

Yelahanka Lokesh
Dr. Mounica Vallabhaneni

ECONOMETRIC MODELING OF PRODUCER BEHAVIOUR



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CHAPTER 1

A BRIEF STUDY ON ECONOMIC DEVELOPMENT AND INSTITUTIONS

Mr. Yelahanka Lokesh

Assistant Professor, Department of Commerce and Economics,

Presidency University, Bangalore, India.

Email Id: lokesh.yr@presidencyuniversity.in

ABSTRACT:

The connection between institutions and economic progress. Focusing on both official and informal institutions, it investigates the role that institutions play in promoting economic development and prosperity. The research examines the ways in which institutions affect economic results, including the defence of property rights, the enforcement of contracts, the rule of law, and regulatory frameworks. It also touches on the significance of inclusive institutions that support social mobility and equality of opportunity. The study closes by underlining the importance of institutional changes in promoting inclusive growth and suggesting policy initiatives to enhance institutions and drive sustainable economic development. Each person is the greatest arbiter of his or her own interests, laissez-faire policies are advocated by all classical and the majority of neo classical economists. The aggregate utility of the community will naturally be maximised if everyone is given their own freedom. Later on, however, economists understood that, under certain circumstances, competitive markets provide the most efficient distribution of resources.

KEYWORDS:

Economic Development, Institutions, Governance, Property Rights, Regulatory Systems.

INTRODUCTION

an attempt to comprehend how institutions affect and influence the economic growth process. Adam Smith thought that supply and demand could allocate resources in the most effective way, but he also thought that there was perfect competition in the market. However, markets are not ideal in real life. We must recognise two things: (a) Noneconomic variables may play an equal or even greater role in determining the degree of economic progress. The economic elements are affected by non-economic factors. (a) Institutions are not static or uniform. Social institutions have a part in influencing how quickly the economy develops [1], [2].

Since each person is the greatest arbiter of his or her own interests, laissez-faire policies are advocated by all classical and the majority of neo classical economists. The aggregate utility of the community will naturally be maximised if everyone is given their own freedom. Later on, however, economists understood that, under certain circumstances, competitive markets provide the most efficient distribution of resources. The competitive market does not operate properly or function perfectly if these prerequisites are not satisfied. The definition of efficiency and the requirements that must be met in order to achieve this efficiency are addressed below.

The Basic Postulates of Welfare Economics

Welfare economics is based on two basic theorems:

- (a) According to the first theorem, a competitive market results in an efficient distribution of resources when certain requirements are met. These criteria were created by renowned welfare economist Alfred Pareto. According to Pareto, resource distribution is efficient if it is impossible to improve one person's situation without worsening anybody else's. It is good to switch to that option if there is a way to benefit someone while without harming anybody else. As a result, there is inefficiency in the distribution of resources. Only on the PPC and not below PPP can Pareto optimality be achieved. It is thus because it is possible to improve someone else's situation without making anybody else's situation worse by employing underutilised resources [3], [4].
- (b) According to the second theorem, an economy must reach a certain point on its utility possibility curve given the correct starting distribution of income. It implies that it must function above PPC and not below it. In other words, it must make the best use of its resources, ensuring that none are wasted or underutilised.

The laissez faire doctrine is strongly supported by these theorems. According to this, no central planning body is needed if individual decision makers make their own decisions without outside intervention and there is competition in the market. This is because market mechanisms would naturally result in the optimum resource allocation. As a result, there are instances when resources are allocated effectively, but there are also instances where Pareto optimality requirements are not met, which is referred to as a market failure scenario. These are the circumstances that provide a legitimate justification for government involvement. In other words, market failure does not imply that nothing positive has occurred, just that the best has not occurred.

Markets with little competition (a) Only when there is perfect competition in the market can the Pareto optimality requirements be met. The prerequisites of perfect competition are now scarcely met by the factor and commodity markets. Most of the time, imperfect competition occurs. Large companies may produce goods that are differentiated (monopolistic competition), a small number of dominant, interconnected companies may be in an oligopoly, or a single seller may produce a single product (monopoly). Given these market conditions, Pareto optimality is difficult to achieve since it requires free entrance and departure. Hicks and Robinson have shown that monopolistic competition has surplus capacity, demonstrating that these markets cannot reach Pareto optimality. Since there is just one seller under a monopoly, the seller may always take advantage of the buyer who has no other options. He obtains a cut of the excess generated by consumers by charging more than MC. No specific person may be refused access, regardless of whether he or she pays a fee for it. Another hallmark of public commodities is their lack of seller- and producer-side rivalry. Since they are often solely given by the government, there is no rivalry between consumers (to get a bigger amount) or producers (to generate more). An example of a public benefit is street lighting. The government will either not provide it at all or provide it to everyone, whether or not they have paid for it. Free Riders become a concern as a result.

When you know that transportation will be accessible to both paying customers and non-paying customers, the difficulty with free riders is that everyone wants to join the non-paying customers' group. As a result, markets will either undersupply or fail to supply these items, and when they do, they won't command a fair price[5], [6], because there will be no marginal cost to the second person receiving the benefit.

Externalities: When one company affects the expenses of other companies or the general public, this is referred to as an externality. Externalities may be both good and detrimental. To put it another way, "an externality is said to occur when actions taken by an individual or a firm result in benefits or costs that have an impact on other members of the society but these costs and benefits are not taken into consideration by these firms or individuals." Externalities may happen during both production and consumption. The question of why externalities cause market failure emerges.

The answer is that private costs and benefits that are reflected in individual and market demand and supply curves are the only factors that matter when businesses or people make choices. Therefore, they balance out marginal private cost and marginal private gain, but marginal social benefit and marginal social cost may not be equal.

A factory's pollution, for which it in no way makes up to society as a whole, is an example of a negative externality. Additionally, the building of a hospital next to my home has raised its property value, which is an example of a positive externality[7], [8].

Incomplete Markets: On occasion, despite consumer willingness to pay a price equal to the product's marginal cost, the market is unable to provide the commodity. It is a case of a failed market. It occurs when there is a lack of infrastructure or supporting industry. The lack of numerous services in remote regions that people are ready to pay for is an example of a scenario like this. Rural families may be able to afford to pay for a metro train if such good mobility is offered to them, but this is possible only because rural regions lack other support services.

Information Failures: When certain participants in the economic system have access to more accurate and pertinent information than others, there is an instance of incomplete information. Or, to put it another way, it indicates that not everyone has access to the same knowledge. If producers had more accurate information, they may not have sold low-quality goods at excessive prices; if consumers had more precise information, businesses might not have chosen their clients unfavourably.

There could still be a principal-agent issue. Managers may pursue goals different from those of the owners.

These are the circumstances in which government involvement would be advantageous since it would boost the effectiveness with which resources are allocated. Another area where government action is desired is to first lessen economic inequality and then to compel people to buy quality products. The government defines merit products as those that consumers would not normally choose to purchase but that are believed to be in their best interests. A vehicle that must keep a pollution under control certification is one example.

DISCUSSION

Government Failure

The foregoing explanation of market failure made it clear that market mechanisms are not always effective. There are instances when markets fall short. The concern now is whether the planning authority will be able to achieve Pareto optimality if all choices are made by it. In short, no. These are the instances that the government fails. In the economy, the government has various functions. It is involved in the creation of commodities and services, economic planning, the announcement of monetary, fiscal, and other economic policies in accordance with needs, and efficient national administration. However, in reality, government may not be able to bring the market to Pareto optimality and might not succeed in its goals of the most effective resource allocation. Failure of governance is what this is. We must realise that just as the market isn't always able to function effectively, neither is the government always omniscient or flawless. Additionally, it often fails to achieve its declared goals and, in some circumstances, even sets the incorrect ones. We refer to them as instances of government failure.

These factors contribute to government failure:

- (a) **Limited Information:** State will never have access to the same level of information as the market. It's also conceivable that the state bases its goals and programmes on erroneous predictions about the future.
- (b) **Limited Control:** The government has only a little amount of power over producers and consumers in the private sector. The government was unable to significantly curb tobacco production or use despite imposing high tariffs on cigarettes and outlawing their use in public areas.
- (c) **Bureaucracy:** Despite the creation of law, it is not executed effectively for a variety of reasons. The elimination of India's Zamindari system serves as an excellent illustration. Although the legislation was approved, bureaucracy hindered its effective implementation.
- (d) **Political Process Restrictions:** If the government's choices are supported by powerful individuals in society, this might lead to economic issues. They might bring about a variety of issues. Government must take into account a variety of factors. The phrase used by Lipsey, "Economic efficiency is only one ingredient of the recipe of decisions taken by the government," is excellent.
- (e) Gunnar Myrdal, a Nobel Prize recipient, offers the following explanation of why governments fail:

Myrdal claims that the following factors contribute to government failure:

- i. Politicians and government officials may act in their own self-interest, which may result in dishonesty and less-than-ideal outcomes.
- ii. (ii) Political parties are compelled to make less-than-ideal choices out of concern for their voter base. For instance, reservations in Indian constitutions were predicted to decrease over time yet continued to increase to favourably affect the vote.

- iii. (iii) Government with a short-term outlook may not be able to bring about fundamental improvements, leaving many issues unattended. India's population issue is one example. Although we made policy announcements, we did nothing to bring about structural improvements that would solve the issue on their own.
- iv. (iv) The government has numerous objectives that may be social or political in addition to economic ones. Therefore, a policy may yield less than ideal economic outcomes but do so while bringing about beneficial social improvements, which may be more significant than economic objectives.
- v. Coordination issues might be caused by a lack of information.
- vi. Most significantly, and unfortunately, democratic nations are eroding democratic values. There is a chance that certain interest groups may improperly influence government decisions in their favour.

Institutions and Governance

What causes markets and governments to be ineffective if they do so in certain circumstances? The institutional structure of an economy has a role, but there are other elements that can have an impact. Understanding how institutional structure affects resource distribution is crucial information. Neo-Classical ideas were predicated on the concept of "an institution free environment." Thorstein Veblen and other economists did, however, take into account how institutions affect resource allocation. Numerous hypotheses have been developed to explain why some endogenous elements, neither the causes nor the explanations of economic development, are connected to it. The performance of various countries varies significantly due to institutional variations[9], [10]. With the aid of a few instances, this may be illustrated more clearly. Institutions must guarantee income distribution based on productivity if we want individuals to provide their best. The degree of market rivalry also affects the businesses' economic output. Since domestic producers are aware that they must be competitive in order to remain in the market, it has been noted that increased competition brought about by globalisation has increased their productivity.

It is well established that private property rights and anonymous markets are beneficial for private products and for the effective distribution of resources. But in order to provide public goods, we must resolve the issue of selecting an institutional structure that would guarantee resource optimisation. Institutions's definition: According to Douglass North, an economist who won the Nobel Prize, institutions are a society's set of norms or, to put it more properly, they are the limitations that humans have created to guide social behaviour. Institutions have both an influencing and a limiting effect on how individuals interact. For instance, the relative prominence of the social institution of marriage in various civilizations has an impact on consumption patterns, gender disparity, population growth, and sex ratio. It's crucial to remember that institutions are both essential and endogenous.

There have been theories that have included the function of institutions in their justifications, such as Marx's Theory of Economic Development, while other theories, such as Walsarian analysis, have imagined a world devoid of institutions.

Role of Social Norms and the Community in Economic Development

The most crucial factor in economics is optimisation. A producer aims to maximise profits, a consumer to maximise utility, a government to maximise social welfare, and so forth. But each of these agents must optimise within a certain limit. Consumers' budgets, producers' costs, the government's overall resources, and so on. Social norms are yet another set of restrictions that must be met by an economic agent in order for it to reach its ideal state of equilibrium. Even if a company could make more money by manufacturing spirits instead of milk, it could nonetheless decide to do so for ethical reasons. When seen from the standpoint of economic development, which also considers the qualitative component of GDP, it will result in a less than ideal distribution of resources. Thus, it is undesirable if a court judgement causes moral hazard. Thus, it is a significant social norm.

Competition underpins markets, planning authorities rely on command, and community interaction is built on collaboration. Communities often have the power to fix market and governmental mistakes. Government and society may sometimes rectify market failures by working together. Occasionally, the market and society working together may fix government mistakes. Social economists refer to a person's network of ties with other members of society collectively as their social capital.

Approaches to Development: Vicious Circle of Poverty and Unlimited Supply of Labor

Living in poverty means not knowing what the future may hold while you go about your daily business. Being unable to provide children a quality education is poverty. Lack of freedom of speech is poverty. When a family's or nation's income is lower than its level of consumption, poverty exists. Money is the main cause of poverty. Lack of money may cause individuals to do numerous harmful activities, which can have negative results that further impoverish the population. When you consider poverty, unemployment, individuals without jobs, and families being hungry because they lack food are a few of the things that likely spring to mind. Politicians particularly like to take advantage of us in this situation and accuse their competitors of being at fault by pointing the finger at them.

Unfortunately, this is a really challenging part: Even if jobs were readily accessible, you would still need suitable candidates there is no magic formula to solve the unemployment problem! And it takes time, months of training, and often even years, to find competent candidates. However, my dear friends, that is not the end of the tale; these impoverished "criminals" sometimes serve long prison terms, which causes much more hardship for their families who have lost a prospective breadwinner. Guess what these folks will do to live if they have children? Crimes, of course! You probably expect me to say something along the lines of "Education is the key" as most readings we find on the topic of poverty do. Sadly, you will be mistaken this time. It is well known that politicians often employ (or rather abuse) the poor; all you have to do is listen to the talk programmes of well-known politicians during election season to see how they do this. And why do I claim that businesspeople require poverty when there are millions of dollars provided to the poor? In actuality, they only make these gifts in order to get a tax benefit, not because they

are glad to do so. The next time you see Bill Gotes contributing to a cause, remember that his business was required to make the payment.

CONCLUSION

Institutions are essential in guiding economic progress and promoting sustainable development. The infrastructure required for economic activity is provided by formal institutions, such as legal systems, regulatory frameworks, and property rights protection. This encourages investment, entrepreneurship, and innovation.

A favourable climate for commercial transactions is created through effective contract enforcement and the rule of law, which promotes confidence and lowers transaction costs.

These established institutions provide consistency and predictability, luring both local and international capital, and fostering long-term economic development. Social norms, cultural practises, and networks are examples of informal institutions that have a big impact on economic results.

Depending on how well they align with economic objectives, informal institutions may either support formal institutions or work against them. Sustainable development depends on inclusive institutions that support social mobility, equality of opportunity, and access to public resources. Inclusive institutions may boost productivity, encourage innovation, and propel economic advancement by lowering inequality and guaranteeing a fair playing field.

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CHAPTER 2

A STUDY ON UNLIMITED SUPPLY OF LABOUR

Dr. Dasinis Nathan Annette Christinal
Assistant Professor, Masters in Business Administration (E-Commerce),
Presidency University, Bangalore, India.
Email Id: annette.c@presidencyuniversity.in

ABSTRACT:

The idea of an endless supply of labour and how it affects economic analysis. It examines the theoretical and practical issues raised by the notion of an endless labour pool, as well as the possible repercussions for labour markets, wages, productivity, and economic development. The research looks at the variables that might affect labour availability and examines General Theory assumed an unlimited supply of labour at the current price and made some brief observations on secular economic expansion in its final pages, it was initially believed that this book would shed light on the issues facing nations with a surplus of labour. But after some thinking, it became clear that Keynes' book also essentially presupposed that there would be an endless supply of money and land, in addition to the assumption that there would be an endless supply of labour. the potential and problems presented by having an endless supply of labour. It also covers the policy ramifications and factors to take into account when governing labour markets in such circumstances.

KEYWORDS:

Unlimited Supply of Labor, Labor Markets, Wages, Productivity, Economic Growth, Availability of Labor.

INTRODUCTION

Although labour was no longer in limitless supply and the formal model of economic analysis was no longer supposed to explain how the economy grew through time, interest in pricing and income distribution persisted into the neo-classical period. In the European regions of the globe, where labour was in fact in short supply and where for the next fifty years it seemed as if economic development might be anticipated to be automatic, these adjustments of assumption and of interest worked out well enough [1], [2].

However, there is a limitless supply of workers over the majority of Asia, therefore economic growth cannot be taken for granted. However, during the neo-classical era, very few economists were interested in Asia's problems (even Asian economists themselves adopted the concepts and concerns of European economics), and little progress has been made for nearly a century with the kind of economics that would shed light on the issues faced by nations with surplus populations.

Since Keynes' General Theory assumed an unlimited supply of labour at the current price and made some brief observations on secular economic expansion in its final pages, it was initially believed that this book would shed light on the issues facing nations with a surplus of labour. But after some thinking, it became clear that Keynes' book also essentially presupposed that there

would be an endless supply of money and land, in addition to the assumption that there would be an endless supply of labour. Fundamentally, the true restriction to development in the near term—once the monetary faucet is opened—is the finite supply of labour rather than physical resources, and in the long term, the Thai secular boom is constrained by an excess of saving rather than a lack. Providing the Keynesian solutions a neoclassical system reawakens to its full potential. Therefore, from the perspective of nations with a surplus of labour, Keynesianism is just a lengthy, significant, and intriguing postscript to neoclassicism. As a result, the student of such economies must go all the way back to the classical economists before he can discover an analytical framework into which his difficulties can be appropriately fitted.

The Closed Economy

expanding on the notion that there is an endless supply of work and demonstrating its use. Let me say it again: We are not proposing that this presumption should be applied universally. Obviously, neither the United Kingdom nor North West Europe fit this description. It is also untrue that several of the nations that are now grouped together as being underdeveloped lack sufficient male labour, as is the case in various regions of Latin America and Africa [3], [4].

However, it is unquestionably a valid assumption for the economies of Egypt, India, or Jamaica. Our current objective is to develop an alternative framework for those nations where the neo-classical (and Keynesian) assumptions do not apply rather than to replace neo-classical economics. First off, it may be argued that there is an endless supply of labour in nations where the population is so great in comparison to the amount of capital and natural resources available that there are significant portions of the economy where labor's marginal productivity is small, zero, or even negative. The existence of such "disguised" unemployment in the agricultural sector has been brought to light by a number of authors, who have each shown that the family holding is so small that even if some family members found other employment, the remaining members could still cultivate the holding just as well (of course, they would have to work harder, but the argument also assumes that they would be willing to work harder in these circumstances). However, the phenomena is not in any way limited to rural areas [5], [6].

The whole spectrum of temporary employment, including dock workers, young guys who come up to you and offer to carry your bag as you approach, jobbing gardeners, and the like, is another significant area to which it applies. These jobs often have more people than they require and each one makes relatively little money from sporadic work; generally, their numbers might be cut in half without affecting productivity in this industry. Petty retail trading falls under this category as well; it is greatly expanded in overpopulated economies; each trader makes only a few sales; markets are crowded with stalls; and if the number of stalls were significantly reduced, consumers would not be negatively impacted at all. In fact, they might even benefit because retail margins might decrease.

Twenty years ago, it would have been impossible to write these sentences without pausing to explain why, under these conditions, casual workers' wages would not be bid down to zero or why farmers' output would not similarly be consumed entirely by rent, but modern economists are unfazed by these ideas.

The Open Economy

When capital accumulation surpasses labour supply, wages start to grow beyond the subsistence level, which has a negative impact on the capitalist surplus. The capitalists may, however, escape this if there is still excess labour in other nations by either promoting immigration or exporting their capital to nations where there is still an abundance of workers available at a subsistence rate. We must look at each of them separately. Since our major worry is with a large immigration of unskilled workers released from the subsistence sectors of other nations, let's first pave the way for the consequences of skilled worker immigration.

The need for local unskilled employees' services may potentially be decreased by the immigration of skilled people, although this is very improbable. More often than not, it will open up new opportunities for investment and industry, increasing demand for all types of labour in comparison to supply. Additionally, we need to clear the path for the very little immigrations. If 100,000 Puerto Ricans relocate to the US each year, there won't be much of an impact on wages here. The salaries of Puerto Rico are raised to the level of those in the United States, not the earnings of the United States. Mass immigration is a very other animal.

The salary level in the United States would undoubtedly fall below that of India and China if immigration from those countries were unfettered. Under actuality, under a competitive economy, the U.S. salary could only be higher than the Asian wage by an amount sufficient to cover migration expenses in addition to the "cliff" to which we have previously alluded. Whether one anticipates rising or falling labour returns, the outcome is the same. At the plus subsistence level, wages remain steady. Increasing returns completely benefit the capitalist surplus. This is one of the reasons trade unions are fiercely opposed to immigration, with the exception of those who fall under certain specific categories, and work to limit it in any nation where wages are reasonably high. As a consequence, real earnings are greater than they otherwise would be, whereas overall production, earnings, and capital resources are all less than they otherwise would be. Since trade unions limit immigration quickly but take considerably longer to manage capital export, the export of capital is consequently a far simpler way out for capitalists.

DISCUSSION

Lewis Model

The dual-sector model was first described by Sir Arthur Lewis in his paper "Economic Development with Unlimited Supplies of Labour," which was published in 1954. The model was then given Lewis's name. The paper and the accompanying model, which were first published in The Manchester School in May 1954, played a crucial role in creating the discipline of developmental economics. Some people have said that the essay itself was the most important contribution to the development of the field.

The market-driven sector

This industry, according to Lewis, is "that portion of the economy that employs capitalists and pays them for their capital," The capitalists, who employ labour, are in charge of how capital is

used. Manufacturing, plantations, mining, etc. are all included. The capitalist sector might be either public or private.

The Sector of Subsistence

He described this industry as "that portion of the economy not using reproducible capital." It might alternatively be rephrased as the "self employed sector" or the indigenous traditional sector. Because it is not capitalised, the per-person production in this industry is much lower.

A theory of development known as the "Dual Sector Model" proposes that extra labour from the old agricultural sector be shifted to the contemporary industrial sector, whose expansion over time absorbs the extra labour, fosters industrialization, and fosters long-term development. The subsistence farming sector is shown in the model as being usually characterised by low wages, a surplus of labour, and poor productivity due to a labor-intensive production process. As opposed to the subsistence sector, the capitalist manufacturing sector is characterised by higher pay rates, greater marginal productivity, and a need for more labour. Additionally, it is believed that the capitalist sector uses a capital-intensive production method, making investment and capital development in the manufacturing sector feasible over time as capitalists' earnings are reinvested in the capital stock. The improvement of labor's marginal productivity in the agriculture sector is considered to be of low importance since the hypothetical developing country's investment is flowing towards the manufacturing sector's physical capital stock [7], [8].

Relationship between the two sectors

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Workers will thus tend to move from the agricultural to the industrial sectors over time in order to enjoy the benefits of higher earnings owing to the wage gap between the capitalist and subsistence sectors.

However, even when labor's marginal product is zero, it still contributes to the overall output and gets about the average output. Regardless of who actually transfers, overall welfare and productivity will increase if a certain number of employees leaves the subsistence sector for the capitalist sector in an amount equivalent to the amount of surplus labour there. Due to the increase in labour, total industrial output will grow while total agricultural product will stay the same. However, the manufacturing sector's marginal productivity and wages will decrease as a result of the increased workforce[9], [10].

The marginal productivity of employees in manufacturing will be pushed up by capital creation and driven down by new workers joining the manufacturing sector over time as this transition continues and investment results in increases in the capital stock. As employees migrate from the agricultural sector to the manufacturing sector, marginal productivity and wages in agriculture rise while marginal productivity and salaries in manufacturing decline. Eventually, the pay rates of the agricultural and manufacturing sectors will be equal.

The end result of this process of transition is that the agricultural wage is equal to the manufacturing wage, the manufacturing marginal product of labour is equal to the agricultural marginal product of labour, and there is no further expansion of the manufacturing sector because workers no longer have a financial incentive to transition.

Surplus Labor and the Growth of the Economy

The establishment of new industrial investment projects may employ surplus labour in place of capital, or it can be directed towards newborn industries that need a lot of labour in the beginning. Since there is more labour available than there is demand for at that rate, such growth does not increase the value of the subsistence wage. Moreover, when output increases thanks to better labour skills, the capital coefficient is reduced. Although it is believed that there is a surplus of labour, much of it is unskilled. Since technology advancement necessitates trained labour, this retards development. However, this barrier may be removed by the supply of training and educational facilities if there is a labour surplus and modest capital.

The quantity of money that is simultaneously accessible determines how useful a limitless supply of labour is for achieving development goals. If there is excess labour, agriculture will not be able to utilise it productively; thus, a transfer to a non-agricultural sector will be advantageous to both parties. It relieves the strain of people on the land and offers employment to the rural population. Today, labour is obtained through industry. To boost agricultural output, labour has to be incentivized to relocate. The capitalist sector will be required to make a compensatory payment equal to the wage rate that people can earn outside of their current sector, as well as a number of other payments that take into account the cost of living in the new sector and adjustments to the level of profits in the current sector.

Since the subsistence sector's profits determine the wages in the capitalist sector, capitalists would want to keep subsistence sector productivity and wages low so that the capitalist sector may grow at a stable wage. Since a capitalist employer would be diminishing his surplus if he paid labourers more than he was paid for the goods produced, labour is only engaged in the capitalist sector up to the point where its marginal output equals salary. However, in subsistence agriculture, this need not be the case as wages might be set at the same level as the average produce or the minimum standard of living. The payments to labour in the form of wages, OWPM, and the capitalist surplus, NPW, are split up into the total product labour ONPM. Utilising capitalist excess determines how quickly the capitalist sector expands and how much labour the subsistence sector absorbs. The excess will be reinvested, increasing the labour force as a whole. The marginal product line moves rightward and upward to N1. If salaries stay the same, there are now more jobs in the industrial sector. As a result, employment grows by MM1.

From WNP to WN1P', the quantity of the capitalist surplus increases. Now that the money has been invested again, the procedure may be continued until all the extra labour has been used up. The subsistence sector's wages will start to grow until all the surplus labour has been drawn into the capitalist sector, which will change the terms of trade in favour of farmers and drive up wages in the capitalist sector. The population has caught up with capital accumulation, and there is no longer room for expansion from the original source, namely, limitless labour supply. The supply of labour to the industrial sector becomes less than fully elastic after all the excess labour has been used up. Given that the agricultural industry is completely commercialised, it is now in the producers' best interests to engage in labour competition. The capitalist sector's increased share of profits assures that the labour surplus is constantly used until it is depleted. The economy will transition into a phase of self-sustaining development with a constant character as real wages tend to climb along with productivity gains.

CONCLUSION

From a policy standpoint, regulating labour markets in the face of an infinite labour supply presents difficulties. Promoting job opportunities for all people and guaranteeing equitable working conditions and salaries are two objectives that policymakers must reconcile. Programmes like skill development efforts, education and training initiatives, and labour market rules may all assist to reduce the potential negative effects of a labour shortage. Fostering an environment that fosters the growth of human capital and encourages a trained workforce capable of handling the needs of a changing economy is crucial. Despite being purely speculative, the idea of an endless supply of labour has important consequences for understanding the dynamics of the labour market and policy decisions. Both politicians and scholars must comprehend the possible impacts on wages, productivity, and economic development. Societies may aim for balanced and inclusive economic growth by carefully controlling labour market circumstances and investing in human capital. The population has caught up with capital accumulation, and there is no longer room for expansion from the original source, namely, limitless labour supply. The supply of labour to the industrial sector becomes less than fully elastic after all the excess labour has been used up. Given that the agricultural industry is completely commercialised, it is now in the producers' best interests to engage in

labour competition. The capitalist sector's increased share of profits assures that the labour surplus is constantly used until it is depleted. The economy will transition into a phase of self-sustaining development with a constant character as real wages tend to climb along with productivity gains

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CHAPTER 3

DETERMINATION OF CAPITAL ACCUMULATION

Dr. Mounica Vallabhaneni

Assistant Professor, Department of Commerce and Economics,

Presidency University, Bangalore, India.

Email Id: mounicav@presidencyuniversity.in

ABSTRACT:

The elements affecting capital accumulation and how it affects the growth of the economy. It examines the theoretical foundations and empirical data around the factors that influence the accumulation of capital, taking into account both physical and human capital. The research examines how institutional, technical, educational, savings, and investment variables affect the accumulation of capital. As a result, both the capitalists' surplus and the pace of capital accumulation will decrease and, as a result, may require more money to survive, which will increase both the subsistence wage and the capitalist wage, which will lower the capitalist surplus and the rate of capital accumulation. As long as the capitalist surplus grows, so does national income, fueling economic expansion. The utilisation of more and more labour, which is believed in this model to be in excess, is correlated with a growth in capitalist surplus. It also analyses how capital accumulation affects economic development and offers insights into the policy considerations that should be made to encourage sustainable capital creation.

KEYWORDS:

Capital Accumulation, Economic Development, Physical Capital, Human Capital, Savings, Investment.

INTRODUCTION

Economic development and the expansion of the capitalist surplus are closely intertwined; as long as the capitalist surplus grows, so does national income, fueling economic expansion. The utilisation of more and more labour, which is believed in this model to be in excess, is correlated with a growth in capitalist surplus [1], [2]. At some time, the process of accumulating money does come to an end. At this moment, population growth has caught up with capital accumulation, and there is no longer any surplus labour. According to Lewis, the moment at which capital accumulation stops might occur earlier if real wages grow to a degree where all capitalist profits are spent and there is no longer any room for net investment. There are many ways in which this might happen:

1. If capital accumulation is outpacing population growth, this results in a decrease in the number of persons working in agriculture or subsistence.
2. As the industrial or capitalist sectors grow in size relative to the subsistence sector, the terms of trade may shift against the capitalist sector, forcing the owners of those sectors to pay their labourers a larger share of their output in order to maintain a constant real income.

3. The subsistence sector may adopt new and more effective production methods and techniques, which would push up the level of subsistence wages and compel a rise in capitalist wages.

As a result, both the capitalists' surplus and the pace of capital accumulation will decrease and, as a result, may require more money to survive, which will increase both the subsistence wage and the capitalist wage, which will lower the capitalist surplus and the rate of capital accumulation. As long as the capitalist surplus grows, so does national income, fueling economic expansion. The utilisation of more and more labour, which is believed in this model to be in excess, is correlated with a growth in capitalist surplus. At some time, the process of accumulating money does come to an end. At this moment, population growth has caught up with capital accumulation, and there is no longer any surplus labour [3], [4]. According to Lewis, the moment at which capital accumulation stops might occur earlier if real wages grow to a degree where all capitalist profits are spent and there is no longer any room for net investment. There are many ways in which this might happen:

1. If capital accumulation is outpacing population growth, this results in a decrease in the number of persons working in agriculture or subsistence.
2. As the industrial or capitalist sectors grow in size relative to the subsistence sector, the terms of trade may shift against the capitalist sector, forcing the owners of those sectors to pay their labourers a larger share of their output in order to maintain a constant real income.
3. The subsistence sector may adopt new and more effective production methods and techniques, which would push up the level of subsistence wages and compel a rise in capitalist wages. As a result, both the capitalists' surplus and the pace of capital accumulation will decrease.
4. and, as a result, may require more money to survive, which will increase both the subsistence wage and the capitalist wage, which will lower the capitalist surplus and the rate of capital accumulation. population, i.e., its impacts on the surplus in agricultural production, the capitalist profit margin, wage rates, and general job prospects. Lewis similarly believed that the pace of growth in manufacturing would be the same as that in agriculture; but, if industrial development includes a more intensive use of capital than labour, the movement of labour from agricultural to industry would only result in more unemployment.
5. Lewis seems to have overlooked the balanced rise of industry and agriculture. Given the connections between agricultural development and industrial growth in developing nations, the process of industrialization would be at risk if capitalists did not dedicate a portion of their profits to agricultural development.
6. Lewis seems to have neglected any potential economic leaks. He boldly believes that a capitalist's marginal inclination to save is near to one, but because profits usually rise along with some increase in consumption, the overall gain in savings will be smaller than changes in profit. The consumption-saving habits of the top 10% of the population will determine whether or not capitalist excess is employed productively. However, businesspeople are not the only ones in society who are productive. Small farmers in

Egypt who grow income crops have shown to be fairly capable of saving the necessary money.

7. Although it is thought that the transition of unskilled employees from farm to industry would be virtually painless and inexpensive, this does not really happen since industry demands different kinds of labour. Investment in education and skill development may remedy the issue, but the procedure is neither simple nor affordable.

The model takes into account industrial capital generation that is infinite, perfect knowledge, and rationality. The full potential of the model is seldom reached since they don't occur in real-world circumstances. The model does, however, provide a sound general theory on the transfer of labour in emerging countries.

DISCUSSION

Empirical Tests and Practical Application of the Lewis Model

The Lewis model is not always well supported by empirical data. In an empirical examination of a hamlet in India during the influenza outbreak of 1918–19, Theodore Schultz demonstrated that agricultural productivity decreased, albeit his research does not establish whether output decreased or not would have decreased if a similar percentage of the people engaged in agriculture had moved into other professions as a result of financial incentive. Again, certain economic sectors may experience disguised unemployment while others do not. Additionally, empirically speaking, it's crucial to understand how much excess labour there is and how its removal affects production, as well as if the marginal productivity is equal to zero[5], [6].

Mabro applied the Lewis model to the Egyptian economy in 1967, but despite Lewis' assumptions being close to the truth at the time of the study, the model failed for two reasons: first, Lewis grossly underestimated the rate of population growth; second, the choice of capital-intensiveness in Egyptian industries did not exhibit much labor-use bias, and as a result, the level of unemployment did not exhibit any tendency to rise. When the Lewis model was applied to Taiwan, its efficacy was once again questioned. Although Taiwan's economy grew at an outstanding pace, unemployment did not decline much, and this may be explained once again by Taiwan's preference for capital-intensive sectors. This brought up the crucial question of whether having excess labour is a prerequisite for development.

The Fei–Ranis Model of Economic Growth

This idea holds that the economy's present agricultural component is the primitive sector, while the fast developing but modest industrial sector constitutes the modern sector. The economic coexistence of both sectors is where the development challenge is most acute. Only a full change in the focus of development from the agricultural to the industrial economies, together with an increase in industrial production, may lead to development. This is accomplished by transferring labour from the agricultural to the industrial sectors, demonstrating that developing nations are not affected by labour supply issues[7], [8]. The agricultural sector must increase, but not in an insignificant way, and provide enough food and raw resources to sustain the whole economy. When it comes to the economic growth of underdeveloped nations, saving and investment take

on the role of the driving factors, much as in the Harrod-Domar model. Given that the Fei-Ranis economic model makes use of the traditional premise of subsistence wages, it may be categorised as a classical model. capital-intensiveness in Egyptian industries did not exhibit much labor-use bias, and as a result, the level of unemployment did not exhibit any tendency to rise.

The Lewis model's undercutting of the contribution of agriculture to the expansion of the industrial sector was one of its main flaws. In addition, he did not recognise that the rise in labour productivity need to occur before the division of labour between the two sectors. However, the Fei-Ranis dual economy model of three development phases took these two concepts into consideration. They contend further that the model fails to properly apply focused analysis to the shift brought about by agricultural progress. The agricultural labour force's elasticity is infinite in Phase 1 of the Fei-Ranis model, which causes it to experience hidden unemployment. Additionally, labor's marginal product is zero. The Lewis model is comparable to this stage. step 2 of the model sees an increase in agricultural production, which fuels faster industrial expansion and lays the groundwork for step 3. Agribusiness surplus might exist in Phase 2 as a growing average product (AP), larger than the marginal product (MP), and below the subsistence wage threshold.

Connectivity between Sectors

Fei and Ranis emphasised the interdependence of business and agriculture and claimed that strong linkage between the two will promote and hasten growth. The industrial and agricultural sectors may be connected if agricultural workers hunt for industrial employment and industrialists hire more people by using greater capital goods stocks and labor-intensive equipment. Additionally, the surplus owner will probably pick the productivity from which future savings might be directed if he invests in the industrial sector of a recognised location that is adjacent to the soil. They used the dualistic economy of Japan in the 19th century as an example and said that the existence of a decentralised rural industry that was often tied to urban output increased communication between the two sectors of Japan. They contend that it is the efforts of a small group of entrepreneurs with access to land and decision-making authority who employ industrial capital and consumer products for agricultural practises in dualistic economies of developing nations[9], [10].

Land-Labor Production Function

(A) measures labour on the horizontal axis and land on the vertical axis. Two ridge lines are shown by O_u and O_v , while M , M_1 and M_2 show the production contour lines. The zone of factor substitutability, or the region where factors may be replaced readily, is defined as the space bounded by the ridge lines. Let's consider the consequences of this. The intersection of the production curve M_1 and the ridge line O_v at point s makes M_1 absolutely horizontal underneath O_v if the quantity of labour equals the entire labour employed in the agricultural industry. The horizontal behaviour of the production line suggests that once land is fixed and labour is increased, output ceases and labour becomes superfluous beyond the zone of factor substitutability. If O_t is the entire quantity of land used for agriculture, then t_s is the maximum amount of labour that may be used without it being redundant, and e_s is the amount of

agricultural labour that is redundant. Fei and Ranis created the idea of labour utilisation ratio as a result, which they describe as the number of productive labour units per unit of land that may be utilised (without redundancy).

Capital-Labor Production Function

Fei and Ranis use the same constant returns to scale assumptions for the industrial sector as they do for the agriculture sector. However, capital and labour are the primary production-related elements. The production functions have been displayed in the graph (A) right side, with labour on the horizontal axis and capital on the vertical axis. The line $OA_0 A_1 A_2$ indicates the direction of industrial sector growth. The industrial output shown by the production contours A_0 , A_1 and A_3 grows when capital increases from K_0 to K_1 to K_2 and labour increases from L_0 to L_1 and L_2 .

Due to labour shortages in the agricultural sector, this model suggests that the primary source of labour for the industrial sector is the agricultural sector. The labour supply curve for the industrial sector S is shown in (B). On a graph with the industrial labour force on the horizontal axis and output/real wage on the vertical axis, PP_2 depicts the straight line portion of the curve and is a measure of the superfluous agricultural labour force. Real wages stay constant because of the superfluous agricultural labour force, but as the curve begins to slope upward from point P_2 , the upward sloping suggests that more labour would only be provided with a comparable increase in the real earnings level. The MPPL curves M_0 , M_1 , M_2 , and M_3 have been constructed to match to the capital and labour levels in each. The marginal physical productivity of labour increases from M_0 to M_1 when capital stock increases from K_0 to K_1 . The MPPL curve cuts the labour supply curve at equilibrium point P_0 when capital stock is K_0 . At this moment, the shaded area on the graph represents the entire real wage income, which is W_0 . $PO_0 P_0$, which is represented by the shaded region qPP_0 , is the equilibrium profit. Given that the workers' severely.

A dual economy's use of agricultural surplus as a wage fund is explained via the integration of the industrial and agricultural sectors. The agricultural surplus is a key component of the wage fund. The graph on the right, which combines the industrial sector graph with an inverted agricultural sector graph with the agricultural sector's origin located in the upper-right corner, may assist illustrate its significance. The graph is now seen differently as a result of the origin's inversion. The output numbers are read vertically downward from O , whereas the labour force values are read from the left of 0 . This inversion is just being done for convenience's sake. As previously described (See Section on Basics of the model), the point of commercialization is located at point R , where the tangent to the line ORX runs parallel to OX .

The whole labour pool is present in the agricultural sector before a portion of the superfluous labour force is absorbed into the industrial sector. The residual labour in the agricultural sector is then represented by OG' after the AG quantity of labour force (let's say) has been absorbed by the industrial sector. However, how is the amount of labour absorbed into the industrial sector decided upon? The labour supply curve for SS' and multiple demand curves for df , $d'f$, and $d''f$ are shown in (A). The equilibrium employment point G is determined by where the demand-

supply curves cross when the labour demand is df . Therefore, OG stands for the quantity of labour that has been absorbed by the industrial sector. In such circumstance, the only labour used by the agriculture industry is OG . This OG amount of labour results in an output of GF , from which the agricultural sector consumes GJ amount of labour and the agricultural surplus for that level of employment is JF . When the agricultural sector's unproductive labour force is absorbed by the industrial sector, it simultaneously becomes productive and generates the $OG'Pd$ production shown in the graph, earning a total pay income of $OG'PS$. The same people who went for the industrial sector need the agricultural surplus JF produced for consumption. As a result, agriculture effectively supplies both the labour force for production activities abroad and the necessary pay money.

Significance of Agriculture in the Fei-Ranis Model

Agriculture is neglected in the Lewis model, which is why it is attacked. Fei-Ranis model takes a step further and asserts that the growth of the industrial sector depends heavily on agriculture. In reality, it claims that the quantity of the overall agricultural surplus and the sum of industrial sector earnings determine the pace of expansion of the industrial sector. Therefore, the rate of expansion of the industrial economy will be greater the more surplus there is, the more excess is invested productively, and the more industrial profits are made. Fei and Ranis believe that the ideal shift occurs when investment funds from surplus and industrial profits are sufficiently large to buy industrial capital goods like plants and machinery. The model focuses on the shifting of the focal point of progress from the agricultural to the industrial sector. Employment opportunities must be created in order to use these capital assets. As a result, Fei and Ranis stipulate that for a transformation to be effective, the rate of capital stock expansion and the rate of job opportunities must outpace the rate of population growth.

CONCLUSION

Savings, investments, technical advancement, human capital, and institutions are only a few of the many elements that have an impact on the complicated process of capital accumulation. In order to create successful policies that encourage sustainable capital creation and stimulate economic development, it is essential to understand these drivers. Societies may establish an environment for capital accumulation and realise their full economic potential by putting a priority on saving and investing, advancing technology, investing in human capital, and increasing institutional quality. Therefore, the rate of expansion of the industrial economy will be greater the more surplus there is, the more excess is invested productively, and the more industrial profits are made.

Fei and Ranis believe that the ideal shift occurs when investment funds from surplus and industrial profits are sufficiently large to buy industrial capital goods like plants and machinery. The model focuses on the shifting of the focal point of progress from the agricultural to the industrial sector. Employment opportunities must be created in order to use these capital assets. As a result, Fei and Ranis stipulate that for a transformation to be effective, the rate of capital stock expansion and the rate of job opportunities must outpace the rate of population growth.

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CHAPTER 4

A BRIEF STUDY ON INDISPENSABILITY OF LABOR REALLOCATION

Mr. Yelahanka Lokesh

Assistant Professor, Department of Commerce and Economics,

Presidency University, Bangalore, India.

Email Id: lokesh.yr@presidencyuniversity.in

ABSTRACT:

The importance of labour reallocation in promoting economic development and growth. It looks at the theoretical and practical support for the necessity for labour reallocation across industries and professions, emphasising how it may boost output, spur innovation, and improve economic efficiency overall. The research looks at the variables that influence labour reallocation, such as changes in consumer preferences, comparative advantage, and technological improvements. It also covers the effects of labour reallocation on employment, income inequality, and policy ideas intended to ease transitions and maximise the advantages of labour reallocation. Labour is moved from the agricultural to the industrial sectors when a developing nation goes through its development phase. The economy of a country grows more quickly the more reallocation there is. The notion of labour reallocation is supported economically by the need for greater economic growth. Engel's Law, which stipulates that the percentage of income spent on food falls with an increase in an individual's income level, even while there is a rise in the actual spending on food, is the foundation of labour reallocation. For instance, if agriculture employs 90% of the total population in the economy in question, only 10% of the people would be employed in the industrial sector.

KEYWORDS:

Labor Reallocation, Economic Growth, Productivity, Innovation, Comparative Advantage, Consumer Preferences.

INTRODUCTION

Labour is moved from the agricultural to the industrial sectors when a developing nation goes through its development phase. The economy of a country grows more quickly the more reallocation there is. The notion of labour reallocation is supported economically by the need for greater economic growth. Engel's Law, which stipulates that the percentage of income spent on food falls with an increase in an individual's income level, even while there is a rise in the actual spending on food, is the foundation of labour reallocation. For instance, if agriculture employs 90% of the total population in the economy in question, only 10% of the people would be employed in the industrial sector [1], [2]. As agricultural production rises, just 35% of the population can continue to provide a sufficient food supply for the remainder of the population. As a consequence, 65% of the population is currently employed in the industrial sector. A larger labour supply for the industrial sector would be appreciated under the current circumstances because the growth of industrial goods is dependent on the rate of per capita income while the growth of agricultural goods is only dependent on the rate of population growth. In reality, when

consumers start to prefer industrial products compared to rural commodities, this labour reallocation becomes inevitable over time[3], [4].

However, Fei and Ranis were quick to point out that, in accordance with the discussion of Engel's Law, the demand for labour reallocation must be more closely related to the need to create more capital investment products than to the idea of industrial consumer goods. This is due to the fact that the idea that there is a large demand for industrial products looks implausible given how low the real wage in the agriculture sector is and how this lowers the demand for industrial goods. In addition, low and generally stable pay rates will result in low and constant wage rates in the industrial sector. This suggests that the demand for industrial products will not increase at the pace that Engel's Law predicts.

The dualistic economies follow the path of natural austerity, which is characterised by greater demand for and significance of capital good sectors as opposed to consumer good ones. As a result, the growth process would witness a slowly increasing increase in consumer spending power. Private enterprises are turned off by the lengthy gestation time that comes with capital goods investments. This implies that, particularly in the early phases of development, the government must intervene and play a significant role in order to facilitate growth. The government also tries to reduce social and economic costs by building roads, railroads, bridges, educational facilities, healthcare facilities, and other infrastructure.

According to the Fei-Ranis model, it is feasible that when technical advancements occur and industry shifts to labor-saving methods, the economy grows with higher profits but no actual economic progress occurs. The graph in this section may be used to describe this in detail. The graph shows two MPL lines that are drawn, with the horizontal axis representing employment and the vertical axis representing actual salary and MPL. The term "OW" stands for "subsistence wage level," or the minimal pay at which a worker (and his family) might exist. Since there is no limit to the supply of labour at the subsistence wage level, the line WW' that runs parallel to the X-axis is thought to be indefinitely elastic. The squares OWEN and DWE stand for the wage bill and the surplus or profits made, respectively. If the MPL curve shifts, this excess or profit could rise[5], [6].

The surplus or profit realised would rise if, as a result of a change in production method, the MPL curve shifts from MPL1 to MPL2, becoming labour- or capital-saving. When comparing DWE with D1 WE, which has a larger area than DWE, this rise may be noticed. There isn't a new point of equilibrium, and because E remains the point of equilibrium, neither the level of employment in the labour force nor the level of wages are increasing. As a result, employment for labourers remains ON and earnings remain OW. The surplus or profits are the only changes that occur in tandem with a change in production method. This is an excellent illustration of a growth without development process since it results in more profits but slows down development because labourers' employment and earnings stay the same.

Food-Leisure Graph

The Fei-Ranis model of economic growth has drawn criticism for a variety of reasons, but if it is adopted, it will have significant theoretical and policy ramifications for the efforts of developing

nations to advance as well as for the persistently contentious claims regarding the balanced vs. unbalanced growth debate[7], [8].

It has been said that Fei and Ranis lacked a thorough knowledge of the weak economic climate that prevailed in underdeveloped nations. If they had carefully examined the nature and the causes of the problem, they would have discovered that the institutional framework, particularly the feudal system that predominated, was to blame for the current agricultural backwardness. Fei and Ranis declare, "That has been contested. In various stages of economic development, there are grounds to think that the connection between money and physical capital may be complimentary, to the point where credit policies may be crucial in removing obstacles to the expansion of agriculture and industry. This suggests that they are ignoring the importance of money and pricing throughout the development process. They don't make a difference between wage labour and home labour, which is crucial for assessing the costs of dualistic growth in a developing country.

Harry T. Oshima and some others have criticised Fei and Ranis' assumption that MPPL is zero during the early stages of economic development on the grounds that it is only true if the population of farmers is very large, and if it is, some of that labour will move to cities in search of employment. This segment of labour that has moved to the metropolis is now jobless, but in the long term, it either gets absorbed by the unorganised sector or returns to the rural and tries to cultivate more marginal land. They have also ignored temporary seasonal unemployment, which is brought on by shifts in labour demand.

We turn to the graph in this part, which plots Food on the vertical axis and Leisure on the horizontal axis, to help us better grasp this. OS stands for the least amount of food that agricultural workers must eat to survive, or the subsistence level of food intake. IO and I1 between the two agriculturalists' goods, food and leisure. Since the origin is on G, the greatest amount of labour is represented by OG, and the direction of labour input is measured from right to left. The SAG transformation curve deviates from A, indicating more leisure usage on the same amount of land. The indifference curve IO and the marginal transformation between food and leisure are both tangent to the transformation curve at point A, where $MPL = 0$ and $A = 1$. The moment of leisure satiation is at hand[9].

Take the example of a worker who transitions from the agriculture to the industrial sectors. In such situation, the remaining labourers would split up the remaining land, changing the transformation curve from SAG to RTG. Assuming continuous returns to scale, MPL at point T would be the same as it was at point A and APL would remain the same. The curve RTG must be flat at point T in order to maintain the same level of production if $MPL = 0$ is taken as the point at which agriculturalists live on a subsistence level. That, however, would suggest either that leisure is sated or that leisure is a lesser good, which are both extreme circumstances. Therefore, it may be inferred that, under typical circumstances, the production would decrease as labour moved into the industrial sector but the per capita output remained constant. This is due to the fact that a decline in per capita production would result in consumption that is lower than the level necessary for subsistence, and the amount of labour input per person would either increase or decrease.

DISCUSSION

Rodhan's Theory of Big Push

According to the model's assumption, poor nations must make significant financial investments in order to get beyond their current level of economic stagflation. According to this hypothesis, a "bit by bit" investment strategy won't have the necessary positive effects on development for emerging nations. A waste of resources will really result from infusions of little amounts of investment. A Massachusetts Institute of Technology research is cited favourably by Paul Rosenstein-Rodhan in this context: "There is a minimum level of resources that must be allocated to... a development plan if it is to have any possibility of success. Getting a nation into self-sustaining development is similar to taking flight in an aeroplane. Before the craft is able to take flight, it must pass a crucial ground speed.

The whole industry that is intended to be formed, according to Rosenstein-Rodan, should be viewed and planned as a gigantic entity (a business or trust). According to him, when a group of industries is planned together according to their social marginal products, the rate of economic growth is higher than it would have been otherwise because the social marginal product of an investment is always different from its private marginal product.

Indivisibility in production function

In the production function, indivisibilities might exist in relation to any of the following:

1. Inputs
2. Procedures
3. Results

These result in rising returns (i.e., economies of scale) and may call for a large firm's optimal size. Since at least one optimal size business may be developed in many sectors, this is achievable even in poor nations.

However, social overhead capital investment includes all fundamental industry investment, which must always come before immediately productive investment activities (such as electricity, transportation, or communications). Social overhead capital investments tend to be "lumpy." Such financial needs cannot be imported from other countries.

Therefore, significant initial investment in social overhead capital is required (estimated to be between 30 and 40 percent of the overall investment made by poor nations). Four more indivisibilities that further define social overhead capital are as follows:

1. **Timelessness:** It must come before other investments that would immediately provide income.
2. **Equipment has a minimum lifespan:** Any lower degree of durability is either technically impossible or much less effective.
3. **Long gestation periods:** Social overhead capital investments take time to pay off, and their effects on the economy are not always immediate or obvious.

Indivisibility (or complementarity) of Demand

Low buying power and per capita income define developing nations. As a result, these nations' markets are modest. Modernization and improved efficiency in a single sector in a closed economy have little bearing on the economy as a whole since that industry's product won't find a market. In order for individuals working in one sector to consume the products of other industries and therefore generate complementary demand, several industries must be established at once.

Rosenstein Rodan uses the shoe business as an example to demonstrate this. When a nation makes significant investments in the shoe sector, all the workers from other sectors who were secretly employed find jobs and a source of income, which boosts both the production of shoes and individual earnings. The additional revenue will be used for other things than shoe purchases. It is possible that the higher incomes will result in more expenditure on other goods as well. To meet this increasing demand for the other commodities, there isn't a comparable supply of these things. The prices of these goods will increase in accordance with the fundamental market dynamics of supply and demand. Investments must be spread out across many businesses to prevent this scenario. In an open economy, the scenario may be different since the new industry's production might replace previous imports or even find a market via exports. Although its necessary scale may now be less owing to the existence of international commerce, a significant push is still required even if the global market serves as a replacement for local demand.

Indivisibility in the supply of savings

We cannot constantly depend on foreign help since significant investments in many industries must be made repeatedly at high levels. Domestic savings are thus essential. However, this is difficult in a developing economy because of the low income levels. Following the gain in revenues due to greater investment, the marginal rate of savings must be raised. Take into account a nation whose economy is divided into a huge number of minor sectors, each of which contributes so little to overall economic growth. Each industry has two options: it either continue using conventional ways or transition to more efficient contemporary manufacturing techniques. Let's say that the economy has l employees and n sectors. A sector would generate l/n production using conventional technology, with each employee generating one unit of the good. A sector would generate more if it used current technology since the productivity would be higher than one unit per worker. However, a contemporary industry would need some of the employees (let's say h) to carry out administrative duties.

The curve T represents the output in the traditional sector, while the curve M represents the production in the modern sector.

The positive intercept of the curve M on the x -axis indicates that there must be at least h people working for administrative tasks even in the absence of any manufacturing. The contemporary sector will be more productive than the old sector given our assumption of l/n employees in the economy. Because employees in the contemporary sector are more productive than those in the old sector, the production function of the former is steeper. Both production functions have a

slope of $1/m$, where m is the marginal labour rate needed to generate an extra unit of output. The contemporary sector has a lower level of m than the old sector.

Indivisibilities and External Economies

The idea of externalities is pertinent to the industrialization of developing nations, as choices must be made on how to divide funds among available investment options. These result from market economies' interconnectivity. Pecuniary economies are those that are externally conveyed via the pricing system because, in a market economy with perfect competition, prices serve as the signalling mechanism. They develop inside an industry as a result of internal economies of scale in overcoming technological indiscriminabilities. This lowers the cost of its product, which benefits a different business (let's call industry Y) that uses it as an input or a manufacturing element. The revenues of industry Y will therefore increase, causing it to grow and creating demand for industry X's product. Industry X's output and earnings increase as a consequence.

1. However, owing to the decentralised and varied character of the market in undeveloped nations, ideal competitive conditions are not available. For the following reasons, prices are ineffective as a signalling system:
 1. Prices reflect the current situation and do not forecast future economic conditions.
 2. Prices may determine current productive activities, but they cannot decide on investments that are suitable for emerging nations.
 3. Because of the differentiation and decentralisation in emerging nations, the private sector's reaction to pricing signals is insufficient and imperfect.

This demonstrates the need of centralised, cross-industry planning of investments in developing nations as the private sector is unable to do it. Another significant externality that results from the complementarity of sectors is an increase in market size. Because workers of one industry often become clients of another, there is a motivation to increase the scope of activities. One sector creates demand for the output of the other as the size of operations increases, just like in the example of industries X and Y given above in terms of goods. Marshallian economies also benefit a company operating in a developing sector as a consequence of the concentration of industrial districts or clusters in a certain location. These happen as a result of the benefits of agglomeration that Alfred Marshall listed:

Creation of a market for skilled labour;

1. Information spillover;
2. Specialisation and division of labour.

CONCLUSION

Reallocating labour is essential for innovation, productivity gains, and economic progress. It enables the effective allocation of labour resources in response to changes in customer preferences, comparative advantage, and technological improvements. Although the redistribution of labour comes with difficulties like lost jobs and income disparity, policy considerations may lessen these consequences and ease the transition. Societies may maximise the potential of their labour force and promote sustainable economic growth by recognising the

significance of labour reallocation and putting in place the necessary policies. cross-industry planning of investments in developing nations as the private sector is unable to do it. Another significant externality that results from the complementarity of sectors is an increase in market size. Because workers of one industry often become clients of another, there is a motivation to increase the scope of activities. One sector creates demand for the output of the other as the size of operations increases, just like in the example of industries X and Y given above in terms of goods. Marshallian economies also benefit a company operating in a developing sector as a consequence of the concentration of industrial districts or clusters in a certain location.

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CHAPTER 5

A STUDY ON BALANCED GROWTH AND UNBALANCED GROWTH

Dr. Dasinis Nathan Annette Christinal
Assistant Professor, Masters in Business Administration (E-Commerce),
Presidency University, Bangalore, India.
Email Id: annette.c@presidencyuniversity.in

ABSTRACT:

With relation to economic development, the ideas of balanced growth and unbalanced growth. It examines the theoretical underpinnings and empirical data supporting these two theories, taking into account their consequences for income distribution, sectoral growth, and general economic stability. The research looks at the causes of imbalanced growth, such as sectoral specialisation, unequal resource distribution, and income inequality, as well as the elements that lead to balanced growth, such as diversification, investment in human capital, and equitable development. It also addresses the trade-offs and policy issues connected to both strategies, emphasising the need of striking a balance between economic development and fairness. Because all economic sectors can only expand over the long term, balanced growth is a long-term plan. However, unequal growth is a short-term strategy since it allows for the quick expansion of a few dominant industries. A development approach known as "balanced growth" calls for the pursuit of economic advancement in a proportionate and coordinated way across all economic sectors. The objective is to achieve proportionate and synchronous development across a range of industries, including agriculture, business, and services. The goals of balanced growth are to increase general economic stability, lessen income inequality, and guarantee that the advantages of progress are spread fairly.

KEYWORDS:

Balanced growth, Unbalanced Growth, Economic Development, Income Distribution, Sectoral Development.

INTRODUCTION

The development of a sectoral or regional interaction investigation-ready endogenous growth mechanism. It is shown how the high value economic historians put on production connections and the high value observers of modern less developed nations place on openness often indicating a lack of links could be reconciled. It is shown how the traded goods sector functions as the "engine of growth" in the sense that its profitability of knowledge acquisition predominantly controls the steady state aggregate growth rate when the product of one sector is traded and the output of the other is not [1], [2]. It is also demonstrated how regions or sectors interact outside of a steady state through the product, labour, and capital markets. In particular, it is demonstrated how, if the former interaction dominates, the growth of one sector 'pulls along' the growth of the other, whereas, if the latter two interactions dominate, one sector or region booms while the other declines. Based on these findings, the unit explains why liberalising international trade should cause a shift from a lower to a higher steady state growth rate and why

growth may initially be even slower during this transition than it was prior to liberalisation. A balanced-growth equilibrium in macroeconomics occurs when an economy's capital intensity defined as its capital stock divided by total output remains constant. The primary premise of the traditional exogenous growth model is balanced growth, whereas real GDP, capital stock, and output per worker are all increasing. Developing nations may use an imbalanced growth approach.

Balanced Growth

In terms of economics, balanced growth might signify at least two distinct things. Macroeconomically speaking, balanced growth happens when both the capital stock and production expand at the same pace. The long-term stability of real interest rates may be explained by this development path, but it is predicated on some significant assumptions [3], [4]. The simultaneous, coordinated growth of multiple sectors is referred to as balanced growth in development economics. Scale economies are often used to support this growth approach, arguing that individual enterprises' productivity and profitability may be influenced by the size of the market. In macroeconomics, consistent returns to scale are often linked to balanced growth. The phrase has a stronger association with growing returns for the majority of development economists, and this dispute dates back to Rosenstein and Jordan (1943). He claimed that coordinated investments across many sectors would be necessary for the post-war industrialisation of Eastern and South-Eastern Europe. The theory is that the growth of several industries complements one another since a rise in production in one industry expands the market for another. A sector that grows alone may lose money, but if many sectors grow simultaneously, they may all gain money. This might justify a role for state involvement or development planning and tends to suggest the necessity for coordinated growth, sometimes known as a "Big Push."

Ragnar Nurkse's balanced growth theory

Ragnar Nurkse (1907–1959), an economist, is credited with developing the balanced growth hypothesis. According to the argument, every poor nation's government must concurrently make large investments in a variety of sectors. As a result, the market will grow in size, productivity will rise, and the private sector will be encouraged to invest. Nurkse supported achieving balanced development in the economy's industrial and agricultural sectors. In order for each of these sectors to create a market for the goods produced by the other and, in turn, provide the required raw materials for the other to flourish and grow, he understood that the expansion and inter-sectoral balance between agriculture and industry was essential.

The balanced growth hypothesis was developed by Nurkse and Paul Rosenstein-Rodan, and a lot of how it is understood now may be attributed to their contributions [5], [6]. According to Nurkse's argument, undeveloped nations' small markets help to maintain their underdeveloped status. Additionally, Nurkse has explained the many factors that affect market size and emphasises productivity. He contends that if productivity levels increase in a less developed nation, the size of its market would increase and it will ultimately achieve developed economy status. In addition, Nurkse has earned the moniker "export pessimist" since he thinks that poor

nations should raise the money for their projects from inside their own borders. Export promotion should not be prioritised.

Size of market and inducement to invest

When analysing what encourages investment in a nation, the size of a market has key relevance. Ragnar Nurkse claimed that the size of the market has a limit on the enticement to invest by citing the work of Allyn A. Young. Adam Smith first proposed this theory, arguing that the size of the market limits the division of labour (as opposed to inducements to invest). Nurkse contends that developing nations lack sufficient buying power. Although they may have a high salary in monetary terms, those with poor buying power have low real incomes. If the money income were low, the issue might be readily solved by increasing the money supply; but, as real income is the focus here, doing so would simply lead to inflationary pressure. Real production and real investment won't increase. It should be recognised that low buying power translates into poor domestic commodity demand. This not only comprises the demand for goods and services for consumers, but also for capital.

Regardless of the type of the economy, the size of the market influences the incentive to invest.

This is due to the fact that business owners always evaluate the demand for the product in question when making production choices. For instance, if a car manufacturer is deciding where to locate factories, he would undoubtedly only make investments in markets with significant demand. He would rather invest in a developed nation where, while having a smaller population than an undeveloped nation, the people are rich and there is a clear market for their products [7], [8]. Private business owners may turn to aggressive advertising to attract customers to their goods.

Although this could increase demand for the product or service offered by that entrepreneur, it has no real impact on the economy's overall demand. Simply put, the demand changes from one source to another. This is obviously not a long-term fix.

DISCUSSION

Money flow

Nurkse underlined that developing nations shouldn't apply Keynesian theory since they don't experience a shortage of effective demand in the same manner that affluent nations do. Their issue is a lack of genuine buying power brought on by poor production levels. Therefore, just expanding the money supply will not cause the market to grow but would instead result in inflationary pressure.

Population Nurkse contested the idea that a big population automatically results in a huge market. Despite having a sizable population, poor nations have low levels of output. Low real per capita income levels are the effect of this. As a result, consumer spending is low and savings are either nonexistent or extremely low. On the other side, industrialised nations have fewer populations than less developed nations, but because of their high rates of production, they have greater real per capita incomes, which leads to a larger market for products and services.

Geographic region

The idea that a country's market size should be big if its geographic region is vast was also debunked by Nurkse. Despite having a very tiny territory, a nation may nonetheless have a high effective demand. Japan, for instance. In contrast, a nation may have a huge geographic region but a little market. This may happen if a significant portion of the nation is uninhabitable or if the nation has poor productivity and hence low national income.

Transport expenses and trade restrictions

It has long been believed that trade restrictions and the expense of transportation limit market growth.

Nurkse underlined that fostering international cooperation in exporting and importing is severely hampered by tariff levies, currency controls, import quotas, and other non-tariff trade barriers. More particular, companies lack the motivation to export their goods since international transportation is so expensive. As a consequence, capital accumulation is still minimal. In 1951, the United Nations published a report with recommendations for developing nations in order to solve this issue.

They claimed that by creating customs unions with nearby nations, they might increase the size of their markets. Additionally, they may implement a favourable taxation regime or perhaps completely remove customs charges. It was believed that once customs taxes were eliminated, transportation costs would decrease. As a result, prices will drop and demand will increase. Nurkse, an export pessimist, disagreed with this viewpoint. The concept of "inward looking growth" as opposed to "outward looking growth" governs the trade theory known as export pessimism.

promotion of sales

It is true that a company's efforts to boost demand for its goods often succeed because of the broad use of advertising and other sales promotion techniques. Nurkse contends that these initiatives will not be successful at the macro level in raising a nation's aggregate demand level. The "macroeconomic paradox" is what he refers to as. Productivity is the main factor influencing market size, according to Nurkse. The amount of products and services moving through the economy grows with an increase in productivity, which is measured as the output per unit of input. Consumption increases in response. Therefore, poor countries should strive to increase their levels of productivity across all economic sectors, but especially in agriculture and industry.

For instance, the technology utilised to conduct agricultural tasks is outdated in the majority of undeveloped economies. Low levels of mechanisation are combined with a reliance on rain. Therefore, even if a sizable section of the population (70–80%) may be actively engaged in the agricultural sector, the sector's contribution to the GDP may only be 40%. This suggests that there is a need to boost output per input unit and output per head. If the government supplies irrigation systems, seeds from high-yielding varieties, herbicides, fertilisers, tractors, etc., this may be accomplished. Farmers benefit from this because they make more money and have greater real income, which increases their buying power. Industrialists will be encouraged to

invest in that nation because of the increase in demand for other items in the economy. As a result, the market grows in size, which benefits the impoverished nation's situation.

According to Nurkse, developing nations are where Say's Law of Markets is most prevalent. The market's size won't increase until real income and productivity levels increase, even if people's money earnings increase and the economy's price level maintains the same. Nurkse said, to paraphrase, "There is often no 'deflationary gap' from excessive reserves in undeveloped countries. The amount of output determines the size of the market since production generates its own demand. In the end, increasing productivity across the board is the only way to expand the market. The ability to purchase is the ability to generate.

Export Pessimism

Nurkse argues that a rise in productivity might result in a positive feedback loop of development and points to the small size of the market as the greatest barrier to economic progress. Therefore, a massive investment initiative in a variety of businesses is the solution. Due to complementarity in needs, a rise in demand for one sector will result in an increase in demand for a different industry. According to Say's Law, supply generates demand for itself. Nurkse noted, however, that the financing for this growth must come from the undeveloped nation itself, i.e. domestically, to the greatest degree feasible. He said that the United States of America was the only country where finance via expanded commerce or foreign capital had been successful in the past the 19th century. In truth, the supposedly "new countries" of the United States of America (which broke away from the British empire) were already wealthy nations. They already had effective producers, active marketplaces, and substantial buying power. Nurkse wanted to emphasise that both the work force and the resource endowment in the USA were abundant. The work force had just recently immigrated from Britain to the USA, therefore their level of expertise was already high. Therefore, this condition of development driven by external factors was unique and could not be imitated by developing nations.

A lot of issues arise when such a plan to finance growth from outside the native nation is implemented. For instance, foreign investors might recklessly waste the resources of a developing nation. In consequence, this would restrict the economy's capacity to diversify, particularly in the event that natural resources were looted. Moreover, a warped social structure could result from this. In addition, there is a chance that individual luxury expenditure may be financed by the foreign capital. People would attempt to adopt Western purchasing patterns, and as a result, a balance of payments problem and economic disparity among the population may emerge. Another reason exports cannot be pushed is because, in all probability, a developing nation may only have the expertise necessary to encourage the export of basic items, such agricultural products.

The marketability of such items is constrained because of the inelastic demand for them. Nurkse implicitly assumed that industrialised nations are working at the replacement rate of population growth, even if increased export demand may result from rising population. So exports cannot be considered as a strategy for economic growth in Nurkse. Therefore, the necessary capital must be created inside the nation itself, rather than via an excess of exports or foreign investment, for a

large-scale development to be conceivable. Only then would productivity rise, resulting in rising returns to scale and finally generating virtuous growth loops.

State's function

A discussion regarding whether a nation should use financial planning to develop itself or depend on private entrepreneurs began to take shape after World War II. Nurkse had the opinion that economists are uninterested in the question of who should encourage progress. It is an organisational issue. The key concept was that the economy should get a sizable quantity of evenly distributed investment so that the market size grows and results in greater productivity levels, growing returns on scale, and ultimately the growth of the concerned nation. It should be emphasised, nevertheless, that the majority of economists who supported the balanced growth hypothesis thought that only the government was capable of making the type of large investments that the theory advocates. Additionally, such lumpy investments often have a lengthy gestation time, and private sector entrepreneurs typically do not incur such high risks.

Reactions

The balanced growth hypothesis of Ragnar Nurkse has also under criticism for a variety of reasons. Albert O. Hirschman, the inventor of the imbalanced growth plan, was his greatest foe. A few elements of the idea were questioned by Hans W. Singer as well. Hirschman emphasised that undeveloped economies are so-called because they lack resources, maybe not natural resources per se, but rather resources like trained labour and technology. Therefore, it is unrealistic to assume that a developing country can make large-scale investments in several economic sectors at once owing to a lack of resources. Hirschman said that if a nation was prepared to implement the philosophy of balanced growth, it wouldn't have been undeveloped in the first place.

The balanced growth hypothesis, according to Hans Singer, is more effective in reversing the effects of a cyclical downturn in the economy because it is a sign of advanced persistent growth rather than the implacable cycle of poverty. Hirschman said that inventories of resources, equipment, and businesspeople in industrialised nations that are experiencing periods of slow economic growth are just idle capacity. Therefore, under this scenario, simultaneous investing in many different areas is a wise course of action. The many economic actors are momentarily idle, but once the investment incentive begins to work, the downturn will be gone. This theory doesn't apply in an undeveloped economy when there aren't any such resources.

CONCLUSION

Unbalanced growth and balanced growth are two unique strategies for economic development, each having advantages and disadvantages of its own. Unbalanced growth may result in fast sectoral development but can also exacerbate regional imbalances and income gaps. Contrarily, balanced growth encourages diversification, human capital investment, and fair development, which supports sustainability and stability. To promote sustainable and equitable economic growth, policy considerations should prioritise the development of human capital, strike a balance between sectoral specialisation and diversification, and address income disparities. The

balanced growth hypothesis, according to Hans Singer, is more effective in reversing the effects of a cyclical downturn in the economy because it is a sign of advanced persistent growth rather than the implacable cycle of poverty. Hirschman said that inventories of resources, equipment, and businesspeople in industrialised nations that are experiencing periods of slow economic growth are just idle capacity. Therefore, under this scenario, simultaneous investing in many different areas is a wise course of action.

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CHAPTER 6

INVESTIGATION OF UNBALANCED GROWTH

Dr. Mounica Vallabhaneni

Assistant Professor, Department of Commerce and Economics,

Presidency University, Bangalore, India.

Email Id: mounicav@presidencyuniversity.in

ABSTRACT:

Imbalanced economic development growth is a phenomena. It focuses on sectoral imbalances, geographical disparities, and income inequalities as it investigates the origins, effects, and implications of uneven growth. The research investigates the elements, such as sectoral specialization, unequal resource distribution, and technical breakthroughs, that lead to imbalanced growth. It examines the political, social, and economic effects of imbalanced growth and proposes policy options to solve these issues and advance more inclusive and balanced development. of balanced growth is the hypothesis of unbalanced growth. This idea holds that investments should be made in a few areas of the economy rather than all of them at once. No undeveloped nation has the money or other resources to invest in each industry at the same time. Investments should be made in a few well-chosen areas or industries in order to accelerate their growth, and the economies generated by these investments may be used to advance other sectors.

KEYWORDS:

Unbalanced Growth, Economic Development, Sectoral Imbalances, Regional Disparities, Income Inequalities.

INTRODUCTION

The antithesis of the philosophy of balanced growth is the hypothesis of unbalanced growth. This idea holds that investments should be made in a few areas of the economy rather than all of them at once. No undeveloped nation has the money or other resources to invest in each industry at the same time. Investments should be made in a few well-chosen areas or industries in order to accelerate their growth, and the economies generated by these investments may be used to advance other sectors. As a result, the economy progressively transitions from an uneven growth trajectory to one of balanced growth. A number of economists, including Singer, Kindleberger, Streeten, and others, have criticised the idea of balanced growth in support of the unbalanced growth hypothesis. Hirschman, however, is the one who has systematically advanced the uneven growth theory [1], [2].

He believes that the greatest method to spur economic development in a developing nation is to purposefully unbalance the economy in accordance with a predetermined plan. Hirschman contends that investments in well-chosen economic sectors or businesses will create new investment possibilities and hence pave the path for further economic growth. According to him, "development has obviously moved in this direction, with growth being transmitted from the leading sectors of the economy to the followers, from one industry to another, and from one firm

to another." According to him, growth is a "chain of disequilibria" that must be maintained rather than eliminated, the symptoms of which are profits and losses in a market economy[3], [4].

The goal of development policy is to sustain tensions, disparities, and disequilibrium in order to keep the economy growing. This "seesaw advance" is brought about by a disequilibrium, which then triggers another disequilibrium and so on indefinitely. Hirschman contends that when new initiatives are launched, they appropriate the external economies produced by earlier ones and produce fresh ones that may be used by following ones.

Some undertakings, which he refers to as convergent sequences of investments, appropriate more external economies than they produce. Hirschman also refers to them as "induced investments" since they are net economic benefits. He refers to other ventures as diverging sequences of investments since they generate more external economies than they appropriate. In terms of the economy, the latter may be more desirable from a societal perspective than private profitability, while induced investments may not be as beneficial. In actuality, development policies should strive to [5], [6].

1. Avoid convergent investment cycles that appropriate more foreign economies than they produce, and
2. Promote divergent investment cycles that create more economies than they appropriate.

The only way for development to occur is to upset the economic balance. This is accomplished by making investments in either directly productive activities (DPA) or social overhead capital (SOC) services. While the latter appropriates foreign economies, the former creates them.

Unbalancing the Economy with SOC.

According to one definition, "comprising those basic services, primary, secondary, and tertiary productive activities cannot function without social overhead capital." Investments in traditional public utilities like light, water, electricity, irrigation and drainage systems, etc. are included in SOC along with investments in public health, communications, transportation, and education. Large SOC investments will stimulate private DPA investment later on. For instance, a more affordable electric power supply may promote the development of small businesses. SOC investments indirectly support commerce, industry, and agriculture by driving down the cost of the numerous commodities they employ to save expenses.

Private investments in DPA won't be promoted unless SOC investments provide affordable or enhanced services[7], [8]. Therefore, the SOC's strategy for economic growth involves creating economic imbalances to encourage DPA investment. Hirschman states, "Investment in SOC is advocated not because of its direct impact on output, but rather because it permits and actually invites DPA to enter." Before making a DPA investment, there must be some SOC investment.

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The Path to Development

Hirschman refers to the first sequence (from SOC to DPA) as "development via excess capacity of SOC" and the subsequent sequence (from DPA to SOC) as "development via shortage of SOC." Hirschman favours the sequence that is "vigorously self-propelling" when it comes to the order that should be followed first for economic progress this. Investments in DPAs are calculated along the vertical axis.

The curves a, b, and c are isoquants that display different amounts of DPA and SOC that will always result in the same gross national product. A higher curve indicates a greater gross domestic product as we proceed in that direction.

The ideal locations on the various curves are connected by a 45° line drawn across the origin. The balanced increase of DPA to SOC is shown by this line. Hirschman bases two of his conclusions on the ideas that SOC and DPA cannot be increased at the same time and that the expansion should be done in a way that maximises induced decision making. The economy will move along the dotted line AA'BB"C if the road to development is taken using SOC surplus capacity [9], [10].

When the economy shifts its SOC from A to A' while maintaining the same isoquant a, the induced DPA shifts from A to B' until the economy's overall balance is restored at B, where it is on a higher isoquant b. As a result of the increased gross domestic product, the government increases SOC to B" from B and DPA follows suit from B to point C through C' on higher isoquant c.

The economy advances along the thick line AB'BC'C if the lack of SOC, the alternative route to growth, is adopted. SOC must first migrate to A' and then to B when DPA grows from A to B'. Balance dictates that SOC must rise to C through B when DPA is raised further from B to C'. It should be noticed that the second road is less continuous and bumpy than the growth path through surplus SOC capacity. In certain ways, it is what Hirschman refers to as self-propelling. The alternative approach, which relies on SOC shortage capacity, is untrue because, if SOC is adjusted later than necessary as is likely the case given the lack of political pressure at first—the DPA cost of producing a certain output increases. Hirschman argues that "development through surplus SOC capacity is basically permissive whereas development via SOC insufficiency is an instance of the disordered, compulsive sequence.

DISCUSSION

Linkages

Finding the kind of imbalance that is most likely to be helpful is a challenge after studying the benefits of various imbalances. Every investment has the potential to have both forward and backward linking effects. Investment is encouraged in later phases of production by forward linkage effects, and earlier stages of production by backward linkage effects. The goal of development should be to identify the initiatives with the greatest overall connectivity. Such initiatives change over time and among nations, and can only be identified by empirical analyses of their input-output tables. According to Hirschman, the iron and steel sector has the greatest overall connection score. Perhaps the less developed nations do not give this business such primacy because they are so dumb and just driven by status. He continues, however, by stating that "it is obviously impossible to begin industrial development everywhere with an iron and steel industry simply because the sector maximises linkage." The lack of connectivity and connections in developing nations is the cause. Mining and agriculture, including primary production, are two examples of industries with poor forward and backward linkage effects. In an impoverished nation, the main production activities, which are mostly of the enclave type and lead to exports, have minimal impact on economic growth in terms of increasing either employment or gross national product.

Last Industries First

Hirschman is a supporter for "last stage industries first." A developing nation need not carry out all phases of production concurrently while producing industrial goods. It might start with the last phases of manufacturing for the development of durable consumer items. Numerous assembling, converting, and mixing facilities may be imported to provide the finishing touches to almost completed items. In this approach, the nation may produce completed consumer items that it had previously been importing and then advance via backward linking effects to the higher phases of production to intermediate goods and machinery. Not just from secondary back to primary production, but also from tertiary back to both secondary and primary production, backward linking effects are significant. Backward linkage effects are the sum of the impacts of a number of mature businesses in a nation. Demand increases result in a backward linkage effect.

Therefore, a growth in the demand for goods that may replace imports justifies some local final stage manufacturing. To put it another way, it makes sense to produce certain things at home once demand reaches a certain level. Importing the goods is profitable as long as the criterion is met. Hirschman recommends giving subsidies or protecting industries that compete with imports after the barrier is achieved. However, it is not advisable to safeguard a young sector until it is well-established. Hirschman refers to these sectors as import enclave sectors. For export enclave industries, they vary. The latter produce only for export and are mostly connected to minerals and basic goods in LDCs. Hirschman claims that LDCs undervalue the role that exports have played in their economic progress. Exports are often seen as the underdog. Their exports do not increase and do not have a positive impact on the economy's forward linkages. Hirschman proposes export promotion as the sole workable method of attaining industrialisation via import

replacement. In his *Strategy of Economic Development*, Hirschman states that "economic development typically follows a path of uneven growth; that balance is restored as a result of pressures, incentives, and compulsions; that the efficient path towards economic development is apt to be somewhat disorderly and that it will be littered with bottlenecks and shortages of skills, facilities, services, and products; that industrial development will primarily proceed through backward.

A Critical Appraisal

Hirschman's idea of imbalanced growth is an admirable effort to show undeveloped nations how to hasten their economic progress. It considers virtually all facets of growth planning and is practical. The numerous development-related incentives, impediments, and resistances are examined from the correct angle. The description of final stage production and forward and backward linkage effects is quite helpful. Hirschman additionally adds a dash of reality by focusing on export promotion and import substitution. He neither supports generalised state planning of the Russian kind nor does he put the whole burden on private industry. Private enterprise in an underdeveloped country is unable to generate the necessary economic surplus required for development, to carry it further, or even to sustain losses, so it will not encourage private investment in DPA unless the state follows the SOC path of economic development. Therefore, it seems that he supports a mixed economy.

Balanced Vs. Unbalanced Growth

The argument for balanced growth is based on the notion that poverty-inducing cycles are at work in developing nations, which are to blame for the constrained local market for their products. The answer comes in a well-balanced investment strategy across a variety of sectors that support one another, therefore expanding the market. Its detractors contend that an impoverished nation lacks the manpower, raw materials, and financial resources necessary to make simultaneous investments in a variety of complementary businesses. This doctrine's focus on the complementary nature of markets for end items primarily consumer goods as a means of encouraging investment leaves out markets for intermediate goods, which is a fundamental flaw. Unbalanced growth strategy proponents prefer investing in a few economic areas rather than all of them at once. Selective investments offer up new investment prospects. The economy may be purposefully unbalanced to achieve this. By preserving tensions, disproportions, and disequilibria, the goal is to preserve rather than eradicate the disequilibria. The goal of the uneven growth approach is to eliminate scarcities in developing nations via forced investment decision-making. Critics draw attention to the fact that these nations lack resources and decision-making itself. Moreover, developing nations have inflationary pressures and balance of payments issues as a result of generating economic imbalances by investing in vital areas in the face of a severe resource deficit. The ideologies of balanced and unbalanced growth share two issues despite their divergent methodologies:

One relates to the state's role, and the other to the constraints on and inequities in the delivery of goods and services. Nurkse thinks that a private business system is where balanced development is most applicable. "Private investment is drawn to markets and requires an incentive from

expanding markets. This is where the mutual support component is so beneficial and, for quick development, essential. However, detractors note that private industry cannot make investment choices in developing nations on its own. Therefore, planning is a must for balanced development. Hirschman's imbalanced growth approach, on the other hand, relies heavily on the state to promote SOC investments and hence produce disequilibria. Political forces compel the state to make investments in SOC if development is launched by DPA investments. Unbalanced development hence need governmental planning as well. Both balanced growth and unbalanced growth need state planning since they both demand lumpy expenditures in complementary activities. In an undeveloped country, whether it follows the policy of balanced development or unbalanced growth, coordination between the private and governmental sectors is vital in order to have investment choices executed and to profit from complementarities. The function of supply constraints and supply inelasticities is the other issue with the two systems. Nurkse's theory of balanced growth focuses primarily on the absence of demand and downplays the significance of supply constraints. This is not the case since impoverished nations have a terrible shortage of inelastic resources like money, expertise, and economic infrastructure. However, without using the approach of balanced development, import quotas and export promotion might increase demand for finished products. The idea of uneven growth also downplays the importance of supply constraints and supply inequalities. Although it underlines the lack of resources for making decisions, it overlooks the lack of material, human, and financial resources in a developing nation. As a result, both methods make the mistake of ignoring supply constraints and basing their justifications on industrialised nations, where the supply of resources is very elastic.

CONCLUSION

Political stability, social equality, and economic prosperity are all seriously threatened by imbalanced growth. Forging successful policy responses requires an understanding of the factors that contribute to imbalanced growth as well as its effects. Societies may work towards a more balanced and inclusive development that benefits all facets of the population through fostering diversity, resolving regional inequities, and combating economic inequality. The function of supply constraints and supply inelasticities is the other issue with the two systems. Nurkse's theory of balanced growth focuses primarily on the absence of demand and downplays the significance of supply constraints. the lack of resources for making decisions, it overlooks the lack of material, human, and financial resources in a developing nation. As a result, both methods make the mistake of ignoring supply constraints and basing their justifications on industrialised nations, where the supply of resources is very elastic. This is not the case since impoverished nations have a terrible shortage of inelastic resources like money, expertise, and economic infrastructure. However, without using the approach of balanced development, import quotas and export promotion might increase demand for finished products.

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CHAPTER 7

ANALYSIS OF CRITICAL MINIMUM EFFORTS

Mr. Yelahanka Lokesh

Assistant Professor, Department of Commerce and Economics,

Presidency University, Bangalore, India.

Email Id: lokesh.yr@presidencyuniversity.in

ABSTRACT:

A study of the necessary minimum efforts across different fields and how important they are to getting the results you want. It analyses the idea of critical minimum efforts and how it might be used in areas including environmental preservation, healthcare, and poverty alleviation. The research looks at the variables, such as resource allocation, policy interventions, and stakeholder involvement, that define the essential minimum efforts necessary to effect significant change. It also talks about the repercussions of meeting or not meeting the essential minimum efforts and emphasises how crucial it is to recognise and prioritise these efforts for sound decision-making and sustainable growth. Finding the important elements or characteristics required for a system to succeed or operate is the first stage in the analysis of critical minimum efforts. Understanding the system's goals, dependencies, and crucial procedures is necessary for this. For instance, crucial elements in a manufacturing process can include equipment, raw materials, skilled labour, and quality control procedures.

KEYWORDS:

Critical Minimum Efforts, DeSired Outcomes, Resource Allocation, Policy Interventions, Stakeholder Engagement.

INTRODUCTION

Harvey Leibenstein is connected with the crucial minimal effort idea. The link between the three variables per capita income, population growth, and investment is the foundation of the hypothesis. Leibenstein noted that although investment is an income-generating element, population is also an income-depressing factor (or a). It is feasible for an economy to grow when the variables that increase income outweigh those that decrease it. A little extra investment might result in a meagre income. The population expansion that may result from the higher income would consume the extra money, making it unlikely that a cumulative process of growth would be generalised. If necessary, it is important that the first effort or the initial series of efforts must be above a specific minimum size. What is needed is an initial considerably big volume of investment that may generate circumstances that should exceed the expansion of population [1], [2].

Let's say the per capita income is OA. This level is low in comparison to the crucial minimum level, which would prevent the economy from emerging from recession. However, forces that would be strong in respect to the impact of forces that would increase income would be strong in contrast to those that would decrease it. When income is increased to an OB level, the growth

curve will take the route BCR. It is clear that the per capita income increases up to point C before starting to decline. This indicates that the OB level of income is inadequate to sustain economic development [3], [4]. Sustained growth will happen if the system receives enough investment to increase per capita income to OM, and the effort of stimulants will be comparatively stronger than that of shocks. Any investment below the key threshold cannot guarantee sustained growth there.

The word "critical" refers to the notion that the investment must at the very least be at a level that might increase per capita income for OM in order to achieve sustainable growth. However, splitting the effort into two doses would be more practical and cost-effective. The first investment infusion might be sufficient to increase OB's per capita income. The economy might then reach the key minimum income level necessary for continued growth at time T by injecting a second dose of investment to boost per capita income to OM. Critical minimal effort justifications: According to Leibenstein, the following conditions need a critical minimum effort: One is that certain production components are indivisible, meaning that if they are not utilised entirely or to their utmost potential, internal inequities will result. It could be essential to make certain little but crucial investments to combat these diseconomies [5], [6].

A lot of businesses and sectors are somewhat mutually dependent on one another. There are emerging overseas economies as they grow. Evidently, economies can only be harvested when at least the bare minimum of industries necessary to these economies are active. These economies may not develop in their absence; they might not develop at all. Three: The economy may at any moment be susceptible to independently produced income-depressing forces as well as depressants brought on by a certain part of the growing process. To get there and start sustainable development, a certain minimum investment is required. Four, certain attitudes need to be acquired for development. The following stand out as being more significant among them: "Western Market Incentives" meaning a high profit motive, A readiness to embrace entrepreneurial risks, and An ambition to enhance scientific and technological process. Only when the economy makes the same degree of investment do these views emerge.

Due to the aforementioned causes, an economy must make at least a certain amount of investment in order for growth-promoting forces to take hold. The investment must be made in one sizable chunk rather than via marginal increments brought about by a series of unconnected personal choices. Because the essential minimum effort may be divided into a number of smaller efforts that can be made at the appropriate moments to set the economy on the road of sustainable development, the theory is more feasible than Rosenstein-Rodan's "big push" idea. The idea, however, is subject to the following criticisms: One is that Leibenstein makes the assumption that when income rises over the subsistence level, population grows. After a certain income threshold, population drops.

According to this presumption, an increase in income has a direct impact on population growth. However, the reality of this relationship is more complex. In addition to per capita wealth, societal attitudes and cultural practises can have an impact on population growth. Two: Myint disputes Leibenstein's assumption that the functional relationship between per capita income and income growth rate is straightforward. It has two phases and is complicated [7], [8]. The rate of

saving and investment in the first stage is influenced by the amount of per capita income, which in turn is influenced by the distribution of income and the efficiency of financial institutions in mobilizing saving. The second stage relies on the nation's economic and social structure for how investments and production are related. Innovations may strengthen the partnership.

When a nation has the required infrastructure, competent workforce, and modern technology, genuine innovation is conceivable. However, during the early stages of development, they are not accessible, and the critical minimum encounters problems. Three: During the early phases of growth in undeveloped nations, external pressures are crucial. The influence of external factors like foreign money, overseas commerce, international economic linkages, etc. is not well explained by this theory. These forces have a significant influence on development, and these elements are crucial to the process of development. Despite the aforementioned drawbacks, the theory demonstrates how to escape the cycle of poverty. The road to long-term development is not straight and level. It is a challenging and complicated one. The ultimate goal of a development plan is to create steady growth, which can be accomplished with only little effort.

DISCUSSION

Theory of Balanced Growth

The notion of "Balanced Growth" has been proposed as a remedy for the issue of the poverty-inducing vicious loop that plagues the demand side of capital development. The idea of balanced growth recommends the simultaneous establishment of several sectors that are mutually beneficial in order to break this vicious cycle. These industries would create demand for one another's goods, hence increasing market size and encouraging investment. The first presentation of the balanced growth idea was made by Rosenstein Rodan. Due to the small scale of the market demand, he said, no new industry has a chance to exist in developing nations. As a result, if a shoe factory with 100 employees were to be established, it would likely go down quickly owing to a lack of demand for shoes. But the likelihood that all of these industries would survive is higher if we concurrently built, say, 100 factories that employed thousands of people.

This is due to the fact that when these people spend money on different goods produced by these businesses, the greater income they get as a result of their job will increase market demand. As a result, demand for shoes and other products made by other businesses rises, enabling all of them to prosper. Nurkse concurred with Rosenstein Rodan's position and advanced a theory of balanced growth along similar lines, but he expanded the balanced growth program's application to a far wider range of industrial sectors. Nurkse believes that "more or less synchronised application of capital to a wide range of different industries" is the only way to overcome the challenges brought on by the market's limited size. Here, the deadlock is broken, and the outcome is a general expansion of the market. The majority of sectors that cater to mass consumption are complementary in that they support one another by providing a market for one another [9], [10].

The individuals who operate in these fields will purchase one another's goods. As a result, each sector of the economy will generate demand for the products produced by the others. According

to Nurkse's idea, if significant investment is made in sectors that are reliant on one another, the poverty cycle can be broken and the nation may look forward to economic growth.

The Theory of Balanced Growth's shortcomings

There are flaws in the Theory of Balanced Growth from the start. Singer has voiced his scepticism about the viability of the balanced growth paradigm. He contends that developing nations would face challenges if they embark on a significant investment programme in industry without giving agriculture any thought.

The great push in industry must be supported by a strong push in agriculture as well in order to prevent a lack of food and raw materials. But when we consider such a comprehensive and diverse package of industrial investment and agricultural investment at the same time, it raises major concerns about the ability of the developing nations to pursue a path of balanced development. According to him, "A nation disposing of such resources would in reality not be undeveloped since the resources necessary for carrying out the strategy of balanced growth are of such an order of magnitude.

Explanation of Critical Minimum Effort Theory

Recent years have seen a significant advancement of a key subject in the debate of the economic growth of poor nations. The impoverished nations are said to be in an equilibrium condition, which is frequently referred to as a vicious loop. This circle is said to be so vicious and entrenched that breaking it apart will need a significant amount of work. A certain minimum level of effort (often measured in terms of investment) and a certain minimum rate of growth are necessary for the undeveloped nations to experience any degree of development. Any less than minimal effort would be useless. This subject has been developed in many ways by Rosenstein-Rodan, Nurkse, and many others. Most recently, Leibenstein developed the most sophisticated version of this theme. In this essay, Leibenstein's theory which he refers to as the "critical minimum effort thesis" will be presented and examined. We contend that the crucial minimum effort theory is flawed both logically and empirically, and that the fallacy of aggregation is largely to blame for this.

The Quasi-Stable Equilibrium

Leibenstein defines an undeveloped or backward economy as one that is in a condition of roughly constant equilibrium with regard to per capita income. When the term "equilibrium" is used in the conventional meaning, it refers to a set of values or magnitudes for the variables that, if obtained, would stay constant across time. When these variables are perturbed by an external force and corrected, an equilibrium is said to be stable if this occurs. The term "quasi-stable equilibrium" refers to a situation where only a portion of the system's variables are stable. That is, some variables will settle at their new magnitudes following a disturbance while others will revert to their original values. Because there are few internal factors that may modify the magnitudes of the variables, an undeveloped economy can be said to be essentially in equilibrium.

Because of poor net capital creation, low savings, and low per capita income, income and labour productivity are held at low levels. Because of low income, consumption and education levels are also low, which contributes to low labour productivity brought on by ill health, ignorance, and other factors. The primary concept of this vicious loop is that the features of an undeveloped economy are such that they maintain the economy's underdevelopment. Of course, this vicious circle may be expressed in a variety of ways. Nothing in the economy could lift it out of poverty. It just remains unchanged year after year.

Leibenstein, though, continues on. He makes the case that sometimes an undeveloped economy's equilibrium may be disturbed by stimulant shocks, and it is at this point that he emphasises the quasi-table character of the equilibrium with regard to per capita income. Consider a stimulus that will increase the amount of land that is farmed and the amount of production produced per person. The per capita income will stay the same if the rise in income causes a comparable growth in population. The population and land are now both bigger than they were before the discovery of this additional area, but the per capita income is about the same as it was before. According to Leibenstein, the stable component of an impoverished country's equilibrium is its per capita income.

The Critical Minimum Effort Thesis

According to Leibenstein, a certain minimum effort (in investment) is required if the per capita income of an undeveloped country is to be improved permanently and consistently without returning to the previous low level. First and foremost, in order for the necessary income-raising strategies to be successful, a certain minimum investment is required. Second, certain "income depressing forces" will be put into action during the course of development; if per capita income is not immediately raised above a certain level, these forces will eventually outpace the "income-raising forces" and return per capita income to its previous level. While the nature of the "income-raising" and "income-depressing" forces will be explained later, Leibenstein's fundamental argument may be shown here visually by one of his numerous eye-catching illustrations.

Determinants of the Critical Minimum Effort

Leibenstein contends that due to both internal and external economies of or diseconomies, a certain minimum effort is necessary to increase revenue, even without taking into account all the induced consequences. First, there is the issue of internal scale diseconomies brought on by factor indivisibilities. If efficiency is to be reached, a business must be larger than a certain minimum size for particular forms of manufacturing. If many of these businesses need to be founded at once, the issue becomes significant. Here, the ideas of interdependence, balanced growth, and foreign economies come into focus. The phrase "external economy" refers to the idea that when an industry grows, expenses for all of its businesses decrease, even if none of them become any more efficient than they were before.

As a result, a company operating by itself may not be able to meet its expenses, but it will be able to do so if many other companies operating in the same sector are. This also holds true for an industry that could only be able to exist and grow if other sectors are established. Naturally,

this is the well-known balanced growth thesis advanced by Rosenstein-Rodan and Nurkse, but the latter two place more emphasis on the demand than the cost side of the interconnectedness of various businesses. When factor indivisibilities are high, the simultaneity of the formation of numerous sectors necessitates a sizable initial expenditure. Leibenstein also makes the case for the need of making a significant effort in the creation of what he refers to as the growth agents and growth activities. The economy that is depicted as being undeveloped has a lot of institutionalised and culturally ingrained beliefs that limit development. If these challenges are to be addressed, the predisposition towards "zero-sum" activities, general lethargy and fear of engaging in new kinds of activities, and the possibility of a high rate of failure of new activities in the first stage all call for a quick pace of development for the economy. In other words, the early stages of growth are marked by a high degree of entrepreneurial interconnectedness. Low rates of growth would fail because they are "unlikely to induce that synchronised expansion of all factors so that the interaction and results generate sustained growth," which is necessary for a sufficient number of growth agents to succeed, establish themselves firmly, and serve as a model for other imitators. The pace of economic development must be sufficiently high and widespread to convince a sizably large number of individuals that new values and experiences will endure and eventually supplant the pre-existing values and behavioural patterns.

CONCLUSION

In order to achieve desired results and bring about significant change across many domains, essential minimum efforts are crucial. Effective decision-making and sustainable development depend on identifying and prioritising these initiatives in sectors including education, healthcare, environmental preservation, and poverty reduction. a company operating by itself may not be able to meet its expenses, but it will be able to do so if many other companies operating in the same sector are. This also holds true for an industry that could only be able to exist and grow if other sectors are established. Naturally, this is the well-known balanced growth thesis advanced by Rosenstein-Rodan and Nurkse, but the latter two place more emphasis on the demand than the cost side of the interconnectedness of various businesses. Societies may work to achieve beneficial and long-lasting effects on people, communities, and the earth by fulfilling these essential minimum efforts via resource allocation, policy interventions, and stakeholder involvement.

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CHAPTER 8

NATURE AND MAGNITUDE OF THE MINIMUM EFFORT

Dr. Dasinis Nathan Annette Christinal
Assistant Professor, Masters in Business Administration (E-Commerce),
Presidency University, Bangalore, India.
Email Id: annette.c@presidencyuniversity.in

ABSTRACT:

The kind and size of the minimal effort needed in diverse settings to get desired results. It explores the idea of minimal effort and its importance in a variety of fields, such as health care, education, environmental preservation, and poverty alleviation. The research examines the variables that affect the character and size of the minimal effort, including resource accessibility, contextual considerations, and the difficulty of the desired result. It also examines the effects of calculating the minimal effort incorrectly or incorrectly, and it emphasises the significance of appropriately estimating and allocating resources to produce effective and long-lasting outcomes. The qualities and amount of resources or effort needed to accomplish a desired result or sustain a certain system are referred to as the type and size of the minimal effort. It entails comprehending the precise specifications and estimating the level of effort or resources required for achievement. Here is a look at the minimal effort's characteristics and scope.

KEYWORDS:

Minimum Effort, Desired Outcomes, Resource Availability, Contextual Factors, Complexity, Education, Healthcare.

INTRODUCTION

It is simple to establish the essential minimum effort required to break the cycle of an undeveloped economy using Leibenstein's fundamental theoretical framework. However, Leibenstein makes no effort to provide a minimal amount in terms of practise. First off, Leibenstein sometimes equivocates on what he truly means when he refers to an attempt. He uses the same word "stimulant" as previously, but not all stimulants can be quantified in monetary terms. For example, a stimulant may be an especially excellent environment or some form of discovery [1], [2]. It is simple to establish the essential minimum effort required to break the cycle of an undeveloped economy using Leibenstein's fundamental theoretical framework. However, Leibenstein makes no effort to provide a minimal amount in terms of practise. First off, Leibenstein sometimes equivocates on what he truly means when he refers to an attempt. He uses the same word "stimulant" as previously, but not all stimulants can be quantified in monetary terms. For example, a stimulant may be an especially excellent environment or some form of discovery.

However, if one just equates the terms "effort" and "investment," and views "induced population growth" as the mechanism that depresses income, then no major wrong is done. By doing this, it is possible to calculate the precise amount of necessary minimal effort. The impact of the

income-depressing factors has a maximum limit, according to Leibenstein. Due to biological constraints, a rise in wealth can only result in population growth that is no more than a predetermined pace (let's say 3% annually). The vicious cycle may be stopped if the stimulant (investment) can increase per capita income to a level that leads to income growth at a rate greater than, let's say, 3%. The incremental or marginal capital-output ratio (ICOR), which according to Leibenstein is presumably larger in the less developed stage than in the more developed stage, determines how much investment is necessary to attain a certain growth rate of national revenue.

The Doctrine of Growing Points

That wraps up my explanation of Leibenstein's idea. Our critique of his theory will fall into two categories. In order to ensure the viability of an undeveloped economy, we will first investigate the veracity of the claim that a certain minimum investment is necessary. Second, we shall examine Leibenstein's core thesis, which is that once per capita income falls below a certain point, factors that lower income will ultimately triumph over those that increase it. The doctrine of growing points, which, in essence, holds that the development of a few areas of a backward economy, even if it is slight and proceeded at a slow rate, may lead the economy into the path of sustained growth, will, however, aid our efforts [3], [4].

For certain sectors, the justification for a large investment on the grounds of capital indivisibilities and "lumpiness" is unquestionably true. A few yards of railway are of little economic worth to an economy, and if an atomic plant is to be constructed at all, it must be built to a specified scale. But there are also many other sectors where there is significant capital divisibility as well as factor substitution. The scale need not be excessive, even in situations when component proportions are constant. It would be quite difficult to conceive a developing economy that is so underdeveloped that it is unable to mobilise any savings at all in order to launch a few businesses, even if it may need a significant amount of money. If that were the case, there would be very little, if any, potential for that nation to prosper without significant foreign aid.

The important question is not whether starting a few factories costs a lot of money; rather, it is whether a few enterprises can succeed on their own. According to Rosenstein-Rodan and Nurkse, these factories cannot be expected to flourish unless a broad front of industries is developing more or less simultaneously. The argument is that, even if built, these few manufacturers would not be able to sell their goods to enough people. The economy's low income level restricts people's ability to buy things and, as a result, the market. There's little question that the few newly founded factories' employees will earn more money, but it's unrealistic to assume that they'll spend all of it on goods produced by the new manufacturers. However, when investments are made throughout the whole economy, the numerous sectors that are developed will become one another's consumers, solving the issue of a market or an incentive to invest [5], [6]. But is it accurate to say that when several sectors are established simultaneously, one that is now unsuccessful when operated alone will start to turn a profit? And is it accurate to say that the creation of one industry implies the creation of many others at the same time? The availability of labour and capital must presumably be somewhat elastic in order for the first question to be

answered in the yes. If not, it's possible that the surge in demand for labour and capital brought on by the simultaneous emergence of several businesses would be so great that few will be lucrative for investors due to rising salaries and interest rates. Unskilled labour supply may perhaps be horizontal in the "overpopulated" developing nations, but this is clearly not the case for skilled labour, managerial staff, and capital. In actuality, the lack of these components is just a sign of underdevelopment. The philosophy of balanced growth makes an attempt to address the supply side of the investment issue while ignoring the demand side.

Even in terms of the demand side, how accurate is the doctrine? It is inaccurate that a balanced development is the only option to address the demand issue, as the ideology indicates, even if the simultaneous expansion of a number of sectors would solve the market problem. There are always economic areas that, even when grown separately, might bring in money for investors. The existence of imports indicates that there is a demand for products that are not produced locally. The import-replacing businesses may turn out to be lucrative under some situations, such as when there is a favourable protective tariff or during a period of war. When one creates a product for export, there are always lucrative opportunities[7], [8]. There will always be a demand for some industrial tools, whether they are outdated ones or new ones that serve the same function but cost less. The same is true for the consumer sector, where there is always opportunity for goods that are higher in quality or less expensive. Simply said, there has always been and will continue to be a need for capital goods and consumer goods in both mature and developing economies, and there is always opportunity to replace them with new, better, or less expensive items by adopting new manufacturing techniques or other enhanced methods.

DISCUSSION

The Process of Diffusion

The tenet of rising points goes beyond just stating that mature sectors will expand. If understood correctly, it implies that when these few places are expanded, the economy as a whole will likewise expand. The doctrine's primary goal is to clarify how the growth of a few specific areas may result in the growth of the whole economy. However, this work is not especially challenging since it is well-known and that there are strong connections between the growth of certain areas and the growth of the whole economy. The following debate may be mentioned for clarity's sake: The demonstration effect, reinvestment effect, and linking effect are the first three.

The demonstration effect has two components. One is the well-known Schumpeterian copycat effect, in which a number of imitators establish businesses after one inventor. Consider the Chinese experience (1840–1937), where the compradors of foreign enterprises played a significant part in the establishment of modern industries in China. Their efforts were definitely inspired by what they saw in their foreign employers. A significant, though constrained, push towards economic modernization was launched when a few Chinese leaders were interested in the development of modern industries in China in the later half of the nineteenth century as a means of reducing foreign economic influence there. Many other Chinese people made the decision to choose their route out of fervent nationalistic motives. There are several instances of this kind in other nations as well, and it is undeniably a characteristic of human nature to emulate

and copy others. The consumption-related part of the demonstration effect has lately been well-formulated and highlighted by Duesenberry and Nurkse. Perhaps as ancient as human history, the concept of "keeping up with the Joneses" is crucial to economic growth. Consider the Chinese experience once more: it is still a topic for intriguing study to explore how the Chinese people (particularly the urban population) modified their preferences in favour of contemporary goods and services. It seems that both the wealthy in the rural and urban areas quickly developed a desire for contemporary goods like cigarettes or services like a Western-style haircut. When someone tastes a contemporary product, they are likely to want more, and what they do will undoubtedly be replicated by others. Thus, if the goal is to establish a market for new items, the demonstration effect (regarding consumption) may not be as bad as Nurkse thinks.

In any country, there are not many entrepreneurs or inventors. This group is the one that consistently makes an effort to investigate new possibilities, introduce novel technology, and improve manufacturing processes. These company owners strive to reinvest as much of their profits as they can, both in their current industries and in brand-new ones. This group is the one that continuously explores and widens new economic horizons. The number of successful individuals of this kind in China has been quite low in the contemporary age, but the success stories of Chinese businessmen like Chang Chien and Jung Tsun-ching appear to confirm our premise. Even more telling is the track record of Jardine, Matheson & Company, a foreign trade company in China. In the 1830s, it was established in China as a little commercial company. The company, which was constantly expanding, eventually became one of China's biggest trade companies, having interests in a wide range of sectors, including cotton textiles, breweries, engineering, shipping, shipbuilding, and silk reeling[9], [10].

The Fallacy of Aggregation

It is clear that Leibenstein's theoretical framework does not accommodate the notion of increasing points as it has been described above. Leibenstein does not dispute the above-described process of cumulative development, but he maintains as was already mentioned that such processes are not possible in economies whose per capita income is below a particular threshold, as it is in poor nations. Because in such an economy the produced negative pressures would outweigh the cumulative benefits of progress. We've spoken about Leibenstein's induced depressants; now let's look at the reliability of his main source of revenue decline, population increase. Population is seen as a function of per capita income in Leibenstein's model, although this aggregate study doesn't tell much about the development process. Even when per capita income is relatively low, if the different economic sectors are taken into consideration, it may be discovered that there is very little functional link between population and per capita income.

As occurred in China after the 1840s, imagine there is an impoverished traditional civilization that is now experiencing foreign political or economic encroachment. A series of circumstances that follow the clash may result in some level of economic modernisation. In the case of China, the conflict with the West after the 1840s sparked a great deal of anti-foreign feeling, and the Chinese took a variety of economic steps to reduce Western economic dominance there. A contemporary component of the economy, while very small, formed along the Chinese coast as this "retaliation effect" was bolstered by the demonstration and connection effects of foreign

economic infiltration, while the interior and agricultural sectors remained largely unaltered. It is challenging to understand how Leibenstein's population process can function when a nation develops in the manner described above, which is opportunely referred to as "development without." If the pace of income growth exceeds the rate of induced population growth in the modern sector, income and per capita income will increase. Even in this case, continuing the study on a per capita basis is risky. The group of managers and entrepreneurs will undoubtedly have the fastest rates of income increase. If the labour supply is, across a large range, not elastic, as it seems to be in the "overpopulated" nations, the average worker's wage may not expand at all. There is no indication of a big rise in the average worker's salary based on the early development experiences of Great Britain and Japan. Therefore, even under the commonly held but highly dubious assumption that there is a relationship between income growth and population growth which will be examined below), an increase in per capita income, driven primarily by rising incomes of the wealthy, may not be accompanied by any noticeably greater increase in population leaving the issue of immigration aside. The "development without" paradigm almost guarantees that nothing will change in the rural sector. In the long term, the rural or traditional sector will be progressively encroached upon; as the modern sector grows, this sector gradually dwindles. However, there is no compelling evidence to suggest that when earnings in the modern sector rapidly expand, increasing per capita income for the overall economy, population would rise in the traditional sector where incomes are virtually unchanged.

Population as a Factor of Growth

the impact of rising incomes on population expansion. However, we have only looked at a portion of Leibenstein's population theory up until this point. The other half, as previously said, predicts that as population grows, per capita income will decrease and level out. The per capita income level will decline and revert to its prior level. Leibenstein, you may remember, used the phrase "quasi-stable equilibrium" to describe the long-term consistency of per capita income. Our main concern here is that, even if there is an induced population expansion, there is no reason to think that it would inevitably outpace income growth and bring per capita income to its pre-induced level. In order to bolster his argument, Leibenstein cites the rule of decreasing returns, although this law has a caveat: "other things being equal." It is impossible to presume that this state would persist throughout development. When an undeveloped economy sees a growth in revenue of, say, 2% for a while, there must be several modifications to the economy's structure and the resource allocation. One may anticipate the continued operation of all the increasing points outlined in the section on variables contributing to additional cumulative development. Why would an induced population growth cause all of these things to become less effective? Leibenstein doesn't provide a convincing justification.

Given the status of the arts, the rule of diminishing returns must apply to agriculture in nations where there is a shortage of land in relation to labour and capital. However, if the law is applicable to agriculture in nations where land is scarce in comparison to labour and capital. The question of whether the legislation applies to manufacturing, however, is another. It is very plausible that the law of growing returns, rather than the rule of declining returns, may be in operation throughout a large range. According to Marshall, more labour and capital would

typically result in better organisation and efficiency (as well as other external economies), counteracting the trend towards declining returns. Despite Wicksell's assertion that diminishing returns will ultimately rule even in manufacturing, the condition of the arts cannot be maintained over the long term. In the now-advanced nations, the continual rise in productivity of both agriculture and industries has only been made possible by technological advancement.

CONCLUSION

varied domains and settings have varied minimum effort requirements in terms of size and kind. In fields including education, healthcare, environmental protection, and poverty reduction, accurate assessment and resource allocation are essential for obtaining effective and lasting results. Societies may strive towards reaching their intended objectives and fostering long-term growth by taking into account the unique elements impacting the minimal effort and ensuring adequate resource allocation. The "development without" paradigm almost guarantees that nothing will change in the rural sector. In the long term, the rural or traditional sector will be progressively encroached upon; as the modern sector grows, this sector gradually dwindles. However, there is no compelling evidence to suggest that when earnings in the modern sector rapidly expand, increasing per capita income for the overall economy, population would rise in the traditional sector where incomes are virtually unchanged.

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CHAPTER 9

A STUDY ON LOW LEVEL EQUILIBRIUM TRAP

Dr. Mounica Vallabhaneni

Assistant Professor, Department of Commerce and Economics,

Presidency University, Bangalore, India.

Email Id: mounicav@presidencyuniversity.in

ABSTRACT:

The idea of a low-level equilibrium trap and how it affects economic growth. It examines the circumstances that lead to economies becoming stuck in a low-level equilibrium marked by enduring poverty, constrained growth, and insufficient access to essential services. The paper examines the institutional restraints, human capital limits, and structural obstacles that help to create and maintain the low-level equilibrium trap. It also explores the negative effects of being stuck in a low-level equilibrium and emphasises the need of focused interventions and policy actions to escape this trap and support long-term economic growth.

KEYWORDS:

low-level equilibrium trap, economic development, poverty, growth, basic services, structural barriers, institutional constraints, human capital, interventions, policy measures.

INTRODUCTION

According to Nelson, a steady equilibrium level of per capita income at or near subsistence requirements may be used to diagnose the disease of undeveloped economies. The rates of saving and investing are both low at this low stable equilibrium level. A rise in per capita income above the minimum required for subsistence promotes population expansion. In turn, the population expansion forces per capita income back to the subsistence level. As a result, the economy is trapped in a low level equilibrium [1], [2]. To escape the trap, the rate of income growth must be raised to levels greater than the rate of population growth. According to Nelson, the following four circumstances are favourable for trapping:

Nelson Model

Nelson used a three-equation model. An equation for determining income is presented first. The degree of technology, population size, and capital stock all affect income. The second net investment comprises of money generated by saving plus increases in the area under cultivation. Third, there is the equation for population growth, which states that in regions with low per-capita incomes, short-term changes in the pace of population increase are influenced by changes in the death rate, and changes in the death rate are influenced by changes in the amount of per-capita income. However, once per capita income exceeds the threshold necessary for subsistence, future increases have a small impact on the mortality rate. It is simple to understand that an undeveloped economy is trapped in a low level trap given these three sets of linkages [3], [4].

Savings plus new investment equals capital.

In this instance, the economy has a particular amount of revenue with no savings since all money is spent on consumption. Additionally, there is no investment at all. When savings are negative, it indicates that the economy is experiencing negative investment, which means that individuals are living off of their prior investments. However, when per capita income increases, savings begin to increase from zero, which raises the amount of investment in the economy.

equation for population growth

Any additional gain in per capita income, once it rises beyond the subsistence level, will have little impact on mortality rates. Additionally, variations in per capita income cause variations in the mortality rate. Since the rate of population growth is larger than the rate of growth in total income, starting from this low level equilibrium trap, any modest rise in per capita income will not be able to maintain itself or result in future increases in per capita income [5], [6].

This continues as long as the population growth rate exceeds the rate of increase in total income. Because the pace of development surpasses the rate of population expansion, the nation can only expect to escape the low level equilibrium trap when the level of per capita income is boosted by a discontinuous leap. According to Nelson's theory, for the nation to escape the low level equilibrium trap, its rate of total income growth must be greater than 3 percent annually. Only some circumstances, to use Leibenstein's terminology.

DISCUSSION

Dualism and Dependency Theory

Duality refers to a dualistic condition. The Latin word for "two" is duo, which is the term's origin. The definition of "dualism," which originally meant co-eternal binary opposition, has been watered down in popular use but is still used in metaphysical and philosophical discussions on duality. Theories of dualism presuppose that distinct sectors' economic and social structures have been divided, resulting in differences in their modes of organisation, degrees of development, and types of goals. Typically, the idea of economic dualism (BOEKE 1) distinguishes between two economic sectors.

The modern sector of capital-intensive industry and plantation agriculture produces for the global market with a capital-intensive mode of production and a high division of labour, in contrast to the traditional subsistence sector, which consists of small-scale agriculture, handicraft, and petty trade, and has a high degree of labour intensity but low capital intensity and little division of labour. Both sectors evolve in accordance with their unique patterns and have nothing in common. The contemporary sector may be seen as an economic outpost of industrialised nations, and although its multiplier and growth impacts will favour these nations, they will have minimal impact on the domestic market [7], [8].

The lack of interactions between individuals of various races, religions, and languages—often a legacy of colonialism leads to economic, technical, and regional dualism, which is often a result of social dualism. The suppression of the old sector by focusing on and enlarging the

contemporary sector is a development in dualism notions. It is anticipated that the trickle-down effects would eventually lessen and eradicate dualism. According to this perspective, capital creation is the fundamental issue since the extent and rate of contemporary sector growth are determined by capital formation. Generally speaking, agriculture must provide the manpower and financial resources needed to build the modern industry. The approaches differ in specifics. Because of the pervasive disguised unemployment, several scholars, like LEWIS (14) and FEI/RANIS (5), believed that a decrease in the agricultural labour force would not affect agricultural productivity. Industrial investment must be prioritised since the productive employment of these employees in the contemporary sector would boost the economy's overall productivity.

Concentrating on the modern sector caused regional disparities to widen, rural-to-urban migration to increase, unemployment in urban regions, agricultural productivity to decline, and industrial growth to be hampered due to a lack of buying power in rural areas. The predicted cascading repercussions seldom ever materialised. In practise, this line of reasoning caused development plans to fail, much like the early Indian development planning. In order to supply sufficient internal resources for the development process, additional writers like JORGENSON (10), LELE (12), and MELLOR (17) emphasise the crucial significance of agriculture at the outset of development, i.e., before to or concurrent with industrial development[9], [10].

Kinds of Dualism

A social dualism exists, for instance, if there is a Western social system alongside the "traditionellen" native "imported". It often brings with it an economic duality that consists of a producing (or "traditional") sector and a much smaller contemporary segment of the economy that caters to a select number of local consumers or exports. There is a technical dualism that coexists with the presence of all technologies. Regional dualism refers to a separation between developed and undeveloped/underdeveloped areas. The many forms of dualism often cause and enhance one another.

Small financial resources, the use of basic production engineering, and extensive family organisation, as in agriculture, are characteristics of the traditional sector. Due to the Nichtverbundenheit and posited Nichtverbindbarkeit of the sectors, economic development policy suggestions sometimes focus only on the one-sided promotion of the modern sector (see also modernization theory).

Dependency Theory

A collection of social science theories includes dependency theory. According to this theory, resources are transferred from a perimeter of undeveloped and poorer nations to a core of wealthier ones, benefiting the latter at the cost of the former. According to dependence theory, poor nations' integration into the global economy results in wealthy states becoming richer and poor ones becoming poorer. You will learn about the Gandhian theory of development, which is founded on Gandhian philosophy, in the next unit.

You should be able to: explain the dependency theory of development and the fundamental elements of a dependent economy; differentiate between the Marxian and non-Marxist approaches to dependency theory; and describe critiques of dependency theory after completing this unit.

The Dependency Theory of Development

The components of a dependent economy, methods for addressing dependence, and objections to dependency theory make up the dependency theory of development. Around 1950, dependency theory began to take shape as a response to some prior ideas of development. Prebisch, Singer, Paul Baran, Paul Sweezy, C. Furtado, F. H. Cardoso, Gunnar Myrdal, A. Gunder Frank, Girvan, and Bill Warren are the principal proponents of dependence theory. Many of these academics concentrated on Latin America. The Egyptian economist Sarnir Amin is the most influential dependence theorist in the Islamic world.

In order to assist the undeveloped regions escape poverty, it is necessary to hasten their progress down the presumptive shared road of development using a variety of strategies, including investment, technological transfers, and a greater interaction with the global economy. Dependency theory disagreed, claiming that undeveloped nations have their own distinct characteristics and systems and are not just underdeveloped counterparts of affluent nations. They are poorer participants in a global market economy than the industrialised countries, who have never seen a situation like this. They never had to be supported by nations that were more powerful than they were. In contrast to free market economists, dependency theorists believed that developing nations needed to cut down on their connections to the global economy in order to follow their own paths that were more in line with their own requirements and less constrained by outside forces. The well-known dependence theorists Hans Singer and Raul Prebisch noticed that over time, the terms of trade for developing nations had been worse in comparison to rich nations.

In return for a predetermined amount of the rich nations' exports of raw resources, the developing countries were allowed to buy less and fewer produced commodities from them. The Singer-Prebisch thesis is the name given to this concept. Prebisch, an economist from Argentina who worked for the United Nations Commission for Latin America (UNCLA), went on to say that if undeveloped countries were to go on a road towards self-sustaining growth, they would need to practise some degree of trade protectionism. The optimum approach for developing nations, according to him, is import substitution industrialization (ISI), not a commerce and export focus.

According to proponents of dependence theory, it is impossible to analyse the dualistic dependent structure of many countries, like Brazil, Mexico, and India, using the ideas of Smith, Ricardo, and other European classical economists. The dependency theorists contend that it is important to see the less developed nations as active participants in the global process. Their only purpose is to provide as raw materials for developed countries. Under unfavourable trade conditions, they provide low wage manufacturing. Dependency analysis was developed on structuralist principles, more especially on Prebisch's division between the core and the peripheral. The idea is that the middle is the cause and the edges are the results. Dependency

theory concluded that factors outside of the LDCs' (Less Developed Countries) socioeconomic structures were to blame for the lack of progress. It does not address the LDCs' defective institutions as the root of their backwardness. Underdevelopment is never attributed to internal institutional structures including high levels of corruption, idle land holdings, wealth concentration, and unresponsive political systems. Numerous dependency theorists support social revolution as a practical way to lessen economic inequalities in the global economy.

Dependency theory's fundamental tenets are (i) that underdeveloped countries provide inexpensive labour and access to natural resources. They serve as export hubs for outmoded technology and markets for affluent countries, without which the latter would not be able to maintain their current level of life. Poor nations are at a disadvantage in their relations with the market. Rich countries deliberately use a variety of tactics to keep their citizens dependent.

Continuity Theory

This influence may span a wide range of areas, including banking and finance, banking and politics, banking and media control, education, culture, sport, and all facets of human resource development, including hiring and training employees. Rich countries aggressively thwart any efforts made by dependent countries to oppose their influence via the use of economic penalties and, in some cases, military action. Contrary to what free market economists often claim, the poorest nations in the world are not those that are not connected into the global system or are not completely integrated; rather, it is the manner in which they are integrated that accounts for their poverty.

The Characteristics of Dependent Economy

the features of a dependent economy now that we are familiar with the foundations of dependency theory. Dependency is attributed to the industrial revolution, the growth of European empires over the globe, as well as to these empires' superior military might and amassed riches. Some said that prior to this growth, the country's big economic centres dominated the rest of the nation via internal exploitation. Capitalism extended around the world thanks to the development of international trade patterns in the nineteenth century. Because they benefited disproportionately from imperialistic practises, the affluent got further distant from the poor. This regulation makes sure that all earnings earned in underdeveloped nations are transferred to the developed ones. It inhibits domestic investing, which results in capital flight and constricts economic expansion.

The following are the basic causes of reliance for any nation: Foreigners are mainly the owners of exporting companies. The export sector leads the economy and imports are greater in proportion to GDP than exports (iQ). Mineral and petroleum products are produced under vertical integration circumstances. The following are the characteristics of a dependent economy. Economic expansion does not occur on its own. Profits from iQ are often repatriated rather than reinvested. the production of export industries is dependent on imported inputs income, employment, and growth are influenced by changes in the prices and types of imports; the willingness of multinational corporations to invest; and the international market's prices and demand conditions.

Developmental Theories changes in foreign economies, alterations in taste and fashion alterations in alternatives produced by technology. Backward and forward connections between export-related activities are very uncommon vii) foreign money, foreign technology, and foreign management are the main players in the economy. Vernengo (2004) argues that contrary to what traditional dependency theorists hold, technical competence is not a need for the existence of a dependent relationship. It is the disparity between the financial capacities of core and periphery nations. In actuality, the periphery nations are unable to issue their own currencies.

CONCLUSION

The low-level equilibrium trap, which is characterised by enduring poverty, constrained growth, and insufficient access to essential services, poses a difficult position for economies. Forging a path out of this cycle and fostering long-term economic growth need an understanding of the elements causing this trap and the implementation of focused remedies. Structured impediments that restrict options for people and communities and impede economic advancement often feed the low-level equilibrium trap.

These obstacles may include restricted access to markets, technology, and finance, as well as prejudice and poor infrastructure. Institutional limitations that impede investment, innovation, and inclusive development include poor governance, corruption, and a lack of effective legislation. Low levels of education and competence may also be a factor in the persistence of the low-level equilibrium trap. Inadequate human capital.

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CHAPTER 10

MARXIAN THEORY OF DEPENDENCY THEORY

Mr. Yelahanka Lokesh

Assistant Professor, Department of Commerce and Economics,

Presidency University, Bangalore, India.

Email Id: lokesh.yr@presidencyuniversity.in

ABSTRACT:

The implications of the Marxian notion of dependence theory for comprehending international economic relations. It looks at the fundamental ideas and tenets of dependence theory, which developed in response to criticism of conventional economic theories and aimed to explain the ongoing inequality and underdevelopment seen in many nations. The basic concepts of the Marxian framework are examined in the research, including the idea of imperialism, unequal trade, and the function of multinational firms. It also covers the effects of dependence and emphasises the theory's applicability to current debates on the dynamics and advancement of the world economy.

KEYWORDS:

Marxian Theory, Dependency Theory, Underdevelopment, Inequality, Imperialism, Unequal Exchange.

INTRODUCTION

The Political Economy of Growth, written by Paul Baran in 1957, is a full explanation of this theory that was created from a Marxian standpoint. Dependency theory and previous Marxist conceptions of imperialism have numerous similarities. Marxists continue to be interested in it. One of the first economists to use the word "dependency" and make the case that underdevelopment and development are two facets of the same economic system was Brazilian economist Celso Furtado [1], [2]. Keynes and Myrdal both had a significant impact on his thinking on the relationship between the economy and power, the critical function of the state, and the manner in which the global economy impacted or restrained the growth of national economies. After a military takeover in 1964, Brazil closely adhered to the industrialised growth policy, which resulted in a social exclusion process.

Furtado, however, contends that growth should be a social process. He thus stated that Brazil's sizable population of underprivileged workers, farmers, and marginalised people ought to be included in a process of inclusive social development. According to him, industrialisation may release fresh social tensions and forces that result in an inclusive social development process. Furtado, who oversaw the National Bank of Brazil, concentrated on the northeast and noted that the income disparity between those living in poverty and those in Sao Paul was worse than it had been between Sao Paul's average income and that of Europe in the 1950s. In order to combat "internal colonialism," which was evident in the northeast's exclusion from Brazil's economic growth, he established SUDENE (Superintendency for the Development of the Northeast), a

Brazilian government agency founded in 1959. SUDENE's mission is to promote industrial development and land reform in the northeast region. Furtado said that the terms of trade for the northeast's exports of agricultural products and the industrial items it purchased from Sao Paulo and Rio were both declining[3], [4]. Both progress and underdevelopment are created continuously within the framework of the economy. He believed that there has to be a connection between growth driven by FDI and expanding domestic inequality. The impoverished countries would need to design their own economic strategies to get rid of reliance.

Marx thought that creative destruction is a hallmark of capitalism. Both regeneration and destruction are repercussions of it. Paul Baran emphasised how destructive capitalism can be in developing nations. He didn't discover any indications of regeneration. Contrary to the competitive capitalism of the nineteenth century, the monopoly capitalism of the twentieth century had a vested interest in keeping the periphery poor and dependent. In Latin America and Africa, the gloomy and stagnationist school of reliance blossomed as a result of Baran's analytical contribution[5], [6]. After seeing British imperialism, he saw that Indian social scientists had evolved ideas that were very comparable to those of the late nineteenth-century dependency theorists.

An examination of economic excess served as Baran's theoretical starting point. He defined economic surplus as the quantity of resources (real and prospective) at a society's disposal that might support economic expansion. It is the sum that might be spent again in worthwhile endeavours to Theories of Development raise the level of societal production in the future. After society's fundamental necessities for food, clothes, housing, and human connection have been satisfied, this surplus is what remains from the overall revenue. But this excess might be terribly misapplied. It may be used to build lavish, multi-story homes for the wealthy or it can be squandered in a number of ways via ostentatious expenditure. The excess may be heavily taxed by the military or the church, or it may be syphoned off by foreign power via looting or, more simply, by profit repatriation as a consequence of foreign dominance over developing nations. According to Baran's historical interpretation, colonialism's removal of this excess is where the causes of poverty in less developed nations are located. Colonialism thereby prevented the possibility of transformation. These areas continue to be underdeveloped and poor. He claimed that the brutality of the feudal lords' subjugation was restrained by tradition. The dominance of both foreign and native capitalists made things much worse[7], [8].

According to dependency theory, the tyranny and brutality carried over from the feudal era are paired with the sanity and clever rapacity of the capitalists, which amplifies the exploitation of the people. Many nations, like India, did not see a rise in productive wealth as a result of capitalism. These fruits were exported and used to finance a domestic parasitic bourgeoisie. People were in abject suffering with little hope for a brighter future. Underdevelopment and poverty persisted. They lost their traditional occupations, their skills and crafts. There was no contemporary industry to replace them with new ones. They were forced into close touch with the west's cutting-edge science, yet they remained in the deepest level of backwardness. Baran came to the following findings by studying colonialism's history: (i) profit margins are reduced because workers seek greater salaries(ii) The use of foreign money as a target for raising state

income for instance, by the imposition of higher taxes and royalty payments. Foreign currency restrictions are put in place (iii) to stop money from leaving the nation as repatriated profits, and (iv) taxes on imported wage items are put in place to support local production.

The state may theoretically end this impasse by choosing fresh initiatives that would boost the effectiveness and vitality of import substitution industrialization (ISI). However, the state in underdeveloped areas is unable to take the actions required to advance on any rung of the development ladder. Political revolution, according to Baran, is required to end this cycle. He maintained that these nations cannot be expected to reach Rostow's level of "high mass consumption" by following the capitalist path. These nations would instead move closer to their own economic and social graveyards. The less developed nations may thus anticipate some alleviation from poverty by choosing the socialist path.

DISCUSSION

The Structuralist Theory of Dependency

They disagree with the stagnation-based viewpoint. The most well-known author among them was Fernando Henrique Cardoso, a prominent worldwide Dependency Theory economist and active Brazilian sociologist. He claimed that countries on the periphery experience "peripheral capitalism" in some kind. Economic stagnation, or, in the words of renowned dependence author Andre Gunder Frank, "development of underdevelopment," is one of the key characteristics of these countries. According to Cardoso, the dependent nations aren't going nowhere. The economies and communities on the periphery are constantly changing. The LDCs' economic history may be divided into three primary phases.

The first is the agro-export phase of colonial times, when there was a lot of economic duality. The majority of economic activity took place in the precapitalist sectors of craftsmen, small producers, and peasant producers throughout this period. Some industries, such precious metals, minerals, and tropical goods, are now connected with the global market. These exportables are manufactured in modern, semi-capitalist enclaves.

The stage of developmentalist alliances is the second. Some LDCs saw significant development after the Second World War thanks to import substitution industrialization (ISI). In this phase, a new social structure of accumulation is developed based on the shared interests of capitalists, peasants, and industrial workers.

The third step is a corporatist state, where democracy, unions, universities, and other social institutions where opposition could be encountered are severely curtailed. The second stage's populist orientation which includes expanding social security, minimum wage laws, public health care, and public education is flawed. The state's funding for public services has been drastically reduced.

Transnational companies (TNCs) are especially welcomed. They play a crucial role in the new accumulation process and are essential to the process of development. The structuralists contend that some economic improvement is to be expected and that LDCs are not helpless in determining their own future.

Malthusian Theory of Economic Development

A more methodical explanation of development was presented in "The Progress of Wealth." According to Malthus' population theory, unregulated population expansion always outpaces increases in the availability of resources, leading to an increase in scarcity. According to him, population growth follows a geometric trend, but food supply growth follows an arithmetic development. Thus, there is an imbalance between the growth in population and the production of food, and this imbalance is progressively becoming bigger[9], [10]. Malthus predicted that this imbalance would result in famine and malnutrition, which would increase mortality and reduce life expectancy. In addition, there may be famines, epidemics, and other man-made or natural disasters. These are what Malthus called "positive checks," which inevitably occur if people do not take preventative action. Malthus suggests that preventative measures like celibacy, delayed marriage, moral constraints, etc. Malthus cautions that economic expansion is not a given or inevitable process. It takes more than just population expansion to spur economic growth. According to him, population expansion is impossible without a proportional, or nearly comparable, rise in income. Second, even as the population increases, the effective demand for labour must also rise, and this demand is dependent on the pace at which capital accumulates.

Structural Change

The idea that as economic growth increases, structural changes of this kind occur in the economy that lessen the relative significance of agriculture was initially proposed by economist Thomas Malthus and subsequently refined by Colin Clark. According to Malthus, there are two economic sectors: the agricultural sector and the industrial sector, and the expansion of the former stimulates the latter. Malthus believed that agriculture received capital investments as long as it could economically absorb them. Once every piece of arable land had been developed, stocked, and upgraded, the agricultural sector no longer provided attractive investment prospects; only the industrial sector did. The cost of living for workers on the farm will go down, and maize wages will go down, if there was adequate investment to support the growing population.

Malthus said that undeveloped economies should stay that way because every sector serves as a market for every other sector, preventing the rise of one sector at the expense of the other. As a result, for the economy to develop at all, the Balanced Growth approach must be followed. He continued by saying that the primary reason for the underdevelopment of the industrial sector in developing nations is the poverty of the agricultural sector in such nations. He elucidates the reasons behind agricultural poverty. According to him, huge landowners lack the financial means to practise more intensive farming, and farmers in general lack the cash to do so.

Schumpeter's Theory of Capitalistic Development

The supply side of production was emphasised in every theory offered by classical economics. They asserted that economic expansion entailed an increase in the capacity for production or a higher supply of products and services. Schumpeter was the same. However, traditional economists held that a rise in capital formation caused an increase in production; Schumpeter asserted that this is not the case. Schumpeter defined innovation as the capacity of businesspeople to employ novel concepts or inventions to produce new combinations of inputs

that lower costs and boost profits. In other words, innovation is the capacity of planners to combine resources in new ways that boost their effectiveness. Capital creation was not as important to Schumpeter. He asserted that innovation is a continual process in an economy. More successful innovation results in more effective resource management and better revenues. A new product's introduction, a new technique of production's introduction, the creation of a new market, the discovery of a new source of raw materials' supply, and the design of a new organisational structure are all examples of innovations.

Due to the fact that every new invention renders the previous ones obsolete, Schumpeter dubbed his thesis "a creative destruction." And as a result of this internal revolution, there is constant creative destruction. For instance, the telecommunications business has evolved from landline to wireless, then mobile, and now mobile is a little computer, rendering the previous innovations outdated. Schumpeter saw competition differently. Competition to him meant "do or die." It's a lose-win situation every time. He had no regard for win-win scenarios. According to Schumpeter, if innovations halt, surplus profits vanish, and eventually there won't be any competition at all. However, in order to maintain their extra earnings, business owners will engage in extensive research and development.

Savings mobilisation was considered by all classical economists to be a source of capital production and economic expansion. Schumpeter believed that innovations carry risk, nevertheless. As a result, financing is used to finance the testing of technologies. The capital market is the source of this credit. Schumpeter thus emphasised the need of a well-functioning capital market in the economy to guarantee innovation and the introduction of newer items and better technology, which in turn increases production and the pace of economic growth. The hypothesis of Schumpeter is endogenous. It views the development of capital as a social process that involves the creation of a win-lose competitive system. He disagreed with Neo-Classical economics who reinstated flawless and unrivalled competition.

Following is a summary of the viewpoints of Schumpeter and Neo-Classical Economists:

- (a) Neo-Classical economists contend that perfect competition dominates the market and, as a result, supernormal profits do not exist over the long term; Schumpeter, however, argues that monopolies (through the protection of intellectual property rights) exist, as well as monopolistic competition and supernormal profits.
- (b) While Schumpeter explored the long run and a dynamic model, Neo-Classical economists focused on the short run and a static model.
- (c) Neo-Classical economists claimed that more savings would improve economic development via better mobilisation. The two drivers for economic expansion, according to Schumpeter, are (a) the availability of intellectual labour and organisers, and (b) inventions and technical advancement.

Schumpeter's Theory as a Model of Evolutionary Growth

To determine the quantitative links between inventions and important economic factors, Schumpeter did not employ mathematical methods. As he founded his theories on innovations and the dynamic character of the economy, he never believed in fixed mathematical correlations.

He also did not create any hard models based on any constrictive assumptions. His hypothesis is descriptive in character rather than mathematical. Business cycles are also explained by Schumpeter's thesis. A business cycle is an upward and downward trend that goes through four phases: boom, recession, depression, and recovery. He said that a capitalism-based economy is characterised by frequent ups and downs. Because Schumpeter came to the conclusion that capitalism will ultimately give way to socialism, his theory is evolutionary in character. This is the case since innovations themselves will eventually get boring and commonplace.

It is entirely probable that new inventions may sometimes appear without completely replacing older ones. When both have advantages and disadvantages that are comparable, it will occur. For instance, even the development of online coaching has not lessened the significance of in-person learning sessions since each has advantages and disadvantages of its own. Schumpeter's theory of creative destruction is thus invalid.

While agreeing with Keynes that money plays a crucial role in the economy, Schumpeter criticised Keynes for failing to account for the fundamental structural changes in the economy in his theories. In summary, Schumpeter's theory is dynamic, plausible, and compelling but lacks any quantitative or mathematical tools to establish a clear relationship between economic factors. However, this is also a strength of the theory since it makes it adaptable. When Schumpeter predicts that capitalism would eventually give way to socialism via innovation, he is acknowledging the psychological truth that even the most inventive technologies eventually get boring through repetition.

CONCLUSION

The Marxian idea of reliance provides a critical framework for examining international economic ties as well as the continuation of inequality and underdevelopment. Dependency theory offers important insights into the structural processes that form the global economic system by emphasising the role of imperialism, unequal trade, and multinational businesses. To achieve more fair and sustainable results in the global economy, it is crucial to understand the effects of reliance and pursue alternative development options.

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CHAPTER 11

A BRIEF STUDY ON THEORIES OF UNDERDEVELOPMENT

Dr. Dasinis Nathan Annette Christinal
Assistant Professor, Masters in Business Administration (E-Commerce),
Presidency University, Bangalore, India.
Email Id: annette.c@presidencyuniversity.in

ABSTRACT:

Theories of underdevelopment and their contributions to comprehending the dynamics and underlying causes of certain areas' and nations' enduring underdevelopment. It examines many theoretical stances and their perceptions of the political, social, and economic aspects of underdevelopment, including structuralism, modernization theory, and dependency theory. Each theory's fundamental ideas and arguments are examined in the research, along with their implications for development methods and policies. It also draws attention to the current discussions and the applicability of these ideas to modern conceptions of underdevelopment. According to dependency theory, interactions between industrialised and developing nations are unfair, which leads to underdevelopment. It implies that the political and economic systems of industrialised nations take advantage of and maintain the reliance on undeveloped nations. The idea emphasises how resource extraction and the promotion of unfair trade relations contributed to colonialism, neocolonialism, and the global capitalist system's role in sustaining underdevelopment.

KEYWORDS:

Theories of Underdevelopment, Dependency Theory, Modernization Theory, Structuralism, Economic Factors.

INTRODUCTION

The Lewis model's undercutting of the contribution of agriculture to the expansion of the industrial sector was one of its main flaws. In addition, he did not recognise that the rise in labour productivity need to occur before the division of labour between the two sectors. However, the Fei-Ranis dual economy model of three development phases took these two concepts into consideration.

They contend further that the model fails to properly apply focused analysis to the shift brought about by agricultural progress[1], [2]. The agricultural labour force's elasticity is infinite in Phase 1 of the Fei-Ranis model, which causes it to experience hidden unemployment. Additionally, labor's marginal product is zero. The Lewis model is comparable to this stage. step 2 of the model sees an increase in agricultural production, which fuels faster industrial expansion and lays the groundwork for step 3. Agribusiness surplus might exist in Phase 2 as a growing average product (AP), larger than the marginal product (MP), and below the subsistence wage threshold[3], [4].

Methods to Break the Vicious Circle

There are two methods for helping an economy escape its constricting cycle. The first is referred to as the "Gradual Approach to Economic Development," while the second is known as the "Big Push Approach to Economic Development."

The Step-by-Step Method

The gradual method adheres to the adage that "slow and steady wins the race" and depends on market mechanisms and individual effort. It promotes an incremental strategy for economic growth. It indicates that an economy should focus on agricultural advances, social overhead capital, and the construction of small scale industries during its early phases of growth.

This strategy fervently supports the idea that development must start in the primary sector and would naturally spread to other sectors due to spillover effects. The primary sector will have a stronger effective demand for secondary products and services generated by the territorial sector as its level of income rises. The demand for capital goods used to produce manufactured products will rise as a result.

The Big Push Strategy

According to the large push hypothesis, we cannot depend on automated market mechanisms to guarantee a minimal pace of economic growth. It necessitates action on the part of the government. It requires a wide and quick capital generation across all industries. It opposed the notion that growth may occur on its own. Big push theory proponents argued that if the pace of GDP growth isn't high enough, it would be eaten away by population growth, resulting in little to no gain in per capita income [5], [6].

Development must thus go above a certain "critical minimum effort" in order for the economy to be able to defy the pull of population growth. Some other economists contend that the poverty cycle cannot be stopped without a major effort. In his theory of balanced growth, Nurkse promotes this method, arguing that in order to guarantee a fair pace of development, we must simultaneously undertake large-scale investments in a variety of sectors.

The Big Push Theory

To set a nation on the road of sustained growth, there must be a significant push or a significant overall minimum amount of investment. "Launching a country into self-sustaining growth is a little like getting an aeroplane off the ground," said Resenstein Rodan. Before the ship may take off, it must surpass a certain minimum speed. Bit by bit progress will not result in more work than the total of the individual bites. Similar to this, if the process of development has to be started, sporadic and minor efforts won't assist; instead, a significant financial push is needed. He provided four different forms of indivisibilities that every economy encounters as justifications. These indivisibles include:

- (a) **Indivisibility in the Production Function:** Some production components can't be divided, therefore they provide growing returns. Social overhead capital benefits from such uniqueness as being irreversible in time, having a lengthy

gestation period, and having a low durability. Due to all of the characteristics of Social Overhead Capital, a sizable initial lump sum investment that raises the amount of investment is required.

- (b) **Indivisibility of Demand:** Markets in UDCs are rather tiny. Small market size breeds uncertainty, which prevents the economy's capital investment. A simultaneous big scale investment is needed to be undertaken in many sectors in order to expand the market and eliminate uncertainty.
- (c) **Indivisibility in the Supply of Savings:** As mentioned in the section on the poverty trap, low income levels prevent individuals from saving much money. Therefore, it is preferable to invest on a very big scale since it might result in a significant rise in income and, therefore, savings.
- (d) **Psychological Indivisibilities:** These indivisibilities pertain to the reality that individual efforts, no matter how tiny, go unnoticed by society as a whole. Therefore, it does not inspire optimism for higher returns.

An increase in the pace of development might thus result from a large amount of investment made all at once.

Theory of Critical Minimum Effort

Harvey Leibenstein came up with the hypothesis. According to the hypothesis, population expansion has a negative relationship to per capita income, and per capita income has a positive relationship to investment, which is a stimulant and a source of revenue. Therefore, investment is functioning as a stimulant while population is acting as a shock. When the influence of a stimulant dominates or surpasses the impact of a shock, growth might occur [7], [8]. A little investment will raise GDP by a negligible amount, which may be so negligible that due to the concurrent rise in population, per capita income may actually decline rather than rise.

1. It is important to make sure that an investment is made that is sufficient to offset the negative effects of population expansion.
2. Leibenstein thought it wasn't necessary to make the necessary minimal effort all at once. It may be broken up into a number of smaller initiatives. A diagram may be used to assist explain it.
3. The horizontal axis in the graphic represents time, while the vertical axis represents per capita wealth.

The economy will expand along a path similar to PQR, which demonstrates that beyond a certain level, per capita income begins to decline because shocks are outweighing the stimulants, unless and until per capita income could be increased to a level OM, which is the minimal critical level. As a result, income must be increased to OM level to ensure that the benefits of stimulants outweigh those of shocks.

The Low Level Equilibrium Trap Theory

Due to high rates of birth and mortality, population remains steady as long as per capita income is less than OD. They balance each other out. Population begins to grow after OD level of

wealth, mostly due to decline in mortality rates. Up to point *t*, when population growth accelerates, the process continues.

The population begins to decline owing to a drop in birth rates after point *t*, or when per capita income exceeds *of*, until it reaches point *s*, which is a stable equilibrium. Population trap refers to the circumstance in which the rate of population growth exceeds the rate of per capita income growth. The reasons of this trap may be explained by the following elements:

1. There is a clear inverse relationship between per capita income and population increase.
2. Low marginal propensity to invest; lack of fertile land that can be cultivated; scarcity of productive ways By either raising the rate of per capita income, reducing the rate of population growth, or both, this trap may be avoided such that per capita income growth is always faster than population growth.

DISCUSSION

Theory of Social Dualism

In Social development, He insisted that, in terms of economics, a civilization had three features. These traits include the organisational structures, the prevailing techniques, and the social spirit. In certain societies, just one dominant social structure exists. We refer to it as a homogenous society. Typically, many social systems coexist in a community at the same time. Dual or multiple society is the name given to such a community. A dual civilization may coexist with both local industrial methods and cutting-edge foreign technology. One example of social dualism in India is the coexistence of too ambitious urban and content rural communities. In eastern and western nations, social dualism is different from one another.

- (a) When people's immediate wants are satisfied, they are more likely to be affected by social than by economic factors. Consequently, the necessities of an eastern civilization are modest.
- (b) Eastern nations rate products more in terms of their prestige worth than their utility.
- (c) Native industries are unorganised, have minimal capital, and lack market knowledge.
- (d) People are unmotivated and unorganised. As a result, they engage in more speculative activities than profit-making businesses.
- (e) Urban growth hinders rural development and is in contradiction with it.
- (f) It is anticipated that international commerce would rise in eastern civilizations.

Boeke understood that since the eastern nations are undeveloped and the theories for developed countries do not apply to them, we need to build new theories for them. He promoted a method of growth that was gradual.

Theory of Technological Dualism

The creator of this idea, Benjamin Heggins, said that technological dualism entails the coexistence of the majority of contemporary production methods in an advanced sector and the employment of old or primitive techniques in an underdeveloped sector of the economy. The following effects flow from such technological dualism:

The industrial sector has fixed technical coefficients and a high capital intensity. There isn't much of an alternative to replace workers with capital. With the help of foreign money, the industrial sector is growing, but job growth is not keeping up with population growth. In the industrial sector, it leads to structural or technical unemployment[9], [10]. The issue facing the rural sector is that it is exceedingly challenging to improve production even by increasing inputs, such as labour or capital. Initially, neither labour nor capital are in short supply. Land, which serves as a type of capital in rural regions, is starting to become more scarce as the population grows. It puts an excessive amount of work demand on the land. It leads to covert unemployment in this industry. Simply said, due to fixed factor percentage in the industrial sector and expanding population in the rural sector, technological dualism causes technical and hidden unemployment in two sectors.

Development Strategies

Development may be approached in two ways. One fits within the laissez-faire economic paradigm. In such an economy, supply and demand act as the unseen hands that distribute resources. But developed nations are more affected by it. This strategy is not appropriate for emerging countries since they do not let market forces drive their growth but rather formulate well-thought-out plans in line with their goals and objectives.

Growth Strategy

The most important duty for an economy is to choose a planning approach. Identification and establishment of a system of objectives or goals that may be pursued with specific strategies are referred to as planning strategy. There are two key development techniques that may be named:

- i. **The Balanced Growth Strategy:** According to the balanced growth strategy, all economic sectors must expand in unison; no sector should outpace or lag behind others, and no sector should have shortages or surpluses. Both horizontal and vertical features are included in balanced development.
- ii. **The Strategy of Unbalanced development:** According to this strategy, initial investments should be made in a few carefully chosen sectors, and over time, the economy will transition from unbalanced to balanced development.

Investment Criteria in Developing Countries

The founder of economics, Adam Smith, believed that the unseen forces of supply and demand were effective and had complete faith in the workings of the market, but this belief was predicated on the idea that there was perfect market competition. However, there is imperfect, not perfect, competition in the actual world market. Planning the distribution of resources becomes vital in such a system of economics. It cannot be left to market forces. The challenge now is to choose the optimal criteria for determining the optimum distribution of resources. The following is a discussion of some of the economics community's criteria:

The Marginal Productivity Approach is the foundation of the criteria. According to this, when a resource's societal marginal productivity is the same across all of its applications, resource allocation will be optimal. According to the law of returns to a factor, the MP of labour begins to

decline at a certain point when more and more labour is used with a given quantity of other resources. According to this criteria, manpower should be distributed across several projects such that its SMP is the same throughout all projects.

Cost-Benefit Analysis

As its name implies, cost benefit analysis (CBA) is a process used to evaluate the costs associated with and benefits anticipated from any particular project, decision, policy, etc. Accept it if the advantages outweigh the costs since it is efficient. Reject it if it's the other way around. Non-monetary costs and non-monetary benefits may also be included in CBA calculations in addition to monetary costs and benefits. Profits are supposedly the main factor in deciding whether to approve or reject a project. The difference between expenses and benefits is called a profit. But it's vital to remember that expenses must be made now, whilst benefits will only accrue afterwards. Future prices, though, can potentially be a factor. Therefore, we must determine the predicted benefits' Net Present Value (NPV). To choose the best alternative, it is necessary to examine the NPV of many potential projects.

CONCLUSION

Theories of underdevelopment provide important insights into the intricate processes and circumstances that contribute to its persistence. Policymakers and development professionals may create more efficient strategies and policies to combat underdevelopment by comprehending these ideas and their consequences. Societies may seek to overcome underdevelopment and achieve sustainable and equitable development results by taking into account economic, political, and social issues and customising policies to unique settings. The difference between expenses and benefits is called a profit. But it's vital to remember that expenses must be made now, whilst benefits will only accrue afterwards. Future prices, though, can potentially be a factor. Therefore, we must determine the predicted benefits' Net Present Value (NPV). To choose the best alternative, it is necessary to examine the NPV of many potential projects. Profits are supposedly the main factor in deciding whether to approve or reject a project. The difference between expenses and benefits is called a profit. But it's vital to remember that expenses must be made now, whilst benefits will only accrue afterwards. Future prices, though, can potentially be a factor. Therefore, we must determine the predicted benefits' Net Present Value (NPV). To choose the best alternative, it is necessary to examine the NPV of many potential projects.

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