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Report on the Ph.D. thesis of Mrs Jana Vobecká

Mlle Jana Vobecká presents a thesis (223 pages, 42 pages of annexes and a reference list) for obtaining a Ph.D. degree with the Charles University in Prague (faculty of sciences) and with the University of Bourgogne in Dijon (UMR INRA-agroSup) entitled « *Spatial dynamics of the population in the Czech Republic, 1989-2007* »

This Ph.D. investigates the spatial population dynamics and the demographic and geographic behaviors (decrease in birth rate, immigration, suburbanization…) in the specific context of a 20 years period where the Czech Republic shifted from a state socialist economy under the control of a totalitarian state to a market economy in a pluralist democracy.

The thesis is compound of three parts.

In the first part (41 p.), Mrs. Vobecká presents the state of art and exposes critically her theoretical framework (the new economic geography). In order to present the context of the Czech situation and dynamics, she discusses information from existing studies on spatial population dynamics in others former communist countries. In that part, the reader is very pleased to find a very clear synthesis of the post-communist transition in the Czech Republic: this sub-section sets a context that the analyses will study in depth and contribute to precise further on. Finally and according to the state of the art and the regional post-communist - but also western-European - context a list of hypothesis is formulated. Part 2 and especially part 3 will provide results for validating those hypothesis. The approach is rigorously built on a very clear positioning of the subject, both on a thematic and theoretical plan.

In the second part (21 p.), Mrs. Vobecká presents the categories of spatial differentiation in the Czech Republic. These categories will support the detailed data analysis from the third part. She reviews the different ways for characterizing urban and rural areas in the Czech Republic and gives several examples on the approaches adopted in other EU countries (expert based thresholds, population density criteria, proportion of agricultural employment…). She justifies her choice in adopting an approach inspired from the French and British models, based on geographical actors' mobility criteria. She explains the interest she found in M. Hampl's researches on the Czech Republic (regional hierarchical approach core-periphery). At that

moment of her Ph.D., Mrs. Vobecká establishes a crucial element for all her work: a commuting-based regional classification of the Czech area following the urban-rural gradient. This results in a map of types of areas on the urban-rural gradient.

The third part is the most important quantitatively (79 p.) but it is also the heart of Mrs. Vobecká's research on the spatial population dynamics in the Czech Republic. It contains the major results, each one corresponding to data analysis tools chosen and discussed in order to highlight spatial properties in population dynamics. First, Mrs. Vobecká shows that, after 1995, the trend in population concentration, strong under the communist period, is reversed and that deconcentration becomes the dominant trait. Following that, she confirms that residential domestic migrations are the most important factor of change in the Czech Republic demographic characteristics, more that changes in mortality and birth rate.

To my view, the three following results are the most original in that research on spatial population dynamics. In section 6.2., the effects linked to regional contrasts and those linked to the rural-urban gradient are analyzed and discriminated. This analysis is conducted in a very convincing way with the use of the shift and share tool. Mrs. Vobecká shows that differentiation along the urban-rural gradient is more important for demographic and social characteristics and that the economic contrasts are more dependent from regional differentiation.

In section 7, the analysis of migration flows is very convincing as well. The main patterns are distinguished (fig. 6. p. 123 and 7 p. 126). Even though the statistical tools used are less innovative, the main determining factors for migrations are highlighted.

Finally, in section 8, residential migrations and their driving forces are analyzed thanks to gravity models. With this section we may say that the Ph.D. loops the loop: using the rural-urban gradient frame of analysis, migration behaviors are put in the context of the changes that occurred in the Czech Republic since the end of the communist period (housing market, job marker, unemployment, poverty…).

This research is thus an important contribution to population geography. It aims at understanding the spatial logic of demographic behaviors (urban-rural gradient, core-periphery model, regional differentiation). For reaching that goal, the research mobilizes different tools in data analysis in order to highlight the geographical properties of social-actors demographic behaviors. Mrs. Vobecká's Ph.D. achieves linking specialized approaches in population geography and data more common to regional geography, in the context of the post communist transition in the Czech Republic.

Moreover, this thesis opens new and interesting perspectives for further research. If the reader can understand that it was not possible to cover those topics in the time-frame of this Ph.D. research, his curiosity was excited by several remarks. First, it is mentioned (section 8) that an environmental variable, a proxy for environmental quality being the ratio built / non-built area, could be a driving force in residential migrations. This surely deserves further investigation. Second, individual choices of moving to suburban or rural areas for benefiting of individual housing could be investigated from not only a spatial but a social point of view in order to better understand the logic of individual choices. One can hope that, in further researches, programs or partnerships, a methodological *enlargement* could bring interesting results regarding the socio-demographic individual and collective logics, once the main patterns are identified.

Those remarks allow going into the section of the report highlighting flaws, gaps and points that could have been dealt with more carefully. First, one feels sorry that, with a so strong investment in data spatial analysis, the results presentation is relatively poor from the graphs and maps angle. It could have been possible, especially coming from a geographer, to elaborate innovative iconographic ways of presenting results on spatial dynamics.

Second, the analysis of demographic behaviors through population statistics should not be mistaken with the analyses of logics, motivations or justifications. This is why the use of the world "preferences" in section 8 could have been justified more carefully: the analysis performed in that section reveals choices but only allow building hypothesis about actual preferences.

Third, the EU nomenclature no longer uses NUTS4 and NUTS5. Regarding local levels, it is referred now to LAU1 and LAU2 and the geographic database was slightly modified.

Finally, even though this Ph. D. is written in very good scientific English, a not insignificant number of typos was found (and if the dissertation is to be reprinted or put on-line this has to be corrected). The hypothesis (part 1) are not written homogeneously. It is referred (p. 53) to hypothesis H.2.2.4… that does not exist. Foot note 24, p. 102, is a sentence yet present in the same page.

But all those comments refer to minor points and do not influence the overall evaluation.

Mrs. Vobecká 's Ph.D. is a very clear, well structured and rigorously conducted research work. It brings novel results to the field of spatial population dynamics in the Czech Republic and beyond, both on a methodological plan, with the use of methods suitable for revealing the spatial structure of demographic data, and on a thematic plan with a better comprehension of spatial population dynamics in former communist countries.

This work fulfills the necessary criteria for obtaining the Ph. D. degree and I do consider this thesis suitable for the defense.

Prague, 26th of July 2010
Pascal Marty