

**Zakat and Principles of Taxation:
Economic Efficiency, a Comparative Analysis with Taxes**

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ABSTRACT

Considering Zakat as a form of taxation, this paper attempts to apply the principle of economic efficiency and the associated key concepts to Zakat. The paper shows that while Zakat generally behaves similarly to taxes, in the sense that it would have a behavioral effect, a substitution effect and a deadweight loss (or additional burden), there are arguments that: (i) Zakat behavioral effect would be less significant than that of tax, (ii) Zakat deadweight loss would be lower than that of tax and (iii) Zakat would have a more favorable impact on saving than tax.

Key words: Zakat, economic efficiency, tax, income effect, substitution effect, deadweight loss.

INTRODUCTION

While in Islamic fiqh (jurisprudence) Zakat is addressed under the chapter of “*Ibadat*” (acts of worshipping) in the same way as prayers (*Salat*), fasting and pilgrimage (*Haji*), it is considered as a key part of the Islamic fiscal and social welfare system (Al Qaradaoui, 1994), and, as such, it is also addressed as a financial obligation of Muslims that is enforced by the sovereign.

From this perspective, Zakat is comparable to tax, as both are: (i) mandatory levies, (ii) collected for no direct consideration, and (iii) enforced by public authorities (Al Qaradaoui, 1994). Accordingly, the principles that govern the design of taxes should be relevant in any discussion on the application of Zakat, including, for instance, whether or not it should be charged on new items of wealth and income, its impact, modality of collection, etc.

The work of Adam Smith on the principles of taxation in his book “*An Inquiry into the Nature and Causes of the Wealth of Nations*” remains one of the most important attempts to conceptualize a

framework around tax policy. This work has been reproduced in some form or shape in almost all subsequent attempts to identify the principles or criteria of a good tax system (Du Preez, 2018). However, regardless of how innovative and seminal this work was, it needed to be revisited in light of the changes in the business environment (Alley and Bentley, 2005).

One of the areas where remarkable developments have been made is the relationship between taxation and economic efficiency. The principles and concepts around economic efficiency of tax have been so enriched and developed that economics of taxation is now a clearly identifiable branch in economics.

Hence, the impact of tax on the supply of factors of production has been thoroughly studied showing that tax has an income effect consisting in a decrease of the available income as a result of tax and a substitution effect resulting from the change in the relative prices of the taxed items (Stiglitz (2015) and James and Nobes (2017)).

Furthermore, research shows that tax generally causes inefficient response from taxpayers, which results in an excess burden (deadweight loss) i.e. a loss of welfare without a corresponding benefit (Auerbach and Hines (2001) and Stiglitz (2015)).

As far as Zakat is concerned, while there is a wealth studies on the economic effect of Zakat at the macro level showing that it has a positive impact on the economy, including on aggregate demand (e.g. Siddiqi (1979); Kuran (2006) and Khan (2007)), saving and investment ((Mannan, 1989), (Kahf 1980, Khan 1984)), there is clearly a gap in relation to studies addressing the impact of Zakat on individual labour supply and saving from a theoretical point of view or trying to assess the deadweight loss of Zakat.

This paper is an attempt to (help) fill this gap. It proposes to discuss the principle of economic efficiency in the context of tax policy design and explore to what extent it applies to Zakat. To this end, the starting point will be a literature review of the topic (section 2). It will be followed by a discussion of the principle of economic efficiency of tax (section 3), then an a brief overview of Zakat will be provided (section 4) to allow addressing the application of the principle of economic efficiency to Zakat (section 5). Section 6 will be a concluding one.

LITERATURE REVIEW

Al Ghofeili (2008) demonstrated that Zakat was given several definitions in classical fiqh (jurisprudence), which all have the following features in common: (i) Zakat is chargeable only if *Nisab* (i.e. a specific amount of wealth) is achieved, (ii) it is due on specific items of wealth, and (iii) it must be spent on specific uses. On this basis, Al Ghofeili (2008) defines Zakat as “*a share prescribed by Sharia in a specific amount of specific wealth for specific beneficiaries*”.

Al Qaradaoui (1994) gives a slightly less explicit definition according to which Zakat is the “*the prescribed share of wealth that Allah imposed for the beneficiaries*” (Al Qaradaoui, 1994).

Allami (2015), on the other hand, attempted to use “modern” tax terminology to define Zakat, and argues that the latter is “*a compulsory flat levy, which is imposed by the Quran, and its funds must be distributed to the eligible beneficiaries*”.

Al Qaradaoui (1994) showed that while Zakat shares some similarities with taxes, it remains fundamentally different in nature. Zakat aim is to purify the giver and his wealth. It represents an ownership right that the poor, the needy, etc. has in this wealth (Powell, 2009), whereas taxes are a forced transfer of resources, which would be, according to Stiglitz (2015), akin to theft had not there been the political process that conferred legality and respectability to them.

The principles of taxation can be traced back more than 4500 years ago (i.e. around 2500 BC) in ancient Mesopotamia where clay tablets recorded payment of a tax called “burden” (Sharlach, 2002). More refined guiding principles of taxation can be found in China around 500 BC where Confucius, and later his disciple Mencius, formulated a number of tax principles centered around the respect of Subjects’ rights (Du Preez, 2018).

In the Muslim world, the work of Ibn Khaldoun was pioneering. In his *Imran* (development) theory Ibn Khaldoun (1377) explains the causes of rise and decay of dynasties and civilizations. He identified good tax system as one of the factors that supports economic development and stability. The key features of a good tax system in Ibn Khaldoun’s theory include mainly fairness and moderate tax burden (Chapra, 2008).

In his inquiry into the sources of public revenues, Adam Smith recognizes the need for the State/sovereign to levy

taxes. Hence before discussing the types of taxes that are available to the State/sovereign, Smith (1776) proposed four cannons (principles) that should govern the design of any tax. These cannons are equity, certainty, convenience and economy of collection (Smith, 1776). The importance of these cannons stems from the fact that they have been referred to almost whenever the principles of taxation are invoked.

The fourth cannon on economy of collection, also referred to as “efficiency of collection” (Fiscal Commission, 2013), is about minimizing the difference between: (i) what is taken out from taxpayers, and (ii) what is brought into the state’s treasury (Smith, 1776). Any difference between these two elements represents the cost of inefficiency of the tax system.

Smith’s cannons of taxation took a central stage over the past 200 years and were referred to whenever the question of how to design a tax is addressed (Du Preez, 2018). However, several attempts to refine or enrich the work of Adam Smith have been undertaken.

Different authors, organizations and committees concerned with tax policy proposed principles of taxation taking the cannons of Adam Smith as a starting point. Hence, the OECD published a report in 1998 addressing the taxation framework of e-commerce. In this report, the OECD expanded on Smith’s (1776) maxims and added a number of principles, including Efficiency and Neutrality.

The same principles were also adopted in the OECD’s 2015 final report on BEPS Action 1 addressing the tax challenges of the digital economy, in which the OECD notes that the principles identified in 1998 report in relation to e-commerce are generally relevant and should be considered in the design of a taxation framework for digital economy (OECD, 2015 b).

In 2001, the American Institute of Certified Public Accountants (AICPA) published a Tax Policy Concept Statement in which they propose a set of guiding principles of good tax policy. The statement commenced with Adam Smith’s (1776) maxims, but added several other principles, including mainly Neutrality, Economic Growth and Efficiency.

Similarly, in 2011, a group of experts led by the Nobel prize laureate Sir James Mirrlees, reviewed the UK tax system and identified the principles of a good tax system. They used Adam Smith’s (1776) maxims as a starting point and concluded that the relevant principles for tax design should also include: Minimizing the Negative Effect on Welfare and Economic Efficiency, Minimizing Administrative and Compliance Costs, Fairness and Transparency (Mirrlees 2011). The review highlighted the importance of Neutrality in achieving these principles/objectives (Scottish Government, 2013).

A similar group of experts was formed in Scotland (known as the Fiscal Commission Working Group) to set out the principles of a modern and efficient tax system in an independent Scotland (Scottish Government, 2013). The group (composed of eminent experts, including Nobel Laureate Joseph Stiglitz) recommended a set of principles to the Scottish government to design an efficient tax system. These principles, which embed the work of the Mirrlees review, are: Simplicity, Stability, Neutrality and Flexibility (Scottish Government, 2013).

Efforts of this nature kept going on, and it will be extremely difficult to identify all the instances where experts or committees tried to identify the principles of taxation using the work of Adam Smith as a starting point. Preez and Stiglingh (2018) counted, on a non-exhaustive basis, as many as 19 of such attempts. To these attempts, we can add the work of Stiglitz (2015) and Scottish Government (2013),

both of which identified the principles of economic efficiency and its variant (viz. neutrality) as relevant principles in the design and assessment of tax policy.

Looking to all these attempts, the principle of economic efficiency (together with associated concepts such as ‘economy of collection’ and ‘neutrality’) was addressed by the majority of the authors and committees who worked on the principles of taxation over the last 200 years. Arguably, it is also one of the areas where the development and enrichment to Smith’s work are the most significant, as several important new concepts and principles have been introduced allowing a better understanding of the economic effect of tax and the assessment of the economic efficiency of tax policies.

More specifically, Auerbach and Hines (2001), Stiglitz (2015) and James and Nobes (2017) and others who looked at the issue of economic efficiency confirm that all taxes, except lumpsum ones, introduce distortions and inefficiencies. Auerbach and Hines (2001) consider lumpsum taxes to be of limited use because while they do not cause economic inefficiency, they cannot be adjusted to take into account any of the taxpayer’s ability to pay indicators.

Stiglitz (2015) and James and Nobes (2017) demonstrated that taxes have an income effect and a substitution effect. The income effect results from the reduction of the available income due to the tax, whereas the substitution effect refers to the impact of the tax on the relative prices of the taxed commodities.

Auerbach and Hines (2001) and Stiglitz (2015) further confirm that all taxes (except lumpsum ones) have an excess burden since they inevitably cause a change in the behavior of the taxpayer with the effect of a loss of welfare without a corresponding benefit.

In this respect, Auerbach and Hines (2001) referred to the work of Ramsey (1927) who asserts that the design of an

optimal tax on commodity requires the minimization of the excess burden. He demonstrated that the maximization of taxpayers’ utility under the constraint of collecting a specific amount of revenue is equivalent to the minimization of the excess burden under the same constraint.

ECONOMIC EFFICIENCY

Smith (1776) tackled the issue of efficiency from the perspective of the economy of collection. He gave four reasons why a tax can be economically inefficient, namely, (i) a too burdensome and costly administrative apparatus, (ii) the disincentive effect of tax on doing business, (iii) an ill-designed tax that creates the “temptation” to evade it and imposes heavy penalties on those who attempt to evade it, and (iv) too frequent and too burdensome tax examinations.

In modern terms, these causes can be grouped under three concepts: administration costs, compliance costs and excess burden of tax (James and Nobes, 2017). These concepts together with the impact of tax on resource allocation (i.e. supply of factors of production) and market equilibrium illustrate how tax can impact economic efficiency.

Furthermore, tax can have behavioral effects. Decisions of taxpayers related to education, work, leisure, investment, consumption, saving and even personal matters such as marriage and divorce, etc. may differ depending on the structure and operation of the tax system. The same applies to decisions related to business activities such as the entity’s legal form, its financing structure, the employees’ remuneration structure (salaries versus fringe benefits), etc. (Stiglitz, 2015).

Neutrality is generally associated with economic efficiency through the impact on resources allocation. A tax is economically efficient if it does not create a distortion in the market. In other words,

taxpayers cannot/do not alter their behavior to avoid the tax. The underlying principle here is that individuals are rational and are best positioned to decide on the best allocation of their resources, which should not be altered by tax.

However, in reality, most taxes will cause a change in the behavior of the taxpayer and, thus, are distortionary (Stiglitz, 2015). They also cause an excess burden (or deadweight loss) i.e. a loss of welfare without a corresponding benefit to anyone else (see section 3.3.).

The remainder of this section will provide more details on the excess burden

of tax as well as the impact of tax on labour and capital.

Tax and Labour

James and Nobes (2017) have shown that the impact of a tax on wages on the supply of labour depends on the shape of the supply curve. If the labour supply curve is an upward-sloping line (see figure 1.), then a tax on wages will reduce the net wage received (from W_1 to W_2), which in turn reduces the number of worked hours – or the supply of labour – (from L_1 to L_2).

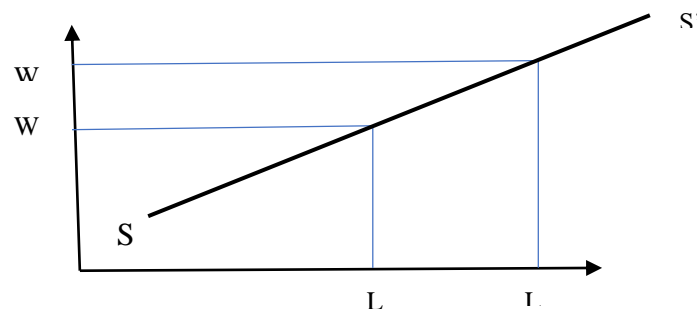


Figure 1.

Source: James and Nobes (2017)

However, if the supply curve is bending back on itself as shown in figure 2., then the supply of labour will increase as wages increase until a certain point (point A on the curve), after which the supply will reduce even if the wages increase. This can be explained by the fact that people may

choose to spend more time on leisure to enjoy their increased prosperity (James and Nobes, 2017). In this situation, a decrease in wages (the move from W_3 to W_4) as a result of tax, for instance, will push individuals to work more (labour supply increases from H_3 to H_4).

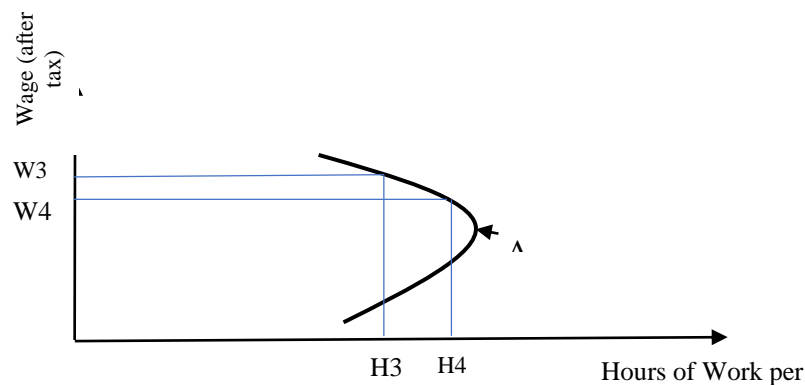


Figure 2.

Source: James and Nobes (2017)

The effect of tax on the supply of labour can be decomposed into 2 types: an income effect and a substitution effect. The income effect refers to the decrease of the net income as a result of the tax, whereas the substitution effect refers to the impact of the tax on the choice between work and leisure (James and Nobes, 2017). The income effect is determined by the portion of the income that is lost/used to pay the tax i.e. average tax rate, whereas the

substitution effect results from the impact of the tax on the marginal benefits of work and leisure and is determined by the marginal tax rate (James and Nobes, 2017).

Both effects do not necessarily work in the same direction. It is, therefore, impossible to predict, based on theory only, their overall impact on the supply of labour (James and Nobes, 2017). Figure 3. below shows this using utility curves.

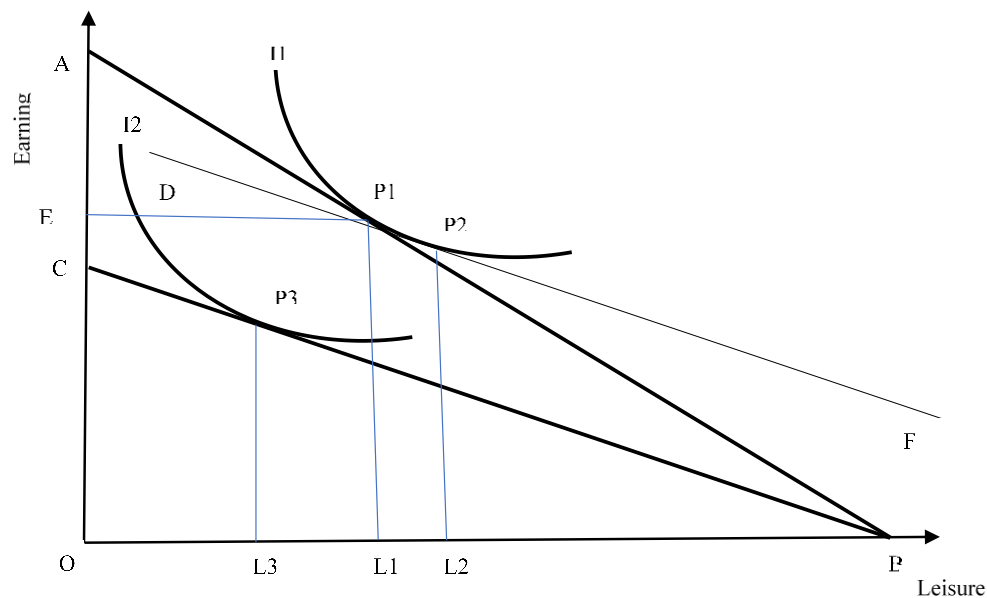


Figure 3.

Source: James and Nobes (2017)

The line AB represents the different combinations between work and leisure that the individual can choose from before tax (we can refer to it as 'budget constraint'). I1 represents the highest attainable utility curve of the individual, taking into account AB. P1 is the tangency point between the two, where the individual is willing to spend OL1 time on leisure and work to earn OE1.

If a proportional tax on wages is introduced, the amount of available earnings will reduce and the budget constraint will shift to CB. The line still ends in B because the combination in that point (no work, all leisure) is still possible (i.e. not affected by the tax). The slope of

the budget constraint has changed (flattered), which indicates a change in the relative prices of labour and leisure such that to earn the same income after tax, more leisure needs to be given up. We can assume, therefore, that the individual will reduce leisure and work more and move to point P3 with reduced leisure of OL3.

The move from P1 to P3 represents the combined effect of income and substitution effects of the tax. To isolate the substitution effect, James and Nobes (2017) assume that the individual is compensated for the amount he lost as a result of the tax (to remove the income effect). In this case, the budget constraint will shift upwards to DF until it reaches I1 (pre-tax utility curve)

while keeping the same slope as CB to ensure that the (post-tax) relative prices of work and leisure do not change. At the tangency point P2, the individual is willing to spend OL2 on leisure. The move from P1 to P2 represents the substitution effect of the tax, which shows that the individual is willing to work less and spend more time on Leisure (OL2). Thus, the move from P2 to P3 is the income effect, which means that the reduction of leisure as a result of the income effect (OL2 – OL3) is higher than the increase resulting from the substitution effect (OL2 – OL1). Mathematically, this can be represented as follows:

$$\begin{aligned} \text{Overall effect} &= \text{income effect} + \\ &\quad \text{substitution effect; or} \\ (OL3 - OL1) &= (OL3 - OL2) + (OL2 - OL1) \end{aligned}$$

One of the key assumptions made by James and Nobes (2017) for the validity of the analysis above is that leisure is a superior good i.e. the demand of leisure increases when income increases. Other assumptions include that: (i) work hours are flexible (i.e. the individuals can choose how much they work), (ii) there are no fringe benefits, (iii) all earnings are taxable, (iv) there is one wage rate and (v) labour demand is perfectly elastic (James and Nobes, 2017).

The same result can be achieved if one starts by removing the substitution effect to isolate the income effect. This can be done by shifting the pre-tax budget constraint downwards while keeping the same slope. There will be a new equilibrium point in a lower utility curve. The shift to this point represents the income effect. The shift from this latter point to the equilibrium point determined by the after-tax budget constraint and the lower utility curve represents the substitution effect (Stiglitz, 2015).

In figure 3. above, the income effect overweighs the substitution effect. However, this is not always the case. Both

effects can cancel out each other or the substitution effects can overweigh the income effect (James and Nobes, 2017).

Using the analysis above, James and Nobes (2017) carried out a comparison between the effects of different taxes on work effort. They showed, for instance, that a poll (or lumpsum) tax will have a more favorable impact on work effort (labour supply) than a proportional income tax of the same yield. The reason being that, while both taxes will have the same income effect, the lump-sum tax will have no substitution effect because it would not affect the tradeoff between (or relative prices of) work and leisure (unlike the income tax).

They also discussed the potential effects of an income tax and excise tax of the same progressivity and yield, but concluded that there are many factors that would prevent the two taxes to have the same effect on labour supply as one would expect, including that taxed goods may be complementary to/substitute of work or leisure. An excise tax on goods or services consumed during leisure may affect the decision/time to do leisure (James and Nobes, 2017). Moreover, Musgrave's 'spite effect' may also come to play. Individuals may decide to work less a response to a tax.

Tax and Capital

Capital and capital formation are determined by investment, which is determined to a large extent by saving.

The impact of tax on saving can be assessed by considering a tax on interest (Stiglitz, 2015). Assuming that one's lifetime income is equal to his lifetime consumption, saving would be nothing else but consumption in future periods. Therefore, the preference between consumption and saving is equivalent to a preference between current and future consumption, which can be analyzed in the same way as the preference between the consumption of two commodities after a tax

has been charged on one of them (future consumption in this case) (Stiglitz, 2015).

Accordingly, a tax on interest (i.e. on saving) will have an income effect and a substitution effect (Stiglitz, 2015). The former arises because the tax makes the individual worse off (it reduces his available income), which would result in reducing his consumption in both periods (current and future), whereas the latter stems from the fact that saving (i.e. future consumption) is now less attractive because of the tax, which would encourage the individual to increase his current consumption (and reduce future one) (Stiglitz, 2015). Therefore, the two effects do not work in the same direction, and the net effect thereof cannot be determined by theory.

The impact of tax on saving can be tackled from a different angle, that is the impact of different taxes on the level and types of saving. If the interest/return of a particular saving account type is exempted from tax or taxed at a reduced rate, individuals will be incentivized to use this account at the expense of other saving forms (substitution effect).

Furthermore, an income tax, for instance, would result in a double taxation of saving: first when the income is derived and second when the saving is made and a return is gained thereon (James and Nobes, 2017). An expenditure tax, on the other hand, will not tax saving, as tax is triggered only upon consumption. Accordingly, an expenditure tax would be more favorable to saving than an income tax (James and Nobes, 2017).

The income effect of tax on savings can also be determined by looking at the impact of the concerned tax on the population group that is (most) affected by the same. If this group saves more than the others, then the impact on saving will be higher (James and Nobes, 2017). Conversely, where the affected group saves less than the others, the impact will be

lower. In the extreme case where all the individuals/households of the population save the same portion of their income (have the same propensity to consume), then the impact on saving will be the same regardless of the group on whom the burden of the tax falls.

Accordingly, a progressive income tax is expected to have a higher effect on saving as it affects more the high-income group of the population who would be subject to a higher tax rate (James and Nobes, 2017). As this group is expected to save more than the other groups of the population, the reduction of their income as a result of the tax, would lead to a reduction of saving at a higher magnitude than would be the case where the tax affected low- or middle-income groups. An expenditure tax, on the other hand, would not have this effect. It may even have a slightly opposite effect to that of income tax because, being an indirect tax, it is slightly regressive (James and Nobes, 2017).

Empirical evidence suggests that the substitution effect is slightly larger than the income effect, which means that a tax on interest would have a slight negative effect on saving (Stiglitz, 2015). This also means that a tax incentive on interest would not significantly increase saving (Stiglitz, 2015).

Excess Burden of Taxation

Taxes result in a transfer of resources from taxpayers to the government (Stiglitz, 2015). The total burden of tax includes both the amounts that taxpayers pay to the government as well as the cost associated with (inefficient) activities that are undertaken in response to the imposition of the tax (Hines, 2007). The excess burden is “the efficiency cost, or deadweight loss, associated with taxation” (Hines, 2007). In other words, it is the difference between what the government collects from the tax and the total burden of the same.

The excess burden is typically measured by the Harberger triangle, which measures the magnitude of the change in economic behavior as a result of the price distortions caused by the tax (Hines, 1999).

Stiglitz (2015) provided a measure of the deadweight loss that is based on utility curves. It compares the revenues collected from the tax that is under consideration (e.g. a tax on commodity X) with the revenues that would be collected from a lump-sum tax with the same burden and the same utility effect as the considered tax. The lump sum tax has no substitution effect as it does not affect the relative prices of the goods consumed. It will bring more revenues than the tax on commodity X. The difference between the two tax revenues is the excess burden of the tax or the deadweight loss.

Hence, to determine the deadweight loss, Stiglitz (2015) asks the following question: For the same effect on taxpayers' welfare, how much extra revenue would a lump-sum tax have raised compared to a tax on commodity X? An equivalent question would be: For the same tax revenue, how much worse off would be the taxpayers with the tax on commodity X than they would have been with the lump-sum tax? The deadweight loss would be the extra tax revenue collected or the loss in welfare (Stiglitz, 2015).

Stiglitz (2015) quantified the deadweight loss as a function of the tax rate, the demand elasticity of the taxed commodity, its price and its quantity. The equation is follows:

$$DWL = \frac{1}{2} T^2 p Q \epsilon_t$$

Where: DWL is deadweight loss, T is the tax rate, p is the price, Q is the quantity and ϵ_t is the elasticity.

James and Nobes (2017) examined and compared the effect of various taxes on the excess burden of tax. They showed, for instance, that a proportional income tax

would have a lower excess burden than an excise tax of equivalent yield. The reason being that the income tax would generally affect less the relative prices of the consumed goods and, thus, the consumer's allocation of resources.

Furthermore, Tideman and al (2002) demonstrated that proportional taxes have a lower excess burden than progressive taxes.

To conclude, taxes (with the exception of lump-sum ones) introduce distortions and inefficiencies (Auerbach and Hines (2001), Stiglitz (2015) and James and Nobes (2017)). They reduce the available income causing an income effect and change the relative prices of the taxed items resulting in a substitution effect (Stiglitz (2015) and James and Nobes (2017)).

Taxes also have a deadweight loss resulting from the behavior change they cause (Auerbach and Hines (2001) and Stiglitz (2015)). It can be measured (using the Harberger triangle) by reference to the tax rate and the price, quantity and demand elasticity of the taxed goods (Stiglitz, 2015). An optimum tax would be one that minimizes the deadweight loss (Auerbach and Hines, 2001).

Applying the above to Zakat, one will note that despite the abundance of the literature addressing the effect of Zakat on the various sides of the economy at the macro level i.e. aggregate demand (e.g. Siddiqi (1979); Kuran (2006) and Khan (2007)), saving and investment ((Mannan, 1989), (Kahf 1980, Khan 1984)), there are very little studies that looked at the impact of Zakat on the factors of production at the individual level (labour supply and saving) or that tried to assess the deadweight loss of Zakat. One of the studies that partially covered this area is that of Wahid (1985) who attempted to determine the impact of Zakat on labour supply in a micro context and in which he argued that Zakat would result in an increase of the individual labour

supply to the extent that the income effect exceeds the substitution effect (which is the same conclusion as James and Nobes (2017) in relation to tax).

The remainder of the paper will focus on this aspect of the economic effect of Zakat by trying to determine the impact of Zakat, in a micro-context, on labour and saving and assess how the additional burden (dead weight loss) it may cause would compare to that of tax.

ZAKAT: KEY FEATURES AND ISSUES

Referring to the elements depicted by Al Ghofeili (2008) to define Zakat i.e. *Nisab*, specific items of wealth and specific uses, and considering the similarities with taxes, the author proposes the following definition of Zakat: *“a compulsory levy imposed by Sharia, under certain conditions, on certain elements of wealth and income, at specific rates and for specific uses”*. This definition captures all the elements mentioned above and adds a specific reference to rates.

Scope

a. Zakatable Persons

Zakat applies to all Muslims who meet the conditions of its chargeability i.e. to be an adult and sane Muslim who owns the *Nisab* (Al Qaradaoui, 1994).

These conditions raise questions about the applicability of Zakat in a number of particular cases. These are briefly discussed below:

- Zakat and non-Muslims: While there is no doubt that the command to pay Zakat in Quran and Sunna are addressed to Muslims, nothing prevents the sovereign to charge a tax with similar features as Zakat on non-Muslims (Al Qaradaoui, 1994) to avoid faith-based discrimination and collect higher revenues (Al Masri, 2006).
- Zakat on the incapacitated: Minors and insane individuals are generally

not addressed with religious obligations, as these entail intention and accountability. However, in the case of Zakat, the prevailing opinion is that Zakat would apply to the minor and insane since the reason of its chargeability (richness) would be met and the existence of guardianship removes the argument of incapacity (Al Qaradaoui, 1994).

- Zakat on companies: Despite the recognition of Bait Ul Mal and Awqaf as forms of legal entities/arrangements (Javed, 2019), the general principle in classical fiqh is that Zakat applies to individuals (Kuran, 2005). However, there are cases where legal arrangements are recognized for the purposes of Zakat (e.g. joint ownership of cattle (Al Qaradaoui, 1994)). Based on these cases, contemporary jurists generally recognize the liability of companies for Zakat with the caveat that the ultimate responsible remains the shareholder (Al Ghofeili, 2008).
- Zakat on public bodies: Zakatable items of wealth and income must be owned by specific person(s) (see section 4.1.2.). As public bodies are owned by the State not by specific persons (individuals), Zakat would not apply to them (Ghofeili, 2008).

b. Zakatable Items

Zakat applies to *Mal*, which covers anything that can be owned and has a value (Al Qaradaoui, 1994). However, this is only a general principle, as not all *Mal* is subject to Zakat. The following conditions must be met to charge Zakat:

- Full ownership: The Zakatable item must have a specific owner, which rules out the case where the owner is identified but is not specific such as public bodies or Waqf beneficiaries who are not specifically identified (Al Ghofeili, 2008). Furthermore, ownership must be full i.e. all of its

- attributes/rights are fulfilled with no restriction (Al Qaradaoui, 1994).
- Growth: According to a majority of jurists, Zakatable items must be predisposed to/intended for growth or productivity, whether this growth is actual or potential (Al Qaradaoui, 1994). This excludes from the Zakat net items for private use as well as those that are not susceptible, by their nature, to growing or generating profits (lost money, doubtful loans, etc. (Al Qaradaoui, 1994)). However, since this requirement (growth) does not apply to all Zakatable items, it raises difficulties in relation to ensuring a just and consistent application of Zakat (Kahf, 1989). Thus, it would make sense to discard this condition and simply apply Zakat based on ownership, unless there is a clear and specific exclusion in the primary sources.
- *Nisab*: This is the minimum level of wealth/income that is needed to trigger Zakat (Al Qaradaoui, 1994). It is determined in terms of number of livestock and quantity of output in the case of agriculture and in terms of a weight of gold and silver in other cases. *Nisab* is to be distinguished from deductions/allowances under tax laws, as it operates more like a condition to charge Zakat rather than a deduction from its base.
- Excess on basic needs: Needs here would cover basic needs for human life such as food, water, shelter, security, health as well as those for wellbeing in general such as education, work, debt repayment, etc. (Al Qaradaoui, 1994).
- Absence of debt: This is related to the previous conditions, as full ownership and excess on basic needs would entail that the items of wealth and income that are subject to Zakat are free from any debt or liability (Al Qaradaoui, 1994).

- Elapse of a lunar year: This condition requires that the item of wealth that is being subject to Zakat has been owned/held by the Zakat payer for 12 consecutive lunar months. This requirement does not apply to agricultural products, mines, treasures and other resources extracted from the ground (Al Qaradaoui, 1994).

Taking the conditions above into account and looking at the Zakatable items of wealth and income, three observations may be made: First, the commands to pay Zakat in Quran and Sunna are general. Second, the trigger of Zakat chargeability is richness. Third, Zakat applied to all forms of wealth known at the time of the Prophet PBUH (Kahf, 1995).

Accordingly, an application of Zakat that is in line with its objectives and spirit would generally require its imposition on all items of wealth and income (taking into account any exclusion based on authentic sources). Any restrictive approach in the application of Zakat would be unfounded (Kahf, 1995).

Zakat Rates

Zakat is generally chargeable at the rate of 2.5% on business assets (after deduction of fixed assets and qualifying debts), gold, silver, money and other forms of savings (stocks, etc.).

Zakat on agricultural products is charged at the rate of 10% if the products are irrigated by rain, rivers and other free sources of water and 5% in other cases. Zakat on livestock is determined as per a schedule of rates expressed in terms of number of livestock (which can be of different species than the Zakatable one).

Mining resources are subject to a 20% rate.

ZAKAT AND ECONOMIC EFFICIENCY

In section 3., we showed that taxes have not only economic effects but also behavioral effects. Decisions ranging from how much to work, to save, to invest or to borrow, etc. to whether or not to get higher education, marry, have children, etc. are all affected by tax (Stiglitz, 2015).

Section 3. also showed that all taxes – except for lump sum (or poll) ones – do affect the supply of labour and capital and cause economic inefficiency in the form of an additional burden (or deadweight loss).

All these aspects will be reexamined in the context of Zakat.

Behavioral Effects of Zakat

Zakat is not a lump-sum tax. Its liability can be affected by the behavior of the Zakat payer. For instance, the owner of a business can choose to use the extra-cash of the business to accelerate a decision to renew the fixed assets. By doing so, he/she would be able to reduce the Zakat liability, as according to the prevailing opinion of jurists, Zakat does not apply to fixed assets. Similarly, the decision of an individual who has a choice between keeping his savings in a (profit-sharing) saving account with an Islamic bank or buying a real estate and renting it will be affected by Zakat. Assuming that the rate of return on the saving account is lower than the Zakat rate, and since investing in a real estate for the purpose of renting it is generally not subject to Zakat, the individual has an incentive to take the second option, that is to buy and rent a real estate, in order to reduce the Zakat due. By doing so, he will still be liable for Zakat on the income derived from the real estate (to the extent the conditions of Nisab and Haul are met) but will avoid paying it on the value of the real estate itself.

However, considering the nature of Zakat for the Muslim i.e. a fundamental

religious obligation that clearly makes the Zakat due a debt towards Zakat receivers, it can be argued that the efforts to avoid it, and thus to alter the behavior for this purpose, would be lower than in the case of taxes. Compliance with Zakat is mostly relying on the voluntary action of its payers.

Moreover, because the key features of Zakat are rather straightforward (i.e. a 2.5% levy on saving that remains unused for 1 year), they are not generally (directly) affected by personal decisions of marriage, divorce, having children, etc. Unlike income tax, for instances, there are no rebates for married couples or for sustaining children in Zakat. Similarly, the transfer of assets does not generally trigger Zakat, as in the case of capital gains tax or inheritance tax. Accordingly, Zakat would generally not impact any of these personal decisions.

To conclude, as all taxes (other than lump-sum ones) have some distortionary effects (Stiglitz, 2015), Zakat is expected to be no exception in this respect. However, there is an argument that its effects on the behavior of its payers would be less significant than those of taxes.

Zakat and Labour

Considering its base and rates (see section 4.) Zakat can be viewed as equivalent to 3 taxes:

- a tax on individuals' savings;
- a tax on businesses' current assets; and
- a tax on agricultural output.

Even though the first two, being related more to capital, are not expected to have a direct impact on the supply of labour, there are studies that point towards Zakat having a positive effect on labour force and labour productivity without any accompanying negative effect on the incentive to work for the poor (Zakat recipients) or the incentive to invest for the rich (Zakat payers) (Kahf, 2009).

The focus in this section will be made on the third tax, which operates as a percentage taken out of the agricultural output (see section 4.2.). It is, therefore, equivalent to a general sales/excise tax on agriculture. The only difference is that the burden of this tax is on the producer, as per the rules. This contrasts with excise (and sales) taxes, the burden of which is put on consumers by the tax rules. However, we already know that it is not the tax rules that determine who actually bear the tax. As a matter of fact, on whom the rules put the burden of the tax is irrelevant (Stiglitz, 2015). This is determined by market forces and, more specifically, by the demand elasticity of the taxed goods (James and Nobes, 2017). The higher the elasticity, the higher the portion of the tax borne by producers. In the extreme case of a perfectly elastic demand, the tax will be fully borne by producers. Conversely, the lower the elasticity, the higher the portion of the tax borne by consumers. In the extreme case of perfectly inelastic demand, the full amount of the tax will be borne by consumers.

Accordingly, as far as agriculture is concerned, the impact of Zakat on labour supply would be similar to that of a general excise tax. In other words, Zakat would have an income effect and a substitution effect that operate in opposite directions. As mentioned in section 3.1., theory does not allow us to determine the net effect on the supply of labour (James and Nobes, 2017).

This is consistent with the findings of Wahid (1985) who looked at the impact of Zakat on individual labour supply and concluded that Zakat would result in an increase of the individual labour supply only if the income effect exceeds the substitution effect.

Zakat and Capital

For the purposes of this section, Zakat will be considered as equivalent to a tax on

savings. This is not unreasonable because Zakat on businesses, if not paid at the level of the business, will generally be paid at the level of the shareholder (see section 4.1.), which means that looking at Zakat as a tax on savings effectively captures both types of tax.

In section 3.2., it was established that the impact of tax on capital and the analysis of the income and substitution effects associated therewith can be tackled from two angles: (i) the individual has to make an arbitrage between consumption and saving or between current and future consumption. In this case, the tax on saving is equivalent to a tax on a commodity, with the latter being future consumption (Stiglitz, 2015), and (ii) the effect of the tax on saving is determined by the differences in the tax treatment of the different types of saving (and the substitution resulting therefrom).

The same approach will be followed for Zakat.

a. Zakat and Saving: Current versus Future Consumption

In section 3.2., we saw that a tax on interest would have an income effect and a substitution effect, exerting opposite forces on consumption. The net effect cannot be determined by theory (Stiglitz, 2015).

A similar analysis can be applied to Zakat. The latter, being a tax on saving, makes the taxed individual worse off. He would, therefore, reduce both current and future consumptions (i.e. consumption and saving). This is the income effect. The substitution effect stems from the fact that Zakat reduces saving and makes it less attractive, which would encourage the individual to reduce saving and increase consumption, as depicted in figure 4. below.

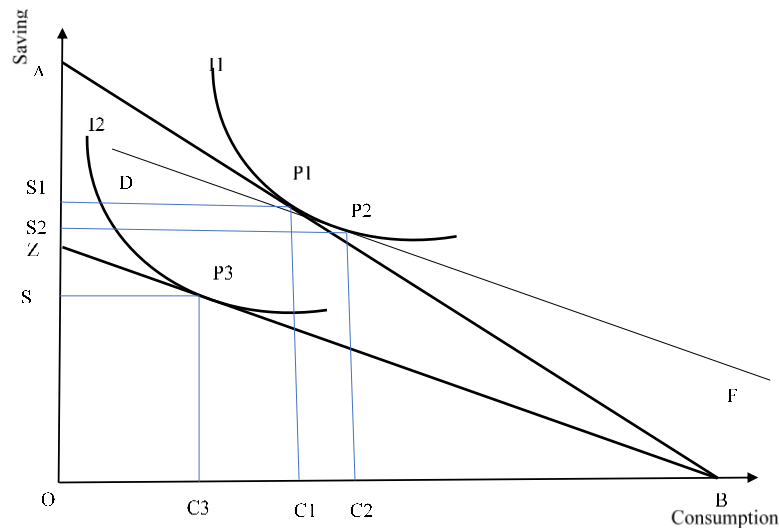


Figure 4.

Source: Author, based on Stiglitz (2015) and James and Nobes (2017).

The line AB in the figure represents the different combinations between consumption of next period (C_{p+1}) or saving and consumption of current period (C_p) that the individual can choose from before Zakat is charged (we can refer to it as 'budget constraint').

I1 represents the highest attainable utility curve of the individual, taking into account AB. P1 is the tangency point between the two, where the individual is willing to consume OC1 and save (or consume in next period) OS1.

Where Zakat is introduced, it applies not on the return of saving like in the case of a tax on interest, but rather on the saving itself (it reduces it). Thus, it operates like a proportional tax on saving.

The amount available for saving will reduce and the budget constraint will shift to ZB. The line still ends in B because where the saving is nil, Zakat is also nil (i.e. at this point, the amount of saving is the same with or without Zakat). The slope of the budget constraint has changed (flattered), which indicates a change in the relative prices of future and current consumptions such that to consume in the next period (i.e. to save) the same amount after Zakat, more current consumption

needs to be given up. Let's assume that the individual will reduce consumption and save more to move to point P3 with reduced consumption of OC3.

The move from P1 to P3 represents the combined effect on consumption of the income and substitution effects of Zakat. To isolate the substitution effect, we assume that the individual is compensated for the amount he/she lost as a result of Zakat in order to remove the income effect (see section 3.2.). In this case, the budget constraint will shift upwards to DF until it reaches I1 (pre-Zakat utility curve) while keeping the same slope as ZB to ensure that the (post-Zakat) relative prices of saving and consumption remain unchanged. At the tangency point P2, the individual is willing to consume OC2. The move from P1 to P2 can be seen as representing the substitution effect of Zakat, which shows that the individual is willing to consume more in the current period (move from C1 to C2) and save less. Thus, the move from P2 to P3 is the income effect, which means that, in this particular case, the reduction of consumption as a result of the income effect ($OC3 - OC2$) is higher than the increase resulting from the substitution effect ($OC2 - OC1$). Mathematically, this can be represented as follows:

Overall effect on consumption = income effect + substitution effect; or

$$(OC3 - OC1) = (OC3 - OC2) + (OC2 - OC1)$$

This is the effect of Zakat on consumption. It cannot be determined by theory, as the income effect can be equal, higher or lower than the substitution effect. A similar conclusion may be reached if we examine the impact of Zakat on consumption using a macro-consumption function which combines the effect of Zakat on the consumption of Zakat payers and Zakat recipients (Kahf, 1999). The impact would be a reduction in the former case and an increase in the latter one (Kahf, 1999). The net effect is neutral or at best indeterminate (Kahf, 1999). Nevertheless, there is another view which states that the net effect would depend on the marginal propensity to consume of both groups, and that there would be an expectation that the combined effect is a lower propensity to consume for the whole population, if we take into account the fact that, in a Muslim society, consumption should be kept moderate and extravagance should be avoided (Kahf, 2009).

Let's now examine the Zakat effect on saving. As mentioned above, the income effect results in a reduction of both saving and consumption. In addition, Zakat on saving creates an incentive/preference for current consumption over future one (saving) because the latter is now less attractive (substitution effect). Accordingly, both the income effect and the substitution effect result in a reduction of saving. Thus, it can be concluded that, unlike the case of consumption, the net outcome of the income and substitution effects on saving can be predicted, and is a reduction. This can be seen on figure 4. The reduction in saving caused by Zakat can be divided in two components: (i) a reduction caused by the income effect ($OS2 - OS3$), and (ii) a reduction caused by the substitution effect ($OS1 - OS2$).

Mathematically, this can be represented as follows:

$$(OS1 - OS3) = (OS1 - OS2) + (OS2 - OS3)$$

This seems to contrast with the conclusion of Kahf (1999) mentioned above that Zakat would result in a lower marginal propensity to consume and, eventually, in being "more conducive towards increasing the aggregate saving" (Kahf, 1999). However, if the net effect of the income and substitution effects of Zakat is lower consumption, then the impact on saving should be an increase.

Similarly, to the analysis made by James and Nobes (2017) in relation to the impact of tax on labour supply (see section 3.1.), there are a number of assumptions that are needed for the validity of the analysis above of the impact of Zakat on saving. These are as follows: (i) consumption (both current and future (saving)) is treated as a superior good i.e. it increases as income increases, (ii) the individuals can choose how much they consume and how much they save and (iii) all forms of savings are taxed (i.e. subject to Zakat).

As highlighted in section 3.1., the same result as above can be achieved if we start by removing the substitution effect to isolate the income effect. This can be done by shifting the pre-Zakat budget constraint (AB) downwards while keeping the same slope. There will be a new equilibrium point in a lower utility curve. The shift to this point represents the income effect. The shift from this latter point to the equilibrium point determined by the after-Zakat budget constraint and the lower utility curve represents the substitution effect.

b. Zakat and Saving: Impact on different forms of savings

Different taxes may have different impacts on the net return from saving. Accordingly, they may be classified as more favorable or

less favorable to saving (James and Nobes, 2017). An illustration of this is the comparison between income tax and expenditure tax whereby the former is considered to be less favorable than the latter because it results in a double taxation of saving (see section 3.2.). Similarly, a tax on saving may be considered more favorable or less favorable to a particular form of saving than to another, depending on the tax treatment of such form. This results in a substitution effect (substituting higher tax savings with lower tax ones).

In relation to Zakat, if the individual decides to keep his/her savings idle (i.e. in a safety box or in a bank account with no return), the amount of saving will be reduced each year by the amount of Zakat until it falls below the Nisab. Therefore, the

individual has an incentive to invest his savings and to ensure that the amount of saving does not reduce as a result of Zakat (Kahf, 1999).

Zakat would, therefore, result in substituting idle savings (i.e. no or low-return investments) with higher return investments. To illustrate this, let's take the case of an individual who has an amount of saving S (exceeding Nisab). Conscious about the Sharia issues of gaining interest on deposits, he limited his choices to two: (i) either to keep the saving in a safety box or in a non-interest-bearing account with the bank (idle saving), or (ii) investing it in (Sharia-compliant) positive return investments. Figure 5. illustrates this arbitrage.

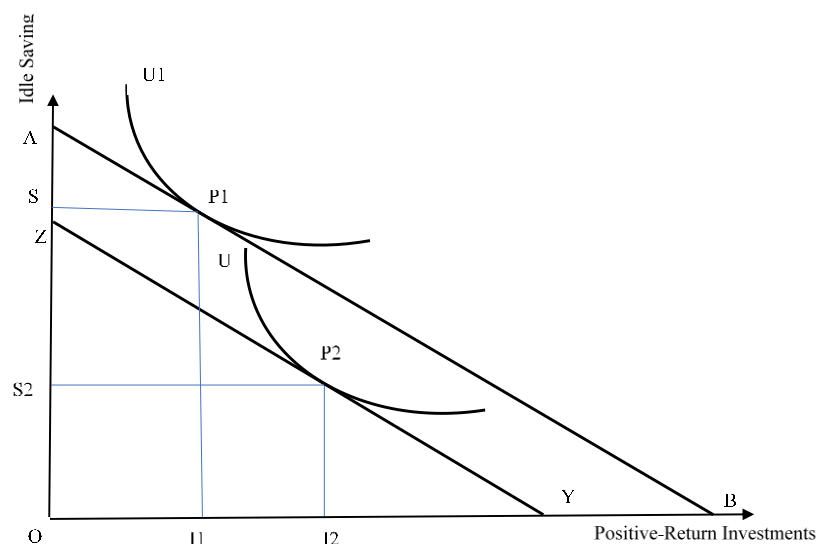


Figure 5.

Source: Author

Similarly to the analysis of the effect of Zakat on saving made in section 5.3.1., the line AB represents the different possible combinations between idle saving and positive-return investments. U1 represents the highest attainable utility curve of the individual, taking into account AB. P1 is the tangency point between the two, where the individual is willing to keep OS1 as idle saving and invest OI1.

When Zakat is introduced, it will affect the total amount of saving and, thus, both amounts available for idle saving and positive return investments will reduce. The budget constraint shifts, therefore, downwards to ZY, while remaining parallel to the original budget constraint AB because Zakat affected idle saving and investments in the same way (it did not affect their relative prices).

A new equilibrium is reached at the tangency point of ZY with a new utility curve U2 (point P2), at which the individual would keep OS2 as idle saving and invest OI2.

Because the amount of Zakat will reduce the amount of available saving, the individual has a strong incentive to move away from idle saving and place his saving in higher return investments. It is expected, therefore that the share of the latter will increase whereas that of the former will reduce. This is depicted in figure 5. by the move from P1 to P2 (investment increased from I1 to I2 and idle saving reduced from S1 to S2).

The magnitude of the change in idle saving/investments as well as the types of high return investments to be chosen will depend primarily on the risk aversity of the individual. At one end of the spectrum, where the individual is extremely risk averse, he/she might invest in low-risk (low-return) investments only to the extent that the return made covers the Zakat due (and any inflation). At the other end of the spectrum, the individual might move away from idle saving altogether and transfer all his saving to high-return investments. These investments are generally of high risk, which means that losses may be incurred. Any other combination between these two extremes is also possible.

To conclude, Zakat will have the effect of using savings in positive return-generating investments to avoid their reduction, which would contribute to diversifying the sources of financing for firms, providing more depth to the financial sector and enhancing the capital market and the economic activity in general.

Zakat and Excess Burden of Taxation

As discussed in previous section, all taxes, excluding lump-sum ones, are distortionary (Stiglitz, 2015) and would, therefore, have an excess burden or a deadweight loss. In other words, any tax that affects the relative

prices and has a substitution effect would cause a deadweight loss. The deadweight loss can be measured as a function of the tax rate, the demand elasticity of the taxed commodity, its price and its quantity, as follows (Stiglitz, 2015): $DWL = \frac{1}{2} T^2 p Q \epsilon_p$

As shown in section 5.3., Zakat is not a lump-sum tax and, thus, it does have a substitution effect. Accordingly, Zakat would have a deadweight loss. However, there may be some arguments that Zakat's deadweight loss would generally be lower than that of equivalent taxes, as detailed below.

Zakat on Agriculture

We have demonstrated that Zakat on agriculture is equivalent to a general excise tax, as it applies to the output, except that it is charged on the producer rather than on the consumer, which effectively makes no difference (Stiglitz, 2015) for the purposes of the analysis.

Looking at the formula above, the key factor that determines whether or not a tax would have a higher deadweight loss than another tax charged on the same goods is the tax rate. The other factors (price, quantity and elasticity) would operate in the same way in both cases.

The rate of Zakat on agriculture is 5% or 10%, depending on whether or not the produce requires irrigation (see section 4.2.). In both cases, these rates are generally lower than excise tax rates, which generally are much higher. In addition, unlike excise taxes, which apply to the price with no deduction, Zakat rules allow the deduction of expenses needed to grow the produce before applying Zakat (Al Qaradaoui, 1994), which means that the rate of Zakat is effectively lower than the 5% and 10% rates mentioned above.

Accordingly, it may be concluded that, while Zakat on agriculture would cause a deadweight loss, this loss would be

lower than that caused by an equivalent excise tax.

Zakat on Savings

We already showed that outside agriculture, Zakat can be compared to a tax on saving (see section 5.2.).

If we look at Zakat in this case as being equivalent to a tax on a commodity (that is future consumption (see section 5.3.)), it may be argued that the formula of deadweight loss mentioned above would still apply, with its components being as follows:

- T: the rate of Zakat (2.5%);
- p: the price of future consumption. This can be represented by the price index of next period;
- Q: the quantity of future consumption (i.e. consumption of next period); and
- ϵ : the demand elasticity of future consumption.

Here again, the deadweight loss of Zakat would be expected to be lower than that of equivalent excise tax (or general sales tax or VAT) because the rate is generally lower (2.5%).

Now let's turn to income tax and try to determine whether it would have a lower or higher deadweight loss than Zakat. As in the case of excise tax, the comparison will focus primarily on the tax rate.

The rate of Zakat cannot be directly compared to that of income tax, as the bases of the two taxes are different. Zakat applies to saving, which is a stock, whereas income tax applies to income, which is a flow. We need, therefore, to convert the rate of Zakat into a rate applicable to income. To do so, we need to take into account the rate of return on the saving and apply Zakat on a base that refers to income from saving rather on the saving itself. Let's assume that in the following formula, (S) is the saving (subject to Zakat), (z) is the Zakat rate (2.5%), (I) is the income, (t) is the tax rate and (r) is the rate of return on savings. An

income tax that is equivalent to Zakat on saving will require the following:

$z*S = t*I$, but since $I = S*r$, then we can write:

$z*S = t*S*r$. after removing S from both sides of the equation, we can determine t as follows:

$$t = z/r \text{ or } t = 2.5\% \div r.$$

From this equation, it is clear that the higher the rate of return, the lower the income tax rate that is equivalent to Zakat, and vice versa. With a rate of return of 10%, for instance, the income tax rate would be 25%. This is the rate to be used to determine and compare the deadweight loss of an income tax that is equivalent to Zakat.

As one would expect that individuals would seek higher returns on their savings, we would expect that the equivalent income tax rate would reduce, which means that the excess burden of Zakat would be lower. However, as mentioned in section 5.3., this will depend primarily on the risk aversity of the individuals.

CONCLUSION

Zakat generally behaves similarly to taxes, in the sense that it would have a behavioral effect, a substitution effect and a deadweight loss (or additional burden).

However, there are arguments that: (i) Zakat behavioral effect would be less significant than that of tax because of its relative immunity to personal choices and circumstances and, most importantly, the self-compliance mechanism embedded therein (i.e. the keenness to correctly determine and pay Zakat (Rejeb, 2020)), which reduces the incentives to engage in economically inefficient activities to avoid and/or evade it, (ii) Zakat deadweight loss would be lower than that of tax, due to its reduced rate compared to equivalent taxes and (iii) Zakat would have a more favorable effect on saving than tax as a result of its

impact on aggregate marginal propensity to consume, on one hand, and the incentive embedded therein to move away from idle savings and channel the same towards positive-return investments, on the other hand.

These findings are based on the current (limited) available literature addressing the economic impact of Zakat at the micro-level and will still need to be validated by further studies, including empirical ones that would look, for instance, at the impact of Zakat on labour supply and saving in countries where Zakat is institutionalized.

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