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**Chiara Mussida & Francesco Pastore (Eds.),  
*Geographical Labor Market Imbalances: Recent  
Explanations and Cures (AIEL Series in Labour  
Economics)*, Springer, 2015, 370 pp. \$179 Hardcover.**

By Olga DEMIDOVA †

**Abstract.** The collection of articles by 31 authors, “Geographical Labor Market Imbalances” (edited by Chiara Mussida and Francesco Pastore) belongs to the AIEL Series in Labor Economics published by Springer Verlag and impresses the readers with the broad spectrum of problems examined therein. The book consists of introduction and four parts. The structure of the book is well thought of, the material of each part is smoothly connected to the previous parts. The chapters’ distribution inside each part is well balanced. Attractive features of the book are extended number of applied econometric methods and a variety of empirical data used for the analysis.

**Keywords.** Labor economics, Labor markets.

**JEL.** E20, F16, F66, J00.

## Book Review

In the Introduction, the editors C. Mussida and F. Pastore professionally and creatively bridge the gap between the existing rather different literature sources on the issues related to the labor market and the edited book. The reader receives the view of the general structure of the book, specific parts of each division, features of each chapter, and can choose the direction of interest. An important specifics of the book is that the presented studies are interesting not only from the theoretical viewpoint, but they are also valuable in the policy implications. In the first part, “Determinants of regional unemployment”, the static and dynamic determinants of regional unemployment, wage differentials and wage convergence are discussed by the examples of Italy, Germany, Russia and Kazakhstan.

In the chapter 2 C. Mussida and F. Pastore examine the correlation between unemployment and worker turnover. Opposite points of view exist on the direction of influence. On the one hand, there exists a so-called Lilien hypothesis, according to which industrial restructuring causing sectoral shifts might explain the high level of turnover of high unemployment regions. On the other hand, there is so-called Krugman hypothesis that greater labor market flexibility is associated with efficient labor markets and low unemployment. The authors used the NUTS1 and NUTS2 data for Italian regions for the period of 2004–2010 and found an evidence of a positive relationship between the worker turnover and unemployment rate across

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## Journal of Economics Bibliography

the regions. The South of Italy, a region with high-unemployment, is at the same time a geographical area with the highest worker turnover. To examine the possible sources of regional differences in the worker turnover, the authors estimated econometric models with individual characteristics such as age, gender and education, type of occupation, sector of activity (public versus private), firm size and type of labor contract (permanent versus temporary). They found that women, the youngest age segment and the least-educated employees experienced the highest probability of worker turnover. The latter characteristics are also associated with temporary work contracts and small firm size. Mussida and F. Pastore also revealed that the worker turnover correlates positively with structural change, as measured by the Lilien index, and negatively with the degree of industrial concentration, as measured by the Herfindahl index. Taking into account the positive relation between the turnover and unemployment rate, all these factors may have an influence on the level of regional unemployment.

E. Semerikova continues the analysis of regional unemployment issues in the next chapter. She investigates the determinants of regional unemployment in Germany as well as spatial labor markets spillover effects employing the panel NUTS3 level data from 2001 till 2009 for 407 regions. In order to take into account the spatial structure of the regional labor markets the spatial weighting matrix of inverse distances between regions is used. The spatial panel data analysis of regional unemployment determinants brings the author to the conclusion that the unemployment in Germany is of both equilibrium and disequilibrium nature. She also finds that there exists a strong significant spatial relationship between regional labor markets, which is important to take into account while developing regional policy. The study makes a good attempt to explore the differences between western and eastern parts of a country, which still persist in Germany. The author reveals that spatial dependence is stronger between regions within western part of a country, than between regions of an eastern part. She also finds the differences in the determinants of regional unemployment between western and eastern Germany. In order to examine the spatial spillovers not only within western or eastern parts of a country, but also between them the author uses the extended specification and estimates it by system GMM approach. This approach allows the author to make the core finding of the study. The change of unemployment rate in an eastern region affects the rate of unemployment not only in other eastern regions but also in western regions. However, the change of unemployment rates in a western region influences unemployment rates only in other western regions and does not influence unemployment rates in eastern part. Alexey Oschchepkov in his chapter makes an attempt to explain sufficient interregional wage differentials in Russia. Using the Mincer-type wage equation with individual characteristics complemented with regional characteristics, he found that wage differentials across Russian regions have a compensative nature. According to the obtained results, half of the interregional wage variation between workers with similar productive characteristics should be considered as compensative. This wage compensation mechanism has a market nature and is not associated with the existing government system of compensating wage coefficients (for living in north regions etc). Russian workers receive wage compensations for living in regions with a higher price level and a relatively low life expectancy, a high level of air pollution, poor medical services, a colder climate, and a higher unemployment level etc. The cross-regional differences in amenities and disamenities explain more variation than differences in the employment composition. Only a small part of the existing cross-regional variation in nominal wage translates to differences in real well-being. An important policy implication is that the policy measures oriented at the reduction of interregional wage differentials will have only a limited welfare effect. Another

## Journal of Economics Bibliography

important finding is that interregional wage differentials reflect not only regional endowments in amenities and disamenities but also the magnitude of migration cost. That is why the best policy reaction to the observed high level of interregional wage differentials could be the removal of migration barriers and reduction of migration costs. Another advantage is a creative approach to finding and use of instrumental variables, in order to avoid the problem of endogeneity of regional characteristics. The author notes that there are reasons to expect that the compensation mechanism has a long-run nature for Russia; therefore one should not expect reduction in interregional wage differentials in Russia. The questions related to the change in the regional wages are also discussed in the chapter by Alisher Aldashev. He studied  $\beta$ -convergence of wages in Kazakhstan based on the regional data for 2003-2011. Traditionally, a model by Barro and Sala-i-Martin is applied in such cases (1991). A specific feature of the evaluated model is considering the spatial correlation in residuals and applying a special procedure to obtain an unbiased estimate of covariance matrix of coefficients. The rate of  $\beta$ -convergence was found to decrease, while it was more than 5% in 2003-2007, in 2008-2011 it was only 3.5%, but still this index is higher than that in many other countries, e.g. in Europe and USA. The author concludes that resource abundance is not a significant contributor to the growth, however, according to the presented results, this conclusion is controversial, at least for the period of 2003-2007. At the same time, there are no doubts that the factors related to innovation activities of regions have a positive effect on the rate of the wage growth. In particular, an increase in a share of students or share of R&D leads to the increase in the GRP growth (being more pronounced in 2008-2011 than that in 2003-2007).

In the second part of the book, influence of agglomeration effects on labor market is discussed. In all three chapters, Italy's regional data are used which provides a profound picture. Roberto Basile, Cristiana Donati, and Rosanna Pittiglio in their chapter analyze the effect of industry structure on local employment growth in Italy. There are two opposed theories concerning the direction of said effect. According to the Marshall–Arrow–Romer (MAR) theory, formalized by Glaeser et al. (1992), the higher the degree of specialization of the region in a specific industry, the higher the growth rate in that particular industry within that region. There are two main sources of local growth: within-sector pecuniary (static) and nonpecuniary (dynamic) externalities (knowledge spillovers). According to Jacobs theory (1969), the higher the degree of diversification of the region, the higher its growth rate. The explanation is following: diverse sectoral structure increases the chances of interaction, generation, replication, modification, and recombination of ideas across different industries. A diverse industrial structure also protects a region from volatile demand and offers it the possibility of switching between input substitutes. Additionally, in line with Porter, Jacobs also suggests that a more competitive environment is stimulating growth. There are empiric studies which support either of these theories. Generally these studies postulate a linear relationship between industry structure and employment growth. Basile et al. in their research point out that a more flexible semi-parametric functional form is better suited for such studies and geographic dependency should also be considered. Using data for 686 local labor systems (LLSs) in Italy for both manufacturing and services and for three different periods (1981–1991, 1991–2001, 2001–2008) and a semi-parametric geo-additive model authors revealed that some local characteristics (density, firm size, the latitude and the longitude) had a nonlinear effect on employment growth.

Higher specialization has a negative nonlinear impact on employment dynamics. At the same time higher diversification, instead, has a positive nonlinear effect on employment growth in manufacturing sectors and a negative nonlinear

## Journal of Economics Bibliography

effect in services. The relationship between growth and level of competition is linear and negative in the case of services, and nonlinear and even not monotonic for manufacturing. So, application of the semi-parametric approach helped to reveal that MAR and Jacobs theories were only partly confirmed for Italy. In the 7th chapter Massimiliano Agovino and Agnese Rapposelli also tested MAR and Jacobs theories and spatial effects influence using Italian regional data for 1970–1993. Traditional Cobb-Douglas model was augmented by inclusion of variables measuring specialization and urbanization externalities, a variable expressing spillover effects (generated by the concentration of employment in the regions close to a given region) and usage of a stochastic frontier approach. Authors found that the productive efficiency of Central and Northern Italy is positively influenced by both specialization and urbanization externalities. Positive spatial effects were revealed for all parts of Italy. Additionally, for Southern Italy the positive influence of diversification was revealed only after taking into account spatial spillovers (influence of specialization was insignificant). That is why policies with the aim of encouraging local development should consider the externalities. Due to spillover effects, it would develop a “domino effect” that would involve not only the region where local development policy has been implemented, but it would also positively affect the neighboring regions. To highlight the contribution of spatial spillovers in determining the efficiency of individual regions authors split all regions in 3 groups: regions for which spillovers contribution does not affect ranking (Piemonte, Emilia Romagna, Veneto, Friuli Venezia Giulia, Liguria, Marche, Calabria, and Sicilia); regions which benefit from the positive effects of spatial spillovers (Valle d’Aosta, Trentino Alto Adige, Abruzzo, Umbria, Molise, Basilicata, Sardegna, and Calabria); regions, which loss of efficiency due to the presence of spatial spillovers (Lombardia, Toscana, Lazio, Campania, and Puglia). So, authors revealed substantial differences among Italian regions due to the presence of spatial spillovers. Some regions benefit from their presence, while others are indifferent or suffer from a negative effect in terms of efficiency.

Giuseppe Croce, Edoardo Di Porto, Emanuela Ghignoni, and Andrea Ricci in the 8th chapter analyze the impact of agglomeration on product and process innovation in Italy. Using firm-level source of data authors estimated models with the dependent variable indicating whether corresponding firm has invested in new products or productive processes. For agglomeration effects’ factors firm density (number of firms over square kilometers surface), employment density (number of employees over the square kilometers surface), and local employers human capital (the number of high-skilled employers over the number of firms in a province and sector) were used. Results of estimation for probit model with instrumental variables allowed to conclude that firms’ density and employment density negatively affect process innovations in small and medium-large firms alike. Share of college graduate employers by province and economic sector does not affect process innovations in both types of firms. Firms’ density, employment density, share of college graduate employers by province and economic sector negatively affect product innovations for small firms and does not affect medium-large firms. Authors conclude that in Italy, agglomeration does not exert any substantial net positive effect on the probability that private sector firms undertake innovative activities. Innovation by the smaller firms is even depressed when they are located in denser areas. So, congestion and poaching effects tend to prevail over the possible positive influences of agglomeration envisaged by theoretical literature.

The third part of the book is devoted to identification of explanatory factors for variability in firms’ productivity and quality of human capital in different regions (on the example of Italy and 30 OECD countries). Massimo Armenise, Giorgia Giovannetti, and Gianluca Santoni in the 9th chapter studied the effect of FDI in

## Journal of Economics Bibliography

business services on total factor productivity (TFP). Authors used the data for Italian manufacturing firms, over the period 2003–2008 and tested the main hypothesis about the presence of vertical linkages between foreign business professionals and domestic manufacturing firms. The obtained results, robust to different specifications, demonstrate that foreign capital inflows in business services improve the performance of domestic manufacturing firms. This relationship is stronger in the case of high-tech sectors, such as mechanics and machinery. At the same time for the traditional low-tech sectors (even in the same location), such as textiles, footwear etc., this influence is less sensitive. Authors note that to attract foreign investments the Italian system should improve the overall business environment, reducing the number of cumbersome bureaucratic practices. Claudio Cozza and Francesco Schettino in the 10th chapter are trying to explaining the Patenting Propensity for OECD firms for the period 2000–2010. Preliminary Data analysis revealed the existence of a deep, uneven distribution of patent applications, R&D expenditure and human capital. Richer regions show higher levels of both private and public R&D expenditure and a consistent share of the total European patent applications. Authors pointed out using Poisson and Negative Binomial model, estimated with ML and GMM, that investment in highly qualified human capital and level of employment in high-tech industries increases the propensity for patenting at the EPO. Private/Business R&D expenditure also has a positive and strong impact on Patenting Propensity for OECD firms. The influence of firm's size, on the contrary to the expectations, was found nonrobust, which can be explained by endogeneity problem. Government R&D expenditure influence was also nonrobust. Therefore, according to the research, the principal factor determining the patenting activity of the firm is R&D expenditure, mainly for business enterprises.

Carmen Aina, Giorgia Casalone, and Paolo Ghinetti in the 11th chapter researched factors influencing Early School Leaving in Italy. This is a significant issue as Italy is ranked third in Europe (after Portugal and Spain). The proportion of early school leavers is not uniformly distributed across the country. In Southern regions, the proportion of early school leavers is 1.5 times higher than in Centre-Northern area. Using Survey of Household Income and Wealth of the Bank of Italy for 1998–2000–2002–2004–2006–2008–2010 and regression analysis authors show that the possibility of Early School Leaving gets lower for families with higher wealth and for families with parents with higher education. The authors also discovered a long-term effect of internal migration in Italy, namely, the origin of the family. Youths born in the Centre-North with both parents from Southern Italy (second generation internal migrants) were similarly to youths born and living in the South, they were more likely to drop out of school earlier than comparable individuals born in the Centre-North with parents from the same area (natives). At the same time when only the household head was from the South, second generation migrants were similar to natives. According to these findings, the integration period of children with two non-native parents in the new area of residence does not necessarily allow to reach the same results of the natives in terms of educational achievements. Therefore, the influence of the family on youth's education is more significant than the influence of local schools. Problems existing in poor regions, including early school leavers, transfer to developed regions due to migration processes and transfer to future generations.

Claudia Pigini and Stefano Staffolani in chapter 12 continue with the theme of secondary school education. They studied the relationship between the enrollment decisions of Italian secondary school graduates and the cost of participating in higher education. Authors use the 2007 survey for 25,880 students, who obtained the title in 2004. The dataset contains information on the students' personal and

## Journal of Economics Bibliography

household characteristics and on their educational background. Some socioeconomic characteristics of the provinces where universities are located also were added. After estimation of a conditional logit model authors note that enrollment costs and the geographical distance play a major role in students university choices. The main finding is following: secondary school graduates, living in regions where the elasticity to fees is high, have a higher degree of flexibility in their choices (because there are large number of universities located in neighbor regions and at a reasonably small distance from their residence). Therefore they are more sensitive to costs than students who have a lower number of opportunities close to the region they live in. On average, the elasticity of the probability of enrollment to tuition fees is 0.062, the one to expected grants is 0.028, and the one with respect to expected rent is 0.022. Authors conclude that regional authorities, by fixing grants and by subsidizing housing policies, can affect students' enrollment choices.

Justina A.V. Fischer in the 13th chapter studied the impact of a country's degree of informational and economic globalization on female employment in 30 OECD countries. She used a micro pseudo panel of 110,000 individuals derived from five waves of World Values Survey, 1981–2008. This data set contains information about respondents' employment status, age, gender, household income, education and marital status, the year of the interview, and the country of residence etc. For measuring the degree of globalization the KOF index of economic globalization and the KOF index of informational globalization (Dreher et al. 2008) are employed (both indices range from 0 (complete isolation) to 100 (complete openness)). Authors test two hypotheses: 1) not only economic integration but also informational globalization increases women's labor market participation and employment probabilities, 2) The impact of globalization on female employment is different across sub-national regions. Both hypotheses received empirical confirmation. At the same time a traditional cross country analysis suggests only the informational dimension of globalization. Author interprets her findings by the following way: both informational and economic dimensions of globalization increase female employment, one working at the regional level, the other one at the national level.

The fourth part of the book is devoted to the evaluations of policy impacts on the regional economic performance. The first two chapters consider the impact of European Structural Funds and the program for self-employment. The third chapter brings a useful suggestion for policy maker to employ regional PPP deflators while considering regional related analysis. Gianluigi Coppola and Sergio Destefanis in chapter 14 evaluate the impact of the European Structural Funds on the economic performance of 20 Italian regions for the period 1989 - 2006. Employing the Garcia-Solanes and Maria-Dolores studies as a benchmark, they consider the influence of the policy on the main aspects: productivity, capital accumulation and employment, separately considering the Funds' effects on four sectors: agriculture, energy and manufacturing, construction, and services. Considering the impacts on different industries separately becomes an essential novelty of the paper, which allows them to obtain a significant impact of the Funds on the economy in contradiction to the previous attempts in the literature.

Another feature of their analysis is that they separately evaluate the impact on factor accumulation and variations in total factor productivity. The quality of the analysis is also supported by the non-parametric FDH-VP approach for the calculation of the Malmquist productivity index. Computed separately for 20 Italian regions and for four different sectors, the index measures technical efficiency in three periods of the Structural Funds. They find that the Funds had a significant but small effect on total factor productivity change and did not influence

## Journal of Economics Bibliography

capital accumulation and employment. Among the Funds considered the strongest impact on factor productivity change had a European Social Fund.

Chapter 15 discusses another labor market policy implemented in Spain. The authors evaluate the impact of programmes, developed in order to foster self-employment among the unemployed. The programme gives a lump sum payment to unemployed people for setting up a new business. The effect of this programme is estimated using data from Spanish Provinces during the period 2003 – 2009. The impact of the programme is estimated with the help of the model, where unemployment is introduced as a dependent variable. Explanatory variables include the proportion of women, educational attainment, industries' employment shares and capitalization of unemployment benefits. A crucial aspect that has been considered is the issue of reverse causality and endogeneity. Authors overcome it by the proper Balatagi's et al. (2012) strategy and by instrumenting the capitalization ratio with the lagged values. Spatial dimension is also taken into account. Proper spatial econometric techniques provide the estimates of direct and indirect effects. The magnitude of the direct effects appears to be quite small, but this result is consistent with the expected since the possibility of capitalization should not be main driving factor to start a business. Indirect effects estimates suggest that increasing the capitalization variable by 1% in region  $i$  influences each neighboring province, however the effect of all municipalities decreases by 0.081%. The analysis of total impacts gives an important conclusion about the necessity of the evaluated policy: if the capitalization variable increases by 1% in province  $i$ , the unemployment rate decreases by 0.277%. Thus, a very useful policy implication from the analysis of the paper comes. The authors conclude that policy makers should be more concentrated on the facilitating the survival of the new businesses than on the transition from unemployment to self-employment.

Bartłomiej Rokicki in chapter 16 emphasizes the importance of implementing regional-specific deflators in wage data analysis. The objective of the chapter is to verify the real wage equalization hypothesis among different regions in Poland, exploring the question how introduction of regional PPP deflator influences the results of the regional wage differential analysis. The deflator used in the analysis is estimated properly in accordance to the Eurostat/OED methodology and can be used to compare real income level between regions within one state. The author provides a methodology of the deflator estimation and accurately lists what prices are taken into account in the estimation.

I studied "Geographical Labor Market Imbalances" with great pleasure and great benefits for myself and would like to recommend it to wider audience, including researchers, students and professors in the areas of labor market, regional economics and comparative economics.



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