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IS THE TAX BURDEN FAIRLY DISTRIBUTED BY DEVELOPED NATIONS? – A COMPARATIVE STUDY

A CARGA TRIBUTÁRIA É DISTRIBUÍDA DE FORMA JUSTA PELAS NAÇÕES DESENVOLVIDAS? – UM ESTUDO COMPARATIVO

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ABSTRACT

Study Objective: To examine whether the tax burden is fairly distributed by developed nations and assess the impact of fiscal policies on social equality. **Methodology/Approach:** The research employs a qualitative literature review and document analysis, focusing on financial and operational data to explore the fiscal policies of nations with high Human Development Index (HDI). **Originality/Relevance:** This study highlights discrepancies in the distribution of the tax burden in developed nations and the need for fiscal reforms to address increasing economic and social inequality. **Main Results:** An unequal distribution of the tax burden is revealed, favoring the wealthier, exacerbating inequality, and undermining fiscal equity. **Theoretical/Methodological Contributions:** Proposes a new framework for analyzing tax justice and contributes to the literature on fiscal policies and social inequality. **Social/Management Contributions:** Provides insights for policy reforms that promote a more equitable tax distribution, essential for achieving sustainable socioeconomic development.

Keywords: Tax Distribution, Fiscal Justice, Economic Inequality, Fiscal Policy, Sustainable Development.

RESUMO

Objetivo do Estudo: Examinar se a carga tributária é distribuída de maneira justa pelas nações desenvolvidas e avaliar o impacto das políticas fiscais na igualdade social. **Metodologia/Abordagem:** A pesquisa emprega uma revisão qualitativa da literatura e análise documental, concentrando-se em dados financeiros e operacionais para explorar as políticas fiscais de nações com alto Índice de Desenvolvimento Humano (IDH). **Originalidade/Relevância:** Este estudo destaca as discrepâncias na distribuição do ônus tributário em nações desenvolvidas e a necessidade de reformas fiscais para endereçar a crescente desigualdade econômica e social. **Principais resultados:** Revela-se uma distribuição desigual do ônus tributário que favorece os mais ricos, exacerbando a desigualdade e minando a equidade fiscal. **Contribuições Teóricas/Metodológicas:** Propõe um novo quadro para análise da justiça fiscal e contribui para a literatura sobre políticas fiscais e desigualdade social. **Contribuições Sociais/Para a Gestão:** Oferece insights para reformas políticas que promovam uma distribuição de impostos mais equitativa, essenciais para alcançar um desenvolvimento socioeconômico sustentável.

Palavras-chave: Distribuição de Impostos, Justiça Fiscal, Desigualdade Econômica, Política Fiscal, Desenvolvimento Sustentável.

1 INTRODUÇÃO

Over the past decades, the opening of international markets to the flow of goods, services, and investment and also the spread of technology boosted economic growth and employment in all regions, helping millions of people escape poverty (Tabassum & Majeed, 2008). However, the increase in global interdependence has led to growing uncertainty regarding the functioning of the economy and the factors affecting key economic variables. Globalisation has intensified the impact of crises today since potential local problems reach all regions of the globe.

In 2011, protests started in Tunisia spread to countries in different parts of the globe, such as Spain, Greece, the United Kingdom, and the United States. They gave rise to movements ‘*Los indignados*’, ‘Occupy Wall Street’, and ‘The 99%’. These movements and protests shared a common feeling: those nations’ different economic and political systems had failed and were fundamentally unfair (Stiglitz,2013).

The lack of commitment of governments to relevant economic issues, among them the constant rising unemployment rate, causes a general sense of injustice, turning it into a sense of betrayal. Thus, the protests asked “for a democracy where people, not dollars, matter; and for a market economy that delivers on what it is supposed to do.”(Stiglitz,2013, p. 31).

Globalisation and fast growth in some developing economies, especially China, have significantly reduced the income gap between countries. However, globalisation has not necessarily resulted in equal benefits inside these countries. Despite economic growth, the income distribution in many countries becamemore unequal between the early 1980s and the mid-2010s. Nations with a high level of development, such as the United States, have extreme and unreasonable levels of inequality among their citizens (Stiglitz, 2013). In the tax field, Stiglitz (2015) warns that the American tax system ignores progressivity, making the wealthiest pay less tax than the rest of society that does not belong to that upper layer.

Discussions on development and inequality are not recent but are still recurrent, both in States’ political agendas and by scholars. In the last decades, the interconnection between these two subjects has been explored with density by political scientists and scholars in the legal, social, and economic fields.

At the intersection of development and equality, taxation plays a prominent role. Like Pires (2018) advises, a fair tax system must provide the most uniform distribution of the tax burden among its citizens to observe the international tax principle of ability to pay. The United Nations' sustainable development guidelines, international treaties, and conventions, among other international instruments, have been warning that nations with the highest level of development are extraordinarily unequal and fundamentally unfair concerning tax burden.

In addition to other issues exposed below, such evidence leads to the following question: is the tax burden fairly distributed by developed nations? Furthermore, to what extent is social inequality impacted by the jurisdictions' extremely competitive policy to attract global capital? The objective is to verify if the development process helped nations with the highest human development index (HDI) achieve fairer and more equal tax burdens among different taxpayer profiles. So, above all, is the tax burden distribution relevant to the nation's human development index placement?

These questions start from the following contextualization. First, it is up to nations to balance budget revenues with public social welfare policies. Thus, it becomes challenging to balance reaching an optimal tax point without harming international competitiveness and negatively affecting tax equality. The challenge becomes even more significant when the vision turns to historically flawed and unfounded public sector planning.

Secondly, it is necessary to design balanced tax systems and policies adjusted to the context of the 21st century. The historical imbalance for sustainable development is evident since the nations with the highest HDI have sustained their respective productive systems with a high level of exploitation of environmental wealth. This history of unsustainable development must now face natural resource constraints. In other words, countries in this phase of capitalism face the costly challenge of reconciling exploitation, renewal, and sustainability, which is necessary to achieve sustainable development.

Therefore, the article, seeking to answer these questions, analyses the level of development of nations by using the HDI. The research also identifies the characteristics of national tax policies of the countries examined. The study investigates if developed countries adopt fair and egalitarian tax policies based on the two variables.

As for the methodological strategy, the research aims to generate knowledge to solve the exposed problem. The problem is approached from a qualitative perspective and with an exploratory objective. The article adopts two research methods to allow an adequate reading of the results. The first part includes a literature review on the correlation between inequality and development and the taxation impact on social inequality. The second stage analysed the existence of a correlation between development and the distribution of nations' tax burden.

The article includes five sections that intertwine and complement each other within a logical sequence and has been structured as follows. The first two sections present the literature review on development and inequality and the role of taxation in this relationship. In the comparative analysis part, the data set and the strategy for data identification and organization are initially presented. Afterward, the main results are discussed. Finally, the final section includes the conclusion.

It is a relevant study since inequality reflects deeply on society[1]. Another justification is that the recent financial and sovereign debt crises have created a new opportunity to re-examine the public policy agenda. And the tax policy is always in the spotlight. Currently, low corporate tax rates have become the focus of politicians responding to the popular frustrations of those who feel economically unfair and have highlighted the unequal treatment given to different layers and categories of citizens (TUDOR; APPEL, 2016). In this context, the present study aims to contribute to the existing literature on the effect of tax policies, state action as a propagator of social well-being, and the development process's impact on economic and social transformations.

The contribution of the research includes, in principle, adding to a growing body of literature that explores the relationship between the development of nations and levels of inequality and covers the role of taxation policies in this interrelationship. Secondly, the work also presents a practical contribution, allowing new possibilities for the distribution of the tax burden, and can guide the formulation of tax policies that seek fiscal justice and aim at global tax governance.

[1] Perhaps the main one is the high levels of unemployment (KRUGMAN et al., 2015). In Greece, for example, the youth unemployment rate was 60% in 2015, causing undesirable reactions, as young people, "when unable to use their energies productively, tend to use them counterproductively" (KRUGMAN et al., 2015, p. 32).

2. DEVELOPMENT AND ECONOMIC INEQUALITY

Economic growth is considered a powerful weapon to reduce poverty. High economic growth, when sustained, increases jobs and wages that trigger poverty reduction. Likewise, income increases lead to increased productivity and growth (Tabassum & Majeed, 2008).

However, economic growth in line with poverty reduction depends on initial income inequalities and especially on how income distribution will occur throughout economic growth. Developing countries achieved high growth rates in different periods, still, due to the increase in income inequalities, poverty does not significantly reduce in the same periods (Tabassum & Majeed, 2008).

According to the GINI[2] index, inequality has increased in almost all regions. The United States coefficient in 2020 was 49, the highest since the 1990s[3], while China rose from 28.6 in 1980 to 46.5 in 2019. In 2008, China's coefficient peaked at 49.1[4]. The global perspective on income inequality is always associated with a worldwide perspective on wealth inequality. Wealth-private income ratios have increased enormously in recent decades, and at the beginning of the 20th century, they reached their peak (Chancel & Piketty, 2021).

While the wealthiest 1% of the population captured 32% of total world growth between 1980 and 2020, rich countries' middle and lower classes were left with just 11%. Furthermore, the wealthiest 10% of global income share has been around 50-60% of total income, while the percentage of the bottom 50% is usually approximately 5-10% (Chancel & Piketty 2021).

Both income distribution and economic growth matter for poverty reduction. Economic growth alone does not lead to significant poverty reduction. Therefore, economic growth must be accompanied by adequate income distribution. So, nowadays, scholars and policymakers are giving up the expression of 'economic growth', replacing it with 'inclusive growth' (AJIDE et al., 2021). Growth is inclusive when growth spreads

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[2] The most common index used to measure inequality. Index created by the Italian mathematician Conrad Gini is an instrument to measure the degree of concentration of income in a given group, ranging from 0 to 1, or from perfect equality to completeinequality.

[3] Data available at: https://www.statista.com/statistics/219643/gini-coefficient-for-us-individuals-families-and-households/

[4] Data available at: https://www.statista.com/statistics/250400/inequality-of-income-distribution-in-china- based-on-the-gini-index/

equally throughout society and creates opportunities for all (Ajide et al., 2021).

Globalisation would be a factor in economic expansion, entrepreneurial freedom, prosperity, and inclusive growth. The term "inclusive growth" means growth that increases shared prosperity and accelerates the reduction of poverty and inequality (Ajide et al., 2021). Therefore, inclusive growth could ensure equity and fairness. However, contradictions mark the current development. At the same time that high levels of abundance are perceived, there are high levels of deprivation and an extraordinary standard of oppression (Sen, 2003).

Sen (2003) explains that there are many new problems coexisting with old ones thatpersist and include, among them, (i) poverty and non-fulfilment of elementary needs; (ii) violation of elementary political freedoms as well as fundamental liberties, (iii) neglect of women's interests and rights; (iv) increasing threats to the environment and the sustainability of our economic and social lives, that both 'poor' and 'rich' countries live with these deprivations. There are good reasons to see poverty, not just as low income, but as a deprivation of basic capabilities (Stiglitz, 2013). In this context, Sen (2003) highlights the need to recognize and apply the different forms of freedom to combat these deprivations.

Moreover, three findings are common in various parts of the globe: (i) markets were not functioning as they should; (ii) the political systems adopted did not correct market failures, and (iii) economic and political systems are fundamentally unjust (Stiglitz, 2013), which would contribute to the deprivations highlighted by Sen (2003). Regarding the failure of markets, it was expected these remained stable, but the 2008 global financial crisis is undeniable proof that they can be very unstable, leaving devastating consequences. The fundamental inability of the market to generate jobs reflects its worst failure, and its most significant proof of inefficiency, reflecting one of the leading causes of inequality (Stiglitz, 2013). According to Sen (2003), unemployment is a determinant for 'social exclusion' and causes a loss of self-confidence, with a relevant psychological impact.

Another considerable evidence of the failure of markets is income. For example, in the United States of America[5], even before the 2008 recession, income, when

[5] According to the author "America had created a marvellous economic machine, but evidently one that worked only for those who are at the top" (Stiglitz, 2013, p. 14).

adjusted for inflation, was lower than it was a decade earlier (Stiglitz, 2013).

Therefore, the growing degree of unemployment and the decrease in income are proof of the failure of the political-economic system in force. Unemployment also tends to increase inequality (WOO et al., 2017). In turn, the very high level of inequality seen even in countries like the United States evidences an economic system that is less stable and less efficient, with less growth and compromise of democracy (Stiglitz, 2013).

Accordingly, inequality is both a cause and consequence of the political system's failure. Inequality contributes to the instability of our economic system, which, in turn, contributes to the increase in inequality itself – a vicious downward spiral that we descend into and which we can only get out of through the adoption of different public policies (Stiglitz, 2013).

The advancement of development and the interconnection of peoples, countries, and economies worldwide can intensify misery and prosperity. On the other hand, integration, the market, and the development process can also favor the concentration of wealth, damage the environment and promote abuses to workers and consumers. Thus, the critical issue is the definition of how development and integration will be managed (Stiglitz, 2013).

On the development process, Sen (2003) notes that development consists of eliminating the deprivations of liberty that prevent people from exercising their choices and limiting their access to opportunities. Thus, the development represents the expansion of 'people's fundamental freedom'[6]. Sen argues that development focusing on human freedom contrasts with narrower visions of development, such as that based on gross domestic product growth to consider the country's development. Finally, Sen justifies that freedom would be precisely the central point of the development process, where (i) the evaluation of progress must be made by measuring the increase in people's freedom and (ii) effective development depends only on people's free will.

The development process is never simple, and there are no guarantees of its success[7]. However, observing some practical rules can make development planning less

[6] "Development consists of the removal of various types of unfreedoms that leave people with little choice and little opportunity of exercising their reasoned agency." "Development can be seen, (...) as a process of expanding the real freedoms that people enjoy." (Sen, 2003, p. 17 and 26, respectively)
[7] Scott (1998) refers to the phrase "It is impossible to legislate for the future" by Prince Peter Kropot Kin, a critic of communist authoritarianism

subject to disasters (Scott, 1998).

Scott (1998) points out the following practical rules: a) take small steps: it is impossible to predict its consequences in an experimental attempt at social change. Therefore, it is preferable to take small steps, step back, observe and plan the next small move; b) favor reversibility: always prefer interventions that allow reversal in case of failure. Irreversible interventions have irreversible consequences; c) opt for interventions that would enable greater accommodation of unforeseen circumstances; and d) be prepared for *human ingenuity*: those involved in the process can later improve the intervention design.

In parallel to the development process, Stiglitz (2013) highlights the indispensability of implementing economic policies that will work better for society. More importantly, that the vast majority of citizens are reached by the policies designed. Adopting such policies implies a better balance between markets and the State, a perspective supported by modern economic theory and historical evidence. Thus, one of the government's main jobs is to redistribute income, especially when the outcomes of market processes are too disparate.

The literature also works on the relationship between equality and happiness. Krugman (2015) explains that more egalitarian societies are not necessarily happier, and this is because if society has complete equality in conditions of poverty, the community will not be very happy. The author mentions China, thirty or thirty-five years ago, where equality and extreme poverty followed together.

A certain level of inequality would be necessary and even advantageous to encourage people since the existence of inequality may represent an incentive for different life choices. Therefore, a certain level of inequality would even be justifiable. However, a certain level of inequality could never justify the unjustifiable levels of inequality, which negatively reflect citizens' social well-being and happiness. For instance, the United States today, presents a status of inequality that is hardly justified in terms of incentive or as a form of stimulus to growth or development (Krugman et al., 2015).

Therefore, just as certain levels of inequality may be tolerable, the same way that wealth and happiness can thrive under conditions of moderate inequality. Northern European countries such as Sweden, Norway, and Denmark have very reasonable levels of inequality and are examples of this contextualization of happiness (Krugman et al., 2015).

Furthermore, when Stiglitz (2015) discusses inequality and happiness, he retook the concept of deprivation, previously highlighted by Sen (2003). Citizens have no reason to be happy when inequality is too great. When someone cannot guarantee the minimum for an adequate standard of living, there are plenty of reasons to be unhappy, and society has reasons to be concerned about the unhappiness of its citizens. Therefore, extreme inequalities are bad for society and people (Krugman et al., 2015).

Nonetheless, this scenario is not changeless. As Piketty (2015) well highlighted, "Europe today is much more prosperous and much more egalitarian than it was a century ago, at a time when inequalities were extreme" and the "institutions can make things change" (Krugman et al., 2015, p. 39).

3. THE IMPACT OF TAXATION ON THE RELATIONSHIP BETWEEN DEVELOPMENT AND ECONOMIC INEQUALITY

There has long been a consensus on taxation to observe taxpayers' ability to pay (Pires, 2018). However, during the second half of the 20th century, especially in high-income countries, 'taxation for growth' came to prevail over the search for the balance that initially existed between the principles of equality and the ability to pay taxes (Lahey, 2019).

Economic integration, made possible by the mobility of people and capital, is closely linked to liberal ideas of free trade (Petersen, 2008). Globalisation affects the socio-political structures of an economy through intensive increases in cross-border trade, information exchange, and foreign direct investment (Estellita; Bastos, 2015; Ajide et al., 2021).

Although market integration has reduced inequality between countries (Chancel & Piketty, 2021; Ajide et al., 2021), this effect has not occurred within countries. In the most developed regions, inequality has reached its highest level in decades.Lahey (2019) states that "the original concept of equality in taxation had already been displaced by appeals to "equity" in the 1920s, almost completely erasing the use of the term "equality" in tax policy discourses" (Lahey, 2019, p. 430). The mobility of agents, technology, the new national and international power (international organizations and even citizens), interdependence, and the weakening of public administration are central elements that impact tax law in this global environment (Jessen, 2012; Pires, 2018; Peters, 2019). Because tax systems remain to be regulated by national rules and based on territoriality principles they were profoundly affected by globalisation and, consequently, they are inadequate and maladjusted (Pires, 2018). Therefore, tax policies and the distribution of the tax burden have undergone significant changes (Tanzi, 1999; Avi-Yonah, 2000; Pires, 2018; Jha & Gozgor, 2019; Lahey, 2019).

Specifically, regarding the advances in technology, Alm (2021) argues that by increasing the information available to governments, technological changes could improve the ability to reduce tax evasion. However, the author also points out that these changes in technology will open new avenues through which some individuals and some companies can evade (and avoid) taxes.

The implications of this new digital era for inequality are not entirely clear yet. Alm (2021) states that it seems plausible, and even likely, that will be "people mainly at the very top and at the very bottom of the income distribution who will reap the benefits of technology and its effects on tax evasion, with the gains at the top almost certainly far exceeding the gains at the bottom" (ALM, 2021, p. 336). Therefore, the author points out that "technology, through its effects on the distributive patterns of tax evasion, will have important effects on economic inequality, almost certainly generating greater inequality" (ALM, 2021, p.339).

Indeed, taxation has been seen as a source of distortions to the most efficient flow of capital (Sato, 2003; Pereira, 2011). Contrary to the neutrality[8] pursued by international tax law, the tax element has been decisive in deciding where and how to invest in this integrated market. The neutrality would only be achievable if national tax systems were identical since precisely the differences between tax rules allow manipulation of the choices of economic agents.

However, the open and integrated economies panorama is far from idealizing a perfectly competitive market since taxation is far from neutral. For this reason, the impact of taxation represents a fundamental element in the decisions of economic

[8] For neutrality, the tax element must not interfere with investment decisions or the way businesses are organized. It would be possible to achieve a perfectly competitive market with economic efficiency (PEREIRA, 2011).

agents.In the past four decades, tax rates on capital have been lowered(Ganghof, 2006; Rixen, 2011). According to Flamant et al.(2021), the number of preferential regimes for individual income has increased more than five times, representing 5 in 1995 and 28 in 2021. Likewise, the corporate and individual income tax competition can reinforce each other in creating more unequal societies (FLAMANT et al., 2021).

Furthermore, Rixen and Unger assert that tax systems at all levels, national, regional, and global are regulatory systems (2021). The authors explain that, despite the lack of consensus, taxation would be an instrument for regulation in a broader perspective because, in addition to the collection purpose, considered predominant, taxes have always been used with the purpose of regulating conduct since the Babylonian divorce tax of 2,350 BC, and prescribing certain behaviours and sanctioning others, as examples the environmental and sin or health taxes (Rixen & Unger, 2021).

In the same sense, Woo et al. (2017) highlight that taxes have been used as a tool for economic intervention and regulation ratios besides the collection purpose. For instance, the authors mention the Great Recession of 2007-2009 increased public debt unprecedentedly, and many governments have resorted to substantial fiscal adjustments through a combination of spending cuts and tax increases to reduce their debt-to-GDP (Woo et al., 2017).

Meantime, in fiscal adjustment periods, it is essential to prevent a significant increase in income inequality because a fiscal contraction considered fundamentally unfair can prevent the sustainability of efforts to reduce the GDP deficit (Woo et al., 2017). Meanwhile, besides the increase in income inequality, another consequence of fiscal adjustments is the increase in unemployment. In turn, unemployment also tends to increase inequality (Woo et al., 2017). Therefore, fiscal adjustments also affect inequality.

However, when countries adopted less discretionary tax rate adjustments during the crisis, inequality did not increase as much. In addition, the composition of austerity measures also matters to offset part of the adverse distributive impact of the fiscal adjustment. For example, progressive taxation, social benefits, and subsidies can help mitigate the harmful effects of income inequality of fiscal adjustments (Woo et al., 2017).

Concerning the issues in the current taxation policies, Limberg (2019), in a study focused on fiscal fairness and progressive income taxation, concludes that tax justice claims still play a role in the formulation of tax policies. The author suggests that although policymakers are more sensitive to the policy preferences of wealthy citizens, his study shows that the general demands for tax justice to compensate for unequal treatment can still prompt the need for progressive income taxation (Limberg, 2019).

In this regard, the literature highlights that tax policy, as a result of globalisation, or precisely because of the advancement of technology, or as a result of financial crises, has a significant impact, in different ways, to worsen the levels of social inequalities.

4. ABOUT DATA AND METHODOLOGICAL STRATEGY

The literature review in the previous section points out that, taxation has a relevant impact on current political and economic systems, so this section introduces a comparative analysis to verify whether developed nations favour fair tax systems. Indeed, are the very highly developed nations distributing their tax burden fairly among different tax bases and taxpayers?

The exercise consists of considering nations that have a prominent position in the HDI or the current political-economic scenario and verifying how these jurisdictions distribute their tax burden among different tax bases (i. tax on individual income; ii. tax on corporate income or business income; iii. taxes on employees and employers; iv. taxes on consumption or indirect taxes). The results especially considered the corporate and individual income taxes.

After collecting these data, the work compiled the data in Table 1: HDI vs. TAX RATE. The study, besides comparing the tax rates of the top 10 nations in the HDI 2020 ranking (Norway, Ireland, Switzerland, Hong Kong, Iceland; Germany; Sweden; Australia, Netherlands, and Denmark), selected nations such as - the United States of America, United Kingdom, China and India due to the relevant economic, political or economic-political impact these nations have on the world economy.

TABLE 1 - HDI vs. TAX RATES

Interpretation: Table reproduces the positioning and index of nations (2011 and 2020 – last HDI index available), as well as the tax rates imposed for different taxes in two different periods (2011 and 2021).

Sources: HDI index available at: http://hdr.undp.org/sites/default/files/hdr_2020_overview_portuguese.pdf and Tax Rates from KPMG website, available at: https://home.kpmg/xx/en/home/services/tax/tax-tools-and- resources/tax-rates-online

Country	YEAR	Human Develoment Index (HDI)	HDI Classification	HDI placement	Corporate Tax Rate	Individual Income Tax Rate	Employee Social Security Tax Rates	Employer Social Security Tax Rates	Indirect Tax Rates
Norway	**2021**	**0,957**	Very high human development	**1**	**22**	**38.2**	**8.2**	**14.10**	**25**
Norway	2011	0,943	Very high human development	1	28	47.8	7.8	14.10	25
Ireland	**2021**	**0,955**	Very high human development	**2**	**12.5**	**48**	**4**	**11.05**	**23**
Ireland	2011	0,908	Very high human development	7	12.5	48	4	10.75	21
Switzerland	**2021**	**0,955**	Very high human development	**2**	**18.31**	**40**	**6.40**	**6.40**	**7,7**
Switzerland	2011	0,903	Very high human development	11	14.93	40	6.05	6.05	8
Hong Kong	**2021**	**0,949**	Very high human development	**4**	**16.5**	**15**	**0**	**0**	**0**
Hong Kong	2011	0,898	Very high human development	13	16.5	15	0	0	NA
Iceland	**2021**	**0,949**	Very high human development	**4**	**20**	**46.25**	**0**	**6.10**	**24**
Iceland	2011	0,898	Very high human development	14	20	46.21	NA	8.65	25.5
Germany	**2021**	**0,947**	Very high human development	**6**	**29.37**	**45**	**20.23**	**19.98**	**19**
Germany	2011	0,905	Very high human development	9	30.00	45	20.48	19.33	19
Sweden	**2021**	**0,945**	Very high human development	**7**	**20.60**	**52.85**	**7**	**31.42**	**25**
Sweden	2011	0,904	Very high human development	10	26.3	56.55	7	31.42	25
Australia	**2021**	**0,944**	Very high human development	**8**	**30**	**45**	**0**	**NA**	**10**
Australia	2011	0,929	Very high human development	2	30	45	2.5	NA	10
Netherlands	**2021**	**0,944**	Very high human development	**8**	**25**	**49.5**	**27.65**	**23.59**	**21**
Netherlands	2011	0,91	Very high human development	3	25	52	NA	19.91	19
Denmark	**2021**	**0,94**	Very high human development	**10**	**22**	**56.50**	**0**	**0**	**25**
Denmark	2011	0,895	Very high human development	16	25	55.38	NA	NA	25

United Kingdom	**2021**	**0,932**	Very high human development	**13**	**19**	**45**	**14**	**13.80**	**20**
United Kingdom	2011	0,861	Very high human development	28	26	50	2	13.80	20
United States	**2021**	**0,926**	Very high human development	**17**	**27**	**37**	**7.65**	**7.65**	**0**
United States	2011	0,91	Very high human development	4	40	35	5.65	7.65	NA
Portugal	**2021**	**0,864**	Very high human development	**38**	**21**	**48**	**11**	**23.75**	**23**
Portugal	2011	0,809	Very high human development	41	25	46.5	11	23.75	23
Argentina	**2021**	**0,845**	Very high human development	**46**	**25**	**35**	**17**	**20.40**	**21**
Argentina	2011	0,797	Very high human development	45	35	35	17	27	21
Brazil	**2021**	**0,765**	High human development	**84**	**34**	**27.5**	**14**	**31.70**	**18**
Brazil	2011	0,718	High human development	84	37	27.5	11	29	19
China	**2021**	**0,761**	High human development	**85**	**25**	**45**	**10.50**	**28.52**	**13**
China	2011	0,687	Medium human development	101	25	45	18	44	17
India	**2021**	**0,64**	Medium human development	**131**	**30**	**42.74**	**12**	**12**	**18**
India	2011	0,547	Medium human development	134	32.44	30	12	12	12.5
Mauritania	**2021**	**0,546**	Low human development	**157**	**25**	**40**	**5**	NA	NA
Mauritania	2011	0,453	Low human development	159	NA	NA	NA	20	NA

The study also included Portugal as a representative of the jurisdictions still classified as having very high HDI but not among the TOP-10 countries in the *ranking*. Brazil and Argentina were also selected. The second represents South American countries with very high HDI classification, while Brazil and China represent countries classified with high HDI. The data analysis of these nations with the top-ranking nations also resulted in relevant findings. Finally, Mauritania, located in Northwest Africa, was selected because it represents the first country among those classified with low HDI.

The study compares data extracted in two different periods, 2011 and 2022, and uses various sources to collect the data, as indicated in Table 2: SOURCES – DATA ANALYSIS

COLLECTEDDATA	SOURCE	INFORMATIONEXTRACTED	METHOD OF ANALYSING INFORMATION
Human Development Index - HDI	Program of the United Nations Development Program (UNDP)	index, classification and placement in the years 2011 and 2020	Planning in EXCEL **TABLE 1 - HDI vs. TAX RATES**
Corporate income tax	KPMG	rates in the years 2011 and 2021	Planning in EXCEL **TABLE 1 - HDI vs. TAX RATES**
Individual income tax rate	KPMG	rates in the years 2011 and 2021	Planning in EXCEL **TABLE 1 - HDI vs. TAX RATES**
Employee Social Security Tax Rates	KPMG	rates in the years 2011 and 2021	Planning in EXCEL **TABLE 1 - HDI vs. TAX RATES**
Employer Social Security Tax Rates	KPMG	rates in the years 2011 and 2021	Planning in EXCEL **TABLE 1 - HDI vs. TAX RATES**
Indirect taxrate	KPMG	rates in the years 2011 and 2021	Planning in EXCEL **TABLE 1 - HDI vs. TAX RATES**

Table 2: SOURCES – DATA ANALYSIS

The analysis uses the positioning of nations in the HDI as one of the parameters. In the Human Development 2020 report, Amartya Sen[9] highlights the index, explaining:

[9] The Human Development 2020 report includes a special contribution by the Indian economist, creator of the HDI, entitled *Human Development and Mahbub ul Haq*.

The simple HDI never tried to represent all that we wanted to capture in the indicator system, but it had much more to say about quality of life than GDP. It pointed to the possibility of thinking about more significant things regarding human life than just the market value of commodities bought and sold. The impacts of lower mortality, better health, more school education, and other elementary human concerns could be combined in some aggregate form, and the HDI did just that. (…) The UNDP's announcement in 1990 of the new Human Development Index, with concrete numbers for different countries' achievements, measured with transparency and relevance, was widely welcomed. (UNDP, 2020, p. 13)

In addition to the data compiled in Table 1 - HDI x RATES, the results consider reports 'International Tax Competitiveness Index'[10] and 'Digital Taxation around the world'[11], produced by TaxFoundation.org.

5. DISTRIBUTION OF THE TAX BURDEN AND THE DEVELOPMENT OF NATIONS: THE DATA FINDINGS

The following results, analysed from the information compiled in Table 1: HDI vs. Tax Rates - Appendix, show that from comparative analysis, (i) there is no asymmetry between the tax policies adopted by the countries analysed and (ii) countries with a very high level of development do not preponderate the equal division of their tax burden between different bases and taxpayer profiles.

Firstly, there is no symmetry in the tax policies adopted by 10 countries with the highest HDI. Quite the opposite, these nations adopt very different rates when considering corporate and individual income taxes. While Hong Kong (4th HDI) adopted similar tax rates, a difference that varies from 1.5% between both rates, Norway (1st HDI), Ireland (2nd HDI), Switzerland (3rd HDI), Iceland (4th HDI), Germany (6th HDI), Sweden (7th HDI), Australia (8th HDI), the Netherlands (8th HDI) and Denmark (10th HDI)

[10] BUNN, Daniel; ASEN, Elke, 2021. International Tax Competitiveness Index 2021. Washington: Tax Foundation. Available at: https://taxfoundation.org/2021-international-tax-competitiveness-index/ (accessed 20 May 2022).

[11] BUNN, Daniel; ASEN, Elke; ENACHE, Cristina, 2021. Digital Taxation around the World. Washington: Tax Foundation, Available at: https://files.taxfoundation.org/20200610094652/Digital-Taxation-Around-the-World1.pdf

applied very different rates for the taxation of corporate and individual income.

In all 9 jurisdictions, the difference between corporate and individual income tax rates exceeded 10%, featuring Iceland, the Netherlands and Denmark with the most glaring differences, presenting extreme contrasts of 26.25%, 24.5% and 33.89%, respectively. However, there is a similarity between the ten countries, namely:they all impose heavier taxation on individual income.

Second, when comparing the corporate income tax rates imposed by the 10 countries in the TOP 10 of the ranking in two different periods, 2011 and 2021, it appears that in many cases there was a relief in the rates (in Norway the decrease was 6%, in Switzerland the decrease was 3,38%, in Sweden the decrease was 5,7%, in Australia the decrease was 4% and in Denmark the decrease was 3%).

Concerning personal income tax rates, this slowdown also occurred, in a smaller number of jurisdictions, however at a very considerable level in the case of Norway (in Norway the decrease was 9.6%, in Sweden the decrease was 3,7% and in the Netherlands the decrease was 2.5%).

Once again, there is no harmony in the changes in tax policies adopted a decade later. While Norway and Sweden both lowered the rates of both taxes, Denmark lowered the corporate tax rate and proceeded to slightly increase the individual income tax rate. On the other hand, Switzerland is the only country that showed an increase in corporate income tax. And yet, countries like Ireland, Hong Kong, Germany, Australia and Denmark kept the rates of both taxes after about ten years.

In third place, the results show that changing or not the tax rates on income did not reflect the positioning of countries in the HDI.

For example, in the case of Norway, the change in fiscal policies (the rates of both income taxes were reduced substantially) was not reflected in the country's HDI ranking, which remained in the first position after almost a decade. Likewise, Ireland remained in second place after the same period, even without any change in the tax burden, and in 2021 it has one of the highest tax burdens on personal income and difference about corporate income tax (48% and 12.5%, respectively).

Finally, the improvement in Switzerland's performance, which appears in second place in 2020, up to nine positions compared to 2011, occurred without any substantial change in the adopted fiscal policy options (in 2011, the rates were 14.93% for tax on corporate income and 40% for personal income tax and in 2021, the rates were 18.31% and 40%, respectively).

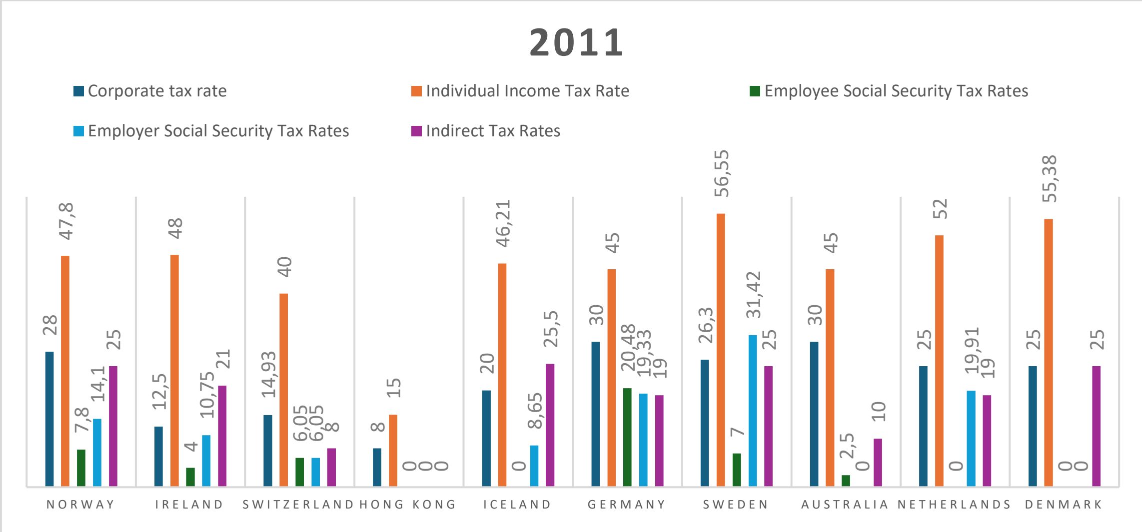

Table 3: Tax rates in 2011 of the TOP 10 countries in HDI ranking

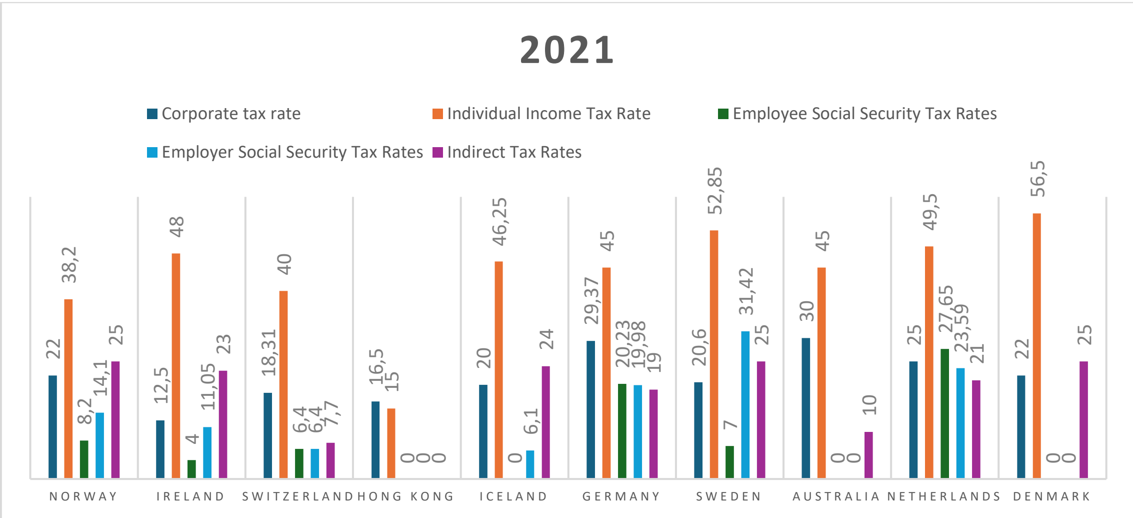

Table 4: Tax rates in 2021 of the TOP 10 countries in HDI ranking

Regarding the first three results, the most relevant aspect involving the three countries in leading positions in the HDI is that, after ten years, they do not distribute their tax burden in a balanced way. These jurisdictions reduce corporate taxes, favouring foreign investments and, on the other hand, increase the taxation of personal income (tax base with less mobility and imposed mainly on citizens and residents of the country).

The exemption of mobile tax bases, mainly reflected in taxation on corporate income, is seen as a consequence of tax competition, responsible for increasing the imbalance between the taxation of corporate income and taxation on wages and assets. The loss of revenue from mobile tax bases, which easily change to jurisdictions with more favourable taxation, forces States to increase taxation on immovable property, represented by taxation on wages and goods (Avi-Yonah, 2000; Santos, 2009; Forrester, 2018; Pires, 2018).

The data survey also shows that there is a significant discrepancy in the tax policies of the TOP 10 ranking countries when considering the tax rates on employee social security and employer social security. While in Germany (6th HDI) and Netherlands (8th HDI), the tax burdens borne exceed 20%, in Hong Kong (4th HDI), Australia (8th HDI), and Denmark (10th HDI) there is no taxation for these bases. In Sweden (7th HDI) the Employer Social Security Tax Rate is 31.42%.

Regarding the results obtained for the other selected countries, it is essential to note that the United States maintained, in the period from 2011 to 2021, a high distinction between the corporative and individual income tax rates (a difference of 10%). The United States also presented a much lower performance in the HDI (from 4th in 2011 to 11th in 2020). Such rates and results corroborate with facts warned by Stiglitz (2013) and Piketty (2015).

On the other hand, China obtained the best result among the selected countries in the analysed period. China rose in 16 positions and went from medium HDI to high HDI. The jurisdiction maintained high rates for both incomes, but the difference between corporate and individual income considerably increased (from 12% in 2011 to 20% in 2020). Data corroborate the notes of Krugman (2015), and previous studies, also reflecting the impact of tax competition.

Finally, all the other selected countries, the United Kingdom, Portugal, Argentina, India, Mauritania, presented in 2021 much higher tax rates for individual income than corporate income. The difference ranged from 12,74% in the case of India and 15% in the case of Mauritania. Brazil is an exception, in this case, having in 2020 presented a higher rate for taxes on corporate income, 34% than for individual income, 27.5%.

Once again, the tax policies adopted by countries are reflections of tax competition, as raised by scholars.

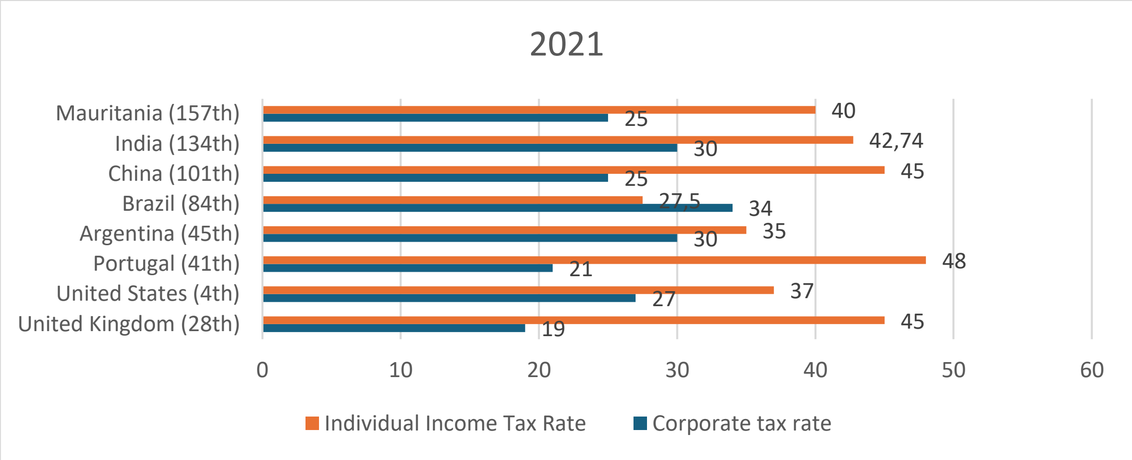

Table 5: Countries' individual and corporate income tax rates in 2021

Another relevant result derives from the analysis of the 'International Tax Competitiveness Index Rankings 2021'[12]. When tax competitiveness is considered, the TOP 3 countries in the HDI ranking do not appear in the lead. Norway, Ireland, and Switzerland are in the 10th, 19th, and 4th place, respectively. In the leadership of tax competitiveness are Estonia, Latvia and New Zealand. Such results suggest that competitiveness is not strictly linked to better performance in human development.

Furthermore, in recent years, the digital economy has been at the forefront of political and economic debates, including discussions on the adoption of new equalization and taxation rates for digital services, in addition to existing taxes (BUNN et al., 2021). So, the tax policies on the digital economy deserve attention, as the matter has a substantial impact on the equity of tax systems. However, there are still few jurisdictions in Europe that effectively tax the digital element.

Bunn et al. (2021) show that only Austria, France, Hungary, Italy, Turkey, and the United Kingdom have implemented digital services taxes in 2020[13].

The lack of digital taxation leads to non-compliance with the ability to pay, impacting tax equity, resulting in a drop in public revenue collection by countries (PIRES, 2018).

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[12] The Tax Competitiveness Ranking takes into account (i) corporate tax, (ii) individual tax, (iii) consumption taxes, (iv) property taxes and (v) cross-border tax rules. Available at: https://taxfoundation.org/2021-international-tax-competitiveness-index/, p. 3.
[13] Available at: https://files.taxfoundation.org/20200610094652/Digital-Taxation-Around-the-World1.pdf, p.19-21.

As a final point, regarding indirect taxation, two considerations are relevant. First, today indirect taxation represents the main source of tax revenue for several countries, especially in the European Union (EU) and the euro area (EA-19)[14]. Nonetheless, also in this aspect, there is considerable variation in the rates adopted by jurisdictions.

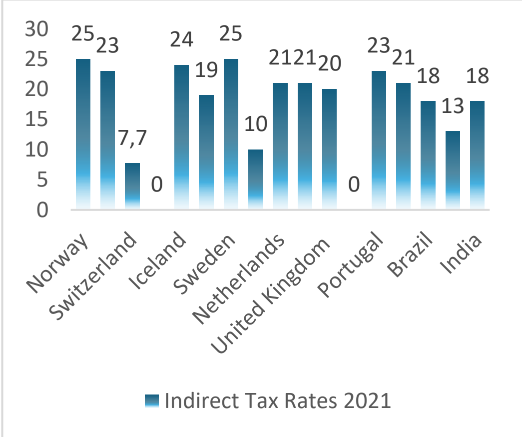

Table 6: Countries' indirect tax rates in 2011Table 7: Countries' indirect tax rates in 2021

The analysis of collected data shows that developed countries do not comply with the equality and ability to pay principles when distributing their tax burden. Thus, highly developed jurisdictions are not in connection with tax equality and fairness. Finally, these evidences corroborate the concern raised by the literature review, that is, the increase in inequality even with the development of nations.

6. CONCLUSION

Since Saint Thomas Aquinas, the relationship between justice and equity has been discussed (HESPANHA, 2002). Although it was not an easy task, this work reinforces the need for articulation between the development of the nation and more equitable distribution of the tax burden.

Markets, themselves, are free, requiring adequate government intervention and regulation for the entire economy to work as expected. In turn, it is essential to adopt

[14] For more information, access: EUROSTAT Statistics Explained. Tax revenue statistics. Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Tax_revenue_statistics#Differences_in_the_structure_of_tax_revenue_across_the_EU

institutional public policies that prioritize the general interests of citizens, to the detriment of interests directed at one layer or only at the top.

The data collection reinforces the literature review. The high level of development does not necessarily represent that there is tax equity in the distribution of the tax burden between different tax bases and taxpayer profiles. Better positioned countries in the HDI present tax choices that ease taxation on some tax bases and burden the taxation of others. Thus, very high developed nations tax different categories of taxpayers and tax bases at significantly unequal rates, demonstrating non-compliance with the tax principles of ability to pay and equality.

The comparative analysis also shows that jurisdictions are overtaxing individual income tax and employee taxation, at the same time, are exempting corporate income taxation to favour foreign investment and become competitive in the global economic scenario.

However, things can always change. A considerable variation from the current panorama depends on the actions of institutions, and specifically concerning taxation, adopting tax policies that contemplate the balanced distribution of the tax burden. In addition, any significant change depends on the intensification of corporate income taxation and the fight against tax havens (KRUGMAN et al., 2015). Finally, the adequacy of tax systems to the current digital economy is urgent, as it promises to balance the revenue collection of jurisdictions.

The results obtained support such conclusions, but the research is limited as it does not cover, for example, the rates applied to property tax. Furthermore, the work needs to be complemented by extensive additional research to achieve a deeper understanding of the global dynamics of inequality.

Finally, the UN Agenda, with its 17 goals, especially SDG 10 - reducing inequalities - may represent an unprecedented advance in more inclusive and equitable development, especially in the tax field. In this regard, the practical rules mentioned by Scott (1998) to make development planning less subject to disasters remain current.

This article seeks to contribute to theoretical discussions involving the development process of countries and the search for more reasonable levels of equality. This will strengthen academic analysis in an area that deserves advancement and improvement. The work also presents a practical contribution, being able to guide the formulation of tax policies aimed at providing global tax governance and achieving sustainable development.

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