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Sabine DÖRRY

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Sabine Dörry
Department of Geography and Development (GEODE), Centre for Population, Poverty and Public Policy Studies (CEPS/INSTEAD), 3 avenue de la Fonte, L-4364 Esch-sur-Alzette, Luxembourg

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Abstract

Ruptures like the recent global financial crisis are inherent elements of our global 'securitised' financial system. Re-regulations and the maturing of the financial industry have led to re-organisation processes within the industry with far-reaching implications on international financial centres (IFCs). Surprisingly, little is known about the IFCs' localised organisational nature, social, and structural power relations. Despite the controversy about 'tax heavens', empirical evidence suggests that IFCs without an economic hinterland have developed strong local competencies and competitive advantages besides regulation aspects. Although dependent on foreign national economies, their specialisation capacitates them to offer finance-related services to a favourable cost-benefit ratio. The IFC Luxembourg seems to exemplify such a case. It has specialised in administrating a particular type of securities: (cross-border) investment funds. The paper does not only employ the GPN approach on finance but also innovatively links it with social network approaches, suggesting a new perspective to analysing locally anchored practices and dynamics in order to better understand 'the global' of today's financial system.

Keywords: International financial centre; global production networks; global value chains; social networks; social capital; investment funds; Luxembourg

JEL classification codes: G15, O16, P16, R11, R51

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"[M]oney is more than just an economic phenomenon, even though it is often treated as the natural province of economists" (Corbridge and Thrift, 1994: 22).

1 Introduction

In spite of the increasing integration of national markets in a supranational financial system, financial capital remains unequally distributed, while financial activities tend to be extremely concentrated. Only a few places – international financial centres (IFCs) – seem to be able to provide the necessary infrastructure and massive resources to co-ordinate financial capital flows at a global level, which makes them major nodes within the worldwide financial flow system. The Economist (2007) aptly describes IFCs as "cities where big financial transactions are done and a dizzying array of financial products is traded" and to whose 'well-being' the national governments increasingly pay attention. IFCs are clusters of finance and finance-related firms, embedded in host urban economies. They provide the necessary infrastructure and resources to co-ordinate global finance transactions. States, in turn, benefit from the industry's well-paid jobs, tax revenues, and international connections.

The financial industry, and thus IFCs as the industry's localised production systems, has been confronted with fundamental change, enforced by, among other things, re-regulation and the gradual dismantling of 'sovereignty niches'. Theories of Industrial Location Analysis suggest that linkages between firms in a localised production network shape their respective locations (Crevoisier and Maillat, 1991). Beyond regulatory advantages, such linkages ensure economic benefits that are not transferable to other locations (untraded interdependencies, Storper, 1995). Recent research emphasises the significance of individuals' networks within these production networks (Grabher and Powell, 2004a, b). Shared practical knowledge within a network cannot simply be codified and traded or imparted to third parties. Thus, the nature of the relations within and outwardly of these networks is vital for the success of a localised production system, such as an IFC. This forms the starting point for the argument in the paper at hand.

With large amounts of mobile capital available, global competition between the IFCs becomes highly relevant. Competition between financial centres does not only take place in the sphere of (inter-)national regulation and governance but increasingly on the local level of financial products/services. Competition between IFCs enforces their specialisation and accelerates their need to develop competitive advantages. Academic literature, however, remains rather silent not only on what exactly constitutes such local advantages apart from favourable institutional settings (Hudson, 1999), but also on how such specific local advantages have developed on-site (Porteus, 1999) and what kind of conditions and social relations are fostering processes of advantage building and their corresponding outcomes. These are the questions this paper addresses on the example of the IFC Luxembourg. The paper is exploratory in nature and aims to broaden the prevalent, quantifying economic manifestations on the financial sector. It suggests a more holistic and complementary view on the complexities of IFCs and puts the analytical spotlight on 'the local' in order to better comprehend 'the global' (Clark et al., 2009a).

"Economic action is, fundamentally, social action" (Homan, 1985: 147). The global production network (GPN) approach (Coe et al., 2008; Dicken et al., 2001; Henderson et al., 2002) places inter-firm as well as firm-state relations at its theoretical core, thus offering a strong heuristic starting point from which to analyse notions of 'embedded networks' *and* 'the market' in more detail. Although one cannot contemplate on the global economic organisation without a careful consideration of the influential cross-territorial dynamics, the paper primarily focuses on the complex intra-territorial dynamics of the IFC Luxembourg. The questions toward constituting social relations and networks are as much of theoretical interest as of political relevance. IFCs are integral parts of the global financial system that is ever more shaped by the financial practice of securitisation ("securitised financial system", Wójcik, 2011), in which debt claims are metabolised into tradable securities. Compared to the long stable growth of the ratio of global financial assets to global GDP until 1980, the financial asset growth nearly quadrupled in size after 1980 (McKinsey Global Institute, 2009). One explanation for these prodigious dynamics lies in the incredible accumulation of investment funds accelerated by the application of ever more 'sophisticated' financial engineering. Based on the assumption that (global) finance is an aggregation of numerous local practices and dynamics (Clark et al., 2009b), these practices and dynamics are essential to grasping the global interplay of financial forces.

In shedding further light on a financial centre's embeddedness in the fabrics of the locally specific 'social context', the subsequent section introduces and characterises the paper's complex unit of analysis – the IFC – before it describes the shaping conditions for the development of the IFC Luxembourg as an internationally recognised global node for the investment fund industry in more detail. This is important to understand Luxembourg's exposure to and strong dependency from foreign financial companies. In its fourth section, the paper critically applies the GPN framework to the investment fund industry, specifically considering the place-bound economic activities and dynamics in Luxembourg City. This section identifies the spatial limits and social interactions within the defined unit of analysis, which the fourth section builds upon. The fifth section discusses the institutional dynamics as a result of ongoing inter-firm and firm-state relations' negotiation processes. The paper closes with a summary of the main arguments and a critical evaluation of the presented heuristics.

2 Analytical perspectives on international financial centres

Relational approaches in economic geography acknowledge that "actors are not preordained to take on structurally determined roles, but that actors, their inter-relations and consequent practices themselves carry explanatory weight" (Boggs and Rantisi, 2003: 111). Two academic sets of explanation seem to be offering crucial insights to inform and deepen our knowledge of the financial centre's social practices and relations: One strand is the so-called 'relational urban studies'/'relational geography' (e.g. Derudder et al., 2012; Sassen, 2000; Taylor, 2004), in which functionally defined connectivities and the distinct qualities of linkages *between* cities and their urban economies are of pivot research interest. This particular rationale is found in empirically rich case studies and is also applied in the context of IFCs. The heterogeneity among IFCs, however, has long been a challenge for attempts at classifying these linkages. Respective studies on IFCs either consider quantitative indicators (rank size analysis, Poon et al., 2004) related to the presence of company headquarters (Choi et al., 2003), a mix of quantitative indicators and assessments from the industry itself (Yeandle, 2011), or the degree of connectedness among the different IFCs (Bassens et al., 2010; Derudder et al., 2011; Geiger et al., 2009). While the prevailing hierarchical rank-sizing conveys the idea that growth, change, and other developmental processes indeed take place, it does, however, not explain, why some IFCs "decline and others rise relative to one another" (Engelen, 2012: 253), or by what means IFCs are able to build and maintain local capacities to react to global forces and change dynamics? Besides the hierarchical ordering of IFCs, other scholars invigorate the acrimonious debate on distinct features of especially small financial centres with full state autonomy, such as 'tax heavens' or offshore 'shadow banking' centres (Franz, 2005; Palan et al., 2010; Roberts, 1995; Starchild, 1994). With regard to examples in Western Europe, the widespread differentiation between on- and off-shore financial centres manifests itself on IFCs such as Switzerland, Jersey, Guernsey, the Isle of Man, Dublin, Luxembourg, Liechtenstein, Andorra, Monaco, Cyprus, or Malta. However, whereas the 'relational urban studies' offer vast empirical wealth and whilst the presented rankings are powerful visualisations and comparison tools to evaluate an IFC's overall position within the global order, both do not reveal the local organisational nature, regulatory shaping, and underlying power relations that *explain* the depicted (growth) dynamics of an IFC.

The other strand of literature stresses the 'social' aspect in economic actions and decisions within regional or local (urban) production systems. These approaches focus on a micro-level, on which localised contextuality, contingency, and path-dependence (e.g. Amin and Cohendet, 1999; Bathelt and Glückler, 2011; Grabher, 2006) explicitly occupy the explanatory centre stage. In this regard, publications from multi-disciplinary backgrounds discuss three distinct but overlapping forms of 'social embeddedness' (Glückler, 2006; Polanyi, [1944] 1978), which impact on the structure and dynamics of the localised production systems such as IFCs: *social capital* as a structure-bearing element in inter-firm networks as well as for the evolution of various social institutions; the latter also being a result of the interactions between institutions and organisations (e.g. Cantwell et al., 2010; MacKinnon, 2012; Scott, 2001). This second body of literature seems to be especially fruitful for taking a further step in breaking up the black box IFC and will thus form the basis for the following discussion.

The raison d'être of financialisation, standardisation and optimisation in the financial industry has evidently impacted on the IFCs. IFCs face the implications of the intertwined complexities of two major challenges. The first one is the financial industry's maturing itself. This is accompanied and accelerated by seemingly contradictory organisational and spatial fragmentation but also concentration processes. They affect both, the economic activities in the local host cities of the financial cluster and, in turn, the configuration of a financial product's GPN itself.

The second main challenge lies in the re-regulatory efforts, not only in response to the recent crisis but also in terms of the gradual dismantling of national 'sovereignty niches' that aims at the curtailment of certain regulatory advantages such as taxation systems. They heavily impact on localised intra- and inter-firm relationships, exemplarily illustrated by the recent introduction of new regulations in London and the financial firms' migration to other IFCs. Price-competition linked with firms' outsourcing strategies increase the industry's global fragmentation. Its resulting spatial-functional configuration is of atomic characterisation. This atomistic fragmentation of the globalised production of financial products as well as the development of financial technologies and services may undermine national regulations; and because IFCs are deeply embedded in their respective nationalities, this dynamic may add to the industry's risk exposure on a global level. However, economic institutions do not appear involuntarily. Rather, "they are constructed by individuals whose action is both facilitated and constrained by the structure and resources available in social networks in which they are embedded" (Granovetter, 1992: 7).

Specialisation and fragmentation in the making of financial products are consequences of seeking cost efficiency. Maturing and outsourcing processes often enforce a firm's search for new places with more favourable production conditions, for some financial products most obviously in form of sites with liberal regulations. Such practices cut through state boundaries and, thus, also through nationally defined regulatory barriers. In consequence, more and more national jurisdictions are involved in the 'production' process of complex financial products. Thus, the argument that "*market activity has become extremely sensitive to even small differences in the competitive advantage ... of different financial centres*" (Martin, 1994: 264) remains as relevant as ever. The laid out context highlights the inquisitiveness for a more nuanced understanding and informed knowledge on the fabrics of the locally specific social context of an IFC. The following section describes the circumstances and conditions that enabled the small country Luxembourg to become an IFC of global recognition.

3 The rise of the IFC Luxembourg

The financial centre Luxembourg as a “global specialist” (City of London, 2010) or “minnow superpower” (Laulajainen, 2003) is an appropriate case to develop the GPN’s potential as a heuristic framework towards its pioneering application on finance. With regard to Luxembourg’s functions and services offered, the labels ‘powerful’ and ‘specialised’ may be justified. However, specialisation is a pervasive phenomenon and a defining feature in the present global system of financial centres and even the “one-stop shops for a full range of financial services” (The Economist, 2007), London and New York City (NYC), have specialised in only some particular strengths, although broader in scope than in Luxembourg. Furthermore, only few of the IFCs such as London or NYC are truly global. Most IFCs, however, are regional in scope, which makes research on such centres particularly vital. Luxembourg is an example of a specialised financial centre being primarily regional in scope (Laulajainen, 2003). It is organised to mainly serve the complex *administration* of investment funds and recently attempts to attract higher value business from the investment banking centres London and NYC.

Of great significance in IFCs is the degree of institutionalisation in the sense that it offers security for financial transactions, since they are based upon (institutional) trust and reputation as well as on the way sensitive information is treated and managed (Pieretti et al., 2007). Another success factor for the implementation and profit realisation of ‘innovative’ financial products are on-site transaction costs. Their determining factors are manifold and comprise firm-organisational logics as much as institutional change dynamics. Regulatory influences and social institutions (North, 2005) can cause effects, which overcome national boundaries and possibly provoke juridical consequences as well as serious changes beyond the border.

In 1984/85, the Bank for International Settlements pointed towards three fundamental changes within the international financial markets: 1) the rapid emergence of ‘financial engineering’; 2) the broadening of the range of financial products by different financial intermediaries and the dissolution of the boundaries between the categories of financial institutions; and 3) the on-going internationalisation of financial intermediary activities. The radical intertwining of national pension policies and financial markets over the past fifty years (Clark, 2000), but also the politically enforced metamorphoses of small savers into private high-risk financial investors (Lai, 2012) enabled the present securities markets to gain vast significance (Clark et al., 2009b; Pagano and Volpin, 2001; Wójcik, 2011). The profound increase of the investment funds'[1] net assets and numbers mirrors this development (table 1).

Table 1: Worldwide total net assets and number of investment funds[2]

Year	2005	2006	2007	2008	2009	2010	2011
Total net assets (billions of USD), year-end	17,757,360	21,808,884	26,131,496	18,920,057	22,952,806	24,699,170	23,779,874
Number of funds	56,867	61,855	66,347	69,032	67,551	69,518	72,657

Note: Funds of funds are not included except for France, Italy, and Luxembourg. Data include home-domiciled funds, except for Hong Kong, the Republic of Korea, and New Zealand, which include home- and foreign-domiciled funds.
Source: 2012 Investment Company Fact Book (www.icifactbook.org/, page 193-4, accessed 03 March 2012)

A look back at the history of the IFC Luxembourg reveals an understanding of its current localised functions and distinct skills, which have developed on-site over time. It is essentially a story about how the Luxembourg state sets the rules of the game for old and new financial business activities and, thus, exploited 'sovereignty niches'. Initially, it was marked by its reliance on the main policy pillars "strict banking secrecy and a tax system targeting specific financial sectors" (Laulajainen, 2003: 376). The financial centre quickly became home to American and European banks working within the Euromarket (OECD, 2008) in the 1960s. Their main activity was linked to international credits and influenced by the development of the Eurodollar markets. They experienced vast growth in the late 1960s and 1970s, not least due to the increased oil revenues after the 1973 price rises. The massive imbalances in international capital requirements between oil importing and exporting countries were handled by the Euromarkets and the necessary intermediation was accomplished by

[1] The linguistic usage of mutual funds is more conventional in the US and refers to contractual funds, also known as common contractual fund (CCF). In contractual funds the investors are unit-holders. The more general term investment fund refers to the corporate fund structures, more widely applied in Europe, in which the investors are shareholders with corresponding rights and duties, different from contractual funds. In the following, I apply the more general term investment fund. However, on a daily basis, both terms are more or less used synonymously.

[2] Number of shareholder accounts includes a mix of individual and omnibus accounts.

international banks (Roberts, 1994: 93-97). While London had specialised in issuing Eurodollars for the international banks, Luxembourg developed into an international centre for the administration of these currencies with only low state interference.

Between 1983 and 1988, Luxembourg was heavily affected by massive debt-relief problems of important developing countries. The Luxembourg government accepted substantial banks' allowances for sovereign risks in order to tackle the consequences of the international debt crisis for the financial centre. As a result, the IFC progressively re-orientated towards private banking, asset management, and the investment fund industry (Walther et al., 2011). It denoted a second important step in the financial centre's evolution.

Its third stage is closely linked to developments overseas and within neighbouring countries. The low-tax policy in Luxembourg not only attracted, for example, financial capital from the fully funded UK pension system (Clark, 2000). In 1988, Luxembourg swiftly implemented the first EU financial investment directive on *Undertakings for Collective Investment in Transferable Securities* (UCITS[3]) into national investment law, which gave rise to the development of the fund administration and turned out to be an economic success story to this day. Although UCITS are fund products based on an initiative by the EU member states, it is largely a Luxembourg 'export hit'. The 1990s were marked by both, a massive influx of German banks[4] willing to avoid regulatory constraints in their own country as well as the inventiveness of financial firms in offering adapted financial products. The ever more sophisticated, yet, less regulated investment funds as well as insurance and reinsurance activities were profoundly backed-up by a Luxembourg state that actively pursued a supportive and liberal fiscal policy but was also able to promptly and constantly

[3] ALFI, the Association of the Luxembourg Fund Industry, explains the UCITS directive as follows: "The acronym 'UCITS' refers to a series of European Union directives that established a uniform regulatory regime for the creation, management and marketing of collective investment vehicles in the countries of the EU. It stands for Undertakings for Collective Investment in Transferable Securities. UCITS typically invest in securities listed on public stock exchanges and regulated markets. The UCITS directives have brought European investors a wide offering of funds together with a high-level of investor protection. Investors can invest in any UCITS fund that has been registered for sale in their country. Before the first UCITS directive most investors were largely limited to funds offered by fund companies based in their country of residence. The UCITS directives have thus greatly broadened the choice of funds available to investors in the EU. Investors also have the option of investing in other non-UCITS compliant funds if necessary, although before doing so, they should find out exactly legal and tax consequences of such an investment would entail in their home country" (www.alfi.lu/investor-centre/how-do-ucits-investment-funds-work/understanding-ucits; accessed 18th August 2012).

[4] Only the introduction of the first Financial Markets Promotion Act (erstes Finanzmarktfördergesetz) in 1990 allowed German investment companies to 'produce' investment funds abroad.

adapt its regulation frameworks. The global distribution strategy of UCITS structures from Luxembourg effectively penetrated important Asian markets, not least due to a broad network of double tax treaties with China, Indonesia, South Korea, Malaysia, Singapore, Thailand, Vietnam, and others (ALFI, 2011), which only recently led Luxembourg's officials to enthusiastically state a new, "unrivalled partnership" with Asia (Brausch, 2011: 28).

This short visit to the history of the financial centre Luxembourg shows that mainly new EU directives enabled the Luxembourg financial centre to do 'big' business with investment funds. Put differently, although equipped with full state autonomy, Luxembourg as a financial centre cannot be analysed in isolation from the dynamics on the level of the EU. Other European states also introduced the UCITS. But undeniably, no EU state was even remotely as successful at realising these directives as Luxembourg. Thus, the financial firms and service providers in Luxembourg were forced to learn fast to be able to perform the needed qualifications required by the new directives. Jean-Nicolas Schaus (CSSF 2003: 5), former Director General of the Luxembourg regulator Commission de Surveillance du Secteur Financier (CSSF), formulated that "*[t]he financial centre is part of a new environment, a kind of global market, where the difference will be less and less on regulatory issues and more and more about the diversity and quality of services offered by the players*."

The negotiation processes of the local financial firms and service providers with the regulating authorities of the IFC itself seem to be no less important. Together, they, for example, have relativised some of the 'birth defects' during the introduction of the UCITs directive, which also led to the adjustment of the new regulations at a European level. Such dynamic and shape-changing agency is embedded "in wider networks of social actors and institutions" (Coe et al., 2008: 277). This holds true for both, the inter-firm relations in the contour of a localised financial production system and the firm-institution linkages in the shape of active on-site strategic coupling processes. The GPN framework offers a suitable heuristic to apprehend the potential meaning of social capital in IFCs and of strategic coupling as a specific form and valorisation of such relational capital. These aspects are deepened in the subsequent sections.

4 Luxembourg as a strategic node in investment fund global value networks

A number of scholars have attempted to better comprehend a financial centre's clustering rationales. The cluster concept, in which IFCs are being reflected as the net sum of centripetal and centrifugal forces (Engelen and Grote, 2009) and defined by 'thick market externalities' (Grilli, 1990), can be utilised to highlight and explain crucial functional (Porteus, 1999) and locational (Schamp, 2009) preconditions necessary for the development of a modern, competitive financial service centre. An extensive empirical study on the IFC Frankfurt am Main revealed an unexpectedly high formal and informal intra- and inter-sectoral interweavement (König et al., 2007). Although these studies illuminate distinct defining features of particular IFCs, a clear heuristic framework based on an IFC's product specialisation, locational comparative advantages, and relational aspects (Budd, 1995; Lee and Schmidt-Marwede, 1993) still remains underexposed. Scholars like Engelen and Grote make a strong claim for "a more 'layered' theoretical approach, in which universal mechanisms ... are being qualified by more context specific causal variables" (2009: 693), whereas others simply suggest making the production networks of the financial industry itself the subject of (empirical) analyses (Oßenbrügge, 2011). Inspired by Castells' (2000) 'spaces of flows' approach, Sokol (2007) seeks to understand what he calls the nature and dynamics of the locational structure of financial services. On the example of the IFC Dublin, he separates the 'domestic banking sector' from the 'international financial services' and concludes from his rather descriptive and general results that "*[t]he application of the concept of 'value networks' in the context of financial services could be a challenging but urgent task, ultimately opening up new ways of looking at the geography of finance*" (Sokol, 2007: 254).

The established GPN concept has allowed for manifold new insights on the functional/organisational and spatial fragmentation of the interconnected nature of economic activities among the production processes as well as their various geographical sensitivities and shifts. The GPN approach – developed in reaction and intellectual continuation to the 'chain concepts' such as the global commodity chains (GCC) and the global value chains (GVC) (Bair, 2005; Gereffi and Korzeniewicz, 1994) – is widely acknowledged but gained comprehensive conceptual critique, trenchantly summarised for example by Bair (2005, 2008) and Kelly (2013). Whereas the ‘chain concepts’ primarily focus on the organisational inter-firm structures of contemporary global industries and the influential governance activities of their powerful economic actors (Bair, 2008), the GPN approach forces open these narrowly defined firm-firm relationships by broadening the architecture of actors involved (*network embeddedness*, Henderson et al., 2002).

GPNs aim to analyse “development in its economic and social dimensions, and understanding places and regions as both territorial sites of global economic change and nodes in a global space of flows” (Coe and Hess, 2013: 7-8). Both, the chain and the network approaches, make *place* a subject of discussion but rather neglect to “engag[e] with those places themselves as the locus of analysis” (Kelly, 2013: 84). In addressing the immanent “firm-territory nexus” (Dicken and Malmberg, 2001), each step in a production network/value chain is embedded in distinct sets of information (Parr and Reynolds-Feighan, 2000), and the supply of very different financial service activities from the ‘outside’ has not only distinct locational consequences but also requires very specific spatial conditions (for a detailed discussion of various value chains at the IFC Frankfurt am Main, see König et al., 2007). Thus, each network’s node is in itself a network of “power-infused interactions” (Hart, 2002: 297), as it is embedded in other nodes and their related activities in other places (Appelbaum et al., 1994). This provokes further inquiry on the GPNs’ conceptual notions of embeddedness and scale/place. Hess (2004) suggests three distinct ideas of embeddedness, which Kelly (2013: 84) summarises as follows: “*‘societal embeddedness’, referring to the corporate culture and practices that derive from a firm’s place of origin (which links the idea to a literature on varieties of capitalism); ‘network embeddedness’, based on relationships in which the firm is engaged in order to make production happen, including ‘strategic couplings’ with the state in various forms (Coe et al. 2004, Yeung 2009); and, ‘territorial embeddedness’ in which economic activities become anchored in particular places. … [E]mbeddedness also implies a rootedness in place or region, and thus lies at the heart of the GPN approach’s attempt to integrate areal concepts of territory/place/region with systemic processes of flow/network/connection*”. The latter notion suggests that, in particular, the ideas of relevant literature on ‘new regionalism’ are of importance to the proposed analytical perspective in the paper at hand and therefore need to be highlighted.

Worldwide, the US (48.9%) and Europe (28.6%) hold the largest shares of the investment fund assets (including funds of funds). Whereas the US is the domestic fund market leader (48.9%), the IFCs Luxembourg and Ireland have been dominating the segment of cross-border investment funds over the past 25 years. In this category, Luxembourg holds a market share of about 80% (EFAMA, 2012). Hence, one of Luxembourg's IFC's non-surprising main characteristics is its domination by foreign banks and other finance-related TNCs. Out of 143 foreign banks, 41 branches and subsidiaries account for banks from neighbouring Germany in 2012, followed by banks from France (14), Belgium (11), Switzerland (10), Italy and the UK (both 8) as well as Sweden and the US (both 7) (CSSF, 2012). Since mainly banks are involved in the fund administration (see figure 1), these figures hardly astonish. While the GPN framework explicitly integrates theories of regional development, it also emphasises the internal relations and specific structures existing in a region. Theories of Industrial Location Analysis suggest that linkages between firms in a localised production network shape their respective locations and ensure economic benefits that are not transferable to other locations (Storper, 1995). Place is shaped by territorially defined institutional actors (most notably the state) who provide the necessary infrastructure as well as business stimuli for economic activity. Place therefore affects the network (Kelly, 2013).

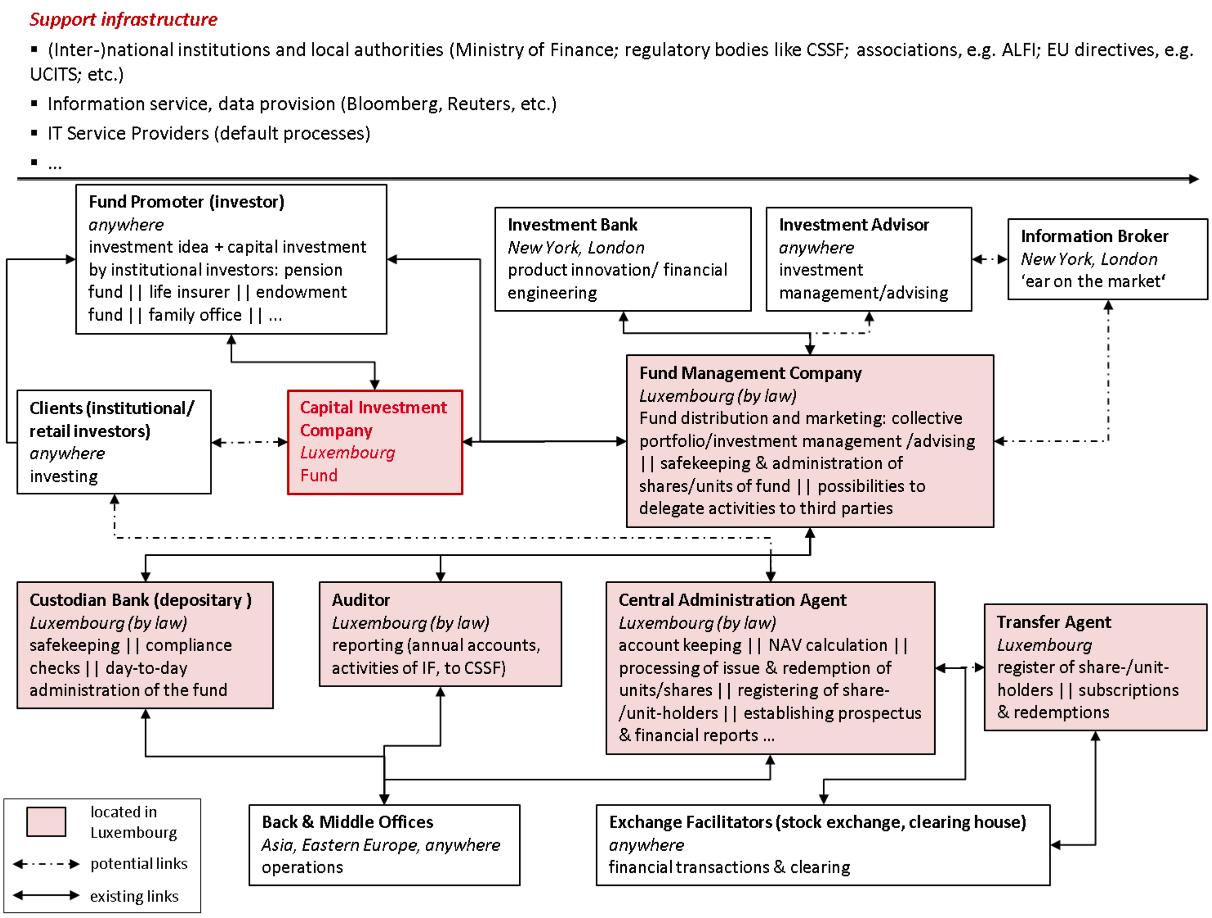
The manifold strategic couplings between firms, governments, but also other economic actors in GPNs comprise one aspect the approach seeks to explore. It encompasses the valorisation of localised assets – specific kinds of knowledge and skills as important resources for local development – and requires shaping assets of local institutions. Although the GPN approach emphasises the capacity of local institutions to bargain with lead firms of global production networks (Christopherson and Clark, 2007), the prevalent unequal nature of the relations especially between transnational corporations (TNCs) and the local state has been underplayed, yet. Given the condition that regulations increase or lower the attraction of an IFC for the financial industry to locate and perform business, the tight interrelations between economic and political actors could be perceived as a feeding mechanism for 'local bridging' between actors within a given network. Some of the world's major financial TNCs with the size and the market capitalisation of JP Morgan Chase, HSBC, or Citigroup are not only key players but, in fact, "market makers" (Corbridge and Thrift, 1994:

14). TNCs are thus considered to be influential “change agents” of local institutions (Cantwell et al., 2010: 572). However, various other advocacy groups like business associations, state authorities, or the local state itself have high stakes at play. Due to the tight interrelations between the political and economic actors at the IFCs, the effective institutions and conventions of the IFC are assumed to be actively shaped through social and political negotiation processes (Gertler, 2010: 3), in which opportunity costs and accepting advantages, however, cannot be ruled out.

Understanding the complexities of causes and effects for (local) development is imperative to policy makers, especially in small states with no hinterland. In such a distinct context, development is notably shaped by dynamics abroad. Localised place-shaping economic activities are part of GPNs, which “*have become both organizationally more complex and also increasingly global in their geographic extent*” (Henderson et al., 2002: 445) and to which they are connected in multiple ways. They determine the characteristics of a financial centre and, hence, link different spatial scales with one another. To investigate locally anchored social practices and dynamics in IFCs, however, both the chain and the network concepts hold strong analytical capacity, and the complementary incorporation of both approaches especially in this regard seems to be most fruitful. Whereas chain approaches emphasise the careful analysis of value creation processes and power aspects between firms in a specific location and, thus, delineate ‘place’, production network approaches accentuate further functional linkages and spatial pipelines towards other places. As I am borrowing from the two frameworks in the following, I will also refer to a rather hybrid terminology of ‘value networks’ in what follows.

The value network of an investment fund product is therefore not only a useful entity to analyse its functional structures with its specific characteristics and spatialities but also provides a practical delineation of the place/location, in which specialised economic activities as part of the fragmented global production processes take place. Such place-specific activity ‘nodes’ can thus be defined as localised cut-outs (bounded regionality) of a global production or value network, which – for the example of an investment fund, domiciled and administered in Luxembourg, – could hence be outlined as illustrated in figure 1.

Figure 1: A global value network of an investment fund, domiciled, administered and distributed in Luxembourg



Source: own illustration

The introduced value network in figure 1 grasps the organisational complexities of an investment fund's production and distribution, territorially anchored in different places. The coloured boxes indicate the localised processes that take place within the value network of the IFC of Luxembourg: If a (foreign) **fund promoter** intends to launch a fund in Luxembourg, it is the **local regulatory authority** CSSF to approve the investor's (fund promoter/initiator) eligibility to initially register the fund. He is obliged to substantiate a certain capital base, holds full liability for it, and acts as lender of last resort. Once recognised by the CSSF, the fund **management company**[5]

[5] Non-fund examples of management companies in Luxembourg comprise at present Commerz Funds Solutions S.A.; Crédit Suisse Fund Management S.A.; Dexia Asset Management Luxembourg S.A.; Global Funds Management S.A.; HSBC Investment Funds (Luxembourg) S.A.; Invesco Real Estate Management S.àr.l.; Lombard Odier Funds (Europe) S.A.; RBS (Luxembourg) S.A.; Swiss & Global Asset Management (Luxembourg) S.A.; Tishman Speyer Management (TSEC) S.àr.l.; UBS Fund Management (Luxembourg) S.A. (ALFI,

– located in Luxembourg – takes on an instrumental role in the management and administration process of a fund. It acts in the capacity of fiduciary, sets up the fund project, and also determines the investment strategy. After compiling the fund prospectus and completing the legal filing, two other key actors in the fund administration process – the **custodian** and the **central administration agent**[6] – get eventually involved. In some cases, the **investment advisor** (equally the investment **manager**) acts independently from the management company; in others, the management company operates the equivalent **portfolio management** function in-house. The specific organisation may differ from case to case since the operations are set up in accordance to a company's resources and know-how. The investment manager advises the management company to invest or disinvest, which is – after a compliance check by the management company – followed by the actual transaction or share trading. The **transfer agent** is responsible for registering the share- or unit-holders, their subscriptions, and redemptions.

Nevertheless, the European market for distribution models is highly fragmented. Two main fund distribution models co-exist. Their differences, however, are increasingly dissolved in the course of standardisation and re-regulation processes. The so-called TA model (transfer agents and registrars), in which "orders and settlements are typically handled through bilateral arrangements between the distributors/aggregators and the fund-side institutions" (Caceis, 2011: 33) is mainly applied in European domestic fund markets such as Belgium and Italy, in cross-border fund markets such as Luxembourg and Ireland, and in Asian domestic fund markets. In contrast, in France, Germany, or Switzerland, "the order and settlement infrastructure is provided almost totally by Central Security Depositories (CSDs)" (Caceis, 2011: 33). Yet, the organisational model varies between the countries in specific aspects of fund transaction services but also implies differences in the GPN configuration.

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www.alfi.lu/sites/alfi.lu/files/files/About_ALFI/ALFI_member_directory/Membres%20ALFI%20Non%20fonds%20ppa%20cat.pdf; accessed 2 July 2012).

[6] Current examples of non-funds (global) custodians and/or central administration agents in Luxembourg include, among others, ABN AMRO BANK (Luxembourg) S.A.; BNP Paribas Securities Services, succursale de Luxembourg; Citibank International plc (Luxembourg Branch); Clearstream Banking S.A.; Deutsche Bank Luxembourg S.A.; Franklin Templeton International Services S.A.; Hauck & Aufhäuser Investment Gesellschaft S.A.; HSBC Trinkaus Investment Managers S.A.; J.P. Morgan Bank Luxembourg S.A.; Sal. Oppenheim jr. & Cie. Luxembourg S.A.; Swedbank S.A.; The Bank of New York Mellon (Luxembourg) S.A.; UBS Fund Services (Luxembourg) S.A. (ALFI, www.alfi.lu/sites/alfi.lu/files/files/About_ALFI/ALFI_member_directory/Membres%20ALFI%20Non%20fonds%20ppa%20cat.pdf; accessed 2 July 2012).

Further, there are several distinctive IFCs aiding the investment fund industry. Whereas Luxembourg is an international investment fund centre without its own economic hinterland (cross-border fund markets), the US, France, and even the UK predominantly serve their large local markets (domestic fund markets). Regarding a functional division of labour, IFCs like Dublin, Luxembourg, Singapore, or Delaware in the US are major global fund distribution centres. Correspondingly, IFCs like London or NYC are recognised investment centres with key and still highly profitable financial engineering activities. The randomly picked performance assessments of bond funds from the financial news section of a daily German newspaper illustrate the importance of Luxembourg as a global fund domiciliation centre. The funds' international securities identification number (ISIN) uniquely identifies each security paper, indicating also the country of issuance. The abbreviation 'LU' stands for Luxembourg (table 2).

Table 2: Snapshot of bond funds with best performance

Funds	**ISIN**	**Performance 3 years**	**…**
Allianz Thailand Equity - A - USD	**LU**348798264	184.41	
Wells Fargo (Lux) WW US All Cap Growth A USD	**LU**353189680	110.24	
Credit Suisse Equity (Lux) Global Prestige B	**LU**254360752	109.57	
First State Global Property Securities A GBP Acc	GB00B1F76L55	109.37	
Danske Invest Global Emerging Markets Small Cap	**LU**0292126785	103.81	
Newton Asian Income GBP Inc	GB00B0MY6Z69	101.17	
Aberdeen Global – Asian Smaller Companies A2 Acc	**LU**0231459107	99.36	
Aberdeen Global – Emerg Markets Smaller Cos A2 Acc	**LU**278937759	97.45	
iShares Nasdaq-100 (DE)	DE000A0F5UF5	95.92	
Credit Suisse (Lux) Luxury Goods Equity Fd B EUR	**LU**0348402537	94.70	
Lyxor ETF Nasdaq 100 D-EUR	FR0007063177	93.48	
Comstage ETF Nasdaq-100	**LU**0378449770	92.99	
Dexia Equities L Biotechnology C Cap	**LU**0108459040	90.57	
Comstage ETF StoxxEu 600 Food & Beverage NR	**LU**0378435803	89.42	
Lyxor ETF StoxxEu 600 Personal & Household Goods	FR0010344978	89.17	
Lyxor ETF Stoxx Europe 600 Food & Beverage	FR0010344861	87.80	
Franklin Biotechnology Discovery A (acc) USD	**LU**0109394709	86.78	
Standard Life Sicav Global REIT Focus A	**LU**0277137690	85.88	
iShares Dow Jones U.S. Select Dividend (DE)	DE000A0D8Q49	84.29	
Nestor Australian Fonds B	**LU**0147784119	83.01	

Pioneer Funds US Fundamental Growth E No Dis EUR	**LU**0347184581	82.20	
Vontobel Fund Emerging Markets Equity B USD	**LU**0040507039	81.10	
Robeco Property Equities D EUR	**LU**0187079180	81.05	
UBS (Lux) EqFd – Small Caps USA (USD) P-acc	**LU**0038842364	80.61	
Aviva Investors Global Real Estate Sec A EUR	**LU**0274935724	79.81	
Templeton Asian Smaller Companies A (acc) USD	**LU**0390135332	78.94	
Morgan Stanley Global Brands A USD	**LU**0119620416	78.31	
Morgan Stanley US Advantage A USD	**LU**0225737302	78.20	
First State Latin America A GBP Acc	GB00B64TSD33	77.94	
Skandia Swedish Growth A SEK	IE0031388014	77.46	

Source: Frankfurter Allgemeine Zeitung (9 Aug 2012: 19)

Fund management activities have been subject to fierce competition. Supported by efficient ICT infrastructures, cost pressure has resulted in a massive trend of standardisation, automation, and outsourcing towards so-called IT platforms in India or other places in Asia and Eastern Europe (cf. figure 1). The operations of financial and finance related companies, such as fund management companies, custodian banks or the central administration agents, have been more and more hollowed out, nowadays being rather 'facades' with a minimum of substance still anchored in Luxembourg. If their actual activities can be sufficiently standardised and reach a certain quantity, firms have been shifting these activities towards back and middle office sites in other parts of the world. In their attempt to further streamline the administration processes, so-called "*'mega'* investment fund platforms for both domestic and international investors" (Ferguson, 2011: 37) are currently discussed by representatives of the IFCs in Dublin and Luxembourg. Their implementation would accelerate the industry's further consolidation and institutional adjustment. However, by outsourcing and off-shoring standardised financial support services to Asia or East Europe, the Luxembourg IFC experienced a relative functional upgrading. The remaining, but nevertheless crucial functions in Luxembourg are mainly those of governance and liability and are as such major targets for re-regulation efforts by the European Commission and other international bodies in the aftermath of the global financial crisis ("regulatory tsunami", Fischer, 2011: 32). Whilst the crucial liability function enforces the introduction of expensive controlling systems by the respective firms in charge, it imposes disproportionately high costs on small and medium sized enterprises, which are currently questioning their chances of survival in this particular sector.

Because the IFC Luxembourg lacks a large domestic market, it has historically been forced to develop a strong and competitive cross-border model for fund distribution. However, responding to the economisation rationalities, the organisation of the value network of investment funds has changed profoundly over the years. Luxembourg has recently gained weight in the system of European financial centres due to rigorous specialisation in a specific securities industry growth market as the investment fund industry took ever-greater significance (table 1) in the recent past.

This section has mainly focused on the illumination of Luxembourg's functionally defined structures to better understand the strategic importance of its financial centre within the global value network of the investment fund industry. The subsequent section will build on this work to discuss the social relations behind the organisational structures and their potential to foster and reshape the prevalent organisational forms in the future.

5 Propelling the IFC Luxembourg: network relations and (localised) social capital

The territorially embedded socio-economic activities are closely related to a fine netting of local, versatile finance-related services and 'Professionals of the Financial Sector' (PSFs). PSFs form a large group of heterogeneous but highly specialised firms belonging either to the IFC related activities of (1) investment firms, of (2) other than investment firms, or (3) to an activity related to, or complementary to, a financial sector activity. Their specific functions and capabilities within the investment fund administration process are tightly interwoven and their relatively durable architectures of social networks make finance "not quite as mobile as some of its practitioners like to pretend" (The Economist, 2012: 19). The top-down introduction of new directives by national and international regulators requires high adaptability capacities by the on-site operating business organisations, but is also shaped by feedback-loops of close firm-state relations as aptitudes with enormous significance (for respective interview sequences with representatives of the IFC Luxembourg, see Walther et al. 2011).

Value networks are considered an innovative and effective form of business organisation, in which *network embeddedness* is an analytical key element. Network embeddedness scrutinises the network agents' degree and stability as well as the network's importance for their members (Henderson et al., 2002). Baker and Faulkner (2009) propose the concept of 'double embeddedness' to convey the idea that social, political, and economic actions in communities and organisations are structurally and culturally embedded in networks. Social structures of such networks are usually "designed to get things done through the cooperation of individuals" (Kadushin, 2012: 90). In consequence, social networks are often related to (the concept of) social capital (Moody and Paxton, 2009; Portes, 1998) as a specific form and resource of organised economic activity and its clear 'means-end rationality' (Weber, 1980 [1921]).

The notion of social capital has been, however, frequently critiqued as a rather fuzzy concept being at risk to explain phenomena with tautologies, lacking an understanding of the "specific social mechanisms at play", or overestimating the cohesiveness of networks as success factor for regional economic development (Huber, 2009: 162-3), which hardly provides a solid basis for empirical analysis. Accounting for the development of an economic cluster, Huber encourages the development of a multi-level framework to better understand the causal mechanisms of social capital. Its analytical dimensions comprise: a) the network's formation shaping mechanisms, including homophile tenets or spatial proximity; b) the forces for maintenance of the identified network relations influenced among other by institutional change or geographical mobility; c) the factors for the transmittance of potential resources and the actual use of resources within the network, thereby fostering an analytical association of network organisations *and* individuals, since it is the latter who activates resources; and d) the analysis of the effects or 'returns' of social capital (Huber, 2009: 166). Fernandez and Castilla suggest "that the benefits of applying the term social capital to network-related processes are most likely to outweigh the costs of using the term the more clearly the analysis addresses 'investment for return' phenomena" (2001: 101). If social capital is indeed linked to higher economic output of financial centres, to what extent then could this be reflected in an improvement of indicators such as higher efficiency, rising productivity, reduction of search costs, the acceleration of on-site procedures and operations, or even innovative abilities in the localised financial value network?

The instrument of social network analysis (SNA) to actually empirically investigate social network structures and their 'relational capital' has been advanced in recent years. Based on Granovetter's (1985) conceptual notion of relational and structural embeddedness, SNA describes the structural properties of the networks and dissects the relational configurations involved in the making of inter-firm and interpersonal networks. It shifts the focus from the attributes of the actors towards the relationships and flows of information and resources between them. Thus, the nature of the relations within and outside of these networks is vital for the success of an IFC. In other words, competitive advantages can only be mobilised through the interaction between network partners from different but linked areas of a 'fund production' network (Walther et al. 2011). In this context, social capital refers to the outcome of such mobilised network interactions and therefore defines specific brokerage opportunities: An IFC's performance is a product of 'brokerage' outside the network and 'closure' inside the network (Burt 2005). "*The central premise [of the social capital value of a network] is that an exchange is more difficult to negotiate, less rewarding, when it is locked into other exchanges. Discontinuities between exchange relations (structural holes) are entrepreneurial opportunities to broker the flow of information between people on opposite sides of the structural hole, and control the form of projects that bring together people on opposite sides of the structural hole*" (Burt 1997: 355). In short and to distinguish this approach from Granovetter's notion, the structural hole theory defines social capital by the brokerage opportunities in a network. If one wants to investigate the multi-level on-site (power) relations between firms but also between firms and institutions of a defined value network, the SNA research technique allows to determine, (1) which actors are connected within the network, (2) the strength of their ties, and (3) how resources and information are shared through the actors' embeddedness?

Although the challenge of catching dynamics in networks suggests to survey longitudinal data, a SNA on the multi-directed social networks in specialised IFCs would provide first evidence to comprehend place-specific structures and relations. This, in turn, sheds light on the network patterns of local and global bridging as well as on local and mobile brokering (cf. Glückler, 2007). SNA, furthermore, would provide a more accurate and detailed picture of the network relationships that make up the socio-economic space in the dominion of a local investment funds' administration and distribution system and, thus, give us a better idea about potential local conditions and relations, which foster processes of strategic couplings. However, such detailed understanding can only be provided by an empirical analysis still due. There are a number of questions the explorative paper at hand can only formulate and to whose answering such empirical investigation may contribute.

Financial systems are country-specifically shaped (Fujita, 2011; Haber et al., 2003; Hall and Thelen, 2009), and regulation retains a measure "of maintaining a national interest" (Budd, 1995: 347; Kirshner, 2003). The financial sector's governance is evidently embedded in complicated, multi-layered networks (Grande and Risse, 2000), in which the nation state is no longer able to do everything itself. The state's specific part in developing collective problem solutions varies according to the national context (Lütz, 2002: 45). Nevertheless, within the scope of increasing (juridical) harmonisation pressure in economic and political unions like the EU, sufficient leeway for distinctive national features is still maintained; and distinctive national features remain emergent sources of national competitive advantages. Although Luxembourg was a major beneficiary from the EU directive on the UCITS introduced in 1985, it now fears – compared to overseas' competitors like Singapore in the emerging Asian economies or Delaware in the US – being 'trapped' in the ever tighter EU's legislative net (Laulajainen, 2003: 375). Further, measures taken by the European Commission[7], the European Securities and Markets Authority, and other supranational regulatory bodies in the aftermath of the financial crisis currently include "180 pieces of regulatory work" (Fischer, 2011: 32). As exemplified by the financial centre of Amsterdam, political actions in the shape of regulatory change is suggested to be among the main drivers for place specific economic activities (Engelen, 2007). In their perception of the wave of new regulations, which is currently in full swing, financial industry representatives in Luxembourg criticise the punctual shock-like events: In "contrast to the successive developments […] in the area of UCITS, which

[7] The Directive on Alternative Investment Fund Managers (AIFMD), for example, was introduced in 2009 by the European Commission and aims "to create a transparent, comprehensive and effective regulatory and supervisory framework … at the European level" (http://ec.europa.eu/internal_market/investment/alternative_investments/index_en.htm, accessed 09 August 2012).

allowed market players to adapt gradually, the AIFMD is imposing a ‘big bang’ approach” (Saluzzi, 2011: 8). Strong lobbyism is currently under way and on-site strategic coupling dynamics (Coe and Hess, 2011; Coe et al., 2004; Yang et al., 2009) gain momentum to abandon or at least mitigate particular regulations in Luxembourg and the EU. In strategic coupling processes, (large) firms like banks and other finance related firms exploit strategies to take advantage of their host region in accordance with their evolving competences to mobilise local resources (MacKinnon, 2012). Such local resources in Luxembourg comprise, e.g. tax regulations, a short implementation time for new directives, or a high qualified labour force. The advantage-taking process is shaped by the intended actions of local agents such as various industrial, regulatory, or policy actors from multiple but inter-related areas of the investment fund ‘production’. Luxembourg’s bargaining power is principally high as the IFC is specialised, distinctive, and complementary to the strategic needs of the firms operating in the fund industry. New national regulations such as the abolishment of earlier introduced tax exemptions to attract new business to Luxembourg may lead banks and other finance-related firms to withdraw their activities from a specific country, as seen in the case of the investment banks’ business shifts from Frankfurt am Main to London in the 1990s (Frenkel and Goldstein, 1998). Strategic relocation decisions of TNCs can heavily infringe upon established networks. At that particular time, entire teams were withdrawn from established network structures in the IFC Frankfurt. But what do such structural changes for (localised) network relations with reference to an IFC’s economic performance mean? Would new ‘internal social capital’ (Huber, 2009) configuration possibilities as well as altered and mobilised ‘external social capital’ initiate new chances and pipelines for further ‘breakings’ and ‘makings’ of rooted local network structures? And with what consequences for an IFC? How are coalitions’ and other influential networks’ actors as well as the quality of the structure of their connections in such processes characterised? What are their dynamics in relation to their changing coalitions’ interests regarding the mere regulations looming over an IFC?

6 Future directions and preliminary conclusions

Overall, the paper has argued for a more grounded research of IFCs. IFCs are vital parts of the global financial system. On-going processes of securitisation, specialisation and outsourcing in the financial sector entail the fractioning of tasks and, thus, the risk to lose the global picture on how the international financial system works. Investment funds are crucial elements of the securities markets. Therefore, the paper has tried to contribute to a better understanding of the organisation and principle of a financial centre's operation as a node within the global value networks of investment funds, in which financial flows materialise. However, such a generalisation seems to be at least debatable as the argument specifically refers to the specific example of Luxembourg.

Both, the exposed vulnerability to risk of the present global financial system and our rather limited conceptual and empirical knowledge on what constitutes the measurable outcomes on an IFC, show the necessity to analyse locally anchored dynamics and social practices more carefully. In this vein, the paper, explorative in character, has further attempted to amalgamate the strengths of structural perceptions (production networks and chain approaches) in order to explain and delineate the IFC as the subject of empirical investigation with a distinct relational perspective (embeddedness concepts, social capital and the empirical instrument of SNA) and territorially rooted social processes, which are assumed to be of inherent importance in the organisation of the global financial system.

Looking at the value network of the investment funds' industry, two key sources fundamentally matter for Luxembourg's specialisation on the investment funds' administration and distribution: place and relations. Thus, whilst the complementary application of the value network frameworks offers a valuable heuristic and as such a useful delineation for the application of SNA, SNA itself promises to be a meticulous tool to empirically investigate respective social complexities and qualities of social relations in an IFC. Further, social capital has been discussed as a specific form and resource of organised economic activity that holds potential for multilayered social network structures to get things better done than without. However, it remains subject to further empirical investigation to evaluate to what extent social capital may indeed be a fruitful research path to follow and of what nature social capital can be in IFCs.

Yet, it is not only a challenge to empirically examine a global value network of the fund industry. Such kind of research would be even more rewarding and insightful in comparative studies of similarly specialised IFCs to observe important differences and to also draw sound conceptual and policy conclusions. Anecdotal evidence from informal talks with representatives holding different functions and positions in the IFC Luxembourg gives rise to the assumption that an empirical analysis would open the window for a more careful capturing of the social complexities in financial centres. This may be an important complementary step to unfolding the geography of finance besides the prevalent and mainly quantifying economic manifestations.

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CEPS
INSTEAD

3, avenue de la Fonte
L-4364 Esch-sur-Alzette
Tél.: +352 58.58.55-801
www.ceps.lu