Economic Growth and Development
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Lecture – 06
Strategies of economic development and growth – I

Hello and welcome to lecture 6 of the NPTEL MOOCs course on Economic Growth and Development. Starting today's lecture we will deal with a series of a discussions on economic development and growth models. There are various growth and development models that have been worked out by economists spanning over more than a century and it is of course, not possible to cover all of these the development and growth models as a part of this course.

However we will try to cover some of the most important development and growth models with appropriate discussions with regard to the implications of each of these models of growth and development. Before we begin with today's lecture we will go through a recapitulation from the last class.

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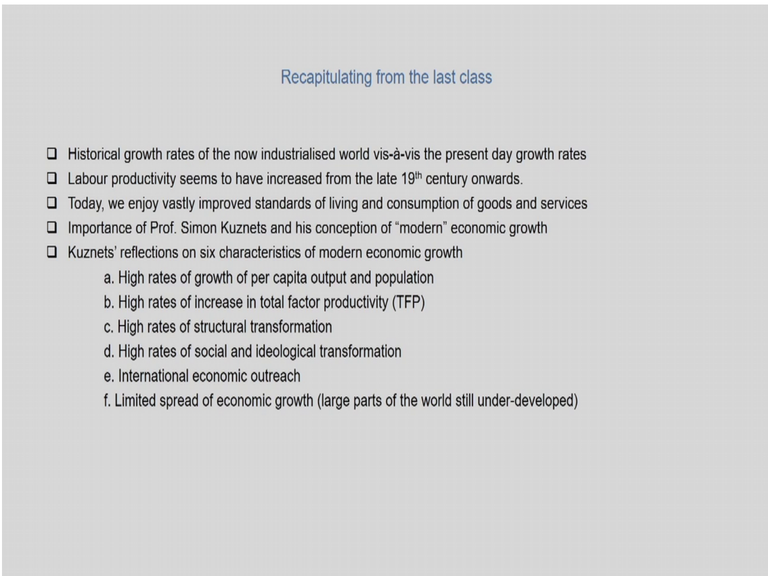

In the last class which was titled as modern economic growth, we mostly try to look at the contribution of Professor Simon Kuznets to the literature on economic growth and what was the importance of his empirical research through which he collected a lot of historical data and came up with the trends of economic growth of the highly industrialized nations of the world.

One of the things that we tried to do in the last class was to compare the historical growth rate and the contemporary growth rates that we see today. A growth rate of about 7 percent or 8 percent or 9 percent does not seem very surprising in today's contemporary world. However, historically spanning the period of 16th, 17th, 18th and even the 19th century, a rate of growth of about 1.5 to 2 percent was considered dramatic.

And what we saw eventually was that there over a period of time particularly since the 18th and the 19th century there have been unprecedented rise in a levels of output in terms of worker productivity and that also means that the in today's world we enjoy a vastly increased we enjoy a satisfaction of a vastly increased number of goods and services and the standards of living have increased dramatically. The importance of Professor Simon Kuznets and his conception of modern economic growth was important because we saw that the highly industrialized nations of the world such as the Netherlands or the UK or the USA had seen dramatic increases in population growth as well as per capita output growth rate.

And there were also certain common characteristics that came up with regard to these highly industrialized nations and Kuznets though his pioneering works on modern economic growth war had reflected upon 6 important characteristics. The first one was that these nations have experienced very high rates of growth of per capita output and population. And he also came up with certain calculations which showed that given a period of given a certain growth rates what is the time that it will require for doubling up of the GDP per capita or doubling up of population and doubling up of the overall per capita output of a nation.

The second important characteristic that Kuznets was reflecting upon was the very high rates of increase in total factor productivity, which means that the total number of output produced per unit of factor input and here he was not just referring to labor productivity, but all other factors of production. For example, capital showed very high levels of productivity and one of the major reasons identified by Professor Kuznets was that of technology use and what influence or what effect technology has had on increasing the total factor productivity. He was also referring to the very high rates of structural transformation observed in the highly industrialized nations of the world.

And here he was referring to the change in the labor force participation in various sectors of the economy for example, there has been a large section of population that had moved away from agriculture to industry urbanization had taken place in all of these countries, there was a production there was production of manufactured goods and which is why these countries are also referred to as the highly industrialized nations of the world. And in the recent decades with respect to structural transformation we also see that there is a lot of structural transformation that has taken place with regard to the moving away of labour from the industrial sector to the services sector.

He was also referring to the very high rates of social and ideological transformation of the highly industrialized nations and how the changes in attitudes or changes in institutions, the changes in ideologies, had affected the rate of growth of his countries. The fifth characteristic that he was referring to was the international economic outreach of the highly industrialized nations. He was basically trying to say focus on the very high development of communication and transport technology and because of this how technology transfer can take place from the developed countries to the underdeveloped countries and how that had the potential of very high rates of economic growth.

Lastly he also cautioned about the limited spread of economic growth in which he was basically trying to say that you know while large parts of the developed world have already seen unprecedented development, unprecedented economic growth which he was referring to as the modern economic growth. There were still more than 50 percent of the world population which is still very underdeveloped and sufficient amount of technology transfer has not taken place, because of which there has been a limited spread of economic growth and there is a requirement for working on economic policies and programs which can bring all of these underdeveloped countries into the ambit of modern economic growth.

Now, having introduced this concept of modern economic growth, we will now move on to discussion on the economic development and growth models that have been worked out by various economists and thinkers of the time. Now there is a great deal of confusion and curiosity among students with regard to the chronology of models of development and growth.

And often questions that I face in a classroom environment is when do these what is the chronology of these models, when does one growth model or when does one development model end and another begin. Now obviously, there are no easy answers to these questions withstand in the fact that there is reason enough to be confused about the chronology of these models that we are talking about.

However to begin with one must understand that most of these development thinkers whether they are economists or sociologists or political scientists and topologists economic historians, historians and so on and so forth were not writing at only a point of time, they were writing over a period of time and therefore, their development thoughts spanned over a period of time and most of them were writing their ideas helds way at such times where there were ideas that were running that were contending with each other and that were often contradictory to each other.

Therefore it is difficult to come up with an exact timeline of these development and growth models. However, it is not difficult to highlight some of the most important development thoughts that had a lot of influence over the way we started thinking about development and growth particularly from the 1900 onwards. So, what I have done as a part of today's introductory lecture on economic growth models is to first give you a chronology of the economic development and growth models that we have come to understand today.

I have tried to flag off some of the most important development thought that have come to exist over a period of the last one century and a little more. Following which I will flag off some of the important models that we need to at least hear about in the context of the course of economic growth and development, and I will end the lecture with a brief discussion on what we know is the doctrine of balanced growth in economic growth and development.

Now, in the last class I also flagged off certain models of economic development growth such as the classical theory of economic development, Marxian theory, Schumpeterian theory.

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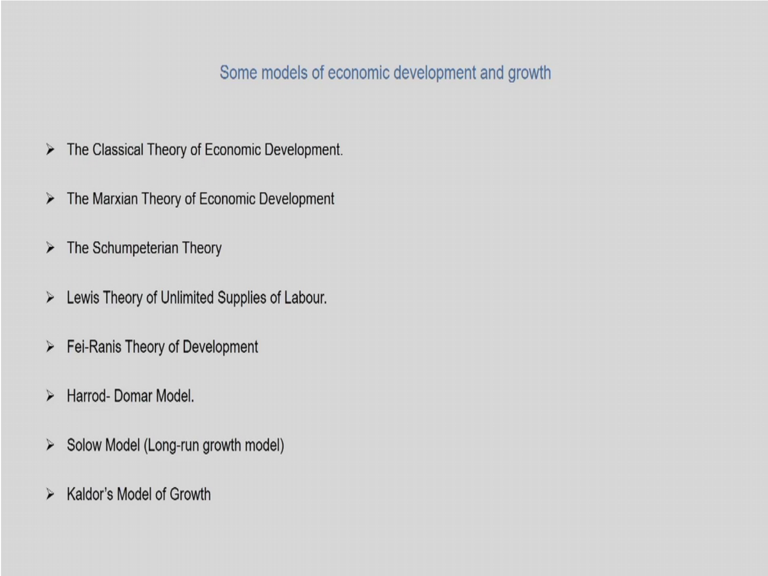

The Lewis theory of unlimited supplies of labour, Fei-Ranis theory of development, Harrod-domar model, Solow model, Kaldor's model of growth and there are many more models of growth and development. However, to do justice to the multidisciplinary background of the student audience, that is listening to this course I will run you through some of the important streams or strains of development thinking that we can put in some order.

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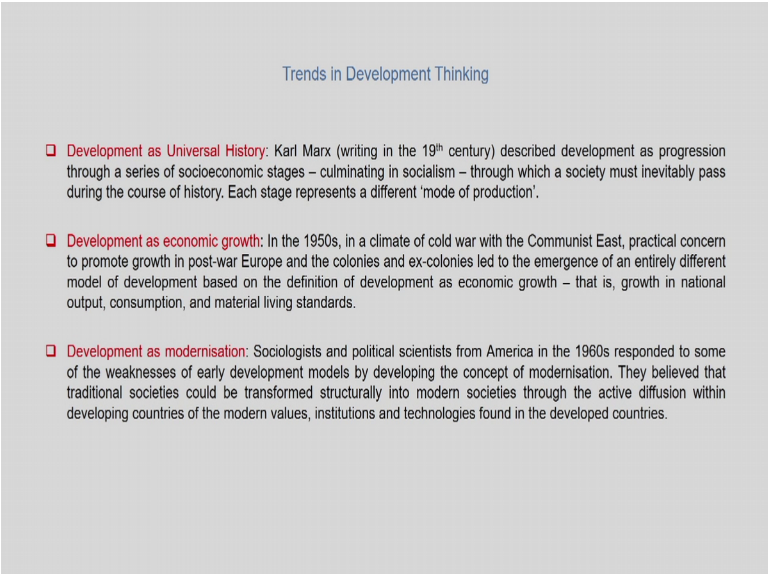

Now, to begin with one of the first trends in development thinking can be categorized as what is referred to as development as universal history and that can be traced back to the writings of Karl Marx who was writing in the 19th century and it can be described as a progression through a series of socio economic stages culminating in socialism through which a society must inevitably pass during the course of it is history and each stage represents a different mode of production which is nothing, but a different type of relationship between people and resources in the production process.

And in this kind of development which is shown as universal history the agent of change is basically the class conflict which eventually leads to the end of one stage and the start of another. It is such as the shift from the capitalist or socialist modes of production and this model of change is often called historical or evolutionary and there is a significant body of modern development theory and practice that has been influenced by Marxist and new Marxist analysis especially before the global demise of centrally planned economies and the end of the 1980s.

A second strain of development thinking and with which we are primarily concerned with when we are talking about development and growth models is what is referred to as development as economic growth and it mostly started in the 1950s or it is popularity started in the 1950s when nation states were reorganizing themselves after the second world war. It was developing in a climate of cold war with the Communist East; it came as a response to the practical concerns to promote growth in post war of Europe and the colonies and ex colonies, they led to the emergence of an entirely different model of development and it was based on the definition of development as economic growth.

And as we have discussed Simon Kuznets in the last class, we know that grow here was being measured because the national income accounts had come into major attention through the national bureau of economic research of the United States. So, growth here was being had started being measured in terms of growth in national output consumption and material living standards. So, such growth would lead developing countries out of poverty it was thought and allowed them to catch up with a developed world and progress in this model was and to a large extent it continues to be measured in terms of growth in per capita income or GDP, which although not a perfect indicator was and continues to be the most widely available one.

Development as economic growth was actually the earliest model in development theory which in the 1950s was becoming a distinct body of academic research that was largely dominated by the works of economists and economic historians such as William Arthur Lewis and Walt W Roscoe. So, the early development models largely reflected on the belief that capital accumulation was the key to economic growth and although the models of early fifties and early sixties varied in their analysis of precisely how growth in underdeveloped economists take place.

They were generally united in emphasizing the need for large scale investment in the modern sector and by the modern sector here we were basically mean the industrial sector. And when we come to the conclusion of this lecture through a discussion of the balanced growth model we will actually see what is this investment that we are talking about in the modern industrial sector and what is the importance of capital accumulation and why it has so much importance too the so, called growth concept.

Now, this investment a large scale investment that was being proposed through these growth and development models was largely to be financed by domestic savings that is the proportion of income which is not consumed by the households, combined with foreign capital in the form of aid and private sector investment and domestic savings or capital could be mobilized by the state using various forms of taxation and directed towards investments in public infrastructure and modern industry.

However these development models which were purely you can development growth models with a lot of focus on measurement issues with a lot of focus on measurement of national income and output and GDP growth rate and so on and so forth came for in there was a lot of challenge to these development models as well. And these challenges were mostly coming from sociologist and political scientists from the US in the 1960s and they were the ones who started talking about development as modernization.

And development as modernization came as a response to the challenges of development as economic growth and they came up they highlighted some of the major weaknesses of these early development models. They what they believed was that traditional societies could be transformed structurally into modern societies. In the economic growth and development models when we are talking about traditional sector and the modern sector we are mostly referring to the agricultural sector and the industrial sector.

The movement of labor force away from the agricultural sector to the industrial sector; however, the sociologists and political scientists, who were focusing on development as modernization believed that traditional societies could be transformed structurally into modern societies through active diffusion within developing countries of modern values institutions and technologies found in the developed countries. One of the best examples of modern values was of course, the western form of education, which was considered to be one of the pioneering one of the most important contributions to modern economic growth.

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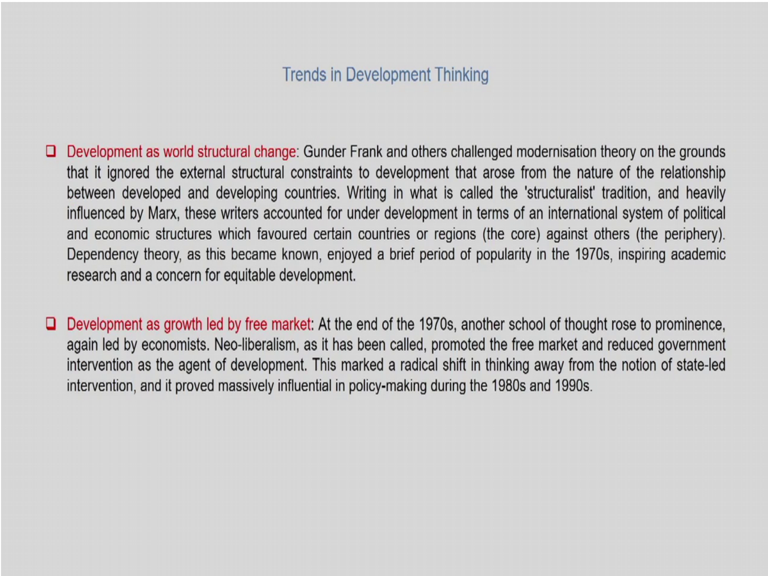

A fourth strain in development thinking that came up was referred to as world a structural change and there were various proponents of such development models referred to as world structural change. They were largely influenced by Marx and other Marxist writers, they call themselves as belonging to the structuralist tradition and these writers accounted for under development in terms of an international system of political and economic structures, which favored certain regions or countries that were referred to as the core against the others, that were referred to as the periphery.

They were also referred to as the dependency theorists and these theories were together known as the dependency theory and they had a lot of popularity in the 1970s that inspired academic research and there was a lot of concern for equitable development of the core countries of the of the countries belonging to the periphery with respect to the core. And this dependency theory, it could be seen broadly as a left wing challenge to a more right wing modernization theory and it was also an alternative theory of development, in which the key to development involved altering international political and economic structures.

So, unlike modernization theory of the 1960s which was brought about by the sociologists and political scientists in the US, the dependency theory never fully translated into practical policy recommendations that could be followed by governments and international agencies and even within the academic circles where it had seen a lot of deliberation interest in dependency theory declined during the 1980s and the 1990s. However, many of the assertions and prescriptions of dependency theory resonate strongly with today's anti globalization movement.

And at the start of the 21st century, it still rekindled some interest in some of it is ideas at the end of the 1970s another school of thought that arose to prominence was again led by the economists and they call themselves a new liberals where development was considered as growth, but led by free market mechanisms. And these set of economists the new liberals they promoted free market and the role of and called for reduced government interference and they considered the role of free market and reduced government intervention as one of the most important agents of development.

And this strain of development thought marked a radical shift in thinking away from the notion of state led intervention and it proved massively influential in policymaking during the 1980s and the 1990s. In fact, the international monetary fund the IMF and the World Bank, the Bretton Woods Institutions, which I was referring to in some of the earlier classes played central role in promoting neoliberal policies in developing countries and this was largely due to the 1980s debt crisis in which many developing countries found themselves unable to meet their international debt obligations and were struggling to finance essential imports.

And the IMF and World Bank stepped in to provide the necessary finance which was conditional upon the implementation of widespread economic reforms known as the structural adjustment programs. However, more on this later the central point the essential point that I am trying to make by giving you a trend of development thinking is that, this is the chronology in which certain ideas of development progressed over a period of time starting from the 1940s to the 50s, 60s, 70s, 80s and the 1990s.

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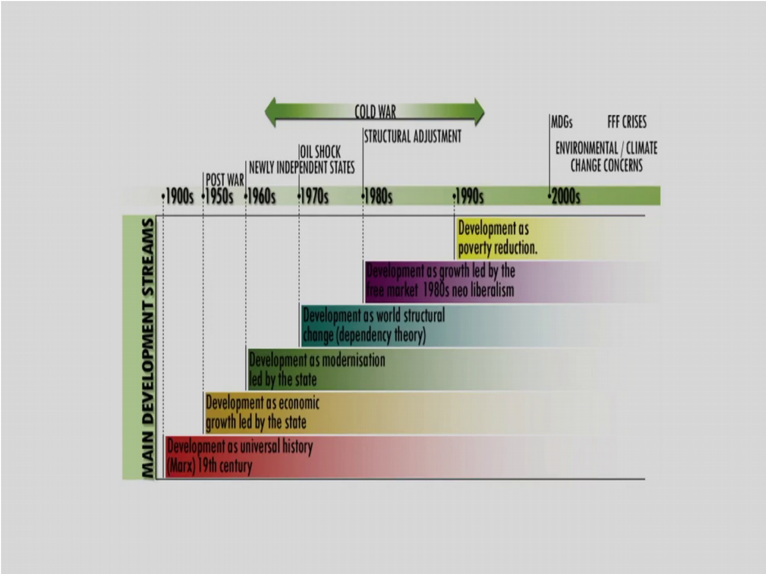

This is a brief if you look at this picture it will show you brief timeline of the main development streams as I have already mentioned. The 1900s saw a lot of influence from development as universal from Marx's writing Marx was writing in the 19th century and it had a lot of influence on development thinking beginning 1900s when there was a lot of talk about socialism the movement of capitalistic society to socialism and so on and so forth.

The post war period the 1950s and it was also the post great depression period saw development as economic growth led by the state. Keynesian economics had a lot of sway, had a lot of influence on economic thinking at this time, where government intervention or state intervention and economic activities were seen as one of the important driving factors of economic growth.

The 1960s development as modernization led by the state diffusion of technology, diffusion of ideas, diffusion of modern education technology transfer from the developed to the underdeveloped countries and so on and so forth. The 1970s as I have already mentioned was a time of dependency theorists, the theorization with respect to the core and the periphery and how the core have been exploiting the periphery and how the periphery needs to break out of the domination of the core by bringing about certain structural changes in the world economic order.

The 1980s saw the emergence of the new liberals who were looking as development as growth, but led by less government intervention and freeing the markets by propagating the ideas of liberalization, privatization and globalization. And the 1990s saw the emergence of the capabilities approach and the human development approach and so, development was being seen as how poverty can be reduced by focusing more on investments made in human development components and not just increasing the levels of incomes of individuals within a country.

In the 2000s saw a radical shift in ideas of a development because here we were no longer thinking in terms of improving only certain components of development, but bringing about, but this was all this was a period of a millennium development goal, sustainable development goals, climate change concerns, financial crisis and so, forth and therefore, multi pronged strategies have to be worked out to deal with the issue of the core issue of poverty reduction and under development.

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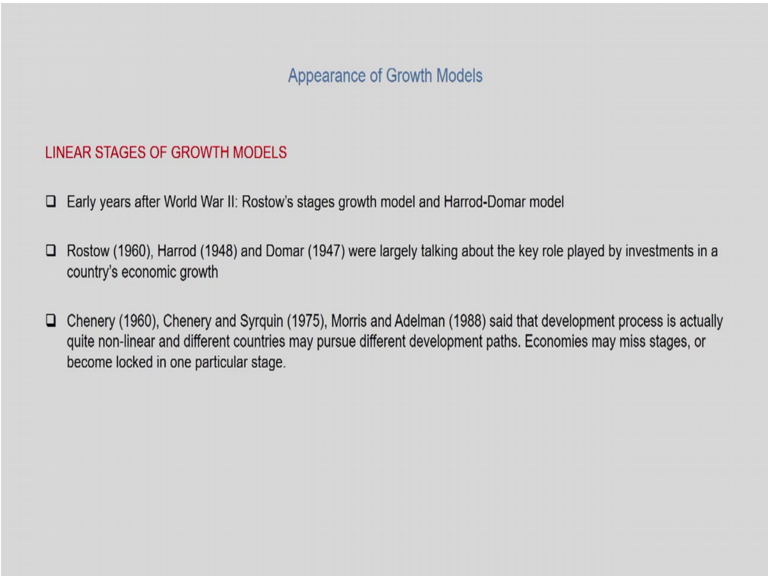

While economic development models had a lot of influence in development thinking growth models also followed a certain chronology and broadly the growth models can be categorized under 2 heads, one is the classical theories of economic development or classical theories of economic growth and second is the contemporary theories of economic growth. And the classical and mostly in the growth literature that we follow in colleges and universities we are mostly dealing with the classical theories of economic growth and development.

The contemporary theories of growth refer to the new growth theory which emerged in the 1990s and where there was a lot of focus on investments in the knowledge economy, investments in research and development and so on and so forth. However, it is important for us also to look at this chronology of when did these economic growth models make an appearance and what was the order or whether there is an order in which these growth models made an appearance.

Among the classical theories of economic development there are basically 4 kinds of growth models one is the linear stages of growth models.

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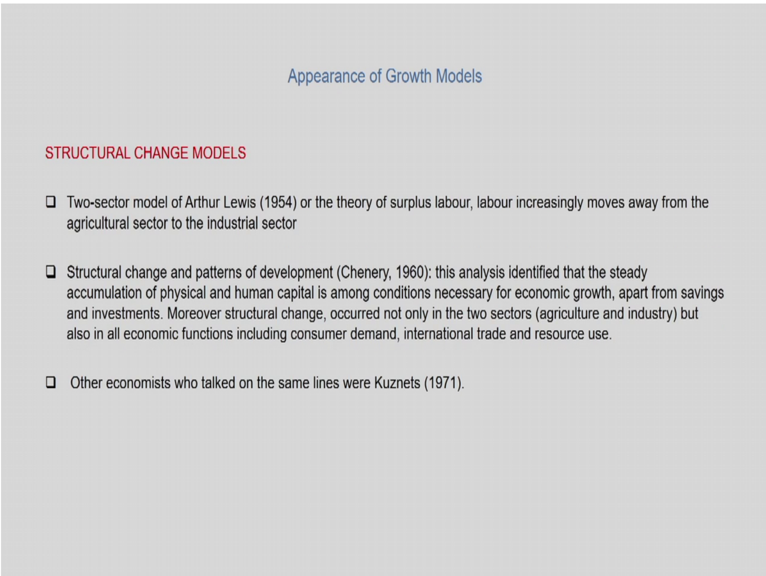

Second is the structural change models.

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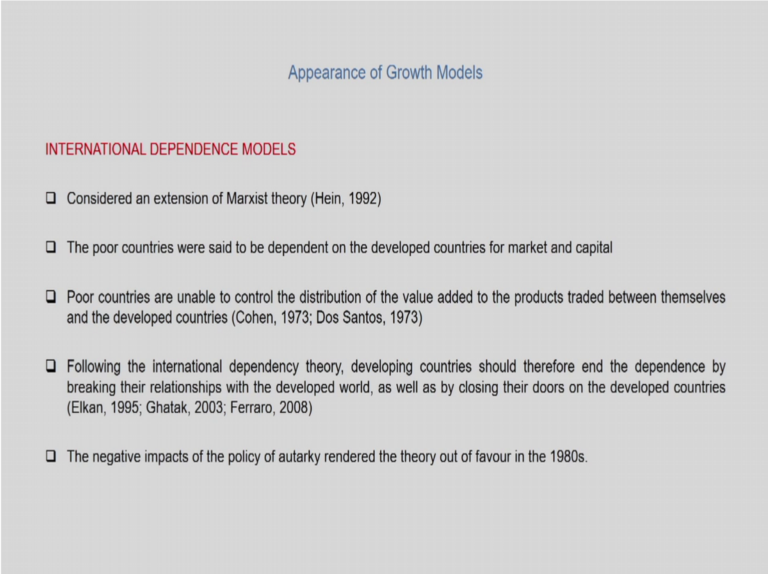

Third is the international dependence models.

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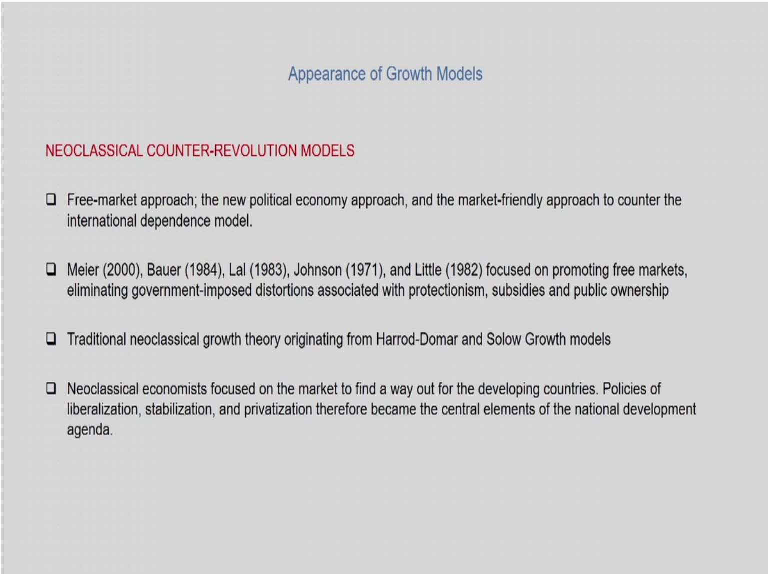

And the fourth is the neoclassical counter revolution models I will go briefly into each of these different categories of growth models that we are talking about here because it is important to understand the implications of the basic implications of what these growth models were.

The first category of economic growth models the linear stages of growth models, they can be considered as the first generation of economic development models that was formulated in the early years after the Second World War and these early models focused on the utility of massive injections of capital to achieve rapid GDP growth rates and there were 2 famous models that can be classified under the linear stages of growth models. One is the famous Rostow's stages of growth model and the second is the Harrod-Domar model.

Now the theorists of the 1950s and the early 1960s they viewed the process of development as a sequence of historical stages and this view was popularized by Rostow. He was building on the historical pattern of for the developed countries and he claimed that the transition from under development to development would basically pass through 5 stages. The traditional society, the preconditions for takeoff, the take off stage, the drive to maturity and the age of high mass consumption that we see in the highly westernized industrialized countries of the world.

This decisive stage is the take off stage through which developing countries are expected to transit from an underdeveloped to a developed state an increasing rate of investments is considered to be necessary to induce a per capita growth. The Harrod-Domar model emphasized that investments are the most important massive investments are the most important drivers of economic growth. So, they were largely talking about Harrod was talking about right was writing and discussing in 1948, Domar in 1947.

So, they were largely talking about the key role by played by investments in a countries economic growth, they were basically saying that every country needs capital to generate investments and the principal strategies, strategies of development from the stage approach were commonly used by developing countries in the early post war years.

However, there were challenges to these linear stages of growth models and these challenges were thrown mostly by economists such as Chenery and Morris and Adelman who said that development process is actually quite non-linear they do not pass a linear stage of stages of growth and different countries may pursue different development paths and economies may actually miss stages or become locked in one particular stage.

So, it is not that it passes through different stages of development all countries need not necessarily pass uniformly passed through these stages of a development. So, as a challenge thrown to the linear stages of growth models economists such as Chenery and Morris and Adelman including economists such as Arthur Lewis they came up with the structural change models that we commonly known as the dual sector models or industry the movement from agriculture to industry migration of labour from agriculture to industry that takes place through the Lewis model.

What the structural change models were telling us was that, they held sway largely in the 1960s and the early 1970s and they were describing development process as a structural change by which the reallocation of labour from agricultural sector to the industrial sector can be the key source for economic growth.

And there were two well-known representatives of this approach one was of course, Professor Arthur Lewis and his theory of surplus labour and the second was professor Chenery, who was talking about the structural changes and patterns of development. Lewis model of the two sector model or theory of surplus labour was basically talking about labour increasingly moving away from the agricultural sector to the industrial sector.

However, Chenery was saying that although promoting the role of savings investments structural change and patterns of development analysis extended in comparison with the Lewis model through Chenery and others and their analysis identified that the steady accumulation of physical and human capital is are the necessary conditions for economic growth apart from savings and investment.

And other economists such as Professor Simon Kuznets also jumped into the fray of the structural change models and these were the people, who provided the most significant explanations to the structural change models. However, like the other growth models, the structural change models were also challenged these models were basically focusing on patterns of development and hypothesized that the pattern was similar in all countries and it was identifiable.

However the challenge thrown to them was that by focusing on pattern of development rather than theory thus these models were misleading policymakers. Therefore, in response to these structural change models there was the emergence of the international dependence models, I have already talked about the dependency theory or the dependency theorists of the 1970s.

And this had a lot of correspondence to the international dependence models also had a lot of correspondence to their dependency theorists, they were basically extending Marxist theory and this international dependency theory as I have already mentioned was very popular in the seventies and eighties and they argued that under development exist because of the dominance of developed countries and multinational corporations over and the dominance of multinational corporations over developing countries.

The poor countries it was said was dependent on the developed countries for market and capital and developing countries received a very small portion of the benefits that the dependent relationship brought about. So, this there was an unequal exchange in terms of trade against poorer countries and this made free trade a convenient vehicle of exploitation for the developed countries.

It was also said that the poor countries were unable to control the distribution of the value added to the products traded between themselves and the developed countries and the growth of international capitalism and multinational corporations caused poor countries to be further exploited and more dependent on the developed countries.

And these models had gained increasing support among the developing countries because of the limited results of a stages and structural change models and the proposal was that the underdeveloped countries of the developing country should break away from the dominance of the developed countries by bringing about structural changes in the world economic order by bringing about changes in the economic and political structures of the core and the periphery by through political changes.

However there were a lot of negative impacts of this policy because one of the important proposals of this policy was following an economic policy of autarky, which means no international trade with the other countries or limited international trade with the other countries. And there were a lot of negative impacts of the policy of autarky and because of which the international dependence models went out of favour in the 1980s, because by the 1980s the international order was becoming highly globalized in nature and the nature of international finance had started changing and it was become increasingly difficult for countries to exist in isolation an international trade had become inevitable to be able to survive the global market.

The 1980s and the 1990s like the neo liberals saw appearance of the neoclassical counter revolution models and this was largely a 1980s phenomenon and they were focusing on 3 approaches the free market approach, the new political economy approach and the market friendly approach. And this these models were introduced largely to counter the international dependence model and the major proponents of these models were Meier, Bauer, Lal, Johnson and I am the little they were focusing more on promoting free markets eliminating government impose distortions associated with protectionism, subsidies and public ownership.

Now, what was the main argument of the neoclassical revolution models counter revolution models, basic argument was that under development is not the result of predatory activities of the developed countries and the international agencies, but was rather caused by the domestic issues arising from heavy state intervention such as poor resource allocation, government induced price, distortion and corruption.

So, as a response to public sector inefficiency they proposed promotion of free markets, another strand of neoclassical free market thought called themselves a traditional neoclassical growth theory and they actually originated from the erstwhile Herrod Domar and Solow growth models and they expanded the Herrod Domar formulation and the Salonia classical growth model stressing on the importance of 3 factors of output growth increases in labour, quantity and quality, increase in capital and improvements in technology.

So, the neoclassical economists focused on the market to find a way out for the developing countries policies of liberalization, stabilization and privatization therefore, became the central elements of the national development agenda. The new growth theory cut itself away completely from the classical development models of the growth models such as that of Rostow and Arthur Lewis and others Solow and the Harrod Domar models, Solow Swan model and so on and so forth.

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And they started talking about and this saw an emergence in the 1990s and they started being categorized as endogenous growth theories the an endogenous growth theories were put forth as an explanation for the poor performance of the less developed countries. So, unlike the Solow model that considers technological change as an exigent factor, the new growth model noted that technological change has not been equal nor has it been exogenously transmitted in most of the developing countries.

And therefore, the new growth theories such as Romer Lucas and so, on they linked technological change to production of knowledge. The new growth theory emphasized that economic growth results from increasing returns to the use of knowledge rather than just labour and capital use. They argued that the high rate of returns as expected in the Solow model is greatly eroded by lower levels of complementary investments in human capital such as education or infrastructure research and development.

So, knowledge is different from other economic goods because of it is possibility to grow boundlessly and knowledge or innovation can be reused at 0 additional cost. So, there was a lot of focus on the knowledge economy and the growth of the knowledge economy and it is contribution to modern economic growth. So, what we saw in the last few minutes of this lecture was a chronology of the development and the growth models.

So, what you can really see is that right from the if we begin a story from the 1900s there has been a gradual shift in development thinking from Marxian thought of universal history to that of economic growth models to dependency growth models and then to the free market mechanism, the new liberals as we have come to know them.

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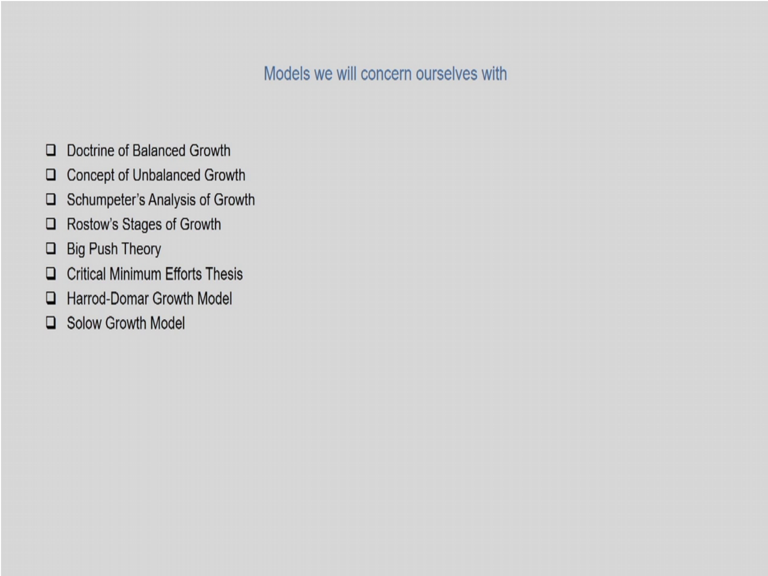

While, there are various growth models of development and growth that we see in the context of courses on growth and development. There are because of a constraints of time and space we will concern ourselves with only the following the Doctrine of balanced growth, the concept of unbalanced growth, Schumpeter's analysis, Rostow stages of growth, which I have briefly touched upon, but we will look in detail into the Rostows stages of growth, the big push theory, critical minimum efforts thesis and the classical development models of Harrod Domar and Solow.

Let me give you a brief idea about what is it that we are talking about in the context of balanced growth models, to remind you in the 1950s we were the development thinking or the development strain concerning economic growth or valuation of economic growth in terms of national output or the growth in national output constitutes is also at the heart of what we understand is balanced growth.

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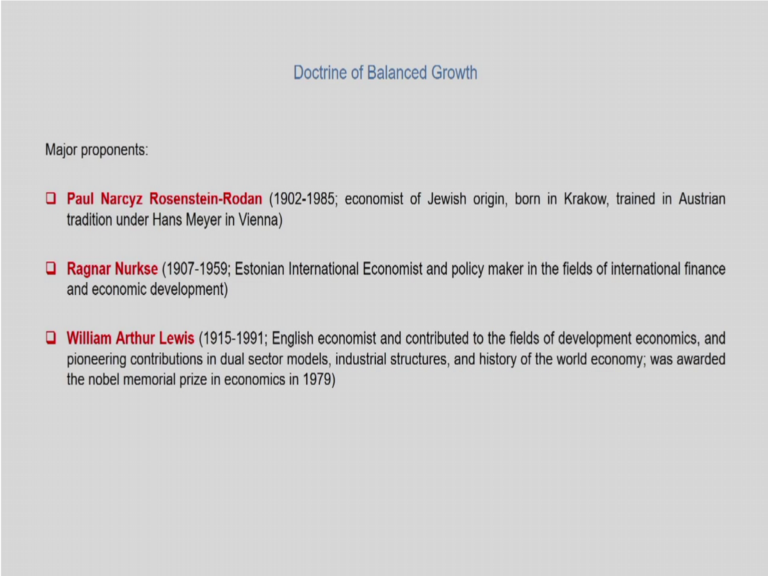

And there were a number of economists who were talking about ensuring that the economy takes the path of balanced growth and not unbalanced growth. What was the doctrine of balanced growth is what we will try to understand in the next few minutes. There were a number of proponents of the doctrine of balance growth for example, Professor Paul Narcyz Rosenstein - Rodan he was writing in the 1940s, he wrote a paper in 1945 about the theory of balanced growth although he did not particularly use the term balanced growth, but he was referring to how investment should be carried out in different sectors of the economy.

So, that there will be an overall increase in capital formation in the economy and remember remind yourselves that I have all I was also referring to the period of the 1950s, as the period of economists stressing a lot on capital accumulation. So, growth models or economic development models of the 1950s were obsessing them themselves with more capital formation within the economic; that would lead to more and more of economic growth.

The second proponent and one of the most influential in propagating the idea of balanced growth was Ragnar Nurkse he was an Estonian international economist he was largely writing in the 1930s in the 40s and the 50s until his untimely death in 1959 he was a major policymaker in the fields of international finance and economic development. And he had a lot of sway in thinking about the doctrine of balanced growth and he had well founded justifications to say why he was proposing the doctrine of balanced growth.

Then we have Professor Lewis, Arthur Lewis he was an English economist and he has contributed largely to the fields of development economics and as I have already mentioned the dual sector models, history of world economy and was awarded the noble prize in 1979.

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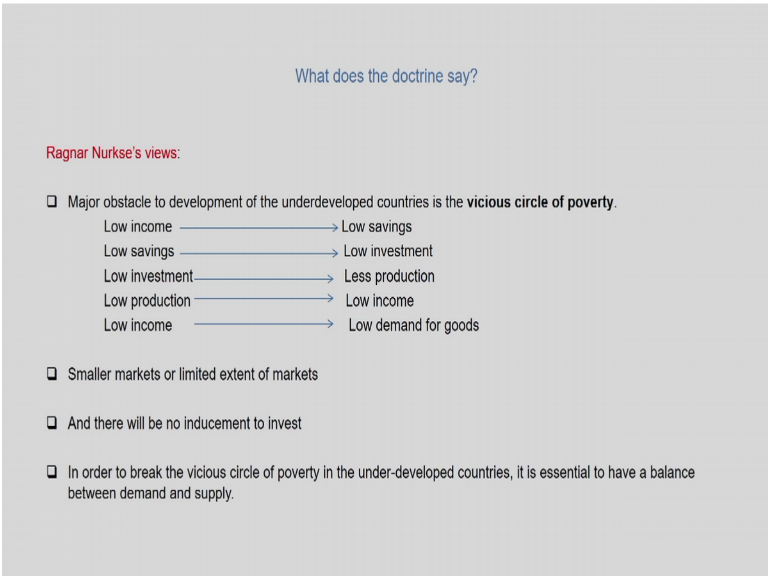

Now, let us try to understand what does this doctrine of balanced growth say through the views of Ragnar Nurkse I have picked up the views of Ragnar Nurkse here because it was one of the most influential views on balanced growth doctrine.

Although there are many more for example, Professor Hirshman has made a lot of contribution to the balanced growth doctrine. However, let us begin with Ragnar Nurkse's views on balanced growth doctrine. Now Nurkse introduces this doctrine of balanced growth by saying that there is one major obstacle to development of the underdeveloped countries and that is the vicious circle of poverty. That most of these developed under developed countries are caught in a vicious circle of poverty.

And this vicious circle of poverty operates in at the demand side as well as a supply side on the demand side we know that the underdeveloped countries or the less developed countries have very low per capita incomes. So, when they have low per capita incomes and consumption expenditures have to occur at a certain level; that means that they are left with very less savings at the household level. So, low incomes lead to low savings, which means that they are left with very less incomes the after making their expenditures on consumption.

And in one of the stylized facts and economics is that if you recall the circular flow of income and national output that I was referring to in the first class, I was talking about the households and the firms and how the households save and whatever the households save go as investments to the firms and whatever is invested by the firms come out as output which is then again bought by the households as a part of consumption expenditure. So, when the households have very less incomes they are saving less, when there are lower savings there are there is very few money left for the firms are based on which they can make investment decisions.

So, low savings will lead to low investments by the funds, low investments will then lead to less production and less production will mean that there will be low demand for goods and services. If the firms are producing less then there is no there is less demand for goods and services and if the households are demanding less, then the size of the market is limited. So, this is a vicious circle which is operating on the demand side and on the supply side.

If the households are on the demand side and the firms are on the supply side, the households have less incomes, they are they have less savings, they are demanding less goods and services. The firms do not have access to the savings of the households therefore, they are not investing or invest or investing less, if they are investing less they are producing less, if they are producing less there is less capital formation and in fact, there is a reduced capital formation over a period of time and therefore, the countries are caught in a vicious cycle of poverty or a vicious circle of poverty.

And therefore, the size of the market in the developing countries of the underdeveloped countries is very limited. So, one needs to break this vicious circle of poverty and therefore, it is essential to have a balance between demand and supply and to be able to break this vicious circle of poverty Ragnar Nurkse was proposing a balanced growth model of development or a balanced growth strategy or doctrine whatever you call it.

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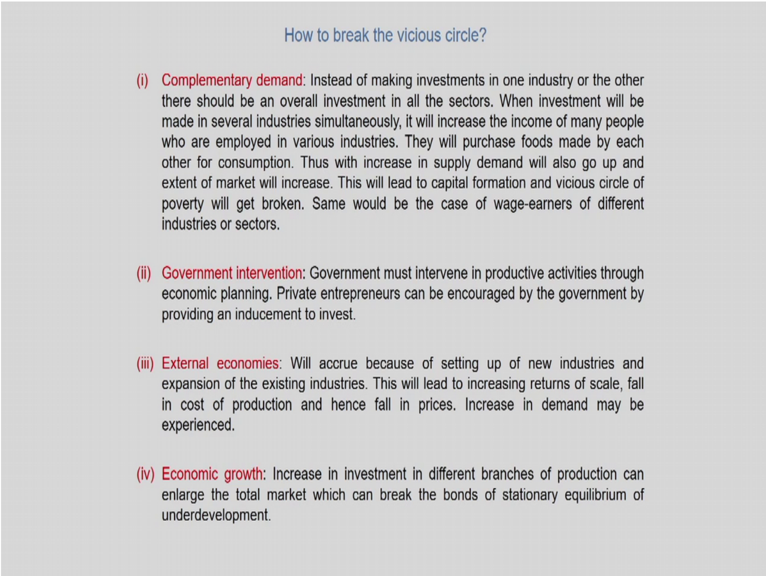

How does one break this vicious circle?

One of the first propositions that Ragnar Nurkse was making was with respect to creating complementarities in demand and supply. So, what he was saying was that, instead of making investments in one industry or the other, there should be an overall investment in all the sectors of the economy. So, when investment will be made in several industries simultaneously, it will increase the income of many people who are employed in various industries. And then they will purchase foods made by each other for consumption and so, with increase in supply, demand will also go up and extent of market will increase, this will lead to capital formation and vicious circle of poverty will get broken.

So, what he was proposing was that complementarities of industry was he was proposing complementarities of industry as the crux of the balanced growth doctrine. If there are numbers of industries and he was of course, there was a lot of assumptions that has gone on into identification of these industries. These industries should be such that they have increasing returns to scale, and there is a lot of external economies that arise out of these industries.

So, these industries have to be identified in such a manner that there are large scale, external economies of scale and heavy investments need to be made simultaneously in all of these industries so, that the overall supply of goods and services increases and there is and simultaneously there is an increase in demand for these goods and services also.

So; obviously, when there is an increase in supply as well as demand, the extent of market also increases and the underdeveloped countries will be breaking through the low level the low equilibrium traps that these countries have fallen into. Now obviously, when one is talking about complementarities of demand and complementarities of supply or complementarities of industry, it cannot be carried out by individual entrepreneurs particularly in the context of underdeveloped countries.

Therefore there is a large role played by the governments in ensuring that these complementarities exist. And these complementarities can exist only when these investments are either made by the governments themselves or there is a lot of support by the governments to the private entrepreneurs in creating the in inducing them to invest. So, the second proposition that Ragnar Nurkse was making as a part of the balance float doctrine was that there should be government intervention governments must intervene in productive activities through economic planning and private entrepreneurs have to be encouraged by the government by providing an inducement to invest.

So; obviously, in terms of an economic policy or economic policy prescriptions the balanced growth doctrine was mostly referring to government support in the form of subsidies or industrial subsidies to the private entrepreneurs or to be able to sustain the heavy investments required to create complementarities in demand or complementarities in industry.

The third proposition as I was already explaining is the external economies to be in this will accrue because of setting up of new industries and expansion of existing industries which means that industries should be identified in such a manner that there is large scale increasing returns of scale, which will lead to fall in cost of production. And hence fall in prices and this increase and because they will be fall in prices in the long run they will be increase in demand will be experienced and of course, now we know the circle increase in demand will lead to expansion of markets.

So, when there is an expansion of domestic market the supply of goods and services within the domestic market increases and that will also have a lot of potential for international trade when the domestic market increases and all of these together complementarities of demand and supply government interventions or government support for heavy investments and external economies all together will create a situation of economic growth.

There will be increase in investment in different branches of production leading to enlargements of markets and breaking the bonds of stationary equilibrium of underdevelopment. So, this in a nutshell was Ragnar Nurkses doctrine of balanced growth model. However, there is a little bit of caution here that we must understand when we are referring to Nurkses ideas on growth and development.

Nurkse understand was an Estonian economist and he was writing in the context of not replicating the growth models of the highly industrialized nations, but trying to make use of the limited resources of the developing countries of the so called underdeveloped countries and trying to find a way out of the low level equilibrium traps of the underdeveloped countries. Unlike various other growth models such as Harrod Domar or even Simon Kuznets, who was trying to look up and dig up empirical data in trying to provide model of development that can be followed by the underdeveloped countries.

Ragnar Nurkse was not talking about replicating the models of the highly industrialized nations, because there was historically the structural characteristics of the developed countries and the underdeveloped countries were such that the developing countries could never have replicated the models of the developed countries.

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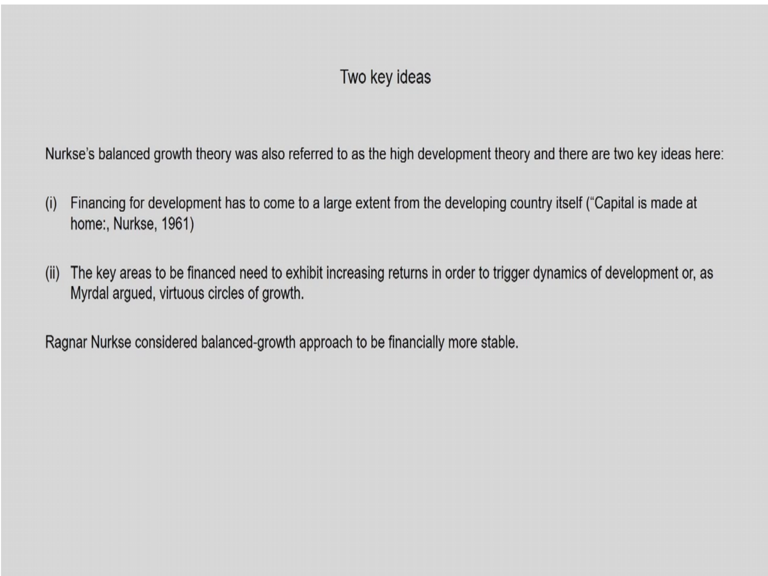

So, there are two key ideas that Nurkse was referring to and Nukses balance growth theory has been referred to as the high development theory. So, he was talking about 2 key points here the first was financing for development has to come to a large extent from the developing country itself, capital is made at home is what Nurkse had said in 1961.

So, financing for development has to come to a large extent from the developing country because of which balanced growth or heavy investments in different sectors of the economy different industries of the economy has to take place simultaneously was the proposition that he was making; because there were certain dangers to depending upon foreign aid or foreign capital for development.

The second key point that he was trying to make was that the key areas to be financed need to exhibit increasing returns in order to trigger dynamics of development or as Gunnar Myrdal was arguing about virtuous circles of growth and Ragnar Nurkse considered balanced growth approach to be financially more stable. What makes Nurkse's contribution so important is the fact that he is the only thinker from this group to first incorporate both key ideas into a coherent theory of development.

And second to draw relationships between these notions and this is precisely the reason Nurkse favored the balanced growth approach over the unbalanced one which we will discuss later. And according to Nurkse the financing for development has to come mainly from within the country, which is set on development or the so called developing country, because the financing of growth through either foreign investments or increased trade was largely a historically unique phenomenon confined to the 19th century and more specifically to American experience.

So, what he was saying was these countries America the new countries within and without the British empire were high income countries from the start, they had effective markets they had efficient producers and Ragnar Nurkse thought that it would be nearly impossible for any developing country to repeat such a successful trade and foreign financing based growth strategy, because America was highly rich in resources, but at the same time populated by workforce essentially on the same skill level as Britain.

So, this unique combination made American experienced non replicable because in any other circumstance trade and foreign investment would engender a number of obstacles to development. So, a large parts of such financing would seek to futile eyes poor countries resources and eventually lock these countries into undiversified economies with a skewed social structure and there was a danger that significant amounts of foreign financing would actually end up funding private consumption patterns emulating western living standards and creating balance of payments, problems, which we actually saw in the post Washington consensus era.

Particularly the 1990s conditional loans taken by the developing countries as a part of the structural adjustment program, what foreign aid could the dangers of foreign aid and foreign trade with respect to the development of the under developing countries.

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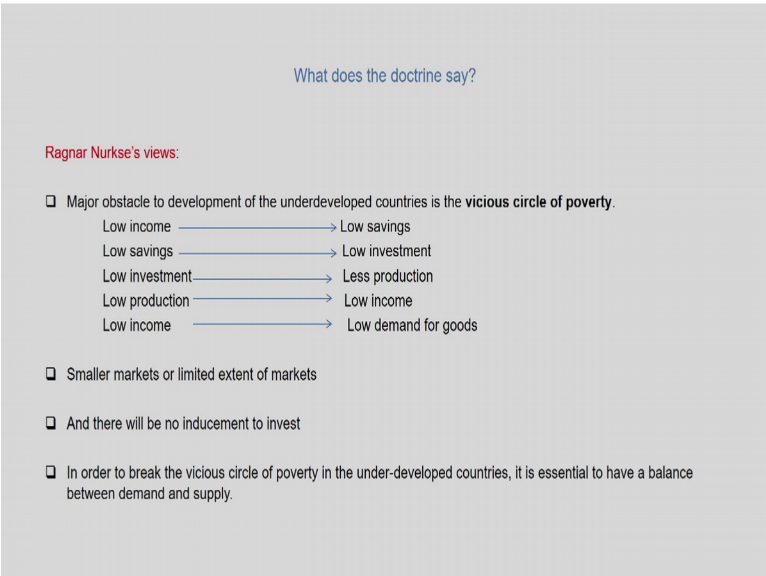

So, to sum up Ragnar Nurkses I introduced you to the balanced growth doctrine through Ragnar Nurkses ideas because it had a lot of influence and development thinking particularly in the context of the underdeveloped countries and it had a lot of implications to what happened with respect to growth and development in the post structural adjustment program period.

This is a discussion in progress this will be a lecture in progress in the next lecture I will discuss the ideas of Professor Rosenstein Rodan and William Arthur Lewis on balanced growth followed by unbalanced growth. What are the basic differences between balanced growth doctrine and the unbalanced growth theory and then we will move on slowly to the other models of economic development and growth that I have highlighted.

Thank you.