of convergence of U.S. regions (the catching up of the Midwest to the Northeast) by means of the structural transformation within each regions. The process of adjustment is quite simple and very much dualistic in its dynamics. Decreasing education/training costs favour the transfer of unskilled labour force, initially employed in the agricultural sector of the southern regions, in the manufacturing sector of northern regions. Specialisation and increasing productivity in each regions lead to convergence in the average income level and average wage rate across industries and sectors. Adopting similar arguments, Gollin, Parente and Rogerson 02, Temple MS 05, and Temple and Graham 04 find that development and growth can be explained by means of a process of structural transformation for which a decreasing share of agriculture output in the economy leaves space to the increasing role for manufacturing and industry. The process can only start if there is a sufficient initial increase in agriculture productivity which allows sustaining the increasing manufacturing labour force. The model implies the asymptotic disappearance of dualism and convergence to a one-sector economy. Though these recent developments of the theory, the features of the dynamics of some economies and the emergence of poverty traps, remain partially unexplained. Moving from this literature, we analyse the issue of *convergence* with the goal to find a general theoretical framework which could explain an old question: the Italian Mezzogiorno's delayed development.

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## 7) Ennio Bilancini and Simone D'Alessandro:

### “Functional Distribution and Industrial Takeoff: The Role of Wages and Natural Resources”

#### ABSTRACT

Functional Distribution in Industrial Takeoff: Agricultural Productivity and Wages.

#### Abstract

We study a stylized economy composed of two sectors, agriculture and manufacturing. The former produces a single subsistence good while the latter is constituted of a continuum of markets producing distinct commodities. Following Murphy et al. (1989) we model industrialization as the introduction of an increasing returns technology in place of a constant returns one. In particular, we take in to account a modified version of this model provided by Bilancini and D'Alessandro (2005) which introduces the functional distribution of income among groups' membership (landowners, capitalists, workers). This contribution analyses the effect of the increase of agricultural productivity on income and industrialization stressing the role of the distribution of the generated agricultural surplus between landowners and workers. The role of productivity improvements and their persistent effects of structural change and growth is the central issue analysed for decades by development economists (Lewis, 1967). Given hierarchical preferences of individuals and the structure of manufacturing sector the distribution of the surplus in favour of workers or of landowners affects the equilibrium level of income and industrialization.

La natura del lavoro è strettamente teorica, si propone un modello che vuole ridiscutere alcuni risultati standard dei modelli ad economia duale.

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Parole chiave: Functional Distribution, Industrial Takeoff, Hierarchical Preferences, Structural Change.

### 19.3) Gualerzi (2.2)

#### *Crescita, investimento e settori a alto contenuto di conoscenza*

##### 1) descrizione del tema, cercando di sottolineare la relazione con il tema generale della sezione

Il lavoro si propone un'analisi della spesa per investimenti nel settore Information and Communication Technologies (ICT) prima e dopo la bolla speculativa del 2000. Si propone quindi un'analisi disaggregata della spesa per investimenti prima e dopo il 2000, in relazione alle fluttuazioni della crescita economica negli Stati Uniti. Questa analisi dovrebbe mettere in luce l'evoluzione strutturale del settore ICT e i legami con la ricerca di base, la spesa in R&D, la strategia tecnologica delle imprese e la politica tecnologica del Governo Usa.

Il secondo tema è quello della trasformazione delle industrie che sono maggiormente interessate dall'innovazione resa possibile dallo sviluppo dell'ICT, in primo luogo le industrie che manipolano informazione, dal settore culturale a quello della produzione di sapere. Questo in relazione allo studio dell'impatto economico di Internet, con attenzione particolare al dibattito sugli effetti complessivi su produttività e cambiamento strutturale, ai fenomeni di increasing e decreasing returns, alle condizioni tecniche e sociali di sviluppo dei networks.

Il risultato dovrebbe essere un'analisi della trasformazione strutturale indotta dallo sviluppo dell'ICT in un specifico periodo di crescita dell'economia degli Stati Uniti. Questo contribuisce a chiarire il processo di trasformazione strutturale che sta alla base della leadership degli Stati Uniti nei settori a alto contenuto di conoscenza, e quindi la questione della geografia della specializzazione produttiva internazionale.

##### 2) natura metodologica del lavoro

L'interesse è principalmente per un'analisi empirica, da condurre su materiale statistico, e/o aziendale e con ricerca su campo, con interviste a imprenditori e studiosi. La ricerca empirica si avvale tuttavia di una parte teorico-concettuale tesa a chiarire il problema dell'investimento nell'analisi della crescita come premessa di fondo e strumento per guidare la ricerca empirica. Infine un ruolo importante avrà una consultazione mirata della letteratura sul settore ICT e sul suo sviluppo negli Stati Uniti.

##### 3) bibliografia

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##### 4) tre-quattro parole chiave

Crescita, Investimento, ICT, settori a alto conoscenza, Economia Usa, anni 90.

## 24) Guarini (2)

*Titolo provvisorio: Produttività del lavoro e conoscenza: un'analisi econometria per le regioni italiane*

### **Descrizione del tema generale.**

In questo lavoro intendo studiare quali fattori influenzano la dinamica della produttività del lavoro nelle regioni italiane e di conseguenza anche “se” ed “in che modo” queste regioni di fronte ad un processo accelerato di competizione internazionale hanno orientato il loro sistema economico verso l'innovazione ed il progresso tecnico.

Per far questo, utilizzo una funzione della produttività alla Sylos Labini modificata che ha come variabile dipendente la produttività media del lavoro e come variabili indipendenti: “investimenti”, “technological skills” (low -diplomati istituti tecnici- e high -laureati in materie scientifiche-), “effetto Ricardo” (differenza tra salari e costo del capitale), “effetto Smith-Verdoorn-Kaldor” (output –export ritardato), “effetto cumulativo”(produttività ritardata).

I contributi teorici di riferimento sono:

*l'approccio classico-postkeynesiano* in quanto alla TFP si preferisce la produttività del lavoro, si considerano l'“effetto Smith-Verdoorn-Kaldor” che identifica la stretta relazione tra dimensione del mercato e divisione del lavoro, “l'effetto Ricardo” che si concentra sugli aumenti della produttività dovuti ad un aumento del costo del lavoro relativamente a quello dei macchinari, l'“effetto cumulativo” in quanto si ritiene che i processi di crescita siano caratterizzati da rendimenti crescenti e dunque da circoli cumulativi;

*l'approccio technological capability* in quanto nell'analisi empirica vengono utilizzati elementi tipici di tale approccio quali “technological skills”

Inoltre con questo tipo di impianto analitico diventa interessante studiare quali fattori influenzano il gap di produttività (del lavoro): “technological skills gap”, “Smith effect gap”. In tal modo diventa

immediato individuare le differenti “dinamiche” delle singole regioni e se esiste un processo di convergenza/divergenza.

### **Natura metodologica**

Lo studio è di carattere prettamente empirico pur presentando solide basi teoriche. Come tipologia di analisi econometrica intendo utilizzare una *pooled cross-section time series analysis* prendendo in considerazione le regioni italiane (tutte o alcune) per un periodo di tempo medio (da definire).

### **Nota di cautela**

In base agli approfondimenti in itinere e ai dati disponibili, l’analisi potrà subire delle modifiche non sostanziali.

### **Biografia essenziale**

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### **Parole chiave**

Produttività del lavoro, progresso tecnico, skills tecnologici, divisione del lavoro, rendimenti crescenti.

**SEZIONE 3 - INTERNATIONAL TRADE / SPECIALIZZAZIONE**  
**INTERNAZIONALE**

**50.2) Mariutti (1)**

*Production of commodities by means of labour – A theory on international relations*

Abstract

Since (at least) Ricardo, international trade has been perceived as a positive-sum-game – any trading partner would be at the end better-off, no matter how bad (that is, how uncompetitive) was in autarchy. The principle of comparative advantages justifies precisely an argument of this kind: international specialization and free trade generate always a rise of income. What is wrong with this argument? Three points are worth discussing. First, it is theoretically based on some ad hoc assumptions, that do not match often reality: the assumption of full employment is the most evident, but not the only one. Second, it dismisses the point that some patterns of specialization may slow future growth, endangering dynamically the economic systems that have chosen to specialize in that way. Third, it focuses exclusively (or mainly) on the trade of goods, while little attention is paid on what occurs in other variables not directly connected with market values.

This paper attempts to discuss constructively these three limitations, by presenting a multisectoral model of international relations. The principle of comparative advantages, though present, is not central to this theory. What is central is the process of uneven change in sectoral productivities that affects both the international relations and the process of domestic growth. The model, while taking into account the possibility of unemployment and more in general of economic instability, focuses at international level on the consequences of the process of structural change, both in the product, technological (knowledge) and consumption space.

The model hints at three conclusions. First it shows how reductive is international economics if looked at exclusively in terms of international trade. The principle of comparative advantages is one of the sources of international benefits. But it is not the only – and it is not even the primary – source of such benefits. Second, the paper will show that the gains from international trade are based crucially on changes of prices. If prices are relatively sticky, or are not allowed to change

to the same degree in which the rate of specialization or the rate of change of productivities occur, the traditional gains from trade will tendentially disappear, while other problems caused by international trade will remain. Third, and most importantly, it will show that in a situation of structural dynamics, both the choice of specialization and the kind of international relations are rather complex (far more than those assumed by the traditional theory) and maintain a strategic component. By making a wrong choice it is possible that international trade itself may result not in a positive-, but rather in a negative-sum-game.

### Methodology

This is a theoretical paper, which however attempts to be “history-friendly”. It assumes an economic system based on many sectors (a multisectoral model), in which – for simplicity and without loss of generality – labour is the only factor of production (a pure labour economic theory). The technology (that is, the labour productivity) is differentiated both across sectors, across countries and across time. The model builds up on the final chapters of Pasinetti’s works (1981) and (1993), and takes into account the further developments on international trade made by Araujo and Teixeira (2004a and 2004b). It tries to interpret that kind of evidence which is also discussed in the recent literature of the new international trade (among others Brezis et al. 1993). Some results given by Samuelson (2004) on the effects of globalization (which sometime may hurt countries) are put in a different and apparently more general framework. The theoretical work will be used to tackle also some issues of economic policy.

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Key Words: international trade, human learning, structural and technological change, gains and losses from trade.

### 35) Tamberi-Lo Turco (2)

#### *Modelli di Specializzazione e crescita* - Abstract

Il progetto si propone di rintracciare empiricamente la relazione dilungo periodo tra specializzazione produttiva e crescita economica. La specializzazione produttiva è intesa principalmente in senso ricardiano, avendo cioè riguardo al tipo di beni che ogni paese produce ed esporta e non nel senso smithiano di quanto ogni paese è specializzato al proprio interno.

In linea teorica le ragioni per le quali la specializzazione produttiva conta ai fini della crescita di lungo periodo possono essere rintracciate in due diversi filoni di letteratura:

- 1) in modelli di “offerta” per cui la presenza di economie di scala differenziate per settore, induce differenti tassi di crescita della produttività (Grossman Helpman, 1991) o differenti effetti di learning (Lucas, 1988) in settori diversi. Quando i paesi si specializzano, in conseguenza della presenza di vantaggi comparati differenziati, alcuni saranno vincolati a sentieri di crescita inferiori.
- 2) in modelli di stampo kaldoriano per i quali la domanda è centrale. Per esempio in Thirlwall (1980) l’elasticità di domanda di esportazioni e importazioni, insieme alla crescita della domanda mondiale, rappresenta il vincolo di crescita di una economia. In questo tipo di analisi è implicito che una delle determinanti più dirette delle elasticità aggregate deriva proprio dalla specializzazione produttiva del paese, in funzione del fatto che le elasticità alla domanda sono differenziate per settore.

In questo contesto teorico l’obiettivo del progetto è di fornire un test empirico del legame tra specializzazione e crescita; in primo luogo, si tratta di rintracciare e comparare criticamente le performance di diversi indicatori di specializzazione; in secondo luogo, di testare l’impatto di tali indicatori sulla crescita di lungo periodo. La letteratura empirica di questo genere è. A nostra conoscenza, piuttosto scarsa (recentemente Rodrik e altri, 2005)

La nostra analisi empirica, prevede l’uso di analisi econometriche con stime di tipo panel. Si userà il più ampio numero di paesi possibile, a diverso livello di sviluppo; il periodo coperto dalle stime potrà variare a seconda della disponibilità di dati, ma dovrebbe coprire almeno l’ultimo ventennio; gli indicatori di specializzazione (da individuare) potranno essere applicati

sia a dati di trade, in questo caso con livelli di specificità settoriale anche spinti, o di produzione e/o occupazione.

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### **Parole chiave:**

Crescita economica, specializzazione, struttura

## **European integration, regional structural changes and the agglomeration of knowledge-intensive activities**

Eleonora Cutrini

### *Abstract*

The European territorial distribution of economic activities has become a prominent topic in the political debate and in the academic research during the last decades. The enlargement process and the Single European Market are deemed to engender drastic changes in the industrial structures of member countries and regions and in the spatial distribution of economic activities bringing about adjustment costs (Ottaviano and Puga (1998)). The increasing clustering of high-value added economic activities in high incomes regions coupled with the low-tech specialisation of lagging regions is an example of the expected territorial implications towards greater inequality which is supposed to exacerbate the existing uneven spatial distribution of income and welfare.

From a theoretical standpoint, in spite of the different source of specialisation, both traditional trade theories and the new trade theories envisage that countries will specialise as a consequence of international integration. Besides, drawing on the new economic geography framework, several models designed for the case of Europe predict that, when international transaction costs have fallen below a certain threshold<sup>1</sup>, international openness is supposed to lead to regional coalescence of industrial activities within the countries (Monfort and Nicolini (2000), Paluzie (2001), Crozet and Koenig-Soubeyran (2004), Monfort and van Ypersele (2003)). Although inspired by the territorial changes following the Mexican liberalisation programme (Hanson (1998)), the contribution of Krugman and Livas (1996) could be adopted as a theoretical framework for the study of the European integration. The model of Krugman and Livas (1996) highlights the importance of congestion costs as centrifugal force pulling towards internal dispersion of economic activities.

International integration in the commodity markets and fragmentation of productive processes are bringing about a progressive irrelevance of national borders. In the light of globalisation processes the basic unit of analysis should be referred to sub-national economies and nested methodologies are required to understand the complexity in the structural change dynamics at the different spatial scales.

Besides, from a normative perspective, the development of rigorous methodologies to disentangle structural changes at different geographical levels of analysis are becoming important in light of the existence of overlapping institutional levels. Assessing if the distribution of economic activities is occurring mostly within countries or instead at wider distances helps understanding how and to what extent each European national and regional policy makers have to be involved in designing appropriate policies. Therefore, on the background of the complex European institutional framework, this paper aims at empirically assessing the location patterns in Europe adopting a twofold geographical perspective. Relying on dissimilarity entropy measures of overall localisation, specialisation and concentration are evaluated simultaneously through different spatial and industrial scales. Preliminary results suggest that, while dispersion took place along short distances

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<sup>1</sup>Since Europe reached an advanced level of integration, the hypothesis behind the work is that transaction costs between European countries are minimal.

between 1985 and 2001, after the completion of the Single Market programme polarisation increased over wider territorial scales, i.e. between countries and the South-North divide. The underpinning centripetal force is the increased clustering of high-tech industries in Northern European regions. The emerging differential specialisation deserves to be analyzed in more detail since it may give rise to a widening of disparities in knowledge potential and growth raising a necessary tension between the policy objectives of regional and social cohesion and a knowledge-driven growth. A second part of the work will attempt to analyze the agglomeration of knowledge-intensive activities with a particular reference to the institutional context for knowledge spillovers at the local level and the exchange of knowledge at the supranational level.

*JEL classification:* C43, F15, O52, R12

*Keywords:* localisation, specialisation, concentration, European economic integration, twofold geographical analysis.

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