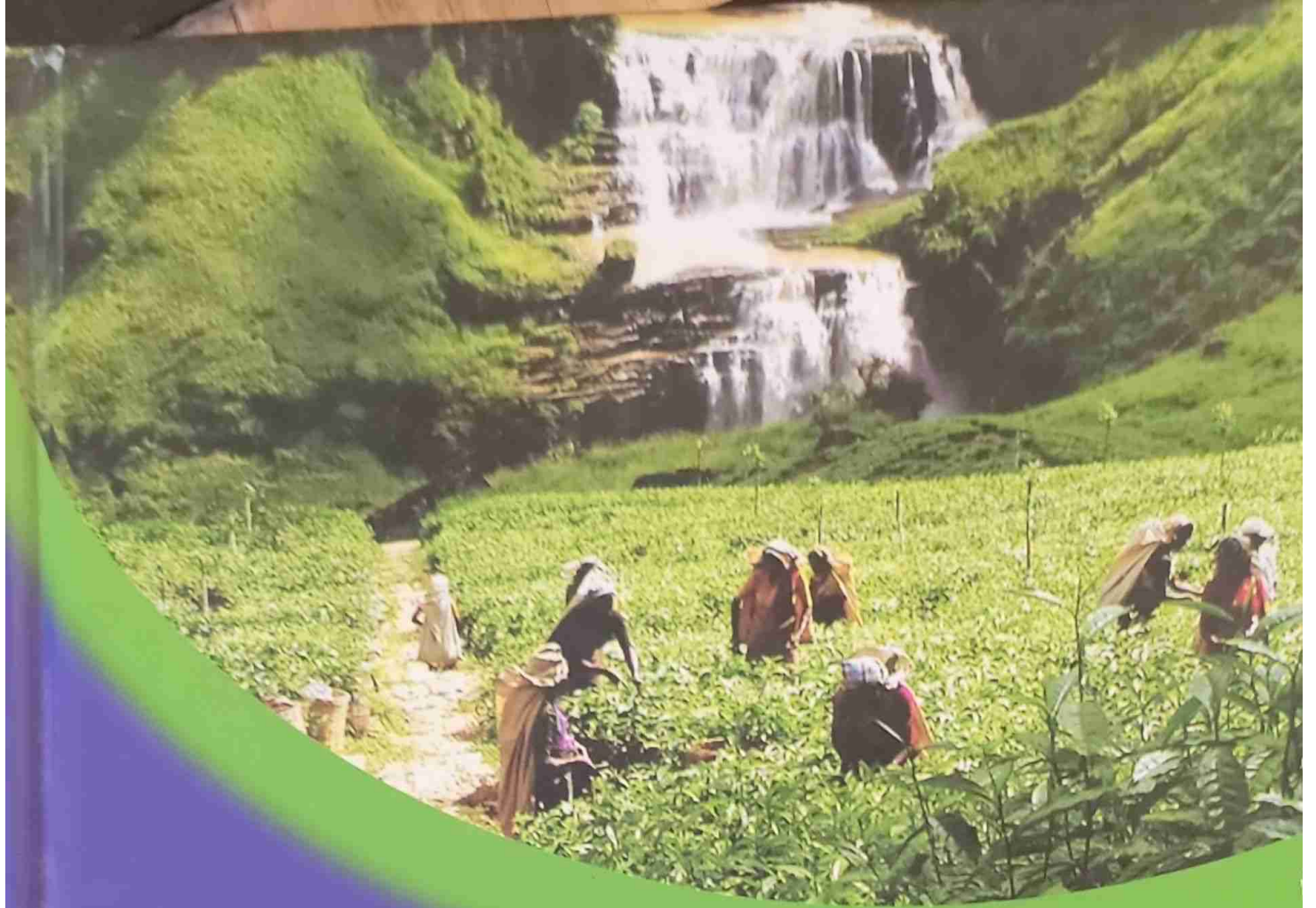




Geography in Development

Issues and Perspectives

S. L. Tilakasiri

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Editor

S. L. Tilakasiri



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CHAPTER 02

GEOGRAPHIC THINKING AND DEVELOPMENT

U. A. Raheem and O. Laro Kazeem

Introduction

In knowledge driven societies, the future is mirrored by the type of knowledge their citizens receive and how such knowledge is disseminated and sustained through generations. Many observers agree that problems with productivity and competitiveness can be traced in large part to deficiencies in the knowledge base of citizens building progressively through deficient knowledge transmission channels. Therefore, development in real sense, is the outcome of the contributions of knowledge sectors to the overall development of the society. In this chapter, we address the major 'headsets of the geographer' and how the series of geographical concepts and approach can fundamentally underpin development trajectories.

Geographic Thinking in Development Research

Development has been amplified in meaning from the pure econometric measurement to indices of social action. The concept has been broaden to include peoples' social and environmental aims with different goals being recognized by different regions and countries (Moris, 1998). This may have shifted slightly since the beginning of the 21st century when the world began to key in to global development goals such as the case in the Millennium- and Sustainable- Development Goals. The spatial aspect, which

manifests at regional and sub-regional levels, have been the focus of geography in development debates. By and large, regions with economically, socially and culturally identifiable spatial borders therefore form the object of most geographical analysis with particular emphasis on the spatial differences in development levels or wealth as well as the objects of modifying policies of governments (Moris, 1998).

Over time, geographic thinking in development process is reflected in the Alonso's (1980) "five bell shapes in development....which although were identified as "a collection of parallel evolutions over time sequence" (Moris, 1998), but could represent the focus of geography with varying emphasis over time and in different regions. These are economic growth rate, the level of social inequality, the level of regional inequality, the level of geographic or spatial concentration and the population growth rate. In demographic transition. Alonso's impression is that geographic concentration is a first process, followed by economic growth and then by social and regional disparities over time. It can also be indicated that geographic thinking had often treated each of these issues as concurrent paradigm issues with each possessing dominance in debate but others also discussed around the geographic lens over time.

At the heart of the concept of "development" are notions of improvement or betterment; however, what is to be improved, at what scale, for whom, where, and how, are all contested. For almost every writer, it is generally agreed that development is not purely an economic phenomenon but rather a multi-dimensional process involving reorganization and reorientation of entire economic and social systems. Thus, development is the process of improving the quality of all human lives in a society with emphasis on the tripod of

- raising peoples' living levels, i.e. incomes and consumption, levels of food, medical services, and education through relevant growth processes;
- creating conditions conducive to the growth of peoples' self-esteem through the establishment of social, political and economic systems and institutions which promote human dignity and respect; and

- increasing peoples' freedom to choose by enlarging the range of their choice variables, e.g. varieties of goods and services (Willis, 2013).

Within this tripod is the question of distribution and allocation of ecosystem resources to people and places in such a way as to guarantee equity and justice within and among territories. Development as distributive justice has been the major focus of the geographer in which development is viewed as improving basic needs. This emphasis also presupposes an interest on social and territorial justice which borders on the nature of goods and services provided by governments, matter of access of public goods to different social classes and the distribution of the burden of development among social classes. In essence, the world we live in has all kinds of dimensions: physical, economic, emotional and imaginative that may impinge on the availability of the ecosystem resources. The focus of geographic thinking is to both address them all and examine their interconnections both in space and across scales. In addressing them, humans must think geographically to impose order in a typical distributive event.

Thinking Geographically

From exploration and discoveries to map making, geography requires a strong desire to ask questions and find out the explanations behind distributions which makes the inquisitive angle of geography to be a core requirement for the geographer. Geography covers a wide range of learning and hence has a wide appeal to a diverse groups-policy makers, governments and businesses. The branches of geography which study aspects of the physical and human perspectives to nature and the ecosystem also provide ample opportunity to cater to the needs of individuals. For example whilst studying people travelling around the globe is very different to learning about rocks and landscapes, what links these individuals together as geographer is their inquisitive geographical approach and the questions they ask in their chosen area. This inquisitive approach involves asking key geographical questions. The geographical questions may be elaborated to include basic questions that

guide logical thinking within an environment and which allows the geography tie together pieces of information about locations which also brings out the explanation into the nature of the observed distribution of an event or phenomena.

The key to geographical inquisitiveness is geared towards answering basic geographical questions in relation to places and spaces. This spatial inquisitiveness is at the core of the geographical approach and is what drives explorers, adventurers, researchers, writers and hopefully teachers. Geographers make sense of the world around them by viewing it through a 'geographical lens'. In other words, they synthesise information from different sources and use geographical skills to help them enquire about and interpret what they find out (Swift, Di, 2013).

Geographers view the world from the focus of four lenses. First is to explore the spatial differences on earth by identifying where places are located on the earth's surface based on natural and/or human characteristics as well as delimiting the unique characteristics of places through an analysis of the importance of spatial distribution of people, plants, animals, resources and earth's physical processes. Geographers are also interested in patterns and trends to identify characteristics that are similar or different within and between places or regions. It is also part of this focus to determine if these characteristics repeat over time and analyse why characteristics are similarities and/or repeat. As a geographical focus, we attempt to determine the importance of why the characteristics are similar and/or different over space. In a nutshell, variation from place to place is what fires geographical imagination.

More importantly, geographical analysis also explore interrelationships by identifying where human and/or natural characteristics and processes interact or connect within and between each other. Under this lens, we also determine how the connections interact to form a system, and analyse the impact of an event, process or development on the natural characteristics, natural processes and human activities that occur through the system.

The Geographical perspectives identifies the environmental, economic, political and/or social context of a geographic issue,

event, development or phenomena to determine the potential stakeholders and their points of view that should be considered in the analysis of the issue. It can also analyse the multiple points of view of the geographic issue, event, development or phenomena considering applicable environmental, economic, political and/or social lenses.

There are certain basic assumptions for the understanding of the idea of human development and which dovetails into its geographical relevance.

Human development is conceived to be capable of achieving lasting satisfaction of human needs and improvement of the quality of life. This encompasses the need to help the poorest of the population who are left with no option but to depend on their environment to survive; and most likely degrade such environment. Secondly, there is the overwhelming idea of self-reliant development with natural resource constraints as well as cost effective development using different economic criteria which also presupposes that issues of health control, appropriate technologies, food self-reliance, clean water and shelter for all.

By and large, popular development for any society necessarily avoids 'grand theories' and emphasizes solutions viewed in context of development which is part of historical process. Thus the context of development is constantly changing in scale and time by accommodating geographical and historical diversities.

Dealing with environmental problems requires solutions sensitive to local social and ecological conditions because society and nature relations are affected by variations in class, gender and ethnicity. Pressures on environmental resources otherwise referred to as "reproductive squeeze" for instances forces peasants to intensify production in fragile environments or harvest under aged fishes despite palpable environmental exhaustion.

Geographers have been much more engaged is in seeking to understand how particular development approaches have been operationalized in particular spaces, from modernization theories in the 1950s and 1960s, to dependency theories in the

1960s and 1970s, and to neoliberal forms of development from the late 1970s onward. Geographers' interventions in these debates have often sought to challenge the very limited ideas of space mobilized in some theoretical and policy research. Additionally, geographers have engaged with post colonialism and post development, which seek to decenter the perspectives of global North elites in interpreting and implementing development, instead focusing on the worldviews of marginalized, indigenous, low-income men and women in the urban and rural areas of the global South. Geographical work has also sought to examine the actors involved in development practice at a number of scales, including states, multilateral organizations, private-sector companies, non-profit/nongovernmental organizations, and community groups. Collaborations within and between these different groups, and the networks involved, have also been a part of geographical research. Finally, geographers have worked at the interface between humans and the natural environment, considering how and why these relationships shift and the potential for sustainable development.

One of the most glaring of these deficiencies is in our knowledge of geography.

Geography and Human Development: The Gap in our Synergy

The UNDP aptly defined human development as the process that widens the range of people's choices, the most critical of which are "to lead a long and healthy life, to be educated and knowledgeable and to enjoy a decent standard of living" (UNDP, 1990). As realistic and operational as this definition appears to be at least for addressing development from a holistic and human perspective. This is poorly accounted for in the definition is the role of space because the definition is operational only in physical space. Physical space is differentiated on the barrier of elevation slope, landforms, rock cover, temperature and precipitation. There are also differentiation based on accessibility to service centres, point sources of exposure to pollution and natural hazards. Geography is therefore of critical importance because natural factors combine to influence the initial potentials of

lands, land use, health and disease burden settlement pattern, and thus health, livelihood and liveability of different areas. Thus, geography-broadly defined is a crucial determinant of development studies like Easterly and Levine (2009) had reported a crucial role for geography in explaining the rates of recent economic growth across countries. For instance, variation in geographical factors like slope, land lockedness, climate, and elevation explained human 25 per cent, 37 per cent and 47 per cent in life expectancy, mean years of schooling and the incidence of provincial income poverty respectively across the archipelagos of Philippines (UNDP, 2014). Spatial dependence is also one important geographical factor with scanty consideration in the way this crafting of human development portray a one directional view of understanding the inter link between locations and corresponding development. Spatial dependence relates to the relationship between observed values of some variable for one location and the values of adjacent locations. In other words, a location may have a high value of the variable and neighbors with high values as well, or it may have a low value and low-value neighbors for a given variable. Another pattern may be that a place differs from its neighbors, having a low value of the variable while its neighbors show high values (or vice versa). The point is that clusters might be observed in the spatial arrangement of variables beyond what might be expected from chance alone (UNDP, 2014). The point is that clusters might be observed in the spatial arrangement of variables beyond what might be expected from chance alone. Such clusters of spatial dependence can be observed for per capita income and Human Development indices. When such neighborhood effects are statistically controlled for, the associations presented may improve through time (Schoutman et al., 2016). After controlling for demographic and political variables, spatial dependence is positively implicated in the behavior of average income growth rates. Geography, though matters, but certainly does not defines an "inescapable destiny." Because a large portions of the variation in some locations may not be captured by geographical factors. In some cases, while neighborhood effects are important, these may depend on something more than just being "near" or "far from" a specific location suggesting that while the physical geography of locations may be fixed, socioeconomic outcomes

are variable and diverse for different locations and indeed neighbourhoods within locations.

Rodrik & Subramanian (2003) have proposed three ways through which geography and human development can be interlinked in practical terms either directly or indirectly. Geographical conditions may directly influence development through its effects on human health and agricultural productivity; it may also affect development indirectly, through its influence on distance and the extent of market integration, as well as through its influence on the quality of domestic institutions. These links are also interwoven in a complex web of non-linear relationships.

An example of the interlink between human health and development will suffice here. Geography and health are intrinsically linked. Where persons are born, live, study, and work directly influences their health experiences. This is due to the air they breathe, the food they eat, the viruses they are exposed to, and the health services they can access (Drummer, 2008). The range and intensity of diseases, especially vector-borne ones, are affected by natural conditions such as climate and topography (Gallup & Sachs, 2000). Such diseases contribute significantly to the disease burden in tropical countries, which on average have per capita incomes only a third of those of non-tropical countries (Gallup & Sachs, 2000). Cross-country studies indicate that environments conducive to disease – as represented by the prevalence of malaria – have significant negative effects on economic performance (Cartensen & Gundlach, 2006). Ill health can be expected to contribute to impoverishment. It has been estimated that malaria is responsible for around 46 million disability-adjusted life years⁵ (or DALY), i.e., years of healthy or productive life lost due to illness, disability, and premature death. The estimated total burden on households can go up to a catastrophic 32 per cent of annual income for the very poor.⁶ Schistosomiasis, on the other hand, is responsible for anywhere between 3 million and 70 million DALY. The costs of these and other chronic illnesses involve the direct monetary costs of mitigating and managing recurring sickness and the opportunity costs of lost schooling or work for the ill or those who care for them. These costs can have longer-term

implications on a household's economy – its assets, income levels and consumption patterns, debt, and livelihood sustainability – as well as on an individual's cognitive development, education levels, and lifelong capabilities (Russel, 2004). The chronic inflammatory process associated with long-term schistosomiasis, for example, contributes to anemia and undernutrition, which can lead to growth stunting, poor school performance, low work productivity, and continued poverty (King, 2010). Malaria is the ninth leading cause of morbidity in the Philippines and is found in 58 out of 80 provinces, with nearly 14 million people at risk (DOH, 2011). Most of the country's malaria cases occur in forested, swampy, hilly and mountainous regions in Luzon and Mindanao, and among upland subsistence farmers, forest related workers, indigenous peoples, and migrant agricultural workers. Schistosomiasis is endemic in 1,230 barangays across 28 provinces of the Philippines, with approximately 12 million at risk and 2.5 million directly exposed. Surpassed only by tuberculosis and malaria in prevalence, transmission of schistosomiasis is highly dependent on the distribution of its intermediate snail host, which in turn is highly dependent on annual rainfall patterns and local topography (Belizario et al., 2007; Blas et al., 2004). Rice fields, streams, and creeks are potential breeding grounds, and irrigation systems can transport hosts into previously nonendemic areas (UNDP, 2014). Farmers, fresh water fishermen, and children are especially vulnerable. Four other "neglected tropical diseases" (NTDs) are endemic to the Philippines and need to be accounted for.

Spatial technologies are the great enabler for this approach. Spatial technology and the associated data and visualisations can provide the geographer in the workforce or the student in the geography classroom with information on places and patterns/trends across space that can answer the geographical questions developed. The developing country however is challenged to take full advantage of this technology by deliberately building capacity to deploy spatial technology both for collection, assemblage and analysis of spatial data in various sectors of human development and endeavour.

Conclusion

Local geography in any country is diverse, fragmented, and may be ridden with environmental and ecological challenges. Geographical characteristics may therefore explain a significant portion of the variation in health status, economic prosperity, education uptake and poverty incidence over space and time. Geographical conditions are thus deep determinants of human development which may be intrinsically linked to the socio-economic conditions through agricultural prospects, access between locations, and specific political institutions. More often, policies and institutional arrangements have failed to adequately address the implications of local geography and have caused significant costs to human development. These are in the form of loss of adult productivity and healthy days, missed school attendance, substandard agricultural yields, food insecurity, forfeited agglomeration economies, and lost growth. There is an urgent need to obtain an inventory of local geographical strengths and encumbrances for the purpose positive discrimination where necessary and thereby ensuring more equitable distribution of burdens and benefits of the society.

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