

1. Teodora Diana CORSATEA

2. Date of last diploma

September 2005 Master "*Espace Européen Economique et Social*", "Université des Sciences et Technologie de Lille "Lille 1

Expected Phd

25.03.2005 Phd in Economics at "Université des Sciences et Technologie de Lille " (USTL Lille 1), laboratoire EQUIPPE.

Title of thesis : « *Geography of 'innovation. Geography of research* »

Thesis supervisor : JAYET Hubert, Professeur.

3. Current affiliation: Attachée Temporaire à l'Enseignement et à la recherche "Université des Sciences et Technologie de Lille "

Letter of motivation

Dear Madam, Sir,

I would like to address to you my application for the 2010 ERSA Summer School.

As a past participant to this scientific event I am particularly motivated to renew the experience. During the visit in Pecs 2008, I have appreciated the interesting topics dealt within the sessions. They have helped me from a professional point of view and motivated to enlarge the research project in which I was involved. Thus, I am grateful to the organizers of training courses. To them I partially owe my enthusiasm for the kind of research developed in my thesis. I am also indebted with all the professors which have shared their experience and their motivation with students of the mentioned trainship courses. In particular they have also contributed with their comments and suggestions at improving the on going work represented in my thesis.

My past and current research is dealing with spatial issues associated to the knowledge diffusion phenomenon. The visit will allow to learn new methods of spatial analysis as those which represent the topics of this year session. I am also likely to work on a project using SCGE modelling. The summer school could give me the opportunity to learn new methods, my knowledge being limited in this area.

Kind regards

Teodora

5. CURRICULUM VITAE

Teodora Diana CORSATEA
22 September 1979



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EDUCATION

Expected
25.03.2005 Phd in Economics at “Université des Sciences et Technologie de Lille ” (USTL Lille 1), laboratoire EQUIPPE.
Title of thesis : « *Geography of ’innovation. Geography of research* »
Thesis supervisor : JAYET Hubert, Professeur.

From 2005 Participation in *European Phd in Social and Economic Sciences*,
University network supervised by « La Sapienza University » Rome, Italy.

2004-2005 Master “*Espace Européen Economique et Social*”, USTL Lille 1
2002-2004 Master “*European studies*”, European Studies Centre (Très Bien), Université « Al. I. Cuza » Iasi, Romania.

1998-2002 Bachelor degree in Accountancy and Information Systems, University « Al. I. Cuza » Iasi, Romania.

PROFESSIONAL EXPERIENCE

2008-2010 *Attachée Temporaire à l’enseignement et à la Recherche*, USTL Lille 1
2005-2008 *Allocataire de Recherche (Moniteur - CIES)*, USTL Lille 1
05.2004-10.2004 *Financial Accountant NBH Distribution SRL*, Iași România.
11.2002- 05.2004 *Financial Accountant SC Nicolina SA*, Iași România.

PUBLICATIONS

Publications:

“*Measuring science. Spatial investigation of academic opportunities in Belgium*” accepted for Publication by Papers in Regional Science

Work in progress:

- « *Geography Of Innovations And Geography Of Research: The French Experience*», submitted to International Regional Science Review
- “*Geography of Research*” submitted to Revue d’Economie Industrielle
- “*Comparing geography of innovations and of research across Europe: the case of France , Belgium and Germany*”

RESEARCH ACTIVITIES

Research interests

Economics of Innovation, Economics of Science, Industrial Economics, Technological Change

Scientific activities

03.2006-10.2007 Co-organiser of research seminar SIUTE (Séminaire InterUniversitaire de Théorie Economique)

04.2008 Member of organising committee “SMYE 2008”

Participation at conferences

25-28.08.2009 Congress of ERSA, Lodz Poland

27.08-01.09 2008 Congress of ERSA (European Regional Science Association)
Liverpool (UK)

10-12 12.2007 The Institutional and Social Dynamics of Growth and Distribution, Lucca
(Italy)

19-21 10.2007 Statistical evaluation of the economic and social development, Iași
(România)

29.08-02.09 2007 Joint Congress of ERSA (European Regional Science Association) and
ASRDLF (Association de Science Régionale de Langue Française) Paris
(France)

Participation at workshops

28-30.09.2009 *Annual PHd Seminar, Barcelona (Spain)*

21-22.11.2008 *Annual PHd Seminar, Southampton (UK)*

06-15 07.2008 Applied Spatial Computable General Equilibrium Modeling: Model
Development *PREPARE*, ERSA Summerschool Pécs (Hungary)

12-15 12.2007 Ranking and Research Assessment, Annual European PHd Seminar,
Bruxelles (Belgique)

8-19 10.2007 *DIMETIC Training Session, Maastricht (Pays Bas)*

03.10. 2007 Séminaire des doctorants Lille(France)

Semester abroad in the framework of European PHd

04.04-30.07. 2008 Humboldt University, Berlin (Allemagne)

Didactics

2009-2010 Travaux Dirigés *Statistics and probabilities (Licence 2)*, USTL Lille 1
2008-2009 Travaux Dirigés *Microeconomics (Licence 2)*, USTL Lille 1
Travaux Dirigés *Long terme Dynamics(Licence 3)*, USTL Lille 1
2005-2008 Travaux Dirigés *Statistics and probabilities (Licence 2)*, USTL Lille 1
Travaux Dirigés *Microeconomics (Licence 2)*, USTL Lille 1

Languages

French, English, Romanian, Italian (Basic)

Software accustomed

Econometric programs TSP, SAS
Mapping programs Mapinfo, Geoda, Philcarto, Crimestat
Accountancy programs Cofinor, Coswin, AIS-Advanced Information System,
Basic Programs Microsoft Office and Project management.

6. Short description of current and past work

Current research

Current research is continuing the analysis of knowledge externalities and knowledge diffusion, moving from an institutional perspective to the individual one: The role and the characteristic of researchers are becoming important feature in the process of allocation of funds. A particular importance is accorded to the *scientific nomadism* (Meyer, 2001) especially within European countries.

Past research: A short resume of the thesis is presented below:

“Geography of innovation. Geography of research” investigates the spatial distribution of applied and basic research. Focused on spatial externalities of knowledge, the structure of the thesis is three folded: in the fields of geography of growth of innovation and science evaluation. In detail, the thesis contains six chapters: the first one presents the literature, the second and the third chapters are an application of the economics of innovation, the fourth presents a theoretical model in a framework of the economics of growth and finally, the last two ones are orientated towards science evaluation.

Starting with the economics of innovation, a first part of my thesis is oriented towards the analysis of the relationship between the spatial distribution of the main research fields and the spatial distribution of innovations for the main industrial activities, for the French case. Using data mining and spatial exploratory statistics, we find evidence of concentration of innovations in regions where one finds the necessary knowledge to develop the innovating activity. Then, we estimate a model with spatial interaction, thereby taking into account the technological spillovers. The core of the model is an innovation function, where the level of innovation depends upon the local level of research, of the level of research in Neighbouring areas, and of the local industrial specialization. Our main result is that, even when taking account of size effects, local innovation is influenced by local research activity, all the research fields being grouped. However, this influence is far from being uniform across sectors. The influence of the level of local research is highly significant in four sectors, electronics, instruments, chemistry and biology. The diversity of employment contributes systematically at the emergence of local innovations, but this contribution becomes non significant once introduced the specialization of employment by sector of innovation. Neighbours count only globally as neighbour researchers but not as neighbour publications, which can reveal some kind of inertia in the knowledge spillovers.

So far, our empirical results showed that the production of knowledge is spatially sensitive. Using the same arguments as the ones stated by the wide literature, we extent the work done in the first chapter to a greater scale. Looking at the key factors contributing to the emergence of innovations, such as the structure of the market, the presence of amenities (or public goods) or even internal structure of industries, we explore the spatial patterns of innovations in Europe, comparing in particular the case of three neighboring countries (France, Belgium and Germany). In doing this, we challenge once more Krugman’s statement : «knowledge flows are invisible , they leave no paper trail by which they may be measured and tracked». The methods used imply spatial descriptive statistics such as Moran and Lisa index and econometric approach as spatial dependence and spatial error models. These techniques reveal that patterns of innovation are all but randomly distributed.

As mentioned above, the regional specialization of innovation activities, as a result of a combination of skills and special abilities developed regionally, strengthens the link between growth and geography, agglomeration being the counterpart of the economic growth (Fujita and Thisse, 2003). Thus, in the context of geography of growth, we examine in a forth chapter to what extent a flaw in the qualification of individuals determines a relocation of researchers and the formation of competitive clusters. The dynamics of the model is determined by the production of a vertically differentiated variety. The distribution of the income of people is the result of a set of choices on the market, overall reinforced by a local externality. This externality, called "the educational efficiency", is able to change the distribution of income and further enhance the attractiveness of the region. Its existence determines to what extent the agents decide to consume, to work and to educate. Furthermore, they decide where to locate themselves, following the principle that "too little efficiency" does not provide incentives for the relocation of researchers. Once produced, depending on the demand structure of two regions, in a trade context this variety determines or strengthens the configuration of localization of researchers and the formation of competitive clusters. Increasing the rate of learning, thanks to a positive externality, may lead not only to an increased income but also to an increased polarisation of researchers.

Since the distribution of researchers carry significant consequences to the development of basic and applied research, the last part of the thesis is exploring the spatial distribution of research. The description investigates traditional measures of research evaluation and introduces a new measure for regional productivity of science under the form of impact score. For this new measure, there are investigated the spatial and spatio-temporal paths of regional productivity. For this exploration there are used spatial descriptive statistics such as Moran and Lisa index, Geary's coefficient and spatio-temporal tests such as Knox test and Mantel test. Even though not spectacular, the results show that we cannot reject the hypothesis of no spatio-temporal autocorrelation.

In a last chapter we investigate the incentives for localization of researchers. In the geography of innovation, location and size of spatial relations are often determined by the role and characteristics of the researchers (Audretsch and Stephan, 1996, Zucker and Darby 1998): the establishment of a "star scientist" into a region attracts investment funds for biotechnology firms even before they go public. Besides the author characteristics, there are indivisibilities/specializations related to fields of research which require more interactions of researchers than other fields, making thus necessary either the presence of researchers, either their intensity of collaboration. For this line of literature, the co-location of only academic teams is determined by multidisciplinary and technological complexity, the researcher's reputation and team size having a minor contribution (Hussler and Rondé, 2005). The main contribution of the chapter is the analysis of the quality of scientific production, measured as impact factor of publications, differentiated per field of science regional context. In a first stage, it is estimated the concentration of researchers per publication, looking in particular at Lotka law's impact: this coefficient is "field of science specific" indicating a measure of participation needed by discipline. Lotka coefficients are used to calculate the impact scores of the publications. Global determinants of impact score are estimated as a function of intrinsic features of article measured either potential, either actual diffusion of knowledge. The analysis ends with an estimation of regional impact score in a model with spatial interaction. Taken globally, we notice the importance of past scientific activity with a bias of publication in a national language of the country.

7. Short description of career plans

My goal is to continue the research activities started with the Phd Doctoral Programme. I am expected to defend my thesis on 25 March 2010. I worked as ATER(Attachée Temporal à l'Enseignement et à la Recherche) and at the present I am looking for post Phd Positions.

8. Phd Supervisor Hubert Jayet, hubert.jayet@yahoo.com,

9. Reference contacts : Hubert Jayet, hubert.jayet@yahoo.com,
Cristina Lincaru, Cristina.lincaru@yahoo.de

10. Proposal of the paper to be presented at the summer school

CONTRIBUTION OF ITALIAN RESEARCHERS TO FOREIGN SCIENTIFIC PRODUCTION

Abstract:

In the United States the contribution of foreign researchers to the local scientific production is a well attested fact. However, within Western Europe, scientific mobility patterns and their contribution to local scientific achievement is lesser studied. Regional studies identify the scientific mobility patterns: “The most important source of star scientists in Western Europe is Italy followed by Belgium, Finland and Ireland[...]indicating the importance of language as well as physical and cultural proximity” (Maier, Kurka and Tripl 2007).

Starting from this fact, in this paper we analyze the contribution of Italian researchers to the foreign scientific achievement for a 10 year time span(1999-2008). The scope of the analysis is to identify where are those researchers opened to foreign collaborations and thus to scientific mobility. For analyzing the spatial repartition of these researchers, we use the 110 NUTS 3 Italian *Province* as our basic spatial units. The foreign level of research is measured by the local scientific productivity, by activity. Using spatial exploratory statistics, we find evidence of concentration of targeted researchers in areas where one finds the necessary knowledge and resources to develop research activity. The foreign level of scientific productivity is estimated using a model with spatial interactions. We find that cultural proximity is contributing to a higher intensity of foreign collaborations. As to the scientific motivation of these researchers we find that short term collaborations are as well privileged as long term projects.