What is Regional Science and Why Study it?

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The concept of the scientific area of regional science is ambiguous, calling for an introduction to its various meanings. This is even more important as in Germany, the notion of “regional science” also describes a (Master’s) degree programme. Therefore, it needs to be clarified what the responsible persons understand by the concept of regional science and how they define it in comparison to other uses of “regional science”, albeit the present frame only allows for a short explanation.

Spatial growth processes

The German term “regional science” has been translated from the English term “regional science” forged by Walter Isard (1919-2010). Isard was an economist who, based on regional and national economic approaches, put a special focus on the spatial dimension of economic activities and was instrumental in the foundation of the North American “Regional Science Association” in 1954. Holding the then-existing professorship in Regional Science at the University of Pennsylvania, Isard gave major incentives to this young discipline which were accepted almost all over the world. On one side, this acceptance was promoted by the fact that inhomogeneous growth processes were in need of explanation. On the other side, after World War II, the idea became increasingly accepted that also a market-oriented system needs a regulating national planning to balance regional disparities, stop adverse spatial developments and to initiate or promote desirable spatial processes. Hence, the analysis of regional processes and their application to planning regulation were the driving powers of regional science.

History of regional science

Regional economic and geographic theories conceived by German scientists, notably by von Thünen, Christaller and Lösch, had delivered a substantially contribution. Isard particularly refers to the German economist August Lösch whose work “Die räumliche Ordnung der Wirtschaft” (the spatial organisation of the economy) first published in
1940 had only attracted little interest at that time. Only after the end of the Second World War and thus after the death of the then only 39-year-old Lösch, the groundbreaking significance of this work was recognized. Correspondingly, Isard created the discipline of regional science in the late 1940s (Isard 1975:6). At the end of his comprehensive life’s work, Walter Isard has documented and scientifically classified the history of regional science through this epoche (Isard 2003).

In Germany, though, whose scientists had inspired Isard to conceive the basics of regional science, other terms were dominating: on the one hand the idea of regional economy as a subdiscipline of economics, on the other hand the concept of regional research not linked to any discipline in particular and thus forming a collective term for approaches coming from highly heterogeneous fields such as economy, geography, and others. From the onset of regional science, the discipline has been extended from economics to social science. Accordingly, the German section of the international Regional Science Association was named “Gesellschaft für Regionalforschung” (association for regional research), reflecting the increasing weight of spatial sciences and the appearance of institutionalized planning on a local level. Since 1970, this was followed by the foundation of the first German Institute of Regional Science at the University of Karlsruhe (today KIT). As an interdisciplinary, cross-departmental institute, the Institute of Regional Science has ever since been concerned with theory and practice of regional science, with the latter referring to the application of regional science to spatial planning.

**Regional science or area studies?**

Unlike the so-called area studies, regional science does not have an explicit regional focus. The notion of area studies designates a number of subject areas and degree courses that follow a broad functional approach including applied linguistics, cultural and business sciences to analyse a certain region. Unfortunately, the term of area studies is sometimes translated as “Regionalwissenschaften” in the German speaking part. This translation creates linguistic confusion as singular and plural forms of the same term are attributed to completely opposing contexts of meaning. Therefore, a clarification is essential.

At the KIT’s Institute of Regional Science, the notion of regional science is not bound to a certain regional focus, according to the meaning initially attributed to it by Lösch, Isard and their successors. By means of sociological, economic and natural scientific methods, the discipline of regional science analyses regional structures, processes and conflicts (regional analysis) in order to identify regularities allowing to assess future developments (regional prognosis) and to influence ongoing processes with the instruments of regional policy and regional planning. Thus, the objective of regional science is to develop analysis and planning tools and to apply them to different regions all over the world.

The increasing fragmentation of spatial processes setting in by the end of the 20th century was met with specialized analysis and planning approaches especially between
the high-technology countries of the North and the low-technology countries of the South, which are - in default of more appropriate denotations - still marked as industrialized and developing countries. As early as in 1957, Myrdal had abstracted the theoretical background of special processes in the "underdeveloped" countries which need to be encountered by specific schemes.

**Focus on developing and threshold countries as well as of the countries of the former Eastern Bloc**

Driven by the strong demand for a specialised training dealing with the distinctive challenges of developing and threshold countries as well as of the countries of the former Eastern Bloc, all of which are subject to diverse and often conflict-laden transformation processes, the Master’s programme in Regional Science/Spatial Planning at the University of Karlsruhe specialised in this field in the 1990s. With substantial support by the German national development cooperation policy, the KIT, follow-on organization to the University of Karlsruhe, runs the internationally oriented Master’s Programme in Regional Science/Spatial Planning which focuses on the analysis of structures, processes and conflicts in these countries as a basis to develop adequate planning strategies. All over the world, the increasingly diverging regional processes as well as the political objective to decentralize administrative structures create a high demand for scientific professionals specialized in regional science. The Master’s Programme’s title “Regional Science/Spatial Planning” was chosen to point out that a profound regional scientific analysis is prerequisite to any successful planning procedure.

**Best teaching through joint research**

The concept of the KIT’s Master’ Programme in Regional Science/Spatial Planning is committed to the German universities’ longstanding tradition dating back to Wilhelm von Humboldt to combine research and teaching in a way generating the best teaching through joint research. This concept relies on the approach of transdisciplinary knowledge integration by allowing for methodological pluralism which is essential to analyse the regions’ current problems by means of a transdisciplinary approach and to develop appropriate solutions. The large number of regional scientists active all over the world in research and planning practice prove the sustainability of this concept, the structure of which will be outlined in the following by means of the Master’s Programme’s curriculum.

**Independent analysis and adequate solutions**

Albeit having been thoroughly planned, plans and measures often turn out to be defective and hardly yield acceptance with the parties concerned. Most of these so-called misplannings rely on merely sectoral optimization strategies leaving aside the secondary effects or consequences of a provision. Hence, a main task of regional scientific analysis is the so-called contextualisation, i.e. to establish the necessary context to a given challenge or planning scheme. In order to systemize this analytical process, the
curriculum of the KIT’s Master’s Programme in Regional Science/Spatial Planning distinguishes between the technical, spatial and temporal contexts. For instance, the most important technical contexts of a technical provision include its social, economic and ecologic side effects. To analyse these side effects, elements of sociologic, economic and ecologic regional analysis need to be applied. Therefore, the Master’s Programme needs to convey the respective specialized basics. This happens in the module basics (module M4/CM4). The collected data need to be statistically evaluated (module M3/CM3) and spatially processed by means of geographic information systems (module M2/CM2). Only based on this detailed analysis, methods, techniques and schemes of planning can be usefully implemented. They are taught in the modules M6/CM6 and M7/CM7.

The fundamentals of cognitive and communicative science equally important for science and planning as well as the framework required to understand the discipline and its methods are taught in an introductory module (module M1/CM1).

The project relation of the Master’s Programme is assured by a scientific study project in the first year of study as well as by a Master’s Thesis in the second year of study both independently realised by all participants. The expertise and techniques required to conduct these projects are taught in the modules M8/CM8 and M9/CM9. Special modules on the problems of Newly Industrialized Countries (NIC) or transformation countries as well as individual specialisations through elective modules complete the curriculum. The Master students should thus be enabled to independently analyse regional scientific problems all over the world and to develop adequate solutions.

**Literature**


