

MAPPING THE CORE-PERIPHERY MODEL

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I. Rationale

This lesson is designed to present traditional economic models of development, namely Rostow's, and to offer some geographic critiques in the form of the core-periphery argument and dependency theory.

Rostow's model of economic development theorizes that all developing countries will pass through five successive stages of growth on their way to becoming industrialized. Rostow's model and other stage models have been criticized because developing countries have in fact not been seen to pass through these stages. Some geographers have critiqued these stage models in an effort to identify their flaws, the largest of which is their failure to recognize the larger geographic context within which developing countries find themselves.

The core-periphery argument is used by geographers as a way to analyze the geographical context of developing countries (Fellman, Getis, and Getis, 1997). Core-periphery models have been used in many different situations by geographers. In this argument, the industrialized countries are identified as the core and the developing countries are the periphery.

Due to the significance of this geographic separation, geographers have argued that the core has continued to develop and industrialize by drawing resources from the periphery, leaving the developing countries without the means or the resources to develop. A definite North - South distinction became evident. It soon became apparent that the development gap between the most and the least economically developed countries widened instead of narrowing over time. This cycle is known as dependency theory and comes out of the belief that neocolonialism is responsible for resources to continue to flow from the less developed periphery to the industrialized core.

II. Definitions of Key Terms

development : the extent to which the resources of an area or country have been brought into full productive use. It may also carry in common usage the implications of economic growth, modernization, and improvement in levels of material production and consumption.

indicators of development : gross national product, per capital income, energy consumption, nutritional levels, labor force etc.

underdevelopment : from a strictly economic point of view, suggests the possibility or desirability of applying additional capital, labor, or technology to the resource base of an area to permit the

present population to improve its material well-being.

MDC : is a more developed country that has progressed relatively far along the development continuum.

LDC : is a less developed country that is at a relatively early stage in the process of development.

Gross National Product : is the value of a country's total goods and services produced in a given time period, usually in one year.

circular and cumulative causation : a process set in motion that continues to polarize development and leads to a permanent division between prosperous (and dominating) cores and depressed (and exploited) peripheral districts that are milked of surplus labor, raw materials and profits.

human capital : an ill-defined composite of skills, habits, schooling, and knowledge that contributes to successful economic development and sustained growth.

neocolonialism : is the entrenchment of the colonial order, such as trade and investment, under a new guise.

Rostow's Model of economic development : In the 1960's, the economist W.W. Rostow presented a model for economic development in which he proposed that all developing countries must pass through five successive stages of growth. J.M. Rubenstein, in *An Introduction To Human Geography*, fifth edition, 1996, explains them as follows:

1. *The Traditional Society*. Rostow uses this term to define a country that has not yet started a process of development. A traditional society contains a very high percentage of people engaged in agriculture and a high percentage of national wealth allocated to what Rostow calls "non productive" activities, such as the military and religion.
2. *Preconditions for Take-Off*. According to Rostow, the process of development begins when an elite group initiates innovative economic activities. Under the influence of these well-educated leaders, the country starts to invest in new technology and infrastructure, such as water supplies and transportation systems. These projects will ultimately stimulate an increase in productivity.
3. *Take-Off*. Rapid growth is generated in a limited number of economic activities, such as textiles or food products. These few take-off industries achieve technical advances and become productive, while other sectors of the economy remain dominated by traditional practices.
4. *Drive to Maturity*. Modern technology, previously confined to a few take-off industries, diffuses to a wide variety of industries, which then experience rapid growth comparable to the take-off industry. Workers become more skilled and specialized.
5. *Age of Mass Consumption*. The economy shifts from production of heavy industry, such as steel and energy, to consumer goods, like motor vehicles and refrigerators.

stage theory of economic development :

1. A pre-industrial society with localized, self-sufficient economies.
2. The core-periphery stage (where we still are)
3. Dispersion of economic activity and the passing of control of portions of the economy into parts of the periphery.
4. Creation of spatial integration in which the spatially separate and fully developed components of the economy relate in an interdependent fashion.

dependency theory : The theory that industrialized nations continue to take resources from developing countries due to neocolonialism, widening the development gap.

big push theory : This theory concludes that developing countries can break out of their poverty trap by investing in high-wage industries and infrastructure. As employees receive higher wages, the consumer base expands because they can afford to buy more goods. This encourages the

creation of additional supporting industries to fill consumer demand and, in turn, creates more jobs. Prices lower due to the increase in production, meaning that more people can afford to buy the goods. This cycle increases development.

core-periphery models : are based on the observation that within many spatial systems sharp territorial contrasts exist in wealth, economic advancement, and growth-"development"- between economic heartlands and outlying subordinate zones.

III. Instructional Objectives

Students will be able to:

1. Identify measures of development.
2. Interpret and use population data to classify countries according to their level of economic development.
3. Create a choropleth map using raw data.
4. Understand the geographic implications of the core-periphery model.
5. Understand identified models of development and geographic critique.

IV. Materials and Equipment

1. [Population Reference Bureau Data Sheet](#). (1875 Connecticut Ave, NW, Suite 520; Washington D.C.; 20009-5728 USA; (202) 483-1100
2. [Blank world outline map](#)
3. [World regional maps](#)
4. [Blank data sheet](#)
5. Colored pencils, pens, or markers

V. Instructional Procedures

1. Look at the Population Reference Bureau (PRB) Data Sheet and pay attention to the top where several values are listed. Focus on the values for more developed countries (MDC) versus less developed countries (LDC).
2. Determine which indicators from the PRB Data Sheet are most important and why. Select four key indicators you will use to determine the development of a country (e.g., infant mortality rate, per capita GNI PPP, etc.).
3. Take out the data sheet and fill in the information on two countries per region. Note: It would be wise to choose countries that fit the norm for each respective region, rather than the exception (e.g., Mauritius – in Eastern Africa - has a per capita GNI PPP of \$10,820; the next highest in that region is Zimbabwe with \$2,180)
4. Using the data gathered, you are to establish categories for each of the regions according to levels of development. Use the four categories defined by the World Bank: 1) High, 2) Upper-middle, 3) Lower-middle, and 4) Low. Now, determine what values you will use from each of the key indicators to classify

where a country will fall within one of those four categories (you will need to come up with these values on your own).

5. Once you have classified the levels of development, assign each of them a color (e.g., High = blue, Upper-middle = green, etc...). Fill in the selected color for each country on your table sheet. Pay attention to some of the cartographic principles involved in making a choropleth map.

6. Create your map using the gathered information. Fill in the region (not just the two countries per region) with the color you chose. If two countries within one region have different colors on your data sheet, select which one would best fit the region as a whole (blue for high, green for upper-middle,...). The map should have all of the TODALSIG elements (Title, Orientation, Date, Author, Legend, Scale, Index (not applicable) Grid (not necessary)).

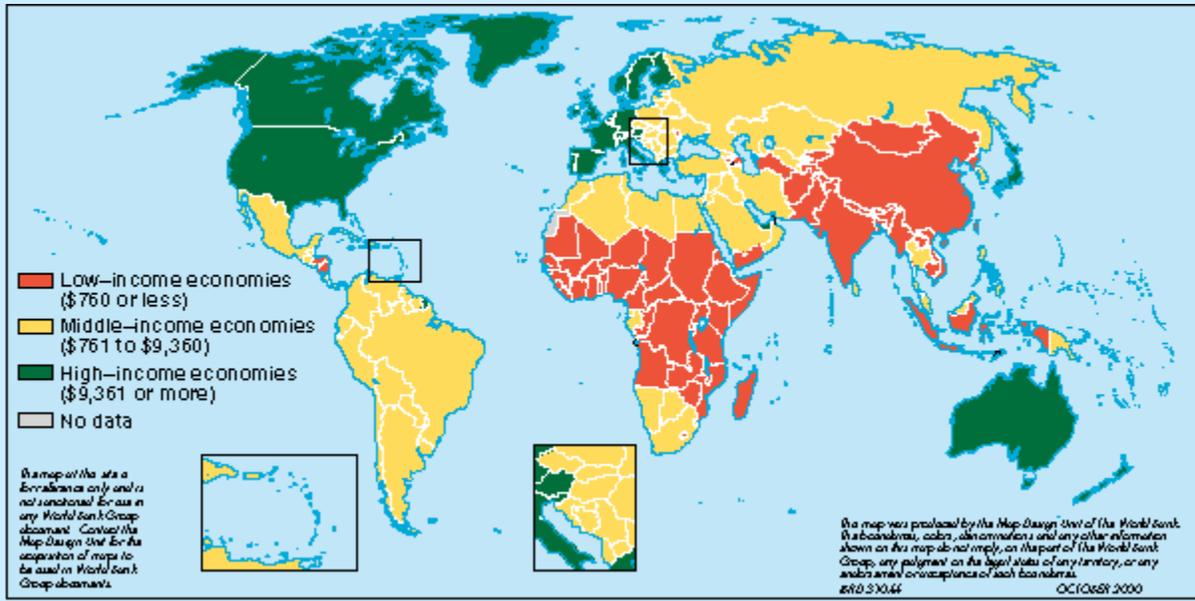
7. Once the maps are completed, notice the implications of the pattern. Draw a line separating developed and developing countries using the data to guide you. Note the general location of this line as drawn on the maps. This line occurs at approximately 30 N latitude (with the obvious exception of Australia and New Zealand) and is commonly called the "Brandt Line".

VI. Assessment

Data sheets and core-periphery choropleth maps will be turned in and graded for completeness, accuracy and aesthetics. In addition, the following questions are to be answered on a separate sheet of paper:

1. Explain your rationale in choosing the four key indicators you selected, as well as the categories you established for each indicator.
2. What are the geographic implications of the north/south split revealed by this map?
3. Why might the pattern on this map be a geographic critique of Rostow's model of development? (Hint: Consider if development levels might be different if developed and less developed countries were more geographically intertwined)
4. What problems of development might this geographic pattern imply? Discuss the validity of the core-periphery model.
5. What limitations might the core-periphery model have as a geographic critique of economic models of development? What are some other critiques?

An example of a map for *per capita GNP* is shown below:



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