

Decentralised Autonomous Organisation (DAO) Regulation

Edited by
MADALENA PERESTRELO DE OLIVEIRA
and ANTÓNIO GARCIA ROLO

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Principles and Perspectives for the Future

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Madalena Perestrelo de Oliveira
and António Garcia Rolo

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The Case for Taxing DAOs

Challenges, Methods, and Impossibility

António Rocha Mendes

ABSTRACT The article explores the rationale for imposing taxes on decentralized autonomous organizations (DAOs) while highlighting the unique challenges posed by their lack of centralized structure and geographical location. Despite similarities to traditional corporations, the decentralized nature of DAOs complicates taxation within existing frameworks designed for entities with identifiable locations. The first section argues for taxing DAOs based on principles of equality and the ability to pay, emphasizing parallels with traditional business operations and the need for income tax on generated profits.

The second section delves into the challenges of taxing DAOs within the current international tax system, considering the limitations of existing frameworks for brick-and-mortar businesses and the complexities introduced by the digital economy. The article anticipates increased scrutiny of DAOs in the future despite their stateless and decentralized operation. The third section proposes potential methods for taxing DAOs' income, evaluating the feasibility of taxing the DAO directly or its participants. However, enforcing taxation on participants in different sovereign countries poses significant challenges, requiring international cooperation and effective audit mechanisms. In conclusion, the article acknowledges the compelling case for taxing DAOs but emphasizes the inadequacy of current tax systems for entities operating in a decentralized manner, presenting a complex issue that demands innovative solutions within the global regulatory landscape.

I. The Case for Taxing DAOs

We believe there is a strong case to tax DAO's profits.

Let's start with the general principle of equality between the members of the community. This requires that the tax burden (revenue used to fund public services, infrastructure, social programs, defense, and other essential functions of government) be shared equally among them. This means, in practice, that everyone must contribute, but that the contribution should be based on the capacity of each member of the community. In technical words, taxes should be borne equally by those with the same ability to pay (horizontal equality), but unequal-

ly by those with different ability to pay, in proportion to this difference (vertical equality).

The need to raise resources from the members of the community and the obligation to share the burden equitably forced governments to: (i) find manifestations of the community members' ability to pay (what is taxed), and (ii) define who pays the tax (the taxpayers).

1. Manifestations of the Ability to Pay (Taxing Business Profits)

The first task is to find manifestations of the ability to pay that justify the transfer of private resources to the public sphere. The relevant manifestations of the ability to pay are to be found in the different phases of the wealth cycle: in its creation (income), in its maintenance (assets), and upon its destruction (consumption). Income taxes are taxes on the creation of wealth.

Business enterprises consist of factors of production organized by entrepreneurs for profit. Economically, profits are income and represent the creation of wealth to the entrepreneur. Profit is, therefore, identified by the tax system as a manifestation of the entrepreneur's ability to pay. This is why business profits are subject to income tax.

Similarly to other forms of organizations, DAOs' purpose might be carrying out a business enterprise for profit. The business income may result from providing services, earning transaction fees, or holding assets that appreciate. Successful businesses will generate profits. If a certain government has decided to tax business profits, there are no reasons to exempt the DAO's profits from income tax.

2. Who Pays the Tax (Taxpayers)

The second task is to define who should pay the tax on the business profits. The issues here are: (i) should some business organizations (entities) be taxed separately from its owners and, if so, (ii) which should be taxed autonomously?

a) Does it make sense to tax entities?

To answer this question, we must first understand what business entities are and why they are autonomous from their owners.

Let's start with the simple case of sole proprietorship. Sole proprietors of businesses are the owners of the enterprise's assets. It is the individual proprietor that owns the business assets and that carries out the business activity. The business profits are integrated into their individual income.

However, modern business is mostly carried out by large groups of owners, not sole proprietors. In most businesses (think of listed entities or even DAOs),

the owners and the business assets are patrimonial and functionally separated. The business is an autonomous economic unit, separated from its owners, that is susceptible to being the legal owner of its assets, activities, and income. These forms of business organizations are generally referred to as “business entities”.

The tax system recognizes this functional and patrimonial autonomy. As a result, business entities have tax personalities, i.e. they are taxpayers in their own capacity. The recognition of the separation of owners and businesses, through the “interposition” of an entity, is the first reason why business entities are autonomously subject to tax.

It is true that, sooner or later, all the business profit realized by these entities will be appropriated by their owners, which usually occurs through its distribution (in the case of companies via dividends). So, why not wait until such distribution to tax the business profits?

The reason is that the “interposition” of the entity causes a tax deferral effect for the owners, which has serious consequences in terms of equality and government revenue. If the owners kept the profits in the entity, the tax would be indefinitely postponed. This would incentivize businesses to retain profits at the entity level, even if they could be employed in more profitable investments.

b) Does it Make Sense to Tax All Entities Autonomously?

So, now that we know that it makes sense to tax entities autonomously, the question is if it makes sense to treat all forms of business entities equally.

The fact is that not all business organizations separate the business from the owners. That separation varies according to the specific circumstances of the business and the agreement between the owners. And that effect has little connection to the legal form of the business or its legal personality. The interposition of a business entity with legal personality does not necessarily mean that there is a high degree of separation between the entrepreneur and the business, just as such a relevant separation may well exist as an effect of a depersonalized entity (think of investment funds, where all the investors are co-owners of the investment assets but have no control over them).

Shareholders in listed companies, for instance, acquire and hold their shares as a financial investment, with a view only to obtaining dividends or capital gains. These shareholders are not seeking a vehicle for carrying out their own business activities. They have little influence over the company’s business decisions or the timing of the appropriation of its profit. These powers are concentrated in the management body of the company, often controlled by a small but compact core of shareholders. In these cases, there is a large gap between the owners and the business.

The opposite is professional partnerships, owned by a small number of partners united by close professional or personal relationships, who use a simple

partnership agreement as a mere instrument for the joint exercise of their business or professional activity. In this case, the business or professional activity of each of the shareholders is of fundamental importance and, in practice, reflects their inseparable connection with the company. Here, unlike in the previous case, the shareholders exercise effective decision-making power over the destinies of the company, including the moment of appropriation of the respective profits. The business and the income of the company are intertwined with the business activity and the income of the shareholders. Due to this extreme proximity, entrepreneurs and the company form an economic unit, which may justify the disregard of the entity for tax purposes, in the sense that its activities and income are directly attributed to the shareholders.

For this reason, most tax systems tax the income of corporations as *per se* entities and partnerships as “pass-through” entities, meaning that the business profits are directly attributed to the owners for tax purposes.

3. There is a Case for Taxing the DAO

A surprising (to someone, not a tax practitioner) aspect of analyzing any DAO for tax purposes is that it can be a taxable entity¹. In some sense, it appears like a disembodied creation floating in cyberspace, with no apparent form. Take the original DAO, for instance. Its group of investors intended to consult together to decide on investments, to make the investments, and to share in the profits. They, and those on the Ethereum blockchain, ultimately worked together to resolve the problem created by a rogue investor. Despite the disclaimers in the material presenting the original DAO to potential investors, the structure operated very much like a partnership contract².

DAOs are, by definition, sufficiently separated from their owners. They “own” assets in the blockchain and their profits are not immediately paid to the participants. A collective decision, through consensus mechanisms, and token-based governance is required for that and any other purpose that affects the DAO (such as protocol upgrades, funding for projects, changes in rules, or adjustments to token economics).

In addition, although DAO’s purpose and structure are not inherently tied to being either for-profit or non-profit, most operate with the goal of generating a profit and distributing it among its token holders or stakeholders. The profits might come from various sources, such as revenue generated by products or services offered by the DAO, investment activities, or other business ventures. It seems clear that these profits, like any other business profits, are manifestations of the ability to pay taxes.

¹ *Shakow*, *The Tax Treatment of Tokens: What Does It*, 2017, 1387

² *Shakow*, *The Tao of the DAO*, 2018, 11

Based on the above considerations, in our opinion, there is a strong case for taxing DAOs. They are autonomous entities that may generate taxable income.

II. The Challenges to Tax DAO's Income

Having a strong case does not mean that taxing the DAO will be an easy task, or even feasible under the current tax system.

The international tax system is built on a combination of domestic tax laws, bilateral and multilateral agreements, and international organizations that help establish guidelines and standards for taxation.

Each country has its own set of domestic tax laws that determine how income taxes are levied on individuals, businesses, and other entities within its borders. On top of this domestic structure, countries enter bilateral tax treaties with each other to establish rules for taxing cross-border activities.

According to this international tax order, in cross-border situations, the jurisdiction where the business owner is domiciled has the right to tax its worldwide profits and the country where the income is sourced has the right to tax the portion of the foreign entity's income that was generated in its territory.

The problem, insofar as taxing DAOs is concerned, is that the international tax system assumes that businesses are not only owned by individuals or entities that have a domicile in a specific country, and that their income may be pinpointed to a certain jurisdiction.

However, that is not how the global economy has evolved and technology has advanced.

1. Challenges of the Digital Economy

With the rise of digital technology and the growth of multinational corporations, the international tax system has faced many challenges. Digital businesses operate globally without a significant physical presence in each market they serve. This has led to debates about how to tax their profits, as traditional tax rules were not designed to address such scenarios. In addition, the digital economy relies heavily on data, and there are debates about how data should be treated in terms of taxation and value creation.

Also, multinational corporations, including digital giants, have been accused of using complex structures to shift profits to low-tax jurisdictions, minimizing their tax liabilities in higher-tax countries. This practice is known as base erosion and profit shifting (BEPS).

In response to these challenges, efforts have been made to update and reform the international tax system to better capture the realities of the modern economy, including the BEPS Project (launched to address the challenges of profit

shifting and tax avoidance); the Digital Services Tax (levied on revenue generated from certain digital services, which sparked international debates and concerns about double taxation); and the Pillar One/Pillar Two Initiative (that addresses the allocation of taxing rights for digital businesses and establish a global minimum tax to prevent profit shifting).

2. *DAO Specific Challenges*

However, taxing DAOs is one step further from the complexity of taxing digital companies. These new taxes and initiatives, even if implemented, will not be sufficient to impose taxes on DAOs profits.

The main difference between digital business and business in the blockchain is that the first happens (digitally through the internet) between traditional legal entities, all of them domiciled in certain jurisdictions. The discussion is focused on where the income is sourced and where the business entities are really located, particularly because some companies are “redomiciled” to low-tax jurisdictions, but their customer base remains in high-tax countries.

The DAO, however, completely eludes this discussion. Contrarily to digital companies, the DAO is not domiciled anywhere, it operates based on blockchain technology and smart contracts, without employees, physical presence, or even legal status. DAOs are code. The DAO “exists” in cyberspace.

III. The Methods to Tax DAO’s Income

In theory, there are two approaches to tax DAOs income: (i) tax the DAO directly, as a business entity; or (ii) tax its participants (often referred to as members or token holders).

1. *Taxing the DAO’s Income Directly*

As we discussed, under current international tax rules, only two countries are entitled to tax business profits. The country of the entity’s domicile, which in practice is where the entity is managed (entitled to tax the entity’s worldwide profits); and the income source country (that may tax income produced within its borders).

This system has been in place since the 1960s and has been extremely efficient at taxing traditional brick-and-mortar businesses. Traditional brick-and-mortar businesses have physical operations, such as storefronts, factories, and offices, within specific jurisdictions.

Even digital taxation proposals try to conform to these principles. The discussion is being focused on shifting the primary taxing rights from the place of

management to where the income is sourced, or at least creating a tax apportionment system based on the location of the client base and business assets.

Both current and digital taxation rules are completely inappropriate for taxing DAOs. First, the DAO does not have a place of incorporation, a registered seat, or a location where it is effectively managed. It does not have a domicile under the existing taxation principles. The DAO functions in a decentralized manner, without a central governing authority or traditional hierarchical structure. DAO's decision-making and coordination among participants are totally automated and are often carried out through consensus mechanisms or voting protocols among participants. DAOs are designed to execute predefined rules and actions automatically, without the need for intermediaries.

In addition, DAOs don't have employees, they don't have offices or stores and most of their business happens in the blockchain. Its participants and "customers" are identified through pseudonyms. This makes it impossible to identify a source country for its revenue.

In practice, this means that, from the perspective of the existing taxing principles, DAOs are aliens inhabiting cyberspace. And as such it is impossible to tax unless a totally innovative tax system is created.

But, even if such a system was created, it would be virtually impossible to enforce it. If a DAO was required to pay taxes somewhere, or to some global organization, the fact is that in a truly "autonomous" DAO those who developed it and promoted it no longer have any power to control it. There would be no one responsible for filing the forms and returns required by the tax system and no one to be responsible for paying the taxes. If the DAO would fail to report income and pay taxes, the reality is that there is no one to blame and no one to collect penalties from.³

2. Taxing the Participants

We think that the only possible alternative to tax DAO's profits is imposing such tax at the level of the participants. From a policy perspective, the participants could be taxed: (i) currently on the DAO's profits (similarly to a pass-through partnership); (ii) on receipt of rewards, dividends, or tokens, and (iii) on the realization of gains on the exchange of tokens⁴.

Taxing the participants is possible because, contrary to the DAO, they do not live in cyberspace, but rather in sovereign countries. They could therefore be subject to reporting obligations, to disclose their holdings, any transactions,

³ *Shakow*, *The Tao of the DAO*, 2018, 15

⁴ Some DAO participants might stake tokens or participate in governance decisions. The tax implications of staking, rewards earned from staking, and participation in governance mechanisms could also be subject to tax. But technically this would not be the DAOs income but rather personal income of the participants.

and other activities related to the DAO. Failure to report those accurately could lead to penalties that would be obviously enforceable on the participant.

This is not an easy task though. It is very difficult for governments to have mechanisms to effectively audit the participants that reside in their country. One way of getting some control would be to force cryptocurrency exchanges to make available the identities of those trading on them. To a significant degree, entities running wallet applications (where most cryptocurrency investors store their holdings) already require anti-money laundering/know-your-customer checks upon sign-up⁵.

To be effective, this system would require that all nations charge exchanges with the responsibility of knowing who their customers are. If customers trading on exchanges realize that their identities will be made known to tax authorities, it would make hiding behind a blockchain more and more difficult. Whether such a level of international cooperation could be achieved is certainly not clear. But this solution assumes that we can locate exchanges in a jurisdiction. If exchanges can themselves operate solely in cyberspace, with no connection to any jurisdiction, governments will need to find another way of dealing with the DAO phenomenon⁶.

IV. Conclusion

There is a clear case to tax DAO's profits. Their business profits are manifestations of an ability to pay taxes and DAOs are, generally, business entities separated from their owners.

However, the reality is that pure blockchain entities do not conform to the international tax system, under which countries are entitled to tax business profits based on the entity's place of management and on the source of income.

These criteria to allocate taxing powers to one jurisdiction do not work with DAOs. They are stateless and their income, mostly generated in the blockchain, cannot be attributed to any jurisdiction. For this reason, no government in the world can claim jurisdiction to tax their income.

The alternative to taxing the DAO directly would be to tax their participants. They don't live in cyberspace and may therefore be subject to reporting obligations to disclose their holdings, transactions, and other activities in their country of residence. Failure to comply with those obligations could be penalized.

However, the reality is that in public blockchains, despite the transactions being transparent and traceable, the participants are often pseudonymous, identified only by their public keys. This makes enforcement of tax rules virtually

⁵ *Shakow*, *The Tao of the DAO*, 2018, 21

⁶ *Shakow*, *The Tao of the DAO*, 2018, 21

impossible, until governments hypothetically force all exchanges and wallet applications with the responsibility of knowing who their customers are, and customers trading on exchanges realize that their identities will be made known to tax authorities. The level of international coordination required to achieve this will not happen soon.

Some DAOs will adjust to the “real” world and create business entities outside the blockchain to comply with the requirements of certain jurisdictions (in particular, having in mind the concerns of their participants). But the majority will most likely remain as it is for a long time.

There is no tax on the DAO’s income in sight.

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