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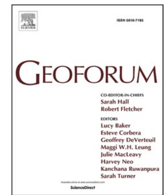

Zones and zoning: Linking the geographies of freeports with ArtTech and financial market making

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A B S T R A C T

Freeports and special economic zones (SEZs) are established policy tools to attract foreign investment at specific locations, based on the de-coupling of sovereignty and territory. As a result, they emerged not only in developmental contexts, but also in tax havens and financial centres. Recently, freeports and SEZs have shifted from responding to global competition for spaces best suited to attract tangible manufacturing to responding to competition for spaces with best conditions to enable value extraction and wealth shielding. We develop the argument on the emerging industry of ArtTech and new 'fine art freeports' that thrive on two core social practices: fracturing property rights to enhance financial liquidity and trading activity in highly exclusive fine-art markets, and offshoring – or zoning – to exploit freeport-facilitated relations for market making and rent-seeking. Besides such practices to make and game markets, freeports supply important physical infrastructure for fine-art technical and custody services that precondition any form of value creation. As such, freeports are important spaces for policy experimentation. Contrary to the conventional belief about free zones in general and freeports in particular, however, their economic impact remains limited. We explain this by conceptualising freeports as 'zones' defined or designed by specific processes of 'zoning' that link their multiple geographies. We conclude that freeports are no sites of exception but spaces that help legitimise novel institutional and economic arrangements emergent in the economy at large.

> "Ship it to a free port, and the bill disappears" (Bowley and Carvajal, 2016: 2).
> "What must instead be understood is that the freeport's mechanism of value creation is based not on what is actually stored within it, but on its relationship to regulated global markets" (Ditzig et al., 2016: 182).

1. Introduction

Both opening quotations illustrate well some of a freeport's main traits and advantages. Freeports are special zones that thrive on their unique legal status to promote trade and foreign investment. Yet freeports are also increasingly important devices in a complex relationship between domestic law and international economic law; they "embody a new compromise between the liberalization and protection of economic sovereignty", or between the State and the market (Chaisse and Dimitropoulos, 2021: 229), thereby responding to the changing realities on a macro-scale currently dictated by financial capitalism.

The globalisation of economic activities in general and of services in particular has had specific territorial implications. They are illustrated by both the expansion and upscaling of international economic relations on the one hand, and the growth of spaces of exemption, exclusivity and separation on the other. This is exemplified by approximately 5,400 Special Economic Zones (SEZs) that exist across 147 countries today, of which more than 1,000 had been created since 2014 only (UN Habitat and UNCTAD, 2019). Financialisation, a deep structural development (Christophers, 2017), has accelerated social and spatial inequalities and coincided with a surge of free zones. Fuelled by vast amounts of credit asset prices, inflated, speculative financial activity spurred and private wealth surged, but financialisation did not help create economic *value* nor, indeed, jobs. While services were indispensable for the successful transformation of industrialised economies, financialisation processes of

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the late capitalist development had detrimental effects. In a globalising economy increasingly affected by trends of servicification, including financial services, and digitisation, States have sought to gain and defend their competitive economic edge. Against this background, a new version of freeports has entered the scene as small but visible strategic components, most of them located in international financial centres (IFCs).

Freeports usually enjoy more investor-friendly laws and regulations dissimilar not only from the rest of the domestic jurisdiction but "often designed to be more familiar to foreign investors" and "based on common law principles" (Chaisse and Dimitropoulos, 2021: 245). These "jurisdictions-in-a-jurisdiction", which in some cases can become as bizarre as dealing with "tax havens within a tax haven" as in the case of the Cayman Islands (Delimatsis, 2021: 278), are an interesting starting point to investigate these enclave-like special zones further. More precisely, we analyse the freeport as a device of contemporary, financialised capitalism and argue that it acts as 'laboratory' and lubricant for policies of transferability among a growing, exclusive yet integrated network of freeports across the globe. We develop this argument on the example of the growing fine art industry and the emerging ArtTech market.

Indeed, free zones – or special economic zones (SEZs) – have a long tradition in the context of economic development as a means to attract foreign investment otherwise not made to countries that lacked competitive industries (Frick et al., 2019, Chen, 1995). SEZs' policy impacts, however, are contested and have varied significantly. Providing a path through the jungle of definitions, SEZ is a generic term to describe "geographically delimited areas administered by a single body, offering certain incentives (…) to businesses which physically locate within the zone" (FIAS 2008: 2), whereby different types of zones – free trade zones, export processing zones (EPZs), industrial parks or industrial estates, free ports/freeports, free economic zones, urban enterprise zones, etc. – indicate varying degrees of openness. Based on the nature of a zone's commercial designation, in the following, we refer to *freeports* as SEZs exclusively employed for trans-shipment and international trade, and to *EPZs* as SEZs used for manufacturing and processing to attract foreign investment (Chaisse and Dimitropoulos, 2021: 244).

Driven by offshoring strategies, these spaces are used not only to outsource certain activities but also to accumulate financial wealth and profit that have remained under the radar of tax authorities. These widespread tax engineering practices based on territorial and institutional arbitrage (Dörry, forthcoming) have been criticized and recently addressed by OECD member countries, while the so far limited impact of SEZs is controversially discussed in economic development, planning and geography (Frick et al., 2019). This includes questions whether and to what extent policy expectations can be met, and whether incentives primarily steer development to certain places in an overall zero-sum game (Schrank, 2001, Levien, 2011, Graham, 2004). Further challenges prevail, not only with regard to a sound conceptualisation of freeports as attempted in this paper, but also concerning empirical research to gain in-depth insights on their functioning and impact, given their inherently discreet business practices. On the one hand, secrecy is a cornerstone in freeports' business models, which makes them difficult to study. On the other hand, shortcomings and lacking empirical insights to date make research into the 'discreet bunkers of the super-rich' (Bradley, 2014) even more prevalent. It is no coincidence that freeport operators are suspected of money laundering. Scandals in the murky worlds of art collectors, gallerists, and traders (most notably the so-called 'Bouvier affair', see Knight, 2016, The Economist, 2015) have put freeports in the spotlight of EU, OECD and further supra-national authorities. This may limit the usefulness of the freeport concept as a policy instrument for economic development.

Starting with a critical analysis of the role of SEZs and freeports to date, our aim is to make sense of the most recent establishment of freeports and explore the specific economic geographies underlying this business model. To test the relevance of the 'new generation' of freeports, we establish links between freeports as a *logistical (infrastructure) device* that helps facilitate new markets (here: fine art) and as a *legal device* to bring back government control over international economic law in an era of dissolving international trade agreements like that under the umbrella of the WTO. Section 2 positions freeports and SEZs in the political, economic, and historic discourse, thus carving out differences and commonalities between the 'old' and the 'new' zone, and addresses the processes and rationales of what we dub 'zoning'. Section 3 engages with the underlying conceptual logics of a 'zone' to help order and systematise the roles of freeports in establishing and connecting new markets. This is analysed on the example of fine art at the interface of financial and ArtTech markets. Section 4 discusses implications and closes with critical conclusions.

In order to make the conceptual-cum-empirical link more credible, and against the background of freeports as opaque research objects, we have employed two complementary sets of exploration. Empirical data was gained from and combined by two different research projects: *GLOBAL* (2016–2019) led by the University of Luxembourg, and *FINWEBS* (2017–2022) co-led by LISER and the University of Ghent. Based on these empirical insights, we systematically screened the secondary literature on the subject matter of freeports, SEZs and related economic development policies.

While *FINWEBS* largely focussed on the analysis of financial networks, financial infrastructure and practices of tokenization and fractionalization, research in the *GLOBAL* project assessed data and secondary material to explore the strategic politics of relationality pursued by three cities – Geneva (Switzerland), Luxembourg City (Luxembourg), and Singapore; and within that, the particular role(s) of freeports. Importantly, however, only one case study provided original material, while the two others were unfortunately not accessible for field research; the discreet business practices of the freeports were indeed a barrier for primary investigation. In the case of the former, we conducted three in-depth interviews with representatives from the freeport's operator, public policy (government) and corporate consultants. Interview transcripts were assessed and coded, whereby the main codes were linked to the specific rationale and actor constellation of the project, possible economic development impacts, its specific geographies, and the controversial reputation of freeports in the context of offshoring, tax evasion and money laundering. Secondary sources and plausibility analyses helped to highlight some of the more critical issues, as the experts interviewed as well as other actors in charge tend to remain silent on these issues (cf. Robinson, 2021). In addition, we organised a sense-making workshop at the end of the project period, which was attended by a selected number of interviewees and other experts. We presented key findings of our research and discussed possible frames of interpretation. While our views on our findings were broadly shared by the experts and practitioners, we received further useful hints and suggestions on further details of the freeport business model. Thus, we were able to lay some foundations on the empirical nature of the problem. Despite this broad information base, however, the paper is mainly conceptual in nature.

2. Freeing the zone: economic policies between offshoring and practices of zoning

2.1. Old zones, new zones, developing zones

SEZs have a long tradition as a policy strategy to develop regional (and national) economies, of which the modern Chinese SEZ during the era of Deng Xiaoping (Kamath, 1990) is probably the most prominent. Literature on SEZs and their related concepts commonly suggests that their main purpose is to offer favourable fiscal conditions and further economic incentives (Chen, 1995). Yet a range of economic motives and hopes to set up SEZs can be identified (Hartwell, 2018, Bach, 2011), e.g. to develop new infrastructure and attract FDI (Graham, 2004), but they also act as a laboratory for new policies (Heilmann, 2008) or support broader policy reform efforts (Ge, 1999). The basic idea is to create

bounded spaces that offer e.g. lower (or no) customs, taxes or tariffs as compared to surrounding areas and 'nation'-wide legal frameworks, from which SEZs are decoupled in order to create "beneficial second-order economic outcomes" (Hartwell, 2018: 1), such as higher exports and increased foreign currency earnings, employment and growth (Bach, 2011). SEZs, technically and legally but not physically, situated outside their host countries, can consist, among others, of bonded warehouses, parts of ports or airports, or newly established, highly fortified logistics facilities for the storage of valuable commodities (Wu, 2009, Neveling, 2020). A common belief is that they provide a recipe for developing and implementing economic growth trajectories, which would otherwise be difficult to achieve. Hence, SEZs are "in effect … small countries within larger countries, more a microcosm of a larger country, but one that is distinct enough to be its own entity" (Hartwell, 2018: 2), sensibly endowed "with the proper cocktail of policies and infrastructure" (Tazzara, 2018: 84).

Indeed, EPZs were thought to be useful policy strategies to channel investments to predominantly disadvantaged areas like peripheral or de-industrialising regions. The late Sir Peter Hall, who considered enterprise zones as a means of giving hope to deprived inner-city areas in Britain, proposed SEZs and freeports in urban contexts as early as in 1977 (Hall, 1982), particularly to those hit hardest by radical de-industrialisation. However, the traditional SEZ focus has been on developing countries and emerging economies. Not coincidentally, small and city-states such as Mauritius, Ireland and Singapore were initially pro-active in founding EPZs (Neveling, 2018), but they are also common in Europe. In fact, 22 out of the (now) 27 EU Member States have established free zones and/or freeports recently, currently totalling 89, of which a large majority is located in Eastern Europe (European Commission, 2017).

The implementation of EPZs has been witnessed for more than half a century with surprisingly little generalised knowledge on the real contributions and outcomes of related strategies. A recent, rather voluminous empirical study by Frick et al. (2019) claims to be a first (if not the only) holistic attempt to evaluate SEZs. It concludes that it is indeed possible to attract growth by establishing such zones, but their success depends much on the framing conditions and strong governance support, if not on the steering capacity of a presumably strong state. Rondinelli (1987) urges to also account for the high sunk costs in a full cost-benefit analysis to establish these zones. In the light of this, the overall modest economic impact generated by SEZs does clearly not suffice for a success story. Moreover, one of the main downsides of SEZs in general, and tax-reduced freeports in particular, is the risk that economic and employment growth is generated mainly by means of re-location rather than by actually creating new jobs.

When it comes to policy and practice, freeports are often considered the outcome of hyperglobalist, intransparent and truly neo-liberal forms of governance and (de-)regulation. However, it seems indicative that the establishment, operation and extraction of zones would not work without the strong role played by the state. Only state sovereignty and authority allow for the implementation of such policies of exception, including the regulation of zones such as tax policies, but also a zone's life span. This does not mean that freeports come into being exclusively through state power. In fact, there is a range of public and private actors involved in implementing freeports. This seems logical, as zones are deeply embedded in value chains and production networks, e.g. financial market 'places'. The underlying mechanisms thus represent what Bach (2011: 99) has coined "nested exceptionalisms". It aptly points to the "interplay of exception and rule that creates intersections for networks, markets, and political rule" (ibid.).

Moreover, within such nested exceptionalisms, mediators, translators and the like from various realms and communities of economic development assist state actors. In the making of Luxembourg's freeport, for example, business consultancies played an important role for setting the agenda and exploring the market of the future freeport, contracted by the government (see section 3.1). We therefore argue that government practice has shifted from top-down, vertical decision making towards a more experimental policy setting and design (Huitema et al., 2018, Voß et al., 2009), and the "proliferation of experiments" (Haughton et al., 2013). This occurs not only in some flexible spaces of soft governance but increasingly in fields of vested state interests such as economic and financial development, and taxation. Experimentation may be a logical choice for policies challenged by complex, uncertain international environments, and this applies even more to the secretive world of freeports, financial transactions, and even art markets.

2.2. *Conceptualising zoning and offshoring as a means to (re)gain state control*

With reference to these explanations and observations of the roles of the state in defining and designing free zones, we here seek to structure and order the underlying logic of free zones. Despite the large body of literature on a range of types of free zones, there is little research that offers explanations how zones evolve and adapt to diverse new economic, political and other influential conditions across different scales; not an easy and straightforward task due to the varying contexts in which free zones have developed. Increasing tensions that result from the altering relationship between the nation-state and global capital have elevated freeports to analytic centre stage. Thus, we link freeports with i) the financial geographies of offshoring and onshoring – or processes and practices of zoning –, and ii) the shifting global governance regimes of international economic law under which states have developed strategies to retain domestic control; the latter with the help of conceptualising the (free) zone.

Both the device 'zone' and the specific practices of 'zoning' are not only closely related to one another, they also define their own durability. Both are linked to processes of *offshoring*. Offshoring refers to the *dis*location of economic activities to extra-territorial terrain that is legally – albeit not necessarily geographically – outside certain jurisdictions (Peck, 2017, Urry, 2014). The freeport is an archetypical case of such zones, as are offshore regimes in regulated IFCs, or: jurisdictions-within-jurisdictions. Freeports remain insofar *exclusive* (or offshore) as they create spaces/borders of fiscal and operational sovereignty, within which activities can be performed either under control of supervising bodies and agencies, or deliberately with no supervision at all. In more conceptual terms, *zones* are a product of legal arrangements based on the concept of exception that "disarticulate(s) jurisdiction from territory" (Neilson, 2014: 11) and emerge from the "separation of national economic and political space" (Bach, 2011: 101). Critically, however, Neilson (2014) provides evidence that the zone is "[f]ar from being a site of exception (as) it renders visible and legitimises arrangements that are frequently informal or emergent in the economy at large" (p. 25). Zoning can hence be a powerful process to purposefully (re)design a zone (objectives, incentives) with a long-term focus.

The concept of offshoring is most often tied to global finance. Although offshore economies and finance are more than secrecy, arbitrage creation and tax havens (Clark et al., 2015, Cobb, 1998), as a conscious effort to specialise the economy in the export of financial services to generate revenues (Zoromé, 2007), the offshore concept does not exist in orthodox economic models and is simply assumed away. However, despite offshore finance being a vital element in modern economies, "operating '*elsewhere*' in relation to one's official balance sheet (…) for taxation and regulatory purposes (means that one is) *accountable to no one*" (Palan and Nesvetailova, 2014: 28, our emphasis). Although beneficiaries operating 'elsewhere', zones are part in multiple regimes of domestic and/or international economic law (Chaisse and Dimitropoulos, 2021). Recent de-globalisation trends, visible, for example, in the dismantling of international governing bodies like the WTO, suggest that national security in both trade and investment is increasingly proliferating domestic strategies. These new strategies ascribe SEZs and their laws (i.e., legal

extraterritoriality) an important function in testing and developing new policies on a smaller scale (Chaisse and Dimitropoulos, 2021), which may later legitimise arrangements that are emergent in the economy at large (Neilson, 2014). While the zone is not 'international' in the traditional sense, it reflects the complex and hybrid nature of international economic law (Chaisse and Dimitropoulos, 2021).

Embedded in a tense power relationship between the state and the private economy with the financial services industry in particular operating in a capitalist regime that bears its name, financial capitalism, both the zone and processes of zoning are argued to reveal important aspects that characterise the (changing) relationships and link arguments in favour of hosting and investing in a freeport. The physical traits of freeports materialised in their distinct offshore-onshore territorialities provided in each of the three IFCs (Geneva, Luxembourg, and Singapore) are an important part to that story. Different kinds of enabling 'economic ecosystems' (cf. Auerswald and Dani, 2018) established and revolve around (para-)financial practices that extract, rather than add, value, as we show below. Fig. 1 presents and links examples of core elements and dimensions of the freeport that we consider to be part of an important infrastructure in the process of making new, digital, and liquid art markets.

A second part of the story concerns socio-technical and socio-legal practices at the interface of the ArtTech and financial markets that seek to properly exploit the opportunities of an emerging freeport and its zoning as introduced in section 3. In essence, these practices help sophisticate the assetization and monetisation of art (Fig. 1, practices). On the example of France's historical and cultural assets, Boltanski and Esquerre (2020), for example, illustrate how new forms of assetization and (re)valuation (not production!) help extract new income from old objects, luxurious brands and historical artefacts that entitle exclusive groups of people to reap the benefits from steady streams of income in a process of 'enrichment'. This is just one socio-cultural technology to perpetuate the capitalist expansion and accumulation processes under the imperative of principles of financialisation and rentier capitalism (Christophers, 2020). They not only coincide with the rise of the art and other luxury markets but also with governments willing to promote these 'development' paths based on value extraction, not value creation. Each of the three IFCs' long-standing expertise in financial and tax engineering for Ultra-High-Net-Worth Individuals (UHNWI) adds to this part of the story.

3. Zones and zoning: freeports as critical infrastructure for the financialisation of art

3.1. The 'posh bunker' – A new old business model

A new generation of freeports has emerged over the past few decades. It seemingly deviates from the long-established perception of freeports as a means of trade policy, but a detailed analysis shows remarkable similarities and a continued sophistication of the established business model in the previously discussed EPZs. The global art market presents a striking case in point. The majority of the high-end art market is still highly exclusive with a limited number of wealthy collectors and investors. The high-end art market is especially prone to macro-economic and legal uncertainties, and "the overall perception of risk in the art market increased by 10 percent by September 2019 from the previous reading in September 2018" (Deloitte/ArtTactic, 2019: 27). Each of the three IFCs in Geneva, Luxembourg, and Singapore hosts a freeport; and each IFC is a renowned hub for their long tradition and specialisation in asset and private wealth management (Beaverstock et al., 2013, Dörry, 2015).

At first glance, 'fine-art freeports', as *The Economist* (2015) aptly termed them, provide high-security storage space as well as opportunities to reduce tax bills for art collectors. The *New York Times* suggests that "a handful of free ports (…) have increasingly come to operate as storage lockers for the superrich. Located in tax-friendly countries and cities, free ports offer savings and security that collectors and dealers find almost irresistible" (Bowley and Carvajal, 2016: no page). Indeed, the most important rationale for today's freeports is considered to provide a space of tax abatement combined with the necessary discretion on both the subject and the object of a transaction; often, end-customers, e.g., the owners of certain pieces of art, and the precise nature of the commodity stored remain undisclosed (Schwarzkopf and Backsell, 2020).

The Geneva Freeport is just one prominent example: Originally established already in 1888 (Post and Calvão, 2020), it hosts more than 1 million pieces of artwork today and makes it a kind of contemporary museum without visitors. Art owners are offered a choice between two tax regimes: the ordinary-territorial (onshore-offshore) one of Geneva's

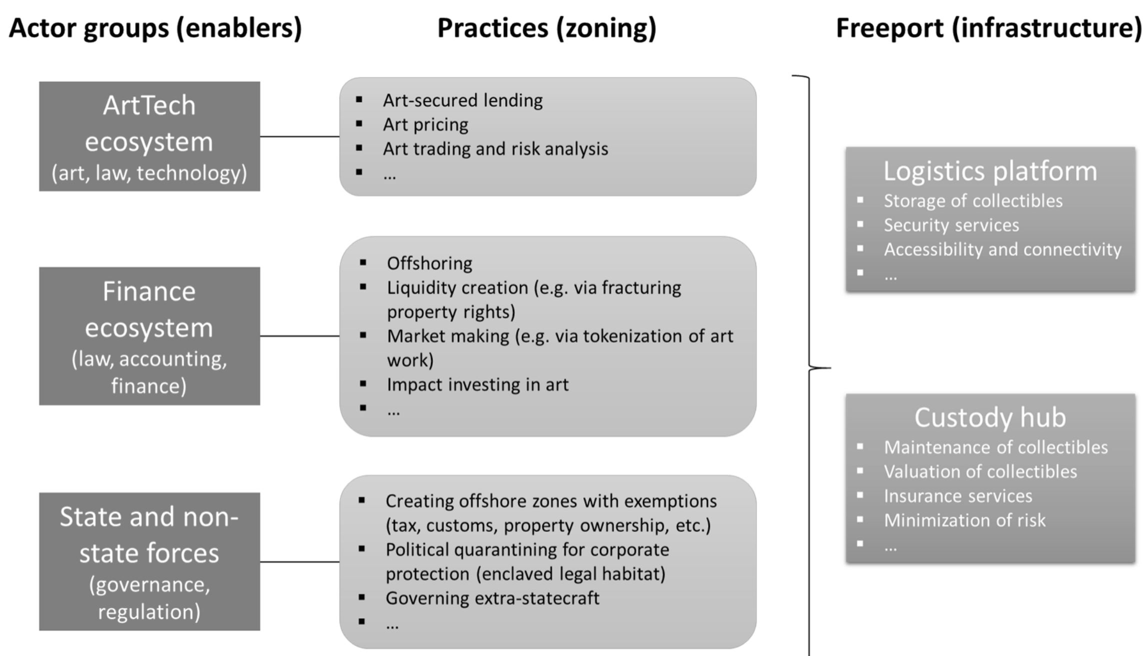

Fig. 1. The zone within the zone, and technologies of zoning: Building blocks of a new financial infrastructure (authors).

financial centre that has itself a long legacy in managing private wealth, and the even more favourable one onsite the freeport itself (offshore). As long as the artwork remains in the bunker, taxes do not apply. Similar is the case for temporary art exhibitions. For sold art or collectibles, taxes apply in the destination country. If, for example, the destination country is the freeport in Newark, Delaware/US, no tax applies either.

Only recently the Swiss freeport model has been exported to Asia and to the Eurozone, namely to Singapore in 2010 and to Luxemburg in 2014. The three projects were closely linked to the Swiss investor Yves Bouvier who, over time, operated (Geneva) and owned (Singapore and Luxembourg) the entities. In Geneva, however, an 86% share in the freeport is held by the regional government, the Canton. The Luxembourg facility is the most recent development. Its 'trajectory' reveals why and how it emerged, and who has pioneered and fostered its establishment. Luxembourg's freeport has 22,000 m^2, is a super-fortified warehouse and fully operational since late 2014. It focuses on storing art (65–70%) and other luxury commodities. As in the other two freeports, state control is ensured through extra law that helps regulate the freeport's operations. Different from the case of Geneva, Luxembourg's government claims to apply full customs control over the site. This should, however, not be mistaken for the equivalence of full transparency, when the government is held responsible for generating GDP effects that "can only be partially explained by real economic activities" (European Parliament, 2018).

Although precise figures on the business development are not revealed, three major reasons attracted the freeport undertaking to Luxembourg. First, Luxembourg's financial ecosystem, experienced in wealth and asset management, its taxation engineering, and a thriving corporate milieu offered a suitable space for a freeport. It was supported by Luxembourg's government, liberal in its economic attitude but detailed in its regulatory practice (Dörry, 2015, Hesse and Wong, 2020). A second locational factor provided its airport, including its consolidated freight centre, which has ranked among the top ten in Europe for a while now (Hesse, 2014). The freight centre ensures high-quality handling conditions as the aircrafts are parked only 500 m away from the freeport, and the freight hub has long-standing logistics expertise. Third, a global consultancy firm was hired to help identify potential to diversify Luxembourg's economy from the dominant (financial) economy. Luxembourg's dependency from financial services became strikingly evident during the financial crisis 2008/09, although its financial centre emerged relatively unscathed from this period (Walther et al., 2011). The consultancy firm, contracted originally for six months but in effect working on the issue for a decade now, mixed its strong interest to (i) develop art & finance as (a) new financial sub-market(s) for its own wealthy client base with the government's mission to redevelop Luxembourg's (financial) economy, and (ii) link it to Luxembourg's existing ecosystems of financial market specialists, corporate headquarters and holding companies, law firms as well as to emerging tech firms and well-established ecosystems of taxation, accountancy, auditing and other consultancy experts. Together, Luxembourg's government and the consultancy firm successfully approached Yves Bouvier willing and able to realise and operate the new freeport facility, with initial government investments of no less than 55 million Euros.

It seemed a worthwhile investment at the time. Indeed, for 2018, estimates suggested that UHNWIs' wealth associated with art and collectibles amounted to US$1.742 trillion, up from US$1.622 trillion in 2016, and that this figure would grow to an estimated US$2.125 trillion in 2023 (Deloitte/ArtTactic, 2019: 49). Deloitte is probably the most active of the 'Big Four' consultancy firms to establish a new art and finance market, and it operates in Luxembourg, Singapore, and Geneva, respectively. This includes activities to co-develop art-based financial derivative products (Ivanova, 2016) and the utilisation of freeports as a connecting device between self-sustained national markets (Deloitte/ArtTactic, 2014).

Building on the idea to attract high art (financing and investment) and hence (more) (U)HNWIs to Luxembourg, the narrative to sell this endeavour originally revolved around building a market niche for the storage, indexing, and documentation of antiques, cultural assets, and cultural heritage (including 'assets' that are endangered by civil war in the Middle East) for museums and other public clients. This has so far not come to fruition. Instead, another narrative has become prominent over time: It concerns the development and employment of new digital assets, e.g., collectibles like art and other luxurious goods, and developed together with the increasing recognition and sophistication of new technologies such as blockchain, and for the art markets.

While we have sketched some key features for selected posh bunkers in this section, we can observe that this business model, which started with much promise, has not yet met investors' and shareholders' expectation in either of the three locations. A failed business model? Perhaps not quite so, as we discuss in the next sections.

3.2. Financial markets and emerging ArtTech ecosystems

To fully capture and employ these opportunities, new social technologies grounded in tech, law, and finance are indispensable. ArtTech, just like FinTech, is an abbreviation to indicate that activities in the domains of art and finance, respectively, are entwined with modern technology to make business activity faster and cheaper, and, as a result, create new products, services, ecosystems – and markets. However, the definitions and fields of both ArtTech and FinTech are opaque and imprecise (Dörry et al., 2018, Jafri, 2021, Wójcik, 2021). Not only do they include a range of very different activities, but the created niche activities and markets are numerous and diverse. ArtTech, for example, can comprise as many different businesses as the new applications that inform the user about background and prices of an artwork once the user takes a photo of it (e.g., *Magnus*); the use of blockchain technology to record the history of artwork in a decentralised, digital register (e.g., *Codex Protocol*); and the operation of online platforms that connect museums and curators with private art collectors (e.g., *Vastari*). ArtTech investment (Kevelson, 2020) is another growing field of business, ready for the next round of big investment that, according to Deloitte, seeks to lead "'transactional' businesses towards art infrastructure investments in tech startups that tackle areas such as logistics, insurance, contracts, legal, storage, data, standardisation, education, and new artist discovery [that] would help build a better and more efficient art market ecosystem" (Deloitte/ArtTactic, 2019: 27–33).

In her fascinating book, Adam (2014) showed how fundamentally the market for fine art had changed within a decade, and how 'superstar' curators and art advisors increasingly became market makers who influenced artists, how public museums became increasingly entangled in the global art market, and how billionaires' demand for private art collections has affected prices. She estimates that the value of the art market in 2013 had "grown by 154 per cent since 2003", totalling US $65.7bn (p. 9). This spawned new financial practices, and Deloitte, for example, estimates "the value of loans underwritten to collectors and private individuals to be between US$18 billion and US$20 billion, which represents around 90–92 percent of the overall art secured lending market" (Deloitte/ArtTactic, 2019: 115). The practice of art-secured lending is nothing else than using artwork as loan collateral to extend credit. This is nothing new, but it has grown significantly in recent decades.

Blockchain, i.e., the technology to run an underlying distributed ledger and manage smart contracts, and cryptographic tokens, which essentially are rights assigned to the token holder, including programmable assets or access rights, are two key building blocks for new 'virtual' marketplaces. A key promise in the narrative of these new marketplaces is to 'democratise' art and other markets with high access barriers by making them accessible more easily for more people. From a functional angle, the art market has some peculiarities that differentiate collectibles from other financial asset classes. Because art is thought to be "a value-preserving asset class rather than an investment vehicle", similar to the price of gold, art traditionally subscribes to long holding

periods. Due to 'holding period effects', artwork is more likely to be sold for a profit (Mei and Moses, several years) rather than generating profits whilst holding the asset. However, financial illiquidity in the market is a repeatedly cited bottleneck that hinders large-scale materialisation on high profit promises: the value of speculative art moves alongside the value of other volatile assets such as houses or land. Illiquid markets are types of markets where little volume is being traded and it is difficult to buy or sell assets in a timely manner and without a substantial loss in value. Fire sales are a case in point, and examples of illiquid assets include real estate, huge blocks of stocks, antiques, and collectibles like art and cars. It thus makes sense that a majority of art *investors* seek to cushion potential impacts of illiquid markets:

> "Not only supply must be guaranteed, but also demand has to be carefully managed. This is where the challenge and the risks rest on dealers, in the primary and sometimes also the secondary market, and on auction houses. In order to provide liquidity they have to act as market makers, meaning they have to guarantee minimum prices or buy back artworks. The liquidity constraint poses a major danger to all these market participants" (Heidenreich, 2016: 5).

One way to address financial illiquidity is to 'fracture' property rights (Kazakina, 2020). Fractionalization refers to legal techniques of breaking up full ownership and instead bringing together joint ownership on one asset or the shared right to access the use of an asset such as a holiday home, a Ferrari, or a van Gogh painting. Curiously, the past years witnessed an incredible push for and accumulation of knowledge regarding blockchain related technologies and services, in which each of the Big Four consultancy firms – and beyond – have invested heavily, as their new 'blockchain labs' and 'blockchain centres of excellence' in a variety of IFCs suggest. This trend further underpins the vast interest of these and other private services firms to engage actively in these new tech markets. Accountancy firms like the Big Four may well be able to diversify their current business profiles that face challenges in the wake of new international taxation rules and to build new reputation.

3.3. Art in freeports as a result of zoning

How then does fractional ownership work in the art market for the purposes of liquidity creation and market democratisation? Blockchain technology can help build new art markets in combination with other blockchain-based techniques and applications. Probably the most famous transaction in the art market to date has been the tokenization and trade of Warhol's painting on the *Maecenas* platform in 2018. A range of commentators welcomed the transaction enthusiastically:

> "Buying a blue-chip art that can return economic benefits requires a significant amount of information such as provenance, artist's background, or potential appreciation. As a result, only limited investors with professional art advice could access that information. Meanwhile, multiple buyers in the 2018 sale of Andy Warhol's '14 small Electric Chairs' became joint owners of the famous artwork. Maecenas, a UK-based blockchain platform for investing in art, sold a 31.5 percent stake worth $1.7 million in Warhol's work and the 800 buyers could acquire 100 secured partial ownership of the painting by paying in Ethereum, Bitcoin, or Maecenas' ART token. Fractionalised art sales, especially those relying on blockchain technology to divide artwork into digital shares and selling them to investors, have emerged as new art transactions in various countries" (Chung, 2019).

Nota bene, the Warhol painting already existed: the property rights of an already existing asset were fractured and sold; yet no new value was created (cf. Boltanski and Esquerre, 2020). The tokenized certificates were traceable through the application of blockchain technology that enabled not only the sale but also subsequent trading of the certificates. The digital token owners of the fractionalized owned painting were able to sell their certificates (tokens) to other buyers at any time, also via the digital *Maecenas* marketplace; in this way, market participants created a thriving secondary financial market for art, from which marketplace *providers* benefitted hugely. Observers stressed that a smart contract run on the *Ethereum Blockchain* helped establish the final price for the artwork in "a fair and transparent manner" (Voshmgir, 2019: 223), which elevated the hope to increase the market's transparency (e.g., via a larger number of trading participants), the market's efficiency (e.g., by cutting out the need for intermediaries) without concessions to the guaranteed verifiability of the artwork's provenance, and the efficiency of managing the asset transfers via tokenized art and the underlying technology (Voshmgir, 2019). As recent as in July 2021, *Sygnum*, a Swiss digital asset bank, and *Artemundi*, an art investment pioneer, have partnered to tokenize Picasso's *Fillette au béret* painting; the first time that a regulated bank transferred property rights on a public blockchain (Dynamics Group, 2021). An entire business ecosystem benefited from the new, artificially created economic activity; and the list of beneficiaries continues.

Art is treated more and more as a capital asset in investment portfolios, and collectors are increasingly managing their art collections from an investment perspective. Coinciding with these trends, sufficiently wealthy collectors are gradually embracing art lending as a tool to re-allocate capital across their balance sheets. The expanded interest in loans secured by fine art has further coincided with the emergence of art financing companies, including small, independent financiers like *Athena Art Finance* and large banks with long-standing UHNW-client relationships like that of *Bank of America Private Bank*. A third category are the financial services arms of the large auction houses themselves, e.g., that of *Sotheby's*. All these firms have specialised in financing solutions for wealthy collectors, including the valuation of the collections. Yet some market players also specialise on evaluating price trends among artists, not least to determine if and what artists' works would be eligible as collateral now and in the future. ArtTech data and risk assessment platforms are hence increasingly in demand; they perform data and risk analyses and help facilitate these young markets, all of which also provides ample space for a range of insurance business. Moreover, high-security architectures like that of freeports are profitable because the insurance for individual artworks is high. Fig. 1 therefore represents and connects examples of core elements and dimensions of a 'new generation' freeport, which we deem part of an important infrastructure for creating new art markets.

But what exactly is the role of freeports here? People who invest in tokens of a painting, a house, or a Ferrari, do not possess the asset. They only possess a fraction of the asset or the right to use the asset at a certain time. This, however, means that the *van Gogh* painting cannot be hung up part-time on an owner's apartment wall. Rather, the painting needs secure storage. The part-owner of the painting is neither bothered with maintenance requirements of the valuable asset; rather, specialised custody service providers take over these tasks and provide adequate storage conditions and facilities, and professional maintenance. Custody services, for which Luxembourg is a worldwide renowned hub in the asset management industry, can be considered a kind of guardian for the assets who ensure that the goods, e.g., collectables and luxurious objects, truly exist in the promised condition. Importantly, mobile collectibles – other than holiday houses or apartment blocks – would need accessibility, a task we discussed and allocated to the sophisticated logistics functions of freeports. Custodian and logistics services define tangible market infrastructure and are hence critical to guarantee confidence in these emerging fine art markets (Fig. 1). IFCs have both the knowledge and the need to expand their businesses, and governments are experimenting with such new forms of business in specifically defined and designed zones, as we have exemplified in this article. To summarise, the abstraction of value from art depends on social-legal practices of fracturing property rights to inject new liquidity in art markets (and democratise these markets) and requires the underlying technical and service infrastructure of a freeport that helps store and protect commodities in the facility. The discussed practices of zoning (cf. Fig. 1) help exploit the market relations it facilitates via offshoring. The

business model and underlying development policy approach of freeports may thus be changing from being a mere bunker for the rich to providing the institutional environment and dedicated spaces that support and enable the continuous search for new profit sources in financial capitalism's best fashion. This is active market making.

4. Discussion and conclusions

We began with a brief assessment of the emergence and the functionality of the 'old' model of EPZs, which helped to conceptualise the policy tool of free zones (the generic term for a variety of sub-forms) with reference to literatures on offshoring and extra-territoriality. We saw that the enabling mechanisms of freeports as a policy device remained stable over time. Yet, as suggested on the concrete example of the three 'fine-art freeports' in Geneva, Luxembourg, and Singapore, freeports evolved over time in response to and accordance with systemic shifts of the macro-regimes as shown in the tension between a slow disassembling of global trade governance regimes like that of WTO and the responses of the nation states to shift back control over domestic economic fortunes, e.g., via freeports as policy devices. At the same time, it became clear that freeports also act as policy labs in their provision of special fiscal, economic, and regulatory spaces for new technologies and practices that may well shape the markets of the future. The example we invoked was ArtTech markets, which are still highly exclusive and illiquid. However, our empirical evidence suggests that fractionalizing property rights can not only create more liquid markets, but also open the door for new rent-seeking activities as part of the next generation of financial capitalism. Freeports, embedded in financial centres as jurisdictions-within-the-jurisdiction, whose specialised ecosystems operate in favourable institutional environments anyway, are intriguing cases. We applied a conceptual angle of 'zoning' to illustrate the multiple actors, practices, and mechanisms that help design and define purpose and function of a freeport as a special zone.

There are four main findings that we can extract here: First, freeports seek to boost infrastructural services for financial markets, but are disarticulated from manufacturing and job creation, which have been the main strategies of EPZs. Second, freeport policy strategies focus more on wealth creation (or value extraction) rather than on job and value creation. This ties in with the third observation that economic transformation, here technologies based on blockchain, enables trading and financing emerging digital assets, e.g. fine art, on a new dimension regarding scale and scope. However, extracting, bundling, and valorising on circulating commodity flows is difficult to copy, which is also evidenced by the lackluster economic fortunes of the freeports in Singapore and Luxembourg so far. While the former has been for sale for a while now, the latter has been re-branded to *Luxembourg High Security Hub* in 2021, to overcome the negative reputation still associated with the Bouvier affair; it could also be considered an attempt to re-focus the freeport's determination as a logistics device. Fourth, our analysis goes beyond a static conceptualisation of the freeport "as a vaulted private bank hiding away and accruing value in assets such as art" (Ditzig et al. 2016: 181). Rather, a freeport incorporates highly dynamic practices of zoning and a multidimensional approach as a special zone.

Two novel insights support the need for further analysis. First, a core argument that informed and guided the empirical parts in section 3 – but questions the traditional view in the literature – points to the fact that freeports and free zones are no sites of exception. Rather, they are spaces that help formulate and legitimise institutional arrangements and economic practices emergent in the economy at large (Neilson 2014). This deviation from the mainstream is an important new perspective on freeports (and free zones more generally) as 'development devices' that respond to macro-shifts to help recalibrate national economic development. It should motivate more research into the 'laboratory-like' economic practices on a small-scale as part of the manifold enabling mechanisms in the perpetuation of financial capitalism (Christophers 2020). In this regard, freeports are difficult to imagine without the visible, invisible, and pro-active engagement of the state as illustrated on the examples of the freeports in Geneva, Singapore, and Luxembourg. In the cases presented, the state acts as owner, regulator, facilitator, and/or financier of freeports simultaneously, and in both their material and immaterial dimensions, freeports can only be fully understood when reflecting upon *infrastructure alliances* (Wachsmuth 2017), for which freeport enclaves are important nodes. Offshoring techniques supported by and coupled with legal-financial technologies make "[t]he zone (…) a territory for organizing and orchestrating capital's operations" (Neilson 2014: 16) expected to be(come) a growing capital market of the future. If these developments were to materialise, the (exclusive) network of freeports would itself become a network of growth poles, thus linking to and actively shaping a variety of new financial geographies. We showed in section 3 that policy mobilities have established strong links between the rather established freeport in Geneva with the ones in Singapore and Luxembourg. Interestingly, in Luxembourg, the freeport's business model was tried and tested by an influential private company that has ambitions and experience to establish a sufficiently favourable institutional environment to attract and nurture this business of the future thereby acting as an 'agent of experimentation', also on behalf of the state.

The second novelty we addressed in this paper is its contribution to the debate on freeports as devices to test required conditions and facilities in the era of digital technologies, which we developed on the example of ArtTech. This helped us to identify – though far from being exhaustive – some of the linkages that have emerged between freeports as a material, built facility on the one hand, and a facility to support the tech shift of the global art market from a physical to a virtual trading space on the other. Transferability of practices between special trading zones seems to be an important motivation, especially when incorporating private actors into this equation. As suggested, they do not only have commercial interest in developing these markets and technologies as first movers and gatekeepers; they also operate in and control development in each of these sites. Freeports have thus become nodes in a global system of flows that allows for selective use of *zoning in* (by taking advantage of the regulatory conditions offered in a zone) and *zoning out* (by connecting to other places that are integral to this business model). So far, however, the promises of economic growth, employment, and public wealth creation have not even come close to being fulfilled.

If freeports fail to deliver on this promise, it is consistent with the assumption that infrastructure alone is not sufficient to capture the value of global flows (see, for example, recent debates about SEZs in the UK). This ambiguity should motivate research on (financial) market infrastructures that goes beyond descriptions of functionalities. Such research may also include issues of freeports' commercial secrecy and transparency – and the role of the states therein. While secrecy used to be ensured by fortified walls, the latest generation of freeports has moved secrecy building into cyberspace. We conclude and encourage further research by borrowing Neilson's (2014: 17) apt words that "[i]f the centralization of legal, political, and economic function has historically made the nation-state the essential political unity globally, the zone registers the partial undoing of these processes and the emergence of a new political topography of territory".

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