

Human Geography

CONCEPTS, APPROACHES AND TRENDS



Edited by
J. F. Olorunfemi
S. L. Tilakasiri

K. O. Laro
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HUMAN GEOGRAPHY

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Part One

**Human Geography and
Conceptual Issues**

Chapter 15

REGIONAL SCIENCE AND REGIONAL DEVELOPMENT

M. O. Abdulraheem, W. M. Raheem and
K. O. Laro

Introduction

Regional Science provide answers to actual issues of economic life of society- the optimum location of activities in the area, the calculus of costs corresponding to transport from one point to the other, the distance from periphery to central areas, migration and other demographic phenomena, specialisation, agglomeration economy of scale among other economic decisions (Antonescu, 2012)

The early period focused on the commercial hubs and administrative centres which were mostly core and urbanized at the expense of the periphery, largely due to such factors as the availability of resources and natural endowment in the advantaged areas. Studies have shown that because natural resources are not evenly distributed, areas with the surplus became favoured regions while those with less or none became disadvantaged.

According to the UNDP (2011), these factors can be grouped into two main categories. The “hard factors” refers to those that cannot be changed due to natural endowment brought about by geographical location and/or climate. The “soft factors” comprised of the institutional framework put in place by governments in terms of policies, investments and programmes. In other words, the uneven distribution of natural endowments, differences in climate and physical conditions and lopsided institutional policies have been found responsible for the uneven economic opportunities available to population residing in different regions. Consequently, these lopsided developments have triggered population movement that has in turn led to undue strain on the existing infrastructures, congestion, environmental degradation and sometimes slum development. The need to address the uneven spread of development across different regions gave rise to studies in regional development. This chapter is out to address the concept of a region, regional development and planning, development planning and regional planning.

Concept of a Region

There is no one-size-fits-all definition of a region. Nonetheless, two schools of thoughts can be identified. The objective view point sees a region as a real entity that can be physically identified and mapped, while the subjective sees a region as a large land area that has geographic, political, or cultural characteristics distinguishable from others. In the latter, administrative units or ecological area can be subjectively employed. The objective school of thought led by Henderson (1905), divided the world into Natural Regions, based on land configuration, climate, vegetation and population density. Adeleke & Goh Cheng-Leong (1979), further divided the world into 12 climatic regions based on distinct latitudinal locations, climatic conditions, natural vegetation types and natural resources. Thus, a region can be seen as an area, physically demarcated or not, with characteristics that singles it out from the other regions.

Regional Development and Planning

As nations continue to grow and adopt new technologies and management methods, new sources of energy (including atomic power), new modes of transportation, and new sources of livelihood, regional inequalities and urbanization tend to occur. A comprehensive regional planning and sufficient investment in social and physical infrastructure at the early stage may help to guide the development of industrial complexes and residential agglomerations, of zones of intensive cultivation and of centres of essential activities into desirable patterns thus distributing and linking settlements and people, in territorial entities. These can be cities in the socio-economic sense and regions in the geographic and administrative sense or regions in the geographic and administrative sense.

The "city-region" concept therefore suggests itself as a practical approach to the task of moulding an environment in which nature's ecological balance is preserved and its beauty enhanced such that, material growth, human progress and culture can develop and benefit man and the community. Any developing area or "growth pole" can be seen as the starting point. The city region can take any shape or structure that geography, technology and human ingenuity can produce. The main characteristics, however, should always be the flexibility and a capacity to respond to human need for dignity, freedom, and continued growth. Regional planning must shift from a static art of "projecting", to the dynamic "action planning" sensitive to rapid advances in science and technology, fast rising productivity and to the growing amount of resources and time the average citizen will have for leisure, learning and culture. Most of all, we suggest here a prescription of "ground rules" for a dynamic process of balanced socio-economic and environmental development.

Conceptualising Development Planning

Attempts at defining the concept of "development planning" faced the problems of semantics as well as the divergent philosophical and ideological orientations of authors either as academics or practitioners. Jhingan (2007, p.488) for example alluded to the very loose use of the term in economic literature by saying "it is often confused with communism, socialism or economic development". Indeed, it has also been synonymously used with the term "national development master plan" which Daggash (2008) viewed as "a long term integrated comprehensive national plan of actions: that indicates the trajectory of national growth and development". Dalton in Jhingan (2007, p.489) referred to the term as "the deliberate direction by persons in charge of large resources of economic activity towards chosen ends". In yet another sense, it has been conceptualized as consisting "in the extension of the functions of public authorities to organization and utilization of economic resources in which planning implies and leads to centralization of the national economy" (Jhingan, 2007, p.489). The responsibility for development planning therefore rests squarely on the central government through its officials in order to achieve definite targets and objectives within a specific period of time. In like manner, Egonmwan & Ibodje (2001) posited that development planning entails "a consciously directed activity with pre-determined goals and predetermined means to achieve the set goals". It was argued further that *"it provides the rallying point for social and political mobilization whereby the society is able to set development objectives and goals, map out strategies and programmes for the attainment of such goals and mobilize resources for their attainment"*.

Why is development planning so important to every responsible government especially in the developing economies? Planning emanates from scarce resources in comparison to the demand for same. Planning is thus seen as a strategy for the allocation/utilization of resources to improve the standard of living of the citizens. Planning therefore entails the prioritization of resources in order to meet desired ends. It is also the objective of planning to increase the rate

of economic development through capital formation by raising raising income, saving and investment levels. The capacity and propensity to save identified as abysmally low in the poor economies can be broken through planned development. Planning can further aim at strengthening market mechanism by removing market imperfections, determining the amount and composition of investment and overcoming structural rigidities in the economy.

Regional Planning: Issues and Prospects

Regional planning combines analytical and graphic methods to project economic, social and physical development in a given geographic area, for a given period of time, and presumably also for the benefit of the region's population in addition to, and beyond, the "national" benefit to which all regions contribute. The regional plan is capable of regulating the timing and sequence of execution of specific projects and programs. Projects with national linkages and inter-relationships are timed such that it helps to bridge the gap between "national development" objectives and the effects on "local communities" in terms of "actual" development. In which case the many services and facilities furnished in a given area by central, local and regional authorities can be planned on the regional scale so as to attract investments from other sources. The region offers a framework within which development projects of national significance and those on local initiative and aspirations are suitably integrated for the mutual benefit of the region and the nation.

The question may be asked, however that as development broadens and planning becomes more comprehensive, "At what level of government (or scale or operation) can the planning of economic, social and environmental development be most suitably integrated"? Or, "at what levels of government (or scale of operations) can the implementation of development objectives be conveniently programmed in a rational sequence"? Recent development experience provides the answer. It has been found that countries with centrally planned

economies have gradually supplemented central, national and regional territories so as to overcome difficulties inherent in detailed planning exclusively executed from the centre. Whereas, in the countries relying on the market mechanism to regulate the economy, planning which was traditionally local and urban have been expanded to the scope of "master planning" to cover at least the area directly influenced by, and in turn influenced by a given city's development from city proper, to the greater city area from the metropolitan region, to the megapolis. Thus, starting from the opposite planning concepts, the "region" is now accepted by both as a convenient scale for the disaggregation and implementation of national plans. With increasing knowledge and experience in comprehensive development planning, the inadequacy of the traditional indices of national averages became more and more apparent. Different geographical areas of a country therefore vary with respect to economic, technological and human resources, the rates of productivity, standard of living, levels of health and education, and their endowment with the essential physical and social infrastructure. Once these regional differences are recognized, national development strategy must try and strike a balance between the extreme positions.

Either to equalize as soon as feasible the conditions in all areas, at the expense of national growth; or favor areas most likely to grow rapidly in the short run, and use the resources so reproduced to bring about desired progress everywhere in the long run. Decisions of this kind must, of course be guided by knowledge of alternative courses of action present and their consequences in economic, political and human terms.

Paradigm Shift in Regional Development Policy: From Top-Down To "Place-Based"

The old paradigm of regional development policy centered on top-down decision making by the central government or external agencies, while largely ignoring mixed, integrated and/or bottom-up approaches (Barca et al., 2012 ; Wolfe, 2011). In Europe, the key

elements of regional development policy was based on infrastructure-driven projects like roads, railways, port infrastructure and sanitation in lagging and peripheral regions, creation of employment through state-aid-based industrialization and inward investment strategies aimed at supporting and attracting subsidiaries of leading international firms. These policy elements had a specific appeal to decision makers by their simplicity, tangibility and popularity (Bachtler & Yuill, 2001).

The limits of traditional development policies, of the 1950s became clear in the 1970s 1980s (Buyst, 2012; Heremans, 1983; Wolfe, 2011). Such regional development policies lacked coherence, with limited or no connection between spending on regional policy and the regional allocation of spending in other policy fields. Government departments created sectoral development programs which included little integration of instruments or coordination across policy fields (Heremans, 1983; Wolfe, 2011). Furthermore, the same solutions were applied to similar problems in different places without considering the specificity of the wider regional and local context (Barca et al., 2012). Accordingly, the "top-down regional development approach" did not fulfil the main objective of regional policy of addressing such as concentrations of unemployment, improvement of the economic situation of regions and reducing disparities within and between countries (De Brabander, Vervoort & Witlox, 1992; Heremans, 1983; OECD, 2009; Tödtling, 2010). State aid and industrial intervention in declining industries, "lame ducks" and big projects resulted in unbalanced policies, deterioration of industrial regions and further economic marginalization of many peripheral and rural regions (see for example e.g. Grabher, 1993 on the Ruhr-region; Hassink & Shin, 2005).

As a counter-thesis to the "top-down regional development approach", national and regional governments began to adapt to the growing complexity of regional issues (Hassink & Klaerding, 2011; Lagendijk, 2011; Tödtling, 2010) such that by 2009 and 2010 a series of highly influential reports on regional development policy intervention were published by the OECD (OECD, 2009), the European Commission (Barca, 2009); the World Bank (World Bank, 2009); and the Latin American Development Bank *Corporacion Andina de Fomento* (CAF,

2010). Barca et al. (2012, p. 138) point out that these reports on development strategies were lame ducks "likely to reflect a collective reaction to the growing unease with the way development policies were conducted and their consequences".

The reports show a highly dynamic debate on regional policy that fell into two radically different views (Barca et al., 2012; Pike, Rodríguez-Pose & Tomaney, 2010). On the one hand, a "spatially blind" idea of regional development policy, with an emphasis on the agglomeration and spillover benefits arising from the geographical concentration of growth (World Bank, 2009). On the other hand, a "place-based" approach that assumes that geographical context, in terms of institutional, cultural and social characteristics, matters. Further focus on the issue of local knowledge in policy intervention and the role of institutions was adopted for a discussion (Garcilazo, Martins & Thompson, 2010; Gill, 2010). The "place-based" approach became the most influential in the thinking towards the future of regional development and cohesion policy in the European Union (DG Regional Policy, 2011; Wolfe, 2011).

Three interrelated drivers spurred these new developments in regional policy (Barca et al., 2012). Firstly, a growing recognition that because of regional specificities and complexities, policies need to be designed and shaped at the regional level itself (Legendijk, 2011). This recognition was in relation to globalization processes which made development more localized and complex. Globalization unveiled the importance of local specificities and assets upon which the competitiveness of regions were based. For example the quality of the regional human capital base, the development of regional innovation policies, the presence of networks and clusters and the availability of specific knowledge infrastructure (Capello & Nijkamp, 2009)

Secondly, resulting from a diverse mix of social, cultural, economic and political factors, there came a growing trend of decentralization of different competences related to development fields (e.g. research policy, innovation policy, regional development policy) in European countries (OECD, 2010). Thus in areas initially the regional

level adapted national policies and instruments, individual regions in various member states now have strengthened capabilities for tailor-made policies and they have more weight in regional programming and policy coordination (Bachtler et al., 2003; Lagendijk, 2011).

Thirdly, the influence of EU policies played a key role in developing more strategic methods of facilitating regional economic development (Manzella & Mendez, 2009; Raines, 2001). The program of regional development that was first introduced in 1975, has since undergone a continuous process of change and evolution, even though the framework of European regional policy remained very top-down oriented (Cabus, 2002; Wolfe, 2011). Ever since the end of the 1980s, the design and implementation of European regional policy provided a highly appropriate platform to experiment with programs and projects that targeted competitiveness issues besides cohesion (Tödtling, 2010). Moreover, it enhanced the bottom-up development approach by fostering local partnerships of organizations in the design and ownership of programs (Cabus, 2002).

A New Paradigm of Regional Policy

Bachtler & Yuill (2001) mentioned paradigm shift in regional policy. In a 2010-report the OECD (2010) endorsed the Bachtler & Yuill's view that argued empirically that there was widespread evidence of an identifiable paradigm shift which involved new objectives, new geographical scope, new governance and new policy instruments for regional development (Table 1).

The "new paradigm of regional policy" became "place-based, multi-level, innovative, and geared towards different types of regions" (OECD, 2009; Wintjes & Hollanders, 2010). According to Barca (2009) a place-based development approach was aimed at institutional building and strengthening, improving accessibility to goods, services and information and promoting innovation and entrepreneurship. Furthermore, essential features of the approach included: tailoring interventions to specific contexts and their spatial

linkages; eliciting and aggregating the knowledge and preferences of local actors. A context-specific approach targeted the endogenous local assets and knowledge with the main objective of promoting increased investment, creation of employment and the provision of infrastructures for economic development (Bachtler et al., 2001).

Table 1: Paradigm Shift of Regional Development Policy.

	Old/classic paradigm	New/modern paradigm
Conceptual basis	Industrial location theories, key factors are regional attributes e.g. production costs, availability of workers	Learning region theories, key factors are regional capabilities e.g. innovative milieux, clusters, networks
Aim(s) Objectives	Equity through balanced regional development	Increased competitiveness and equity e.g. entrepreneurship, innovation
General policy framework	Compensating temporarily for location disadvantages of lagging regions, responding to shocks (e.g. industrial decline) --> reactive to problems	Tapping underutilised potential in all regions enhancing regional competitiveness through regional and strategic programming (e.g. smart specialization strategies) --> proactive for potential
Sphere of action	Sectoral approach with a limited set of sectors --> narrow (economic/industrial policies)	Integrated and comprehensive development projects with wider policy coverage --> broad (integrated development projects)
Spatial orientation	Targeted at lagging regions, within administrative areas	All-region focus, with orientation towards functional economic areas
Approach	One-size-fits-all approach	Context-specific approach (place-based approach)
Focus	Exogenous investments and transfers	Endogenous local assets and knowledge
Instruments	Incentive scheme with subsidies and state aid, with focus on hard infrastructure and business aid (often to individual firms)	Development programme with mixed investments for soft and hard capital e.g. business environment, labour market, infrastructure
Actors Organisation	Top down policy development by central government	Collective policy development by different levels of government and various stakeholders (public, private, NGOs)
Evaluation /Outcomes	Ex post evaluation, measurable outcomes	Ex ante, interim, ex post evaluation with difficulties to measure outcomes

Source: Revision based on OECD (2008, p.13) and Bachtler (2001, p.12).

We can clearly see from the foregoing an evolution in the conceptual basis of development policies from regional attributes of production costs, availability of workers and infrastructure towards regional capabilities with emphasis on the presence of an innovative milieu, clusters and interregional networks. The focus has shifted towards competitiveness of innovation, networking, quality of human capital and entrepreneurship.

Theories of Regional Development

Several theories have been developed to sharpen our understanding of regional development, and most of them were used to test their appropriateness in explaining regional related issues. For the purpose of this chapter, two of the theories shall be examined.

The Central Place Theory

The first proponent of this theory was a German Geographer Walter Christaller (1933). The theory was an attempt to explain the reasons for the distribution patterns, size, and number of cities and towns around the world, and to also identify the settlements concerned with the provision of goods and services in a particular region. Accordingly, a central place theory, a central place is a market centre where exchange of goods and services by people are attracted from the surrounding area, such as to maximise accessibility (See Figure 1).

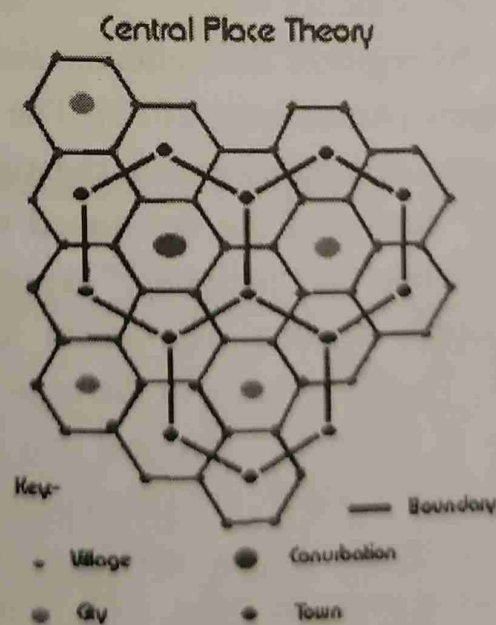


Figure 1: Diagrammatic Representation of Christaller's Central Place.

Source: Glasson (1974).

It has been further argued that the traditional regional science models based on the central place theory possessed a regional-urban perspective to an extent that it can be used in explaining regional development issues.

In driving home the model, Christaller made some assumptions. Three of which are that:

- i. the region is an isotropic surface (i.e. flat), so no barriers to impede people's movement;
- ii an evenly distributed population i.e producers and consumers; and
- iii evenly distributed resources - similar purchasing power of all consumers.

The central place theory received a lot of criticism, it nevertheless provided a basis for selection of location and efficient space functions. Perhaps, more relevant in this chapter, the theory provided a guideline for relocation policy, location of settlements, hierarchy and allocation of market and service functions in regional planning and development.

The Theory of Core-Periphery

The Centre-periphery theory was first proposed by John Friedmann and further expanded by regional theoreticians such as S. Holland and G. Myrdal among others (Antonescu, 2012). The central thrust of the theory was that as general prosperity grows, the majority of that growth is enjoyed by a "core" region of the developed world comprising of the wealthy countries while the "periphery" region comprising of the underdeveloped countries became pauperized and ignored despite their huge population. This dichotomy in the regional structure can be explained by reasons of barriers of physical and political that inhibit the poorer countries of the world from participating in global relations. Adedeji (2011), rightly observed the disparity of wealth between core and periphery countries as overwhelming, with 15 per cent of the global population in control of 75 per cent of the world's annual income. The same goes for the disadvantaged and favoured regions at the local scale, where cities enjoy the full glare of benefits such as employment opportunities and infrastructural facilities while the rural areas are abandoned and impoverished.

While the core regions are generally characterized with most positive features of development such as (higher wages, access to healthcare, adequate food, water and housing supply), scientific innovation, and increasing economic prosperity, the peripheral areas are generally characterized by extreme poverty, less access to potable water, poor infrastructures and low standard of living.

The application of the core-periphery model presents a true picture of the low and high class; and the developed and disadvantaged regions at the local scale, where there exist a sharp disparity in employment opportunities, wages, access to health care and infrastructures among the wealthy and the poor population. Compared to the 15 per cent of the population in charge of the world's 75 per cent income referred to above, it is believed that in Nigeria, only about 10 per cent of the population control 90 per cent of the resources. This aptly describes the relevance of the core-periphery theory not only at the global scale but also at national and regional levels. This inequality can be seen in Nigerian, where slum dwellers abound in few kilometres away from the haven of affluence found in Maitama and Asokoro areas of Abuja.

Contributions of Scholars to Regional Development

In an effort to solve the Nigeria's developmental problems, some Geographers particularly Professor Akin Mabogunje, at different time remained undaunted in seeking solutions to the numerous developmental problems of the Nigerian society. He played advisory roles in the establishment of various urban management programmes. The location of the Olabisi Onabanjo University and the planning Abuja are relevant examples in this context. On while most rural areas remain underdeveloped, Mabogunje argued that rather than adopting a top-down approach of development in rural areas, the understanding of their local realities, histories and indigenous philosophies should be used to bring out development ideas in them (Mabogunje, 2006).

Besides, he opined that rural development is germane to urban development, arguing that both sides have historically affected each other and that development of one can have a far reaching effect on the other. At the global level, Mabogunje (1996) emphasized self-reliance, political development, enlightened leadership, efficient government as weapons of protection from the burden of global power. In his word *"while we look outward to working with the rest of the world, we also need to look inward within Africa to foster regional integration, create physical and social infrastructure that enable the movement of people, information, labour, specialists and trade"* (Mabogunje, 1996).

Regional Development Strategy in Nigeria

Administrative Decentralisation

Attempts at regional development in Nigeria took different dimensions in the past, (Raheem et al, 2014). The creation of more states and local government councils were efforts aimed at spreading development and investment to the less developed regions. In 1963, the number of regions was increased from 3 to 4 and further 12 states in 1967 and 19, 21, 30 and 36 in 1976, 1987, 1991 and 1996, respectively. The motive was *"...making for even proportion and balanced development for all"* (Ayeni & Mabogunje, 1982, p.15). This structure helped to increase the number of administrative headquarters and further pushed development to the peripheries. Even though, the allocation of investment fund spread to the nooks and crannies of the country leading to relatively high level of developmental projects and investments, provision of more job opportunities and high standard of living, it did not address the productive capacity of the hinterland.

River Basin Development Authority (RBDA)

River Basin Development Authorities were created in order to harness the physical characteristics of the country to bridge regional disparity. The act establishing the RBDA among others undertook a comprehensive development of both surface and underground water resources for multipurpose use with particular emphasis on the provision

of irrigation infrastructure and the control of floods and erosion and for water- shed management (RBDAA, 1986). The following areas of operation were identified: Agriculture; Irrigation; Fisheries; Forestry; and Veterinary Services and Livestock. The act created eleven (11) different River Basin Development Authorities (Table 2).

Table 2: River Basin Development Authorities in Nigeria.

S/N	Name of authority	Area of operation	Headquarters
1.	Anambra-Imo river Basin	The whole of Anambra and Imo state	Oweri
2.	Benin-Owena river basin authority	The whole of Benin, Delta, Ondo State excluding those parts of Bendel State drained by the Benin, Escravos, Forcados and Ramos river creek system.	Benin
3.	Chad river basin authority	The whole of Borno State excluding those parts drained by the Jama'are and Misau river system but including those parts of Gongola (Adamawa and Taraba) State drianes by Yedseram and Goma river systems.	Maiduguri
4.	Cross river basin authority	The whole of Cross river State.	Calabar
5.	Hadejia-Jama'are river basin	The whole of Kano State and those parts of Bauchi and Borno State drained by the Jama'are and Misau river system.	Kano
6.	Lower Benue river basin	The whole of Benue and Plateau State.	Markurdi
7.	Niger Delta river basin authority	The whole of River State and those parts of Delta State drained by Benin, Escravos, Forcados, and Ramos river creek system.	Portharcourt
8.	Niger river basin authority	The whole of Kwara and Niger State, the federal capital territory. Whole of Kaduna Sate excluding Kastina State	Minna

9.	Ogun-Osun river basin authority	The whole of Oyo, Ogun, Osun and Lagos State	Abeokuta
10.	Upper Benue river basin authority	Those parts of Bauchi State drained by the Gongola River system. The whole of Gongola State excluding those parts drained by the Yedseram river system.	Yola
11.	Sokoto-Rima river basin	The whole of Sokoto State and Kastina State.	Sokoto

Source: RBDAA (1986).

The idea was actually borrowed from the Tennessee Valley Authority of the USA whose primary motive was borne out of harnessing the positive gains of the Tennessee River which usually flood the adjoining settlements. Over the years, the Basin Authorities, though not without challenges, have been able to attain some considerable level of success in pushing development to the regions of their operation. They have lived up to expectation in the areas of Agriculture; Irrigation; Fisheries; Forestry; and Veterinary Services and Livestock. Millions of Nigerian have benefitted from various supports made available through different programmes of the authorities. Farmers have enjoyed services varying from land allocation, supply of farm input and machineries to the construction of dams and roads. All these have tremendously helped in increased productivity and high standard of living of people in those regions and by extension reduced the burden of migration of able bodied people to urban centres in the country.

The Relief-Pole Approach

In Nigeria, the creation of new towns and satellite towns have been adopted and used at various times. The FESTAC satellite town in Lagos was conceived to relief the metropolitan city of some of its urban problems.

Other related examples of the relief pole approach in Nigerian are the Ajoda town in Ibadan and other several other satellite towns designed purposely to relief the capital city of its problems.

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