INVESTIGATING THE FACTORS AFFECTING THE INCOME DISTRIBUTION ON THE AFGHAN ECONOMY WITH EMPHASIS ON TAXES

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Abstract

One of the most important tools for adjusting the income distribution is tax. By imposing taxes on the income and wealth of individuals, governments can, in addition to financing their own expenses, use this tool to reduce the income gap and make the necessary adjustments in the distribution of income. The purpose of this study is to investigate the factors affecting the income distribution by emphasizing the types of taxes in the Afghan economy. In this research, data collected by library and statistical methods, WDI 2021 and Global Inequality Database during 1971 to 2020, and for data analysis, OLS and GMM time series econometric models use in this research. The results of different research models show that the tax on the consumption of a tax is on the path of injustice and inequality, because it receives a tax in equal proportions from all members of society. The most important proposal in this regard is to create an exponential tax mechanism. The research also shows that trade taxes will increase the price of domestic consumer goods, resulting in inflation and increased income inequality. The results also show that increasing profit tax will reduce corporate profits and, of course, reduce income inequality.

Keywords: Income Distribution, Inequality, Afghanistan Economy, Consumption Tax, Profit Tax, Trade Tax.

JEL Classification: R62, D63, H23, F38.

1. INTRODUCTION

Income distribution and ways to reduce inequality are the most important issues in any intellectual and economic system that is considered by individuals and economists in developing countries. Since the amount of social welfare of households depends on their income and proper distribution of income can increase the level of social welfare in society and for the majority of households, so the fair distribution of income is one of the important goals of development programs (Sen et al., 1997; Sadeghi Amroabadi, 2021b; Nasr Azadani et al., 2023). One of the most important tools to adjust the distribution of income at the disposal of governments is the tax tool. By imposing taxes on income and wealth of individuals, governments can, in addition to financing their expenses, use this tool to reduce the income gap and to do the necessary in the distribution of income (Komlos, 2020). Poverty and unequal distribution of income and wealth is one of the main problems of Afghanistan's economy, which will cause many problems in society in the economic, social and political spheres (Sadeghi Amroabadi, and Kazemi, 2022).

The multidimensional poverty index score for 2016 was 0.272 and shows that poor people in Afghanistan experience more than 27% of deprivation if all people are deprived of all indicators. The ratio of multidimensional poverty per capita has been fixed at 51.7%. The Multidimensional Poverty Index complements Afghanistan's monetary poverty rate. Although 51.7 percent of the population is poor in terms of the multidimensional poverty index, 54.5 percent are poor in terms of money, and about 36.3 percent of the population in Afghanistan is poor on both scales. Afghanistan, with a population of 32.9 million, experienced a real GDP growth of -9.1 and inflation of 6.5 percent in 2020. The tax-to-GDP ratio is 9 percent, the profit-to-income tax ratio is about 4 percent, and the trade tax ratio is about 7 percent. The percentage and ratio of goods and services tax is about 6% value added. Afghanistan's Gini coefficient in 2020 is equal to and the share of one percent of the population above income is equal to 15 percent and the share of 10 percent above the population of income is equal to 44 percent (World Bank, 2021), so the situation of income equality in this country is not appropriate. One of the goals of governments to reduce income inequality is the tax tool that this study seeks to examine.

Usually, the reason for non-distribution of income is the non-realization of projected revenues and its distribution to the citizens in the system and policies of the Government of Afghanistan. On the other hand, non-fulfillment of financial obligations of donor countries leads to non-distribution of income. The non-distribution of income and the tax system goes back to the emergence of the Ahmad Shah dynasty, during which financial self-sufficiency was almost imaginary that the previous governments did not achieve their long-term goals and sometimes did not achieve the goal they had set (Atkinson and Morelli, 2014). The solution to this problem has usually been to resort to foreign aid, while the solution to these

strategies has been cross-cutting and has not had a positive effect on the poverty and living conditions of the people. For several years, developing and developing countries have similarly sought to use the financial system, especially the tax system, to compensate for income inequalities generated by private market performance. Bird and Zolt (2004) examines developing countries to believe that income tax is incomplete and non-exponential, and that the administrative and political costs of implementing an exponential tax system are high, so it cannot be used to improve income distribution. He cites strengthening consumption taxes and costly policies to benefit the poor as alternative ways to reduce poverty and inequality. Berg and Rattso (2001) in an article examined the importance of the structure of the income distribution tax in a local government in Norway and showed that although the high-consumption tax covers a large amount of tax, but the wealth tax effect has more distribution. Chu et al. (2000) by examining the distribution of income and taxes in developing countries and countries in transition, indicate that in developing countries, the distribution of income before taxes is more equal than in industrialized countries. Unlike industrialized countries, however, developing countries are generally unable to reduce income inequality through taxes and transitional policies. Engel (2011) examines the direct effect of taxes and changes in the tax structure on income distribution in Chile to show that taxes have had little effect on income distribution. The Gini coefficient is 48% before tax and 49% after tax. In addition, a fundamental adjustment in the tax structure, such as an increase in VAT from 18% to 25%, as well as a change in the progressive income tax to a 20% tax, has made little change to the income distribution. Monfor (2012) uses a questionnaire method among students to conclude that economic inequality causes political conflicts such as revolution, insurgency, terrorism, demonstrations and coups. Ghaffari et al (2014) in a study entitled the study of the effects of taxes on income distribution in Iran shows that with increasing taxes, the Gini coefficient decreases, which has led to improved income distribution. Zucman and Saez (2020) have provided evidence of the distribution of macroeconomic accounts in the United States, showing that personal income tax data fell from 70% in the late 1970s to about 60% in 2018, which could be offset by inequality in America has a relationship. Taghizadeh-hesary et al. (2020) evaluate Japan's tax policy on income inequality which shows that the increase in money supply through quantitative tax adjustment policies is significant and increases income inequality. The situation of inequality in Afghanistan is not good and the declines of the population benefit disproportionately from income.
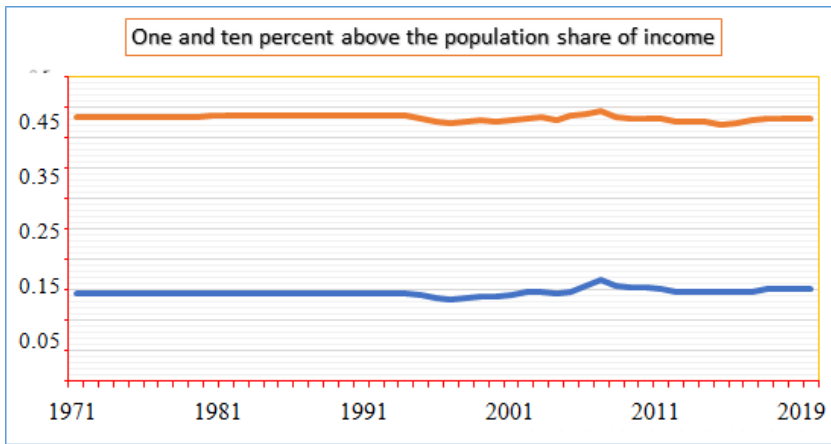
Figure 1. One percent and Ten percent above the population share of income
(Source: Research Findings).

According to the chart above, the high one percent share of the income from income has been steady since 1971-1994, despite the ongoing civil war, but after the chaos began again in 1994-2008. The economic situation of the government and the people became critical and inequality increased, then with the efficiency of the new government and its presence in the international community, the economic situation flourished, and inequality decreased.
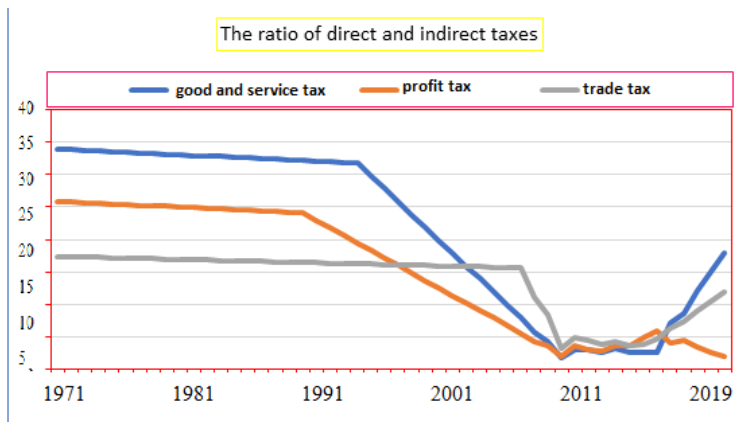

Figure 2. Tax rates in Afghanistan
(Source: Research Findings).

Considering that taxes are one of the main variables of the research, especially consumption tax, an attempt has been made to explain these statistics accurately, according to the above diagram which shows the effect of consumption tax on variables in different sections. It shows that it has fluctuated over time; the most changes have started from 2017 onwards, when the country's economic

situation is in a severe crisis. As a result, it can be said that in the sample collected until 2017, it shows an improvement, but after this year, it expresses a severe crisis. According to the chart above, the profit tax has been declining since 1971-2010, which means that it has improved the economic situation, especially from 2010-2020, although it has fluctuated, but these fluctuations have not been very severe. According to the chart above, the tax on trade has been very slow until 2006, when after the formation of a new government, trade flourished and on the other hand, the tax on trade also improved the economic situation, which unfortunately from 2016 to then there was chaos in the country again. This process was in crisis again.

Considering these studies and the importance of inequality and the factors affecting it in the Afghan economy, the purpose of this study is to investigate the factors affecting the equitable distribution of income with emphasis on taxes in the Afghan economy.

2. LITERATURE REVIEW

Todaro has made the eradication of poverty and inequality the center of gravity of issues and in fact for many people is the main goal of development policy (Todaro, 1999, p. 138; Sadeghi Amroabadi, 2022). Inequality, especially in advanced economies, has attracted the attention of many policymakers and academics (Yellen, 2014; Bernanke, 2020; Draghi, 2016; Adeniyi & Adesunloro, 2017). Equality is considered a significant value in most societies, such as justice. Regardless of ideology, culture or religion, people find inequality undesirable. Kuznets (1971) as the first theory of inequality, proposed the relationship between income inequality and growth. Others have argued that rising inequality may be a major factor in the global financial crisis (Bernanke, 2020; Mahmoudinia and Amroabadi, 2023).

2.1 FACTORS AFFECTING INEQUALITY FROM THE PERSPECTIVE OF DIFFERENT SCHOOLS

In a division, theories of income distribution can be examined from the perspective of various economic schools, including the classical, Keynesian, Marx and neoclassical schools:

2.1.1 CLASSICAL THEORIES OF INCOME DISTRIBUTION

Marx first used the term classical economics. The classical way of approaching the problem of income distribution is based on the distinction between two sections in national production: the section, which is necessary for its reproduction, which includes the necessary livelihood of the workers in the economy, and the section which is freely available to society. And constitutes its net product or surplus, what remains of the product after the necessary subsistence of the workers and the replacement of the means of production. The aim of classical theory is to explain the conditions governing excess size and its distribution among

different classes of society (Berberov and Milogolov, 2020; Mohamadifar and Sadeghi Amroabadi, 2020).

2.1.2 KEYNESIAN THEORIES OF INCOME DISTRIBUTION

According to Caldor, Keynes has never been interested in the issue of income distribution in this regard. Since the mid-1950s, a large number of neo-Keynesian or post-Keynesian models of economic growth and income distribution have emerged, originally from the University of Cambridge. The theory of post-Keynesian income distribution now has a prominent place in most macroeconomics textbooks (Lubik and Marzo, 2021; Sadeghi Amroabadi, 2021a). Because passive savings relative to capitalism, full-time employment is moderated through the limited distribution of income between wages and profits or among social classes, these models are termed post-Keynesian. It can be said that post-Keynesian theories, in the middle of the classical and marginalist theories, reject the distribution of social class proposed by classical economists, according to which the share of income corresponds to the ownership of the main inputs (labor, capital or land) (Nagheli et al., 2013; Hoynes and Patel, 2018).

2.1.3 MARXIST THEORIES OF INCOME DISTRIBUTION

It is difficult to imagine in the Marxist economy a more important issue than the distribution of income and the means of production among the main classes of capitalist economies. For example: 1) the share of profits (in contrast, the share of wages) is an important component of the interest rate.2) the interest rate acts as the main determinant of the speed of investment and consequently accumulation. It is a life-giving force of capitalist economies that regulates their growth and development and the wealth of individuals in them. 4) Thus, distribution, production, and accumulation are fundamentally interconnected and form the basis of life and livelihood in capitalist societies. In this sense, in fact, Marx saw distribution relations as part of the economic core of capitalist economics. Marx affirmed that relations of production and relations of distribution are part of the material foundations and social forms of any given historical period.

2.1.4 NEOCLASSICAL THEORIES OF INCOME DISTRIBUTION

The neoclassical theory of income distribution is considered by many to be a general equilibrium theory, but Friedman sees it as a partial or Marshall Equilibrium approach. The theories we encounter are designed to explain the level of payment as production, rent, wage rates, profit rates, and to explain the change in the share of various factors in total production, what these theories offer. Importantly, income distribution is based on factors of production (Fremstad and Paul, 2019). Apart from the theoretical perspectives on economic schools of thought about the theory of income distribution, there is a well-known theory that deals with the relationship between income distribution and economic growth. This theory was proposed in 1945 by Simon Smith Kuznets, an American economist and statistician

who won the 1971 Nobel Prize, and is known as the Kuznets hypothesis. According to this theory, in the first stages of economic growth, income distribution becomes more unequal. Kuznets studies show that inequality in income distribution in advanced economies decreased in the 1920s. Estimates for Japan, which has access to historical data, show that income distribution inequality increased from the beginning of industrialization until World War II and decreased significantly during the post-war period.

2.2 FACTORS AFFECTING INCOME DISTRIBUTION

There are various methods for measuring the distribution of income, including: 1) Income distribution by dimensions. 2) Income distribution based on factors of production. 3) Distribution of some income. 4) Income distribution through the Lorenz curve. 5) Gini coefficients and income inequality scales (Renani et al., 2014; Alstadsæter et al., 2019). All the different factors that have been described in the literature as affecting inequality can be classified into five groups as follows. There are studies that first introduce the inverse relationship of U-shape between average income and income inequality by Kuznets. Growth from a low level of development first leads to an increase in inequality, but then, at a higher level of development, leads to a decrease in inequality. However, evidence from the transition process and many studies have cast doubt on Kuznets' hypothesis. Accordingly, it makes sense to look for the relationship between GDP growth and inequality through other indicators, which describe the level of development of a particular country. One of these indicators may be the share of the working population in different sectors. There is evidence that inequality increases if a large part of the population moves to a higher segment (for example, from agriculture to the industrial sector), but if the movement stops, income distribution redistributes. Technological changes can also lead to wage disparities due to increased need for skilled workers and increased productivity only for skilled workers (Ciminelli et al., 2019). However, these changes can be avoided by making appropriate adjustments to education policy. Opponents of Kuznets' theory argue that: 1) Experience in underdeveloped countries has shown that the wealthy in these societies spend their extra income on luxury goods instead of savings. 2) Low income of the poor causes physical weakness and reduces their labor productivity, and this in itself reduces the amount of production and consequently reduces the national income. 3) Increasing the income of the poor increases the demand for essential domestic goods, which in turn increases employment and production. 4) Equitable distribution of income increases the psychological motivation of individuals to participate in economic development. And the government can act in four ways to properly distribute income: 1) Change the distribution of income based on factors of production, which is created by changing the relative prices of factors of production. 2) Adjust the distribution of some income through the redistribution of assets. 3) Increasing the distribution of some income at the lower levels of society through direct transfer

payments or the provision of essential goods and basic services, is one of the important issues in the science of income distribution economics, which is examined through positive economy and normative economy. 4) Reducing the distribution of some income at high levels, which is achieved through the imposition of progressive taxes on income and wealth (Piketty et al., 2019; Racheal & Frank, 2023). Other factors such as macroeconomic, political, historical and cultural, demographic factors are influential.

2.2.1 MACROECONOMIC FACTORS

Include inflation and unemployment, the size of government spending, foreign debt and foreign reserves, exchange rate fluctuations, and other factors. High inflation mainly exacerbates inequality, as it distributes resources through people with fixed nominal incomes, usually from the less insured and poorer in the population. However, with a progressive tax system, inflation can reduce the income share of a more affluent sector of the population (Dai et al., 2016). The impact of government spending depends on its composition, mainly on the share of social transfers in public spending. For example, if foreign debt increases, lower interest payments are less likely to be transferred to social transfers and the effect of redistribution of public sector spending is reduced (Sadeghi Amroabadi et al., 2012).

2.2.2 DEMOGRAPHIC FACTORS

Includes demographic development processes, including population age structure (share of economically active population), population growth and density, urbanization, level of human capital, including level of education and population health status. For example, inequality is lower in high-density countries than in low-density countries. In the latter case, the possibility of land concentration is greater, which leads to greater inequality through capital income. The level of human capital, especially education, is also very important. Research has shown that the relationship between academic development and inequality is inversely U-shaped. In the early stages of development, increasing the level of people education increases inequality, because more educated employees will have higher incomes. Further increase and equality at the educational level equalizes income distribution and reduces inequality**.**

2.2.3 POLITICAL FACTORS

It includes privatization and the share of the private sector, the level of taxes and the share of the public sector, the openness of a country, especially the openness of trade and the freedom of workers. Social policy and other economic policy decisions have been analyzed by Durham as a factor influencing inequality. However, no definite conclusion can be drawn about the effect of the type of regime, because, for example, most developed countries with less inequality are democracies, but the reason for their lower inequality can also be their higher level of development. Privatization in transition countries leads to greater or lesser

concentration of wealth, leading to unequal income distribution. Profit inequality in the public sector is usually lower than in the private sector. The general relationship between trade openness and income inequality is unclear. There is also a negative relationship between social transfer or income redistribution and income inequality, but apart from direct population, redistribution can also affect business and investment decisions, so it is unclear to what extent inequality is affected and in what direction. The tax system is social transfers**.**

2.2.4 HISTORICAL, CULTURAL AND NATURAL FACTORS

Including the distribution of land ownership, people's attitudes to inequality and the extent of the shadow economy, all of which have been formed throughout history. In addition, there is another factor; Availability of natural resources Countries with good natural resources are more inequitable due to capital-based technology and less need for skilled labor. Certainly, there is more inequality in those countries that have historically owned land, natural resources and wealth. A small group of people is concentrated. Finally, social scientists have found a relationship between the cultural characteristics of a society and its income inequality (Kaasa, 2003; Kataoka & Takamatsu, 2024).

2.3. THE RELATIONSHIP BETWEEN TAXATION AND INEQUALITY

Taxes are used for a variety of purposes. Taxes are a source of funding for government spending, they correct market failures, and they are also a tool for income distribution and reducing inequality (Musgrave, 1959). Musgrave (1959) states that taxes in the economy have three roles: stabilization, allocation, and distribution. There are many views and opinions about the distributive role of taxes. These views are different and have changed over time. The first view holds that the tax system is effective in redistributing income and can reduce inequality (Sadeghi Amroabadi et al., 2015; Cheng and Pu, 2017; Bises et al., 2024). The second view states that the tax burden arising from the application of taxes may apply to any natural or legal person. The third view, with a relatively different approach, considers the task of the tax system to increase the maximum amount of government revenue in order to cover the costs of redistributive policies. Other perspectives on the distributive role of the tax system lead to differences in the design of the tax system (Emani et al., 2019; Van den Berge et al., 2023). This has plagued many of the countries involved and even other Third World Countries, which has increased demand, improved the welfare of poorer families and increased labor force participation. None of the other tax-reduction options discussed earlier will be particularly beneficial to the poor: corporate tax cuts to varying degrees benefit shareholders, consumers and workers, but those with incomes seem unlikely. They are low, especially to make a profit. They also aim to increase investment rather than consumption. Reducing high rates of personal income tax or property tax is likely to

contribute to a better situation. While sales tax cuts apply to the entire population, they provide greater absolute benefits to those who spend the most (Binder, 2019; Sadeghi Amroabadi and Mahmoudinia, 2020).

3. RESEARCH METHOD

This research is applied in terms of library method and in terms of purpose. In this sense, data is collected and analyzed from reputable sources such as the Ministry of Finance, the National Statistics and Central Information Office of Afghanistan, the World Bank and the International Monetary Fund. The realm is a subject in the field of public sector and development. The time domain is in the period 1971 to 2020. Spatial territory is also the economy of Afghanistan. This study tries to examine the sources affecting the distribution of income in Afghanistan. OLS and GMM time series econometric models are used to analyze the data in this study.

3.1 RESEARCH MODELS AND VARIABLES

According to the theoretical literature, Kuznets theory (effect of production on inequality), Public Sector theories (role of government on income inequality), Musgrave theory (tax effect on income inequality) and other theories of inequality, model and research variables are as follows:

$$\text{InEquality} = a_0 + a_1 DT + a_2 IDT_t + a_3 T + a_4 \sum_{i=1}^{n}(controls_t) + u_t \quad (1)$$

3.1.1 INEQUALITY RATIO

1% high share of income from income (Y1), 10% high share of population from income (Y10) income distribution index. Data are extracted from the Global Inequality Database.

3.1.2 INDEPENDENT VARIABLES

(DT) The ratio of direct taxes to GDP: taxes on consumer goods and services, taxes on profits. (IDT) Ratio of Indirect Taxes to Gross Domestic Product: Export Tax, International Trade Tax. (T) Ratio of tax revenues to GDP, net tax with deduction of subsidies.

3.1.3 CONTROL VARIABLES

Based on the literature and inequality theories the following variables used as controls variables: Log (TOSEM): Logarithm of financial development index (credits granted to private sector to GDP)). Log (GDPP): logarithm of per capita income and power 2 per capita income. Log (CPI): logarithm of consumer price index. Log (Edu): primary and secondary education rates (Supplementary). Rent: Rat income ratio. Pol: Pollution rate. Trade: degree of commercial openness. Un: Unemployment rate. Pop: Urban population, rural population. Other control variables included in some models are self-employment rate, life expectancy, labor ratio, migration rate, tourist ratio, net foreign assets, net capital account, government

debt, net savings, investment Foreign, domestic consumption, government spending on education, birth rates. The above data has been extracted from the World Bank website and [1]WDI2021 software. u_t is a component of disruption.

3.2 ESTIMATION METHOD: OLS AND GMM

In addition to the OLS estimation method, the GMM method was used in this study. The advantage of using the dynamic method (GMM), considering individual heterogeneity and more information, is the elimination of biases in conventional regressions, which will result in more accurate, higher efficiency and less alignment estimates in this method. The dynamic method of generalized torques has the following advantages:

1) Solving the problem of endogenous variables. 2) Reducing or eliminating alignment in the model, 3) increasing the temporal dimension of variables, and 4) eliminating variables that are constant over time. With the GMM method, many variables such as customs, religion, historical factors, laws and regulations, political components, etc. that affect the per capita income and financial development and are fixed over time can be differentiated by removed statistics without deleting them leading to bias in model estimation. Due to the possible endogeneity between the income inequality index and the explanatory variables, as well as the correlation between the Ut disruption component and the dependent variable, it is forced to use instrumental variables. Interruptible values of explanatory variables or dependent variables mean that the model structure has become dynamic and the reason for inserting interrupts is the slow adjustment of the dependent variable, because explanatory variable changes often do not have immediate effects on the dependent variable but their effect takes time (Davidson and MacKinnon, 2004).

In order to avoid bias and provide a consistent estimate of the estimator (GMM); the validity of the momentum conditions is estimated. The consistency of the above estimator depends on the validity of the instruments. The Sargan test for robustness exams the validity of the instruments and the second test examines the correlation of the errors. In fac the failure to reject the null hypothesis of both tests will provide evidence of the non-correlation hypothesis in the differentiated error statements and the validity of the instruments (Greene, 2000).

4. RESEARCH RESULTS

In order to better understand the nature of the population studied in the study and become more familiar with the research variables, before analyzing the statistical data, it is necessary to describe this data. Also, statistical description of data is

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[1] The World Inequality Database (WID. world)

sometimes used to identify the pattern that governs them and is the basis for explaining the relationships between variables used in research. Descriptive statistics of research variables are presented in Table 1.

Table 1. Indicators describing sorted data, central and dispersion indicators.

Variables	Average	Middle	Standard Deviation	Skewness	Kurtosis	Min	Max
A high one percent share of society in revenue	0.144	0.145	0.005	0.141	2,938	0.134	0.166
Ten percent above the community share of income	0.434	0.435	0.004	-0.308	3.532	0.421	0.444
consumption tax	26.824	31.060	23.817	0.363	2.767	1.780	75.550
income Taxes	16.581	18.763	14.112	0.366	2.725	1.896	44.980
Export and import tax	53.741	60.629	49.568	0.344	2.712	3.161	152.036
Jarque–Berastatistics and probability							
Ten percent of the community's share of income				One percent high community share of income			
1.214				0.215			
(Possibility)0.213				(Possibility)0.645			

Source: Research Findings

The average value for the share of one percent of the population above income is 0.144, which indicates that most of the data is centered on this point. As can be seen, the median share of the top one percent of income is 0.145, which indicates that half of the data is less than this amount and the other half is more than this amount. One of the most important scattering parameters is standard deviation. The value of this parameter is equal to 0.005 for the share variable of one percent of the population above income. The degree of asymmetry of the frequency curve is called skewness. If the skewness coefficient is zero, the society is completely symmetrical, and if this coefficient is positive, it is skewed to the right, and if the coefficient is negative, it is skewed to the left. The elongation or inclination parameter of the frequency curve relative to the standard normal curve is called protrusion or elongation. If the kurtosis is about zero, it means that the frequency curve is balanced and normal in terms of elongation. If this value is positive, the prominent curve and if it is negative, it is a wide curve. The elongation of the research variables is all positive. The following are the results of different models in two ways, OLS and GMM, as shown in Table 2.

Table 2. *Results of research models*

Variables / Model	Model 1: Dependent variable: the top one percent share of society's share of income				The second model: dependent variable: the top ten percent of society's share of income			
Variables	The first model OLS	The second model is OLS	The first GMM model	The second model is GMM	The first model OLS	The second model is OLS	The first GMM model	The second model is GMM
Profit Tax	-0.001**	-0.0008**	-0.001**	-0.001**	-0.0001**	-0.0007*	-0.005**	-0.008**
Consumption Tax on goods and services	0.0002*	0.001**	0.001**	0.001**	0.0001**	0.001**	0.001**	0.0001**
Export and Trade Tax	0.0001*	0.0001**	0.004**	0.004**	0.0001**	0.001**	0.0009**	0.001**
Total tax	-	-	0.001*	0.001**	0.002**	-	0.0002**	0.0006**
Changes in GDP	0.0003**	0.0002**	0.0006**	0.00001	-0.0001	0.009**	0.001**	0.007**
GDP^2	-	-0.0003**	-0.0005**	-0.0007**	-0.0001**	-0.0005**	-0.0008*	-0.684**
Inflation index	0.0001**	0.002**	-		-	-	0.00005**	-
Primary Education index changes	-0.0007**	-0.0008**	-0.0009**	0.0001*	-0.0005*	0.00001*		-0.0002**
Postgraduate Education	-	-	-0.0005**	-	-	-	-0.001**	-0.0001*
Rural Population	-0.0001**	-	-0.074	-0.109	-0.002**	-0.002**	-	-0.017**
Tourist Ratio	-0.102*	-0.207**	-	-	-0.00001	0.124**	-0.141**	-
Environmental Pollution	-	0.009**	-	-	-	-	0.001**	-
FDI	-	-0.001	-0.005*	-0.006**	-0.0002	-	-0.001**	-0.004**
Birth rate	-	-	0.083**	0.068*	-	0.002	0.003**	-
National savings	-	-	-0.002**	-0.001**	-	-0.0004	-	-0.003**
Rental, mining and oil Revenues	-	-	0.045**	0.036**	0.0004	0.007**	0.009**	0.008**
Trade Volume	-	-	-	-0.168**	-	-	-0.015**	-0.089**
Sargan statistics	-	-	10.117	17.297	-	-	9.323	9.515
R^2	0.825	0.909	0.971	0.981	0.846	0.955	0.925	0.916
Ad R^2	0.873	0.878	0.962	0.944	0.772	0.887	0.919	0.785

Source: Research Findings. The numbers inside the table show the coefficients. Numbers with *, ** and *** have a significant probability of 10%, 5% and 1%, respectively.

The results of different models and models showed that the impact of three types of tax variables on different indicators of economic inequality in Afghanistan is significant. The estimated coefficients of different regression models are all above 0.8. The value of the estimated coefficient indicates that more than 80% of the behavior of the dependent variable of income inequality is explained by independent variables; this indicates a relatively high correlation between independent variables and dependent variables. All estimated variables have theoretically consistent coefficients. The effect of three base variables on income distribution is significant. According to the obtained results, the variable coefficient of tax on consumption of goods and services in all models has a probability of less than 5% and positive, which has a positive and significant effect on the share of one percent and ten percent of society (income inequality index) and as a result the hypothesis is rejected at the 95% confidence level. These results show that the consumption tax is on the path of injustice and inequality, because it receives a tax in equal proportions from all members of society. In other words, a rich person and a poor person pay the same tax on a certain amount of goods and services, which increases income inequality. The most important proposal in this regard is to create an exponential tax mechanism (Piketty and Saez, 2003).

The results of other variables also show that increasing the GDP changes, inflation, environmental pollution and birth rate and rental revenues increases inequality. Also increasing the foreign direct investment, education, trade volume, GDP^2, rural population and tourist ratio in Afghanistan will decrease the inequality. It means the Kuznets theory exists in Afghan economy. Also base on public sector theories, the role of government like education, tourist and FDI absorption have effect on income inequality (Aigheyisi & Egbon, 2020).

Sargan statistics in GMM estimates used to test the correlation between residuals and instrumental variables show that there is no estimation problem. The Sargan test statistic, which has degrees of freedom equal to the number of oversized constraints, also rejects the zero test for the correlation of wastes with instrumental variables. As a result, the validity of the results for interpretation is confirmed. In the interpretation of Sargan statistic, it can be said that the correlation between the residuals of the estimate, which can cause bias in the estimated coefficients, is rejected in this test. In fact, this test examines the relationship between the estimation residuals to test the autocorrelation problem as one of the possible classical regression problems. Finally, the existence of this autocorrelation is rejected, and the estimation results are completely accurate and without bias.

The research results also show that trade tax in all models will increase the price of domestic consumer goods and thus create inflation and increase income inequality. The results also show that increasing profit tax on all models will reduce

corporate profits and, of course, reduce income inequality. Therefore, it is recommended to increase the corporate income tax, especially for sole proprietorships in Afghanistan. This Study shows how reducing income inequality through tax policy affects economic growth, taxes in different parts of the income distribution have heterogeneous effects on households' incentives to work, invest and consume, modern governments use tax policies not only to increase capital They have been used for government operations but also to reduce income inequality among citizens. Leading tax with a negative net tax rate for low-income households achieves two distinct goals:

1) Provide the minimum level of consumption for low-income people. 2) Reduce income inequality between different population groups. The underlying economic rational effort his tax policy is that income inequality creates less economic growth. By between the impact of tax policy on middle-income households and those on middle-income households, asymmetric effects are allowed, which means that reducing poverty and reducing income inequality, between low-income and middle-income households improves economic growth. Reducing the income gap between the above-average households and the average household has a negative impact on GDP growth. There are, and each will have different effects on the economy, so it can be expected that consumption taxes will have a small negative impact on growth, although they do not have the benefits of repeated taxes on real estate. Personal income tax is more harmful to growth than consumption tax:

1) They are generally progressive, with marginal tax rates (which hinder growth) higher than their average rates (which generate government revenue). This means that they discourage the growth of each unit of tax revenue more than consumption taxes, which are generally fixed (but not very high) rates. 2) They usually tax the return on savings (dividends or dividends) in addition to the income tax that their savings generate, thus preventing savings. While this second effect may not hurt the growth of publicly traded companies that can raise funds abroad, growth financing may be for small and medium-sized enterprises (especially those with Reduce the budget of family and friends) (Sadeghi Amroabadi and Emadi, 2020). 3) High income taxes and social security contributions for low-wage workers can lead to people preferring to take advantage of social benefits over work.

To assess the validity of the model and to examine the assumptions of classical regression, in addition to checking the absence of collinearity between the independent variables entered in the model, tests related to the normality of residuals, homogeneity of variances, residual independence and no error in model specification should also be done. Various tests can be used to test the normality of error. One of these tests is the Jarque–Bera test, which has also been used in this study. The results of the Jarque–Bera test indicate that the residuals obtained from the estimation of the research models have a 95% confidence level of normal distribution, so that the

probability of this test is greater than 0.05. Another statistical assumption of classical regression is the homogeneity of variance of the residuals. If the variances are heterogeneous, the linear estimator is not straightforward and will not have the least variance. In this study, Breusch–Pagan test was used to examine the homogeneity of variances. Given the level of importance of this test, which is greater than 0.05, the null hypothesis that there is variance homogeneity is not rejected and it can be said that the model does not have the problem of variance heterogeneity. Also, in this study, the Durbin-Watson test (D-W) was used to test the non-correlation of residuals, which is one of the assumptions of regression analysis and is called correlation itself. According to the preliminary results of the models, the statistic value of DW is equal to 1.5 till 2.5, and it can be concluded that the rest are independent of each other. In addition, a Ramsey test was used to test whether the model has a linear relationship and whether the model in question was correctly explained in terms of linearity or nonlinearity. Due to the fact that the level of significance of the Ramsey test for the models is greater than 0.05, therefore, the null hypothesis of this test is that the model is linear, and the model does not have a specified error. A summary of the results of the above tests is presented in the table. The collinearity of the independent variables was investigated using the VIF criterion and all coefficients were less than 5, which indicates a lack of strong collinearity between the independent variables. The research remains of all models also have a normal distribution.

Table 3. *Results of tests related to the statistical assumptions of the first and second pattern models.*

Jerque–Bera Statistics		BPG statistic		D-W statistic	Ramsey statistic				
χ^2	P-value	F	P-value	D	F	P-value	Model		
1.472	0.334	1.215	0.07	1.8	0.227	0.745	1	The first pattern	
1.215	0.125	1.159	0.97	1.7	0.985	0.215	2		
1.385	0.258	0.209	0.91	2.1	0.315	0.596	3		
1.348	0.148	0.615	0.125	2.1	0.125	0.825	4		
1.467	0.339	2.841	0.51	2.2	0.147	0.458	1	The second pattern	
1.472	0.125	1.841	0.11	1.9	0.242	0.623	2		
1.523	0.295	0.184	0.64	1.7	0.147	0.458	3		
1.052	0.186	2.745	0.49	2.01	0.452	0.142	4		

Source: Research Findings

5. CONCLUSION AND SUGGESTIONS

The results show that the consumption tax in Afghan economy is on the path of injustice and inequality, because it receives a tax in equal proportions from all members of society. In other words, a rich person and a poor person pay the same tax on a certain amount of goods and services, which increases income inequality. The most important proposal in this regard is to create a mechanism of exponential taxes. The research also shows that trade taxes will increase the price of domestic

consumer goods, resulting in inflation and increased income inequality. The results also show that a tax increase will reduce corporate profits and of course, reduce income inequality. These results are based on the Ciminelli et al. (2019), Piketty et al. (2019), Komlos (2020) and Berberov and Milogolov (2020). Therefore, it is recommended to increase the corporate income tax, especially for sole proprietorships in Afghanistan. According to the research results, the following practical suggestions are presented:

1. By identifying the activities of the underground economy, the government can take steps to increase tax revenues, which will improve the standard of justice and the efficiency of income tax.

2. The government needs to implement programs to increase job opportunities; because in the long run it will improve the distribution of income. Also, determine the minimum wage every year based on the real inflation rate of the society, because the results show that the increase of the minimum wage is related to the improvement of income distribution.

3. In order to study exactly the effects of taxes on income distribution, it is better to consider government expenditures (as another financial variable) along with it, because on the one hand, paying taxes reduces the purchasing power of some people whose government is trying to reduce their income. In return, the government will increase the incomes of low-income groups through taxes collected through their transfer payments. The result of this fiscal policy, on the one hand, will be to the benefit of low-income individuals with government transfer expenditures, and on the other hand, the tax burden and loss will be imposed on high-income individuals. Examining the combined benefits of expenditures and the burden of taxation can be a prelude to future research.

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