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THREE COURSES OF REGIONAL COMPARATIVE STUDIES: CROSS-NATIONAL, REGIONAL AND CROSS-NATIONAL REGIONAL COMPARISONS

The cross-national regional comparisons are a relatively young branch of the comparative research in the regional studies. One may say that their time of prosperity still lies in the future. This future, however, is approaching fast, for the cross-national regional comparisons (abbreviated as C-NRC) should be regarded as the type of investigations that provides great opportunities for enlarging our knowledge about the regional and national development processes.

Besides their future potential, the C-NRC have already proved to be promising approach, by producing interesting empirical results.

The aim of this paper is to discuss the origins, content, experiences and prospects of this course of comparative studies.

ORIGINS

The cross-national regional comparisons originated from the confluence of two independent comparative courses: cross-national studies on country level and regional studies dealing with spatial units of one country.

The origins and development of comparative regional studies are widely described in the literature and shall not be dealt with in this paper. Suffice it to mention empirical studies by Ernst (1938)¹ and Hagood (1943), the pioneers of the statistical regional comparisons of the pre-computer era, and by Berry (1961b, 1967, 1968), the "father" of this course in geography. The literature on the quantitative regional comparisons comes to thousands of titles of which several hundreds are by Polish authors. The "quantitative revolution" in geo-

¹ As far as I know, this is the first study where the methods of numerical taxonomy have been applied to the comparisons of spatial units according to their economic features. The method used was invented also by the Polish anthropologist, J. Czekanowski, in 1903.

graphy was based on this approach, which was also adopted — and modified — by later orientations in geography.

The achievements of the cross-national comparisons, expressed by the number of empirical works, are definitely smaller than in the case of one-country regional studies, which is probably caused by greater complexity of the theoretical questions and smaller availability of comparable data. Still, this number is far from negligible. Let us mention here only the studies by Berry (1961a), Beckerman (1966), UNRISD (1970), Szczepanik (1973), Hellwig and Kania-Gospodarowicz (1975).

The confluence of these courses of comparative studies that were separated so far took place in the second half of the 1960s. This was the time when the international scientific cooperation in the social sciences really emerged, which naturally led to increased importance of any cross-national research projects, also in regional studies. The name of Stein Rokkan has to be mentioned here, whose role was really outstanding both in the field of theoretical basis of the cross-national social studies and in the practical implementation of the international empirical projects.

The Regional Programme originating from the UN activities (see *European Seminar ...*, 1964 and also Komorowski, 1982), headed by Antoni Kukliński in UNRISD in the late sixties and early seventies is an excellent example of implementing this "spirit of cooperation" on the ground of regional science, regional planning and regional policies. The Programme yielded in a whole bulk of important publications, some of which contributed to the experiences of the cross-national regional comparisons, too.

WHY CROSS-NATIONAL REGIONAL COMPARISONS?

One may ask: what are the advantages of the C-NRC over the cross-national or over the regional comparisons? Are there any advantages at all, keeping in mind that the difficulties in collecting the comparable data for the C-NRC are enormously greater than for the "pure" cross-national or "pure" regional studies? We do believe that these advantages really exist, which we try to prove by the following simple example (Fig. 1).

Let us assume that we are concerned with the economic development which can be measured by two variables x and y , representing two "dimensions" of development. Regardless of the kind of study, we are usually interested in the two following problems:

- (i) the level of development measured as the distance from the point (0.0) to the given unit (country or region),

(ii) the **structure** of development pictured by the slope of the line crossing the set (sets) of points and representing the relation between the dimensions of development.

Let us examine what answers can be provided in both cases (i) and (ii) by the different kinds of comparisons.

1. Cross-national comparisons on the national level (i.e. when the countries are the units of observation), using the national averages (represented in Fig. 1 by the big dots) of the countries concerned, show that the three countries can be arranged on the scale of development in the following order: C, B, A. We can also conclude that there is a certain positive statistical relationship between the variables x and y (of course, the greater the number of countries, the stronger our conclusions about this relationship). Therefore, we can expect that the countries will follow the general pattern of development, moving along the straight line marked in Fig. 1. Moreover, we tend to consider this pattern as a universal one.

2. The results of the regional studies for one country (each country in Fig. 1 is divided into 20 regions) will tell us nothing about the development levels in other countries since the results obviously concern only a single country. On the other hand, the pattern of regional development will differ according to which country we examine: in country A the variables are correlated positively, in B negatively, in country C no correlation occurs.

It is worthwhile noting the possibility of the following pitfall: if our scientific experiences are derived only and exclusively from the results of the cross-national comparisons analogous to the situation from Fig. 1 and from the results of regional comparisons in a country with the A-type structure, our "natural" conclusions will be that the variables x and y are always positively correlated on both regional and national levels. This generalization does not have to be true; that will be presented further on. For example, both the cross-national comparisons (see UNRISD, 1970; Hellwig, Kania-Gospodarowicz, 1975) and the comparisons of the administrative regions of Poland (Gorzelaek, 1983) demonstrate the existence of the strong positive statistical relationship between the variables representing urbanization and industrialization. Such a correlation has also been found in the set of South-American regions by Pedersen (1975). This could lead to the conclusion that such a relationship holds true for the regional structures for all countries, in other words that this is a general, universal relationship of urbanization and industrialization on regional and national levels. As it is de-

monstrated in Gorzelak, Wyżnikiewicz (1984) this is not true in every case.

3. Cross-national regional comparisons combine the cognitive abilities of the two kinds of the above-mentioned comparisons. These abilities are enriched by further additional elements:

- we can compare the development levels of all regions under study, not only the regions of one country or the whole countries.
- C-NRC may lead to modification of the valuation of the countries' development levels when a criterion of small differentiation is imposed on some of the developmental phenomena, the living standard, for example. In our illustrative example we should perhaps evaluate country B as more developed than country C, for despite its lower mean values country B is remarkably less regionally differentiated than country C, which has a polarized regional structure. It can be said that the regional disaggregation introduces a new dimension to the evaluation of development: its regional differentiation.
- C-NRC enable the researcher to identify the structural differences in the national development patterns, establishing the statistical relationships between the components of development for each country in its regional disaggregation and comparing the patterns thus observed.

It should be noted that the advantages of the C-NRC over the cross-national and regional comparisons come into being only when the analysis is of a quantitative type. Dealing with the large sets of data and drawing comparable conclusions is possible only when "objective"² methods of analysis are applied. This by no means should be understood as an attempt at rejecting the "descriptive" approach as inaccurate or even obsolete. Several valuable theoretical and methodological as well as practice-oriented studies have been carried out in a descriptive mood. One may say that the descriptive and quantitative approaches complement each other, the first one formulating the hypotheses for the second and exploiting its results and the quantitative approach supplying the descriptive one with the sound and rich empirical basis. The point is, however, that the empirical results of the C-NRC are really richer and broader than the results of the cross-national and regional comparisons when performed separately.

² We should not exaggerate the "objectivity" of statistical methods: it is limited to the assumptions accepted and has to follow several subjective decisions and choices.

QUESTIONS THAT THE C-NRC CAN ANSWER

Taking into account the experiences already accumulated, four major kinds of hypotheses, or may be rather four major groups of questions, can be formulated that the C-NRC are able to answer:

1. Is there any important and systematic impact of the type of political solutions on the regional structure? In other words: does the political system adopted produce any specific type of the regional structure?

2. What are the patterns of relationships between three major dimensions of development, namely urbanization, industrialization, standard of living? Are there any regularities in relations of this pattern with other features of the national socio-economic systems?

3. Is it true that the inter-regional discrepancies remain in the systematic negative relation with the national level of development? Are there any other systematic factors that can be responsible for the regional differentiation?

4. What is the most important factor determining the mutual similarities of regions? Is it "nationality", i.e. are the regions of one country always more similar to each other than to any foreign region, or is it the socio-economic structure of these regions?

SOME EXPERIENCES

Questions two, three and four have been already examined by some of the researches. Williamson (1965) formulated hypotheses concerning the shape of relationship between the overall level of development and the magnitude of the interregional differences. He noticed that this relationship can be demonstrated as an inverted U-letter, which means that the regional disparities tend to grow in the first stages of development and then diminish at its highest level (see also Richardson, 1977, where these hypotheses are discussed). Pedersen, when investigating the regional structure of South America, found a strong positive relationship between urbanization, industrialization and modernization (Pedersen, 1975). This corresponds to the kind of relationships observed in Poland (see Gorzelak, 1983). Finally, Molle suggests that the national differentiation of the GNP per capita accounts for 60 per cent of the regional differences of this category among the regions of the EEC, while only the remaining 40 per cent can be interpreted as being the result of the intra-national regional discrepancies (Molle, 1980).

In a study carried out for the regions (193 altogether) of the six countries (Czechoslovakia, France, German Democratic Republic, Japan,

Poland and Spain)³ all the questions presented in the previous section have been dealt with directly or indirectly. In particular, the major conclusions of this study were as follows:

1. The regional structure of development and the relations between the developmental phenomena form two different patterns of development seen from the regional perspective. The first one — of "industrial" type — occurs in Japan, Poland and Spain. Three remaining countries: Czechoslovakia, France and GDR present the second pattern, the "postindustrial" one.

2. The countries compared can be arranged in a descending order on the synthetic scale representing the elements of the standard of living as follows: France, GDR, Czechoslovakia, Japan, Spain and Poland.

3. Generally speaking, the higher the standard of living, the smaller its regional differentiation.

4. The specificity of the national patterns of development is much more strongly determined by the specificity of the relations between the developmental processes and phenomena than by the strength or level of these processes.

5. No impact of the political system on the regional structure of development was observed.

PROSPECTS

As was already said, the C-NRC form a new type of the regional studies. The major importance will at first be paid to the European regions due to the fact that the European countries belong to the same cultural, social and economic sphere and also represent approximately similar size. This hypothesis is supported by the work already undertaken.

The studies briefly mentioned in this paper are the first step towards a whole-European regional comparison. It seems highly probable that such a work will be done during the 1980s. This is supported by the logic of the scientific progress on the one hand and by some empirical attempts carried out so far, on the other. There exists an international project sponsored by the International Federation of Data Organizations aiming at creating the European Regional Database. The "Nordic Project" which already resulted in establishing the joint database for the first-level administrative regions of the five Nordic countries is

³ The full account of the methodology, data and empirical findings can be found in Gorzelak, Wyznikiewicz (to be published in 1984).

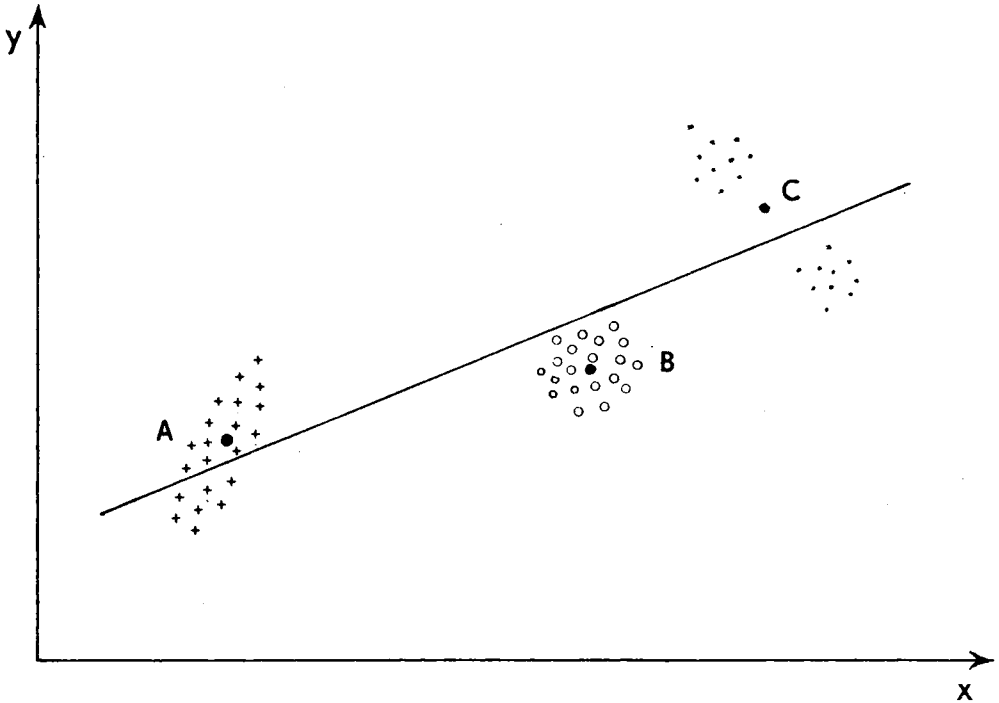


Fig. 1. The cognitive abilities of the cross-national, regional and cross-national regional comparisons.

one of the most promising examples of this kind of comparative approach. Such attempts providing the international community of researchers with their basic necessities, i.e. the data, should be given the strongest possible support from the international scientific organizations.

Looking a bit further in the future, one could imagine a world-wide cross-national regional comparison, embracing the majority of countries disaggregated to their spatial units. The idea of such a study, presented to UNRISD, will presumably succeed not immediately, for it needs a real co-operational scientific spirit and also a tremendous organizational effort. The starting point of this project could be formed by the analyses carried out for the countries belonging to particular continents on the one hand, and for the "large-scale" countries (e.g.: Australia, Brasil, China, Canada, U.S.A., U.S.S.R.) on the other.

These studies should be undertaken for the sake of achieving the most possible deep and detailed insight into the developmental processes occurring in the national systems, belonging to so different cultural

spheres and development levels. Besides all specific gains (such as creating the unimaginable data base, for example), this is probably the most efficient way for answering one of the fundamental questions of the social sciences, which deals with the problem of what is universal and what is peculiar on the way of socio-economic development — the question that attracts the attention of the social scientists throughout years and places.

REFERENCES

- Beckermann, W., "Comparison international du revenu reel", Centre de Développement de l'OCDE, *Etudes du Centre de Développement*, Paris 1966.
- Berry, B.J.L., "Basic Patterns of Economic Development", in: N. Ginsburg (ed.), *Atlas of Economic Development*, The University of Chicago Press, Chicago 1961a.
- Berry, B.J.L., "A Method for Deriving Multifactor Uniform Regions", *Przegląd Geograficzny* Vol. XXXII, No. 2, 1961b.
- Berry, B.J.L., "Grouping and Regionalizing: An Approach to the Problem Using Multivariate Analysis", in: W.L. Garrison, D.F. Marble (ed.), *Quantitative Geography*, 13, North-Western University, Evanston 1967.
- Berry, B.J.L., "Numerical Regionalization of Political — Economic Space", *Geographia Polonica*, 15, 1968.
- Ernst, J., *Niektóre zagadnienia z geografii rolnej Podola* (Some Problems of Agricultural Geography in Podole), E. Romer (ed.), Vol. 19, Lwów 1938.
- European Seminar on the Social Aspects of the Regional Development*, United Nations, Toulouse, September 1964.
- Gorzelał, G., "Comparative Statistical Methods in Regional Studies", in: Z. Mlinar, H. Teune (eds.), *The Social Ecology of Change*, SAGE, London 1978.
- Gorzelał, G., "The regional differentiation of the level of living in Poland, its dynamics and structure", in: J. Lambooy, A. Kukliński (eds.), *Dilemmas of Regional Policy*, Mouton, the Hague 1983.
- Gorzelał, G., Wyżnikiewicz, B., "The Cross-National Regional Comparisons. The Experiences and Prospects", in: A. Kukliński, J. Lambooy (eds.), *Societies, Regions, Boundaries*, Mouton (forthcoming, 1984).
- Hagood, M.J., "Statistical Methods for Delineation of Regions Applied to Data on Agriculture and Population", *Social Forces*, Vol. 21, 1943.
- Hellwig, Z., Zastosowanie metody taksonomicznej do typologicznego podziału krajów ze względu na poziom ich rozwoju oraz zasoby i struktury wykwalifikowanych kadr (Application of the taxonomic method to typological division of countries due to their development level, resources and structure of skilled labour forces), *Przegląd Statystyczny*, No. 4, 1978.
- Hellwig, Z., Kania-Gospodarowicz, A., "Zastosowanie analizy porównawczej w badaniach międzynarodowych" (Application of the comparative analysis in cross-national studies), *Z Prac Zakładu Badań Statystyczno-Ekonomicznych*, No. 83, GUS, Warszawa 1975.
- Komorowski, S.M., "Regional Studies: The Geneva Programme", UNCRD

Working Paper No. 82—1, Nagoya 1982.

- Milhailovic, K., *Regional Development: Experiences and Prospects in Eastern Europe*, Mouton, Paris, The Hague 1972.
- Molle, W., *Regional Disparity and Economic Development in the European Community*, Saxon House 1980.
- Pedersen, P.O., *Urban-regional Development in South America: A Process of Diffusion and Integration*, Mouton, Paris, The Hague 1975.
- Richardson, H. W., "Aggregate Efficiency and Interregional Equity", in: H. Folmer and J. Osterhaven (eds.), *Spatial Inequalities and Regional Development*, Martinus Nijkoff Publ., Boston, The Hague, London 1979.
- Szczepaniak, E.F., *Agricultural Policies at Different Levels of Development*, FAO, Rome 1973 (draft).
- UNRISD, *Contents and Measurement of Socio-Economic Development*, Report No. 70.3, Geneva 1970.
- Williamson, J.G., "Regional Inequality and the Process of National Development: A Description of the Patterns", *Economic Development and Cultural Change*, Vol. 13, 1965.

