

## Session 5

# Rostow's stages of Economic growth

The **Rostow's Stages of Economic Growth** model is one of the linear economic models of historic economic growth. It was presented by American economist Walt Whitman Rostow in 1960 as an alternative view of Marxist interpretation of history. Thus the model was recognized as political theory as well as descriptive economic analysis of growth and development (Thirwall, 2006). Rostow argued that economic take-off must initially be led by a few individual sectors. This belief was based on the theory of comparative advantage presented by David Ricardo. He criticized Marxist revolutionary views on economic transition. This became one of the important concepts in the theory of modernization in social evaluation (Wikipedia, 2016)

Rostow's model does not disagree with [John Maynard Keynes](#) regarding the importance of government control over domestic development which is not generally accepted by some ardent free trade advocates. The basic assumption given of Rostow's theory is that countries want to modernize and grow and that society will agree to the [materialistic](#) norms of economic growth.

Thus Rostow's thesis has identified five stages of economic development according historic economic performance of developed countries.

1. Traditional society
2. Preconditions for self-sustaining growth
3. Take-off
4. Drive to maturity
5. The stage of High mass consumption

### 1. Traditional society

Traditional societies are characterized by nature and limitation of technology. Thus more than 75 percent of labour force is occupied in agricultural activities. Low Social mobility and great division of wealth and political power were recognized as other main features.

Wars, famines and epidemics like plague cause initially expanding populations to halt or shrink, limiting the single greatest factor of production: human manual labor. Volume fluctuations in trade due to political instability are frequent; historically, trading was subject to great risk and transport of goods and raw materials was expensive, difficult, slow and unreliable. The manufacturing sector and other industries have a tendency to grow but are limited by inadequate scientific knowledge and a "backward" or highly traditionalist frame of mind which contributes to low labour productivity. In this stage, some regions are entirely self-sufficient.

In settled agricultural societies before the Industrial Revolution, a hierarchical social structure relied on near-absolute reverence for tradition, and an insistence on obedience and submission. This resulted in concentration of political power in the hands of landowners in most cases; everywhere, family and lineage, and marriage ties, constituted the primary social organization, along with religious customs, and the state only rarely interacted with local populations and in limited spheres of life. This social structure was generally feudalistic in nature. Under modern conditions, these characteristics have been modified by outside influences, but the least developed regions and societies fit this description quite accurately.

Thus it is characterized by

- subsistence agriculture or [hunting and gathering](#); almost wholly a "primary" sector economy
- Limited technology
- A static or 'rigid' society: lack of class or individual economic mobility, with stability prioritized and change seen negatively

## **2. Pre-conditions** for self-sustaining growth

According to Rostow, pre-condition of takeoff were characterized by change in political and social transition from feudalism (Thirwall, 2006). Thus the stage between feudalism and takeoff is called as transitional stage. The main economic requirement in the transition phase is the level of investment should be increased at least to 5- 10 percent of national income to ensure self-sustaining growth.

The main direction of investment is for developing physical and social infrastructure i.e. transport.

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. Lastly, the surplus attained should not be wasted on the [conspicuous consumption](#) of the land owners or the state, but should be spent on the development of industries, infrastructure and thereby prepare for self-sustained growth of the economy later on. Furthermore, agriculture becomes commercialized and mechanized via technological advancement; shifts increasingly towards cash or export-oriented crops; and there is a growth of agricultural entrepreneurship.

The strategic factor is that investment level should be above 5% of the [national income](#). This rise in investment rate depends on many sectors of the economy. According to [Rostow](#) capital formation depends on the productivity of agriculture and the creation of social overhead capital. Agriculture plays a very important role in this transition process as the surplus quantity of the produce is to be utilized to support an increasing urban population of workers and also becomes a major exporting sector, earning foreign exchange for continued development and capital formation. Increases in agricultural productivity also lead to expansion of the domestic markets for manufactured goods and processed commodities, which adds to the growth of investment in the industrial sector.

Social overhead capital creation can only be undertaken by government, in Rostow's view. Government plays the driving role in development of social overhead capital as it is rarely profitable, it has a long gestation period, and the pay-offs accrue to all economic sectors, not primarily to the investing entity; thus the private sector is not interested in playing a major role in its development.

On the social front, a new elites must emerge to construct the industrial society and it must be superseded authority of land based elites of the traditional society. Surpluses must be channeled by new

elites from agriculture to industry (Thirwall, 2006). In summary, the country would be able to achieve following requirements at this stage.

- Develop social infrastructure such as transport, irrigation and communication
- Increase food production sufficiently to feed population
- Increase imports while increasing capital goods and expanding entrepreneurial activities

All these changes effectively prepare the way for "take-off" only if there is basic change in attitude of society towards risk taking, changes in working environment, and openness to change in social and political organizations and structures. The pre-conditions of take-off closely track the historic stages of the (initially) British Industrial Revolution.

## 2. Take off

The characteristics of takeoff is sometimes difficult to distinguish from the stage of pre-condition to take off. However, since the pre conditions for the takeoff have been met in the transition stage, take off is a short stage of development that takes nearly two decades. Development become self-sustaining and investment must rise exceeding 10 percent of national income so as to increase per capita income and level of investment. According to historical records, domestic finance for takeoff has fulfilled through two main sources i.e. agricultural taxes, rents (Meiji reforms, Japan, and voluntary investment by land lords.

According to Rostow there are three main requirements for take-off:

1. *"The rate of productive investment should rise from approximately 5% to over 10% of national income or net national product*
2. *The development of one or more substantial manufacturing sectors, with a high rate of growth;*
3. *The existence or quick emergence of a political, social and institutional framework which exploits the impulses to expansion in the modern sector and the potential external economy effects of the take-off"* I.e., the needed capital is mobilized from domestic resources and is steered into the economy and not into domestic or state consumption.

Industrialization becomes a crucial phenomenon as it helps to prepare the basic structure for structural changes on a massive scale. Rostow says that this transition does not follow a set trend as there are a variety of different motivations or stimulus which began this growth process. Take off requires a large and sufficient amount of loanable funds for expansion of the industrial sector which generally come from two sources which are:

1. Shifts in income flows by way of taxation, implementation of land reforms and various other fiscal measures.
2. Re-investment of profits earned from foreign trade as has been observed in many East Asian countries. While there are other examples of "Take-off" based on rapidly increasing demand for domestically produced goods for sale in domestic markets, more countries have followed the export-based model, overall and in the recent past. The US, Canada, Russia and Sweden are examples of domestically based "take-off"; all of them, however, were characterized by massive capital imports and rapid adoption of their trading partners' technological advances. This entire

process of expansion of the industrial sector yields an increase in rate of return to some individuals who save at high rates and invest their savings in the industrial sector activities. The economy exploit their underutilized natural resources to increase their production.

Country	Take-off Period
Great Britain	1783-1802
Russia	1890-1914
United States	1843-1860
Germany	1850-1873
Canada	1896-1914
China	1952
India	1952

Tentative take-off dates.

The take-off also needs a group of entrepreneurs in the society who pursue innovation and accelerate the rate of growth in the economy. For such an entrepreneurial class to develop, firstly, an ethos of "delayed gratification", a preference for capital accumulation over expenditure, and high tolerance of risk must be present. Secondly, entrepreneurial groups typically develop because they cannot secure prestige and power in their society via marriage, via participating in well-established industries, or through government or military service (among other routes to prominence) because of some disqualifying social or legal attribute; and lastly, their rapidly changing society must tolerate unorthodox paths to economic and political power.

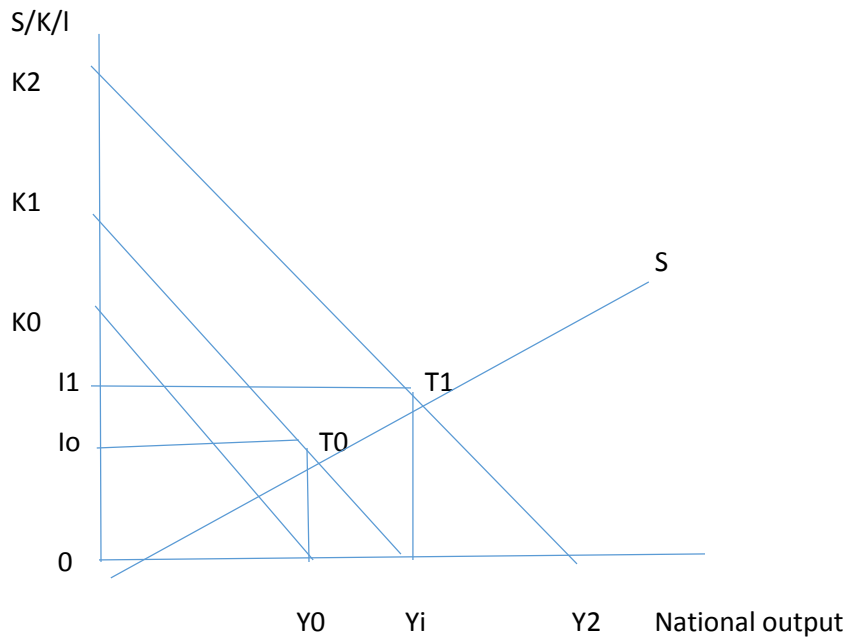
Development of export industries has led to take off in some countries. Example grains in USA, Canada and Russia, Timber in Sweden. Sector or the sectors that led to take off were varied according to countries. However, Rostow has concluded that any industry can play the role of leading sector in the take off stage that to be met with (Thirwall, 2006):

- ❖ That the market for the product is expanding rapidly to provide a firm basis for the growth of output.
- ❖ That the leading sector generates secondary expansion
- ❖ That the sector has an adequate and continual supply of capital from surplus profit
- ❖ That the new production function can be continually introduced in to the sector by increased productivity.

At the take off stage, the economy will transform as follows;

- Urbanization increases, Industrialization proceeds, Technological breakthrough occurs
- the "secondary" (goods-producing) sector expands and ratio of secondary vs. primary sectors in the economy shifts quickly towards secondary
- Increase growth rates in industrial sector.
- Changes in social and political institutions
- Decrease the capital output Ratio

Fig. 5.1 Economic Growth and Decrease Capital Output Ratio



K and Y represent Capital and National output respectively

T0 Y0/Y0Y1 represents marginal capital output ratio

S represents savings

According Rostow, savings rate and capital output ratio is inelastic (slope of saving curve is high ) during the pre-condition of take off period. It happen due to low savings during pre-condition of take off period. However savings ratio is increased during takeoff period and consequently investment ratio also increased. Thus during pre-condition period, at I0 investment, national output increase by  $0Y_0 - 0Y_1$  and at I1 investment, national output increase by  $T_1 Y_1 - Y_2$  . Thus capital output ratio is decreased during takeoff period.

#### 4. Drive 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. Some 10-20% of the national income is steadily invested,* permitting output regularly to outstrip the increase in population. The make-up of the economy changes unceasingly as technique improves, new industries accelerate, and older industries level off. The economy finds its place in the international economy: goods formerly imported are produced at home; new import requirements develop, and new export commodities to match them. The leading sectors will in an economy be determined by the nature of resource endowments and not only by technology.

<b>Country</b>	<b>Maturity Year</b>
<b>Great Britain</b>	<b>1850</b>
<b>Russia</b>	<b>1950</b>
<b>United States</b>	<b>1900</b>
<b>Germany</b>	<b>1910</b>
<b>Canada</b>	<b>1950</b>

Tentative drive to maturity dates.

On comparing the dates of take-off and drive to maturity these countries reached the stage of maturity in approximately 60 years.

The structural changes in the society during this stage are in three ways:

- Work force composition in agriculture shifts from 75% of the working population to 20%. The workers acquire greater skill and their wages increase in real terms.
- The character of leadership changes significantly in the industries and a high degree of professionalism is introduced
- Environmental and health cost of industrialization is recognized and policy changes are thus made.

During this stage a country has to decide whether the industrial power and technology it has generated is to be used for the welfare of its people or to gain supremacy over others, or the world in total.

A prime example of a country in the Drive to Maturity stage is South Africa. It is developing a world-class infrastructure- including a modern transport network, widely available energy, and sophisticated telecommunications facilities. Additionally, the commercial farm sector shed 140,000 jobs, a decline of roughly 20%, in the eleven-year period from 1988 to 1998.

This diversity leads to reduction in poverty rate and increasing standards of living, as the society no longer needs to sacrifice its comfort in order to build up certain sectors

- diversification of the industrial base; multiple industries expand and new ones take root quickly
- manufacturing shifts from investment-driven (capital goods) towards consumer durables and domestic consumption
- rapid development of transportation infrastructure
- Large-scale investment in social infrastructure (schools, universities, hospitals, etc.)

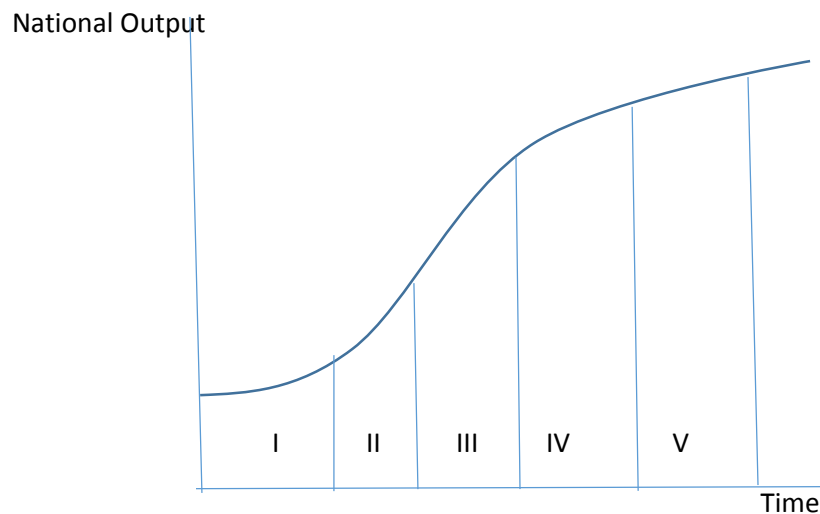
##### **5. Age of high mass consumption]**

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. Rostow uses the Buddenbrooks dynamics metaphor to describe this change in attitude. In [Thomas Mann's](#) 1901 novel, [Buddenbrooks](#), a family is chronicled for three generations. The first generation is interested in economic development, the second in its position in society. The third, already having money and prestige, concerns itself with the [arts](#) and [music](#), worrying little about those previous, earthly concerns. So too, in the age of high mass consumption, a society is able to choose between concentrating on [military](#) and [security](#) issues, on [equality](#) and [welfare](#) issues, or on developing great [luxuries](#) for its upper class. Each country in this position chooses its own balance between these three goals. There is a desire to develop an egalitarian society and measures are taken to reach this goal. According to Rostow, a country tries to determine its uniqueness and factors affecting it are its political, geographical and cultural structure and also values present in its society.

Historically, the United States is said to have reached this stage first, followed by other western European nations, and then Japan in the 1950s.

Fig. 5.2 Rostow's Growth Stages



### Criticism of the model

1. Rostow is **historical** in the sense that the end result is known at the outset and is derived from the historical geography of a developed, bureaucratic society.
2. Rostow is **mechanical** in the sense that the underlying motor of change is not disclosed and therefore the stages become little more than a classificatory system based on data from developed countries.
3. His model is based on American and European history and defines the American norm of high mass consumption as integral to the economic development process of all industrialized societies.

4. His model assumes the inevitable adoption of [Neoliberal](#) trade policies which allow the manufacturing base of a given advanced polity to be relocated to lower-wage regions.
5. Rostow's model does not apply to the Asian and the African countries as events in these countries are not justified in any stage of his model. The stages are not identifiable properly as the conditions of the take-off and pre take-off stage are very similar and also overlap.
6. According to Rostow growth becomes automatic by the time it reaches the maturity stage but Kuznets asserts that no growth can be automatic there is need for push always.
7. There are two unrelated theories of take off one is that take is a sectoral and a non-linear notion and other is that it is highly aggregative.

**Rostow's thesis** is biased towards a western model of modernization, but at the time of Rostow the world's only mature economies were in the west, and no controlled economies were in the "era of high mass consumption." The model de-emphasizes differences between sectors in capitalistic vs. communistic societies, but seems to innately recognize that modernization can be achieved in different ways in different types of economies.

The most disabling assumption that Rostow took is of trying to fit economic progress into a linear system. This assumption is false as due to empirical evidence of many countries making false starts then reaching a degree of progress and change and then slipping back. E.g.: In the case of contemporary [Russia](#) slipping back from high mass consumption to a country in [transition](#), the main cause being the end of the Cold War and geopolitical struggles.

Another problem that Rostow's work has is that it considered large countries with a large population ([Japan](#)), with natural resources available at just the right time in its history ([Coal](#) in [Northern European countries](#)), or with a large land mass ([Argentina](#)). He has little to say and indeed offers little hope for small countries, such as [Rwanda](#), which do not have such advantages. [Neo-liberal economic theory](#) to Rostow, and many others, does offer hope to much of the world that economic maturity is coming and the age of high mass consumption is nigh. But that does leave a sort of 'grim meathook future' for the [outliers](#), which do not have the resources, political will, or external backing to become [competitive](#).

- Simon Kuznets threw doubts upon Rostow's theory. He argued that many countries which have now reached developed status did so without seeing a significant increase in their savings rate.
- The theory does not account for exceptions, e.g. falling output in the USSR under a communist regime; the corrupt and failing government in Zimbabwe has reversed development advances; increased globalisation means that a country's growth rate does not lie solely in its own hands and international competition and protectionism may prevent an economy from moving through the latter stages

### **Relevant to Developing Countries**

**The model was developed by considering development performance of developed countries. But applying model for developing countries is not easy as anticipated because the situations in developing countries are not similar as the western countries. Globalization has changed the world through the economic inter dependency across the world.**



### Recommended Reading

Rostow, W. W. (1960). *The Stages of Economic Growth: A Non-Communist Manifesto*. Cambridge University Press.

- Baran, P.; Hobsbawm, E. J. (1961). "The Stages of Economic Growth". *Kyklos* **14** (2): 234–242.
- Hunt, Diana (1989). "[Rostow of the Stages of Growth](#)". *Economic Theories of Development: An Analysis of Competing Paradigms*. New York: Harvester Wheatsheaf. pp. 95–101. [ISBN 0-7450-0237-4](#).
- Meier, Gerald M. (1989). "[Sequence of Stages](#)". *Leading Issues in Economic Development (Fifth ed.)*. New York: Oxford University Press. pp. 69–72. [ISBN 0-19-505572-1](#).