

Urban Functions in Rural Development: Integrating Spatial Systems for Equitable Growth¹

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I. Introduction

Experience with development planning over the past 25 years has clearly shown that sustained economic and social progress depends heavily on the ability of government and private organizations to both expand gross national product and to increase steadily the participation of subsistence populations in productive economic activity. The emphasis on rapid growth in GNP through capital intensive industrialization without concern for other sectors of the economy, the pattern of income distribution and the extent and nature of participation in productive activities, creates dual economies, in which small islands of progress emerge from a sea of backwardness and poverty. It is also apparent that, contrary to conventional economic theory, highly concentrated industrialization has extremely limited "spread" or "trickle down" effects for rural areas, and limited multiplier effects within the urban economy.

The essence of development must be the expansion of participation in economic activities through the creation of social and economic systems that draw larger numbers of people into the processes of production, exchange and consumption; that involve

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greater numbers in entrepreneurship and employment; that increase the levels of income for the poorest groups; and reduce disparities between rich and poor so that a larger majority of people can obtain basic goods, save and invest, and gain direct access to services necessary to enrich the quality of their lives. Development is a process of expanding the productive capacity of private and public organizations, large and small firms, and rural and urban regions at a steady pace. It involves stimulating the use of potentially productive resources, adapting appropriate technologies and institutions to traditional as well as modern communities, transforming subsistence agriculture and rural sectors into employment and income-generating elements of the national economy, and providing adequate social services and facilities that allow people not only to satisfy basic human needs but also to develop their productive capacity and human potential.

The growing realization that expansion of economic participation is essential to sustained development has led to a dramatic shift in development policy over the last 10 years, from large-scale, capital-intensive, export oriented, urban based industrialization, guided and controlled through centrally formulated macro-economic models, to an emphasis on more balanced and stable internal economies, with greater social equity. Achievement of such goals depends on the expansion of labor-intensive, smaller scale, and more widely distributed agriculture and manufacturing industries, investment in social and physical infrastructure, promotion of rural development and decentralized planning and administration, and increased access for marginal groups to economic resources and opportunities.

Spatial planning, which is fundamental to any attempt to expand productive capacity in developing nations, has been generally overlooked. The spatial structures of Third World countries have been crucial constraints on the spread of growth, and changes in those structures toward creating more balanced and integrated systems of human settlements can provide enormous opportunities for increasing participation in economic activities.

In this paper we make a number of propositional statements about the different functions most likely to be found at the various scales in a well-articulated hierarchy of human settlements. Finally we suggest the types of services and facilities that should be located in various types of centers in order to build articulated spatial systems that can help to achieve growth with equity.

II. The Emerging Role of Spatial Planning in Development Policy

As developing nations began to understand the crucial role of spatial planning in resource allocation, they were also confronted with the enormous complexity of implementing the new strategies. Theories and principles of spatial planning have often been elusive, abstract and inconclusive. As in other fields of development administration, many prescriptions for spatial planning were derived from the experience of industrialized countries. Some prescriptions were simply not transferable and others had to be carefully adapted to unique local needs and constraints. As with other development activities, spatial planning has also been the subject of fads and short-lived experiments. Growth pole strategy, for instance, eagerly accepted a decade ago as a generator of accelerated development, was tried and found wanting.

Dissatisfaction with traditional theories of spatial development, based on the Western concept of center-periphery relationships, has set in motion the search for alternative strategies.

A. Traditional Spatial Development Models

Primate cities have been viewed as the centers from which the benefits of modernization flow outwards to revitalize the stagnating agricultural sector. The belief that concentrated industrial investment in major urban centers creates a "ripple effect" of growth throughout a nation is reflected in the major models that have governed development.² Many models assumed that economic processes would guide a nation automatically toward optimal growth. Spatial inequalities would be corrected through the untrammelled flow of production factors; and, without government intervention, disparities between urban centers and rural peripheries would eventually even out as economic development spread "naturally" from the center to the hinterland, (Myrdal, 1954; Hirschman, 1958).

But contrary to classical laissez-faire economics and growth pole theories, little sustained development occurred in the rural areas of developing nations. Indeed, the failure can be attributed largely to the lack of an appropriate spatial structure for promoting and spreading development. Western theories could not be applied

² The models are discussed in more detail in Souza and Porter (1974) and Soja and Tobin (1975).

because the spatial patterns of most developing countries are substantially different from those in North America and Europe. The overwhelming influence of primate cities in the Third World attracted important change-inducing activities to single locations, creating dual economies. Impulses from the center did not generally trickle down to the periphery.

It is not difficult to understand the spatial patterns of developing nations, and why one primate city or a few dominant centers continue to be the most desirable location for investment. Generally, location decisions were tightly constrained. In some cases, colonial policy established developing nations as raw material exporters to serve industrial nations, which made an entrepot, usually a major port, the only efficient location for infrastructure and services. Elsewhere, political influences shaped the pattern of spatial development, the administrative capital became the center of social, economic and cultural activities and received highest priority for investment in public services and facilities. But regardless of initial pressures, once investment was concentrated in a single location, an inevitable and irreversible chain of events reinforced continued concentration. Lower transportation costs from proximity to complementary activities, economies of scale and agglomeration, and migration of society's most talented people to the city, created multiplier effects that provided one place with a competitive advantage over all others, and attracted even larger numbers of rural people in search of economic opportunities. Resource scarcities, moreover, made creation of multiple centers difficult. The emphasis on foreign trade curtailed development of a domestic system of distribution and exchange, obviating the need for a geographically dispersed transportation system. Advantages of initial concentration quickly increased the primate city's competitive advantages. Additional physical infrastructure, accumulation of administrative and political power, and a stronger economic base, made it a magnate for industry, services, and social and cultural activities. Initial location decisions molded the spatial system, shaping and structuring spatial interaction.

The dominance of the primate city and the absence of an articulated hierarchy of central places seriously obstructed balanced and widespread development in the Third World. Without accessible markets farmers lacked incentives to increase output, to modernize their technology, or to adapt products to consumer demand, contributing to rural unemployment and a waste of ability and talent. Without competitive markets only marginal amounts of produce are sold from near subsistence farms; and village traders easily

exploit farmers who must sell their produce immediately after harvest at depressed prices. Consequently, farm income is perpetually limited, as are savings and investment, constraining farmers from obtaining technical inputs needed to increase production. Without a national system of production and exchange, this vicious cycle of rural poverty cannot easily be broken.

B. Centralization Versus Decentralization

As spatial planning emerges as a central issue in development policy, however, it is likely to regenerate the long-standing debate regarding the most efficient form of urbanization. Development theorists have argued for more than a quarter of a century over whether primate cities are "catalysts or cancers." One advocate of concentrated investment contends that primate cities are the most important centers of cultural change, especially in fields vital to economic development: education, business organization, public administration and technological innovation (Hoselitz, 1957).

Although primate cities inevitably play a dominant role in the progress of most developing nations, they also produce visible and severe adversities. They allegedly draw unskilled and uneducated migrants from the rural areas to live in over-crowded slums and squatter settlements. There, unemployed, without adequate housing, income, medical care or education and straining already over-extended urban social services and facilities, the migrants become burdens on society. Rural-urban migration breaks up families, destroys traditional cultural ties and adds to crime and deviance; over-crowding in the primate city leads to physical deterioration, traffic congestion, the spread of disease and the proliferation of slums. Growth of the primate city occurs at a rate so fast that most developing nations cannot cope with it. The costs of maintaining the metropolis absorb social resources and economic surpluses, thereby inhibiting growth in other areas of the country. The adversities of metropolitan growth on the spread of development in emerging nations generate political backlash. Many countries have enacted laws controlling or restricting the size of primate cities, and national development plans now give priority to projects and large-scale social programs located outside of principal urban centers.

C. Balancing Urbanization for Equitable Growth

Despite extensive and legitimate criticisms of Third World

metropolises, however, negative attributes of urbanization are often overstated. Rural to urban migration, one of the most frequently mentioned evils of city growth, is not in itself necessarily bad; in fact, it can be a positive indicator of healthy economic change. As agricultural production increases and becomes more efficient, greater surpluses can be produced with less labor. Excess agricultural workers then move to towns and cities in search of other employment. And as an economy grows, the "push" from rural areas is supplemented by the "pull" of the cities. Although migration may reflect dissatisfaction with life in agricultural areas, cities also draw the more ambitious and talented people to fill expanding opportunities. A certain amount of rural-urban migration is inevitable in a diversifying economy. Nor, as Davis (1972) suggests, is migration always the major cause of urban population growth in developing nations, noting that almost 50% of the growth in urban populations of developing countries is the result of overall population growth, not migration. Although the rate of change in the urban population of underdeveloped countries almost doubled that of advanced nations between 1950 and 1970, the percentage gain in city populations over the two decades is only a little more than half that of modern societies. During the same period rural population growth in developing nations far exceeded the increase in urban population.

The problem is not, as some theorists contend, that less developed countries are over-urbanized, rather, it can be argued that *less developed countries are not urbanized enough*. Problems arise not from the size of urban populations, or even the pace of city growth, but from the *spatial pattern* of development. The over-concentration of people and investments in a single primate city or a few metropolitan areas limits development potential and constrains the spread of its benefits to rural areas. A pattern of spatial development is needed that de-concentrates urbanization and promotes a *system of cities* and towns, integrating rural and urban areas to achieve a more balanced and mutually reinforcing network of developing centers.

A hierarchy of cities, towns and rural growth centers, functionally linked with agricultural production areas provides a decentralized network of development centers that can increase access of large segments of the population to economic, social and political opportunities as well as to urban services and facilities, and enable migrants to move progressively from smaller towns to intermediate cities, which might in fact permanently absorb a large percentage of rural migrants. Urban functions and services must complement the

wide range of technical inputs required to commercialize agriculture and increase rural productivity.

D. Locating Urban Services and Facilities

Location of social and economic activities in rural centers lies at the heart of development strategy, and there exists a close relationship between location of industry, commerce and public facilities and the distribution and concentration of population. The pattern of population distribution in turn has a pervasive influence on a nation's social, economic and political organization. It defines to some degree the problems a society faces in attempting to guide the pace and direction of progress and largely determines the opportunities for and constraints on future development. The location of public services, physical facilities and productive activities in rural centers can impress on developing nations a spatial structure that influences not only the rate and distribution of national growth, but the quality of life in local communities and individual access to opportunities.

As Rondinelli and Jones (1973) note, the location of public services and facilities and private investment shapes development in a number of ways. Even within relatively small and homogeneous countries, regions differ in their suitability for, and attractiveness as, locations for investment, and thus in their ability to compete for national resources. Future locational advantages depend in part on past decisions--on the quantity and quality of facilities available for production, and on the existence of public infrastructure and services that attract and support private investment. Although suitable natural resources must be available, man-made facilities are crucial. The existence of a transport network, of rail, air, water and highway linkages, for instance, determines the cost of moving raw materials from supply sources to points of production and finished goods to distributors and final markets. Public investment in water supply, waste disposal and energy helps determine the productivity of the labor force and of economic enterprises. Social services can contribute to the quality of human resources and to general standards of living in a community.

Location of investment affects not only the potential of individual communities for future development, but shapes a nation's entire spatial system. Locating services and facilities in central places of various sizes can have important impacts on the pattern of production and exchange; the concentration of economic and social

activities in market towns, small cities, intermediate urban centers and metropolitan areas can create economies of scale and spillover benefits for surrounding areas. Urban centers organize the economy of their hinterlands through supply, market and administrative systems, attract creative and innovative personalities, and draw entrepreneurs with values, attitudes and behavior patterns that create an environment favorable to further innovation. Returns on previous investments provide a substantial portion of the capital available for future development, and this accumulated stock of assets not only creates comparative locational advantages for communities but also opportunities for future growth through "inducement effects." Investment in public infrastructure lowers production costs and attracts new economic activities, which in turn, increase pressure to extend social services and facilities, thus creating a continuing cycle of expansion and growth. Moreover, "complementary effects," from the proximate location of related economic activities and public facilities create new markets for raw materials and semi-finished goods and external economies for other producers. Through backward and forward linkages, opportunities for yet more investment lead to higher levels of development.

National development plans generally specify the location of individual projects, but only recently has there arisen a more direct concern with spatial relationships among investments, and their combined impact on the rate and direction of development. In developing nations the proper location of services and facilities is particularly important, for with scarce resources, limited administrative capacity, increasingly urgent needs to expand food production and manufacturing, projects must be assessed not only by their efficiency and feasibility, but also by their "multiplier effects." Distribution of services and facilities is crucial not only for promoting economic growth, but also in creating social equity and in improving the quality of life. Disparities in economic and social well-being are often measured by the number and diversity of productive and social activities located within a community or region. The growing gap between the richest and the poorest groups in developing nations is largely attributable to inequitable access to productive activities and social services.

III. The Roles of Spatial Centers in National Development

Relatively little is known about the most effective means of distributing physical infrastructure, facilities and services or about locating productive activities in order to achieve integrated spatial

development; and even less is known about the functions performed by smaller centers in the spatial systems of developing countries. The difficulties of defining and comparing elements of spatial systems also add to the analytical and operational problems.

Although central places are usually defined as those human settlements providing residentiary functions (goods or services primarily for local consumption) and basic functions (production of goods for consumption outside the community), the two activities are sometimes difficult to distinguish in developing nations. Determining size and rank of settlements in a spatial hierarchy has also been a recurring problem in cross-cultural analysis. Scale is always relative; a village in a crowded country such as India may be considered a medium-size town in a less densely populated country. Moreover, population size alone does not define a central place. In the absence of more precise data, many studies consider places of 5,000 population or more to be economically viable communities.³ But that distinction may be too arbitrary in some developing nations, where many small settlements perform distinctly "urban" functions, while other larger places may not. Nor can towns and cities always be identified by their physical characteristics, because in many countries, towns, villages and small cities look much the same; they have similar population densities and physical patterns and a mix of urban and rural activities.

Clearly, there are severe limitations to generalizing about the functions and services provided by settlements of different sizes in developing countries or even about the types of settlements that exist. Cultural, historical, administrative, political, economic and physical conditions vary widely, producing drastically different hierarchies. But if, in the absence of detailed research and comparative analysis, integrated development strategy is to be made operational, some general conclusions must be drawn concerning the roles of various types of central places in developing nations and the functions that they seem to perform or are potentially capable of performing.

The conclusions that follow, therefore, should be treated as *propositional statements* concerning the types of functions most like to be found at various-size settlements in developing nations. The propositions must be tested for any specific country through on-site surveys. The general classification used here relies more on order of magnitude than on precise quantitative distinctions between one level of settlement and another, and on the general range of func-

³ See, for example, Steel (1961) and Grove (1963).

tions that seem to appear in comparing a limited sample of countries. In any case, however, the smallest community-labeled village or hamlet here--is at the lower end of the hierarchy, and the primate city or metropolitan center, with the largest population and range of functions, is at the higher end. Within this range, four general types of settlements seem to characterize the spatial systems of developing countries, each performing a somewhat different, but not always consistent, set of functions: 1) villages; 2) market or district towns; 3) "middle level" or intermediate cities; and 4) metropolitan centers or primate cities.

A. Metropolitan Areas or Primate Cities

Large metropolitan centers now play a dominant role in the national economic and social development of developing nations. Thus, the functions of these metropolitan areas must be better understood in order to design realistic strategies for transforming the urbanization process to achieve the goals of growth-with-equity. Usually having the largest population sizes and highest densities, and providing significant economies of scale for manufacturing and large-scale commercial enterprises, primate cities and large metropolises will probably continue to perform a diversity of economic functions with relatively high levels of efficiency in most countries over the next few decades. They are generally the communications and transport hubs of the country, having both internal connections with intermediate-size cities and external linkages with other nations. The major metropolitan center is generally the location of the banking and financial systems' headquarters and provides the largest and most diversified commercial and professional services. It usually contains most of the modern physical infrastructure and utilities, the most specialized technical skills, equipment and repair facilities. The primate city often has the largest commercial markets with a purchasing power, well above the national average. These advantages not only attract the bulk of indigenous manufacturing, commercial and service industries, but also most of the foreign capital investment coming into the country.

The largest city or metropolis occupies the highest level in the nation's spatial hierarchy. It is often the seat of national government, the center of political power and authority, headquarters for government departments and foreign diplomatic missions, and the seat of the judiciary with high and lower courts, judge and specialized legal services. Most municipal public utilities and services are usually available on a high order as are universities, professional

and technical schools, specialized training institutions, research organizations, mass-media, cultural and artistic groups, and major medical facilities. The metropolis is usually the nation's center of trade and wholesale and retail commerce, offering the greatest range of goods within the country, and supported by a complete array of financial institutions--insurance companies, domestic and foreign banks, chambers of commerce and trade associations. The metropolis is generally unsurpassed in cultural and recreational activities.

Such advantages, unrivalled in other localities, are self-reinforcing and establish the momentum for sustained growth. The external economies of primate cities and large metropolises that continue to influence strongly locations decisions of new enterprises include: savings to firms accruing from the mutual proximity of labor and other factor supply; access to government offices and a wide range of financial services, markets, and complementary commercial-industrial activities; and a lower cost of search for labor on the part of firms, and for jobs or business opportunities for individuals. Personal contacts and information linkages provided by a major urban center are of major importance in deciding on location (Törnqvist, 1970). And small companies locate in the metropolis close to existing large industries, where they can benefit from second-hand machinery, skilled labor, potential customers and easy access to supplies and materials (Taylor, 1969).

Indeed, the critical role that metropolitan areas play in attracting growth-inducing activities results from their domination of the spatial structures of developing countries, and the lack of large-scale central places to compete with the metropolis. The lack of urban services and functions in smaller cities and towns reinforces the pull of the primate city. Most of Colombia's light industry, for example, which constitutes the bulk of the nation's manufacturing sector, has concentrated in large urban areas. Because Colombia's physical infrastructure is concentrated in large cities, and the supply of such services as electricity, gas, water, transport, or telephones is either unavailable or unreliable elsewhere, industrial location in smaller towns and rural areas may be either impossible or prohibitively expensive. Such factors suggest that Colombian manufacturers are faced with steeper production costs and poorer markets than those facing similar companies in developed countries. Hence fewer Colombian industries are foot-loose and there is a stronger tendency to locate in major cities, thus reinforcing the advantages of the metropolis over other components of the spatial system (Gilbert, 1974).

In nearly every developing nation, however, the primate city has a disproportionate share of national resources and this may well inhibit both overall national economic growth and emergence of a more balanced pattern of urbanization. The concentration of national resources in a single city, moreover, creates huge disparities in income, wealth, standards of living and productive capacity there compared to other regions of the country. Metropolitan Manila's relationship to the rest of the Philippines is a good example of the type of dominance the primate city exerts over the national economy in many countries. Although it contains about a quarter of the Philippines' total population, in 1970 Manila accounted for 40% of the labor force in secondary and tertiary industries, 65% of family income, 45% of all government revenue. 72% of the nation's manufacturing firms, nearly 80% of all manufacturing employment and production; it consumed 83% of the nation's electrical power and nearly 40% of the water supply, and had 61% of all hospital beds and over two-thirds of all transportation vehicles in the country. (NEDA, 1973; Mangahas, 1976).

B. Middle Level and Intermediate Cities

The next level of central places generally found in developing countries is the middle-level or intermediate city. The intermediate city is usually a regional or provincial economic and administrative center and is the headquarters for specialized government services, such as agriculture, health, regional police, and the judicial system. Such cities offer relatively good medical facilities--regional medical offices, hospitals, specialized medical practitioners, large drugstores--as well as public sewer systems, electricity, large post offices, telegraph and telephone offices. Secondary schools are ubiquitous and colleges or technical schools have often been established at these locations. Intermediate cities are well linked to the national transportation system and generally function as regional collection and distribution centers, containing large wholesaling and distributing firms in addition to a wide range of general and specialized retail outlets. As the regional focus for primary product transactions they often contain a wide range of brokerage enterprises and middlemen, and many of the larger financial, insurance, commercial and transportation facilities. The middle level city may also be an important agroindustrial and primary product warehousing center. Usually it lacks any big, non-processing industries.

The crucial role that intermediate or regional centers can play in national development is vividly illustrated by Chonburi Town, the

major urban center in Chonburi Province, Thailand.⁴ In Thailand the municipality is the center of provincial administration and political activities, and of postal, telephone and telegraph services, the provincial radio station, provincial transportation, and the local newspaper. Generally, the functional roles of rural and urban centers in Thailand are well differentiated, with many rural centers functioning principally as marketplaces for the exchange of agricultural and commercial products. At each center in Chonburi Province distinct goods and services are provided to a definable market area. Various centers are spatially interdependent, with overlapping and interlocking market areas for goods and services.

In Chonburi Province markets exist at each center, which correspond quite closely to provincial administrative divisions. Chonburi town stands out as the highest order center with the largest population, market area, and economic reach. District centers (*amphoe*) form the second level in the hierarchy with considerable range in market area size and functions. District centers at the lower end of the range perform 8 specialized functions which characterize the lower-level centers. Sanitary Districts (*sukaphiban*) contain "Class 'A'" pharmacies, hotels, pawnshops, restaurants, motorcycle agencies, and retail outlets for consumer durables, and relatively well-equipped medical clinics.

Chonburi Town acts as a focal point for trade between the rural areas within the province, and between the province and Bangkok. For some commodities the first 'post-production' activity is undertaken in the hinterland, and does not depend on any urban center. Chicken and chicken eggs are sold directly by farmers to hinterland retailers and customers, and to middlemen from other provinces. Owners of chicken supply stores, located near the farms, also act as hinterland-based middlemen, who sell to both their counterparts in Bangkok and to retailers in the hinterland. Truck drivers ("brokers"), who collect duck eggs from various farms for transport to the Bangkok Egg Center, act on behalf of farmers at the market. In the fruit network, too, local brokers serve as collectors from different orchard owners, combining the products and delivering them to middlemen in the village market. Sugar farmers deliver their harvest directly to mills located in the hinterland, along highways, whereas Chonburi rice producers deliver their product to either middlemen or brokers, who, in turn, deliver it to the mills. Commercial rice mills are not located in the hinterland.

Thus Chonburi town is the focus of all major provincial com-

4 See Chulalongkorn University (1974).

modity marketing networks: chicken, duck, fruit and vegetable farmers sell to Chonburi middlemen who, in turn, wholesale to town retailers; fishermen and shellfish producers doing the same; fish middlemen sell to Chonburi fish product factories; and oyster producers sell directly to restaurants. Chonburi is the site of white sugar warehouses which supply local retailers and the location of middlemen who deal in polished rice. Besides selling to local retailers, Chonburi middlemen also deal with Bangkok merchants and middlemen in other provinces of Thailand.

Although medium-size towns and intermediate cities offer important functions for rural development, in most developing nations they are relatively few in number and are often concentrated in one or a few industrialized regions of the country. Their growth and development, moreover, are frequently constrained by the dominance of the primate city. In Nigeria, for example, there were 24 cities of over 100,000 population, and in the 1960s, half were located in Western State, close to the Lagos metropolitan area. The other half were scattered throughout eight of the remaining eleven states (Onokerhoraye, 1976).

C. Market and District Towns

Market towns extend some specialized functions to lower order centers: administrative functions are reflected in the presence of district officers, courthouses, police stations with jail facilities, and often specialized officials such as an agricultural extension agent. Health services include physicians, sometimes a dentist and maternity and general health clinic or small hospitals. Towns at this level may also have a small pharmacy, post office, telegraphic facilities and may be partially serviced with electricity and secondary education. The Market Town in most countries also boasts some small-scale financial institutions, either commercial, cooperative, or post office banks, financial company offices, and pawnbrokers. Money-lenders still play an important role in the financial structure of these towns. In the commercial sector, the market place and the general retail stores are supplemented by specialized shops; goldsmiths and jewelers, photographic studios, beauty salons, electrical appliance shops, and furniture stores.

Market towns are usually linked to larger settlements by a surfaced road or a railroad. In Ghana, market towns are often located at a main road junction; in Kenya and Malaysia they are at the hub of the district transportation system. In India, these Thana or Block Development Centers have an average population of 2,500 and pro-

vide administrative services to clusters of nearby villages. Originally, most were large agricultural collection centers that eventually spawned daily markets, relatively large grocery stores and cottage industries and then became locations for a cooperative bank, branch post office, sometimes a doctor and pharmacy and occasionally, a secondary school. In Thailand, district market centers (*amphoe*) have populations of from 1,000 to 7,000 and may serve a rural hinterland of 40,000 inhabitants with retail service and administrative functions. Retail businesses located in such centers--as many as 200 in some district markets--include a laundry and drycleaner, print shop, photo studio, bottled gas, grocery shops, electrical goods stores, jewelry and gold sellers, furniture shops, construction materials and outlets for farm machinery, fertilizers, pesticides and animal feeds. Wholesalers are also important in district market centers, since they act as large buyers and transfer agents for agricultural products as well.

The marketplace continues to have an important role in the retail trade of the district town in Malaysia just as it does in the smaller urban place, for it is a town's major source of perishable foodstuffs, particularly fruit and vegetables, and only rarely do retail stores stock these items. Apart from being the source of a town's daily provisions, many markets also have a regional importance, on a particular day attracting vendors from throughout the region (Cohen and Brookfield, 1974).

D. Village Centers

Although varying considerably in population size and in the dimensions of the hinterland served, villages are the smallest central places in nearly all countries, performing only very localized functions, often only for a population within walking distance. Ubiquitous in this class of settlement are retail and marketplace functions. Small retail shops are the most common enterprises along with coffee or tea shops. More specialized functions, such as beauty parlors and barbershops, hardware stores and bicycle repair shops are rare. The marketplace may be open daily or periodically (two or three times per week), but no other function appears as often at the village level. Administration may be represented by a police post; there may be a dispensary, or other public services such as a school or a branch post office. Usually the only financial institution is the village moneylender. Industry is generally limited to production by a few artisans, although as with the sugar mills of Chonburi Province in Thailand, modern factories may sometimes be located close to

the smallest centers. Recreational facilities are usually limited to a simple bar or small cafes and there are usually basic religious facilities.

In India, agricultural collecting centers or urbanized villages are either nodes in a rich agricultural area, or a site along a waterway. Traditionally, such centers boast grocery stores, grain storage facilities, and bi-weekly markets for the sale of agricultural produce, livestock, and crafts. These large villages represent the first sign of a central function in a predominantly rural landscape, offering blacksmithing, carpentry, weaving, pottery and other crafts, and annual fairs, held in such places since time immemorial. Many of these small centers, occupying the lowest rank in the urban hierarchy, have been designated Union Board Centers, or Panchayat centers. As such they have been endowed with a gendarme (village headman), a small maternity health center, and government agricultural stores selling seeds and dispensing information.

In Malaysia, *kampong* towns are small primary centers, generally with less than 1,000 inhabitants, which service hinterlands occupied largely by small-scale farmers and landless laborers. Small stores and market stalls constitute their two types of retail outlets--most sell non-perishable foodstuffs and spices, onions, matches, sugar, tea and soap--and are distinguishable by the permanence of the structure from which the retailer operates, rather than on the basis of goods sold. The periodic market is the most common commercial institution, continuing to be a weekly occurrence in many *kampong* towns. Sellers are either *kampong* people, mainly selling either prepared foodstuffs or *batik*, or itinerant vendors.

IV. Integrating Spatial Development Centers

The failure of developing countries to achieve growth with equity, it has been argued, can be attributed largely to their poorly articulated spatial systems. Development is handicapped both by the lack of market towns and intermediate cities and by a spatial distribution of existing centers that is not conducive to creating an integrated system of production and exchange. Service centers are the smallest places in developing nations at which urban services and facilities can be located for efficient and effective delivery to rural areas. Villages, hamlets and farmsteads do not provide large enough markets for most services and facilities. Market towns and small cities are the most critical settlements in a well-articulated spatial system for linking rural and urban functions. Market towns

perform functions essential to the commercialization of agriculture and to the dispersion of urban services and facilities. Where they have been fully developed, they provide institutions for the collection, exchange and distribution of agricultural products, and contain storage, basic processing and transportation facilities to ship products to larger urban markets. They are the locations of basic financial and brokerage functions; of specialized craftsmen who require a threshold population larger than that of a single village, of non-agricultural work opportunities for surplus rural labor; and of basic nonformal and formal education and apprenticeship training. They facilitate social, cultural, and administrative interaction among groups and villages within their areas of influence and with larger cities and the metropolis. The performance of such basic functions and the provision of these services is essential to the promotion of development in economically lagging rural regions. Without a strong set of market towns, integrated urban-rural development simply will not occur.

Finally, metropolitan areas have made indisputable contributions to development. As major investment, social, educational, administrative and cultural centers they are the "engines of development" in most countries. But to distribute more equitably the benefits of urban development, regional equivalents of the primate city--intermediate cities and regional centers--are needed throughout a country, especially in remote, unserved rural regions. Intermediate cities can function as regional industrial and commercial centers, "way stations" or absorption points for rural-to-urban migrants, and locations for decentralized transportation, marketing, service and government functions. The intermediate city can also play a critical "brokerage role" between rural areas and small cities within its influence area and the metropolitan center. It can be a regional focal point for mixing rural and urban functions and for transforming the less productive, traditional institutions, practices and activities within rural areas.

A. The Village Service Center

Villages that already have some basic combination of services and facilities often attract larger populations and begin to provide functions for other villages. New government investments should be located in those communities that already have some capacity to serve rural hinterlands. These points, "Village Service Centers," should be easily accessible from surrounding rural areas and located where they can extend critical services and technical, political, and

administrative inputs to agricultural programs.

Village Service Centers should 1) be small central places providing isolated farms, small hamlets and villages with basic services and facilities as well as household and agricultural goods; 2) contain facilities that provide services needed to stimulate non-agricultural small-scale industries and increase agricultural productivity; 3) provide basic social services facilities and amenities that raise the quality of life within surrounding rural areas; 4) contain cooperative organizations required to expand popular participation in development programs through a mixture of "bottom up" and "top down" planning; and 5) provide a small node of physical, social and economic activities that link rural areas and villages to market towns and small cities. The services and facilities indicated in Table 1 can improve communications between rural areas and the village center, provide a daily market for surplus primary produce and an outlet for commonly required farm inputs, provide storage facilities for agricultural products, improve agricultural productivity and upgrade rural administrative capacity.

B. The Market Town - Small City

Market towns are crucial for transforming economically lagging rural regions because rural economies can only be stimulated by the increasing commercialization of agriculture, which, as Johnson (1970) notes in turn requires that every farm have "access to markets where farm produce can be sold for cash without the danger of monopsonistic exploitation and where there are enough sellers of farm supplies to prevent monopoly What is essential, therefore, is a unified market town where appropriate facilities are congregated." Historically, in most of the developed world, rural investments have clustered around markets. But if markets are to serve as growth points in developing nations they must perform a wide range of functions and offer a variety of services and commodities. They should be permanent and regulated, so that both farmers and traders can escape the abuses of traditional village monopolists.

Markets can be created by stimulating clusters of investment that are related to rural and agricultural needs. A diversified set of enterprises must be encouraged so that the benefits from association and proximity can provide economies of scale that allow them to thrive and to attract related investments. As the number of trading, manufacturing and service industries grow in one center there is a strong probability that both total demand for all services and products will grow and that the market's service-area will expand.

A critical problem in stimulating market town development is to identify entrepreneurs who can take advantage of the potential for growth and rapidly establish key enterprises. Several types of entrepreneurs have emerged where such centers have been established. In some countries local, private investors provided capital to establish new ventures, in others, such as Puerto Rico, foreign capital has been the main source of investment, whereas Israel established collective cooperative institutions and Yugoslavia allocated government investment funds to communes. Where permitted by government, some combination of public and private investment capital is required to set the development process in motion. Regardless of the method used, however, growth of market towns and small cities can be stimulated by the spatial coordination of public capital projects and by the concentration of service and facilities in established or emerging market points.

Intervention at the market town-small city level (Table 1) should aim to expand and facilitate marketing and to increase agricultural productivity in the hinterlands. Physical facilities must be constructed for a permanent marketplace, supported by storage, grading and processing facilities, as well as the necessary financial, commercial and business services. The market center should be made a district transportation hub to link it with village service centers and to intermediate cities and metropolitan areas.

C. Intermediate City - Regional Center

Although remarkably little is known about intermediate cities in developing nations, middle size cities perform critical roles in the transformation and development of regional economies and spatial structures. Intermediate cities are socially and economically heterogeneous, mixing traditional and modern behavior, institutions, and practices, and accommodating both modern and bazaar economies. Usually situated at the hub of regional transportation routes, intermediate cities are often way-stations or absorption points for rural to urban migrants. Although they lack social homogeneity, Hazelhurst (1968) shows that the middle size cities have "a degree of 'openness' as well as mechanisms for the assimilation of outsiders into the economic structure of the city," and their very heterogeneity serves to integrate a variety of social groups, clans, and tribes as well as village and town services with metropolitan activities and national functions. Indeed, many intermediate cities manifest both rural and urban physical characteristics. Taegu, the Korean middle city of more than a million people,

with a diversity of industry and a growing economy, can still be described by visitors in terms of its rural atmosphere (Kim, 1971).

To build middle size cities and regional centers, facilities and services must capitalize on the openness and heterogeneity of these places, creating a mixed urban-rural economy that can promote higher levels of rural productivity, coordinate national, regional and local administrative functions, diversify commercial and industrial activities and devolve many of the functions concentrated in the primate city. Intermediate cities can be built into raw material and agricultural commodity processing and distribution centers, urban industrial areas that perform a wide range of financial, service, commercial, educational and administrative functions. This may be facilitated by developing within them industrial estates, specialized trade schools, energy and power stations, communications services, warehousing and storage facilities, and a regional appropriate technology research center. With the services and facilities indicated in Table 1, intermediate cities can become vital spatial nodes for integrating smaller with larger central places and meshing the major linkages that build an articulated spatial system within a national economy.

V. Conclusion

Developing nations exhibit a wide variety of spatial patterns with settlements that perform highly differentiated sets of functions and services. The problem is that in many countries essential components of the spatial hierarchy, especially at the middle levels, are missing, underdeveloped or poorly distributed, and that the linkages and interactions among settlements are absent or not well-developed. The majority of the population, especially the rural poor, live in scattered villages too small to support basic services and facilities and too isolated to benefit from the growth of larger urban places. Thus, the dynamics of trade that stimulated commercialization of agriculture and industrialization in economically advanced nations, and that spread the benefits of growth widely throughout the nation, do not easily occur in developing countries with unbalanced spatial systems.

It has become increasingly clear that the slow, groping, experimental actions that allowed articulated and integrated spatial systems to emerge in more advanced countries can only be accelerated in developing nations through careful location of productive investments and social services at strategic points in the spatial system. Equally certain is that the ability to create and sustain

economically viable settlements at the middle levels of the hierarchy, to increase the productivity of smaller villages and to integrate the various settlements into the national economy requires the stimulation of rural economies through development of agriculture and small-scale industry. Increased agricultural production can provide higher levels of income for the poorest groups in rural areas, offering opportunities as well for the settlement and growth of agro-processing and farm-related industry. It can create demand for commercial goods, services and durable inputs, which in turn can increase non-agricultural employment opportunities in rural areas. Programs for agricultural development, small-scale industrialization and infrastructure investment in selected rural towns can strengthen the currently weak middle level of settlements in the spatial system of developing countries.

An integrated "package" of technical inputs and services is needed to increase agricultural productivity. A closely related set of agricultural services, physical infrastructure, public and social services, marketing, credit and financial institutions, and other inputs are needed to create preconditions in rural areas for private investment, and these must be located at or delivered to appropriate settlements in rural regions to transform existing communities into more productive and interdependent units in the national spatial system. In short, a more balanced spatial system can be achieved in most developing countries by building from the "bottom up," by stimulating increased production, employment and demand in rural areas and by extending to smaller settlements the services and facilities that will encourage increased productivity and the consolidation of rural populations into larger economic centers.

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Appendix

TABLE 1
THE SPATIAL LOCATION OF BASIC FACILITIES AND SERVICES
A: VILLAGE SERVICE CENTER

1. Facilities

- Small Scale Storage
- Community Center
- Cooperative Supply Outlet
- Maternity-Health Clinic
- Primary School/Vocational Education Facility
- Police Post
- Farm-Market Roads
- Irrigation Canals and Ditches
- Potable Water Pump, Wells and Storage Tanks
- Rural Electrification
- Primary Processing, Grading, Weighing and Packing Facility
- Agricultural Demonstration Plots
- Village-Hamlet Government Office
- Periodic Market Facility
- All-Weather Access Route
- Government Supply Dump
- Local Transportation Stop

2. Services

- Extension Service
- Welfare and Home Economy Service
- Government Credit
- Paramedical Health Service
- Maintenance of Roads and Physical Facilities
- Municipal Administrative Services
- Postal and Telegraph Service
- Local Bus and Truck Transportation Service

B: MARKET TOWN/SMALL CITY

1. Facilities

- Permanent Market Structures
- District and Municipal Government Offices
- Development Bank Branch
- District Cooperative Office
- District Office of Marketing Board
- Small Hospital and Diversified Clinic
- Primary and Secondary Schools
- Vocational Training Schools
- All-Weather and Arterial Roads
- Paved Streets
- Electricity, Piped Water, and Sewerage Systems
- Transportation Depot

- Extension Center
- Experimental Farm
- Airstrip
- Rural Development Project Operations Office
- Warehousing and Food Processing Facility
- Police Station
- Post, Telegraph and Telephone Office
- Cooperative Supply Outlet and Administration Office
- Equipment Repair and Maintenance Facility
- Government Supply Dump/Warehouse
- Fire Station

2. Services

- Agricultural Marketing Service
- Agricultural Extension and Information Service
- Welfare and Home Economy Service
- Public Transportation Service
- Public Safety and Security Services
- Public Health Service
- Credit and Government Lending Service
- Full-Time Municipal Administrative Service
- District Administrative Office
- Postal and Telegraph Service
- Full-Time Maintenance of Roads and Physical Facilities

C: INTERMEDIATE CITY

1. Facilities

- Regional Permanent and Complementary Markets
- National Government Regional Offices
- Provincial Government Offices
- Municipal Government Offices
- National Financial Institutions
- Full Service Hospitals
- Regional University
- Primary and Secondary Schools
- Specialized Trade Schools
- Arterial Highway
- Airfield
- Major Transportation Junction
- Paved Streets
- Electricity, Piped Water and Sewerage Systems
- Electric Generation Station and Regional Grid
- Industrial Estate
- Regional Development Headquarters Office
- Regional Post, Telegraph, and Telephone Operations Office
- Fire and Public Safety Facility
- Warehousing and Storage Facility
- Industrial Raw Material Processing and Food Manufacture.
- Low Cost, Public Housing

- Government Supply Distribution Center
- Regional Agricultural Experiment Station
- Major Repair and Maintenance Facilities
- Regional Appropriate Technology Research Center
- Public Recreational Facilities

2. Services

- Public City and Intercity Transportation Service
- Public Safety and Security Service
- Public Health Service
- Professional City Administrative Service
- Provincial Administrative Service
- Urban Social Welfare Services
- Public Libraries
- National Government Regional Services
- Postal and Telegraph Service
- Professional Maintenance of Roads and Physical Facilities