THE DESIGN OF TAX POLICIES AND INEQUALITY: HOW CAN TAX POLICIES ADDRESS INEQUALITY?

A CONCEPÇÃO DAS POLÍTICAS TRIBUTÁRIAS E DESIGUALDADE: COMO AS POLÍTICAS TRIBUTÁRIAS PODEM COMBATER DESIGUALDADE?

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Abstract: inequality is a common feature of modern society. Most nations struggle to address this issue which can negatively impact the quality of life of their citizens. After the covid-19 pandemic, this subject deserves special attention. This work intends to answer to the main research question: how a tax policy can be designed to combat social inequality?. In order to achieve such goal, this research starts with a discussion of the definition of inequality and perspectives to be adopted. Later, it proposes guidelines for the policy design process, based on a broad perspective of inequality, which includes social and economic indicators.

Keywords: inequality; inequality of opportunities; tax policies.

Resumo: a desigualdade é uma característica comum da sociedade moderna. A maioria dos estados enfrenta desafios para resolver esse problema, o qual pode impactar negativamente a qualidade de vida de seus cidadãos. Em especial, considerando o cenário pós-pandêmico da covid-19, tal assunto merece reforçada atenção. Este trabalho pretende responder à principal questão: como uma política tributária pode ser desenhada para combater a desigualdade social?. Inicialmente, o trabalho demonstrará os desafios semânticos de definição do termo desigualdade e quais perspectivas podem ser adotadas. Ato contínuo, propõe diretrizes para o processo de formulação de políticas, a partir de uma concepção ampla da desigualdade, a qual inclui indicadores sociais e econômicos.

Palavras-chave: desigualdade; desigualdade de oportunidades; políticas tributárias.

INTRODUCTION

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Inequality is a common feature of modern society. Recent reports show that income inequality has increased in most OECD countries, due to a lot of combined factors: changes in labor market and institutions, less progressive tax system, increased concentration of assets, globalization, among others. Moreover, due to the COVID-19 scenario, the economic impact of the pandemic is expected to worsen inequality.

Most nations struggle to address this issue which can negatively impact the quality of life of their citizens. Inequal societies can lead to the subversion of democratic governance since there is a huge gap of power between the wealthy and the poor. Wealth confers economic security, social and political influence among other benefits which are not being entirely subject to taxation. A society that accepts inequality and will not promote the redistribution of wealth accordingly will impede social mobility and the generation of new economic opportunities. It is worth mentioning that inequality is an inevitable element of the economy, but excessive wealth inequality should be fought considering its harmful consequences. Therefore, states are required to be creative to tackle such harmful issue, that can even impede economic growth.

Tax systems can be designed to also address inequality. Some of the redistributive taxes are already commonly known such as: wealth taxation, corporate taxation, individual income tax, inheritance/ gift taxes. Other tax policies such as VAT exemption, tax payment deferral, profit allocation based on scarcity value, tax incentives for charitable giving, robot taxation via neutral taxes, taxes on immovable property, digital taxation, fight of tax fraud, evasion and avoidance, environmental taxation, can also be used as tools to address inequality. A tailor-made designed tax policy could be a possible solution for many states which are aiming to address inequality via the tax system.

This work intends to answer to the main research question: how can a tax policy be designed to combat inequality? Beforehand, this is a complex question without a clear-cut answer, but, instead, many possible choices will arise for states. The definition of inequality plays an important role in this research question and will be addressed on the following paragraphs. This research does not intend to answer the question of whether inequality should be fought via tax policies since this is a political choice to be made by states. Despite that, it intends to investigate and provide support for those policymakers who decided to use tax tools as mechanisms for such goals.

This research problem was investigated under an exploratory approach, as there is not much research available regarding the design of tax policies connected to a broad aspect of inequality. As it will be explained below, most of the literature is focused on inequality of results (wealth and income, only).

The research question is a philosophical-legal type of question, which aims to answer philosophical questions about the law. In addition, the research question is also a design question, aimed at making or designing something a specific issue. The objective of such question is to provide a set of instructions, detailed recommendations or instruments for the selected field (inequality) (CURRY-SUMNER et al., 2010).

The methodology selected for this research is the doctrinal method. Such method was chosen as doctrinal research is the research into law and legal concepts, via literature review (HUTCHINSON; DUNCAN, 1992). This topic was chosen considering that, in order to answer the question of how to design a tax policy to address inequality and its sub questions, an extensive study of literature and academic documents of relevant sources was required. Therefore, as stated, the literature review is based on legal academic texts, academic literature from other disciplines and international sources, such as OECD's reports.

Firstly, the following paragraphs will present a discussion of the definition of inequality and will clarify what is the approach adopted in this work. Following, it presents varied dimensions of inequality and how they are interrelated to each other. The next part of this research explains how tax policies can be designed to tackle inequality. For last, this work concludes that the adoption of a broad concept of inequality can effectively support policy makers in achieving their goals and presents how this broad concept can be implemented in the policy design. In addition, this research mentions topics that should be considered additionally in the design process, based on literature review.

1. DEFINITION OF INEQUALITY

Inequality is a complex social phenomenon, and its definition is equally challenging. As it will be clarified in the subsequent topics, inequality of income or wealth is usually analyzed in a narrow perspective (considering only the results), which can influence policymaking. This research intends to propose guidelines that could be adopted by states that are willing to address inequality via the tax system. Initially, this study will provide an overview of the issues regarding the definition of inequality and why adopting a broad perspective would be beneficial for the tax policy design.

Inequality should not be mistaken for poverty. Poverty is considered an absolute measure (whether someone is above or below the poverty line), while inequality relies on a greyish area and comparability tools. They are separate concepts, although are intrinsically connected since poverty can affect inequality and vice-versa. Nonetheless, a policy that exclusively focuses on poverty would not be able to address the issue of inequality effectively.

To address inequality, it is necessary to recognize that a lot of factors are intrinsically connected and cooperate among themselves for a vicious circle of perpetuation. Factors such as family background, education, health, environmental quality, housing, gender, and race are mostly not directly considered if tax policies are focusing on the mere redistribution of income. As those factors are intimately related to wealth or household income, special attention should be paid to them.

This research does not aim at digging into the concepts of social inequality and the theoretical remarks behind it. Therefore, discussions such as structured social inequality, one-dimensional inequality, stratification based on class, status and power go out of the scope of this work and would require a purely sociological debate (KRECKEL, 1976). On the following subchapter this work will clarify why the adoption of a broad definition of economic inequality (wealth and income), based on the combination of the inequality of results and opportunities should be adopted by policy makers.

1.1. Inequality of opportunities and results

A better understanding of economic inequality demands a deeper glance into the concepts of inequality of opportunity and inequality of results (ATKINSON, 2015). This differentiation is conceptually applied to economic inequality and considers an ex post view (inequality of results or outcomes) and an ex ante view (inequality of opportunities) of economic distribution (BOURGUIGNON, 2018). Economic inequality focuses on the economic aspect of inequality, mainly: income, wealth, and payment from employment.

Inequality of opportunity is the inequality that results from the differences that are already pre-existent in the availability of opportunity[2]. According to Atkinson, "Inequality of opportunity is essentially an ex ante concept—everyone should have an equal starting point—whereas much redistributional activity is concerned with the ex post outcomes" (ATKINSON, 2015). Thus, this ex ante view will analyze different circumstances that were inherited by

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[2] The author mentions that a marathon metaphor can be used to explain the concept of ex post and ex ante inequality. When redistributing inequality of a marathon, a pure analysis of the runner's results would lead to a redistribution of their finishing times, regardless of who had the least distance to cover. However, if one is analyzing the ex ante situation, the distance that competitors had to run to reach the finish line should be considered for redistribution.

individuals and which will affect their economic and social achievements (BOURGUIGNON, 2018).

To address only the result of a complex social phenomenon is to ignore the roots of what contributes to the inequality in a certain community. Therefore, the outcomes of policies that aim to combat inequality will present low impact if based exclusively on a superficial analysis. It is comparable to dealing with symptoms instead of the real cause of a patient's condition.

Inequality of results is the outcome of a choice that was previously made, including the individualized decisions made by each person (ZOLT, 2013). It is limited to analyzing the outcomes, such as less or more income and wealth in households.

In addition, although they are different concepts, inequality of results and inequality of opportunities seem to be intrinsically connected in a vicious circle of perpetuated inequality, as mentioned in the previous paragraph. Poor opportunities will generally lead to poor results, which might not be dealt with effectively by the state's policies.

It can be challenging to differentiate results from opportunities. Dealing with the identification of inequality of opportunities brings three main challenges: some circumstances are not observable; there is ambiguity between circumstances and personal choices (such as personal choices are influenced by inherited circumstances) and opportunities and outcomes are often intrinsically related, in a vicious circle (BOURGUIGNON, 2018).

However, it is worth mentioning that, although much attention is brought to the measurement of inequality of results (such as Gini Coefficient, among other economic instruments), less is being done about inequality of opportunities.

Nonetheless, this does not lead to the conclusion that ex ante inequality is not measurable, since there are some observable dimensions of it[3]. Therefore, verifiable factors such as inequality of earnings among gender, race, migrants and other personal characteristics combined with an analysis of individual circumstances (as access to health, education, intergenerational consequences, among others) could lead to an identification and measurement of inequality of opportunities. As stated by Bourguignon, "The best that can be done is to monitor the observed dimensions of inequality of opportunity, or equivalently some

[3] Bourguignon mentions that education or income of the parents, race, migration status, family characteristics, region of birth, and characteristics of the labour market could serve as guidelines to identify the distribution of income. As stated by the author,"It matters for policy to know whether this role has increased or not, or that more inequality in the income of the present generation is likely to generate more inequality in future generations"

determinants of inequality of outcomes that can be considered not to be the result of individual decisions or economic behaviours"[4] (BOURGUIGNON, 2018).

To conclude, inequality of results and opportunities are intrinsically connected, although different in essence. This research does not intend to present solutions on how to measure inequality of opportunity. However, it intends to illustrate that this broad perspective (opportunities and results) would enrich the policy designed.

Therefore, under a tax policy design perspective, it should be of extreme importance that a broad definition of inequality is taken into consideration when formulating a policy, by analyzing observable factors such as the ones mentioned in this chapter. To summarize, this broad definition must include not only the ex post perspective, or inequality of results, but also an ex ante perspective, also known as inequality of opportunities. The inequality of results is measured via economic outcomes, such as wealth and income, while the inequality of opportunities uses social indicators to identify equal access to opportunities.

1.2. Economic growth: the solution?

A question must be asked when addressing inequality: what is the role played by economic growth and is economic growth the answer to deal with inequality?

Economic growth was considered as the most important policy objective by most countries, irrespective of their stage of development. This objective is erroneously based on the general belief that economic growth will automatically generate the outcome of well-being to its citizens. The OECD clarifies that economic growth is not itself alone the most important issue, but how countries grow and whether this growth can be translated into benefits for its own citizens (OECD, 2015a).

Rapid and economic growth does not necessarily indicate that inequality will be dealt with. Within the OECD and emerging countries, the distribution of income follows the tendency of becoming more unequal (OECD, 2015b). In reality, despite the economic growth, not all members of society will enjoy this improvement in the same way.

Thus, to summarize, economic growth is not directly translated into reduced inequality and better living conditions for all its citizens, as it might benefit some to detriment of other individuals. Therefore, economic growth is not the only answer to a general question of how to address inequality, although it does play a role in it. For last, although a level of inequality is

[4] The same author defends that measuring inequality of economic outcomes arising from the parental background and its share in total inequality of outcome, along with surveys (such as PISA and analogous) and gender inequality in earnings are basic statistics that should be adopted and harmonized across countries.

expected within a determined community, harmful levels of inequality, which impedes social mobility and economic growth, shall be immediately addressed.

1.3. Dimensions of inequality

The perspective of the inequality of opportunities should broaden the scope of inequality for a policy designer. The following paragraphs will demonstrate the intrinsic connection between inequality and several social and economic aspects. Those topics could serve as indicators for an assessment/diagnosis of inequality of opportunities in a given community, while also serving as parameters to be observed in a feedback mechanism of the tax policy. Income is one of the many dimensions of inequality. Such inequality has widened in most OECD countries, over the last years. Also, the rising of inequality of income is accompanied by the rising of poverty in most OECD countries (OECD, 2015a).

Varied factors will influence the inequality of income and should be taken into consideration. It is known that immigrants and foreign-born workers could be at disadvantage in the labor market. As mentioned by the OECD, "Immigrants and foreign-born workers are systematically at a disadvantage in the labour market. In several OECD countries, foreign-born workers have lower employment rates than native workers" (OECD, 2015a). If those workers are in a vulnerable position, they may fall into the informal sector, leading to loss of the protection of the state (such as social benefits and unemployment coverage, among others). This could also affect the state's revenue due to the taxation of employment. According to the OECD, disparities in job quality are increasing since non-standard employment is widespread (OECD, 2015a).

Thus, income inequality should be observed by policy designers, while taking into consideration several perspectives: the divergence of income relating to reasons of gender, nationality, race, among other factors, to those who perform the same activities; the poor social protection conferred to workers; the vulnerable workers who hold on to a job to escape poverty and informal labor.

Education should always be considered as an inequality indicator if a policy is aiming to address such issues. The unequal access to education or an unequal education offered to the population can certainly promote inequality, especially under the inequality of opportunity perspective. It becomes a concerning issue in developing countries in which children from disadvantaged backgrounds need to face financial constraints that creates a barrier to their participation in school life. This is often accompanied by poor conditions related to habitation, infrastructure, transport, sanitation, among others (OECD, 2015a).

The access to education and the level of education provided by the state could serve as an important indicator of inequality. School dropouts by children can reflect inadequate infrastructure, absence of basic sanitation conditions, bad quality of education, difficulties in traveling to school (such as children in rural areas attending classes in urban areas), financial impediments, and the lack of professional staff, such as teachers and educators. Some of these factors are intimately related to geographical or living inequality. In Latin America, factors such as the wealth and dwelling of the students contribute to the persistence of the disparities in access to education. However, even OECD countries that delivered the expansion of educational opportunities did not necessarily deliver higher educational outcomes and better skills. Therefore, the expansion of educational opportunities would not, exclusively, characterize as a good parameter itself for identifying inequality (OECD, 2015a).

Moreover, the adult's socio-economic background is important for their literacy. Therefore, the parent's level of education (strongly influenced also by a social background) will influence the literacy of their children (OECD, 2013). To summarize, it is noticeably clear that the socio-economic background of students can influence their education, which might result in the perpetuation of inequality due to a lack of opportunities. For that reason, education levels and quality of education shall serve as indicators to tax policymakers in drafting measures against inequality.

Health is an important factor intrinsically related to inequality. Poor living and working conditions along with nutrition deficiency can lead to health issues. Also, poor households have limited access to health services and preventive medicine. Improving the overall health of the population helps to contribute to communal well-being, as well as improving life expectancy. If inequality shall be investigated and addressed by public policies, equity in health care must be analyzed. Although some countries do offer health coverage to all its citizens or those in the territory of the state (such as the universal coverage provided by Sistema Único de Saúde – SUS, in Brazil), health equity is still far from being reached. Low-income individuals face additional barriers to health services, such as: financial costs, not being able to reach doctors, deficient health service, among others (OECD, 2015a). As it can be seen, income inequality and health are intimately related since factors from the former are constantly affecting the latter. In the same way, there is a strong link between the labor market, health, income, and education. For this reason, health indicators shall be considered for the diagnosis of inequality.

Poor environmental conditions are deeply related to inequality in a vicious cycle. Situations such as lack of adequate sanitation, absence of drinkable water, indoor pollution from inadequate ventilation, exposure to solid fuels, among others, can be considered as poor environmental conditions and are intrinsically related to other factors such as education and health (TULCHINSKY; VARAVIKOVA, 2014). The environmental burden of disease (EBD) is a measure used to identify an environmental burden of a society. This measure is important, as the EBD does not equally affect individuals in the same state. It is known that the EBD strongly affects the poor, young, and old populations within a community. This event is not restricted to developing countries, as advanced economies also face the burden of EBD strongly affecting low-income families (OECD, 2015a). To summarize, environmental conditions can also serve as a parameter of identification and analysis of inequality in a given community, especially because the burden of EBD affects more low-income families, in comparison to other families.

Analyzing inequality from a broad perspective also demands a geographical analysis of housing, since wealth and poverty are concentrated spatially. Income inequality tends to be concentrated within urban areas. Another important aspect is to analyze the size of the city, as big cities tend to be more unequal than small ones (OECD, 2015a). Spatial inequality can be defined as a disparity in well-being due to discrepancies in social and economic factors across geography (FAGUET; SHAMI, 2010). Intra-community migration or rural mobility should also be analyzed, as rural communities tend to seek work in the urban area. This can lead to challenges when jobseekers remain unemployed and cannot afford the living conditions of a large city. According to the OECD Report, the urbanization of poverty is a serious issue for most OECD countries (OECD, 2015a).

Moreover, inter-regional inequalities are also related to unequal access to employment and inequality in education. As stated by OECD Report, although there was a creation of employment in the OECD economies, those jobs were **restricted to specific regions**. According to the report, between 1999 and 2012, 40% of an overall employment creation was restricted to 10% of the state's regions. Therefore, this demonstrates that access to employment can lead to domestic inequality, via differences between distinct regions. If employment is concentrated in specific areas, so will unemployment, resulting in a concentration of unemployment in large cities. Education also seems to be spatially concentrated. According to OECD's Report, an analysis of 2012 showed that 25% of the population of OECD's states only had a basic education and tended to be concentrated in a particular place. Additionally, the location of the schools also plays an important role regarding the quality of the education provided. Not only that, but rural area residents might also face difficulties in access to health.

For those reasons, a geographical analysis is a fundamental step to comprehend inequality. Thus, a spatial analysis combined with other social indicators could serve as a parameter for diagnosing and analyzing inequality (OECD, 2015a).

To conclude, as mentioned, economic inequality can be analyzed under an ex ante and ex post perspective. The ex ante perspective will analyze social indicators that are related to inequality of opportunity. Thus, this perspective aims to identify what is the access of an individual to certain opportunities, in comparison with others. This type of perspective demands a broad analysis of local inequality, which includes several dimensions. Income, education, health, environmental inequality, housing or geographical inequality and access to employment are some of the dimensions mentioned by the literature as significant parameters for the study of inequality. Therefore, this research proposes the adoption of this broad perspective, along with the use of social indicators related to such dimensions, in order to support policy makers in tax policy design. The next chapter will illustrate how such dimensions can be addressed in tax policies.

2. HOW INEQUALITY CAN BE FOUGHT BY TAX POLICIES AND HOW TO DO IT?

Inequality can subvert democratic governance, stifle economic opportunities and mobility while weakening the economy. Benefits conferred by wealth include economic security, social and political influence, and additional economic opportunities. All those benefits are not being considered in the tax base of such taxpayers. Harmful inequality can be defined as the one that impedes economic mobility, which contributes to the perpetuation of intergenerational inequality (GLOGOWER, 2018). Moreover, it will also impede efficiency and economic growth. For those reasons stated, it is desired that inequality is fought in the context of a community, and tax policies can be a tool for such.

Inequality can be fought by several actions. Mestrum et al. mention that inequality can be reduced by giving the chance of poor people to raise their income level, in comparison with the middle or wealthy class. A second way of addressing the issue is to curb the income of the wealthy, which leads to economic redistribution. Taxation, by itself, may not be sufficient to revert social inequality, but it does play a significant role in the equation. Besides the redistributive aspect of tax policies, they are crucial for generating income that will finance public services such as health and education, among other benefits that will favor low-income households. In addition, taxation is an important tool for good governance and democratization (KOHONEN; MESTRUM, 2009).

This research does not intend to answer the question of whether inequality should be fought via tax policies and what is the best tools to address such issue, since this is a political choice to be made by states and its population. In addition, the question of how much inequality one is prepared to accept is a political question based on a collective decision. Despite that, this research intends to investigate and provide support for those policymakers who decided to use tax tools as mechanisms for such goals by providing an overview of how dimensions of inequality are related to tax tools. As mentioned by Keeley, “few areas of policy pose quite so many challenges as the design of tax and transfers systems” (KEELEY, 2015).

As an example of effective diagnose of inequality and use of tax tools, the OECD Territorial Review on Gauteng City-Region serves rightly the purpose. Tax tools were mentioned as effective means to support the land management of Gauteng, which is pointed to as one of the causes of inequality. As mentioned in the report, “To make land management more effective and to increase densification, authorities in Gauteng could consider adopting new fiscal tools." (OECD, 2011). Tax tools such as: the split-rate property tax placing higher taxes on land than on built structures; , reduced tax of land-intensive development, such as apartments (vertical occupation)[5]; use-value tax assessment in peri-urban areas; location efficient mortgage (LEM)[6]; favorable taxes for multi-story houses compared to single-family house development; among others tools (OECD, 2011). As it can be seen, the report supports the argument that tax tools can play a significant role in combating inequality, especially when they are tailor-made based on a specific analysis of the social conditions of a community.

2.1.Dimensions of inequality and tax tools

The first dimension of inequality indicated in this research is income and wealth inequality. Personal income taxes are mentioned by some authors as the most important tax instrument to redistribute income, while also being a large source of tax revenue. Likewise, property taxes can be designed to target high-income households. Other taxes can also play a

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[5] Reducing the tax rate of lands that are being intensively used (vertical development), in comparison to extensive use (horizontal development of the land), could promote revitalization and replacement of obsolete buildings in cities, when applied with effective regulatory mechanisms

[6] The location efficient mortgage could reward families living in walkable areas, by allowing a larger mortgage with a smaller downpayment. This is due to the fact that those families would save transport-related costs by living in a location-efficient place. This tool can help guiding efficient urban growth while also impacting the environment. By not using cars or public transport, water, and air pollution, along with greenhouses gases would be reduced.

role in redistribution, however, this role would be more indirectly linked. It is pointed that shifting the tax mix away from income towards value-added would be a regressive change, as personal income taxes are typically progressive. (AKGUN; COURNÈDE; FOURNIER, 2017)

Bequest/inheritance taxation and gift taxes are important factors regarding income and wealth inequality. Usually, they are conceived as a counterweight to undue concentration of wealth (JIANG, 2010). However, wealth taxation could lead to capital flows and difficulties in assessing wealth (BIRD, 1980). It might also not be the best choice for raising revenue for public policies, although it can play an important role in changing the dynamics of intergenerational transfers and equilibrium distribution of wealth (COWELL; GAER; HE, 2019). Regarding inheritance taxation, Jiang concludes that "estate tax, as a symbol of fairness, has a real, but ambiguous effect on inequality" (JIANG, 2010).

Also regarding wealth and income inequality, another tax measure that is discussed by authors is the tax treatment of top earners. Increases to top rates of tax and limitation of tax deduction and tax credits to such category could play a role in addressing inequality (KEELEY, 2015). In the same way, Akgun et al. mention that a lower tax wedge on upper-middle incomes has a negative link with equality, although it might present a positive economic outcome for the income of the rich (AKGUN; COURNÈDE; FOURNIER, 2017). Other authors[7] also defend a more progressive rate structure for personal income tax as an effective tool to address inequality, along with broadening the tax base (ATKINSON, 2015).

Atkinson proposes, among other measures, the introduction of Earned Income Discount limited to the first band of earnings to the personal income tax; taxation of inheritance and gifts inter vivos under a progressive lifetime capital receipt tax; a global tax regime for personal taxpayers based on their wealth and a minimum tax for corporations (ATKINSON, 2015).

Capital taxation is not a unanimous subject regarding progressive taxation. A study conducted by Adam et al. concludes that economies that are characterized by higher income inequality rely heavier on capital taxation while presenting less tax burden on labor. According to the authors, capital taxation affects economic performance and leads to lower growth rates, especially among the poor. For last, they conclude that a different redistribute policy could increase the income of the poorer without hurting the economic growth (ADAM; KAMMAS; LAPATINAS, 2015).

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[7] Authors such as Thomas Piketty and Anthony Atkinson defend a more progressive tax structure system, by applying a more burdensome personal income tax rate to high-income individuals.

An econometric study conducted by Akgun et al. intended to investigate how the choice of taxes to fund government activities would influence redistribution and income, based on the analysis of disposable income. As main findings, it was concluded that taxes primarily influence redistribution by funding transfers which reduces inequality. Also, larger governments are considered able to better reduce inequality. Regarding specific taxes, more use of inheritance taxes was linked to equality of poor and rich, having a positive output result related to the GDP per capita and household disposable income. In addition, a lower tax wedge on lower-middle incomes had a positive effect on inequality, associated with progressivity and good outcomes in the long run. On the other hand, a lower tax wedge on upper-middle incomes will worsen inequality, although it does provide good economic output results. Moreover, a cut in taxes on net wealth was negatively related to equality, but it could have a positive economic output result regarding the income of the poor and the rich. A reduction in the effective CIT rate did not show a significant influence on the distribution of disposable income, although had positive outputs of GDP per capita and household disposable income, in the study. The same conclusion applies to property taxes (AKGUN; COURNÈDE; FOURNIER, 2017).

The research demonstrates an important fact: **the trade-off of inequality and economic growth can lead to a win-win situation when adequately combined. Therefore, it is possible to conclude that, to address the many dimensions of inequality, tax policymakers should always prefer tools of win-win situations, such as the ones previously described** (AKGUN; COURNÈDE; FOURNIER, 2017)**.**

Under an income or wealth inequality, it is known that low-income households tend to be disproportionately hit by consumption taxes since they tend to consume a bigger part of their income than wealthier households. As wealthy households tend to save more, this could lead to an increase in inequality. A suggestion to address such an issue is to limit consumption taxes on essentials, such as food (KEELEY, 2015). Akgun et al. mention that changes in VAT rates in a context where the government size is fixed does not significantly influence the distribution of income, however, it does affect the distribution of consumption and how certain income groups may be exposed to a change in consumption tax (AKGUN; COURNÈDE; FOURNIER, 2017).

Another dimension of inequality is housing/geographical or spatial inequality. As it was mentioned in previous chapters, wealth tends to be spatially concentrated. Useful tools to address such inequality were previously mentioned in the practical case of Gauteng. The split-rate property tax placing higher taxes on land than on built structures, to make underutilized lands costly to the owners could be a tool for stimulating development in certain areas.

Reducing the tax of land-intensive development, such as apartments (vertical occupation) could contribute to the revitalization and use of obsolete spaces. The use-value tax assessment in peri-urban areas, location efficient mortgage (LEM), and favorable taxes for multi-story houses compared to single-family house development, can also be used as tools by policymakers (OECD, 2011).

Another tax that can address inequality is property tax, not only under a spatial inequality perspective but also regarding other dimensions such as wealth and education. According to Atkinson, “there should be a proportional, or progressive, property tax based on up-to-date property assessments” (ATKINSON, 2015).

However, attention should be paid when designing the immovable property tax system, especially regarding the property assessment. A research analyzed the relationship between immovable property tax and inequality in Italy. It was concluded that the use of an outdated cadastral valuation system to determine the tax liability eroded the tax base and imposed a disproportionately high tax burden on the poor. The study concludes: “great potential for better use of the property tax by replacing cadastral valuation with a market valuation system, that addresses the gap between market and taxable values to improve progressivity”. (CAMMERAAT; CRIVELLI, 2020)

Still, the analysis of the progressivity of property tax is not unanimous. As concluded by Akgun et al., taxes on an immovable property do not present a significant influence on income inequality, although they can be considered generally positive due to their economic growth effect (AKGUN; COURNÈDE; FOURNIER, 2017).

Another dimension of inequality is the environmental inequality that low-income individuals are subject to, also as a result of poor living conditions. To address environmental problems, taxes could play an important role by acting as effective instruments for the internalization of externalities. It could also promote behavior change in consumers and producers, raise revenue, and encourage innovation. This would result in a positive environmental outcome. There are three main types of environmental taxes: cost-covering charges, incentive taxes, and fiscal environmental taxes (EUROPEAN ENVIRONMENT AGENCY, 1996). Some of the environmental taxes that can be used are energy taxes, vehicle taxation (EUROPEAN COMMISSION, 2015), taxes on pollution, taxes on proxies to pollution, environmentally related reductions in VAT, tax measures to reduce the costs of green innovation, and ReD credits (OECD, 2010).

Nonetheless, this dimension of inequality is also intrinsically related to wealth and income inequality. A study conducted by W. Oueslati et al. explains that energy taxes **change**

the relative prices of goods which can affect inequality in income sources. **The study shows it is important to provide explicit <u>revenue recycling mechanisms</u> along with the implementation of energy taxes, to address income inequality concerns** (QUESLATI et al., 2017).

Akgun et al. also state that there are indications that environmental taxes can increase inequality as they can reduce middle-income earnings while favoring the top quintile. The authors state that:

> There are therefore signs that increases in environmental taxes, when not part of packages involving reductions in the tax burden of low-income households, may have negative effects for inequality. However, underprivileged households may benefit more than others from less pollution, as they tend to be more exposed to pollution than higher-income households, especially in urban areas. (AKGUN; COURNÈDE; FOURNIER, 2017).

The same is indicated by Fremstad et al. which concluded that “a carbon tax would cost poor households a higher percentage of their expenditures (or incomes) than the rich, making it a regressive tax” (AKGUN; COURNÈDE; FOURNIER, 2017).

Therefore, if environmental inequality is being addressed via environmental taxes to promote better environmental conditions, tax policymakers should also implement a revenue recycle mechanism. If environmental taxes are implemented without such mechanism, those taxes could have a positive outcome for environmental inequality, while burdening income and wealth inequality. **Again, the overall view of the tax policy and choices of win-win tax tools must take place to address inequality in its varied dimensions**.

Non-cash transfers, such as spending on education and health care play a significant role in inequality policies (KEELEY, 2015). To address inequality in education, access to a good, reliable source of education needs to be available for any individual of a local community. For such a purpose, funding is extremely necessary and tax tools could serve such purpose. Earmarked taxes can support the funding process for public education. Such taxes are specifically assigned to the particular objective of education. As an example, there is the Ghana Education Trust Fund, funded by a part of the VAT collection. In Brazil, the Brazilian Fund for Maintenance and Development of Basic Education is partially financed by VAT revenues. In Nigeria, the Nigeria Tertiary Education Trust Fund is financed by 2% of the national companies’ assessable profits (RON BALSERA; KLEES; ARCHER, 2018).

In addition, some tax measures can be related to the costs of private education: the deduction of the costs of private education, crediting education costs against the student tax liability, exemption of scholarships from personal income taxes, income-contingent loans, and exemption of student income from personal income taxes and social security contributions (OECD, 2017). Those measures are usually applicable to tertiary education. Nonetheless, the progressivity of the tax tool shall be analyzed in a broad context, to avoid instruments that would increase inequality. As an example, the US provides tax credits that are partially refundable but poorer households tend not to have sufficient tax liability to benefit from such credits. Such benefits are being mostly enjoyed by middle-income households. An approach to address such an issue is to allow credits to be carried forward to future years (OECD, 2017).

Family life plays an important role in education. If one is aiming at reducing inequality, guaranteeing good support from the family to school-age kids is an important measure. An early study demonstrated that low-income parents are more likely to lack the paid leave and flexibility that is needed to support children with poor academic results or behavioral problems, in comparison to middle and upper-income parents. It was demonstrated that low-income parents have no paid leave or flexibility at work to attend to their children’s needs, in comparison with middle and upper-income parents. Tax incentives are mentioned as a possible tool to solve such issues, as it would encourage companies to provide more paid leave and flexibility for the mentioned parents (HEYMANN; EARLE, 2000).

It is relevant that such tax measures related to education are being correctly understood by the students and taxpayers as such policies can be complex and of difficult comprehension (OECD, 2017). Therefore, OECD mentions that the simplicity of tax and other forms of support will ensure the effectiveness and the equity of the policy.

Other factors should also be considered. As stated by OECD, school dropouts by children can reflect inadequate infrastructure, absence of basic sanitation conditions, difficulties in traveling to school (such as children in rural areas attending classes in urban areas), and financial impediments. Regarding living conditions and geographical inequality, such topics will be discussed ahead. Non-cash transfers could support students and their families in dealing with financial impediments. Moreover, tax exemption of school supplies and tax benefits related to transport could be helpful in the described scenario.

As mentioned previously in this work, there is no clear-cut one policy design that fits them all. Thus, there is no unique best set of taxes to tackle educational inequality. As mentioned by the OECD, “the ways in which tax and skills policies and indeed financial support for skills in general should be designed depends on the goals of the policy maker with respect to skills outcomes in a given country” (OECD, 2017).

Inequality of health is another dimension mentioned in the broad aspect of inequality. In order to address such issues, funding is necessary to guarantee the availability of a good, reliable, public health service to low-income citizens. Universal health coverage is mentioned by the OECD as an instrument to combat inequality. According to the report "equity in health care access supposes that people in equal need of healthcare should be treated equally regardless of their income, race, place of residence, occupation or educational level. The ideal is universal health coverage (UHC)" (OECD, 2017).

In addition, easy access to private health care and health-related products can also contribute to tackling inequality.

The Brazilian universal public health (SUS) is an example of how tax tools can play a role in promoting health. Its system is funded by tax revenues and contributions from states and municipalities. The system guarantees free access to health to all individuals, including undocumented ones and there is no cost-sharing. A small percentage of Brazilians also adopt private health insurance to bypass possible system constraints. Costs related to private health and health-related products are qualifiable for tax deductions (TIKKANEN et al., 2020). SUS is pointed to as an essential health policy in Brazil, that primarily benefits the poorest individual, and that can impact children's health and bring benefits later on the adult stage (ARISTIDES DOS SANTOS et al., 2019). However, some factors such as austerity policies, economic crisis, and long-term freeze on public expenditures threaten SUS. This only reassures that such measures related to inequality must be analyzed under a broad, interdisciplinary perspective and that good administration and smart application of resources are fundamental for a successful policy (MASSUDA et al., 2018).

How tax revenues are sourced also matters for the tax policy. Some authors indicate that progressive tax revenues from profits, capital, and income are more effective in generating public funds for health than consumption taxes (REEVES et al., 2015).

Other factors such as the waiting time for health care might influence the service that is being provided. For such a scenario, subsidy to patients seeking private care has been widely used in many OECD countries to reduce the demand for public care and thus reduce the long waiting time in the public health system (QIAN; ZHUANG, 2017).

The Dutch health system is financed by public and private funds, through tax revenues and government grants, along with statutory health insurance from private insurers. Premiums, paid by adult users, are annually deductible. Regarding disparities in health care,

> socioeconomic health disparities are considerable in the Netherlands, with up to seven years' difference in life expectancy between the highest and lowest socioeconomic groups. Smoking is still a leading cause of death. Although health disparities are monitored by the National Institute for Public Health and the Environment (part of

> the Ministry of Health), the government does not have specific policies to overcome them. (TIKKANEN, 2020).

As a result, the Dutch government started covering weight loss advice and smoking cessation programs in the statutory benefit packages. Related to smoking and tobacco tax, some authors point that it is possible and desirable to analyze the distributional effect of such. A study conducted in China concluded that “despite potentially imposing a tax burden on low-income groups, tobacco taxation can bring substantial health benefits to poor people and can significantly reduce out-of-pocket expenditures for the poorest populations (…) (VERGUET et al., 2015). Again, a broad analysis of the role of a specific tax within the policy is needed to conclude its impact on inequality.

To summarize, in this chapter, several tax tools were mentioned as instruments to tackle various dimensions of inequality. As tax systems are the result of a political process, there is no unique answer on how to tackle inequality via tax policies. Communities shall choose tools which are compatible with their own goals and the level of inequality which is considered acceptable. However, whenever possible, policymakers shall opt for win-win tools, which focuses on economic growth and the combat of inequality.

Additional factors to be considered in tax policy design

To address inequality via a tax policy, a diagnosis phase is required. According to the Human Development Report 2019, “tackling inequality starts with good measurement” (CONCEIÇÃO; UNITED NATIONS DEVELOPMENT PROGRAMME, [s.d.]). In this step, an effort shall be made for measuring economic inequality and its correlation to social factors of a given community. Some tools for measurement are already known such as the Atkinson Index (measures social welfare function), Gini coefficient, Theil Index, Robin Hood Index, and Relative Mean Deviation (UNITED NATIONS, 2015). Indicators such as the Human Development Indication (HDI) are also an important tool that focuses on the development of a country and not exclusively on its economic growth and economic standards. Therefore, aspects such as life expectancy, education, and a decent standard of living form the HDI index and provide a better understanding of a given community (UNITED NATIONS DEVELOPMENT PROGRAMME, 2020).

However, such mentioned indicators will serve the purpose of providing a global analysis of inequality of a certain state, in comparison with others. Local indicators related to the dimensions of inequality should be adopted by tax policy designers in order to assess the current situation of a given community. Such combined analysis of social indicators aligned with economic ones could broaden the perspective of a tax policy designer, by providing a correct diagnose and giving parameters for a feedback mechanism. It also supports having a better understanding of the phenomenon of inequality, considering that some data might be flawed or not transparent. By combining different forms and indicators, including a profound domestic analysis (comparability of household surveys, administrative data, income tax data, data on earnings and wealth), more solid results could be found.

In addition, the urge for better, reliable data, capable to analyze various forms of inequality is of extreme urgency. Atkinson mentions that one shall be confident regarding the quality of data that is being used to measure inequality and that such data shall be scrutinized to avoid premature conclusions. Some sources of evidence that are mentioned are: comparability of household surveys in conjunction with administrative data, income tax data, data on earnings (when dully checked what is considered in the definition of “earnings), and data on wealth. The author also emphasizes the importance of analyzing broad data over the years, instead of being restricted only to contemporary terms (Atkinson, 2015).

Comprehensive databases that will analyze other factors beyond the inequality of income are concluded to be essential for the design of an effective tax policy, under the proposed approach of this research. To adopt a broad definition of inequality, measures related to welfare shall be considered, such as education, health, poverty, among others.

The necessity of considering multiple factors (interdisciplinary approach) is also to be considered when designing tax policies. This can be defined not only by the need of considering a broad definition of inequality, which is connected to varied social indicators, but also by the need of considering the overall effect of the tax policy, and which tax tools are a better fit to the tailor-made policy (KEELEY, 2015). It is important to consider intersectional areas such as inequality, economic mobility, and poverty, along with the constraints on policy and possible undesired effects (ZOLT, 2013). Thus, tax policymakers should consider the policy in its overall effects, since measures that could be considered regressive (such as high consumption rates) could be offset by other benefits, such as income-related benefits. Even if indirect taxes are ought to be regressive, when analyzed in an isolated scenario, they can be offset by other public policy measures. Some actions such as reducing social spending via the tax system, increasing capital income tax (ZOLT, 2013), and mixing and adopting new tax instruments such as digital taxation, might be desired for achieving the purpose. In addition, some authors mention the adoption of financial taxes (COSSART, 2009), wealth taxation (BIRD, 1980), robot/automation taxation (ABBOT; BOGENSCHNEIDER, 2018) and transfer pricing policies (COOPER et al., [s.d.]).

Every policy should be custom-made to its social context, considering the varied factors that can cause inequality. This analysis is required since tax tools also present advantages and disadvantages. A multidimensional or interdisciplinary approach is also the recommendation of the United Nations to fight the inequality crisis generated by COVID-19. Since the pandemic affects interconnected dimensions such as health, economy, and other social aspects, a systemic approach was considered essential. Not only that, once again the UNDP proposed that a response should be looked through an equity lens (TAPIA et al., [s.d.]).

Moreover, public support can influence the effectiveness of the policy. A research conducted by Franko, Tolbert, and Witko analyzed the public reaction regarding a redistributive tax proposal in the United States, by increasing taxation on wealth. It is known that preference or tolerance for inequality is possibly influenced by the economic well-being of the lower-income or no-income part of the population (ZOLT, 2013). Society has difficulties in linking their own economic self-interest and broad concerns regarding inequality to a factual and congruent tax policy proposed. Thus, if a tax policy is structured simply and transparently while being able to translate broad attitudes towards inequality into specific and concrete actions, citizens will be able to make informed decisions, in line with their own interests.

For last, a policy that was carefully designed should be applied in accordance. Revenue that is raised to subsidize social programmes should be subject to a good administration. Questions such as how to apply the revenue to translate it into social benefits and what benefits do the state aims to provide are of fundamental significance. Great administrators are required to smartly apply the resources efficiently and effectively. Another issue that might interfere is corruption and the lack of administrative capacity. Good tax administration is necessary and impacts considerably the tax policy effectiveness. By applying available technologies, states could identify potential missing revenues, facilitate the exchange of information to have a more effective system. New IT systems could identify missing revenues and collaborate to the exchange of information among tax authorities (CARTER; MATTHEWS, 2012). The efficiency of a tax policy also relies on the effectiveness of government programs that promotes redistribution (ZOLT, 2013).

CONCLUSION

This work intended to answer to the main research question of how can a tax policy be designed to combat social inequality. In order to answer such research problem, the doctrinal method was selected, and relevant information was gathered via literature review. The literature included relevant reports from the OECD and UNDP, as well as legal academic texts and interdisciplinary academic texts. The research question is a design-type of question, which shall be answered via a proposal of instructions, recommendations and instruments for the selected field (inequality).

Firstly, inequality shall be addressed under a comprehensive approach. The focus exclusively on the inequality of wealth or income could narrow the perspective of a policy against inequality, as it does not address other dimensions important dimensions, such as health, education, and living conditions.

Therefore, this research proposes the adoption of a broad definition of inequality, based on the combined ex ante and ex post perspective of economic inequality, also known as inequality of results and opportunities. This type of perspective demands a broad analysis of local inequality, which includes several dimensions. Income, education, health, environmental inequality, housing or geographical inequality and access to employment are some of the dimensions mentioned by the literature as significant parameters for the study of inequality. Thus, this research proposes the adoption of this broad perspective, along with the use of local social and economic indicators related to such dimensions, in order to support policy makers in tax policy design.

In addition, a simplistic approach, merely based on the analysis of the outcomes (wealth or income), is insufficient to effectively tackle inequality. As it was demonstrated, several factors (health, education, housing, ecc) are intrinsically related to each other, resulting in an unequal outcome. If such factors are not addressed, the vicious circle of inequality of opportunity will remain and tax policy based exclusively on economic outcomes will not reach its goal.

Moreover, such a complex phenomenon requires tailor-made designed policies to attend to the needs of a given community. For that reason, a good diagnosis, based on social and economic indicators must take place. Local indicators related to the dimensions of inequality (income and wealth, education, health, housing and environmental inequality) could help the tax policy designer in properly diagnosing the situation and proposing effective measures. Tax policy designers shall also be confident regarding the quality of data that is being used to measure inequality and that such data shall be scrutinized to avoid premature conclusions. Some sources of evidence that are mentioned are: comparability of household surveys in conjunction with administrative data, income tax data, data on earnings (when dully checked what is considered in the definition of “earnings), and data on wealth. A broad data analysis over the years of local levels of inequality could help policy designers in assessing the efficiency of the policy, instead of being restricted only to contemporary terms.

Another important aspect that should be observed is whether the state has fiscal self-determination to draw and implement its own fiscal policy. Choices regarding tax policies (revenues and expenditures) can be constrained not only by tax competition but also by political factors. This could act as an external interference on the policy design and might impede the policy designer to achieve its desired goal.

If tax policy is structured simply and transparently while being able to translate broad attitudes towards inequality into specific and concrete actions, citizens will be able to make informed decisions, in line with their own interests. Based on the relevant literature, if the costs and benefits of the designed policy are clearly showed to its citizens, it could increase public support, which can enhance the efficiency of the policy against inequality.

A policy that was carefully designed should be applied in accordance, which is why good administration is an important factor to be considered. Great administrators are required to smartly apply the resources efficiently and effectively. Factors such as corruption and the lack of administrative capacity can affect the policy and shall be addressed accordingly. In addition, by investing in new systems and applying available technologies, states could identify potential missing revenues, facilitate the exchange of information to have a more effective system.

Moreover, in order to address inequality, a policy designer shall also focus on generating revenue. For such a reason, tackling tax avoidance and evasion could play an important role. Additionally, some authors propose a minimum tax for corporations and a global tax regime for personal taxpayers. Although tax increases may be necessary to raise revenue for financing public services, there is literature concluding a most growth-friendly approach is to reduce tax-induced distortions, by closing loopholes, as well as raising revenue from property tax and environmental tax.

For last, tax designers shall apply specific tax tools in order to achieve a desired goal. Personal income taxes are mentioned by some authors as the most important tax instrument to redistribute income, while also being a large source of tax revenue. Likewise, property taxes can be designed to target high-income households. Bequest/inheritance taxation and gift taxes could play a role in addressing wealth and income inequality. A change in the tax treatment of top earners is also mentioned by some authors to address inequality: increases to top rates of tax and limitation of tax deduction and tax credits could be useful tools. Some authors also defend a highly progressive rate structure for personal income tax as an effective tool to address inequality, along with broadening the tax base.

However, the most important guideline might be the one reflected in an empirical research regarding inequality and tax tools: **the trade-off of inequality and economic growth can lead to a win-win situation when adequately combined**. Therefore, whenever possible, in order to address the many dimensions of inequality, tax **policymakers should always prefer tools which results in win-win situations** (economic growth and promotion of equality). One of the examples mentioned is a reduction of the marginal tax wedge at the lower end of the income distribution.

Regarding consumption tax, low-income households tend to be disproportionately hit by it since they tend to consume a bigger part of their income than wealthier households. A suggestion to address such an issue is to limit consumption taxes on essentials, such as food.

Housing/geographical or spatial inequality could be addressed via split-rate property, tax placing higher taxes on land than on built structures, to make underutilized lands costly to the owners. Reducing the tax of land-intensive development, such as apartments (vertical occupation) could contribute to the revitalization and use of obsolete spaces. The use-value tax assessment in peri-urban areas, location efficient mortgage (LEM), and favorable taxes for multi-story houses compared to single-family house development, can also be used as tools by policymakers to address spatial challenges.

Property tax should be, proportional, or progressive and based on up-to-date property assessments. Assessing the value of the property can be relevant to promote equality. A study demonstrated that replacing cadastral valuation with market valuation system could improve progressivity, in a given community.

To address environmental problems, taxes could play an important role by acting as effective instruments for the internalization of externalities, in addition to the generation of revenue. Nonetheless, energy taxes can change the relative prices of goods which can affect inequality in income sources. Thus, it is important to provide explicit revenue recycling mechanisms, to address income inequality concerns.

Inequality in education can be tackled by promoting access to a good, reliable source of education. Tax tools could play an important role for funding, via earmarked taxes. In addition, some tax measures can be related to the costs of private education: the deduction of the costs of private education, crediting education costs against the student tax liability, exemption of scholarships from personal income taxes, income-contingent loans, and exemption of student income from personal income taxes and social security contributions. Also, as family life plays an important role in early education. Thus, tax incentives are mentioned in doctrine as a possible tool to encourage companies to provide more paid leave and flexibility for the mentioned parents. For last, tax exemption of school supplies and tax benefits related to transport could be helpful in tackling inequality.

Providing access to health is a special step to address health inequality. This can be coped via tools that provide funding for Universal Health coverage. In addition, costs related to private health and health-related products could be qualifiable for tax deduction.

As mentioned previously in this work, there is no clear-cut one policy design that fits them all to address inequality. Thus, there is no unique best set of taxes to tackle inequality. Inequality is a complex phenomenon that varies among communities. A good diagnosis of the varied dimensions of inequality is a fundamental starting point. The tax tools that shall be chosen will vary from state to state, as the tax system is also the result of a political and usually democratic process.

The necessity of considering multiple factors can be defined not only by the need of considering a broad definition of inequality, which is connected to varied social indicators, but also by the need of considering the overall effect of the tax policy, and which tax tools are a better fit to the tailor-made policy.

It is important to consider intersectional areas such as inequality, economic mobility, and poverty, along with the constraints on policy and possible undesired effects. As mentioned, measures that could be considered regressive (such as high consumption rates) could be offset by other benefits or measures, such as income-related benefits. Merely raising the personal income tax on high earners is a simplistic measure that will not necessarily combat inequality. On the contrary, it could lead to some behavioral responses such as the increase of tax avoidance. Thus, a tax policy that aims to combat inequality must take notice of intersectional interactions among various factors, which are peculiar to each community.

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