ECONOMIC DEVELOPMENT

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فهرس الموضوعات

Chapter One

Growth, Development And Economic Planning

Topic One

Economic development

What is economic development?

As a result of the multiplicity of concepts of economic development and the existence of a kind of confusion between it and other concepts such as evolution, progress and economic growth, many attempts have been made to define the concept of development, until this concept has become one of the common concepts among individuals or organizations.

Economist Schumpeter was the first to attempt to distinguish between economic growth and development. Growth usually occurs due to population growth, wealth and savings, while development results from technical progress and innovation. Growth is the occurrence of quantitative changes in some economic variables. Development involves qualitative changes in these variables. It is clear from this that economic growth precedes development and is a short-term phenomenon, while

development only occurs in the long term and can only be judged after a relatively long period of time.

Therefore, we conclude that growth is a process of automatic, steady and continuous increase, and a slow, gradual development that occurs in a certain aspect of life. As for development, it is a process of achieving a deliberate and permanent cumulative increase that occurs over a period of time and requires a strong push through organized efforts so that it leads society out of a state of stagnation and backwardness and into a state of progress and growth. The United Nations report indicates that the problem of underdeveloped countries is not in their need for mere growth, but in their need for development, whether social or economic, in a qualitative and quantitative manner.

In 1956, the United Nations defined economic development as the processes by which the efforts of citizens and government can be united to improve the economic, social and cultural conditions of local communities, and to assist communities and

contribute to their progress to the greatest extent possible.

Seltz and Rostow agreed that development occurs when underdeveloped societies abandon their traditional characteristics and adopt the characteristics of advanced societies.

From the above, it is clear that the concept of development is represented in being "planned and directed processes in various fields that bring about change in society to improve its conditions and the conditions of its individuals by confronting the problems of society, removing obstacles, and achieving the optimal exploitation of potential in a way that achieves progress and growth for society and well-being for individuals."

Definition of development:

Development is defined as a historical and civilizational event that affects various aspects: economic, social, cultural, security and moral in society. It is not only an economic phenomenon but extends beyond the material and financial aspects of

human life. Rather, it is a multi-faceted process that includes increasing output and income and also includes bringing about a radical change in institutional, social and administrative parties in addition to changing people's attitudes, customs and traditions.

Economic development can be defined as:

A set of deliberate measures and procedures that represent a change in the structure and framework of the national economy and aim to achieve a rapid and permanent increase in the per capita share of the gross national product, over an extended period of time, so that the vast majority of individuals benefit from it.

Development requirements:

1- Changing the structure of the national economy:

The goal of development is to achieve a rapid and permanent increase in the per capita share of the gross national product. This can only be achieved by changing the structure and structure of the national economy.

The change in the structure and structure of the national economy may come about through the discovery of natural resources, or it may occur through the expansion of capital formation, or through the development of exports and the increase in foreign currency earnings.

2- Increase the per capita share of the product:

It is not enough to simply increase the national income to bring about development. Rather, the individual share of the national product must increase. Therefore, it cannot be said that there is economic development unless the increase in the national income results in an increase in the individual share of this income.

3- Increase real income, not cash income:

The increase in real income refers to the increase in the individual's share of goods and services produced.

4- The increase must be continuous:

The increase in the individual share must be continuous over an extended period of time. If there must be a continuous increase in the individual share of real output, this does not mean that this increase should be at a fixed rate every year.

5- The majority must benefit from development:

The increase in per capita income must benefit the majority of individuals. In other words, the increase in per capita income must not be limited to certain groups of society without the benefit of other groups.

6- Development is not only material:

Changing and developing the structure and construction of the national economy must be accompanied by an influential change in the social, cultural and civilizational aspects, such as increasing the education rate, raising the health level and educating individuals.

7- Development includes a moral dimension:

Development is about achieving basic human values. These values include creating opportunities for real employment and the ability to provide food, shelter and clothing, in a way that ensures a decent life above the poverty line. They also include the opportunity to spread education, increase health care, social security, democracy and political participation.

Objectives of Economic Development

1 – Satisfying the basic needs of individuals:

We emphasize here the justice of necessary goods and services, as this will not be achieved through market mechanisms or through income redistribution policies, but rather through new patterns of investment and production, so as to create new employment opportunities for every individual who is able and willing to work. This means that economic development is a basic condition for improving living conditions by raising the level of real income.

2 – Self-realization and affirmation of the sense of humanity:

The nature of self-realization and the forms of its expression differ from one society to another and from one culture to another, and if wealth and material intervene and take an advanced place in the conditions necessary for self-realization and affirmation of the sense of humanity, there is no way to achieve this wealth except through development.

3 – Providing freedom and the ability to choose:

Freedom in the economic concept means the freedom to make decisions without any interference from the

government except to the extent required by the public interest of society, and thus a person is free to own wealth, protect it and dispose of what he owns.

Economic growth

The concept of economic growth:

Economic growth means achieving a high rate of both national income and real individual income, which leads to providing a better standard of living. It refers to quantitative change, and is usually measured by the increase in the average per capita share of output or income.

Economic growth is also considered one of the basic goals that governments seek, and peoples aspire to; because it represents the material result of economic and non-economic efforts made in society; as it is one of the necessary conditions for improving the standard of living of societies, and it is an indicator of their prosperity, and economic growth is linked to a group of essential factors in society that are considered a suitable climate for its development; such as the availability of highly efficient institutions, good governance, community participation,

scientific research, health and education.. Thus, the process of achieving a reasonable level of growth has become organically linked to the availability of this influential climate.

Section Two

Economic Planning

The nature and history of economic planning

Since economics was not a coincidence, but rather the product of developments of generations and human experiences throughout the ages, economic planning was consequently the product of those developments.

The roots of planning go back to the days of the Greeks, specifically in the era of Plato, who indirectly referred to the concept and process of planning through his ideal city (Plato's book The Republic). Before that, Pharaonic Egypt was the center of civilizational radiation and over the course of thousands of years.

According to what was stated in the interpretations of the heavenly books (Islamic and Christian), Joseph, peace be upon him, began planning the economy of Egypt when he was thirty years old when the Pharaoh summoned him and made him the Minister of Economy and Finance, and gave him absolute powers to manage the country's economy. In light of the remarkable scientific progress at that time, Joseph, peace be upon him, was able to develop

an accurate distribution plan based on counting the living population during the 14 years of the plan in a manner not much different from what is currently studied in probability theory. He also allocated each individual his annual share and daily share of provisions based on what is known today as the subsistence limit. All this indicates that the ancient world knew economic crises and was able to apply the emergency system and economic planning to treat those crises.

With the outbreak of World War I between Germany on the one hand and France and Britain on the other hand, planning was adopted as a method of managing the course of war, and mobilizing economic resources to equip armies and supply them with the armies, equipment, provisions and ammunition they needed. Planning in capitalist countries at that time was considered a temporary means of organizing the process of transforming the national economy from peacetime to wartime. As soon as World War I ended, the capitalist system was struck by the Great Depression (1929–1932). During that period, levels of production, consumption and income declined, prices rose, and goods piled up in

warehouses and stores, leading to the layoff of workers and the spread of unemployment and poverty. This crisis led to the undermining of confidence in the free economic system, which relied on the idea of automatic equilibrium. It became clear that the invisible hand that Adam Smith spoke about in his book The Wealth of Nations was insufficient to ensure growth, stability and full use of economic resources. It also became clear that Say's law of outlets had failed, which states that products create demand for them, or supply creates its own demand. The ideas of the British economist John Maynard Keynes in his book published in 1936 "The General Theory of Interest, Employment and Money" contradicted the ideas of classical economic thought by focusing on the demand side rather than the supply side. Keynes suggested to get out of the depression crisis by increasing public spending and the necessity of state intervention in economic life, and planning to increase the volume of effective demand that restores activity and effectiveness and moves the wheel of the economy.

World War II occurred to transform the economies of countries from peace economies to war economies once

again. Here, there was a need for countries to adopt the planning approach, just as happened in the first war. As soon as the war ended, the United States of America rushed to provide assistance to Western European countries to rebuild what was destroyed by the war, through what was known as the Marshall Plan to confront their economic and social problems and revive their economies. Countries were obliged to adopt a planning approach to estimate reconstruction needs (France and Britain in 1946).

At the end of World War II, the countries of the world were divided into three groups:

- First World countries, which are the capitalist industrial countries (free economy).

- Second World countries, which are the socialist industrial countries (central planning).

-Third World countries, which are the poor, backward countries.

Several developing countries, with the help of international organizations, adopted the economic planning approach to raise economic growth rates and achieve

economic development goals. The concept of economic planning was associated with the Eastern Bloc countries, which adopted the central planning approach as an alternative system to the market system that prevailed in capitalist countries. Accordingly, it was believed that the collapse of the Soviet Union in the early nineties was the end of economic planning, but the reality is that there is no synonymy between planning and socialism or between lack of planning and capitalism, as economic planning is not limited to socialist countries, but is a necessity for any country in which the market system alone is unable to achieve sustainable development in the required manner.

Planning and the economic problem

We studied in the principles of economics that there is a human need that turns into a desire that requires satisfaction, and there are means to satisfy these desires. These means are economic resources represented by natural, human and capital resources that are used in the production of various goods and services.

Resources are characterized by being rare and limited in relation to the abundance of needs, and the criterion of

scarcity is the existence of a price for these resources, and accordingly they are called economic resources to distinguish them from free resources that have no price and that exist in nature in large quantities, and humans do not make any effort to obtain them, such as the sun, air and sea water.

As we have learned about the nature of the economic problem, which is the limited economic resources available for multiple and unlimited human needs, while the resources available to satisfy these needs are limited compared to the need for them, the economic problem is a problem of "scarcity" and a problem of "choice".

To solve the economic problem, society must answer three questions: What does it produce? How does it produce? And for whom does it produce? The answer to the previous questions varies from one society to another depending on its circumstances, stage of growth and development, and depending on the economic system followed, whether it is a capitalist economic system? Or a planned economic system?

In the market system (capitalist system) that enjoys perfect competition, society produces the goods and services that consumers prefer. The elements of production are mixed and used, and production methods are determined to achieve the highest levels of production at the lowest possible costs. Production is distributed according to the income of the elements of production, which is determined according to the interaction of the forces of supply and demand in the market (according to relative scarcity). As for the planned economic system, society produces those goods and services that society needs as a whole, so that a higher planning body tests the appropriate production methods to achieve the lowest production cost. Production is distributed according to the effort exerted by the participants in the production process and according to the decisions of the supreme planning authority.

As some believe, one of the two previous systems is exclusively not applicable in practice, as each country mixes the two systems to varying degrees. The two systems cannot be separated completely or replaced by one of them, as the market plays an important role in

planned economies; state intervention and economic planning have their important role in market economies.

The concept of economic planning:

Planning, or what is known as national planning, is a new system that was not adopted until the twenties of the last century, when the two world wars drew attention to the importance of planning, whether to win the war or to rebuild what was destroyed by the war. The credit for using the term planning goes to the Austrian "Christian Schwender" in an article on economic activity published in 1910 AD, and the term did not gain its fame until after 1928 when the Soviet Union began using planning as a method of organizing its national economy.

Planning, as Jawaharlal Nehru said, is "an intelligent practice of interacting with facts and situations as they are in reality and trying to find solutions to upcoming problems." In the following parts of the article, we will discuss the definition of economic planning in some detail.

Economic backwardness

It is easy to talk about economic backwardness, but it is difficult for us to put a comprehensive and accurate definition of the meaning of backwardness. If economists have not reached an agreement on the definition of economics, it is not strange that they have failed to reach a unified definition for one of its branches called development economics or for one of its concepts, "economic backwardness". The famous economist "Kuznets" believes that backwardness carries three meanings:

Firstly:

Backwardness means not benefiting from the productive capacity provided by the use of modern technical and technological methods due to the strong resistance shown by social institutions in the face of such use.

Secondly:

Backwardness means the weak economic performance of the backward country compared to the most advanced countries at a given moment.

Thirdly:

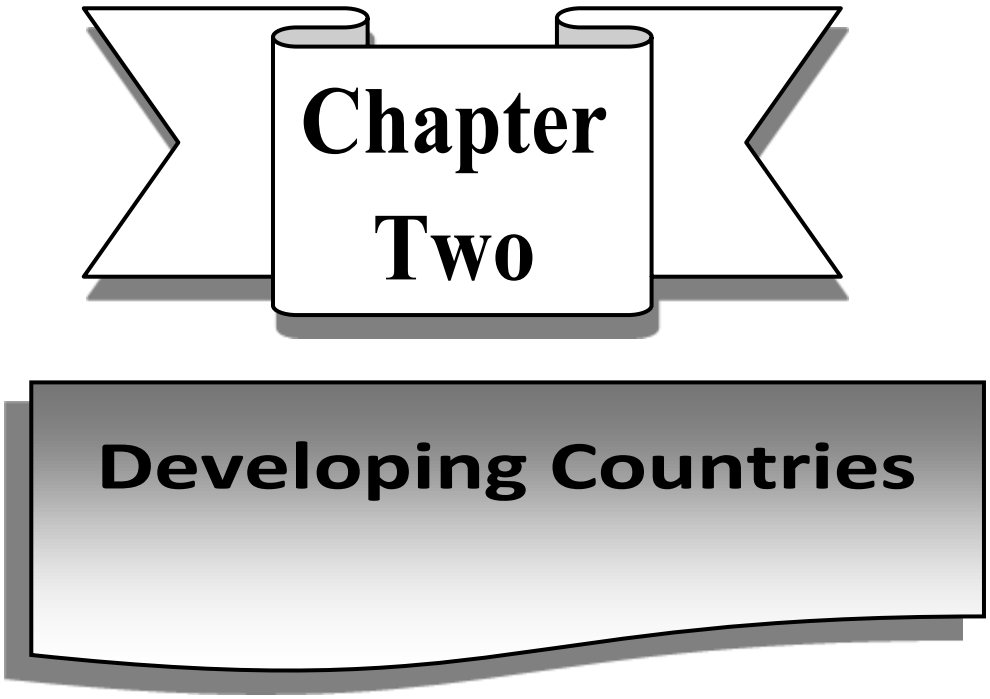
Backwardness is the state of poverty experienced by the backward country, represented by its inability to guarantee the minimum level of material well-being for most of its population.

Other writers believe that backwardness is the state of countries whose levels of production and income are much lower than what their resources allow them to raise their levels of production and income much more than they are. They are poor or developing countries, but they are not backward countries. According to them, backwardness always suggests that development is possible and desirable.

As for the French writer Yves Lacoste, he sees backwardness as a historical phenomenon resulting from a contradictory economic and social situation. On the one hand, this situation resulted in rapid population growth in underdeveloped countries. While: the state of backwardness does not allow for meeting the needs resulting from the increasing population growth. Thus, Lacoste sees that there is a purely internal meaning to

backwardness, in addition to what backwardness means in terms of a decline in production and income compared to developed countries.

Accordingly, we say that backwardness is a state of a group of countries that share common characteristics, the most important of which are: a low level of contribution of the industrial sector to the national product and in the use of the labor force, high disguised unemployment in the agricultural and government sectors, low volume of available capital, primitiveness and duplication of the technology used, dependence on the outside, population explosion, low health and educational levels, scarcity of competent organizers and administrators, and the prevalence of outdated social and moral values, etc.


Chapter
Two
Developing Countries

Chapter Two

Developing Countries

Characteristics of developing countries

Before we study the characteristics of an underdeveloped country, it is essential to understand the meaning of the term underdeveloped and the criteria of underdevelopment.

Meaning of the Term Underdeveloped

The term "underdeveloped" has been used in a variety of ways. "Undeveloped" and "underdeveloped" countries are often used as synonyms. But these two terms are easily distinguishable. An undeveloped country is one which has no prospects of development. An underdeveloped country, on the other hand, is one which has no potentialities of development. The Antarctic, the Arctic and parts of the Sahara may be termed as undeveloped, while India, Pakistan, Uganda, Columbia, Panama, etc, may be called underdeveloped. "Poor" and "backward" are also used as synonyms for "underdeveloped". A poor country does not mean a young country. Poverty simply refers to the low level of per capital income of a country. It has nothing to

do with the country's culture. "Backward countries" is a static term like the term underdeveloped. So the terms poor and underdeveloped are interchangeable. A more respectable term developing countries has also come to be used in economic literature. However, Bauer regards the expression underdeveloped, developing and less developed as clearly euphemisms. The terms underdeveloped and developing are especially inappropriate euphemisms: underdeveloped because it so clearly suggests that the condition it describes is abnormal, reprehensible and also perhaps readily rectifiable. The term developing because its use leads to such contradictions as reference to the stagnation or retrogression of the developing world. According to him poor or materially backward are the most appropriate expressions.[1] The World Bank uses the term developing Countries and divides them into low income and middle income countries. Middle income countries are further divided into lower-Middle income and upper- middle countries. Of late, a new term Third World[2] is being used.

[1] - P.T. Bauer Dissent on Development 1973.

[2]- The A; I can, the Asian and the Latin American member countries of the United Nation prefer to call themselves collectively as the Third World. They do so to distinguish themselves from the economically advanced capitalist countries of the "first world and the socialist countries of the second world.

Ye shall be using all these terms interchangeably throughout the text.

Characteristics of underdeveloped countries

Economists differed in setting a comprehensive and accurate definition for the concept of economic backwardness, but they agreed that there are characteristics and indicators that distinguish developing countries. These are indicators that only need to be available in one country and others in another country in order for it to be called a developing country. The most important of these characteristics and indicators can be indicated as follows:

First: Per capita income

It is generally observed that there is an inverse relationship between population growth and per capita income, and we often find that the highest population growth rates are found in the poorest countries. In fact, per capita income or gross national product is not always an accurate measure of the level of economic development, as gross

national product measures the income generated by residents of a particular country through their production of final products and goods. There are a number of errors and problems related to measuring national income and population.

Per capita income as a measure cannot be used to control the difference in income distribution, for example.

Second: Inequality in income distribution

The greater the inequality in income distribution among members of a society, the more it indicates the backwardness of that society. However, a decrease in the degree of inequality in income distribution among individuals is not considered conclusive evidence of progress. In general, the most famous methods used to identify the extent of inequality in the distribution of income and wealth among individuals are the Lorenz curve and the Gini coefficient, which will be studied in more detail when explaining the importance and method of income redistribution.

Third: Infant mortality rate (IMR)

This indicator is widely used to indicate the degree of development in a country, and it is the number of children who die before reaching one year of age for every thousand births. For the least developed economies, the infant mortality rate is more than 100 per thousand, meaning that at least one child dies for every ten infants. With economic development, this indicator declines to less than ten per thousand

Fourth: The status of women:

This indicator focuses on the status of women. It is the average number of girls enrolled in secondary schools. It is noted that this indicator is low in developing countries compared to developed countries. We find that less than a quarter of girls in many developing countries are enrolled in secondary schools. As for developed countries, the average number of girls enrolled in secondary schools exceeds 85%

Fifth: Structural change:

It is a complementary and integrated component with other indicators in economic development processes, and it includes the transfer or migration of population and resources from rural to urban areas. In developing countries, it is noted that three-quarters of the population is still present in rural areas despite the continued migration from rural to urban areas. In general, it is noted that countries bordering the Sahara Desert in Africa and Southeast Asia are lagging behind in terms of the infant mortality rate and the number of girls enrolled in secondary schools.

Sixth: Purchasing power parity measure

When making international comparisons between income levels in different countries as approximate measures of development, there must be a common basis on which these comparisons can be made, which is a single international currency in which national incomes are calculated in different countries.

When making international comparisons, the national currency numbers of each country may be converted into a unified currency for comparison, which is the US dollar, in what is known as the exchange rate.

These exchange rates can be used in the case of goods that are exchanged internationally, such as tea, rice, cotton, computers, and others, because the exchange rate here gives each of them similar values due to international competition that makes the prices of these products close.

As for non-exchangeable goods and services (i.e. those that do not fall within the scope of international trade), the prices of such products may differ greatly and it may be difficult to find a convergence in estimating their value, as we find that the disparity between the relative prices of goods and services in different countries represents a real obstacle to international comparisons. For example, if we have the following data:

Commodity	Country X		Country Y	
	Production	price	Production	price
Apple	12	2	8	4
Banana	4	1	16	0.5

1 – If the production value of both countries is estimated at country X prices, we find that:

The total production of country X is:

The value of apple production $12 \times 2 = 24$ pounds

+ The value of banana production $4 \times 1 = 4$ pounds

The total production of country X = 28 pounds

The total production of country Y is:

The value of apple production $8 \times 2 = 16$ pounds

+ The value of banana production. $16 \times 1 = 16$ pounds

The total production of country Y = 32 pounds

2 – If the production value of both countries is estimated at country Y prices, we find that:

The total production of country X is:

The value of apple production $12 \times 4 = 48$ pounds

+ **The value of banana production** $4 \times 0.5 = 2$ **pounds**

The total production of country $= 50$ **pounds**

The total production of country Y is:

The value of apple production $8 \times 4 = 32$ **pounds**

+ **The value of banana production** $16 \times 0.5 = 8$ **pounds**

The total production of country $= 40$ **pounds**

It is clear from the previous figures that:

When using prices for (X), the value of production of (Y) was greater than the value of production of (X). But when using prices for (Y), the value of production of (X) was greater than the value of production of (Y).

Therefore, it can be said that:

Often international comparisons of variables such as the size of the national or domestic product based on converting values denominated in the local currency into the currency of a common country, as well as based on prices in another country, are deceptive and misleading.

Economic backwardness

In underdeveloped countries particular manifestations of economic backwardness are low labour efficiency, factor immobility limited specialization in occupation and in trade, economic ignorance, values and social structure that minimize the incentives for economic change.[3]

The basic cause of backwardness is to be found in low labour productivity as compared with the developed countries. This low labour efficiency results from general poverty which is reflected in low nutritional standards, l'll health, illiteracy and lack of training and occupational mobility, etc.

There is also occupational immobility of labour due to the joint family system and the caste system. Certain cultural and psychological factors are more dominant that wage rates in determining the supply of labour the joint family system makes people lethargic and stay–at–home. In many underdeveloped countries, certain occupations are reserved for members of some particular caste, religion, race, tribe or sex. In Latin America, cloth making

[3] - Meier and Baldwin, op. Cit., p. 293.

falls within the exclusive jurisdiction of woman. In India, a janitor always belongs to a particular caste. According to Stephen Enke, underdeveloped countries have what might be termed "an uneconomic culture." Primarily, this means that traditional attitudes discourage the full utilization of human resources. More specifically. It means that men are less likely to strive for extra consumption in underdeveloped countries people are mostly illiterate. Ignorant conservative, superstitious and fatalists. Poverty in such countries is abysmal, but it is considered to be God-given, something preordained. It is never attributed to personal lack of thrift and industry.

There is extensive prevalence of child labour and women's status and position in society are inferior to men. Dignity of labour is conspicuously absent. Government jobs. even of a clerical nature, have more prestige than manual work. People are ranked not according to their capacity to do a particular job but by age, sex, caste, clan and kinship. They are governed by customs and traditions. Individualistic spirit is absent. Exchange by barter is widespread and money economy is hardly understood. The value system minimizes the importance of economic

incentives, material rewards, independence and rational calculation. It inhibits the development and acceptance of new ideas and objectives and fails to compare the cost and advantages of alternative methods to achieve objectives. In short, the cultural value system within many poor countries is not favourable to economic achievement and the people remain economically backward.4

Exercises

[4] - Ibid., pp.298-99

Question on chapter one

Characteristics of an underdeveloped country

Part A True – false questions

Circle whether the following statements are true (T) or false (F)

1- An undeveloped country is one which has no prospects of development.

2- An underdeveloped country is one which has no potentialities of development.

3- Poor and backward are also used as synonyms for undeveloped.

4- Poverty refers to the low level of per capita income of a country.

5- The ratio of population to land area is a superfluous criterion for definition of underdevelopment.

6- The ratio of industrial output to total output is a valid indicator of underdevelopment.

7- Capital indicator is a necessary but not a sufficient of progress.

8- Incidence poverty is one of the most commonly acceptable criteria of under develop- merit.

9- Underdeveloped countries have a relative poverty not absolute poverty.

10- Absolute poverty is measured only by low income.

11- In underdeveloped countries two – third or less of the people live in rural areas.

12- Agriculture is mostly unproductive; it is carried on in an old fashion.

13- The heavy concentration in agriculture is referred to poverty.

14- The subsistence economy is backward and is mainly agriculture-oriented.

15- In many underdeveloped countries, there are foreign directed enclaves thus making a triplistic economy.

16- The dualistic nature of the economy conducive to healthy economic progress.

17- An underdeveloped countries have been successful in overcoming the scarcity of natural resources.

18- Increasing in output is swallowed up by increased population.

19- Declining death rates and increasing birth rates give a very high natural growth rate of population.

20- Unemployed people are prepared to work but they are unable to find work throughout the year.

21- Disguised unemployed his marginal productivity is negligible.

22- The basic cause of backwardness is to be found in low labor productivity.

23- People are ranked according to their capacity to do a particular job.

24- The root cause of capital deficiency is the problem of under saving and under investment.

25- Absolute poverty is measured only by low income.

26- The underdeveloped countries are the slums of the world economy.

27- In underdevelopment countries most of the people live in rural areas.

28- The dualistic nature of the economy is a conducive to healthy economic progress.

29- In underdeveloped countries, the Economic growth can been swallowed up increased population.

30- I underdevelopment countries, the heavy concentration in agriculture is a symptom of poverty.

31- Underdeveloped countries are not been successful in overcoming the scarcity of natural resources.

32- The basic cause of backwardness is to be found in low labor productivity.

33- The demonstration effect means that the saving ratio does not rise with the increased level of income in the long run.

34- Almost all developed countries have a dualistic economy.

35- The subsistence economy (dualistic economy) is backward and is mainly agriculture – oriented.

36- The disguised unemployment is related to developed countries.

37- A person is said to be disguised unemployed if his contribution to output is less than what he can produce.

38- Marginal productivity, in case of disguised unemployment, is nil or negligible.

39- The basic cause of backwardness is to be found in high labor productivity compared with the developed countries.

40- Entrepreneurship is hindered by technological backwardness in underdeveloped countries.

41- In LCDs, the foreign trade orientation is reflected in exports consumer goods and machinery, and imports of primary product.

42- The foreign trade orientation manifests itself through the flow of foreign capital to LDCs.

43- The principal factor affecting the development of an economy is structural change.

44- The economic growth is related to a quantitative sustained increase in countries per capital output.

45- Economic development is related to qualitative changes in economic wants, goods, and institutions.

Part B : multiple – choice questions

Circle the appropriate answer:

1- ……is one which has no prospects of development

A) An undeveloped country b) An underdeveloped country

c) A developing country d) Non of the above

2- ……..is one which has no potentialities of development

A) An undeveloped country b) An underdeveloped country

c) A developing country d) Non of the above

3- Underdeveloped countries have……

a) unexploited natural resources

b) scarcity of capital goods and equipment

c) obsolete techniques of production

d) all of the above

4- Absolute poverty is measured not only by low income but also by:

a) malnutrition b) poor health

c) lack of education d) all of these

5- Absolute poverty if reflected in……

a) low GNP per capita. b) low income per capita.

c) low living standards of the people d) all of the above

6- Absolute poverty is measured not only by low income but also by:

a) lack of technical Knowledge

b) lack of specialization of occupation.

c) small of extent market

d) all of the above

7- The increase in the number of deaths in underdeveloped countries is due to:

a) uniformed parents b) lack of immunization

c) poor nutrition d) all of the above

8-…… saying that underdeveloped countries are the slums of the world economy

a) Prof. Cairncross b) Kreenleyside

c) Stephen enake d) Marx

9- The market economy is

a) In and near the towns b) in the rural areas

c) is developed d) a and c

e) b and c

10- The subsistence economy is

a) in and near the towns b) the rural area

c) is less developed d) a and c

e) b and c

11- A dualistic economy is characterized by the existence of

a) the market economy and the subsistence economy.

b) an advanced industrial system and an indigenous backward agriculture system.

c) a and b

d) a only

12- Dual economies are countries

a) with double capital and labor

b) with a modern manufacturing sector as well as traditional agriculture sector

c) that specialize in labor-intensive products more than capital-intensive products

d) with foreign –owned and domestically-owned capital.

13- In LDCs, the natural resource are:

a) Unutilized b) underutilized

c) Misutilized d) all of the above

e) non of the above

14- In LDCs, the underutilized natural resources due to:

a) lack of technical Knowledge b) the large extent of the market

c) b only d) A and b

15- LDCs are characterized as

a) capital-poor economy b) low-saving economy

c) low investing economy d) all of the above

16- The poorest region of the world is

a) the middle east b) sub-saharan Africa

c) Asia d) Latin America

17- Of the world's population, what portions lives in developing countries?

a) approximately 35% b) approximately 80%

c) nearly 10 billion people d) less than 1 billion people

18- In which of the following countries would you expect material lifestyles to be most like those in the United States?

a) Nigeria b) Japan c) India d) Mali

19- Which of the following could be considered critical questions in development economics?

a) How do the poorest 2/3 of the world live?

b) What are the major theories of economic development?

c) What factors affect labor skills in the third would?

d) all of the above are correct.

20- Which of the following characteristics are most likely found in developing countries?

a) high population growth rates

b) large number of people living in poverty

c) very traditional methods of agricultural production.

d) all of the above

e) none of the above

21- Which of the following could not be considered a major economic system?

a) capitalism

b) communism

c) socialism

d) physical quality of life index

e) none of the above

22- Economic development refers to

a) economic growth

b) economic growth plus changes in output distribution and economic structure

c) improvement in the well – being of the urban population.

d) sustainable increases in gross national product.

Chapter Three

Economic development theories

Chapter Three

Economic Development Theories

There are many theories that explain economic development, but it can be said in general that there are two basic trends in implementing economic development that any country can follow if it chooses to bring about a strong change in the data, and they are:

1 - The balanced growth method

2 - The unbalanced growth method

These two methods will be discussed in some detail at the end of this chapter, after reviewing the most important theories and theses that discussed the different methods used in achieving development.

Classical Theory

The classical theory of growth includes the views of Adam Smith and David Ricardo on growth, in addition to the views of mercantilists on the source of wealth from foreign trade, then the views of John Stuart Mill on markets, Robert Malthus on population, and Schumpeter's theory of competitive markets. The elements of the theory can be summarized as follows:

1- The policy of economic freedom Classical economists believe in the necessity of individual freedom and the importance of markets being free from the dominance of perfect competition and away from any government intervention in the economy.

2- Capital formation is the key to progress All classicists view capital formation as the key to economic progress, and therefore they all emphasized the need to achieve a sufficient amount of savings.

3- Profit is the incentive to invest Profit represents the main incentive that drives capitalists to make the investment decision, and the higher the rate of profits, the higher the rate of capital formation and investment.

4- The tendency of profits to decline The rate of profits does not increase continuously, but rather tends to decline due to the increasing intensity of competition between capitalists for capital accumulation, and Smith explains this by the increase in wages that occurs due to the intensity of competition between capitalists.

5- The state of stasis The classicists believe in the inevitability of reaching a state of stability as the end of the process of capital accumulation, because once profits begin to decline, they continue until the rate of profit reaches zero and capital accumulation stops, and even the population stabilizes and the wage rate reaches the subsistence level, and according to Adam Smith, what stops economic growth is the scarcity of natural resources that leads the economy to a state of stasis.

In the following pages, we will review the characteristics of the most important theories of classical thought.

Adam Smith's Theory

Adam Smith is at the forefront of classical economists, and his writing on the nature and causes of the wealth of nations was concerned with the problem of economic development. Therefore, he did not present a comprehensive theory of economic growth, although later economists formed the theory inherited from him, the most important features of which are the following:

1- Natural law: Adam Smith believed in the possibility of applying natural law in economic matters, and therefore he considers every individual responsible for his behavior, i.e. he is the best judge of his interests, and that there is an invisible hand that leads every individual and guides the market mechanism, so every individual, if he is free, will seek to maximize his wealth, and thus Adam Smith was against the interference of governments in industry or trade.

2- Division of labor: The division of labor is the starting point in Adam Smith's theory of economic growth, as it leads to the greatest results in the productive forces of labor.

3- Capital accumulation process: Smith considers capital accumulation a necessary condition for economic development and must precede the division of labor. The problem is the ability of individuals to save more and then invest more in the national economy.

4- Capitalists' motives for investment: According to Smith's ideas, the implementation of investments is due to capitalists' expectation of achieving profits and that future expectations regarding profits depend on the prevailing investment climate in addition to the actual profits achieved.

5- Growth elements: According to Adam Smith, the growth elements are represented by producers, farmers and businessmen. This is aided by the fact that freedom of trade, work and competition lead them to expand their businesses, which leads to increased economic development.

6- Growth process: Adam Smith assumes that the economy grows like a tree. The development process progresses steadily and continuously. Although each

group of individuals works together in a specific production field, they together form the tree as a whole.

John Stuart Mill's theory

Stuart Mill views economic development as a function of land, labor and capital. Labor and land represent two original elements of production, while capital is a previous accumulation of the product of previous labor. The rate of capital accumulation depends on the extent to which the labor force is employed productively. The profits earned through the employment of unproductive labor are merely a transfer of income. The most important features of this theory are summarized in the following features:

1- Controlling population growth: Mill believed in the validity of Malthus's theory of population. He meant by the population those who perform only productive work. He believed that controlling the population is necessary for economic development.

2- The rate of capital accumulation: Mill believes that profits depend on the cost of the labor element, and thus the rate of profits represents the ratio between profits and wages. When profits rise, wages fall and the rate of profits

increases, which in turn leads to an increase in capital formation. Likewise, the desire to save is what leads to an increase in the rate of capital formation.

3- Profit rate Mill believes that the unlimited tendency in the economy is that the profit rate declines as a result of the law of diminishing size in agriculture and increasing population according to the Malthusian rate. In the absence of technological improvement in agriculture and the population growth rate exceeding capital accumulation, the profit rate becomes at its minimum and a state of stagnation occurs. 4- Stagnation Mill believed that stagnation is expected to occur in the near future and expects that it will lead to improving the pattern of income distribution and improving the conditions of workers, but this can be possible by controlling the rate of increase in the number of the working class through education and changing habits. 5- The role of the state Mill was a supporter of the policy of economic freedom, which should be the general rule, so he determined the role of the state in economic activity at its minimum and only in cases of necessity, such as redistributing ownership of the means of production.

Schumpeter's theory

This theory assumes an economy in a state of perfect competition and in a state of static equilibrium, in which there are no profits, no interest rates, no savings, no investments, and no voluntary unemployment. Schumpeter describes this state as cash flow. The characteristics of this theory are as follows:

1- Innovations: According to Schumpeter, innovations are represented in the introduction of any new product or continuous improvements in existing products. Innovations include many elements such as:

- **Introduction of a new product.**
- **A new method of production.**
- **Establishing a new organization for any industry.**

2- The role of the innovator: Schumpeter assigned the role of the innovator to the organizer and not to the character of the capitalist. The organizer is not a person with ordinary administrative capabilities, but he is able to provide something completely new. He does not provide cash balances, but rather transforms the scope of their use.

3- The role of profits: According to Schumpeter, in a competitive equilibrium, product prices are exactly equal to production costs, and therefore there are no profits.

4- The circular process: As long as investments are financed through bank credit, they lead to an increase in cash income and prices and help create cumulative expansions across the economy as a whole. This is because with the increase in the purchasing power of consumers, the demand for products in old industries will exceed the supply, and thus prices will rise and profits will increase.

It can be said that the literal application of this framework to developing countries is difficult despite its positive aspects for the following reasons:

- **The difference in the economic and social system.**
- **The lack of the element of organizers.**
- **Ignoring the impact of population growth on development.**
- **The need for institutional changes more than innovations.**

Keynesian theory

Keynes' theory did not address the analysis of the problems of developing countries, but was only interested in developed countries. Keynes believes that total income is a function of the level of employment in any country. The greater the size of employment, the greater the size of total income. Keynesian tools and developing economies are:

1- Effective demand: According to Keynes, unemployment occurs due to a lack of effective demand. To get rid of it, Keynes suggests an increase in spending, whether on consumption or investment.

2- Marginal efficiency of capital: Keynes believes that marginal efficiency of capital represents one of the main determinants of investment rates, and there is an inverse relationship between investment and marginal efficiency of capital.

3- Interest rate: The interest rate represents the second element determining investment, in addition to marginal efficiency of capital in the Keynesian model. The

interest rate is in turn determined by the preference for liquidity and the money supply.

4- Multiplier: The Keynesian multiplier is based on four assumptions as follows: A- The existence of involuntary unemployment. B- An industrial economy. C- The existence of a surplus in the productive capacity of consumer goods. D- Supply is characterized by an appropriate degree of flexibility and the provision of capital goods necessary for the increase in production. 5- Economic policies: There are other areas in which the prevailing conditions in developing countries do not conform to the requirements of Keynesian policies.

Rostow's Theory

Rostow presented a historical model for the process of economic development and divided it into five stages:

1- The traditional society stage:

The traditional society or the society of traditions is defined as the society that is limited by a limited framework of production and in which production can only perform limited tasks and is based on primitive science and technology far from modern science and technology.

2- The pre-launch stage:

The second stage represents a traditional era from which the necessary conditions for the start of continuous growth begin. These conditions arose in Britain and Western Europe slowly from the end of the fifteenth century until the beginning of the sixteenth century, i.e. during the period of the end of the middle Ages and the emergence of the modern era.

It can be said that the necessary conditions for continuous industrialization according to Rostow's ideas require radical changes in other sectors, which are:

• Creating a technological revolution in agriculture to raise productivity in the face of the increase in population.

• Expanding the scope of imports, including capital imports that are financed through efficient production and good marketing of natural resources for the purpose of export.

3- The take-off stage:

This stage is considered the great source of progress in society, when growth becomes a normal state and the forces of progress and modernization triumph over institutional obstacles and reactionary customs, and the

values and interests of traditional society decline in the face of the aspiration for modernity. The most important conditions necessary for the take-off stage are represented in the following set of conditions:

- Increase in net investment from about 5% to no less than 10% of the national income.
- Develop some leading sectors, meaning the necessity of developing one or more of the main industrial sectors with a high growth rate as a necessary condition for the take-off stage. Rostow views this condition as the backbone of the growth process
- For the cultural framework and exploitation of expansion, meaning the existence of a political, social and institutional driving force capable of exploiting the forces of expansion in modern sectors. In general, the take-off stage begins with the emergence of a driving force before the development of a leading sector

4- The stage of the trend towards maturity:

Rostow defined it as the period in which society can widely apply modern technology. The countries reaching

the stage of technological maturity is associated with the occurrence of three basic changes:

A. Change in the characteristics and features of the workforce as skills rise and the population tends to live in cities.

B. Change in the characteristics of the class of organizers as employers retreat to be replaced by efficient managers.

C. Society wants to go beyond the miracles of industrialization and looks forward to something new that leads to more changes.

5- The stage of high consumption:

This stage is characterized by the population's tendency to concentrate in cities and their clarity, the spread of vehicles and the widespread use of durable goods. At this stage, society's interest shifts from the supply side to the demand side.

Arthur Lewis's theory of economic development

Arthur Lewis's theory is considered one of the most important early theoretical models in economic development, which focuses on structural transformation through reliance on the use of surplus labor.

Lewis's theory is one of the most important modern theories in the world of development, which focused on structural change in the primary economy that lives on subsistence, for which Arthur Lewis won the Nobel Prize in the mid-fifties, which was later modified by both John Fei & Gustave Ranis.

Arthur Lewis's model became a general theory in the development process based on surplus labor in third world countries during the sixties and seventies, which is still adhered to today in many countries.

The Lewis model consists of two sectors: a traditional agricultural sector and an industrial sector. The traditional sector is famous for its presence in the backward countryside, which is characterized by its marginal productivity of labor being equal to zero, which allows the

withdrawal of surplus labor from this sector without loss and then transferring this surplus to the industrial sector. Lewis pointed out that the transformation is from the low-productivity sector to the high-productivity sector.

Lewis explained that focusing on the processes of labor transformation and employment in the modern sector leads to achieving expansion in the output of the modern sector (i.e. the occurrence of new investment), this investment is at a higher rate than the rate of expansion in wages, which works to increase profits that are supposed to be fully reinvested in the modern sector. Which leads to more development.

Finally, the level of wages in the modern industrial sector is supposed to be fixed. The meaning of wage stability in the modern sector is that the labor supply curve in this sector is fully flexible, i.e. it takes a horizontal shape.

As for the speed at which this transformation takes place, it is determined by the growth rate of industrial investment and the accumulation of capital in the industrial sector. Once investment is created, this allows the profits

of the modern sector to increase over wages based on the assumption that investors will reinvest their profits, which causes expansion in this sector, assuming the following regarding wages:

_ They are fixed.

_ They are determined at an amount that is higher than that level of fixed wages at the subsistence level in the traditional agricultural sector.

Lewis assumes that urban wages must be at least 30% higher than average rural incomes for rural to urban migration to occur. Here we can take some notes on this theory, including:

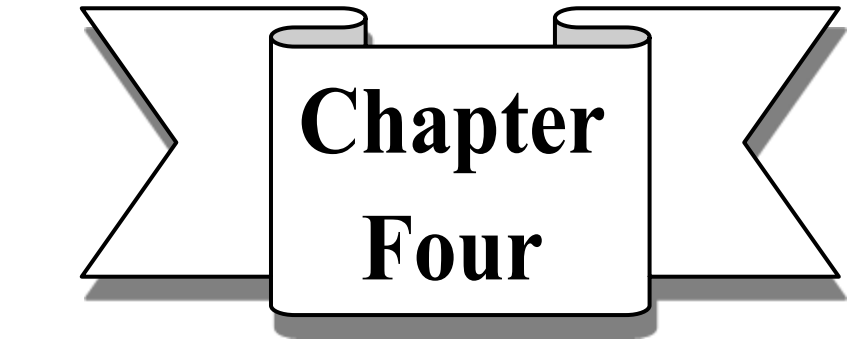
The theory assumed that the marginal productivity of the labor element is equal to zero, and that all farmers participate equally in the output, and that it assumed an increase in capital in the industrial and service sector as a result of investors reinvesting their profits. This serves to some extent the process of urban development, which we believe requires that growth be balanced between the various sectors to depend on the expanding industrial sector for agricultural output, especially in developing

countries where the agricultural sector is expanding. We can develop the agricultural sector from the traditional sector to the modern agricultural sector that depends on advanced technology to increase production and invest labor in industries that depend on agricultural production and withdraw surplus labor to the urban industrial sector to the extent that meets the primary need for industrial production, and create educated and trained labor from urban areas to achieve social and economic balance at the same time, and maintain continuous growth in sectoral structures in a parallel manner and stay away from other secretions that may be caused by withdrawing labor from the countryside to the city.

In addition, the agricultural sector does not depend on the typical need for labor, but rather the demand is often seasonal, and we may be able to bring the demand seasons closer by scientific means so that unemployment in this sector is low and does not constitute an obstacle to growth, but rather is a reason for the process of regular and sustainable development.

We can also assume that much of the capital accumulated as a result of profits may be invested in banks if the interest rates are rewarding or cover a high percentage of the investors' profits because they provide an ideal safe opportunity for investors whether inside or outside the country.

As for wages in urban areas, they are often higher than what workers in rural areas receive, except for those who share their profits with farmers, as they often do not invest those profits in agricultural development, but a large part of them goes to savings, the other part to consumption, and the last part to service and commercial investments, due to the weakness of the development culture and illiteracy, especially in third world countries.



Methods of Economic Growth

Chapter Four

Methods of Economic Growth

There are two basic trends in implementing economic development that any country can follow if it chooses to bring about structural change with a strong push, and they are:

1 – The balanced growth approach

2 – The unbalanced growth approach

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The balanced growth method

1 – Rodin's theory:

This theory is also called the big push theory. The idea of the theory is that a big push or a large and intensive program in the form of a minimum level of investment is needed in order to overcome the obstacles to development and put the economy on the path of self-sustained growth. Rosenstein Rodin distinguishes between three types of indivisibility and external economies.

- **Indivisibility of the production function**

- **Indivisibility of the demand function**
- **Indivisibility of the supply of saving**

Rodin considers his theory of development to be more comprehensive than the traditional static theory because it conflicts with modern slogans, and in fact it seeks the path towards equilibrium more than the necessary conditions at the equilibrium point. .

The balanced growth theory has been addressed by Rosenstein Rodin, Ranger, and Arthur Lewis. This theory presented a new approach to development that Russia applied, and this approach helped it to accelerate the growth rate in a short period, and this theory may have important effects.

Balanced growth requires a balance between the various consumer goods industries, and between the capital and consumer goods industries. It also includes a balance between industry and agriculture.

Rodin suggested that the appropriate model for economic development is as follows:

1 - **The underdeveloped country should rely on foreign capital to provide financial resources, to a sufficient**

extent that does not burden the national economy with the consequences of financing.

2 - Work on spreading light industries that absorb large numbers of workers, provided that this industry is concentrated in crowded places

3 - The necessity of providing capital from internal and external sources together, then investing it to build an industrial base represented by establishing public projects that are all carried out at once and that all efforts are mobilized for them to launch into the self-growth stage

4 - Once these projects are established, they will open new horizons for more investments, and thus an economic policy can be drawn up according to which complementary industries are established alongside basic industries

5 - If the economy reaches this stage, it achieves a state of balance that encourages the individual investor to contribute to industrial operations alongside government projects.

2- Nerckse's theory:

Nerckse took from Rodin the principle of market expansion and external savings and formulated it in his well-known theory of (strong push and balanced growth).

Nerckse began his analysis of strong push and balanced growth by studying what is known as vicious circles of poverty.

He pointed out that there are economic, social and political circular forces that interact with each other in a way that keeps the country in a permanent state of stagnation. On the basis of these vicious circles, Nerckse developed his analysis and treatment of the problem of economic backwardness. He stressed the need to start trying to break the circle of backwardness from the point at which it began, which in his view is defined by the point of (weak investment opportunities).

Nerckse considered that the size of the market determines investment opportunities, and therefore he considered that market expansion is the basic means of creating investment incentives. Nerckse settled on the fact that weak productivity is what prevents production from

increasing and the ability to purchase and prevents the market from expanding.

Nerckse also pointed out that the quantity and type of capital used is the main factor determining productivity. The use of machinery and equipment in large quantities is what raises the level of productivity. Here, Nerckse finds no reason to break the cycle except by excluding the stagnation situation and replacing it with a situation of movement and life.

This situation is represented by the necessity of providing a strong push of investments used in establishing a group of heavy industries. Therefore, Nerckse's proposal includes the necessity of distributing capital generously over a wide range of different industries.

It is noted that there are two types of investment decisions:

<u>The first type:</u>

Decisions with a strong push that incite investment to push development backwards and are called backward push forces. They occur if a new industry is established

and is likely to stimulate the growth of industries that precede it, i.e. supply this emerging industry with its products. For example, the iron and steel industry stimulates the establishment of the iron extraction industry.

The second type

Decisions with a strong push, that encourage investment to push development forward and are called forward push forces and are represented in establishing a new industry that encourages the growth of subsequent industries that use its final products. The establishment of the iron and steel industry encourages the growth of machinery and automobile industries. The comparison between the two types of investments depends on choosing the sectors most capable of pushing development forward, whether they are projects that encourage the growth of projects that move backward or forward.

The forward push force and the backward push force for any industry are known through the user and product table, which is the table that shows the intertwined and

equal relationships between industries and sectors in terms of current use.

In general, this theory is based on the fact that the vicious circle of poverty is linked to the small size of the local market.

This theory faces a fundamental criticism that includes the lack of the necessary materials to implement this amount of simultaneous investments in integrated industries, especially in terms of human resources, financing and raw materials.

Supporters of this theory prefer investments in selected sectors or industries more than they support simultaneous investments.

Unbalanced growth style

Hirschman's theory

The theory of unbalanced growth by the American economist Albert Hirschman is essentially a capitalist theory based on the economic and historical reality that Western countries have gone through in their economic development, which confirms that these countries have achieved significant economic growth without government intervention and without a central plan that depends on the balanced distribution of investments, but rather depends on the capitalist organizer.

The theory of unbalanced growth takes a different direction from the idea of balanced growth, as investments in this case are allocated to specific sectors instead of being distributed simultaneously across all sectors of the national economy.

The content of the theory:

Hirschman begins explaining his theory by criticizing the balanced growth theory. He believes that national income growth is only achieved as a result of the imbalance that affects the national economy as a result of

unbalanced imbalances, which lead to more activity in the national economy and thus to economic development. Hirschman believes that economic development is a long-term process during which economic forces interact that push the national economy towards imbalance and successive movement in all directions, and this in turn leads to a type of new imbalance between the different sectors or industries.

Therefore, a successful economic policy is one that works to create vitality and activity in the economy without seeking to remove any imbalance that will occur in the economy. Thus, it benefits from the economic effects that result from the imbalance.

Therefore, economic development according to the unbalanced growth theory is represented by successive steps that lead the national economy away from balance. Meaning that each step or investment is the result of a previous imbalance and at the same time leads to a subsequent imbalance that results in a new investment process. Thus, the development process in general depends on imbalance, then balance, then imbalance.

These successive and integrated cycles of unbalanced growth are in fact what lead to economic development.

According to Hirschman, establishing new projects depends on the external savings achieved by other projects, but they in turn create new external savings that can be used and built upon by other subsequent projects. Development policies must target the following:

- **Encouraging investments that create more external savings.**
- **Limiting projects that use external savings more than they create**

Marxist theory

The contributions of Marxist theory to development were concentrated in three directions as follows:

First: The materialistic interpretation of history

It is a set of attempts to present historical events as an inevitable result of the continuation of the economic struggle and challenge between the different classes in society.

Marx expressed the main case of this type of conflict, as the conflict between the methods and ways of production on the one hand, and the relations of production on the other hand.

The methods and ways of production refer to the special way of organizing production in society, which can be decided by the ways of political, social and religious life.

As for the relations of production in society, they are linked to the fact that each structural level in society has unique specifications by following the following elements or components:

1- Labor management in the project is separate, but cooperative.

2- Labor skills and social status are linked to labor freedom.

3- Differences in the geographical environment and knowledge of how to use resources and raw materials from one industry to another.

4- Differences in technical methods and processes and the scientific status in general.

According to Marx, every class in society consists of some who have property, and others who do not have this property. Therefore, when the step of social evaluation comes, it is due to the conflict between those who have and those who do not have within society.

Second: Surplus value

Marx used his theory of surplus value as an economic basis for class struggle under capitalism. He pointed out that class struggle is simply the result of the continuous accumulation of surplus value in the hands of a small number of capitalists. Marx divided capitalism into two major parts:

Part One:

They are the workers who sell their labor power like any similar commodity for a certain value.

Part Two:

They are the capitalists who own the means of production and buy labor power for a certain value that does not exceed the workers' subsistence level (the subsistence level is the level that barely keeps them alive). According to Marx, the value of the subsistence level can never equal the value of the worker's production. Therefore, there is an unpaid value, which represents surplus value.

Since the hours that a worker works without receiving compensation are called surplus labor, according to Marx, surplus value is the same as surplus labor.

Third: Capital accumulation

Marx explained that surplus labor itself leads to the accumulation of capital. The main incentive for capital is to increase surplus value, which is ultimately represented in the form of profits. Therefore, the owner of capital always aims to maximize profits through three methods:

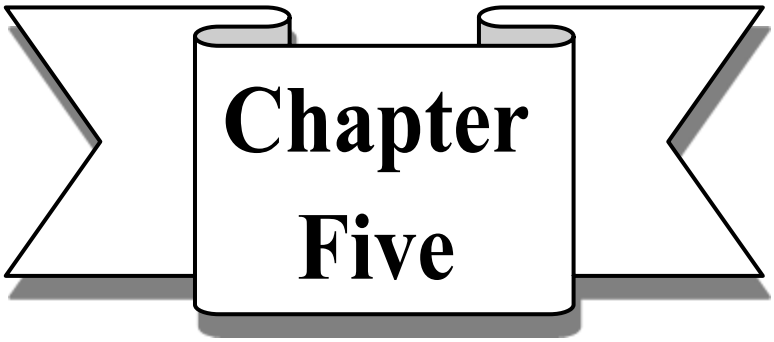
1- Increase the tasks required from workers daily, and thus the surplus labor will increase automatically.

2- Continuous reduction in the number of working hours that the capitalist is required to pay for, which creates more surplus labor.

3- Accelerating the use of labor (i.e. raising the value of labor), which means working to increase labor productivity through technological development and training.

It is noted that the best of the three methods chosen by the capitalist according to Marx is the last method (increasing productivity). The owners of capital work to save the surplus value and reinvest it in order to achieve the large balance of capital required and then accumulate capital.

This means that accumulation leads to accumulation, and that profits are determined by the amount of capital that absorbs the labor limit and leaves only the subsistence limit.



The Economic Growth Models

Chapter Five

The Economic Growth Models

We need studying the following topics

1- Harrod - Domar model

2- Kaldor's model of growth

3- Joan Robinson's model of capital accumulation

Chapter Five

Harrod Domar Model Kaldor Model

Fixed coefficients production function suppose we have only production factors capital (K) , labour (L)

K = capital stock

L = Labour

Y = real national product

A = Technological level, notice, the technological progress is neutral we can write the fixed coefficients production function as a following

$$Y = A \min \left(K / v , K/u\right)$$

Where

V = Ratio the capital stock to production, it's constant $K/Y = V$

U = Ratio the labour to production its constant $u = L/ Y$

Y = production level determinant by minimize the ratios

$(L/u , K/v)$

// Suppose dominant constant return to scale this means the double inputs result double output as follows.

If the all input increase by quantity C where $(C > 0)$ then the output increase by the same quantity

$Y = A, \min (K/v, L/ u)$

$= (CK/v, CL/u) = CY$

// The lost assumption for this production function with factor substitute where we assume no substitute between production factors. Because the form of this kind of production function do note allow to substitution between capital and labor for example

$$Y = A\,(K/V)^{X}\,(L/U)^{B}$$

Where $X + B = 1$

The equation of model

Harrod–Domar Model

The hypothesis

H1 (1) $K = vY$ full capacity

H2 (2) $L = uY$ full employment

H3 (3) $S = I$ equal I = S

H4 (4) $S = sY$ saving function O < S <

H5 (5) $\Delta \frac{L}{L} = n$ natural labour force growth

We can use the fixed coefficient

$Y = A \,.\, \min (K/v\,,\, L/u)$

Suppose $A = 1$ to simple

From the first $\overline{H}$, we can result

If $K = vY$

Then $\Delta K = V\Delta Y$

From the second H_2, we can result

If L = uy

The $\Delta L = u\Delta y$

$$\frac{\Delta K}{K} = \frac{V\Delta y}{vy} = \frac{\Delta y}{y},$$

$$\frac{\Delta L}{L} = \frac{u\Delta y}{uy} = \frac{\Delta y}{y}$$

Model construction

When (H) K = vy , (H2) L = uy

From H1, H2

This Yo = ($Ko/_v$, $Lo/_u$)

Stationary state

For any change from K $(\Delta K) or\ L\ (\Delta L)$

Then we have

(H)1 $\Delta K = V\Delta y$

(H)2 $\Delta L = U\Delta y$

By divide (H1) , (H2) on (H1) , (H2) we can get the rate of growth as following

$$\frac{\Delta K}{K} = \frac{V\Delta y}{vy} = \frac{\Delta y}{y}$$

$$\frac{\Delta L}{L} = \frac{u\Delta y}{uy} = \frac{\Delta y}{y}$$

$$\frac{\Delta K}{K} = \frac{\Delta L}{L} = \frac{\Delta y}{y}$$

We know $\Delta K = I$

From H3 I = S

From H4 S = sy

Then $\Delta K = V\Delta Y = I = S = sy$

$$V\Delta Y = sy$$

Marginal S/v = $= \frac{\Delta y}{y}$

Propensity to save

Because $Hs \ \frac{\Delta L}{L}$ = N

Then $\frac{\Delta L}{L} = \frac{\Delta y}{y} = N$

This is the $S/_V$ = N

Equilibrium condition

Staple condition

Suppose you have the following values for Harrod- Domar Model

V = 5 U = 10 S = 0.10 n = 0.02 L_o = 40 K_O = 20

Calculate the real values for (L) , (K) , (Y) and equilibrium state for both (0) , (1) period

From

H1 K = vy = 5y

H2 L = uy = 10y

H3 S = 0.10 y

H5 Δ L/L = n = 0.02

Then

$$Y_o = \min\left(\frac{K}{5}, \frac{L}{10}\right)$$

$$= \left(\frac{20}{5}, \frac{40}{10}\right) = \min(4,4) = 4$$

Ko = v y_o = 5(4) = 20

Lo = u y_o = $10\ (4)$ = 40

The values in period 1

From the H3 S = I

Where S_o = $0.10\ (y_o)$ = 0.4

But S = I

When ΔK = Io = So = 0.4

Then the capital stock in next period (K_1)

$$K_1 = K_o + \Delta K$$

$$= 20 + 0.4 = 20.4$$

And n = 0.02

Where Δ L /L = 0.02

this mean $\Delta L = 0.021$

$$L_1 = L_o + \Delta L \quad = 40 + 0.2\ (40) = 40.8$$

The new equilibrium level of Y_1

Y_1 = then $\frac{20.4}{5}$, $\frac{40.8}{10}$ = $(4.08\ ,\ 4.08)$ = (4.08)

The model is stable

In the other hand

The demand on labour force in period is

$$Ld_1 = 10y_1 \quad = 10\ (4.08) \quad = 40.8$$

Then $$Ls_1 \quad = Ld_1$$

Because $$Ls_1 = L_0 + \Delta L = 40 + 0.02\ (40) = 40.8$$

$$Kd_1 \quad = 5\ (y_1) = 5\ (4.08) = 20.4$$

$$Ks_1 = K_o + \Delta K = 20 + 0.4 = 20.4$$

Then the planned rate of growth equal with actual rate of growth

Where S/V = n $\frac{0.10}{5} = 0.02$ = n

period	Y	L	K	case
0	4	40	20	stabile
1	40.8	40.8	20.4	stabile

Suppose the n ratio change from 0.02 to 0.03 or L3 then the labour supply increase than labour demand the result its unemployment

We know from period (o) data

$$\frac{\Delta L}{L} = n = 0{,}03 \quad \Delta L \qquad = \text{L (n)}$$

Then $$\Delta L = (0.03)(40) \qquad = 1.2$$

Then $L_1 = L_0 + \Delta L = 40 + 1.2 = 41.2$

also $K_1 = K_0 + \Delta K = 20 + 0.4 = 20.4$

$$Y_1 = \min {}^{20.4}/_{5} \ , \ {}^{41.2}/_{10} = 4.08 \ , 4.12 = 4.08$$

period	Y	L	K	The Model Care
0	4	40	20	Stabile
1	40.8	41.8	20.4	Labor surplus

We note the

$$Kd_1 = 5(4.04) = 20.2$$

While $Ks_1 = K_0 + \Delta K = 20.4$

Then the model instable because it in the capital surplus case

Kaldor Model

$$Y = w + p \qquad (1)$$

Where $w =$ wages

$P =$ profit

$$S = Sw \quad W + sp \quad P \qquad (2)$$

Divided By y

$$\frac{S}{Y} = \quad Sw \quad (w/y) \quad + \quad sp \quad (p/y)$$

The Ratio of the share the share of the

Saving to of the wage profit from the

Income from the income income

$$S = Sw\ (w/y) + sp\ (p/y) \qquad (3)$$

But

$$y = w + P$$

then

$$\frac{y}{Y} = \frac{w}{Y} + \frac{w}{Y}$$

$$1 = w/y + p/y$$

$$(w/y) = 1 - (p/y) \qquad (4)$$

From (3) and (4)

Then $S = sw - (1 - (p/y) + sp\ (p/y)$

$$S = sw - (p/y) + sp\ (p/y)$$

$$S = sw + [sp - sw]\ (p/y) \qquad (5)$$

Now we can use the Kaldor's saving function to treatment the instable in harried dormer model

Suppose we have Kaldor's saving function as follows

sw = 0.02 sp = 0.42

$^{p}/_{y}$ = 0.20 $^{w}/_{y}$ = 0.80

By using the Kaldor model we can transform the isstable harried dormer model to stable or equilibrium by using Kaldor's saving function. We can do it by redistribute the income between wages and profit to increase the saving ratio from 0.10 to 0.15 where this value allow to real equilibrium dynamically as follows

$$^{S}/_{V} = n$$

S = n.v = 0.03 X 5 = 0.15

S = sw + [sp – sw] $(^{p}/_{y})$

$$0.15 = 0.02 + [\,0.42 - 0.02]\,(^{p}/_{y})$$

$$0.13 = 0.4\,(^{p}/_{y})$$

$$(^{p}/_{y}) = \frac{0.15}{0.4} = 0.326$$ or %32.6

Then $^{w}/_{y}$ = %67.5

Now we can write the results as follows

ΔK = I = S = 0.15y = 0.15 x 4 = 0.6

K_1 = 20 + 0.6 = 20.6

Y_1 = min $\quad {}^{20.6}/_{5}$, ${}^{41.2}/_{10}$ = min [41.2 , 41.2] = 4.12

We note the surplus labour is delete where the demand for labour become

Ld_1 = uy

= 10 x 4.12 = 41.2

Also Ls_1 = Lo + ΔL

= 40 + 0.03 (40) = 41.2

Then we can result the Model stable and ${}^{S}/_{V}$ = n or $\frac{0.15}{0.4}$ = 0.03

The new result table

period	Y	L	K	case
(0)	4	40	20	stabile
(1)	40.2	41.2	20.6	Labour surplus

Kaldor's Model of growth

The neo classical models treat the causation of technical progress as completely exogenous. But Kaldor attempts to provide a framework for relating the genesis of technical progress to capital accumulation.

Assumptions

The assumption of Kaldor's model are follows:

(1) It is based on the Keynesian full employment assumption in which the short – period supply of aggregate goods and services is inelastic and irresponsive to any increase in money demand

At point P the percentage rate of growth of capital and the percentage rate of output (income) are equal.

(2) Income consists of wages and profits where wages comprise salaries and earning of manual labour and profits comprise incomes of entrepreneurs as well as property owners.

(3) Total saving consists of savings out of wages and savings out of profits.

(4) It is assumed that the share of profits in total income is a function of investment, given the propensity to save out of profits.

(5) All macro-economic concepts of income, wages profits capital saving and investment used in the model are expressed at constant prices

(6) kaldor assumes as investment function which makes investment of any period partly a function of the change in output and partly of the change in the rate of profit on capital in the previous period

For the operation of the model Kaldor postulates three functions:

The savings function

$$S_1 = \propto P_{t-1} + \beta\,(Y_{t-1} - P_{t-1}) \qquad (1)$$

Where savings S_t consist of savings $(\propto)$ out of profits (P_{t-1}) and savings (β) out of wages $Y_{t-1} - P_{t-1}$ in period t . The inqualities $1 > \propto \beta \geq o$ show that $\propto$ and β lie between 0 and 1 and that $\propto$ (savings out of profits) is greater than β (savings out wages).

Investment function

$$K_t = \bar{\alpha} P_{t^{-1}} + \bar{\beta} \left(\frac{P_{t^{-1}}}{K_{t^{-1}}}\right) \quad Y_{t^{-1}} \qquad (2)$$

$$I_1 = K_t - K_t \qquad (2.1)$$

Where

$$\bar{\alpha} > 0 \text{ and } \bar{\beta} > 0$$

Equation (2) shows that the stock of capital (K_t) at time t is a coefficient $\bar{\alpha}$ of the output of the previous period $(Y_{t^{-1}})$ and a coefficient β of the rate of profit on capital of the period $\frac{P_{t^{-1}}}{K_{t^{-1}}}$ multiplied by the output of the previous$Y_{t^{-1}}$.

In equation 2.1 shows the investment function where invest in period t equals the stock of capital in the previous period $(K_{t^{-1}})$ minus the stock of capital in the current period(K_t)

The inequalities $\bar{\alpha} > 0$ and$\bar{\beta} > 0$ reveal that the value of the coefficient $\bar{\alpha}\alpha$ and $\bar{\beta}$ are greater than zero.

Technical progress function

$$\frac{Y_t - P_{t^{-1}}}{Y_{t^{-1}}} = \bar{\bar{\alpha}} + \bar{\bar{\beta}} \quad \frac{I_t}{K_t} \qquad (3)$$

Where

$$\bar{\bar{\alpha}} > 0 \ , 1 > \bar{\bar{\beta}} > 0$$

Equation (3) shows that the rate of growth of income (and labour productivity) is an increasing function of the rate of net investment expressed as the proportion of the stock of capital (I_t/K_t) in period t multiplied by the capital per head β plus the coefficient of technical progress $\propto$. Here the value of the coefficient of technical progress in greater than zero but of capital per head lies between 0 and 1.

The technical progress function as gives by equation (3) shows the growth of income and capital from periodt_1 onwards whereby the economy gradually moves from a short period equilibrium to a long period equilibrium of steady growth taking the identity $S_t \equiv I_t$ it is the level of profits which brings about the equality of saving and investment for a stable equilibrium path, the following condition should be fulfilled.

Question

Prove that the rate growth the optimal rate of growth which the economy couch the stability situation

$$S_t = 40 \;\; Y_{t-1} = 385 \qquad P_t = 20 \qquad K_{t-1} = 760 \propto = 0.4 \, \beta$$

$$= 0.08 \quad \bar{\bar{\propto}} = 0.02 \;\; \bar{\bar{\beta}} = 1.4$$

The answer

$$S_t = \propto \;\; P_t \;\; + \;\; \beta \;\; (Y_t \; - \; P_t)$$

$$40 = 0.4(20) + 0.08\ (Y_t\ -\ 20)$$

$$40 = 8 + 0.08\ Y_t - 1.6$$

$$40 - 8 + 1.6 = 0.08\ Y_t$$

$$Y_t \frac{33.6}{0.08} = 420$$

$$s_t = I_t$$

$$I_t = 40$$

$$I_t = K_t - K_{t-1}$$

$$K_t = K_{t-1} + I_t$$

$$K_t = 760 + 40 = 800$$

$$\frac{I_t}{K_t} = \frac{40}{800} = 0.05$$

But $\frac{\Delta Y}{Y} = \frac{Y_t - Y_{t-1}}{800} = \frac{800-800}{385} = \frac{35}{385} = 0.08$

We know from the technical progress function

$$\frac{Y_t - Y_{t-1}}{Y_{t-1}} = \bar{\bar{\propto}} + \bar{\bar{\beta}} \quad \frac{I_t}{K_t}$$

By substitute the above result

$$0.09 = 0.02 + 1.4\ (0.05)$$

$$0.09 = 0.02 + 0.07\ It = 40$$

By $I_t = 40$ $K_t = 800$ can reach the stable equilibrium growth

Joan Robinson's model of Capital accumulation

Assumption: Mrs. Robinson's model is based upon the following assumptions:

(a) There is a laissez faire closed economy

(b) In such as economy capital and labour are the only productive factors

(c) Total savings consist of savings out of wages and savings out profits

(d) There is neutral technical progress

(e) There are only two classic – the workers and the entrepreneurs between whom the national income is distributed

(f) Workers save nothing and spend their wage income on consumption.

(g) Entrepreneurs consume nothing but save and invest their entire income (from profits) from capital formation if they have no profits the entrepreneurs cannot accumulate and if they do not accumulate they have no profits.

(h) There are no changes in the price level

Net national income income in the Robinson model is the sum of the total wage bill plus total profits which shown y = w N + pK

Where Y is the net national income, w the real wage rate, N the number of workers employed P the profit rate and K the amount of capital

Here Y is a function of N and K. since the profit rate is crucial in the theory of accumulation. it can be shown as

$$P = \frac{Y - w\,N}{K}$$

Divided by N $$P = \frac{\frac{Y}{N} - wN}{\frac{K}{N}}$$

By putting Y/ N = L and K/ N = θ (theta) We have

$$P = \frac{L - w}{\theta}$$

Thus the profits rate in the ratio of labour productivity minus the total real wage rate to the amount of capital utilized per unit of labour, is other word, the profit rate (P) depends on the income, labour productivity (L) , the real wage rate (w) and the capital–labour ratio (θ)

On the expenditure side, net national income (Y) equals consumption expenditure (C) plus investment expenditure (I)

$$Y = C + I$$

Since Joan Robinson assumes zero saving out of wages but attributes saving to entrepreneurs profits are meant for investment only we have

$$S = I$$

The saving investment relation may be shown as

$$S = PK$$

And $I = \Delta K$ [ΔK is increase in real capital]

$$[S = I]$$

$$PK = \Delta K$$

Or $$P = \frac{\Delta K}{K} = \frac{L - w}{\theta}$$

The growth rate of capital $(\Delta K/K)$ being equal to P) the profit rate), it depends on the ratio of the return on capital relative to the given stock of capital

The Golden Age

Besides the growth rate of capital $(\Delta K/K)$, another factor which determines the growth rate of an economy is the growth rate of population $(\Delta N/N)$. when the growth rate of population equals the growth rate of capital I.e., $\Delta N/N = \Delta K/K$ the economy is in full employment equilibrium.

The golden age is explained diagram matically in figure No.1, capital – labour ratio K/N or θ Along the horizontal axis and per capital output on the vertical axis.

The growth rate of labour force is taken to the left of along the horizontal axis , the curve of shown the production function, every point on this curve shows the ratio of capital to labour in order to find out the capital – labour ratio and the wage – profit relation , we draw a tangent NT which touches the production function OP. At point G and cuts vertical axis at w. point G shows the capital –labour ratio for the golden age which is measured by ok, per capita output is OA , out of this OW is paid as wages and WA or EG is the surplus which is the rate of profit on capital.

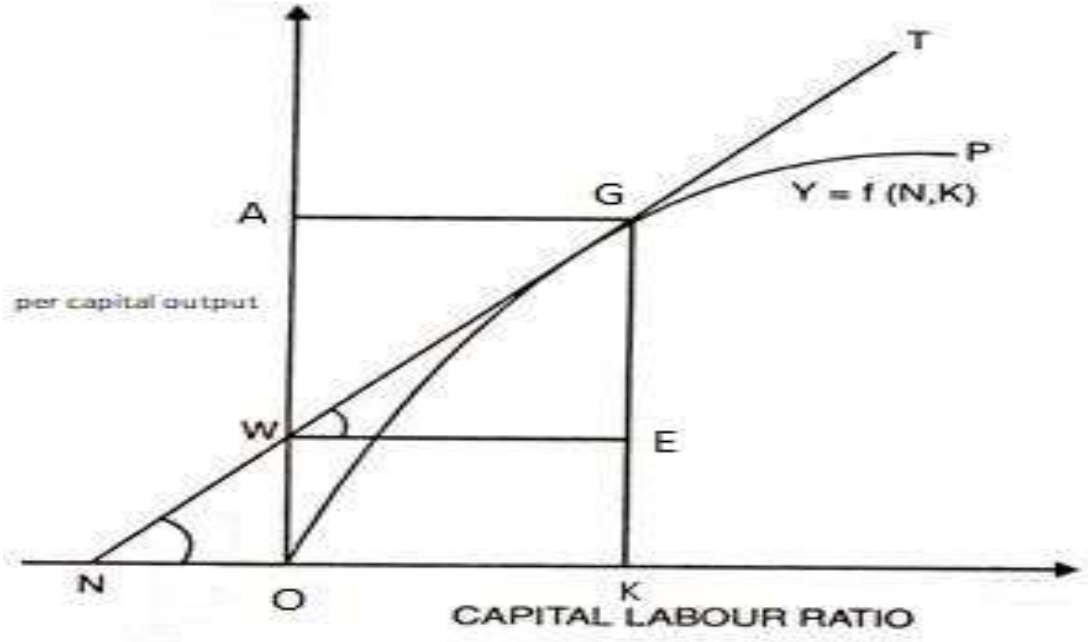


Fig. 1

This figure also proves that the growth rate of capital $(\Delta K/K)$ equals the growth rate of labour $(\Delta N/N)$,where EG/EW reflects $\Delta K/K$, and OW/ON reflects N/N

Thus

$$\frac{EG}{EW} = \frac{OW}{ON} \text{ where } [\ \tan \propto \tan = \beta]$$

According to Mrs Robinson a economy is in a golden age when the potential growth ratio is being realized. The potential growth ratio represents the highest rate of capital accumulation that can be permanently maintained at a constant rate of profit. This potential growth ratio is approximately equal to the

proportionate rate of labour force plus the proportionate rate of growth of output per head

A critical appraisal

(1) Mrs Robinson assumes that capital and labour are employed in fixed proportions to produce a given output. This is an unrealistic assumption because in a dynamic economy there are no fixed coefficients of production rather substitutability between capital and labour takes place through time. The degree of substitutability being dependent upon the nature of technological changes

(2) This model is based on the unrealistic assumption of constant price level , when an economy moves on the path to progress, investment has to be increased continuously which tends to raise the demand , this leads to rise l prices, thus price rise is inevitable with growth.

(3) Joan Robinson's Model is based on the assumption of a closed economy. But this is an unrealistic assumption because capitalist countries are open rather than closed economies in which foreign trade plays a crucial role in accelerating the growth rate

Question

Suppose you have the following gives

$$\frac{\Delta K}{K} = 0.02 \qquad Y = 120 \qquad N = 20 \qquad w = 2$$

Calculate the capital stock (K) which economy reach the golden age or stable equilibrium

Answer

In the golden age situation

$$\frac{\Delta L}{L} = \frac{\Delta K}{K}$$

$$0.02 = \frac{\Delta K}{K}$$

$$\Delta K = 0.02K$$

We known S = PK

And S = I in golden age situation

And $I = \Delta K$

$$\Delta K = PK$$

$$P = \frac{\Delta K}{K}$$

If $P = \frac{L-w}{\theta}$

Where $L = \frac{Y}{N} = \frac{120}{20} = 6$

$$P = \frac{\frac{Y}{N} - W}{\frac{K}{N}}$$

$$0.02 = \frac{6-2}{\frac{K}{20}}$$

$$= 2 \times \frac{20}{K}$$

$$0.02\ K = 80$$

$$K = \frac{80}{0.02} = 4000$$

Exercises

Questions on Chapter Six

The economic growth models

The choice of techniques Part A True – false questions

Circle whether the following statements are true (T) or false (F):-

1- According to the Harrod-Domar model a higher savings rate increases the rate of growth of per capita income.

2- The Harrod-Domar predicts the neutrality of growth rates with respect to per capita income

3- We can use the Kaldor's saving function to treatment the instable in harried dormer model.

4- The one of assumptions of Kaldor's model is that the short-period supply of aggregate goods and services is elastic and irresponsive to any increase in monetary demand

5- The one of assumptions of Kaldor's model is that the percentage rate of growth of capital and the percentage rate of output (income) are equal.

Part B: multiple – choice questions

Circle the appropriate answer:

1- Harrod-Domar growth model suggests that growth is

a) directly related to savings and inversely related to the capital/ output ratio

b) directly related to the capital/ output ratio and inversely related to savings

c) indirectly related to savings and the capital/ output ratio

d) directly related to savings and the capital/ output ratio

2- Which one of the followings is Not an assumption of the Harrod –Domar model?

a) fixed capital –output ratio

b) variable marginal and average propensity to save

c) closed economy

d) capital is the only factor of production

3- Which among the following statements is not true for the golden Age equilibrium in the growth model of MRs. Joan Robinson?

a) rate of profit treads to be ruing

b) level of real wages rise without per worker

c) technical progress is natural

d) population in growing at a steady rate.

4- Joan Robinson's growth model deals with

a) desired growth rate

b) possible growth rate

c) natural growth rate

d) warranted growth rate (June)

5) A technical change is neutral if remains unchanged at constant ratio: (June)

a) Kaldor b) Harrod c) Hicks d) Solow

6- The classical model of economic development emphasizes

a) capital accumulation

b) laissez faire policy

c) both a and b are correct

d) Question does not provide sufficient data or is vague

Pat C : Problems

1- Suppose you have the following value for Harrod- Domar model

$$V = 12\ U = 24\ K0 = 36$$

$$L0 = 72\ S = 0.36\ n = 0.03$$

Required

a) The real value of YO is

b) The real value of YI is

c) The real value of supplied KI is

d) The real value of supplied LI is

e) The real value of demand K1 is

f) The real value of demand LI is

2- Suppose the n value increase to n = 0.05

a) Then the real value of supplied L1 is

b) And new real value of supplied KI is

c) The real value of YI is

d) The new real value of demanded KI is

e) The new real value of demanded L1 is

f) The calculation of unemployment is L factor is

3- Suppose the n value decrease to n = 0.01 then

a) The new value of supplied L1 is

b) The new value of supplied KI is

c) The new value of Y1 is

d) The new value of demanded KI is

e) The value of capital surplus is

4- We can use Kaldor saving function to treatment the instability in Harrod- Domar where SP = 0.90 sw -0.10

a) Then when n-0.05 the saving percent must be

b) The new value of YI is

c) The ratio of total profit to output is

d) And ratio of total wages to output is

e) When n -0.01 the saving percent must be

f) And new value of Y1 is

g) The ratio of profit to output is

h) The ratio of wages to output is

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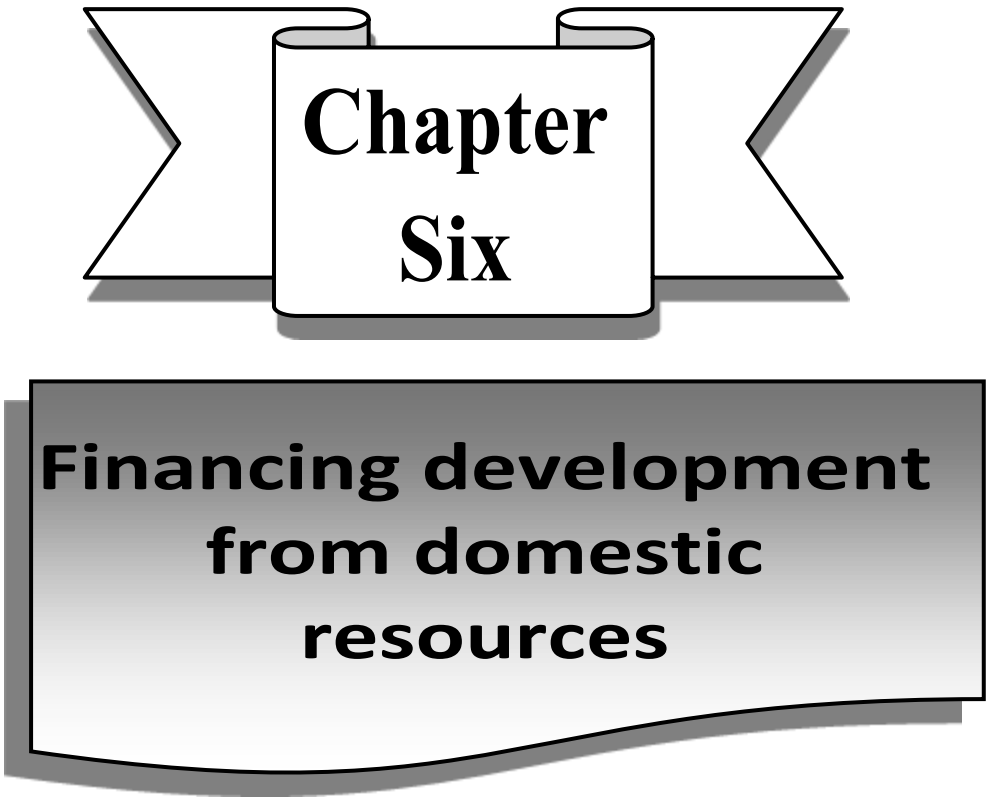
Chapter
Six
Financing development from domestic resources

Chapter Six

Financing development

from domestic resources

Introduction

The topic of financing development from domestic resources has two major aspects. The first concerns the ways in which saving can encouraged in developing countries, because only if society is willing to save can resources be devoted to the production of capital goods, saving is necessary to fund investment. In a primitive subsistence economy, without money or monetary assets, saving and investment will tend to be simultaneous acts, in the sense that saving and investment will be done by the same people, and saving will be invested in the sector in which the saving takes place. Those who sacrifice time and resources that would otherwise be used for consumption purposes do so to develop the means of production. They do not hold money or interests bearing assets .in more sophisticated money exchange economy, however, there is no guarantee that saving will necessarily be converted into investment, with the existence of money and monetary assets; the act of saving becomes divorced from the act of investing.

Those who want to do the investing may be different from those who want to do the saving, and the process of capital accumulation is likely to require financial and credit mechanisms to

redistribute resources from savers to investors. Indeed, with a banking system with the power to create credit, investment can take place without prior saving through the process of borrowing. In other words, saving funds investment, but does not necessarily finance it. Investment generates its own saving through increases in output and profits. In fact, in the early stages of development, savings may not be the major barrier to capital formation but rather an unwillingness or inability to invest.

Unwillingness to invest may stem from cultural attitudes or simply from a realistic assessment of the risks involved.

We analysed in Chapter 1 – 2 why poor people may be risk averse. The inability to invest, on the other hand may result from shortages of cooperating factors of production (including foreign exchange), or lack of access to credit because of the underdeveloped nature of the financial system. The second important aspect of financing development from domestic resources, therefore, has to do with the role of the banking and financial system in promoting and financing investment. The financial system is important for encouraging saving, financing investment and allocating savings in the most productive manner.

In this chapter, we focus primarily on the determinants of saving, the role of the financial system in promoting savings, investment and growth, and also the process of credit–financed growth initiated by the government, which may be inflationary. This

leads us to consider the relation between inflation and economic development.

Saving

There are three broad groups in society that save: the household sector, the business sector and the government. The household sector saves out of personal disposable income (personal saving), the business sector saves out of profits, and the government can save out of tax revenues if it spends less than it receives on current expenditure (that is , runs a budget surplus on current account). Household and business saving is sometimes referred to as private saving, while government saving is public saving. Each the sectors' motive for saving will differ, and we shall consider the determinants of saving later.

As far as the nature of saving is concerned, three broad types may be distinguished: voluntary, involuntary and forced. The origin of these types of saving is fairly self- explanatory:

- Voluntary savings are savings that arise through voluntary reductions in consumption out of disposable income both the household and the business sector may be a source of voluntary savings.
- Involuntary savings are savings brought about through involuntary reductions in consumption. All forms of taxation and schemes for compulsory lending to governments are traditional measures involving involuntary reductions in consumption.

- **Consumption may be reduced because of rising prices. This is referred to as forced saving and may happen for a number of reasons. People may spend the same amount in money terms, but because prices have risen this means they spend less in real terms (money illusion).People may want to keep; he real value of their holdings of money constant, so they accumulate more money as prices rise (the real balance effect). Also inflation may redistribute income to those with a higher propensity to save, such as profit earners.**

For a variety of reasons, which will be considered later, inflation is likely to be a natural concomitant of development, but it can also be deliberately induced by governments financing budget deficits at full employment by monetary expansion. This is the idea of inflation as a tax on money, it should also be remembered that if an economy is at less than full employment, there can always be more saving by activating unemployed or underemployed resources, provided not all of the increase in output is consumed.

Domestic savings for investment can also be supplemented from abroad. Private foreign investment is a direct source of capital formation and provides a direct addition to domestic investment. It can also be a source of savings by stimulating income and employing previously underutilised resources Second, Borrowing from abroad provides resources for investment by enabling imports to exceed exports, which in the national accounts shows up as

investment in excess of domestic saying. Foreign assistance may be from multilateral or bilateral sources and may take a variety of forms, ranging from loans at commercial rates of interest to outright gifts of goods and services and technical assistance.

Finally, a country's commercial policy can stimulate savings and release resources for investment purposes. Trade itself, improvement in a country's terms of trade, can provide additional resources for investment if the resulting increase in real income is not fully consumed, likewise policies to restrict imports of consumption goods can release additional resources for investment, provided that domestic saving is not reduced by purchasing power released being switched to home consumption goods. These topics are taken up in subsequent chapters.

The amount that countries save and invest is a proportion of their gross domestic product (GDP) differs enormously, affected by differences in the ability and willingness to save and invest. Some countries disserve. Consuming more than they produce. Some countries save more than they invest, which means they are investing abroad, and other countries invest more " than they save, which means they are net importers of capital. The experience by country and by continent for the years 1980 and 1995 is shown in Table 1. The first thing to note is that the savings ratio much lower in poor countries than in rich ones, but that the savings ratio does not continue to rise for ever as countries grow richer. It tends to level off in the middle- income group of countries and then

stabilise. The weighted average savings ratio in the low-income countries (excluding China and India) is only 10 per cent of GDP compared with 25 per cent in the middle-income countries and 21 per cent in high income countries. Some countries in the low income category dissave, for example Tanzania, Burundi, Chad and war-torn Rwanda. Most of the low income countries also have investment ratios that are higher than their domestic savings ratios, indicating that they are net capital importers, the average investment ratio is 20 per cent, compared with a savings ratio of 10 per cent.

The second important observation is the enormous disparity in saving performance between continents, particularly between the high savings ratio of the highly successful East Asian countries and the much lower savings ratios in the less successful economies of Latin America and Sub-Saharan Africa. The ratio in East Asia (35 per cent) is nearly double that of Latin America (19 per cent), and more than double that of sub-Saharan Africa (16 per cent). The question that naturally arises is: did high savings precede rapid growth in East Asia, or did rapid growth generate its own high savings ratio? Some might argue that it was policies to stimulate saving that were important, including financial the amount liberalisation. Some might say it was policies to stimulate investment, partly through control of the banking system, that generated growth and therefore saving. Others might say it was the

deliberate involvement of the government in generating and reallocating new resources.

There is no easy answer to question, but the different replies that might be given high light the differences in the three broad analytical approaches to the study of financing development from domestic resources, which we will use as the organising framework for the rest of the chapter. The three approaches are as follows:

Table 4 Saving and investment ratios asa percentage of GDP									
	Cross domestic investment		Cross domestic investment			Cross domestic investment		Cross domestic investment	
Country	1980	1995	1980	1995	Country	1980	1995	1980	1995
Low in come economics excluding China And India	24 ..	32w 20w	22w ..	30w 10w	Lower−Middle income economies Lesotho	42	87	−62	−9
					Egypt, Arab Rep.	28	17	15	6
Mozambique	22	60	1	5	Bolivia	15	15	19	8
Ethiopia	9	17	3	7	Macedonia FYR	..	15	..	4
Tanzania	29	31	19	−7	Moldova	..	23	..	24
Burundi	14	11	−1	−7	Uzbekistan	..	23	..	24

Malawi	25	15	11	4	Indonesia	24	38	37	36
Chad	4	9	−6	−10	Philippines	29	23	24	15
Rwanda	16	13	5	−7	Morocco	24	21	14	13
Sierra Leone	18	6	2	−9	Syrian Arab Republic	28	..	10	..
Nepal	18	23	11	12	Papua New Guinea	25	24	15	39
Niger	37	6	23	1	Bulgaria	34	21	39	25
Burkina Faso	17	22	−6	6	Kazakhstan	..	22	..	19
Madagascar	15	11	−1	3	Guatemala	16	17	13	8
Bangladesh	15	17	2	8	Ecuador	26	19	26	21
Uganda	6	16	0	7	Dominican Republic	25	20	15	16
Vietnam	..	27	..	16	Romania	40	26	35	21
Guinea Bissau	30	16	−6	−5	Jamaica	16	17	16	10
Haiti	17	2	8	−7	Jordan	..	26	..	3
Mali	17	26	−2	10	Algeria	39	32	43	29
Nigeria	22	18	32	20	El Salvador	13	19	14	6
Yemen Rep.	..	12	..	10	Ukraine	..	..	..	..

Cambodia	..	19	..	6	Paraguay	32	23	18	14
Kenya	29	19	18	13	Tunisia	29	24	24	20
Togo	30	14	25	9	Lithuania	..	19	..	16
Mongolia	46	..	27	..	Colombia	19	20	20	16
Gambia	26	21	1	5	Namibia	29	20	39	17
Central African Republic	7	15	−10	6	Belarus	..	25	..	20
					Russian Federation	22	25	..	26
India	21	25	17	22	Latvia	26	21	..	16
Lao PDR	..	..	..	..	Peru	29	17	32	11
Benin	15	20	−5	9	Costa Rica	27	25	16	24
Nicaragua	17	18	−2	−9	Lebanon	..	29	..	−22
Ghana	6	19	5	10	Thailand	29	43	23	36
Zambia	23	12	19	3	Panama	..	24	..	22
Angola	..	27	..	43	Turkey	18	25	11	20
Georgia	29	3	..	−9	Poland	26	17	23	19

Pakistan	18	19	7	16	Estonia	..	27	..	18
Mauritania	36	15	7	11	Slovak Republic	..	28	..	30
Azerbaijan	..	16	..	17	Botswana	38	25	28	23
Zimbabwe	19	22	16	17	Venezuela	26	16	33	21
Guinea	..	15	..	11	Upper –Middle–				
Honduras	25	23	17	14	income economies				
Senegal	15	16	0	10					
China	35	40	35	42	South Africa	28	18	36	18
Cameron	21	15	20	21	Croatia	..	14	..	1
Cote d' Ivoire	27	13	20	20	Mexico	27	15	25	19
Albania	35	16	..	−8	Mauritius	21	25	10	22
Congo	36	27	36	23	Gabon	28	26	61	48
Kyrgyz Republic	..	16	..	10	Brazil	23	22	21	21
Sri Lanka	34	25	11	14	Trinidad and				
Armenia	29	9	..	−29	Tobago	31	14	42	25
Czech Republic	..	25	..	20	High – income				
Malaysia	30	41	33	37	economies	23	21w	23w	21w

Hungary	31	23	29	21	Korea. Rep.	32	37	25	36
Chile	25	27	20	29	Portugal	34	28	21	18
Oman	22	17	47	27	Spain	23	21	21	22
Uruguay	17	14	12	13	New Zealand	21	24	20	26
Saudi Arabia	22	20	62	30	Ireland	27	13	14	27
Argentina	25	18	30	30	Israel	22	24	11	13
Slovenia	..	22	..	21	Kuwait	14	12	58	18
Greece	29	19	23	7	United Arab Emirates	28	27	72	27
Low- and middle income economies	26	27w	30w	22w	United Kingdom	17	16	19	15
Sub-Saharan Africa	23	19w	27w	16w	Australia	25	23	24	22
East Asia and Pacific	28	39w	28w	38w	Italy	27	18	24	22
South Asia	20	23w	15w	20w	Canada	24	19	25	21
Europe and Central Asia					Finland	29	16	28	24
					Hong Kong	25	35	34	33
					Sweden	21	14	19	19

Middle East and N Africa	26	..	45w	..	Netherlands	22	22	22	29
Latin America and caribbean	25	20w	23w	19w	Belgium	22	18	19	24
					France	24	18	23	20
					Singapore	46	33	38	...
					Austria	28	27	26	26
					United States	20	16	19	15
					Germany	....	21	..	23
					Denmark	19	16	17	21
					Norway	25	23	31	29
					Japan	32	29	31	31
					Switzerland	24	23	20	27
					world	24	23w	25w	21w

- **The prior saving approach to the financing of development stresses the importance of prior savings for investment and the need for policies to raise the level of savings either voluntarily or involuntarily, or both. The approach is very classical in, conception, emphasising saving as a prerequisite of investment. The approach is also characterised by a strong aversion to inflation and a belief that saving will readily find investment outlets.**
- **The so-called quantity theory approach points to the role of government monetary expansion in appropriating resources for development through forced saving or the inflation tax.[5] If developing countries are characterised as fully employed in the Keynesian sense (with no spare in the consumption goods industries). both the Keynesian and the quantity theory approach to the financing of development will involve inflation. Plans to invest in excess of plans to save at full employment will drive up the price level, and so will monetary expansion by government. In this sense there is an important practical as well as a theoretical difference between the prior- savings approach and the other two approaches. In the poor-saving approach the resources released for investment come from voluntary and involuntary saving and no inflation is involved. In the Keynesian and quantity theory approaches the resources are released through the process of inflation, by income redistribution from**

[5] - the approach gets us name from the quantity, theory of money, which predicts that increases in the quantity of money will always eventually lead to increases the price level.

classes with low propensities to those with higher propensities to save, and by inflation as a tax or money.

The prior savings approach

In classical theory saving and investment are one and the same thing. All saving finds investment outlets through variations in the rate of interest. Investment and the development process are led by savings. It is this classical vies of the development process that underlies such phrases. In the development literature as the mobilisation of savings for development and also underlies the policy recommendation of high interest rate to encourage voluntary saving. Lewis's influential model of the development process, which we considered in chapter 5, is a classical model stressing the importance for development of reinvesting the capitalist surplus.

The level of saving and the ratio of saving to national income in developing countries are likely to be a function of many variables affecting the ability and willingness to save. The main determinants of the ability to save are the average level of per capita income, income, the rate of growth of income, the distribution of income between rich and poor and the age composition of the population. In turn, the willingness to save depends on such monetary factors as the existence of acceptable and reliable monetary institutions, the interest rate offered in relation to risk and time preference, and general societal attitudes

towards consumption and the accumulation of wealth. Differences in cultural attitudes between countries may distort the estimation of saving functions across countries based on economic variable alone.

Turning to the empirical evidence, the time–series and cross–section evidence suggests that the level of saving per head and the saving ratio are primarily a function of the level of per capita income and growth of income – other factors, including monetary variables, are of lesser importance.

The hypothesis that savings per head and the savings ratio are a function of income per head is part of the Keynesian absolute income hypothesis, that is, saving is a function of income. If we write the Keynesian savings function as S = a_0 + b_0 (Y) and divide by the population level (N) we have

$$S/N = - a_1 + b_1(Y/N)$$

To obtain an expression for the savings ratio we multiply Equation. 1 by N and divide by Y:

$$S/Y = b_1 - a_1 \ (Y/N)^{-1}$$

The Keynesian absolute income hypothesis therefore predicts that savings per head (S/N) is a linear (but non proportional) function of income per head (Y/N), and that the savings ratio (S/Y) is a hyperbolic function of the level of income per head; that is, that the

savings ratio will rise with the level of per capita income but at a decreasing rate. As Y/N→∞, S/Y→ to the asymptote b_1. This is shown in Figure 1.

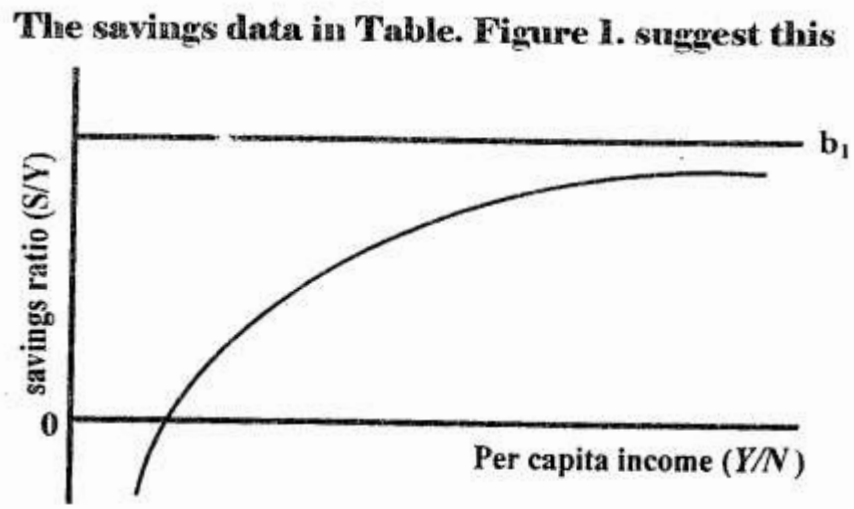

Figure 1

type of relation, as already discussed. Data on the personal savings ratio over the period 1985–93 also suggest this non linear relation, as shown in Table 2. The ratio rises rapidly between the low–income and upper middle income countries and then levels off.

The reason why the savings ratio should rise as per capita income increases and then level off is not clear–cut. It is as if saving is a luxury good in the early stages of development but then loses its appeal. Part of the reason may be purely statistical, arising from the way saving is normally defined in developing

countries as the difference between investment and foreign capital inflows.

As investment expenditure becomes more faithfully and accurately recorded as development proceeds (as per capita income rises) the savings ratio is also shown to increase. But there are also a number of economic factors that probably play a contributory role in explaining the relation. One is the growth of the money economy. As money replaces barter for transactions, the public will wish to , hold a higher proportion of their income in the form of money, which they can only do by giving up command over real resources. This hypothesis is supported by what we know about the income elasticity of demand for money in developing countries, which exceeds unity (For evidence of this, see Thirlwall, 1974, CH.5.)

Table 2 personal savings ratio

Countries	Personal saving as % of GDP (average 1985093
Low income	11.2
Lower middle – income	16.7
Upper middle income	195
High income	20.0

a higher proportion of their income in the form of money which they can only do by giving up command over real resources. This

hypothesis is supported by what we know about the income elasticity of demand for money in developing countries, which exceeds unity. (For evidence of this, see Thirlwall. 1974, CH.5)

A second possible explanation is that population growth decreases with increases in the level of per capita income, so that population growth absorbs household saving to a lesser and lesser extent. Another plausible hypothesis is that in the early stages of development the distribution of income, both personal and functional, grows more unequal but at a decreasing rate. It higher-income groups have higher propensities to save than lower-income groups, and profit earners have a higher propensity to save than wage earners, the savings ratio will be positively related to the degree of inequality in income distribution (personal income distribution) and to the share of profits in total income (functional income distribution). Some evidence of the widening distribution of income in the early stages of development was given in Chapter.

It will be remembered from chapter 5 that in Lewis's model of development with unlimited supplies of labour, it is not the absolute level of per capita income that is the prime determinant of the savings ratio but the size of the capitalist surplus and the distribution of income between entrepreneurial profits and other income according to Lewis (1955), if we ask why the less developed countries save so little the answer is not because they are so poor but because their capitalist sector is so small. Lewis also expressed the view that no nation is so poor that it could not

save and invest at least 12 per cent of its national income if it so wished. Investment as a proportion of national income is not small because of an incapacity to save but because the surplus generated in developing countries is used to maintain unproductive hoards of retainers and for conspicuous consumption in general:

Lewis's view is very much in line with our earlier remark that in the early stages of development there may be savings investment gap in the sense of incapacity to save, but an unwillingness to save or to use saving for productive formation.

Other recent studies show that the savings ratio is positively related to the rate of growth of income, which is the prediction of the lifecycle hypothesis of saving (see Modigliani, 1970). The idea is that people wish to smooth out consumption over their lifetime, so that they dissave when their income is low (in youth old age) and save when they are working and their income is high. If income growth then accelerates for some reason, people will save more to give themselves a higher level of consumption in retirement. Thus if income growth is faster in one country than another, this will produce a higher savings ratio. Edwards (1995) has analysed the private savings ratio across 36 industrial and developing countries over the period 1983 to 1992 and finds that one of the most important determinants of high savings is the growth of output. The age distribution of the population also makes a difference, and the degree of urbanisation negatively affects the savings ratio.

The dependence of savings on income suggests that development and rising living standards is a cumulative phenomenon. Growth depends on saving and capital formation, but saying in turn depends on growth and the level of capita income. A virtuous circle can be started once the growth of income rises above the growth of population, allowing per capita income to rise. The virtuous circle of growth must be initiated by directly raising the low levels of per capita income of the vast majority of people by making their labour more productive. This is the first task of financing capital formation by domestic voluntary means within the prior savings approach. The second task is to encourage and exhort those with the ability to save to curtail extravagant consumption and to invest productively the surplus of income over whatever level of consumption is decided upon. The encouragement to save and invest productively must come from the government and government agencies concerned with promoting economic development. This is where monetary and fiscal policies become important. At the practical level, this is what the prior savings approach to development is concerned with designing monetary and fiscal policies that raise the level of savings directly, and also indirectly by allocating resources in the most productive way possible. While monetary factors may not be so important as income in determining savings behaviour, economic development itself is dependent on the sophistication of the financial system, and there is evidence that saving may be more responsive to interest rates when the level of income rises

above subsistence. Research on this topic by Ogaki, Ostry and Reinhard (1996) is reported in Table 3[6].

Table 3 interest sensitivity of savings under alternative we scenarios'

Country groupings	Real interest initial		
	3 per cent	4 per cent	5 per cent
Low-income			
Average for group	0.312	0306	0.300
Average for 10 poorest	0.177	0.174	0.171
Lower-middle-income	0.532	0.522	0.512
Upper-middle-income	0.560	0.519	0.539
High-income	0.584	0.573	0.562

Source M Orgako. J.D. Ostry and C.M reinhart (1996)

The data refer to the change (in percentage points) in the saving rate owing to a 1 percentage point increase in the real interest rate. For example, in high - income countries with a real interest rate of 3 per cent, a1 percentage point rise in the real interest rate would raise the saving rate by nearly two thirds of a percentage point (0 584 of a percentage point) at higher baseline levels of the real interest rate, the saving response diminishes slightly.

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Income over whatever level of consumption is decided upon. The encouragement to save and invest productively must come from the government and government agencies concerned with promoting economic development. This is where monetary and fiscal policies become important. At the practical level, this is what the prior savings approach to development is concerned with designing monetary and fiscal policies that raise the level of savings directly, and also indirectly by allocating resources in the most productive way possible. While monetary factors may not be so important as income in determining savings behaviour, economic development itself is dependent on the sophistication of the financial system, and there is evidence that saving may be more responsive to interest rates when the level of income rises above subsistence. Research on this topic by Ogaki, Ostry and Reinhart (1996) is reported in Table 3.

It appears that saving is very unresponsive to interest rates in low income countries where there is little margin of income over subsistence needs, but its responsiveness rises as consumption rises above subsistence needs and people can exercise choice about increasing their present or future consumption.

This leads us to the extensive topic of financial systems, financial policy and economic development

Fiscal policy and taxation

There is another arm of the prior savings approach to the financing of development from domestic resources that needs to be considered, and that is the use of fiscal policy and taxation. Fiscal policy has two major roles in the financing of development. The first is to maintain the economy at full employment so that the savings capacity of the economy is not impaired. The second is to design a lax policy to raise the marginal propensity to save of the economy as far above the average as possible without discouraging work effort and consistent with an equitable distribution of the burden.

Using fiscal policy to maintain full employment will involve deficit finance if unemployed or underused real resources exist in the Keynesian sense. While deficit finance is likely to be inflationary in the short run until supply has had time to adjust , there is an important analytical distinction between the means by which resources are made available for investment through deficit finance at less than full employment and the means by which savings are generated by inflation. In the isomer case savings are generated by an increase in real output, in the latter case by a reduction in real consumption through a combination of factors, including a real balance effect on outside money. Income redistribution from low savers to high savers, and money illusion.

Fiscal policy to raise the marginal propensity to save above the average is concerned with the implementation of taxes to reduce

consumption in the private sector. Saving brought about by taxation is involuntary saving. How much taxation a country raises as a proportion of national income depends on two major factors: the capacity of the country, and the effort made by the country in relation to its taxable capacity. The taxable capacity of a country depends on such factors as the overall level of per capita income of the country, the distribution of income, the level of literacy and urbanisation. The size of the industrial sector, the importance of trade. Whether the country has mineral resources, and the amount of foreign investment. In turn, the tax effort depends on the extent to which a country exploits these various tax bases and the rates of tax applied to the bases.

The overall buoyancy of a tax system is measured by the proportional change in total tax revenue ($\Delta T/T$) with respect to the proportional change in national income ($\Delta Y/Y$). and is composed of two parts: the elasticity of tax revenue ($\Delta T/T$) with respect to the tax base ($\Delta B/B$) and the elasticity of the base ($\Delta B/B$) with respect to income ($\Delta Y/Y$), that is.

$$(\Delta T/T)/ (\Delta Y/Y)= (\Delta T/T)/ (\Delta B/B)* (\Delta B/B)/ (\Delta Y/Y) \qquad (3)$$

If the Tax system is progressive (with higher tax rates applied to higher levels of income or expenditure), then the elasticity of tax revenue with respect to the base will be greater than unity, and buoyancy will be greater than unity provided the elasticity of the base with respect to income is at least unity, if buoyancy is greater than unity, then tax revenue as a proportion of national income will

rise as national income rises. The buoyancy of the tax system can be increased by increasing the rates of tax or extending the base.

Any measured change in tax revenue with respect to income is likely to consist both of an automatic increase in tax revenue as income increases if the rate structure is progressive, and the effect of discretionary changes in tax rates and extension of the tax base. The elasticity of a tax system is measured as buoyancy minus the effect of discretionary tax changes. There are techniques for estimating the elasticity of the tax system but we will not describe them here – suffice it to say that the greater the elasticity, the more that tax revenue and saving can increase without the need for discretionary changes. This is desirable feature of tax systems in circumstances where it may be difficult to implement discretionary changes.

Tax effort depends on the elasticity of the system and overall buoyancy, and needs to be measured in relation to capacity. One way of doing this, pioneered by the IMF (see Tait et at., 1979) is to take a cross–section of countries and relate their ratios of tax to national income to the various measures of tax capacity mentioned earlier, namely per capita income, the importance of trade and industry and so on . Estimating such an international tax function gives an equation of the form:

$$T/GDP = a + b_1(PCY) + + b_2(X/GDP) + b_3(L/GDP) \text{ and so on} \quad (4)$$

Where T/GDP is a country's ratio of national income, PCY is per capita income. X/GDP is the ratio of exports to GDP, I/GDP is the ratio of industrial output to GDP, and the coefficients $b1$, $b2$, $b3$ and so measure the average effect of each of the variables on the tax ratio across countries. For example, if $b2$ was estimated as 0.5, this would mean

Table 4
Composition of tax systems by major type of taxes , tax 1992

	Taxes trade share of GNP	Taxes on international trade	Domestic commodity taxes	Domestic income taxes	Social security taxes	Other taxes
Low income countries	16.0	25.2	32.9	18.8	0	23.0
Lower-middle- income countries	19.0	17.8	28.3	31.5	1.7	20.7
High middle – income countries	21.0	9.3	29.1	25.2	14.8	21.6
Upper – income countries	27.0	1.1	18.2	42.5	27.9	10.3

Source Gillis- Perkins, Kroemer and Snodgrass: 1996

that a country with an export ratio that is 1 per cent above the average for all countries will have a tax ratio that is 0.5 above the average for all countries, other things remaining the same.

By time method, a country's tax effort can be measured by substituting values for PCY, X/GDP, I/GDP and so on in Equation 4 . predicting what the tax ratio should be and then comparing the predicted value with the actual value of the tax ratio. If the actual value is greater than predicted, the country can be said to be making a good effort; if it is less then the tax effort can be regarded as weak.

The facts on tax revenue in developing countries are that tax revenue as a percentage of national income is typically low, averaging less than 20 per cent compared with nearly 30 per cent in high income countries, and taxes on income are a minor source of tax revenue compared with indirect taxes, as can be seen in Table 4. The proportion of the population that pays income tax in developing countries is correspondingly low, averaging about 20 per cent, compared with the vast majority of the working population in developed countries, who constitute over 40 per cent of the total population.

On the surface there would appear to be a great deal of scope for using tax policy to raise the level of community saving relative to income; two important points must be borne in mind, however. The first is that the rudimentary nature of the tax system in developing countries is partly a reflection of the stage of

development itself. Thus the scope for increasing tax revenue as a proportion of income may in practice be severely circumscribed. There are the difficulties of defining and measuring the tax base and of assessing and collecting taxes in circumstances where the population is dispersed and primarily engaged in producing for subsistence, and where illiteracy is also rife. And there is also the fact that, as far as income tax is concerned, the income of the vast majority of the population is so low anyway that it must fall outside the scope of the tax system. Whereas 70 per cent of national income is subject to income tax in developed countries, only about 30 per cent is subject to income tax in developing countries.

Even if there is scope for raising considerably more revenue by means of taxation, whether the total level of saving will rise depends on how tax payments are financed whether out of consumption or saving and how income (output) is affected. It is often the case that taxes that make tax revenue highly elastic with respect to income are taxes that are met mainly out of saving or have the most discouraging effect on incentives. For example, very progressive income tax will discourage work effort if the substitution effect of the tax out weight the income effect; and to the extent that high marginal rates of tax fall primarily on the upper income groups with a low propensity to consume, saving may fall by nearly as much as tax revenue rises.

To avoid such large reductions in private saving, an expenditure tax on upper income groups, which exempts saving

from taxation, is an alternative to a progressive income tax, but the disincentive effect on work effort is not necessarily avoided. This is so because if the expenditure tax encourage saving, the tax rate must be higher to yield the same revenue as the income tax. If people work to consume and the price of consumption is raised, work- effort will be curtailed if the substitution effect of the change outweighs the income effect. The more successful the expenditure tax is in stimulating saving out of a given income, the higher must be the rate of tax to keep the yields from the two taxes equal, and the greater the disincentive to work effort is likely to be. If the expenditure tax is in addition to the income tax, however, there is no reason to expect any substitution effect in favour of private saving, so that whether aggregate community saving increases depends on how much work effort is discouraged and on the relative propensity to consume and save of those who pay the tax compared with those of the government. In general the most effective tax policy to raise the level of saving relative to income is to impose taxes on those with a high marginal propensity to consume, namely the poor, but there are obvious considerations of equity to bear in mind m pursuing such a policy, as well as the practical consideration of political feasibility

The predominant importance of agriculture in developing countries makes agricultural taxation a potentially significant source of tax revenue and a means of transferring resources into investment. There are a great variety of tax instruments for taxing

agriculture, including taxes on land area, on land value, on net income, marketing taxes, export taxes, land transfer taxes and so on. If revenue is the aim, then marketing and export taxes are probably the most efficient and the easiest to collect. As far as exports are concerned, two main systems may be adopted. Either the state- controlled marketing board may pay the producer a price that is lower than the international price received, or the government may require that all foreign exchange receipts be surrendered, with compensation given in local currency at an exchange rate that overvalues the local currency.

Export taxes may, however, have disincentive effects. The substitution effect of export taxes will be discourage production, or to switch production to the home market the home market is not saturated. Either way, the yield from tax will fall if the tax base (the level of exports) falls more than in proportion to the rise in the export tax. Trades taxes have also been shown to be very unstable because of the volatility of primary product exports (and of imports), which can lead to severe budgetary problem for countries that rely on them (see Bleaney et al,. 1993).

In theory, land taxes are probably the most desirable way to transfer resources from agriculture, but in practice land taxes are not important as a source of tax revenue.

It is also worth mentioning that no developing country has yet successfully applied a conventional income tax to agricultural income. The nearest that countries have come to this is to tax the

value of land, the imputed income from land or the potential physical yield from land.

The balance between direct taxes on income and indirect taxation on expenditures and trade in the economy at large is heavily weighted in the direction of the latter, particularly in the form of import duties and sales taxes. The emphasis on indirect taxes originates from the difficulties already mentioned of levying direct taxes, and the disincentive effects that direct taxes can have. this is not to say that indirect taxes are totally devoid of disincentive effects, but they are probably less especially if taxes such as sales taxes and import duties can be levied on necessities without too much social hardship. Indirect taxes on luxuries will raise revenue, the more so the more price inelastic the demand, but the taxes may largely be paid out of saving to the extent that luxuries are consumed by upper income groups with a low propensity to consume. The equity grounds for such taxation, however, are still strong.

Taxes on business are easy to collect and administer, but again business taxation may merely replace one form of saving with another. The marginal propensity to save out of profits is typically high. The main justification for company taxation must be to retain control of resources that might otherwise leave the country if the business is foreign owned, or to substitute public for private investment on the ground that public investment is more socially productive than its private counterpart.

The Keynesian approach to the financing of development

The Keynesian approach to the financing of development by inflationary means stresses, first, that investment can generate its own saving by raising the level of income when the economy is operating below capacity, and by redistributing income from wage earners with a low propensity to save to profit earners with a high propensity to save when the economy is working at full capacity. Second inflation itself can encourage investment by raising the nominal rate of return on investment and reducing the real rate of interest. Only the first of these two aspects of the Keynesian approach will be considered here.

Unemployed resources provide the classic argument for Keynesian policies of inflationary finance. If resources are unemployed or underused, real output and real savings can be increased by governments running budget deficits financed either by printing money or by issuing government bonds to the banking system and the public.

In a situation or genuine Keynesian unemployment, any tendency towards inflation. Whatever method of deficit finance is used. Should burn itself out as the supply of goods rises to meet the additional purchasing power created. Some economists have questioned, however, whether the observed unemployment of labour in developing countries is strictly of the Keynesian variety, and whether the supply of nut–put would respond very much to increased demand. It is probably true that most unemployment in

developing countries results not from a shortage of demand, but from a lack of cooperating factors of production to work with (mainly capital), and the direct multiplier effects of government expenditure may be low, but some deficit- financed projects may have considerable secondary repercussions on output if they eliminate production bottlenecks at the same time.

In the agricultural sector of developing countries, and in the production of consumer goods in the industrial sector, there are many opportunities for investment that can yield outputs several times the money value of capital invested in a very short space of time. In agriculture, the use of fertiliser and the provision of transport facilities are good examples. Credit expansion for these activities can soon generate sufficient output to absorb the demand creating effects of the new money in circulation.

Thus while ii may be conceded that much of the unemployment in developing countries is not of the Keynesian variety, it does not follow that monetary expansion in conditions of unemployment cannot generate secondary employment and output effects. The capacity generating effects need to considered in conjunction with the emphasis on demand in Keynesian static multiplier theory.

Let us turn now the Keynesian full employment case. At full employment, inflation is the inevitable result of the Keynesian approach to development. In contrast to classical and neoclassical theory, Keynesian theory specifies independent saving and investment functions and allows price changes in response to

excess demand in the goods market to raise saving by redistributing income. Inflation is the means by which resources are redistributed between consumption and investment. In Keynesian models, investment is not constrained by saving, but by the inflation rate willing to be tolerated by wage earners who have had their real wages cut.

If plans to invent exceed plans to save it is reasonable to suppose the both investors and consumers will have their plans thwarted investment is less than firms desire, but greater than consumers plan to save. Let us assume. Therefore, that the actual growth of capital is a linear combination of planned saving and planned investment.

$$\frac{dK}{K} = a\frac{I}{K} + (1-a)\frac{S}{K} a < 1 \qquad (5)$$

Where k is the quantity of capital, I is planned investment and S is planned saving. Now assume that the rate of inflation is proportional to the degree of excess demand as measured by the difference between plans to invest and save:

$$\frac{dP}{P} = \lambda\left(\frac{I}{K} - \frac{S}{K}\right)\lambda > 0 \qquad (6)$$

Where P is the price level. Substitution the expression for I/K into (5) gives

$$\frac{dK}{K} = \frac{a(dP/P)}{\lambda} + \frac{S}{K} \qquad (7)$$

S/K is planned saving and a (dP/P)/ λ is forced saving per unit of capital. Forced saving results from the inability of consumers to fulfil their planned consumption in conditions of excess demand. The underlying mechanism that thwarts the plans of consumers is inflation, which redistributes income from wage earners to profits. Other things remaining the same, if prices rise faster than wages, real consumption will fall and real saving increase as long as the propensity to save out of profits is higher than the propensity to save out of wages.

In Keynesian models, therefore the effect of inflation on saving depends on two factors: the extent to which income is redistributed between wages and profit; and the extent of the difference in the propensity to save out of wages and profits.

The relation between wages, prices and profits, and the consequent effect of income redistribution on saving, is best illustrated using simple algebra. Let Z labour's share of national income so that

$$Z = \frac{W}{PY} - \frac{wL}{PY} - \frac{W}{Pr}$$

Where W is the wage bill, w is the wage rate, P is price per unit of output, Y is income and r = Y/L is the productivity of labour. Hence the rate of change of labour's share may be written as from this equation a number of interesting propositions can be established. First, given a positive rate of growth of productivity, a sufficient condition for a redistribution of income from wages to

profits is that prices rise faster than wages. Note, however, that in a growing economy (with positive productivity growth) it is not a necessary condition. Labour's share will fall and the share of profits rise as long as (dw/ w − dP/P) < dr/ r; that is, as long as the real wage rises less than the growth of labour productivity. In a growing economy, therefore, there is no necessary clash between the real wage and profits/ The real wage can rise and the share of profits in income can also rise as long as some of the gains in labour productivity are appropriated by the capitalists.

$$\frac{dZ}{Z} - \left(\frac{d}{w} - \frac{dP}{P}\right) - \frac{dr}{r} \qquad (9)$$

Second, if can be shown that, on the classical savings assumption that the propensity to save out of profits is unity and the propensity to save out of wages is zero, the rise in the aggregate savings ratio will be equal to the fall in labour's share of income. If ail wages are consumed and all profits are saved Equation 9 may be written as

$$\frac{dZ}{Z} = \frac{dc}{c} - \frac{dr}{r} \qquad (10)$$

Where C is real consumption per worker. Hence

$$\frac{dZ}{Z} = \frac{dc}{c} + \frac{dY}{Y} = \frac{d(C/Y)}{C/Y}$$

Where C is aggregate consumption, Y is income and C/Y is the consumption−income ratio. Since d (C/Y) /(C/Y) = − d(S/Y) / (C/Y) and dz = d (C/Y), we have the result that − d (S /Y) = dz, that is,

labour's share and the aggregate savings ratio change by exactly the same amount (in opposite directions).

The basic Keynesian notion that investment determines saving forms the backbone of neo- Keynesian growth theory, as expounded by Robinson (1962) and Kaldor (1955-6). Variations in the savings ratio resulting from inflation and income redistribution is one of the many possible adjustment mechanisms for raising the warranted growth rate towards the natural rate (see chapter 4). As Robinson used to argue, in response to the neoclassical adjustment mechanisms of variations in interest rates and the capital-output ratio, there is nothing in the laws of nature to guarantee growth at the natural rate, but if entrepreneurs wish to invest sufficient to grow at the natural rate then saving will adapt, subject to inflation barrier.[7]

When a steady rate of growth is going on, the share of savings adapts to it. In effect, the actual growth rate pulls up the warranted growth rate by forcing saving

Saving adapts to investment through the dependence of saving on the share of profits in income, which rises with the level of investment relative to income in the way that has already been described. Profits in turn depend on what happens to real wages

[7] -in a static economy the inflation barrier means where a real wage solow that wage earners react to price increases to prevent the real wage from falling futher. In a growing labour economy. It is the point at which labour resists any further reduction in its share of national income, is that where labour appropriates all increases in labour productivity itself in the form of increased real wages.

when the system is out of equilibrium. The basic equation of Robinson's model is tire distribution equation:

$$PY = wL + \pi PK \qquad (11)$$

Where π is the gross profit rate R/K. and P, Y, W, L and K are as before. Dividing by P and rearranging to obtain an expression for the profit rate, gives Given the capital labour ratio, the rat of profit depends on the relationship between output per head and the real wage. If all wages are consumed and all profits are saved, the rate of profit gives the rate of capital accumulation and the rate of growth. This follows since S = I =πK , and $\Delta K = \pi K$ there for $\Delta K/K = \pi$. And if the capital output ratio is fixed, $\Delta K/K = \Delta Y/Y$:hence $\pi = \Delta K/K - \Delta$ Y/Y

$$\pi = \frac{(Y/L)-(w/P)}{(K/L)} = \frac{R/L}{K/L} = \frac{R}{K} \qquad (12)$$

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Variations in the rate of profit and corresponding variations in the real wage provide the mechanism that equilibrates plans to save and invest and the actual and warranted growth rate s.

If the actual growth rate equals the natural rate, the warranted and natural growth rates will also be equalised. If the real wage remains unchanged as investment takes place, however, saving cannot adapt and a greater volume of real investment cannot be financed. This is the inflation barrier in a static model. It appears, in fact, that in a static context the growth rate can only be raised at the expense of the real wage, which comes close to the pessimistic development theories of Ricardo and Marx. In a growing economy such pessimism would be unfounded because it can be seen from Equation 12 that the rate of profit and capital accumulation can rise even if the real wage is rising, as long as the growth in labour productivity exceeds the increase in the real wage.

Kaldor's model also makes saving adjust to the desired level of investment through a rise in the share of profits in national income. The model consists of three basic equations

$$Y = W + R \qquad (13)$$

$$I = S \qquad (14)$$

$$S = s_w W + s_y R \qquad (15)$$

Where R is profits. W is wages, S_W is the propensity to save out of wages and SY is the propensity to save out of profits. Using the three equations we can write

$$I = s_w (Y + R) + s_y R$$

$$= (s_r - s_w) R + s_w Y \qquad (16)$$

Making investment the independent variable in the system and dividing by Y gives

$$\frac{R}{Y} = \left(\frac{1}{S_Y - S_w}\right)\frac{I}{Y} - \frac{S_w}{S_Y - S_w} \qquad (17)$$

The ratio of profits to income and the investment ratio are positively related as long as the propensity to save out of profits exceeds the propensity to save out of wages. The investment ratio must clearly be the independent variable in the system. Capitalists can decide how much they are going to consume and invest but they cannot decide how much profit they are going to make. If SY =I and Sw =0, then I/Y = R/Y, and, multiplying both sides of Equation 17 by Y/K we have Robinson's result that the rate of profit, the rate of capital accumulation and the rate of growth are all equal A higher level of investment can raise the rate of capital accumulation by raising the profits rate and the share of saving in total income subject, of course, to the inflation barrier. The mechanism that gives this result is rising priced−relative to wages.

It is interesting to consider, using a model like Kaldor's how much inflation is necessary to raise the savings ratio by a given amount, there are two ways of approaching this, and both can be considered using the same model. One is to consider the redistributive effects of inflation through time and ask how much inflation there would have to be within a certain time period for the savings target to be achieved, holding the parameters of the model constant. The second approach is to consider what increase in the

rate of inflation is required for a once and for all increase in the savings ratio of a given amount. Both methods of approach can be considered if Kaldor's model is formulated in continuous time. Taking a savings function of the Kaldor's type, S = s_wW + s_yR left

Exercises

Question on Chapter Five

The choice of techniques Part A True – false questions

Circle whether the following statements are true (T) or false (F):-

1- It is certainly that saving will necessarily be converted into investment.

2- Those who want to do the investing may be different from those who want to do the saving.

3- In the early stages of development, savings may not be the major barrier to capital formation but rather an unwillingness or inability to invest.

4- Unwillingness to invest may stem from cultural attitudes or from a realistic assessment of the risks involved.

5- The financial system is important for encouraging saving , financing investment and allocating savings in the most productive manner.

6- Household and business saving is referred to as public saving.

7- Both the household and the business sector may be a source of voluntary saving

8- All forms of taxation involving involuntary reductions in consumption.

9- Money illusion 'people spend less in real terms become of rising in prices.

10- Inflation can be deliberately induced by governments financing budget deficits at full employment by monetary expansion.

11- Plans to invest in excess of plans to save at full employment will drive up the price level.

12- Low interest rate encourage voluntary saving.

13- Acc to Keynesian , the saving ratio will rise with the level of per capita income at an increasing rate

14- LDCs save so little because they are so poor.

15- If income growth is faster in one country than another, this will produce a higher saving ratio.

16- Saving is very responsive to interest rates in low income countries.

Part B : multiple – choice questions

Circle the appropriate answer:

1- Unwillingness to invest may stem from:

a) cultural attitudes. **b) a realistic assessment of the risks involved.**

c) a and b **d) nor a either b**

2- If government spends less than it receives on current expenditure: it runs

a) a budget deficit. **b) a budget syrplus.**

c) dissaving **d) saving**

3- Are saving that arise through voluntary reductions in consumption out of disposable income this means

a) involuntary saving **b) voluntary saving**

c) forced saving **d) none of the above**

4- The main determinants of the ability to save are

a) Average level of per-capita income.

b) the rate of growth of income.

c) Age composition of the population

d) All of the above

e) a and b only

5- The main determinants of the willingness to save are:

a) reliable monetary institutions

b) interest rate offered in relation to risk and time preference

c)societal attitudes towards consumption.

d) All of the above

e) a and only.

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