

Modern Economic Development Concepts

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1 Introduction

Streeten (1972), who participated in the preparation of Gunnar Myrdal's *magnum opus* Asian Drama published in 1968, opined that 'development means modernization, and modernization means transformation of human beings. Development is an objective and development is a process both to embrace a change in fundamental attitudes to life and work, and in social, cultural and political institutions' (Streeten 1972, p. 30).

In less abstract form, economic development may be defined as the process by which a traditional society employing primitive techniques and therefore capable of sustaining only a modest level of per capita income is transformed into a modern, high-technology, high-income economy (Rostow 1961). The process involves the replacement of labor-intensive subsistence production by techniques that use capital, skilled labor and scientific know-how to produce a variety of different products consumed in an affluent society.

From a historical perspective, economists in the seventeenth to the nineteenth centuries were practically development economists concerned about issues like the political economy of production and distribution, trading with other countries, means of improving the health of the national coffer through productivity and reformation in the dominant agriculture sector. Often they were writing about a developing country (in many cases, Britain) going through a process of industrial transformation. Then in the 100 years before the Second World War, development economics took the form of protectionist arguments for industrialization. The mercantilists opined that the only way for the nation to create wealth is to promote export and curtail import. That idea soon gave way to that of Adam Smith that championed division of labor, free trade and the efficacy of the market (invisible hand) in the creation of wealth and prosperity. Nonetheless, the path of progress

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is never smooth. The negative sides of free enterprise and liberal capitalism as in squalid and unhygienic industrial towns, child-labor and general exploitation of labor had stoked the emergence of communism and injection of socialistic ideals in political organization and in management of the society and economy. The October Revolution in Russia in 1917 was a manifestation of the latter, and it ushered in economic planning and the emphasis on capital accumulation and dominance of heavy industries as in steel, machinery and chemicals to force-march economic growth and development. The world is offered an alternative to the free enterprise, light government, market-driven style of economic development embraced by then emerging European industrializing countries. This state of affair persisted for quite a long while until 1989, when the Berlin Wall fell and the subsequent dissolution of the Soviet Union.

There is no dearth of intellectual efforts by economists and professionals in other disciplines searching for the elixir or secret formulae to enable nations to grow and prosper. Even before the Second World War ended in 1945, economists were already considering what strategies can be employed to rebuild economies that were destroyed by the war. Economic development plan is not actually abhorred by economists oriented towards market and free trade. Often the plan is taken as a document delineating the intent/objective and actions to be taken to achieve the objective. This is in contrast to an economic plan in a socialist economy, in which market is subordinated and the basic questions in economics: what to produce? how to produce? and for whom is the produce? are addressed authoritatively and centrally administered. A good example is the Marshall Plan initiated by the USA after the Second World War to provide necessary resources for the rebuilding of European economies devastated by the war. The French government was famous for its use of rolling plans to guide economic development. Developing economies asking for financial assistance from the World Bank are required to submit their application with sound development plan indicating how the funds are being used. At one count, there were more than 500 economic development plans registered at the World Bank, though the information on whether plans were implemented and their efficacies is scarce.

These economic development plans were often supported by propositions or insights of planning models of the development economists. For instance, macro and sectoral planning models such as that of Feldman (1928), Leontief (1951), Harrod (1939), Domar (1947), Mahalanobis (1953) and Chenery and Bruno (1962) became the theoretical rationale for such development plans. As interest in development intensifies, many area-specific studies were conducted and many economic theories emerged.¹ The famous paper by Rosenstein-Rodan (1943) on 'big-push' theory or 'balanced growth' about economies in south-eastern Europe had stimulated a

¹ Chenery and Syrquin (1975) provide a classification of development theories: structuralist, Marxist, classical, Keynesian, neo-Marxist, neoclassical, post-Keynesian and the dependency school. Broadly speaking, the structuralist theories reflect assumptions in developing economies characterized by various institutional features and weaknesses, and that markets operate imperfectly, with the consequence that uncontrolled economic change directed by market forces does not result in the pattern of development which is desired.

stream of works by Chenery (1960), Hirschman (1958), Kuznets (1955), Lewis (1954), Nurkse (1953), Scitovsky (1954), Sen (1975, 1983) and others, that help establish development economics as a subject in University curriculum. Hirschman (1958) in particular argued for unbalanced growth in contrast to balanced growth that necessitates balanced (simultaneous) expansion by a large number of sectors to help raise the demand for output of all the other sectors. He recognized that concentrating resources on key sectors that have strong backward and forward linkages on other industries can spark-off a development process. This approach, he reckoned to be more applicable in situation of limited decision-making capacity and resource availability as in developing economies. An indispensable pre-requisite for the transformation to occur, amidst all the theories propounded, is the accumulation of capital, and this must be interpreted to include not just physical capital goods but also human capital, social capital and intangible capital as in relevant scientific knowledge.

Economic Development as a process of transformation is the principal theme of models by Lewis (1954) and Fei and Ranis (1964). In the Lewis–Fei–Ranis model, often called dualistic economy model, economic growth occurs because of the increase in the size of the industrial sector, which accumulates capital, relative to the subsistence agricultural sectors. The growth impulse is expected to ignite an unbalanced but virtuous cycle of growth.

The dismantling of colonial system and the setting up of international institutions World Bank and International Monetary Fund (IMF) at the Bretton Wood meeting of nations had given much expectation and hope about the new international economic order after the Second World War. Persistence of under development and imperceptible growth have led some to believe the new order is a modified continuation of the old. Within the structuralist/neo-Marxist/Marxist framework of analysis, the dependency theory of economic development takes center stage. Largely originated in Latin America and the Caribbean, it asserts that resources flow from a ‘periphery’ of poor and underdeveloped states to a ‘core’ of wealthy states, enriching the latter at the expense of the former (Frank 1969; Furtado 1970). It implies exploitation of the poor by the rich; increasing divergence of standard of living is the expected outcome.

The Fall of the Berlin Wall in 1989 had enhanced the role of neoclassical economics in development issues while diminishing the influence of Marxian and dependency theory. The neoclassicists contend that slow or negative growth results from poor resource allocation from nonmarket prices and excessive state intervention. Neo-classical growth theory emphasizes the reliance on market, private initiatives, deregulation and the importance of increased saving for economic growth. The Washington institutions of the World Bank, IMF and the US government have applied neoclassical analysis in their policy-based lending to less-developed economies. In fact, the neoclassical growth model (Solow 1956), predicts that incomes per capita between the rich and poor countries will converge. Mankiw et al. (1992) include human capital as an additional explanatory variable to physical capital and labor in Solow’s model, and this helps to explain to some extent the slow convergence observed in reality. Relaxing the assumption that technology being exogenous

in the neoclassical model, gives rise to a new strand of theory: the new endogenous growth theory. When the level of technology can vary with different efforts (such as Research and Development, R&D; and human capital), speed of convergence between developed economies and less developed economies is determined by the rate of diffusion of knowledge (Romer 1994).

In the 1980s and the 1990s, development and growth theories propounded in the 1950s and 1960s have been subjected to criticism, evaluation and test of usefulness. Many aspiring developing economies did not find the predictions of the theories verified and in many cases missing out on important issues such as absorptive capability, institutional failure, spatial, interpersonal and inter-sectoral distribution problems prevailing in the economies. On the intellectual and research front, new theories of endogenous growth emerged to challenge the neoclassical model as well as revived and renewed interest of spatial economics. Concurrently scholars in business research have creatively exposed and enhanced the relevance of economic theories to business decision-making, and this ultimately filtered back into macroeconomic policy-making. The general acceptance of the market as a useful mechanism for coordination of economic activities and its potential in creating the appropriate incentives for optimal resource utilization has enabled the convergence of private and public interest in wealth creation. Concepts like agglomeration economies, clustering, competitive advantage, value chain and knowledge capital became new buzz words or vocabularies in the discussion of economic development.

In this chapter, we will briefly review the main new concepts like competitive advantage, agglomeration economies and cluster-based analysis used in economic development and planning in recent years. These concepts will be pertinent to the varied development experiences described in other chapters of this volume. Indeed in a separate chapter, the roles and usage of the new concepts in charting plans and policies that promulgate good economic performance of the Singapore economy are extensively discussed.

2 Modern Economic Development Concepts

During the 1980s, development economics researchers began to move away from the pre-occupation with studies on trends and changes in national aggregates and averages. These are criticized for ignoring absorptive capacities, institutional constraints, spatial diversity, interpersonal and inter-sectoral distribution problems. A particular strand of research proceeded to address and examine special features of developing economies, which most formal theories have not accounted for. Among these topics are such matters as foreign ownership of firms, dependence upon foreign technology, barriers to international trade, problems of income distribution and nutrition and requirements for institutional reform (Bardhan and Udry 1999). With no initial direct link to economic development, industrial organization and business management-oriented researchers in the quest for better understanding of the strategies pursued by successful enterprises develop concepts, theories and tools

on strategic management that soon found application not only for companies but also for nations vying for progress and prosperity. A notable contribution in this strand is the work of Michael Porter. Porter's diamond of competitive advantage forces, value chain and cluster analysis have become common vocabularies for business executives and government officials.² Meanwhile, economic geography and urban economics become in vogue after the seminal contributions of Krugman (1991, 1995) and that of Henderson (1997) and Glaeser (1992). These also somehow dovetailed into valuable contribution in the discussion of trade and economic development when the latter is often initiated and commenced in the cities. We shall highlight three main inter-related concepts in this section: competitive advantage, cluster-based analysis or agglomeration economies and value chain.

2.1 *Competitive Advantage*

The notion of competitiveness of a firm is elevated and extended by Porter to that of a nation. Porter defined the competitive advantage of a nation as its capacity to entice firms (both local and foreign) to use the country as a platform from which to conduct business. He introduced what has become known as the 'diamond of national competitiveness' with four 'facets' determining the competitive strengths and weaknesses of countries and their major sectors. They are:

- Factor conditions (e.g. human resources and research and information infrastructures);
- Firm strategy, structure and rivalry (a business environment that invests in innovation);
- Demand conditions (sophisticated customers will force firms continuously innovate and upgrade) and
- Related and supporting industries (complementary product and services).

Two other variables that Porter believed to be important, but nonetheless auxiliary, were government actions and chance events. Together, they provide the essentials of a new competitiveness framework for analyzing and guiding national economic development.

National prosperity, in Porter's view is created, not inherited. It is highly associated with the 'upgrading' of competitive advantage. There are three broad stages of economic development. The national competitiveness strategy should have a different orientation at each stage. In the beginning at the resource-driven stage, a nation tries to exploit its factor conditions to drive its development. At the next stage, the investment-driven stage, the nation starts attracting foreign technology and investing in capital equipment, while encouraging more savings. Labor- and resource-intensive industries are replaced by industries that are more capital- and technology

² As usual, Porter's work has subsequently spawned many other research efforts that improved and extended the basic competitiveness framework. Contributions include Moon and Perry (1995), Rugman and D'Cruz (1993), Yip (1992) and Zou and Cavusgil (1996), among many others.

intensive. The most successful companies are able to produce higher value-added through product and service differentiation. These companies concentrate on knowledge activities overseas. At final stage, the innovation-stage, the nation turns to innovation as a major driver of its national wealth. The emphasis should be on supporting institutions and extending incentives that reinforce innovation within the business sector. Companies should be encouraged to compete on the basis of unique strategies. The development of service export capacities should be a priority objective. The stages are not strictly sequential and they can overlap.

The differences between Porter's theory of national competitive advantage and the existing theory of international trade and investment are highlighted by their respective public policy implication. Government aims to maximize the level and growth of the nation's living standard, while Porter defines the primary policy goal as:

to deploy the nation's resources (labor and capital) with high and rising levels of productivity... To achieve productivity growth, an economy must continually upgrading. This requires relentless improvement and innovation in existing industries and the capacity to compete successfully in new industries. (p. 617)

The appropriate role for government is to contribute to the conditions that are most conducive to the upgrading of competitive advantage working through each of the four corners of the national diamond and taking actions that improve the interaction between these influences. Porter's view of the appropriate role of government is:

Government's role is a pusher and challenger. There is a vital role for pressure and even adversity in the process of creating national competitive advantage. (p. 681)

Grant (1991) provides several examples on the difference in policy emphasis. For instance, in the area of policy towards R&D, traditional approach recognizes government spending in R&D stimulates the innovation within the country. Defense-related research offers commercial spin-offs. Cooperative research pools efforts and avoids wasteful duplication. In contrast the Porter model emphasizes the importance of diffusion of technology, which implies that research within universities is more effective than research within government laboratories. Government should support research into commercially relevant technologies in preference to defense-related research. Government should support research institutions focused upon industry clusters or cross cutting technologies. Cooperative research may blunt rivalry. Nations that recognize the meaning and importance of competitive advantage and deploy their resources accordingly can expect to be winners in the global economy.

2.2 Cluster-Based Approach and Agglomeration Economies

The cluster concept has gained prominence as an economic policy tool aimed to foster innovation and the growth of a competitive private sector in developing countries. The oft-quoted and much written about cluster in the world is the Silicon Valley. International agencies such as United Nations Industrial Development

Organization (UNIDO), World Bank, Asian Development Bank (ADB) have supported cluster-based development programs that help in identifying good practices for adoption and implementation.

An ‘economic cluster’ is a set of businesses in the same or related field and located near one another, which are linked by service or suppliers relationships, common customers and supporting institutions or other relationships. They compete with one another but also complement one another. Overall, however, they draw productive advantage from their mutual proximity and connections (Cortright 2006). Cluster strategy is first and foremost, an economic development strategy. It provides a coordinated and efficient way to promote economic growth. Properly designed, cluster strategies are a low-cost way to stimulate innovation, new-firm start-ups and job creation by helping to link and align the many factors that influence firm and regional growth.

Clustering of economic activity has been observed for over a century. In his 1890 book *Principles of Economics*, economist Alfred Marshall noted the positive spillover effects that occur when related economic activity co-locates. ‘Agglomeration’ economies have been recognized by economists since at least that time. For the hundred years after Marshall’s book, research on clusters was dominated by economic geographers studying the formation and growth of cities. In 1990, Michael Porter brought the cluster concept into mainstream discussions of business strategy and economic development with his extensive study of clusters, *The Competitive Advantage of Nations*. The advantages of clusters, as described by Porter (1990), are that firms benefit from a shared culture and learning experience, supply capabilities and local infrastructure, and that the resulting economies give them competitive edge in both domestic and international market (Dunning 2006).

A cluster approach and the coordination it brings also helps an industry set priorities and establish a constructive relationship with government. An industry cluster strategy allows public agencies to direct resources more effectively and efficiently. Instead of creating myriad programs that meet the needs of individual firms, public efforts can be focused on meeting the needs of many firms with similar issues.

Other benefits of effective cluster strategies come through firms’ participation in an organized cluster. These benefits include:

- **access to a specialized workforce** (companies in clusters can draw on large markets of people with specialized skills and experience for related firms);
- **access to specialized suppliers** (companies in clusters have access to concentrations of specialized suppliers of inputs and services); and
- **access to extensive networks** (companies in clusters have access to information flows and technological spillovers that speed innovation).

An industry cluster strategy focuses on developing a workforce with the skills and training necessary to strengthen and build competitive, innovation-driven industries. An industry cluster has a clear advantage over individual firms in helping set education and training priorities within a region or state. The cluster also provides cues to students and current workers on future employment options and opportunities to gain both general and specialized skills.

Industry clusters are also a good way to build social capital (relationships that facilitate productive activities) within a community or region. The cluster brings together representatives of industry, government, education and other organizations to work together for the improvement of the economy. It helps to focus public policy on those issues that are likely to have the greatest long-term effect on the economic success of the region.

2.3 Global Value Chain and Global Production Network

The value chain describes the full range of activities that firms and workers do to bring a product from its conception to its end use and beyond. This includes activities such as design, production, marketing, distribution and support to the final consumer. The activities that comprise a value chain can be contained within a single firm or divided among different firms. Value chain activities can produce goods or services, and can be contained within a single geographical location or spread over wider areas.

The idea of a value chain becomes useful for analytical and policy purposes, once we include three further features:

- a. the activities are often carried out in different parts of the world, hence the term global value chain (GVC);
- b. some activities add more value and are more lucrative than others (the policy-makers' concern is to help local enterprises to move into the lucrative activities);
- c. some actors in the chain have more power over the others (governance issues).

The powerful actors are often called the 'lead firms' who seek to 'govern' the chain. They set/or enforce the terms under which the others in the chain operate. A central concern of value chain analysis is to 'unpack' the relationships between global lead firms and local producers—and the opportunities and constraints that result from entering such relationships.

Coming up with good economic policy appropriate to the level of development in an industry and country requires an understanding of how local enterprises fit into the global economy. The way forward is to focus on the sectors in which the local enterprises specialize and then ask how the global market for products from this sector is organized. Often these markets are not free-for-all open spaces. The spaces are coordinated by global buyers who source different parts and services from around the world. There is increasing functional integration between internationally dispersed activities. The outsourcing of manufacturing and service activities from the high-wage to the low-wage economies accelerates this trend. Active participation in international trade and embracing capital and technological advancement via foreign direct investments are likely channels for high economic growth performance.

The rise of GVCs is seen as changing the balance of forces that determine the geographical distribution of economic activity; towards the forces of dispersion and away from those of agglomeration. To put this in another way, the increased ease of

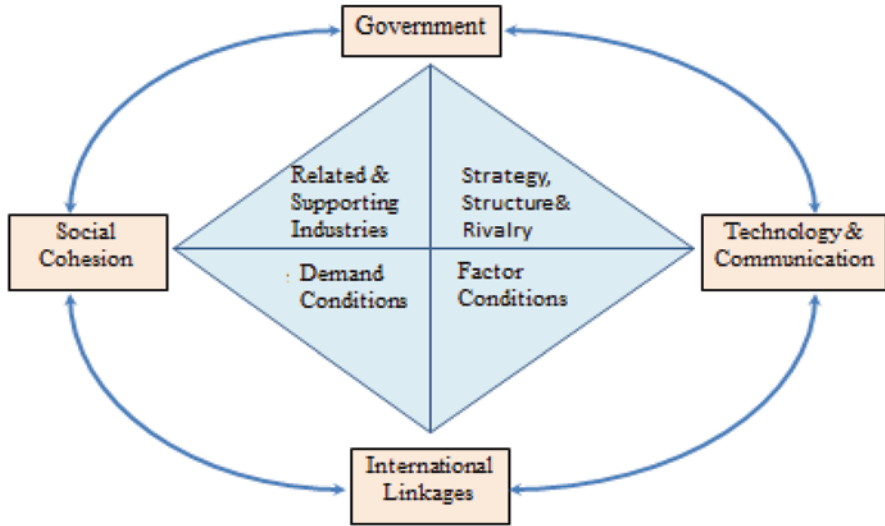


Fig. 1 Determinants of nation's development advantages

coordinating activities across space and reduced costs of communication, that are thought to be behind the growth of GVCs, reduce the benefit of clustering activities (such as in the larger US market) thus allowing them to become more disperse and to take better advantage of geographical differences such as in wages.

The quality of domestic linkages and domestic support systems plays a crucial role in creating international competitiveness. Being competitive internationally requires an effective domestic value chain. This means suppliers that provide on-time delivery of high-quality inputs, as well as support institutions that can test the quality of the inputs and certify conformance with international standards.

Value chain analysis helps the policy maker to find out where the bottlenecks are and provides a framework for sector-specific action. The value chain perspective ensures that action plan of policy makers does not stop with domestic linkages. It highlights the importance of facilitating linkages with the global economy. Multi-lateral trade rounds championed by World Trade Organization (WTO) and/or regional free-trade agreements are channels in which the global linkages can be expanded.

As an attempt to summarize the gist of competitiveness framework for development in a diagrammatic form, four additional factors are superimposed on the Porter nation's diamond to form the *lens of development advantages* in Fig. 1.

Government can be an effective facilitator of economic activities by providing essential infrastructure such as power, utility, roads, ports and telecommunication networks. It can also encourage the use of technology and R&D for both product and process improvement in the economy through grants, fiscal rebates and investment subsidy. In a globalized world, enterprises' profitability and viability can be enhanced by selling abroad and procuring lower-cost material inputs from overseas.

Active government participation in multi-lateral trade negotiation and free-trade agreements, and being open to the presence and participation of foreign multinational corporations in the business sector are also a means to enable the economy to develop international contacts and expand market access in foreign countries. All the development efforts will count to naught, however, if citizens cannot identify with the aspirations of the country. There is a need of social cohesion so that the raw forces of competition will be tamed to improve the well-being of the citizens, and individuals are not rendered into callous digits, devoid of care and compassion by fellow human beings.

3 Conclusion

After the Second World War, the basic Harrod–Domar growth model has become a standard theory used by many practitioners in their preparation of economic development plans. Economic development strategies in the 1940s till 1960s were much dominated by the debate between balanced growth championed by Ragnar Nurkse and Rodenstein-Rodan and unbalanced growth led by Albert Hirschman. Unbalanced growth doctrine favors using the limited resources to develop identified strategic sector, which will then pull and push other sectors to support and achieve overall growth. The unbalanced growth approach somewhat jived with theories based on economic dualism associated with researchers like Arthur Lewis, John Fei and Gustav Ranis. The basic dual economy theory explains how an agrarian economy with no modern industrial sector is transformed into a mature industrial economy. The idea of development as transformation from primitive traditional society to one characterized by high mass consumption was skillfully described by Rostow's book in 1961.

By the end of the 1980s, new theories that have substantive impact on economic development were propounded by academics and researchers in field of business strategies, urban planning and spatial economics. Many of these have neoclassical economics foundation and also have derived insights from increased spatial interdependence and competition attributed to globalization and availability of new communication technologies. New concepts like competitive advantage, economic cluster, agglomeration economies and GVC become increasingly familiar in development economics.

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