

Evaluating Planning Perspective with respect to Stages of Economic Development

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Abstract - Technological advancement has indeed been a primary driver of socio-economic and spatial development across the globe, fundamentally reshaping human civilization. Technological advancement, mainly in the form of Agricultural Revolution, Industrial Revolution and Information Technology Revolution has shaped Economic Development at a wider extent and has given new perspective to civilization. These advancements have posed major challenges in front of Planners as they require to be addressed and need to be incorporated in evolving Planning Perspective. Economic Development resulting due to such technological advancement can be categorized mainly in three stages - First Stage of Economic Development as a Pre-industrial Stage dominated by Agricultural Revolution, Second Stage of Economic Development as an Industrial Stage dominated by Industrial Revolution and Third Stage of Economic Development as a Post-industrial Stage dominated by Information Technology Revolution. Many theories have been proposed considering these stages of Economic Development.

Planning is a continuous and multifaceted process as it considers various aspects and is being defined and redefined with every advancement in Economic Development. In this research paper, evaluation of some relevant theories has been carried out with respect to these stages of Economic Development considering social, economic, and spatial aspects of society or country to understand evolving Planning Perspective.

Keywords: Evaluating, Planning Perspective, Economic Development, Pre-industrial Stage, Industrial Stage, Post-industrial Stage, etc.

INTRODUCTION

Technological advancement has been shaping the socio-economic and spatial development of the civilization across the globe. Technological advancement mainly in the form of Agricultural Revolution, Industrial Revolution and Information Technology Revolution has shaped Economic Development at a wider extent and has given new perspective to human civilization (Sonar, 2012). An Agriculture-based civilization is a community whose wealth and economy come from farming, where settled agriculture allowed people to move from nomadic life to stable civilization. Availability of assured source of water and fertile land have played significant role in the development of Agriculture-based civilization. During the 19th century, industrialisation gave rise to manufacturing plants and factory towns, while the steam engine led to growth of seaport cities. Subsequently, a system of railroads linked cities and towns within regions, whereas development in aviation sector brought cities within reach across the globe (Sonar & Devadas, 2008). Availability of raw materials and transportation networks have played significant role in development of Industrial-based civilization. Technological advancement in the form of Information Technology, which represents an outgrowth of developments in electronics and microelectronics, the technologies of which are central to both communications and computing bound to affect every aspect of human life and the city functions (Daas & Sonar, 2013). Emerging Information Technologies have started to transfer the economic role of cities, and their pattern of spatial development. In this process, many cities have lost their roles as corporate headquarters, and manufacturing centres, while some have attracted Information Technology based economic activities. (Sonar & Devadas, 2008). Availability of Information Technology and Quality of Life have played significant role in development of Information Technology-based civilization. Agricultural Revolution has spanned across several centuries, whereas, Industrial Revolution has spanned across many decades. However, Information Technology Revolution is changing every day. Economic Development resulting due to such technological advancement can be categorized mainly in three stages of Economic Development – First Stage as a Pre-industrial Stage dominated by Agricultural Revolution, Second Stage as an Industrial Stage dominated by Industrial Revolution and Third Stage as a Post-industrial Stage dominated by Information Technology Revolution. Some literatures also defined Transition Stage of Economic Development spanning across overlapping portion between matured stage of Agricultural Revolution and early stage of Industrial Revolution and Industrial Maturity Stage spanning across overlapping portion between matured stage of Industrial Revolution and early stage of Information Technology Revolution. Many theories have been proposed considering these stages of Economic Development. Out of which, Three Sector Theory proposed by Allan Fisher, Colin Clark and Jean Fourastié; Demographic Transition Theory proposed by Warren Thompson, Adolphe Landry, and Frank W. Notestein; Urban Environmental

Transition Theory proposed by Gordon McGranahan; Core-Periphery Theory developed by John Friedmann, Stages of Economic Growth theory proposed by Walt Whitman Rostow, and Trajectory of Metropolitan Development theory developed by John Brotchie, Peter Nijkamp, Peter Newton, have been evaluated to understand evolving Planning Perspective with respect to stages of Economic Development in following subsequent paras.

THE THREE SECTOR THEORY

Three Sector Theory is an economic theory which divides economies into three sectors of activity: extraction of raw materials (Primary Sector), manufacturing (Secondary Sector), and services (Tertiary Sector) with respect to stages of Economic Development happening in the society or country. It was developed by Allan Fisher, Colin Clark and Jean Fourastié. According to the theory, the focus of an economy's activity shifts from the Primary Sector, through the Secondary Sector and finally to the Tertiary Sector. Countries with a low per capita income are in an early stage of development; the main part of their national income is achieved through production in the Primary Sector. Countries, in a more advanced stage of development, with a medium national income, generate their income mostly in the Secondary Sector. In highly developed countries with a high income, the Tertiary Sector dominates the total output of the economy (Wikipedia, 2025). First Stage, i.e., Pre-industrial Stage represents a society which is scientifically not yet very developed, with a negligible use of machinery. The state of development corresponds to that of a modern-day developing country. In Second Stage, i.e. Industrial Stage, more machinery is deployed in the Primary Sector, which reduces the number of workers needed. As a result, the demand for machinery production in the Secondary Sector increases. The transitional way or stage begins with an event which can be identified with the industrialization: far-reaching mechanization of manufacture, such as the use of conveyor belts (Wikipedia, 2025). The Tertiary Sector has begun to develop, as has the financial sector and the power of the state. In Third Stage, i.e. Post-Industrial Stage, the Primary and Secondary Sectors are increasingly dominated by automation, and the demand for workforce numbers falls in these sectors. It is replaced by the growing demands of the Tertiary Sector. The situation now corresponds to modern-day industrial societies and the society of the future, the service or Post-industrial Society (Wikipedia, 2025). Proponents of Three Sector Theory represented their model in a graphical format as shown in Figure No. 1 below. Graph has been plotted using percentage of employment in particular sector on vertical axis verses stages of Economic Development on horizontal axis as observed in United Kingdom from 1800 AD to 2000 AD.

THE DEMOGRAPHIC TRANSITION MODEL

Demographic Transition refers to the transition from high birth and death rates to lower birth and death rates with respect to stages of Economic Development happening in the society or country. The theory was proposed in the mid-20th century by Warren Thompson, Adolphe Landry, and Frank W. Notestein who observed transitions in birth and death rates in industrialized countries (Wikipedia, 2025). Most developed countries have completed the demographic transition and have low birth rates; most developing countries are in the process of this transition. The major exceptions are some poor countries, which are poor or affected by government policy or civil strife. In First Stage, i.e. Pre-industrial Stage, death rates and birth rates are high and roughly in balance. All human populations are believed to have had this balance until the late 18th Century, when this balance ended in Western Europe. Population growth is typically very slow in this stage, because the society is constrained by the available food supply. In Second Stage, i.e. Transitional Stage of a developing country, the death rates drop quickly due to improvements in food supply and sanitation, which increase life expectancies and reduce disease (Ghosh, NA). Without a corresponding fall in birth rates this produces an imbalance, and the countries in this stage experience a large increase in population. In Third Stage, i.e., Industrial Stage, birth rates fall due to various fertility factors such as access to contraception, increases in wages, urbanization, a reduction in subsistence agriculture, an increase in the status and education of women, a reduction in the value of children's work, an increase in parental investment in the education of children and other social changes. Population growth begins to level off. During Fourth Stage, i.e. Post-industrial Stage, there are both low birth rates and low death rates. Birth rates may drop to well below replacement level, leading to a shrinking population resulting due to socio-economic transformation of society (Ghosh, NA). Proponents of Demographic Transition Model represented their model in a graphical format as shown in Figure No. 2 below. Graph has been plotted using Birth Rate and Death Rate (number of birth or death per 1000 person per year) on vertical axis verses stages of Economic Development on horizontal axis based on repeated observation of similar population growth patterns in countries as their economies developed.

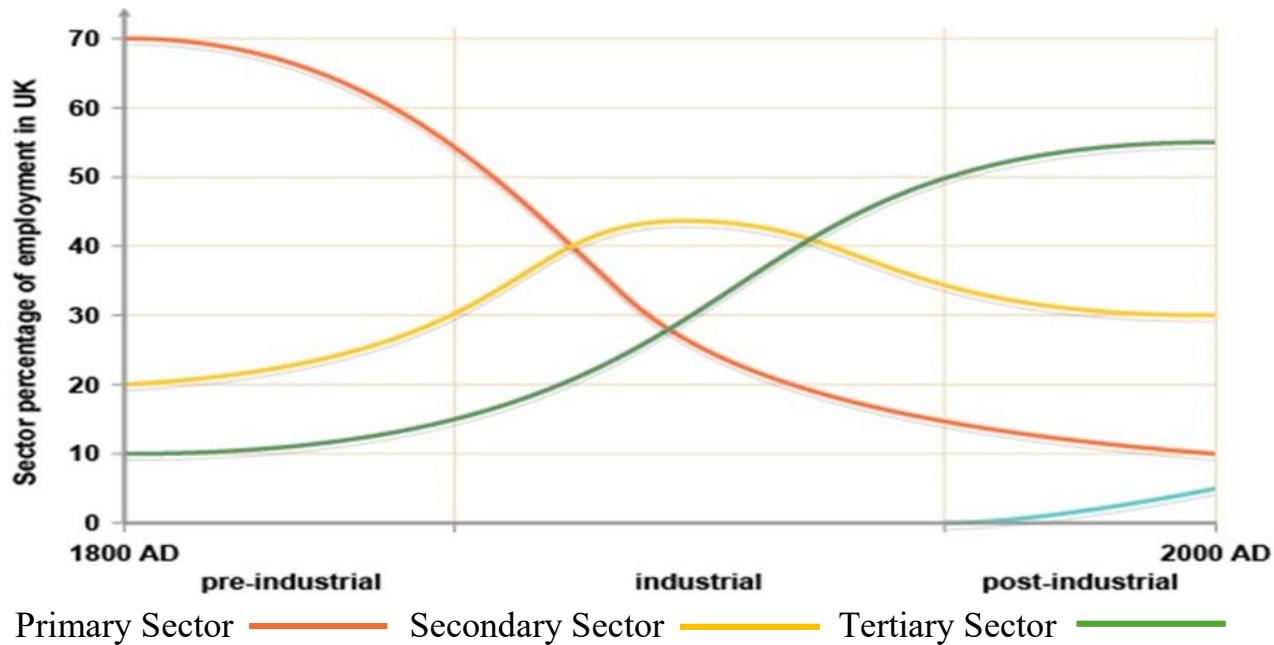


Figure No. 1: The Three Sector Theory Model

Source: Three-Sector Model, Wikipedia, 2025

URBAN ENVIRONMENTAL TRANSITION MODEL

Gordon McGranahan's key theory is the Urban Environmental Transition (UET), which posits that as cities get wealthier, their environmental problems shift from immediate, localized, health-threatening "brown" issues to more dispersed, longer-term "green" challenges (Marcotullio, & Lee, 2003). First Stage or Pre-industrial Stage indicates Traditional Rural Societies, which are usually based on agriculture and not as dependent on the outside world. Families are larger, their income levels are low, and their advantages and Economic Development opportunities are low. Populations development has a stationary population pyramid. In Second Stage or in Transition Stage, countries experience high population growth rates because family size remains high but modern medicine or improved nutrition allows people to live longer, which lowers the death rate. During this stage, population is exploding in countries and young people from rural areas often migrate to the cities looking for employment. Societies or countries in this stage often have a rapidly expanding population pyramid. Societies or countries that have made business connections that provide for manufacturing of products, industrial activities, or an increased Tertiary Sector might progress to Stage Three, the rural-to-urban shift stage. These regions are experiencing a high rate of rural-to-urban shift in their populations. Income levels start to increase, and family size starts to drop significantly. In Third Stage or Industrial Stage countries have an expanding population pyramid (Wikipedia, 2025). Societies that have urbanized and industrialized and are members of the global marketplace might enter Stage Four. Members of an urban workforce assist in building a networked economy. Family size is lower as urban women enter the workforce and have fewer children. Health care, education, and social services have become increasingly available, and income levels continue to rise. In Stage Four, there is typically a high level of growth in the industrial and service sectors with a great need for infrastructure in the form of transportation, housing, and human services. Countries in Stage Four development have populations that resemble a stationary population pyramid. As incomes increase and family size decreases, a consumer society emerges, creating Stage Five, where high mass consumption can drive the economy (Wikipedia, 2025). Many countries in Stage Five can eventually experience a negative population growth rate, in which the fertility rate is below replacement levels. With a low number of young people entering the workforce, Stage Five regions become an attractive magnet for people looking for opportunities and advantages in the job market (Marcotullio, & Lee, 2003). Proponent of Urban Environmental Transition Model represented their model in a graphical format as shown in Figure No. 3 below. Graph has been plotted using Family Size (number of persons per family) on vertical axis verses stages of Economic Development on horizontal axis based on repeated observation of similar population growth patterns in countries as their economies developed.

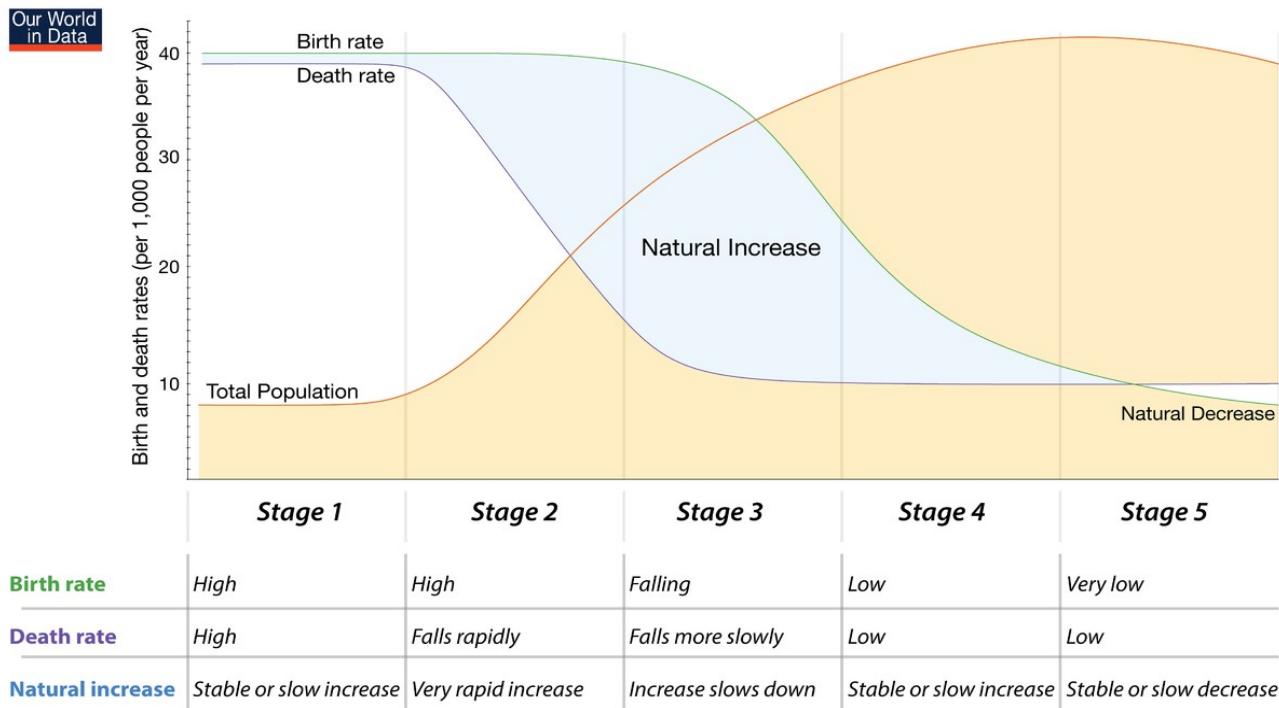


Figure No. 2: The Demographic Transition Model

Source: Demographic Transition, Wikipedia, (2025)

THE CORE-PERIPHERY MODEL

Core-Periphery Model developed by John Friedmann explains uneven regional development, showing dominant "core" areas surrounded by dependent "periphery" regions. It describes how Economic Development concentrates in cores, creating disparities, but also outlines stages where peripheries can develop into emerging economies and eventually integrate into a more balanced global system through trade and investment (Sing, 2023). Model of development tries to represent the emergence of a Regional Urban System in four major stages which goes on par with the development of Regional Transport Systems. From an initial process that favors the setting of spatial inequalities, these are eventually reduced and a functionally integrated urban system emerges. First Stage, i.e. Pre-industrial Stage with localized economies and a small-scale settlement structure. Each settlement is isolated, activities are dispersed and mobility is low (Sing, 2023). There are limited differences. Second Stage, i.e. Transitional Stage, the concentration of the economy in the core city begins because of capital accumulation and industrial growth. The specific reasons behind this concentration are often not too clear, location with better access being a significant factor, but the fact remains that a dominant center emerges within an urban system to become its growth pole (Chhabda & Sonar, 2021). Trade and mobility increased, but within a pattern dominated by the core even if the overall mobility remained low. In Third Stage i.e., Industrial Stage through a process of Economic Development and diffusion, other growth centers emerge (Sing, 2023). The main reasons for deconcentrating are increasing input costs (mainly labor and land) in the core area. This diffusion is linked with increased interactions between elements of the urban system and the construction of transport infrastructures. In Stage Four, i.e., Post-industrial Stage: the urban system becomes fully integrated and spatial inequalities are reduced significantly (Sing, 2023). The distribution of economic activities creates a specialization and a division of labor linked with intense flows along High-Capacity Transport Corridors. The factors that have favored spatial inequalities in the previous stages of development have structured the dominant poles of the urban system and favored the setting of a large commercial gateway, usually a World City (Klimczuk & Klimczuk, 2019). Stage-wise development of Regional Urban System is depicted in following Figure No. 4.

Rostow's Stages of Economic Growth

Rostow's Stages of Economic Growth model is one of the major historical models of Economic Development. It was published by American economist Walt Whitman Rostow in 1960. The model postulates that economic growth occurs in five basic stages of varying length: Traditional Society (Pre-industrial Stage), Preconditions for Take-off (Transition Stage), Take-off (Industrial Stage), Drive to Maturity (Industrial Maturity Stage) and Age of High Mass Consumption (Post-industrial Stage). Traditional

Societies (Pre-industrial Stage): an economy in this stage has an unlimited production function which barely attains the minimum level of potential output. Modern science and technology have yet to be introduced (Wikipedia, 2025). As a result, these pre-industrial societies, unaware of the possibilities to manipulate the external world, heavily depend on manual labor and self-sufficiency to survive. Pre-conditions for Take-off: in the Second Stage of Economic Development, the economy undergoes a process of change for building conditions for growth and take-off.

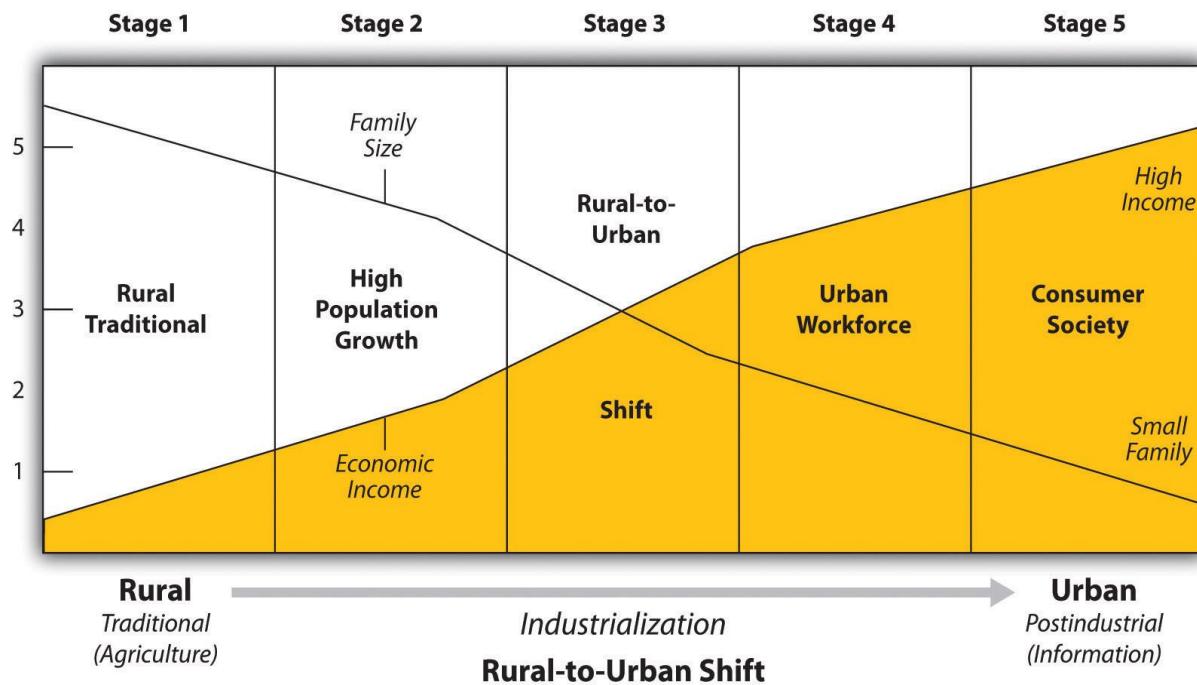


Figure No. 3: Urban Environmental Transition Model

Source: Marcotullio, Peter J., and Lee Yok-shiu, (2003), "Urban Environmental Transitions and Urban Transportation Systems: A comparison of the North American and Asian experiences"

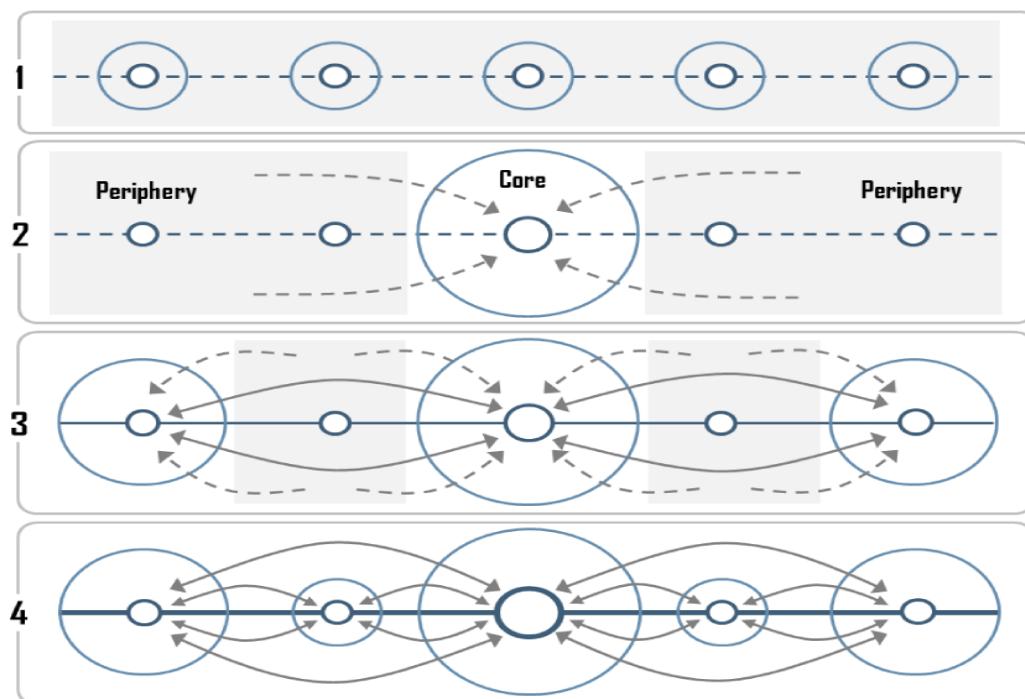


Figure No.4: The Core-Periphery Model

Source: Singh Kulwinder, (2023), "Core-Periphery Model by Friedman"

Rostow said that these changes in society and the economy had to be of fundamental nature in the socio-political structure and production techniques. There are three important dimensions to this transition: firstly, the shift from an agrarian to an industrial or manufacturing society begins, albeit slowly. Secondly, trade and other commercial activities of the nation broaden the market's reach not only to neighboring areas but also to far-flung regions, creating international markets. Take-off (Industrial Stage): this stage is characterized by dynamic Economic Development. As Rostow suggests, all is premised on a sharp stimulus (or multiple stimuli) that is/are any or all economic, political and technological change. The main feature of this stage is rapid, self-sustained development. Take-off occurs when sector led development becomes common and society is driven more by economic processes than traditions (Wikipedia, 2025). Drive to Maturity (Industrial Maturity Stage): after take-off, there follows a long interval of sustained development known as the stage of driving to maturity. Rostow defines it "as the period when a society has effectively applied the range of modern technology to the bulk of its resources. Now regularly growing economy drives to extend modern technology over the whole front of its economic activity. Age of High Mass Consumption (Post-industrial Stage): the age of high mass consumption refers to the period of contemporary comfort afforded many western nations, wherein consumers concentrate on durable goods, and hardly remember the subsistence concerns of previous stages (Wikipedia, 2025). According to Rostow, a country tries to determine its uniqueness and factors affecting it are its political, geographical and cultural structure and values present in its society. Rostow's Stages of Economic Growth model is presented in following Figure No. 5.

Trajectory of Metropolitan Development

The Trajectory of Metropolitan Development describes the long-term path of urban growth, marked by stages like urbanization, suburbanization, and re-urbanization, driven by population shifts, economic changes, and infrastructure, leading to spatial expansion and influencing sustainability, often shifting from core growth to decentralized nodes and corridors, especially with globalization (Brotchie, et. al., (1985)). This evolution sees cities expand beyond old boundaries, creating interconnected regions with unique social, economic, and environmental patterns, requiring strategic planning to manage growth and infrastructure. At the metropolitan level the spatial arrangement or form of the system may be expressed in terms of two key parameters: the dispersal of non-residential activities; and the spatial dispersal or extent of their interactions. The dispersal of non-residential activities may be measured by their mean distance from the urban center or by the number of dispersed centers within the Metropolitan Area, and the dispersal of interactions by the Mean Flow Distance (Brotchie, et. al., 1985). These two parameters may be expressed as the two axes of a graph representing an Activity-verses-Interaction Space. The ABC triangle defines the feasible limits of this space. The point A represents a single-centered city, the line BC represents the other extreme of complete dispersal of non-residential activities, or cottage industries. The line AB represents the extreme of zero flow cost where interactions are independent of distance; the line AC represents the other extreme of infinite flow cost or interactions with the closest activity only. A particular city may be presented as a point in this space (Brotchie, et. al., 1985), A possible trajectory of the urban system over time within this parameter space is indicated in following Figure No. 6.

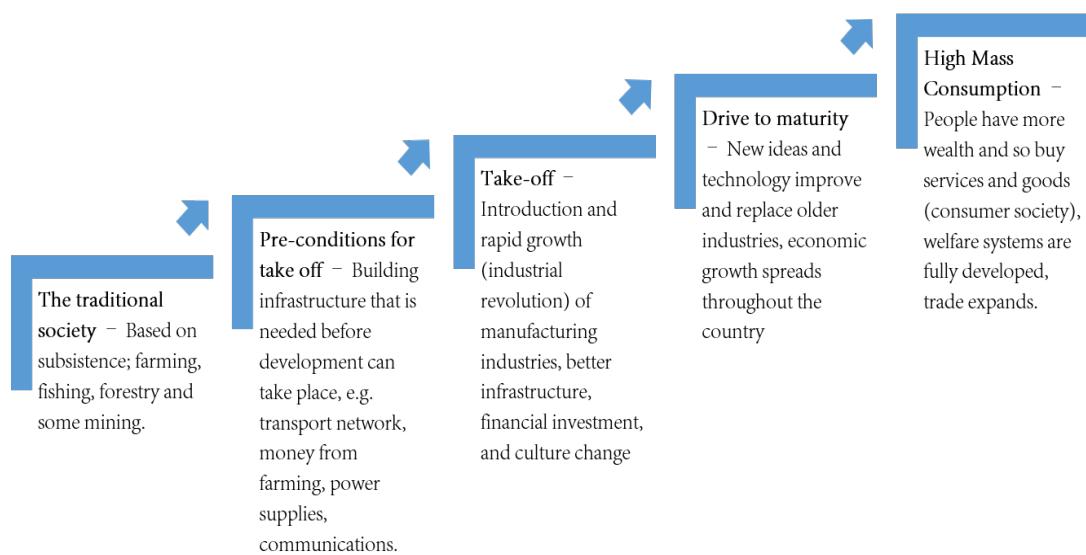


Figure No. 5: Rostow's Stages of Economic Growth

Source: Rostow's Stages of Growth, Wikipedia, (2025)

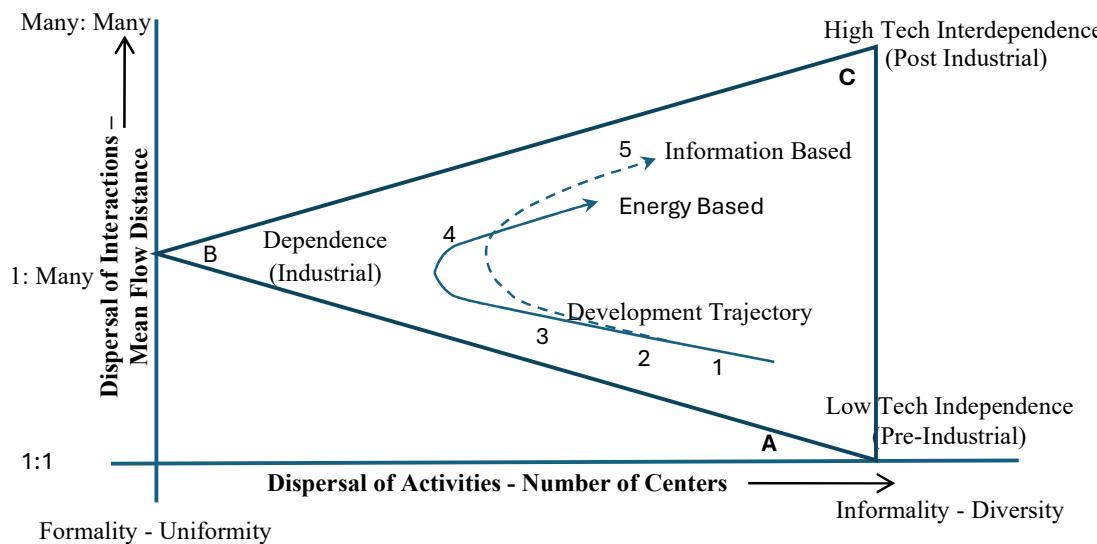


Figure No. 6: Trajectory of Metropolitan Development

Source: John Brotchie, et. al., (1985), "The Future of Urban Form"

The early stages of the metropolitan development are indicated by movement inwards, or concentration. The later Industrial and Post-industrial development are accompanied by a movement outward. Information Technology based industries may be expected to move towards the point B, particularly where the interactions are primarily electronic. But this movement may be slowed by the need for some of these industries to retain 'high touch' face to face interaction for transactions needing trust. Material and energy-based industries, too, may be expected to take a lower trajectory, particularly when the interactions are largely energy based and especially when the movement of heavy material is involved (Brotchie, et. al., 1985). Thus, the change that are occurring in Society and its urban systems are a consequence of Information Technology revolution are by no means similar or unidirectional. On the contrary, they are diverse, profound and multifaceted.

Evaluating Planning Perspective with respect to Stages of Economic Development

Development means the action taken by the Policy Makers to raise the standard of living of people by developing human capital, critical infrastructure, health, security, education, regional competitiveness, social institution, and any other initiatives for the welfare of people. Economic Development alleviates people from low standards of living into proper employment with increase in the Per Capita Income. Planning is a means of achieving development of human being. It is a continuous and multifaceted process as it considers various aspects and is being defined and redefined with every advancement in technology. Technological advancement has indeed been a primary driver of socio-economic and spatial development across the globe, fundamentally reshaping human civilization. Technological advancements and stages of Economic Development are mutually dependent on each other, and its combined reflection is observed in social, economic and spatial aspects of society or country. Understanding of social, economic and spatial aspects of a society or country is prerequisite for defining Planning Perspective. Evaluation of above theories has been carried out based on social, economic, spatial aspects of a society or country and Planner's Perspective with respect to stages of Economic Development. Parameters consider for this purpose of evaluation mainly include Birth Rate, Death Rate, Family Size, Family Income, Type of Society, Dispersal of Interactions, Dispersal of Activities, Sectoral Composition of Economic Activities, Important Infrastructure, Implementation Mechanism, Stage of Urbanization, Planning Aspects, People Participation, Role of Planner, etc. Understanding of these parameters is necessary for defining Planning Perspective. Summary of evaluation of above theories is presented in following Table No. 1. Summary of evaluation is important to understand prevailing status of social, economic and spatial aspects of society or country with respect to stages of Economic Development. Proper understanding of social, economic and spatial aspects of society or country with respect to stages of Economic Development is useful in defining Planning Perspective.

Table No. 1: Planning Perspective with respect to Stages of Economic Development

Parameters	Pre-industrial Stage	Industrial Stage	Post-industrial Stage
Social Aspect	Birth Rate: High Death Rate: High	Birth Rate: High Death Rate: Low	Birth Rate: Low Death Rate: Low
	Family Size – High Family Income - Low	Family Size – Medium Family Income - Medium	Family Size – Low Family Income - High
	Dispersal of Interactions: Low	Dispersal of Interactions: Medium	Dispersal of Interactions: High
Economic Aspect	Water based economics	Energy based economics	Information Technology based economics
	Primary Sector: High Secondary Sector: Low Tertiary Sector: Low	Primary Sector: Medium Secondary Sector: Medium Service Sector: Low	Primary Sector: Low Secondary Sector: Low Service Sector: High
	Implementation Mechanism - Public Initiatives, Role of Government - Provider	Implementation Mechanism - Public - Private Initiatives, Role of Government - Facilitator	Implementation Mechanism - Market Oriented, Role of Government - Regulator
Spatial Aspect	Traditional Society	Urban Society	Consumer Society
	Dispersal of Activities: Low	Dispersal of Activities: Medium	Dispersal of Activities: High
	Urbanization	Sub-urbanization	Re-urbanization
Planner's Perspective	Spatial Planning	Procedural Planning	Strategic Planning
	Planning for People	Planning with People	Planning by People
	Role of Planner -Expert	Role of Planner -Advisor	Role of Planner -Service Provider

CONCLUSION

Technological advancement, mainly in the form of Agricultural Revolution, Industrial Revolution and Information Technology Revolution has shaped Economic Development at a wider extent and has given new perspective to civilization. Economic Development resulting due to such technological advancement can be categorized mainly in three stages of Economic Development – First Stage as a Pre-industrial Stage dominated by Agricultural Revolution, Second Stage as an Industrial Stage dominated by Industrial Revolution and Third Stage as a Post-industrial Stage dominated by Information Technology Revolution. Some literatures also defined Transition Stage of Economic Development spanning across overlapping portion between matured stage of Agricultural Revolution and early stage of Industrial Revolution and Industrial Maturity Stage spanning across overlapping portion between matured stage of Industrial Revolution and early stage of Information Technology Revolution. Many theories have been proposed considering these stages of Economic Development. Economic Development is a continuous process for the improvement in social, economic and spatial aspects of a society or country. Planning is a continuous and multifaceted process as it considers various aspects and is being defined and redefined with every advancement in Economic Development. These advancements have posed major challenges in front of Planners as they require to be addressed and need to be incorporated in evolving Planning Perspective. Evaluation of some relevant theories with respect to these stages of Economic Development considering social, economic, and spatial aspects of society or country is helpful to understand evolving Planning Perspective. Parameters consider for this purpose of evaluation, such as Birth Rate, Death Rate, Family Size, Family Income, Type of Society, Dispersal of Interactions, Dispersal of Activities, Sectoral Composition of Economic Activities, Important Infrastructure, Implementation Mechanism, Stage of Urbanization, Planning Aspects, People Participation, Role of Planner, etc. are important to understand prevailing status of social, economic and spatial aspects of a society or country with respect to the stages of Economic Development. Timely responses to these evolving Planning Perspective not only help in efficient Planning but also help to plan in globally competent environment.

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