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Self-Funded Social Impact Investment:

An Interdisciplinary Analysis of the Sardex Mutual Credit System

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Abstract

Sardex is a B2B electronic complementary currency and mutual credit system. It allows private funding to be endogenously generated within a geographically limited socio-economic context, rather than injected from exogenous sources, leading to a greater level of positive social impact. Sardex promotes stable and constructive integration of market activity with democratic institutions and socio-cultural values, and is hence identified with sustainable development. By drawing on different strands of monetary theory, sociology and anthropology, the paper argues that Sardex implements a form of self-funded social impact investment. This paper presents a case study based on 29 semi-structured in-depth interviews of Sardex actors over four years.

Keywords: mutual credit; social finance; sustainable development; anthropology; monetary theory; sociology

1. Introduction

> Social Impact Investments are those that intentionally target social objectives along with financial return and measure the achievement of both. (SIITF, 2014, pg. 1)

Social Impact Investment (*SSI*) is usually discussed in the context of a group of *investors* acting as third parties that set financial and social targets for a group of *investees,* who are expected to implement sustainable social and financial targets in a *community*. However, this view represents only one special case of a more general framework in which SII can occur. Consider mutual credit: here, both investors and investees can be identified with the same set of people, with financial targets not stipulated by a third party but by the participants themselves. However, to understand mutual credit as part of SII, it becomes important to elucidate how *social* targets can be understood in the context of mutual credit. This paper begins to develop an interdisciplinary theoretical framework to achieve this.

The focus of this paper is on *Sardex,* a mutual credit system founded in 2009 to counteract the negative effects of the global financial crisis on the island of Sardinia. Sardex enables SMEs to provide each other credit when it is unavailable in the formal banking sector. In 2015 Sardex had ~3000 members, was recognised by the UNDP[1], and mediated a trade volume of 51m Euro (Littera 2015), corresponding to almost 0.2% of the Sardinian GDP in 2013[2]. Sardex challenges prevailing notions both about the nature of money and the financial autonomy that a relatively poor region can aspire to, because participants *create their own money* (Sardex is also a complementary currency).

To understand how Sardex fits within the SII paradigm, consider a scenario where a financial services company carries out a social impact investment initiative. In the usual setting, it is expected that a third party (e.g. a government) would specify the return on investment conditions for the company, as well as the financial health metrics to be applied to the relevant community. In Sardex, the first function – the establishment of a sustainable corporate entity – is taken up by *Sardex S.p.A.*, a private company that operates the system. However, the second function – the measurement of social impact and its associated consequences – is taken up by the credit circuit members. Each member will be able to measure the benefit that they extract from Sardex, and will only continue contributing if this benefit is sufficiently high. Hence, continued investment in the system by its participants is conditioned on the system delivering a sufficiently high value to both Sardex S.p.A. and its associated community. From this point of view, Sardex can be unequivocally understood as an SII.

To better comprehend money creation in Sardex, and its implications, this paper presents a discussion of the ontology of money that extends beyond the neoclassical assumption of money as a precious commodity that serves as a medium of exchange to obviate barter. The paper shows that mutual credit can be integrated in a more inclusive framework that encompasses all forms of money creation. Mutual credit appears to be central to a form of SII identified with sustainable development, by which is meant a stable and

[1] https://www.sardex.net/grande-successo-di-sardex-al-meeting-di-istanbul-del-dipartimento-sviluppo-delle-nazioni-unite/

[2] http://www.sardegnastatistiche.it/

constructive integration of market activity with democratic institutions. Such integration, in turn, relies on socio-cultural aspects of society that cannot be understood from an economic or monetary theory perspective alone.

This paper proposes a holistic understanding of mutual credit in general and of the Sardex system in particular, as a form of self-funded SII. Rather than developing yet another cause-effect argument for social impact, the focus is on the analysis of how impact is achieved when a multiplicity of small-scale feedback loops bring together the economic decisions and cultural narratives of a community. Sociological monetary theory provides the link between socio-cultural narratives and the economic account presented.

The paper is based on a four-year study of the Sardex system, including several in-person visits and participation in Sardex public discussion panels.[3] The authors interviewed the five founders of Sardex (see for example Littera et al. 2017), and conducted 29 semi-structured interviews with circuit members across the island of Sardinia, from the Summer of 2015 to the Winter of 2016. One third of the interviews took place in Cagliari; one half in smaller towns such as Serramanna, Assemini, Carbonia, Terralba and Oristano; and the rest in the larger town of Sassari (Dini et al. 2014-16). Sardex members were selected from a wide range of business types: professionals (lawyers, notaries, private training instructors, translators); food and hospitality sector owners (supermarkets, restaurants, bars, catering); artisans and small manufacturers (blacksmiths, decorators, neon sign producers); retailers (clothes, sports, electronic appliances, plumbing materials, tyres, crockery and household items); and other service providers (printing, postal). The interviews were transcribed to study the patterns of similarities and differences between people's practices and understandings of Sardex. In particular, accounts of how they use the system were analysed. The empirical material has led to other publications complementary to this paper (Littera et al. 2017; Sartori and Dini 2016).

The endogenous creation of money within a circuit or community discussed here can only be understood as a combination of economic, sociological, political, cultural, and technological factors. Section 2 summarises the main notions from monetary theory that are needed to make sense of the Sardex system, and presents an outline of the Sardex

[3] http://www.sorgentidicambiamento.eu/

system itself. Section 3 discusses how Sardex fits in the social entrepreneurship literature. Section 4 presents a sociological perspective on Sardex as a Zelizer circuit and as an institution. Section 5 relies on an anthropological perspective to discuss Sardex's epistemological and emotional advantage as a culture. Section 6 discusses briefly how Sardex is a sustainable, self-funded SII that can only be understood from an interdisciplinary perspective and, finally, presents some conclusions.

2. A Monetary Theory Perspective on Mutual Credit

The crucial element for a market-based mutual credit instrument to lead to positive social impact is for the rate of interest to be zero on all debt and credit balances; this focuses economic activity on goods and services with immediate socio-economic impact, rather than financial instruments operating on a longer-term horizon and under greater risk. This is because, somewhat reductively, a capitalist market is one in which the medium of exchange is itself a commodity, whose price is the rate of interest (Amato and Fantacci 2012). This paper claims that a non-capitalist market (thus defined) with a zero-interest currency is part of the solution to the sustainable development problem, as it has beneficial properties reminiscent of Adam Smith's circular flow or Schumpeter's circulating debt, where there is no hoarding and the market functions at its most efficient.

Unfortunately, setting the interest rate to zero undermines investment-dependent entrepreneurship. The challenge is then to retain some aspects of capitalist growth while keeping its more detrimental effects in check. The empirical evidence and theories invoked in this paper point to a solution in terms of a monetary system designed to support a multi-scale, poly-centric economy (Ostrom 2005). This resonates with Douthwaites's monetary ecology (Douthwaite 1999), in which local or regional economies should be established on a different footing to the national economy.

Rather than a linear cause-effect chain from funding to social impact, other narratives of socio-economic innovation are possible and, in fact, preferable. This is consistent with Daggers and Nicholls's (2016) observation that proposed academic models are not providing a coherent body of theory that does justice to the new ways practitioners are experimenting with private funding for social impact.

Methodenstreit Legacies

Many analyses of SII are based on an implicit separation between the social and/or environmental sphere, where the impact is sought, and the private (or public) capital that is supposed to enable such impact. For instance, Daggers and Nicholls (2016) define *impact investing* and *social investment* as follows:

> Impact investing concerns the use of capital to create specified social or environmental impact, whether it is through direct allocation capital, investment in funds, or contractual agreements such as SIBs [social impact bonds]. The focus is therefore mainly on *investor behaviour and motivations*. Social Investment concerns providing *access to repayable capital* for social sector organisations (SSOs), where the providers of capital are motivated to create social or environmental impact. As a result, there is more of a focus on the *investee.* (Ibid.: 6, original emphasis)

To carry the points made in this paper, it is necessary to consider what happens beyond the implicit separation above. In Sardex, investors become investees and vice-versa, and investments are made not only with economic capital, but with cultural and social capital as well. Hence, it becomes necessary to subsume and extend both impact investing and social investment, so that they become complementary sides of the same phenomenon. Definitionally, SII allows this as it includes both social and impact investment. This paper's contribution is to provide a framework to understand social impact in Sardex, starting with the economic, anthropological and sociological aspects of money and value.

Within the field of economic anthropology, the economy is divided into four domains of value: market, capital, social relationships, and the base or commons (Gudeman 2001). In this view, *economy* and *market* are not synonymous, and the social and the economic spheres are not seen as incommensurate: social relationships, as a domain of value, are a part of economy – but not of the market. In other words, they are not outside the economy, even if commodification (e.g. through social network analytics) is ruled out.

A second way in which the social and the economic spheres can be joined is, surprisingly, through monetary theory, because 'money is a *social* relation of credit and debt denominated in a unit of account' (Ingham 2004: 12, added emphasis) and formalised through the double-entry book-keeping method. However, money has a life-cycle: it is created, spent one or more times, and destroyed (e.g., through tax payments or bank loan repayments). Because money is *transferable* or *assignable* debt (Ingham 2004: 12), the manner in which it was created is soon forgotten, and the perception that it is a precious commodity predominates. Therefore, different points in money's life-cycle are best understood through different types of monetary theory. In addition to the sociological/institutional theory, the state theory also explains money creation: money is that which the state accepts as tax payment (Knapp 1973[1924]). The neoclassical commodity theory adequately explains money expenditure, and the sociological theory can best explain money destruction, as discussed below.

Wray makes very similar points, using economics language, when he defines *endogenous money*. In contrast to the still prevailing definition of money as a medium of exchange created to eliminate the need for double coincidence of wants in barter, 'the endogenous money approach … concentrates on the *source* of money: how is money created, and how does it enter a capitalist economy?' (Wray 1990: 2, original emphasis). In this view, the creation of endogenous money is 'tied to the essential features of capitalism: private ownership, production for the market, and capital accumulation' (Ibid.). Endogenous money is created principally through the extension of bank loans secured on the basis of personal and community resources (*collateral*). This paper argues that mutual credit is another form of endogenous money creation, which extends Wray's concepts not only towards smaller geographically delimited economies, but also beyond capitalism to more inclusive economies reminiscent of Gudeman's insights. This can be seen as follows.

According to sociological monetary theory all money is debt, even though not all debt is money (Ingham 2004). Thus, debt is the more general concept. In fact, a loan can consist of money that already exists (usual definition), or of money that is created at the time the loan is made, which is how banks create money (Wray 1990; Douthwaite 1999; Ingham 2004; Werner 2014). For any debt, the collateral guarantees to the lender that, if the debt is not repaid, the value of what was lent is not lost. The concept of collateral applies both when the money already exists – and is simply moved from someone's account to another's – as well as when it is created as an integral part of extending the loan. In the second case the collateral is called *backing*.

Thus, money can be created in several different ways, which can be told apart by the kind of backing used in each. For example, when the state pays its suppliers, the future tax receipts provide the backing, and the negative entry in the ledger shows up as an increment in public debt. When banks issue mortgages, the backing is the market value of the house the mortgage buys and the negative entry is the amount of the debt that needs to be repaid, plus interest.[4] Finally, in mutual credit systems like Sardex, money is created when a company "goes into the red" with respect to the circuit by a certain number of credits. The backing is the products and services which that company will produce over the next 12 months – in other words, the *labour* required to create the products and provide the services. Finally, money destruction is explained by sociological theory because it takes place when the debt that originated it is repaid.

From the point of view of the general lack of understanding and agreement about the nature of money that has dogged discussions for centuries, the crucial point is that the sociological theory of money is not "needed" in the intermediate, and longest, phase of money's life-cycle. Therefore, in this phase the separation of the sociological from the economic perspective, known in the literature as the *Methodenstreit* (Ingham 2004: 9), does not seem like a big loss of explanatory power. This "divorce", however, leaves the creation and destruction of money unexplained. Since this is the most important part in understanding where the self-sufficiency of mutual credit systems comes from, this paper emphasises the sociological theory. Through a combination of historical analysis, theoretical insight, and practitioner ingenuity, Sardex has been able to incorporate all of these concepts in a local complementary monetary system.

The Sardex Mutual Credit System

The Sardex mutual credit system operates alongside the Euro as a *complementary* currency, and provides a zero-interest credit buffer for participating SMEs. Sardex is also the name of the Sardex credits as a unit of account (1 Sardex = 1 Euro), the company that provides the credit-clearing service (Sardex S.p.A.), the economic community or circuit (Zelizer 2005; Sartori and Dini 2016), and the online environment (http://sardex.net/blog). Its complementary nature suggests that it can support profit-oriented market activity while, at the same time, providing resilience to the system in times of capitalist crises through its ability to protect the weaker members of the local economy.

Similarly to the Swiss WIR system (Studer 1998) after which it is inspired, Sardex relies

[4] However, banks record this negative entry as a positive one, because it is treated as an *asset* since it is supposed to come back to them in the form of repayment of the debt.

on trust between members, which is an extension of the trust that each member has in Sardex S.p.A. (Sartori and Dini 2016). Before members develop sufficient familiarity with the system to trade on their own, Sardex brokers guide and help them, acting as match-makers between supply and demand within the circuit. Brokers are perceived as reliable and efficient problem-solvers, and the fact that Sardex does not charge a commission on successful matches builds further trust in them (Littera 2015; Greco 2015).[5]

Sardex can only be *spent* and *earned* through economic participation in the network. It is a digital (electronic) currency which does not have a physical embodiment in paper notes. The emphasis in the previous sentence refers to the peculiar manner in which these operations are carried out in mutual credit systems, since Sardex credits can be created (if the buyer has a zero or negative balance) or destroyed (if the seller has a negative balance) *at the time of the transaction*. In all other cases Sardex credits move between accounts like regular money. As with WIR, in Sardex transactions involve a positive entry in the centralised electronic ledger (in the seller's account) that balances the equal and opposite negative entry (in the buyer's account) according to double-entry book-keeping. The absence of interest motivates the holders of positive balances to spend them, stimulating the local economy. The absence of interest on negative balances, on the other hand, means that there is no penalty during negative cash flow fluctuations, i.e. when the buying party is in need of credit, which is particularly relevant since the core of the membership is constituted by SMEs. The maximum credit line a given company is granted depends on vetted indicators such as that company's history, turnover, etc.

The absence of interest gives rise to the perception that mutual credit systems are a form of barter; in fact, WIR and Sardex are sometimes characterised as multilateral barter systems.[6] However, based on the textbook definition of money as performing the functions of unit of account, medium of exchange, store of value, and means of payment (Ingham 2004: 6), Sardex is able to perform all four and is therefore a type of money. Although its perception as a store of value is weaker than that of "regular" money due to

[5] However, everyone from the CEO to the newest employee interacts with circuit members and builds trust.

[6] WIR charges interest on large loans but not on small transactions. All transactions are charged a 1% fee, in Swiss Francs, which provides sustainability to WIR Bank and adds to their capital reserves (Studer 1998). Sardex moved away from transaction fees; to achieve sustainability they charge a yearly membership fee that varies from 200 Euro for social/non-profit enterprises to 2000 Euro for large companies.

the absence of interest, and its means of tax payment function is weaker than that of the Euro, its ability to store and transfer abstract value as pure purchasing power across time (Ingham 2004: 4) is the same.

According to the companies interviewed (Dini et al. 2014-16) Sardex does not incur some of the more acute problems characterising capitalist markets in conditions of scarcity, e.g. it exhibits no liquidity crisis and no incentive to hoard. The latter effect results in the well-known claim that (zero-interest) community currencies stimulate the local economy by import substitution. Whereas generally this effect militates against competition, for weaker economies with a negative trade balance it is very positive in terms of subjective perceptions and self-empowerment:

> Because of the crisis the turnover has been small. But most of our 2013 business was invoiced in Sardex. I repeat that without Sardex we would have lost everything. (Bruno, blacksmith)

In the same vein, another aspect of Sardex that has both economic and social relevance is their Business to Employee (B2E) programme, whereby participating members can offer their employees to pay their salaries partly in Sardex.[7] Based on the available empirical evidence, during the current crisis this has enabled many companies to retain employees they would have had to fire otherwise.

Ingham asserts that, according to the *state theory of money* (Knapp 1973), money derives its legitimacy from the authority of the state. From this perspective, money is that which the state exacts as tax (Ingham 2004: 47). On that basis, Ingham argues that community currencies are not *real* money, since they tend to emerge when the state-sponsored money is not able to perform the functions that the community in question needs. In Sardex, transactions below 1000 Euros in value must be paid in credits, whereas above 1000 Euros they can involve some credits and some Euros. However, for any transaction VAT is paid on the *whole* transaction amount, and it is paid in Euros. Therefore, Sardex fulfils the means of payment function more weakly than the national currency. Since Sardex transactions are centrally-mediated, however, 100% tax transparency and compliance is guaranteed by the membership contract.

[7] Individuals (natural persons) cannot accrue a negative balance, they can only spend a positive amount of Sardex credit.

Sardex elicits state approval because, like WIR (Studer 1998), it contributes to the state's fiscal revenues and to positive GDP accounting, owing to transactions that would not have taken place without it. This strengthens its legitimacy as currency, as tax compliance helps rebuild trust between the state and the citizens. This is an example of a positive or constructive social impact of the mutual credit approach.

3. Sardex and Social Entrepreneurship

Sardex can be understood as a type of *self-funded* social impact investment, which extends the traditional definition of SII (Nicholls et al. 2015) in two ways. First, there is no a-priori requirement to have an external investor that expects some sort of social impact. Second, the main benefit of Sardex – the increased economic activity generated – is not under the direct control of Sardex S.p.A.; rather, it is an emergent property of the market that arises when Sardex facilitates the meeting of unrealised supply and demand. To a certain extent, traditional notions of SII finance are akin to *planned economies*, in the sense that there is a clear effort to explicitly maximise a specific notion of economic utility, and this effort is often orchestrated by a single economic actor (the investee; acting on behalf of a central government in this example).

Sardex is able to reconcile traditionally opposite understandings of the nature of markets. Sardex creates a "free" market where, to a significant extent, the members are profit-maximising rational agents in how they decide specific economic actions to be taken: which products and services to produce and when, and to be consumed by whom. However, it also shares some elements of planned economies, as Sardex S.p.A. uses its privileged central position in the circuit to help supply and demand meet each other through a sophisticated and commission-free brokerage service. In addition, when first arriving in a given village or locality, Sardex S.p.A. tries to sign up firms from complementary sectors, therefore minimising competition between circuit members and maximising the number of new clients each will accrue. Although the resulting local exclusivity eventually wears off as new entrants join the circuit, it is an effective marketing strategy in the early stages of adoption in a given community. Finally, participation in Sardex requires a contractual agreement to follow certain rules of behaviour, for example avoiding persistent large positive or negative balances.

It is important to understand how Sardex can be positioned in the current panorama of social entrepreneurship and where it diverges from previous proposals. The subdiscipline of social entrepreneurship that most closely aligns with Sardex is *collective social entrepreneurship*, which combines business risk and capital investment with the social values of collective action, in order to achieve economic growth and poverty reduction (Edobor and Ogunleye 2015). The parallel arises because in both cases there is a number of organisations, coordinated under some form of governance, achieving concerted collective action towards a common good. Sardex uses a mixture of market, brokering, and institutional norms for this coordination, whereas other examples in this category use other forms of governance based on rules or social norms – formal political coalitions, producer or agricultural cooperatives, formal industrial alliances, associations of cultural organisations or government agencies, federations of trade unions, etc. (Barnett et. al 2000).

One central focus of the literature in collective social entrepreneurship is on the ability to trigger and maintain movements for social change based on direct entrepreneurial action. Works analysing this have underscored that it is usually difficult to attain sustainable social change only by the involvement of single economic actors (Sud et al. 2008). Instead, interventions at various points in the economy are required; usually, groups of economic actors are crucial to drive this concerted action (Pies et al. 2010). By providing and guiding a complementary market, Sardex achieves collective action without the need for explicit political coordination. Each participating business expresses their preferences directly, in terms of the Sardex members that they support with their transactions. Since participants span a wide cross-section of economic activity, coordination can happen between multiple economic sectors and resource volumes, generally spanning from a few Sardex credits (e.g. for coffee and pastry) to tens of thousands Sardex credits per transaction (e.g. for a restaurant extension). By providing and guiding a complementary market, Sardex achieves collective action without the need for explicit political coordination, because it helps solve collective problems of trust (as further detailed in Section 4).

Another point that has been widely studied in the collective social entrepreneurship literature concerns the intentions behind the collective coordination at hand. Some authors have focused on management schemes to create social value (Austin et al. 2006); others have focused on alleviating social problems and catalysing social transformation (Alvord et al. 2004). The Sardex system aligns the incentive for monetary gain of Sardex

S.p.A.[8] with the attainment of economic development goals in the region, because the company benefits only if both are achieved. Therefore, the Sardex circuit goes beyond the conventional Schumpeterian sense of personal for-profit gain, which in turn as by-product generates the enhancement of social wealth through the creation of new industries and technologies. Since the health of Sardex S.p.A. depends on the health of the Sardex market, the private incentives of the company and those of the economic region are naturally aligned. Although the for-profit motive might be an engine, it does not preclude its alignment with other motivations (Edobor and Ogunleye 2015). Similarly to a co-operative, Sardex provides the opportunity to participating businesses to self-manage resources and to share the organisation's success or failure (Jonsson 1995). Participants understand that continued access to the free credit and reduced transaction costs that Sardex provides is predicated on them offering these benefits to other participating businesses (by accepting their credits); the network externalities of the system provide a feedback loop that aligns the incentives of every participating business to those of the Sardex effort as a whole.

In Sardex the pooling of resources happens not by physically putting money in a single bank account which is then reallocated to other participants, as in other mutual credit systems. Instead, the pooling of resources happens as the members collectively make available their spare capacity to the circuit, meaning that they agree to accept up to the value of their spare capacity of goods and services in credits. In this context, spare capacity means *the goods and services they would not have sold*, which is the main reason why participation in the circuit has beneficial economic implications for the members. For the purpose of this discussion this capacity amounts to approximately 10% of turnover, on average. This mechanism can be regarded as a shared resource because, when joining the circuit, there is a perception of risk in accepting credits that requires a significant investment of trust. As this trust increases, chains of Sardex transactions weave into the economy and allow the surplus of one business to become the debt position of another. Since there is no central body that allocates this shared resource directly, participants do not need to enter a shared debt with an external investor. This drastically reduces the cognitive and emotional weight of participation in the circuit, as personal, familial, and social responsibilities are not conflated with debt, as happens with other

[8] Which is however reinvested in the company.

alternatives discussed in the social entrepreneurship literature (e.g. Schuster 2015).

4. Sardex as a Zelizer Circuit and a Public Institution

A sociological lens helps understand Sardex because it highlights important concepts such as trust, circuits, values, markets and institutions (Sartori and Dini 2016). It has been shown that in many cases leadership and institutional frameworks are crucial for the success of social entrepreneurial initiatives (Zhang and Swanson 2014). This section shows that, by providing these, Sardex S.p.A. provides stability and becomes sustainable in the process.

Sardinia, the context where Sardex was created, has a reputation for solitary and individualistic attitudes (Lodde 1998) and, at the same time, for very close-knit family networks (Pinna 1971). Thus, envy and closed communities have governed economic activities in a traditional and static manner, condemning the region to poor economic performance, characterised by agriculture, local markets, state-led industrial initiatives and a negative trade balance which, in turn, limited innovation and entrepreneurship (Bottazzi 1999). Sardinia has also been linked to a low level of civicness and negative social capital (Barbagli and Santoro 2004). There are two theoretical constructs that help understand the way that Sardex intersects both the economic and social spheres of its members: *social capital* and its relationship to trust, and *the Zelizer circuit*.

Whether it is referred to as generalised trust conducive to a fluid social and economic environment (Coleman 2000; Putnam 2000), or it is meant as a network of productive and resourceful relations (Granovetter 1985; Trigilia 2001), social capital is a key component within a network of exchange for establishing a fluid trading environment among SMEs. Sardex works as an integrated network of economic and social ties with a distinctive balance of self-interested and cooperative actions. Cultural and social embeddedness of economic action fuels a self-reinforcing mechanism (the more the network is used, the more useful it becomes) establishing a favourable context for market exchange and community building. Relational contacts (both strong and weak ties) mediate and support innovation actions such as joining an unknown network of exchange (as members) to look for new business.

> Sardex gives us the opportunity to get more business. The customers that Sardex brought me were people that I didn't know, so it has allowed me to find new

potential customers in a period of crisis like this. (Vinicio, decorator)

Sardex provides information to its participants, which allows them to easily find out who the potential transacting partners in the system are. This information quickly diffuses through the system, both using the company's institutional means (the Sardex newsletter, the Sardex social media accounts, events, and other various communication or education-related activities) and the network – which is intrinsically social, not only economic – created by members purchasing goods and services from one another. This works directly to counteract the informational exclusion that usually accompanies firms' limited social capital, making the market more fluid and efficient.

An example already mentioned is based on the fact that lack of interest on positive balances stimulates spending. Members soon realise that spending is positive for the overall network, since it builds on the stock of social capital and trust that reinforces the community. A healthy network allows for easier access to credit (especially in times of reduced liquidity):

> One advantage of the network is that it allows financing investments without having to pay interest. If I have to invest in some improvements on the house, for example on the heating system, through Sardex I can ask for a Sardex credit line to do that kind of work because there are some craftsmen that are part of the network. So I can get the job done without paying interest (Vinicio, decorator).

It also allows for some familiar marketing strategies, such as sponsorships:

> I am the president of the local football team and our sports club has also joined the network. We got Sardex credits through sponsors, because it is easier to convince a sponsor to pay in credits than to give you Euros. Both types of sponsors have helped us for the championship. For example, the medical examinations of the team and the equipment were paid in Sardex because in the network there are doctors and also companies that sell this type of equipment. For a regional championship like ours this was a big deal. (Vinicio, decorator).

The second fundamental construct that helps understand the socio-economic linkages of Sardex is that of the *Zelizer circuit* (Zelizer 2005). If Sardex is conceptualised as a network of exchange that represents a new market with its proper governance structures, specific rules and working mechanisms (Sartori and Dini 2016), it is clear that Sardex cannot be interpreted by the classic concepts of market, hierarchy, or network. Instead, a sociological lens is needed to understand how it operates, both as an economic and a social organisation framework.

According to Zelizer's (2005) multi-dimensional definition, a circuit 1) has well-defined boundaries separating members from non-members; 2) exerts control over exchanges across boundaries; 3) includes transfers that might involve the use of a specific medium; 4) builds connections between participants that are based upon shared meanings; 5) permits the transfer of well-defined goods through personal interconnections and 6) fosters mutual awareness of the participants. Sartori and Dini (2016) find evidence that Sardex supports five out of the six conditions. Only the fifth condition is not met, but it is understandable given the specific role of Sardex S.p.A. as the host for the double-entry book-keeping database and the centre around which the media and engagement efforts of the system are built. Hence, a Zelizer circuit provides a model for how Sardex stabilises trust, strengthens reciprocity and reduces credit risk. By explaining the positive reinforcement loops inherent to Sardex, circuits can help understand the conditions under which mutual credit systems become sustainable and, hence, effective vehicles for social impact investment.

Having Sardex as a mediator within the circuit guarantees the 'presence of an institutional structure that reinforces credit, trust and reciprocity within its perimeter, but organises exclusion and inequality in relation to outsiders' (Zelizer 2005: 5). This is a crucial role for successful circuits because they tend to 'emerge in those intersections between capitalist markets and pressing problems' (ibid., 24) and with their institutional structure they help solve 'significant collective problems of trust' typically faced by circuits (Zelizer 2010: 307). In fact, even though as mentioned in Section 3 members are free to transact with any other members, Sardex plays a role similar to the state, as provider of a robust social structure that supports a stable socially embedded world (the network of exchange) where economic actors can engage with each other, trust each other, and trade.

> You meet people who are part of the network and we exchange opinions; you learn from them, and they learn from you. There is an exchange not just regarding the purchase but also about the ideas, ways of conducting business, advice. You can establish a relationship that is different from the one that you can have with a customer because the usual customer buys, chats, and that's it. Instead with Sardex when you enter this big network, I'm not saying that it's as if you entered a big family, but you do have a different relationship. (Alessandra, retail)

An additional point is that Sardex, recognised as a local institution, allows for tax transparency and acts as an enforcer of legality in a context where medium to high levels of informal ('black') economy are associated with low quotas of trust. Sardex makes transactions clear, simple and traceable, becoming itself also a guarantee of payment, providing a positive atmosphere for trading.

> I haven't evaded tax because you've paid 10 and I've written 10, so nothing is done under the table. Indeed, it is also a way to prevent evasion. You cannot evade! (Gemma, hairdresser)

> We are sure to be paid. If you don't work in Sardex it often happens that you don't get paid. So it's quite a guarantee. (Bruno, blacksmith)

The case of Sardex makes it evident that if a complementary currency grows out of necessity (in the aforementioned intersections between market and pressing problems), it may eventually acquire formal approval by the state, with positive implications both for Sardex S.p.A. and for the community as a whole. The former resembles the state as legitimate mediator because Sardex, as a mutual credit system, is recognised as the bearer of a legitimate *public interest* towards the community and a stakeholder in market-state relations – demonstrating the alignment between individual and collective goals of the previous section. Not only the state benefit from transparency over all transactions; better transparency also improves social cohesion between members and allows for stronger trust towards Sardex and within the community.

5. Sardex's Epistemological and Emotional Advantage as a Culture

Anthropological perspectives on money have considered how money gives rise to a particular way of thinking, feeling, and *being* in the world (Maurer 2005; Graeber 2014). One focus has been its enormous cultural variation: there is a plethora of ways in which money is symbolically represented and linked to moral evaluation, affecting the cognitive worlds people inhabit and influencing their behaviour (Parry and Bloch 1989).

For anthropologists, money is *good to think with* – a useful epistemological tool to understand the configuration of social organisation. Anthropologists classify money into two broad categories: *general-purpose* money (such as the Euro), which can be exchanged for almost anything else; and *special-purpose* money (such as tokens), which can only be exchanged for specific things and in specific situations. In Western academic literature, general-purpose money has been discussed as a modernising force that depersonalises social relations of exchange, promotes individualism and capitalism, and erodes traditional social solidarities for a more diffuse mode of integration. In this view, general-purpose money becomes a signifier of a modern society. In contrast, special-purpose money has been discussed as having a more benign influence in social life, since often it is linked to the wider moral order. An example of this is the payment of certain goods as a dowry, which then enables marriage arrangements. These, in turn, change social structures by uniting or dividing families. Special-purpose monies often symbolise traditional values and local ideologies, which might contest or align with wider neoliberal, modern or capitalist ideologies to different degrees.

General-purpose money can be turned into special-purpose money, re-classified and re-personalised to create other types of money more in tune with local values. In reference to Zelizer (1994), this occurs when people *earmark*: they can hold separate bank accounts for household, personal and business expenses, or use a wide range of credit cards to pay for specific kinds of goods. Even if all of these are denominated in general-purpose money (e.g. Euros), the fact that they are used for specific purposes changes their cultural appropriation. Likewise, special-purpose money can become a more generalised means of exchange if governments, banks and/or widespread institutions recognise this money as a suitable medium for exchange and account, growing into a national complementary currency (e.g. WIR).

This section argues that Sardex is currently used as special-purpose money. It can be used to buy small or medium-sized goods or services, such as food, clothing, haircuts, car repairs, or electricians; or white-collar services such as accounting, legal, or notary. However, for the most part it cannot be used to buy homes or property, pay taxes, set up pension savings or leave a substantial inheritance.[9] Most of the members interviewed used Sardex for personal and household purchases, so that it became the *family* or *indulgence* money. For instance, they said:

> The increased turnover enabled me to treat myself ... The electric bicycle is one of the items I have bought recently; I love cycling but my office is on top of a hill and every time I use it, I thank Sardex! (Bruno, lawyer)
>
> Subconsciously, people do not feel guilty for spending Sardex… Let's say I go shopping for… clothes with my wife. If the bill were 420€, I would be a bit concerned, but if I had to spend 420 Sardex, I would find it somehow affordable (Francesco, business advisor).

The informants report that their use of Sardex is emotionally rewarding. For them,

[9] However, Sardex credits can be inherited and spent for up to 12 months.

spending Sardex feels different from spending Euros; they feel less guilty and more thankful. In this sense, Sardex is less like a commodity and more like a gift, since it provides value that they would not have had otherwise (were it not for Sardex and its members). This is accentuated by a realisation that Sardex transactions are fundamentally symbolic, because goods and services are exchanged for nothing more than a symbolic representation of value.

Although Sardex lacks the *absolute* liquidity of the Euro, it is liquid enough that it can be used in most short and medium-term expenses; longer-term investments are rare. The reasons for this are twofold. First, if money is to be stored, a currency that provides interest is more attractive – this is often why longer-term savings in Euros cease to be liquid (e.g. fixed-term investments). Further, using Sardex as a long-term investment can be riskier than using similar instruments backed by Euros. This stems in part from the legal framework regulating the banking industry, but also from the sheer number of investors that already participate in the market, which makes diversification simpler. Additionally, some members experience feelings of inadequacy when contemplating long-term investments:

> One of my clients… collected a huge amount of Sardex credits and bought a house. He confessed he was scared of losing them and invested in something more reliable … (Giandomenico, Lawyer)

Anthropologists have addressed these preoccupations between long-term and short-term investments and their moral adequacy, and have reached the conclusion that most cultures have 'two related but separate transactional orders: on the one hand transactions concerned with the reproduction of the long-term social or cosmic (moral) order; on the other, short-term transactions concerned with the arena of individual competition' (Bloch and Parry 1989: 24). In this framework, the Euro usually represents the short-term transactions arena of individualistic calculative competition, whilst its investment in homes or property would be long-term transactions, where the Euro is *re-socialised* and translated into less liquid assets for the sake of the reproduction of the social and moral order (e.g. inheritances). Sardex, similarly to the Euro, enables short-term transactions. However, when using Sardex these feel more personal, less calculative or individualistic to the participants. In the words of an informant,

> I feel much better if I buy… in Sardex rather than in Euros… [At first,] it was a bit

> unusual to sell something and apparently receive nothing… A friend of mine is a butcher and I've been one of his regular customers for ages; now I pay him in Sardex and he does the same with me; it's mutual support. In practical terms, this is not a benefit for either of our businesses... (Alessio, bike shop owner)

As can be seen above, Sardex provides an epistemological framework that allows members to ask ontological questions about money. These questions transcend the strictly financial aspects of money, venturing into wider notions of identity, morality and community as part of a transactional order:

> It is in my interest to help improve the Sardex system because I am part of it… I've got to admit they unfortunately have a 'Sardinian' approach. I don't say they should manage the project with an American attitude, but at least a Lombardic one, and I'm sure it would grow more… Like I said, the biggest problem is that they are rather insular in their approach…You have to use Sardex when you have time.... My granddad used to drive 20 km to get petrol at a friend's station, and then he would go to that specific local confectioner's, which was 15 km away, to get homemade pastries. Fifty-years ago it was like that; when you had time you did things at a slower pace. Sardex reminds me of that; I think it's taking us a bit backwards… Yes, it is an interesting thing because they have basically modernised the old barter system… I had subscribed because there were no risks involved… But I don't understand a few things that they were not able to explain… (Giandomenico, lawyer)

By ascribing culturally loaded terms to Sardex, informants create an explicit link between the credit network and the cultural values and stereotypes of the region. This epistemology is imperfect – whilst Giandomenico can place Sardex in a hypothetical continuum of economic systems, he is unable to fully grasp its full complexity. Nevertheless, in anthropomorphising Sardex, he is implicitly carrying out a sociological critique of its properties, while at the same time reproducing his symbolic representation of Sardinia, America or Lombardy.

According to Nicholls (2006), social entrepreneurship intervenes when economic forces settle on a socially undesirable equilibrium (e.g. unfair or counterproductive resource allocations arising from externalities). By providing a more personal, less calculative class of money, Sardex paves the way for beneficial economic transactions to happen beyond those provided by economic self-interest. In this sense, Sardex provides the benefits of a social enterprise without necessarily being managed as one. Further, as explained by Desa (2012), in order to be successful, social enterprises must flexibly adapt to the unique socio-political features of the communities in which they operate. Since this of course includes values and cultural stereotypes, by creating and stabilising a market Sardex is well placed to address this challenge (Sartori and Dini 2016).

The vast majority of the informants joined Sardex to increase their business transactions; hence, engagement starts with as a purely rational, economic decision. However, soon afterwards cultural, epistemological and emotional considerations emerge.

> I needed a brush cutter; if I had bought it on the net it would have cost me 220€, but I spent 350 Sardex instead. I pointed out to the vendor it was cheaper on the website, but I bought it anyway. I decided to participate in the Sardex program to have personal relationships and I willingly paid 130 Sardex more, because I know that if the vendor ever needed legal advice, he would come to me. (Giandomenico, lawyer)

When circuit members use Sardex they make emotional, epistemological, symbolic, social and economic investments, all at once. These represent various types of capital (Bourdieu, 1986), and Sardex enables the multiplication and transformation of some kinds of capital into others. By understanding Sardex, members reflect upon notions of modernity, tradition, and how money should fit into their cultural and social practices. Rather than being a mere accounting tool, Sardex becomes a conceptual model that guides participants as they ask economic questions and answer them based on personal experience; these answers become embedded in their symbolic life. This is why often the informants talk about Sardex as a philosophy, a home bank and a way of life that appears closer to people's individual or collective interests, against the backdrop of the Euro and formal banking institutions. Sardex helps its members explore the fundamental economic tensions between the banks, the state, money, labour, and the ways in which they shape their identity and day-to-day actions in more qualitative terms than the Euro does:

> I don't notice… distinctions between the Sardex credits and the Euros; I see a radical difference, though, between the Sardex scheme and the conventional banking system, because banks don't care about increasing your volume of business, whereas Sardex does… I am sure Sardex as a business company gets its proper economic return… but both the underlying philosophy and the services provided are entirely different. Sardex home banking is a consequence of the Sardex project. (Bruno, lawyer)

The informant accounts presented show that Sardex enables members to question their practices and reconsider what money is doing for or against them, what values it should embody, how it should make them feel, and how it lubricates social relations. By instantiating these tensions, it allows them to ask whether the social relationships that it generates are more positive than those generated by fiat money. Despite a majority of the informants having joined to increase the volume of their transactions, many others join Sardex not because they fully understand the benefits, but because they desire to be part of something that feels more *theirs*. Informants perceive Sardex as inherently Sardinian, even to the point of becoming a cultural export:

> Sardex is crucial to Sardinia. It's the first time we export and teach something to others. The Sardex scheme is not a new idea, but we have improved it. (Elisa, economist, appliance service company owner)

In this case, *teaching* becomes a cultural effort that brings about feelings of pride for contributing to the wider economy. The positive feelings and interesting thoughts about alternative finance that Sardex enables both attract newcomers and keep established members participating; they are part of the rewards of re-personalising transactions. Sardex 'conveys meanings[,] and these tell us a lot about the way human beings make communities' (Hart 2005: 170). The opportunity that Sardex provides for further participating in culture as a collective vehicle for shared meaning, understanding and belonging is, in and of itself, part of its appeal.

The creation of social value networks is crucial for the success of social enterprises (Mair and Schoen 2007). Because Sardex allows companies to come together under a shared cultural banner, these social links become stable and enduring as they are embedded in regional culture. In this regard, Sardex is ideally positioned to function as a sustainable social enterprise; transactions transcend their economic origin and become anchored as long-lasting expressions of regional identity. In addition to the creation of links within the locality, Sardex also helps in the formation of links between members that would be socially or geographically disjoint. These trust links tend to connect disjoint geographical clusters of circuit members; this is an instance of *bridging* social capital (Putnam 2000: 22-23; Stam et. al 2014) that reinforces the stability of the system.

Sardex allows members to re-discover how money influences their personal behaviour and social organisation, instead of simply being a taken-for-granted feature in society. This problematisation is akin to one usually made by social scientists, but arising from the organic engagement with the system rather than theoretical analysis. Sardex embodies a basic tension between economic and anthropological concerns. On the one hand, it is pulled towards the efficiency and liquidity of general-purpose money when members want it to become more like fiat money (e.g. by allowing the payment of taxes, or being accepted for a wider selection of goods or services). On the other, it is pulled to remain special-purpose money, part and parcel of regional identities and having its local character explicitly protected and celebrated. This tension is at the heart of both its current success and its future sustainability, as both personal and impersonal monies are equally necessary for our well-being. Working out specific ways of combining them is what is problematic (Hart 2000).

6. Discussion and Conclusion: Sardex as a multi-layered system

In contrast to the prevailing mainstream economics view of money as a 'neutral veil' (Ingham 2004), within sociology, anthropology, and heterodox economics a wide range of perspectives on money has emerged over the past two centuries. These can be reductively divided into two groups, as suggested by Evans (2009) and Dodd (2014): the *values change money* perspective (Bourdieu, Zelizer and Maurer) and *money changes values* perspective (Marx, Simmel, and Polanyi). Whereas the former tends to emphasise a socio-cultural layer on top of money by which it acquires manifold meanings and context-dependent social and communicative functions, the latter is more pessimistic and sees money as a corrosive force that destroys society. This paper has tried to do justice to both viewpoints, since they are both relevant.

The fact that these positions seem mutually exclusive should not be a deterrent to considering both, and can be ascribed to an ongoing process of collective sense-making or *cultural epistemology*. Indeed, there is a firm association between money and collective memory (Hart 2000: 9), where collective memory is an informational commons that is stored and managed through cultural symbols and signs. This is by no means unique to money, though, and suggests the need for an informed and balanced approach at this powerful social technology. What this paper has argued is that a sustainable, *self-funded* market and a high level of socio-cultural impact appear to be two sides of the same coin. The former reinforces the latter, but itself needs to start from a strong base of trust. This is why a circular logic seems better suited than the more familiar linear *impact* logic to unravel this complex set of ideas and practices.

Sardex enacts and resolves a tension between financial capitalism and a non-capitalist market mediated by mutual credit. Private property and profit still apply to the goods and services that are traded within the Sardex system, setting it apart from commons-based social finance proposals predicated only on solidarity or moral governance. However, Sardex has features in common with these kinds of proposals because goods and services that are traded in Sardex carry additional social values, such as trust, identity, and solidarity.

Sardex is thus a technology that is symbolic and material, virtual and real, individual and social, old and new, affective and rational, capitalist and commons-based. As part of an emotional, epistemological, institutional, social, and personal repertoire on monetary experimentation, it provides a useful case study to re-think various fundamental disciplinary questions. Sardex works well because it is a multi-layered system that engages people in various dimensions at once, enabling the expansion of human activity, creativity, inquiry, and capacity to create culture and community. Any single discipline gives only a very partial picture of its configuration and dynamism.

This paper's analysis of Sardex follows a critical Marxist approach centred around capital, because it combines insights from sociology, anthropology and economics to understand mutual credit as a social enterprise. Marx suggested that owning the means of production allowed the capitalist class to extract surplus value; a similar analysis applied to currency suggests that the control that the traditional banking sector has on money creation processes can lead to the extraction of an equivalent surplus value in the shape of interest. Marx suggested that the true value of commodities should be understood in terms not of the commodities themselves (*commodity fetishism*), but of the labour that has been expended in transforming raw materials into commodities. Likewise, this analysis of Sardex suggests that the true value of currency does not lie in the currency itself; rather, it lies in the efforts that circuit members expend in generating products and services to exchange for it. In this light, when banks condition credit to the payment of interest, they are effectively hijacking some of the productive capacity from firms by leveraging their ownership over money creation processes. By allowing circuit members to *create* their own interest-free money, Sardex approaches in the currency realm a configuration that, in the commodity realm, could be identified with public ownership of the means of production. However, whilst achieving this, it also avoids many of the other hallmarks of planned economies. Indeed, Sardex can only achieve this configuration by decentralising not only the productive choices (relying on a market), but also money creation (relying on Sardex S.p.A).

Sardex is well suited for social impact in two related respects. First, it enables *resource bricolage*, the orchestration of available economic mechanisms in order to bring about social change (Zhang and Swanson 2014). By making the productive resources of the entire circuit membership available for mobilisation, Sardex provides a direct way for social relationships to be embedded in market transactions, combining social and economic benefits. Second, Sardex provides a way for the assessment dimension of SII to be decentralised. The accurate appraisal of the social impacts of a given initiative is one of the main difficulties faced by SII, in part because impact may be multi-faceted and difficult to quantify (Austin et al. 2006). Sardex addresses this issue by allowing each circuit member to individually assess its own benefit from participation. Since most participant businesses are unable to use objective social measures, they instead rely on subjective assessments based on their own cultural and social impressions of Sardex. However, since Sardex S.p.A. is still embedded centrally within the operation of the credit circuit, it could provide a more conventional measure of social impact.

How can Sardex help understand social impact investments better? First, it demonstrates that a culturally-embedded market like Sardex can help bring together the interests of multiple actors, both social and economic. Sardex can provide a type of *self-funded* SII in which the community itself makes investments based on its own productive capabilities, subjecting itself to the collective assessment of the associated costs and benefits (both social and economic). This case study demonstrates that imbuing an SII initiative with symbolic and emotional charge makes it more likely to be successful; it must be rewarding for the participants if the system is to take hold. The analysis also shows that local collective action mediated by multiple types of capital can be extremely fruitful, as long as it is underpinned by a reliable institutional framework. But, above all, Sardex shows that by challenging preconceptions regarding fundamental economic concepts (e.g. currency) it is possible to create sustainable and effective financial instruments that provide significant social benefits.

References

Alvord, S. H., L. D. Brown, and C. W. Letts. 2004. "Social Entrepreneurship and Societal Transformation: An Exploratory Study." *Journal of Applied Behavioral Science*, Vol. 40, N. 3, pp. 260-282.

Amato, M., and L. Fantacci. 2012. *The End of Finance*. Cambridge: Polity.

Austin, J., H. Stevenson, and J. Wei-skillern. 2006. "Social and commercial entrepreneurship: same, different, or both?" *Entrepreneurship Theory and Practice*, Vol. 30, N. 1, pp. 1-22.

Barbagli, M., and M. Santoro. 2004. *Le basi morali dello sviluppo*. Cagliari: AM&D Edizioni.

Barnett, W.P., G.A. Mischke, and W. Ocasio. 2000. "The evolution of collective strategies among organizations." *Organization Studies*, Vol. 21, N. 2, pp. 325-354.

Bottazzi, G. 1999. *Eppur si muove. Saggio sulle peculiarità del processo di modernizzazione in Sardegna*. Cagliari: CUEC.

Bourdieu, Pierre. 2011. "The Forms of Capital." In *Cultural theory: An anthropology*, edited by I. Szeman and T. Kaposy, 81-93. Oxford: Wiley-Blackwell.

Coleman, J. S. 1990. *Foundations of Social Theory*. Vol. Belknap Press: Cambridge.

Daggers, J., and A. Nicholls. 2016. The Landscape of Social Impact Investment Research: Trends and Opportunities, Said Business School Report to the MacArthur Foundation. Oxford: University of Oxford.

Desa, G. 2012. "Resource Mobilization in International Social Entrepreneurship: Bricolage as a Mechanism of Institutional Transformation." *Entrepreneurship: Theory and Practice*. Vol. 36, N.4, pp. 727–751.

Dini, P., L. Sartori and W. Motta. 2014-6. *Twenty-nine semi-structured interviews conducted in various Sardinian towns (Serramanna, Cagliari, Carbonia, Terralba, Oristano, Sassari) in July and October 2014 and February 2016.*

Dodd, N. 2014. *The Social Life of Money*. Princeton: Princeton University Press.

Douthwaite, R. J. 1999. *The Ecology of Money*: Green Books.

Dufays, F., and B. Huybrechts. 2014. "Connecting the dots for social value: A review on social networks and social entrepreneurship." *Journal of Social Entrepreneruship*, Vol. 5, N. 2, pp. 214-237.

Edobor, F. O., and J. Ogunleye. 2015. "Collective social entrepreneurship: a literature review." *International Journal of Knowldege, Innovation and Entrepreneurship* Vol. 3, N. 2, pp. 65-83.

Evans, M. S. 2009. "Zelizer's Theory of Money and the Case of Local Currencies." *Environment and Planning*, Vol. 41, N. 5, pp. 1026-1041.

Graeber, D. 2014. *Debt - Updated and Expanded: The First 5,000 Years*. London: Melville.

Granovetter, M. 1973. "The strength of weak ties." *American journal of sociology,* Vol. 78, N.6, pp. 1360-1380.

Greco, T. 2015. Sardex, a brief report. https://beyondmoney.net/2015/08/20/sardex-an-emerging-model-for-credit-clearing-exchanges/

Gudeman, S. 2001. *The Anthropology of Economy*. Oxford: Blackwell.

Hart, K. 2000. *The Memory Bank: Money in an Unequal World*. London: Profile.

Hart, K. 2005. "Money: One anthropologitst's view." In *A handbook of Economic Anthropology*, edited by James G. Carrier. Cheltenham: Edward Elgar.

Ingham, G. 2004. *The Nature of Money*. Cambridge: Polity.

Jonsson, I. 1995. *West-Nordic Countries in Crisis: Neo-structuralism, Collective Entrepreneurship, and Microsocieties Facing Global Systems of Innovation*. Copenhagen: New Social Science Monographs.

Knapp, G. F. 1973. *The State Theory of Money*. New York: Augustus M. Kelley.

Lietaer, B. A. 2001. *The Future of Money*. London: Century.

Littera, G. 2015. "Sardex S.p.A." Personal Communication.

Littera, G., L. Sartori, P. Dini, and P. Antoniadis. 2017. "From an Idea to a Scalable Working Model: Merging Economic Benefits with Social Values in Sardex." *International Journal of Community Currency Research.* Vol. 21, pp. 6-21.

Lodde, S. 1998. *Invidia e imprenditorialità: alcune considerazioni sul ruolo delle emozioni nello sviluppo economico*. Cagliari: Crenos.

Mair, J., and O. Schoen. 2007. "Successful Social Entrepreneurial Business Models in the Context of Developing Economies." *International Journal of Emerging Markets*, Vol. 2 , N.1, pp. 54–68.

Maurer, B. 2005. *Mutual life, limited: Islamic banking, alternative curriencies, lateral reason.* Princeton: Princeton University Press.

Maurer, B. 2015. *How Would you Like to Pay? How Technology Is Changing the Future of Money.* London: Duke University Press.

Nicholls, A. 2006. *Social Entrepreneurship: New Models of Sustainable Social Change*. Oxford: Oxford University Press.

Nicholls, A., R. Paton, and J. Emerson. 2015. *Social Finance*. Oxford: Oxford University Press.

Parry, J., and M. Bloch. 1989. *Money and the Morality of Exchange*. Cambridge: Cambridge University Press.

Pies, I., M. Beckmann, and S. Hielscher. 2010. "Value creation, management competencies, and global corporate citizenship: An ordonomic approach to business ethics in the age of globalization." *Journal of Business Ethics*, Vol. 94, N. 2, pp. 254-278.

Pinna, L. 1971. *La famiglia esclusiva. Parentela e clientelismo in Sardegna*. Bari: Laterza.

Putnam, R.D. 2000. *Bowling alone: The Collapse and Revival of Amercian Community*. New York: Simon & Schuster.

Sartori, L., and P. Dini. 2016. "From Complementary Currency to Institution: A Micro-Macro Study of Sardex Mutual Credit System." *Stato e Mercato*, Vol. 107, N. 2, pp. 273-304.

Schuster, C. E. 2015. *Social Collateral: Women and Microfinance in Paraguay's Smuggling Economy*. Berkeley: University of California Press.

SIITF (Social Impact Investment Task Force). 2014. *The Invisible Heart of Markets: Harnessing the Power of Entrepreneurship, Innovation and Capital for Public Good.* London: SIITF.

Stam, W., S. Arzlanian and T. Elfring. 2014. "Social capital of entrepreneurs and small firm performance: A meta-analysis of contextual and methodological moderators". *Journal of Business Venturing*, Vol. 29, N. 1, pp. 152-173.

Studer, T. 1998. *WIR and the Swiss National Economy*. Basel: WIR Bank.

Sud, M., C. V. VanSandt, and A. M. Baugous. 2009. "Social Entrepreneurship: The Role of Institutions." *Journal of Business Ethics*, Vol. 85, N. 1, pp. 201-216.

Trigilia, C. 2001. "Social Capital and Local Development." *European Journal of Social Theory*, Vol. 4, N. 4, pp. 427-442.

Werner, R. A. 2014. "Can banks individually create money out of nothing? The theories and the empirical evidence". *International Review of Financial Analysis* Vol. 36, pp. 1-19.

Wray, L. R. 1990. *Money and Credit in Capitalist Economies: The Endogenous Money Approach*. Aldershot, Hampshire: Edward Elgar.

Zelizer, V. 1994. *The Social Meaning Of Money: Pin Money, Paychecks, Poor Relief and Other Currencies*. New York: Basic Books.

Zelizer, V. 2005. Circuit in Economic Life. *Working Paper*

Zhang, D. D., and L. A. Swanson. 2014. "Linking social entrepreneurship and sustainability." *Journal of Social Entrepreneurship*, Vol. 5, N. 2, pp. 175-191.