Taxation in Economic Thought

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Abstract: This study illustrate the history of Economic thought schools in taxation from classic school and new classic school to Solow growth model and indigenous growth model. The paper plan to use historical method and descriptive-analytical approach to illustrate the history of Economic thought schools in taxation. The paper going to highlights the content of Economic thought history in taxation from the classic school to growth model and indigenous growth model. This study concludes that the classic school supported tax only when it necessary to fund the basic services of the state to carry out its basic duties. While Keynes, he pointed out that taxes should contribute to the redistribution of income and wealth in society because lake for allocate income and wealth in society leads to decline in effective demand which leads to economic recession. for that the government should impose progressive taxes which contribute to the redistribution of income and wealth in society and the increase in effective demand. Solow built his economic growth model based on the role of taxes in enhance economic growth. Solow growth model is based on the fact that increasing government revenues from taxes means increasing savings which increases economic growth if the greater part of the tax revenues is directed to investment. However, a tax negatively affects on Economic growth if tax revenue directed to consumer expenditure. Then, the endogenous growth models stated that economic growth is primarily the result of endogenous variables, rather than exogenous. It argues that improvements in productivity can be tied directly to faster innovation and more investments in human capital. This study is very important for scholars, institutes, universities, research centers, organizations and governments which concern to know and studying taxation in Economic thought.

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INTRODUCTION

Schools of economic thought had different approaches in terms of dealing with and processing taxation and its role in economic growth. The classical school did not support taxation because taxation results in an increase in product cost and a decrease in capital profit, or leads to a distortion in the prices of products if imposed

on goods and usually leads to decrease personal saving if imposed on incomes. Classical school had supported taxation only when required to fund the basic services of the state to carry out its basic duties. After that the Great Economist Keynes had concluded that taxes should contribute to the redistribution of income and wealth in society because the lack of distribution of income and wealth in society leads to a decrease in effective demand which leads to economic recession and depression. Therefore, the state must impose progressive taxes which leads to the redistribution of income and wealth in society and the increase in effective demand. Then, Solow introduced his economic growth model based on the role of taxes in promoting economic growth. Solow's growth model is based on the fact that increasing government revenues from taxation means increasing savings which increases economic growth if the greater part of the tax revenues is directed to investment. However, a tax will have a negative impact on Economic growth if most of its revenue is directed to consumer expenditure and thus the rate of economic growth decrease. The main difference between Solow and the endogenous growth Models stated that economic growth is primarily the result of endogenous variables, rather than exogenous. It argues that improvements in productivity can be tied directly to faster innovation and more investments in human capital. and that tax policies have great impact on both of them. For instant high tax rate on income may impede the human development process and the ability of individuals to develop themselves. Further, research and development are closely related to the growth process since high taxes on income may impede companies and research institutions to continue the research and development process necessary for the acquiring knowledge and economic growth. Below, we will examine in detail how schools of economic thought dealt with taxation and its role in economic growth.

First; Classical school: Regardless of the different intellectual and economic schools to which they belong, the economic thinkers have paid the greatest attention to addressing the issue of economic growth in a precise and detailed manner by discussing the growth impulses, elements, sustainability and problems facing growth.

The major ideas that examined economic growth were represented in the writings of early classical economists such as Adam Smith, David Ricardo and Thomas Malthus who discussed the specializations, division of labor, competitive behavior, capitalist accumulation and the profit tendency to decline due to competition.

Classical economists believed that production is a function of the following factors: labor, capital, natural resources, technical progress in production and that the change in the previous factors leads to a change in production and they considered that natural resources are fixed and the rest of the factors are variable and as a consequence, the production process of agricultural land is subjected to Law of Diminishing Returns and this law is implemented on the assumption that production technology and capital employed are constant.

The pioneers of the classical school agreed that growth is the result of an interaction between capital accumulation and overpopulation. An increase in capital formation means an increase in the supply of capital which in turn leads to a reduction in the interest rate and thus an increase in investment and production and achieving economic growth. At the same time, there is an inverse relationship between population census and capital formation, as population growth leads to diminishing returns in agriculture which means higher costs of agricultural products and wages, in addition to lower profits and savings and in the end, a decrease in capital formation[1].

They also affirmed that economic development is achieved in a stable system in all its sectors and they believed that the capitalist system is subjected to recession and in order for the economic growth process to succeed, they supported the policy of non-interference by the state in economic activity.

The classic economists emphasize the neutrality of the taxation, based on the idea of the neutrality of the state and its limited role to providing the internal and external security of the country. The classic economists called for the necessity of balancing the state's general budget because resorting to borrowing would lead to a permanent financial deficit, given the additional financial burdens that the loans would entail.

Adam Smith (1723-1790): Adam Smith was the first to try in 1776 to lay down the basic rules on which the taxation system should be based in his famous book Wealth of nations which are as follows[2].

First; Rule of equality: This rule means that the citizens of the state shall contribute to public expenditures according to their relative ability. Equality is achieved if citizens bear the taxation in proportion to their income. Further, the modern concept of equality requires exempting low-income people from paying the tax in relation to the subsistence level, i.e., the minimum necessary level for living as well as the necessity of taking into account family burdens in proportion to the level of living in society. Equality also requires tax rates to be different according to the types of income imposed on which they are imposed and whether it is a result of work or capital. In summary, we can say that the rule of equity or equality includes two principles, namely:

- Generality: all persons are subject to tax
- Ability: considering the ability of taxpayers to pay taxes

Second; Rule of certainty: Meaning that the tax shall be imposed according to specific and clear rules for the taxpayer and the tax administration. The tax rate, its maturity date how it will be collected and its procedures must be known to the public. There is no doubt that the lack of clarity of these matters may lead to a control by the taxation administration which will result in violation of the rule of equity and equality, the spread of favoritism and general corruption when evaluating and collecting taxes.

In order to achieve certainty, taxation must be stable and constant, not to be subject to continuous amendment. Amendments in tax legislation must be limited and over extended periods. This will result in not causing inconvenience to financiers or disrupt economic activity and tax legislation must be clear so that it is easily effortlessly understood by the public without any ambiguity and so that, courts and tax administrations can apply it without efforts or interpretation.

Third; Rule of suitability: Meaning to collect the tax at the time and the most appropriate way to pay it by the taxpayer according to the source of income and its circumstances. This requires that the tax administration shall choose a suitable date for tax payment and that the collection procedures are appropriate for the taxpayer's circumstances, so that, the amount of the tax is not too heavy to the extent that will make the taxpayer unable to pay or escape the taxation.

Thus, the time at which the taxpayer receives his income must be the most appropriate time to pay the tax. The farmer should be obligated to pay the tax after the crop is harvested and sold. The merchant is required to pay the tax after the end of the year for his commercial activity and after determining the net amount for this activity.

Taxation on consumption to be paid when the commodity is purchased. The taxpayer in this case is free to buy the commodity and thus pay the tax imposed on it or not buying it and thus avoid paying the tax.

Fourth; Rule of economics: Meaning that the economy is in the cost of tax, that is what the state incurs and spends on its evaluation and collection and the net proceeds that remain. As well as the economy in the expenses incurred by the financiers to meet the tax debt such as the use of accountants, or keeping accounting records and books, or submitting declarations supported by official documents.

In other words, this means that these banks do not exhaust a large part of the tax proceeds in a way that reduces the state's ability to benefit from it.

David Ricardo (1772-1823): Ricardo believed that it would be better in the field of taxation that the state does not interfere in economic fields such as agriculture, trade and industry but he recognizes the possibility of imposing taxation when necessary, that is, when the state is unable to cover its public expenditures[3].

Ricardo states that taxation is Great Evil, as he states that there are no taxes that do not have a tendency to reduce capital accumulation. Either it is imposed on revenue or imposed on capital. If imposed on the capital, it reduces the volume of capital accumulation for this country and thus, the financing available for industry and investment. If the economy is regressing, i.e., achieving a negative growth rate, then taxes would lead to the erosion of the capital of this country because the imposition of taxes did not occur on revenues achieved in the light of a developing economy or a positive growth rate but rather the tax was imposed on the capital base to finance government expenditures. However, if the tax is imposed on revenue, it reduces saving and consumption and forces consumers to reduce their consumption only of essential goods.

Some taxes cause this effect more than others, so, governments must choose the appropriate ones. Ricardo also pointed out the inverse relationship between taxation rate and government revenue. He believed that while governments try to increase their revenues by increasing taxes, they will reduce the ability of individuals to spend because these taxes are derived from capital in the possession of people which in turn will affect the supply of labor and thus lead to shrinking future production levels of the economy which will eventually reduce tax revenue. However, in the end, he recognizes the need for the state to impose taxes when necessary when it is unable to cover its public expenditures.

Ricardo argues that wage taxes raise wages which reduces capital gain because taxes on necessities raise their prices. And that the increase that the tax will cause in wage rates will eventually reduce the profit of the landowner where workers work, the tax will raise the prices of manufactured goods and will ultimately cause harm to consumer. Also, taxes on any commodity will raise their prices which reduces capital gains or the profit of the landowner and differentiates between whether the commodity is a necessary or a luxury commodity such as wines and believes that imposing taxes on luxury goods is better than imposing taxes on necessary goods and both of them will raise the prices of the product and reduce the profit of the industry and will cause harm to consumer[3].

Thomas Malthus (1766-1834): Malthus emphasized the importance of population in determining demand in relation to development and to maintain economic growth, effective demand must grow in proportion to the growth of production potential to maintain the level of profits. Malthus is considered the only thinker among the classic

thinkers who discussed the importance of demand, as the rest of the classic thinkers emphasized supply according to Say's law which says that supply creates demand[4]. Malthus believed that population increase is a threat to economic growth because the population increase exceeds the rate of increase in food as the population increases in a geometric sequence unlike food or resources that grow in a numerical sequence which will ultimately lead to a multiplicity of the population at rates that exceed the increase in food which leads to famines and Malthus asserted that population growth discourages economic growth endeavors[5].

Malthus focused on the saving by landowners and the imbalance between the supply of savings and the planned investment of the capitalists which could reduce the demand for commodities and that reduced consumption hinders development. In the event that the amount of savings of the landowners exceeds the need for the capitalists to borrow, then Malthus proposes to impose taxes on the landowners.

Second; The neo-classical school: This school is considered an extension of the classical school because it believes in liberalism as the logic of economic activity but it differs from it in two important points: the method of analysis and the theory of value. They assume that the value of materials is determined by their utility and not through the work spent in order to produce them, in other words that the value of a commodity is greater than the value of another commodity because its utility for consumers is greater than other commodity or material. And the serious utility for them is the utility resulting from the consumption of the last unit of the commodity consumed and this utility is subject to decrease[6].

The neo-classical analysis is concerned with the analysis at the partial level, i.e., the level of the economic unit and that economic growth is a coherent, integrated and compatible process, where the growth of a specific sector leads to the growth of other sectors and the growth of the national product leads to the growth of different income groups in terms of wages and profits. Furthermore, the economic growth depends on the number of available elements of production in society (labor, natural resources, capital, technical progress, organization). With regard to the labor element, we find that the theory links population changes and the size of the workforce with an emphasis on the importance of matching the increase in population or in the workforce with the size of available natural resources. With regard to capital, an increase in capital formation means an increase in the capital supply that leads to a reduction in the interest rate, thus, increasing investments and production and achieving economic growth with

reference to the role of saving in directing investments. The neo-classical school considers saving as a well-established habit in countries that make their way to progress where the process of investment and growth takes a mechanical automated form. In addition, the interest rate is the price in the capital market where the supply of savings meets the demand. As for the element of organization, supporters of the theory believe that the organizers use technological development to the available extent which expresses their ability to innovate and create[7].

Alfred Marshall (1842-1924): Marshall described the economic growth as an organ growth that cannot be achieved suddenly, rather, it is achieved gradually and that economic growth requires focusing on specialization, division of labor and freedom of trading, in order to promote the international exchange rate for the interest of the state. The freedom of trading ensures the implementation of specialization and division of labor on the international scale. Marshall sees that taxation is undesired in his analysis because it leads to reducing consumer surplus. He states that the loss in consumer surplus is more than the realized revenues, therefore, he sees that the taxation is undesired unless in necessary cases to cover the state expenditures[8]. Figure 1 shows the following:

The supply curve SS, the demand curve DD, the quantity H and the consumer's surplus is determined by the region SDA and when a tax is imposed the supply curve shifts upward in a new curve S*S* and the new consumer's surplus after taxation is DS*a. Thus, while the area SS*Aa is the area representing the consumer's loss and the area SS*ak is the area of tax profit or tax gain, so the loss of consumer's surplus is greater than the tax gain realized. Therefore, Marshall encourages the imposition of the tax only in cases of necessity, to cover the necessary public expenditures.

Schumpeter (1833-1950): Most economists classify Schumpeter[9] as a supporter of the neo-classical school, however, he differs from the rest of the economists who belong to this school by being deeply influenced by Marxist views on the subject of contradictions in the capitalist system and the class conflict.

Schumpeter presented his famous theory of economic growth which was based on the role of innovations and inventions in creating economic growth.

He concluded that growth is not a gradual process as seen by the classic economists but rather it is achieved in leaps without harmony which are periods of prosperity followed by periods of depression and that the trend of growth is not continuous but rather quickly reaches its limits and that these limits are when the innovative
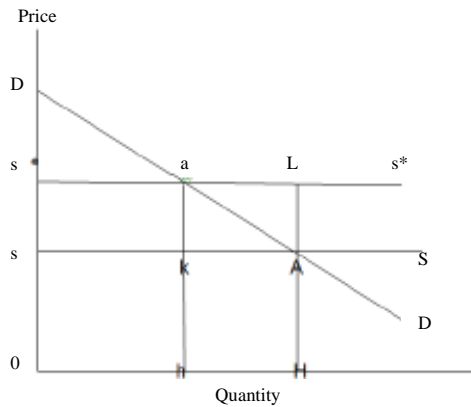
Price

Fig. 1: Taxation and consumer surplus for Marshall

investment environment is not suitable to the growth process. He sees that economic growth is a one-time process according to the emergence of new inventions and innovations entering the commercial field in the form of new investments that suddenly lead to a tangible increase in national income[9].

Schumpeter says that the second half of the eighteenth and nineteenth centuries and the early years of the twentieth century witnessed the emergence of a large number of new inventions and every time a new invention appears, there is a sudden huge increase in investment as a result of this new invention entering the commercial field which leads to an increase in the incomes of individuals[10]. He believes that the organizational and technical factors play an important role in the growth process. The organizer is the main character in his analysis and from his point of view is an innovator who draws the production plan and works to collect the elements of production to achieve maximum profits by producing new goods and opening new markets as well as obtaining a new source of raw materials. All these elements lead to growth and development[11].

Third; John Maynard Keynes (1883- 1946): Keynesian theory is based on criticism of the classical theory in many aspects, mainly:

Keynes refused to impose the classical theory of the ability of the capitalist system to automatically achieve balance at the level of full employment as Keynes considered that full employment is a special case and doesn't happen all the time, because the balance may be achieved at a level higher or lower than that, the fluctuations of economic activity are the general case for the growth of the free capitalist system.

Opposition to the idea of flexibility of wages and prices to the degree that guarantees re-balancing at the level of full employment. With the presence of trade unions and unrest, it is difficult to lower wages to the degree that eliminates unemployment and restores balance at full employment.

Keynes presents his model by explaining the determinants of national product and employment, as the distribution of national income among the items of total expenditure is as follows:

$$Y = C+I+G+X-M \tag{1}$$

Where:
Y = National income
C = Consumer expenditure
I = Investment expenditure
G = Governmental expenditure
X = Exports value
M = Imports value

To simplify the model, the analysis will be limited to the case of the closed economy and accordingly, Eq. 1 becomes as follows:

$$Y = C+I+G \tag{2}$$

Keynes states that the level of national income is determined by the demand or total expenditure on consumer and investment goods in the household and government sectors (C+I+G) and this level of income is correlated to a certain level of labor L, the predominant technological art T and a certain size of capital K.

Keynes believes that the rise in income is often accompanied by a corresponding rise in the level of operation for all elements, especially labor, with the assumption that technological art remains the same. In addition, Keynes indicates that there are limits to the labor increase that can occur as a result of an increase in national income and investment, that is, when the economy reaches the total size of employment where it is not possible to increase the national income any further, the output at this level is called the potential national product and the difference between it and the actual output (less than full employment) represents the level of unemployment.

If the state wants to increase aggregate demand, it must raise government expenditure to treat unemployment or recession, in addition to increasing consumer and investment expenditure by reducing interest rates or granting tax benefits or subsidies.

Taxation in Keynesian theory: Keynes believed that high taxes have an impact on effective demand by recession because imposing high taxes on income leads to a deduction of money from the possession of citizens into the possession of the government. This deduction undoubtedly affects their real income and employers do not compensate employees for this deduction which leads to an effective decline in demand and the decline in demand also affects investment by recession and reduction due to the inability of business owners to

dispose of their products and goods[12]. The recession in investment, in turn, affects the demand for labor, i.e., employment and the decline in employment and the increase in unemployment in turn lead to a decrease in effective demand which means entering an unending cycle of decline in employment and effective demand and this ultimately leads the economy to a state of stagnation and then recession. Also, imposing high taxes on commodities leads to distortions in prices and high inflation which in turn also leads to a decline in effective demand for low purchasing power[13].

Keynes believed that taxes should be imposed in a manner that leads to fair distribution of income such as progressive taxes because poor income distribution in a society leads to a decrease in effective demand because only a few of the society possesses the income and the majority suffers from poor income distribution which leads to a decline in effective demand which results in stagnation and recession. Keynes believed that, to get out of this recession state, the state must work to increase effective demand by increasing public expenditure and reducing income taxes and it can choose a combination of indirect, progressive and other specific taxes to finance the expansion of spending[14].

Fourth; The Solow Model for Economic Growth (1956): In a research paper entitled "(A Contribution to the Theory of Economic Growth) (For this important scientific work, Robert Solow was awarded by the Nobel Academy in 1987) Solow presented his model for long-term economic growth which was referred to in more than one scientific paper that dealt with the effect of taxes on economic growth[15]. Solow begins his growth model by reviewing the total production function:

$$Y = F(K, L)$$

Where:
Y = Real income
K = Total capital
L = Total labor or employment

Solo relied on several assumptions in his model: the two elements of capital and labor are used in the total production volume of society (Y) at the moment (t) as it assumes the rule of perfect competition, equality between domestic saving and domestic investment and the assumption that full employment is achieved for all elements of production, so that, the work supply is equal to the level of actual employment and the marginal productivity of capital decreases and the productive art, the size of employment and the population are exogenous variants determined from outside the of model[16].

Assuming the economy and population are growing steadily, every individual works on a fixed number of working hours. There is one commodity in the economy that can be consumed or saved. The only source of savings is investment in capital.

Under these assumptions, the output (Y) that is produced at a specified time (t) is (yt) and can be divided between consumption (Ct) and investment (it). In the case of balance in the economy, the level of investment must be equal to the level of saving. The capital symbol is (kt) and labor symbol is (Lt). Therefore:

$$Y_{(t)} = F[K_{(t)}, L_{(t)}]$$

Where:
Y = The volume of output
L = Total employment
K = Capital

And it is assumed by a homogeneous function of the first degree. At every moment (t) an amount of SY(t) is being saved which is fully invested and thus this saving is equal to investment I(t) which is equal to capital accumulation or net investment symbolized by K*(t):

$$sY(t) = I(t) = K^*(t)$$

The level of saving is a fixed share of the output and at that point investment is equal to saving and thus:

$$It = S F(kt, Lt)$$

That is:

$$K^*(t) = SF[K(t), L(t)]$$

Solow assumed that labor supply L(t) is determined by exogenous variables, that is, it increases at a constant rate, while labor demand is always equal to supply and this can be expressed in the following function:

$$L(t) = L_0 e^{nt}$$

Where:
L_0 = The initial labor volume
n = The rate of population growth equal to that of the work force
e = The natural logarithm

That is:

$$K^* = SF(K, L_0 e^{nt})$$

We note that the solution to the above equation determines the evolution of the capital stock and hence, the development of production Y(t), investment I(t) and saving S(t) Solow preferred to study the evolution of the ratio (capital/labor), i.e., r = K/L. Therefore:
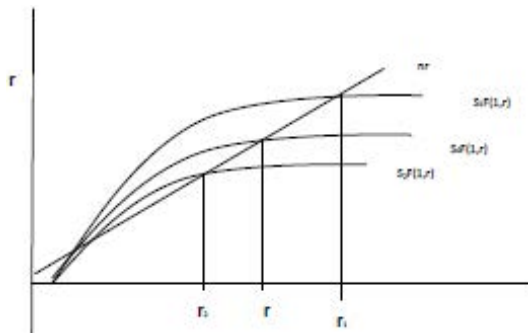
$$K = rL, ..., K = r L_0 e^{nt}$$

Fig. 2: Impact of taxation for Solow

Then, by making the differential of K with respect to time, we reach the value K* = dK/dt. Therefore, the value of r* can be deduced which expresses the rate of change of the labor factor of capital with respect to time:

$$r^* = sF (r, 1)-nr$$

Which is the basic equation of the model.

The role of taxation in the framework of the Solow model for long-term growth: By introducing tax to income in the analysis assuming that tax revenues are directed entirely to capital accumulation and if the government imposes a tax on personal income:

The saving function S is written as s+T but if tax revenues are directed to government non-investment expenditure, then the saving function becomes S-T. If tax revenues are partially directed to investment and the remaining part to consumer expenditure, the saving function becomes [S+(V-T)].

These effects can be traced as shown in Fig. 2. Figure 2 represents the saving rate if no taxation was imposed and s_1 represents the higher rate of saving after taxation. The greater part of this tax revenue is directed to investment which leads to a high short-term growth rate. In the long term, balance is achieved at r = 0, driving the growth rate to the natural rate n seconds but at a higher level the capital-labor ratio is r_1 which means more per capita income. If the greater part of tax revenues is directed to consumer spending, the saving rate will decrease to S2 which leads to a decrease in the short-term growth rate but the growth rate will return to the stable rate again in the long term, even if it will be at a lower level of the capital-labor ratio r2 which represents the lower average per capita income.

Accordingly, it becomes clear that imposing a tax positively affects saving if the greater part of the tax revenues is directed to investment and then the growth rate increases in the short term. However, the tax adversely affects saving if most of its revenues are directed to consumption spending and thus the short-term growth rate decreases.

Therefore, the impact of tax through the saving rate is limited to the possibility of changing the growth rate in the short term. However, returning the economy to balance at r = 0 again in the long term leads the growth rate to the natural rate n seconds but this new balance is at a different level from the capital-labor ratio "r" which results in changing the average per capita income in the long run.

It is evident from the above that long-term economic growth is not affected by the change in the tax rate, as the long-term growth rate is directed to the natural rate based on the rate of employment growth in the absence of the technology element.

Criticisms to the Solow model: Major criticism towards the Solow model was attributing the reason for the change of growth in the long term to two variables that are determined entirely from outside the model, namely the rate of population growth and the rate of technological progress over time, meaning that there are no inherent or intrinsic characteristics that contribute to the sustainability of growth in the long term[17].

Further, the Solow model does not provide an explanation for the great difference in the levels of income growth rates in both developing and developed countries as Southeast Asian countries at that time had high growth rates compared to more developed countries despite the prevalence of the same level of technology at the time which prompted economists to believe that technical progress is not progressing evenly in developed and developing countries.

Fifth; The Endogenous Growth Models: Although, the neo-classical model represented by the Solow Model 1956 concluded that the importance of technology is a primary source of growth, it did not explain how technological progress and development was achieved and considered it an exogenous variable which led to the emergence of the idea of convergence between developing economies and developed countries. The reason is that in the developed countries the rate of growth is low but developing countries will be able to grow at a rate that exceeds the growth rate in developed countries until the level of growth converges between developed and developing countries in the long term, because developing countries absorb advanced technology in developed countries at a faster rate. That is why the importance of technology appears in the knowledge economy (Endogenous growth).

Solow presented his new model, to which he added the technical factor. In which he considered, as we explained earlier, "technical progress" in its new growth equation is an uncontrollable exogenous variable.

For this important scientific work, the Nobel Academy awarded Robert Solow with its award in 1987. But a year earlier, in 1986, Paul Romer had published his first study[18] on the factors explaining long-term economic growth. In the eighties of the twentieth century, Romer began his research work in the field of economic growth theory by investigating the nature of technical progress which Solow considered as an uncontrolled exogenous variable. Romer concluded that this factor is not an exogenous variable but an endogenous factor and Romer incorporated it into the equation of economic growth.

In 1990, he published a new article[18] in the Journal of Political Economy on endogenous technological change in which he presented four basic variables that determine the rate of economic growth: capital, labor, human capital and the rate of technology in a country. Thus, Romer has radically departed from the logic of the neo-classical model that Solow developed by merging two new variables that can be produced internally (endogenously) and excluding any exogenous variables that constitute an insoluble puzzle.

Concerning the importance of human capital to creating economic growth; Romer emphasized in his article that the greater the investment in human capital, the higher the rates of economic growth and the more human capital was directed to specialize in scientific research, we would be able to create new scientific models and the improvement in the stock of knowledge and the level of creation and creativity would lead to an increase in the productivity of engineers and workers and vice versa. On another level, the continuous increase in the stock of human capital in the community leads to an increase in the stock of human capital allocated to scientific research, creativity and innovation. Romer argued that investment in human capital and in scientific research is what gives the economic superiority of Western industrialized countries while investment in human capital remains weak in poor countries.

Romer distinguished between two classes of human capital, the one directed at scientific research and the one directed at work and enterprise. The first category remains insignificant compared to the second. Not everyone who has invested in teaching and training himself will seek the scientific research approach as much as they seek the labor market, even in Western countries. And if the second category is important for creating growth, then the first category is more important, as it introduces new ideas and models through innovation and creativity and this is the idea by which the Nobel Academy justified choosing Paul Romer to receive its award for the year 2018 shared with William Nordhaus. Thus, Romer's idea about the importance of investing in human capital directed to scientific research coincided with the main idea of the great economist "Joseph Schumpeter", author

of the book (Capitalism, Socialism and Democracy) who argued that the sustainability of the capitalist system is guaranteed by the ability of this system to create and innovate through the mechanism of "creative destruction" that operates continuously to offer consumers new goods that are more reliable and more effective than old goods. Romer predicted in his 1990 article that a country with a large stock of human capital would grow its economy larger than a country with less human capital. This explains the great and exceptional growth of Western economies during the second half of the twentieth century and even their renaissance after the World War II, as the infrastructure was completely destroyed, leaving only, for European countries in particular, the educated human competencies that survived the war. The American economy, the country that was not affected by the disasters of the world war, may be the country that most benefitted from the scientists and competencies who fled from the countries destroyed by war during the twentieth century. The United States is in fact the country that benefitted the most from the great genius minds during the twentieth century due to the atrocities of the World War II and the process of attracting minds to American laboratories and universities did not stop and it is not surprising that most of the inventions have seen the light in this country which built its scientific, industrial and economic empire on investment in creative human capital and by witnessing this country winning Nobel Prizes in all disciplines we can notice the veracity of this assumption. The economic importance of human capital for Romer is related to his ability to create and innovate. From his viewpoint, the importance of educated human competencies is reflected in their ability to innovate. There is no doubt that tax policies greatly affect this internal factor in economic growth, as imposing high taxes on income may impede the process of human development and the ability of individuals to develop themselves. Further, research and development are closely related to the growth process as high taxes on income may hinder companies and research institutions to continue the process of research and development necessary for the accumulation of knowledge and economic growth.

Several recent studies have used endogenous growth models to emphasize that taxation reforms can affect the rate of economic growth.

Lucas concluded that reducing taxes on capital and increasing taxes on personal income could lead to an increase in the rate of economic growth. Barro found that government expenditure and taxes have a joint effect, in the short and long term, on economic growth. Rebelo has analyzed the impact of taxation on growth and found that an increase in the investment tax leads to a decrease in the rate of growth while a permanent change in the consumption tax does not in any way affect the growth rate, although it affects its level exactly as the effect of the total tax.

Jones, Manuelli and Rossi concluded that removing tax distortions and reducing taxes could lead to an increase in the average growth rate. Pecorino indicated that the shift of the tax structure from income tax in general to consumption tax leads to an increase in the rate of growth. Ishi states that tax revenues depend heavily on gross domestic product and that the gross domestic product is the one that affects the volume of revenues. This means that an increase in the size of the gross domestic product leads to an increase in tax revenues, that the causal relationship flows from the gross domestic product towards tax revenues and that the gross domestic product is an external variable that leads to an increase in tax revenues. Hak K. Pyo found that human capital is amoral influence in total production and believed that human capital complements both physical capital and labor and therefore income growth cannot be explained by physical capital alone. He believed that it is possible to observe the convergence of growth rates of developing countries that use human capital as a production factor. On the other hand, we can observe the variation in the growth rates of developing countries that were unable to use human capital as a production factor and between the growth rates of developed countries that achieve large-scale external savings from the accumulation of human capital stocks. Therefore, he believed that the miracle of growth in South Korea is the result of the continuous accumulation and use of human capital. In Engen and Skinner, the study shows that there is a strong positive relationship between tax rates and long-term economic growth for the United States of America and the study concluded that tax reform by reducing the tax rate by an average of 2.5% will lead to an increase in the economic growth of the United States between 0.2 and 0.3%. On the other hand, economic growth can occur under the influence of internal factors in the overall economy which is the reason these models are called endogenous growth models.

CONCLUSION

The debate about the role of taxes in the process of economic growth is, in fact, a broad debate that will not end. Therefore, in this section, we tried to briefly present the theories of growth and the role of taxes in the growth process in economic thought, then modern growth models and then in the next part, we will examine the role of tax policies in Economic development process.

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