

Governance and sustainability of the Argentine Complementary Currency Systems

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Abstract: The *Redes de Trueque (RT)* thrived during the economic crisis of 2001 – 2002 in Argentina and still stand out as one of the largest Complementary Currency System in the world. These local exchange networks reach a large scale during times of severe economic distress, but as large non-state initiatives, they pose a governance problem. Four types of governance systems were structured within the Argentine RT, of varying degrees of sustainability: a) loosely regulated market systems, b) hierarchies, c) associational regional networks, and d) local communities. Based on a four dimensional analytical framework, this paper discusses the rules of governance and sustainability of the governance systems in the RT. It found that some became more sustainable than others in terms of achieving combinations of scale and organisational modes.

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Introduction

The Argentine Complementary currency systems, the *Redes de Trueque (RT)* thrived during the 2000-2002 economic crisis. They fell apart shortly after the economic demise and most of them disappeared, but some still survive and support the consumption of several thousand households up to 2010. The unequal rise and decline of the *RTs*, in spite of sharing the same context, origin and evolution, begs an explanation. Why were some of these complementary currency systems more resilient to the fall? What were their rules of governance and sustainability?

‘Sustainability’ is defined here as the durability or resilience of governance systems in which the rules of action and their compliance cannot be assumed a priori because none of the actors has the means to enforce them. Institutions are designed, legitimacy is constructed, compliance is obtained through voluntary decisions and negotiation. Similar governance problems are observed in situations in which regulation by the state is not possible, desirable or cost-effective and it is done by non-state groups, either within the private sector or civil society (Rosenau and Czempiel 1992, Streeck and Schmitter 1985). In relation to the *RT*, sustainability refers to the resilience of the various networks to the general decline of the *Trueque*. This paper will focus on their decline period around and after 2002 and how they relate to the general rules of governance and sustainability of non-state institutions.

The research uses data gathered in two periods of fieldwork in Buenos Aires, Rosario and Mar del Plata, three major cities in Argentina. The first period was between May and December 2004 and the second one, in November and December 2006. Data was collected through interviews with the main leaders, who provided lists of the *CTs* in their networks. A total of 44 *CTs* were visited across the three cities mentioned and combined a variety of conditions: large and small cities, wealthy and poor neighbourhoods, old and new *CTs* and so on. Eighteen *CTs* were then selected in relation to the geographical area, the relative poverty in each location, their number of participants and the *RT* network they linked to. A survey with a semi-structured questionnaire was conducted among participants in these *CTs* chosen at random while they queued to enter the marketplaces or after they had finished their trade. A total 386 responses were obtained, with samples of 15% of the participants in *CTs* with less than 50 members and 8-10% in those with more than 50 members. This extensive coverage is a novelty in the research on the Argentine *RT*.

The next section will categorise governance systems as institutional arrangements and discuss the characteristics that contribute to their sustainability. Section three describes the evolution of the *Redes de Trueque*, the Argentine complementary currency systems, and section four focuses on their rapid but uneven fall. Section five analyses various aspects of governance and sustainability presented in the analytical framework.

Factors of sustainability of governance systems

The concept of governance is used in different contexts and disciplines with some divergence of meaning, but it always implies giving up a top-down approach to ruling and including a multiplicity of actors in either the economy or the polity (Hirst 2000). It refers to a particular kind of governing: ‘sustaining co-ordination and coherence among a wide variety of actors with different purposes and objectives such as political actors and institutions, corporate interests, civil society, and transnational governments’ (Pierre and Peters 2000). It is conceived as a process combining negotiation, accommodation, cooperation and alliance formation rather than coercion, command and control.

One of its derived concepts is that of governance systems, which are defined in the economy as ‘the totality of institutional arrangements –including rules and rule-making agents– that regulate transactions inside and across the boundaries of an economic system’ (Hollingsworth et al. 1994). That is, a cluster of mechanisms for co-ordination of economic activities so that individual economic action may become predictable and stable. Related concepts are ‘mode of regulation’ coined by the French Regulation School (Boyer 1990, Jessop 1997, 2001), and ‘models of social order’ (Campbell et al. 1991, Streeck and Schmitter 1985).

How are institutions and organisations brought together in a governance system? A possible explanation stems from the principle of “reconstitutive upward causation” (Hodgson 2002, 2007) or “cumulative circular causation” (Berger and Elsner 2007), by which elements of a lower ontological level engage in a process of trial and error and create rather stable institutions that reflect what is feasible at each point in time. Bob Jessop adds that the process is not continuous but happens in phases related to the economic cycle (Jessop 1997). In periods of crisis and/or transition, actors seek to define new modes of regulation or governance systems through trial-and-error search processes that contain a considerable element of struggle and chaos. In periods of stability, the structural coherence of complex institutional forms prevails and confines economic action to the reproduction of the economic system. All in all, the evolution of institutions is pushed by factors such as political struggle, changes in social values and the search for improved efficiency, while stability is achieved when changes become consolidated in new institutions.

An early attempt to theorise on governance systems in which the state is not the central actor was made by Streeck and Schmitter, using the concept of social orders in their path-breaking book *Private Interest Government* (Streeck and Schmitter 1985: 11-15). They argued that governance systems are built around a ‘central institution which embodies (and enforces) their respective and distinctive guiding principle’ of coordination and conflict areas. They identified four social orders: community, market, bureaucracy and associations. They suggest that ‘it might be more accurate to label them according to the principles that coordinate each: spontaneous solidarity, dispersed competition, hierarchical control and organisational concordance’. In a community, actors are interdependent, their preferences and choices are based on shared norms and jointly produce satisfaction; sustainability is tied to the satisfaction of mutual needs and keeping a collective identity. In an ideal market, actors are competitors and in principle independent. Entrepreneurs seek to maximise their profits, and by virtue of dispersed

competition they share with consumers the material benefits of technical progress. There is a basic conflict of interest between sellers and buyers (supply and demand) which is reflected in prices. Sustainability is tied to the capacity of markets to clear in spite of the uncertainty and risks inherent in compliance and incomplete information. In a bureaucracy, actors are dependent upon hierarchical coordination and their choices are asymmetrically predictable according to the structure of legitimate authority. Allocation decisions are made by hierarchical centres and carried out by agents rewarded by career advancement and stability. Sustainability is tied to the effective capacity to control action via hierarchy. In an associational order, actors are contingently interdependent: the actions organised collectively can have a predictable effect on the satisfaction of others, which induces them to search for stable pacts. Collective actors are defined by a common purpose to defend and promote functionally-defined interests and mutually recognise the status of competitor organisations. Sustainability is tied to preventing fragmentation into rival communities, competing for resources and securing compliance from members.

This four-type taxonomy was based on ideal types of governance systems that are rarely present in reality. For example, a market regulated by a public or private regulator is still a market but it has elements of hierarchical control, so it is not driven by dispersed competition alone. Hollingsworth and Boyer later presented a more flexible categorisation of governance systems, based on two criteria: the action motive (what disposes individuals to behave in a certain way) and the coordination mode (how their economic actions are made compatible with each other) (Hollingsworth and Boyer 1997). This framework allows identification of several subtypes of market systems, for example, according to their mix of institutions: competitive, cartelised, state-regulated and cooperative markets embedded in long-term relations. The market as a multilateral setting for exchange is still the core of these governance systems, but non-core institutions matter, too. Self-interested behaviour is more or less typical of all markets, but coordination at a social level is also achieved through state coercion and civil society organisations. Hence, the strong dichotomy of hierarchies versus markets loses appeal, as markets are ensembles of institutions.

The categorisation of governance system proposed by Hollingsworth and Boyer (1997) offers an entry-point to analyse what factors make various governance systems sustainable. This question is critical in systems in which rules have to be created and enforced by actors without the monopoly over means of violence as the state. Referring to regulation regimes, Jessop (Jessop 1997) claims that their life expectancy (sustainability) is given by the compatibility (coherence) of their mediation mechanisms (institutions). Boyer and Hollingsworth (ibid) follow a similar path and assert that governance systems are 'viable' as long as the set of institutions that form them are coherent or "compatible" with each other. However, how is this coherence constructed and how can it be observed?

A few issues, which are directly or indirectly related to non-state actors' setting of rules, stand out as critical to the durability of governance systems. The first dimension is the acceptance or legitimacy of rules (Van Kersbergen and Van Waarden 2004). The concept of legitimacy is further categorised as input and output legitimacy (Scharpf 1999, Thomassen and Schmitt 1999). By input legitimacy, the authors mean the process by which rules have come about and account for provisions to modify them in the future. It

represents an ex-ante analysis; input legitimacy is created along the process of rule definition. It may involve shared values and idealism. On the other hand, output legitimacy represents an ex-post generation of legitimacy based on the 'success' of the governance systems: the capacity to deliver results, solve problems and resolve conflicts.

The second dimension sees actual behaviour. Policing functions are problematic because the ex-ante acceptance of rules does not mean ex-post compliance. The latter is an actual event, the real behaviour of agents, while the former is a disposition to act. Actual compliance is achieved by monitoring and enforcing rules even against resistance from agents (Ronit and Schneider 1999).

Thirdly, the benefits delivered by governance systems are evaluated in relation to the costs for the actors involved. The capacity to deliver results, solve problems and resolve conflicts within the economy means achieving 'resource synergy' (Jessop 1998) or building the ability to coordinate material interdependencies among internal and external agents, which is especially critical when resources are scarce (Cashore 2002).

On the other side of the ledger, there are the costs of running the system, generally referred to as transaction costs. In a system where the state is not available as a low-cost rule-maker, these are mainly of two types. First, the costs associated with uncertainties, risks and information asymmetries (Williamson 1975). Second, there are the costs of sustaining collective action, setting rules, making decisions, and redefining objectives when necessary; these are organisational costs. On the other hand, the process by which collective action is framed and advances the commonality of interest and legitimacy mentioned above. These five factors will thus be analysed in the context of the *Redes de Trueque*.

The decline of the RT

The first seed of the *Redes de Trueque* started in 1995, as one of the income-generation schemes that were launched in reaction to the neoliberal structural reforms of the nineties. It quickly appealed the poor, unemployed and disenfranchised middle class, who were attracted to a scheme that entailed producing goods at home and selling them to neighbours in one of the nearby marketplaces. It allowed them to make a complementary income with which they could, at least partially, protect or improve their lifestyle.

The marketplaces grew in scale and number, and by 2002 they had multiplied in every neighbourhood across the country. Their offer expanded equally rapidly until there were hardly any goods or services that could not be obtained with the various complementary currencies used in the *Redes de Trueque*. Each individual marketplace and its community of producers–traders was called *Club de Trueque* (CT) and with other CTs they formed networks (*redes*) that operated at the local, regional and national level. Each network used a currency and defined its own rules of conduct and standards of monetary regulation. The RTs functioned as circuits of economic activity entirely organised and regulated by its members, with barely any intervention of the government or legal protection. For a while the main networks were articulated under a single umbrella organisation in which common rules were agreed on but which broke up in 2002.

The *RT* got a definite boost with the crisis of 1998 – 2002, when they allowed an estimate of 2.5 million households to go by in about 5.000 marketplaces (Ovalles 2002). Evidently, they had to find institutional solutions that go beyond the community and local level, but institutional responses to the crisis stemming from civil society or the private sector, away from state intervention, generally have serious problems of governance and sustainability. The Argentine *RT* were no exception. Their organisers tried to find functional equivalents to the state as regulator of economic activity but they mostly failed. At the peak of their scale the *RT* began to crumble, barely months before the regular economy began its recovery and employment raised.

In the period of 2000-2002, all the networks shared similar challenges and in many of the thousands of nodes with thousands of members across Argentina the situation looked like sheer anarchy. Squeezed by the economic crisis, the structural poor kept pouring into the nodes with barely anything to offer and desperate to meet their basic needs. The *Trueque* was not really a solution to poverty, as Leoni found when she studied nodes dominated by the structural poor (Leoni 2003). The author described it as the ‘dictatorship of homogeneity’. The services most frequently offered were cleaning and gardening, for which there was no demand. Services such as electrical and plumbing work were in demand, but those skills were also of little help because none of the parties had pesos to buy wires or spare parts. So when the majority of the participants were structural poor, the offer of basic necessities like food was insufficient for all who wanted them.

An underlying class conflict then appeared in most nodes. The scheme was made popular by the unemployed and disenfranchised middle class, for whom the *Trueque* was a good way of getting some value for their small-scale production, the goods made as hobbies (paintings, knits, hand-made dolls) or those accumulated in better times (fur coats, toys, small furniture). Many had a small amount of working capital to buy inputs in pesos, which they either resold or processed into products for sale in the nodes. Others just resold food products bought in supermarkets with pesos, which violated the principle of presumption but was tolerated because there was dire need of them in the nodes. In contrast, the structural poor joined the *Trueque* later, pushed by the crisis. They had no accumulated assets, no income in pesos and no working capital. What they could sell in the nodes was their own labour and second-hand goods such as clothes, shoes and toys that came from charities and donations. When they could get ingredients in the *Trueque*, they were also able to produce food like bread, for example. Such ingredients were mainly provided by disenfranchised middle class participants who consumed the bread. In short, a critical balance had to be kept in the nodes between the disenfranchised middle class and structural poor in order to enable both groups to benefit. This was by no means guaranteed.

Large-scale *CT* were the site of many abuses, among them by the coordinators who were supposed to organise them, as was also found by Peter North (North 2007). Excess demand for basic food products inputs gave rise to inflation. When prices were too high, coordinators advised members to refrain from buying. However, people needed the products desperately and the nodes became fertile ground for speculation and exploitation of those who had no pesos by those who did. That often meant exploiting the structural poor, who had less choice. In addition, excessive issuance of complementary currency rekindled inflation. The *créditos* were used to pay for all sorts of expenses: wages to the

Trueque employees, gifts to friends and local politicians, self-awarded wages of coordinators, cleaning and maintenance of the market venues, and refurbishment of buildings. The final blow was large-scale forgery of the *créditos* in the second quarter of 2002. The risk of forgery had existed to some extent almost from the beginning of the *RT*. As the network expanded and many goods and services could be obtained with complementary currency, it became profitable to print forged vouchers. It will perhaps never be known who was responsible for the forgery and the suspects range from normal criminal gangs to political brokers. Participants recall:

You could see people selling packs of forged vouchers near the entrance of almost every large node. You could even buy them in the nearby kiosks. We wondered many times who has the capacity to do that. Printing costs money and these criminals must be making money. For me, the politicians were behind it because they didn't like the *Trueque*.

Whatever the origin, members soon found out that it was easier to buy a pack of forged *créditos* than to produce goods to obtain them. Coordinators across nodes were mostly unable to stop the inflows of forged vouchers, so they spread from one *CT* to another and then from one region to another. The sharp inflation that resulted can be seen in the price of a litre of cooking oil in a node, which rose from one *crédito* in December 2001 to 3,500 *créditos* in December 2002. In October 2002, the *PAR* leaders, the largest network in number of members, estimated that ninety per cent of their circulating notes were counterfeit.¹ They then implemented a plan that ended in disaster. They collected all the *créditos* in circulation to weed out the fake ones. The real ones were partially replaced with a new voucher, on the basis of a progressive discount rate. The maximum given to any member, whatever amount they had before, was 60,000 *créditos*. The strategy caused heavy losses to participants who had lots of accumulated vouchers –against strong advice that vouchers were not a reserve of value–. It was also too burdensome for coordinators, many of whom got fed up, split from the network or closed their *CT*. It seriously damaged the credibility of the system as a whole.

Two additional factors contributed to the collapse. First, in May 2002 the government decided to implement a welfare policy giving 150 pesos to each unemployed head of household with children at school. Thus, for the first time in a decade, a welfare system offered an option, and precisely when the *Trueque* had lost its appeal. The government grant did not immediately cause a steep fall in the number of members but reduced membership over the medium term. Some beneficiaries, though, used the welfare money to buy food products to resell in the *CT* or buy more packs of forged *créditos*. The second factor was the recovery of the regular economy after 2003, when many of the *Trueque* members could gradually return to regular employment.

So by the middle of 2002 all the *RT* networks started a sharp decline in terms of participants. Of the 5,000 nodes in April 2002, it was estimated in fieldwork that half were closed by December and only 1,000 were still open by July 2003; around 300, barely ten per cent of the number in its heyday, were operating in December 2006. The *Trueque* in general became a corrupt and miserable ugly duckling nobody wanted to be involved with.

A coordinator in the city of Mar del Plata tells:

The sequence was as follows. In the beginning, you met your neighbour in the street and she asked you where you were going. 'To the node', you'd answer. And 'what is that?' she'd ask. Later she'd ask which one you attended and what that one was like. In the end she'd stare at you and would ask whether 'that' still existed.

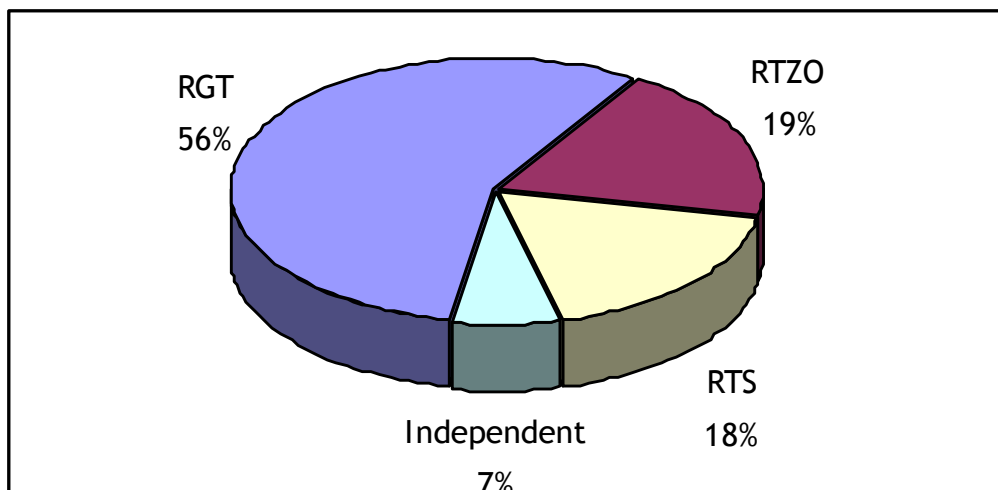
Governance systems of the RT networks

To some extent, the collapse of the *Trueque* could have been foreseen. However, some groups and networks resisted the fall better than others and while some networks have almost disappeared, others continued to operate and even experienced some periods of recovery. The differences in the fates of the networks deserve an explanation. They were all affected by similar problems, but did not suffer the shrinkage to the same extent. Some sub-networks disappeared or declined sharply. At the time of the fieldwork for this study in late 2004, a total of 700 nodes were estimated to be operating. Follow-up fieldwork at the end of 2006 found that about half of them still survived. Others reached their nadir in 2004 and recovered after 2006. What is the reason for these differences? This study argues that the explanation lies in the governance systems that they had structured.

Four groups emerged out of the break up of the *RT* around the turn of 2001. An estimation of their size is given in Figure 1. A simplified description of their governance systems follows.

The largest of the *RT* network was the *Red Global de Trueque (RGT)*, led by the group that initiated the *Trueque* and extended across the entire country. It was the main one to be affected by the counterfeit *créditos*, the one to receive the most media and public exposure, and the first to fall apart. This caused a knock-on effect on other networks, too, because the majority of participants were unclear about the differences between networks beyond using a different currency. From the start it set a high priority on expanding the number of *CTs* using their complementary currency and designed a system of "social franchise" to facilitate this expansion. Through this method, any individual or group interested in opening a *CT* could contact the *RGT*, get the necessary information brochures and know-how, and buy the desired amount of complementary currency vouchers for a few pesos. After that, there was hardly any subsequent control or communication between the *RGT* leaders and the nodes, so the *RGT* relied on spontaneous coordination. The nodes retained all decision-making powers except for the central institutions such as printing of *créditos* and dealing with third parties, which were concentrated in the leaders' hands. Coordination at the level of *CT* and across nodes was atomistic and spontaneous and its markets operated mainly through price mechanisms. There was no discrete control structure across the network, only basic ground rules that operated as voluntary guidelines.

Figure 1: Number of participants by sub-network, beginning of 2002



Note: Estimation by the author based on interviews with the leaders of the various Trueque groups. Percentages are calculated on 2.5 Million participants

The second largest network was the *Red de Trueque Solidario (RTS)*, which operated mainly as an umbrella association of regional and local networks. A watch-dog of the principles of reciprocity and solidarity, it advocated for an alternative economic system based on self-reliance and face-to-face relations at the local level. As a matter of principle, it was a staunch enemy of the *RGT* and its “social franchise”. Each one had its own complementary currency system, identified with common logo. So it was arranged as an associational model, with multiple centres converging into a negotiation and decision-making body for coordination. When the *Trueque* declined, the sub-networks that formed the *RTS* continued independently and the *RTS* disappeared as umbrella organisation. Self-interest as a behavioural principle was contained by the bonds of trust and reciprocity the *RTS* advertised in each node and peer control was promoted.

The third largest network was the *Red de Trueque Zona Oeste (ZO)*, organised and managed by former entrepreneur Fernando Sampayo. It was also a regional sub-network covering the densely populated and impoverished western suburbs of Buenos Aires. Although it suffered the decline of the *Trueque*, it fell the least of all the networks in the *RT*. It had a similar system to the “social franchise” to expand its number of *CTs*, but there was a relatively tight control structure over its franchisee nodes. Members contributed a small amount to a collective fund in pesos to finance the costs of the *ZO* and the development of social enterprises that supplied food into the nodes. The plan of building a supply chain of social enterprises to supply the nodes was never fully accomplished and was interrupted by the decline of the *Trueque*. The *CTs* worked as markets coordinated by price-mechanisms but the supply of some food products was centrally organised, planned and delivered. The *ZO* was a loose hierarchy in which there was one main centre for decision-making, rule-setting and enforcement for the network: its leader, Fernando Sampayo.

There was also an undetermined number of *CTs* that have always been or became independent from the networks after the decline. They traded using their own vouchers and had no contact with other nodes. They typically operated as closed groups such as schools, churches or cultural groups. They roughly correspond to the model of

communities or clubs, closely reliant on relations of reciprocity and obligation to abide by the rules, typical of small communities. There were no standard organisational structures for coordination. For example, *Comunidades Solidarias* was started by a group of parents in a community school for mentally handicapped children. Another group, the *Grupo Poriahju*, was organized by teachers who, inspired by Paulo Freire, started a self-help group in a slum with a library, a civic centre and a cooperative for scavenging and recycling waste. By the end of the nineties they launched a *CT* because they saw its potential for generating an income for the poor. All decisions were taken collectively by a committee. A different example was that of *Feria Rouchon*, located in a slum that suffers flooding during rain. Between 200 to 300 people participated in the market every day, trading with the left-over vouchers of any network, currently in bad shape. There are no designated leaders; decisions such as the schedule are made by consensus by those who are present at the time.

Sustainability in the Trueque

This section analyses the governance systems of the *Trueque* in relation to the factors that make governance systems sustainable, which were highlighted above. The first one is input legitimacy (agreement of the actors with the rules or willingness to abide by them). In the *RT*, the main institutions to assess it are the management of the currency systems, the mechanisms to replicate *CT*, the handling of pesos, and the negotiation with other actors such as local governments. The second factor that supports the sustainability of governance systems are the institutional mechanisms of rule compliance and enforcement, even against resistance by some agents. In the *RT*, it meant having the means and capacities to monitor the behaviour of coordinators and participants and impose compliance. The third factor supporting sustainability is the benefits for agents based on achieving resource synergy, which in turn, raises output legitimacy. In the period analysed, basic food products were the critical resource across all networks in the *RT*, through which to achieve synergy and secure its sustainability. The fourth factor supporting sustainability of governance systems has to do with the costs of running the system, which translate into output legitimacy. The costs studied here are transaction and organisational costs of managing a non-state currency system and keeping the *CTs* articulated as a network (e.g. holding meetings, homogenising behaviour and prices).

The benchmark network of the *Trueque* was the *Red Global de Trueque (RGT)*, representing an atomised market governance system. The rules were set by the central leaders, but the willingness of members to comply with them was not really checked; it was just assumed that they agreed by virtue of their membership. In fact, during the fieldwork the author established that most participants (as much as 90% in some *CTs*) had not read any rules or did not know they existed. The coordinators of the nodes were asked to report on their activities, but in practice none of those interviewed did and the reports were never requested. They only contacted the *RGT* leaders when they needed more *créditos*, for which they paid in pesos and was often solved by mail. So, the rules were poorly communicated and there was no provision to change them in ways that would generate legitimacy later.

Rule compliance in the RGT was also assumed to happen by virtue of membership, rather than checked or promoted. It was expected that the coordinators would supervise and enforce rules of appropriate behaviour but, given the massive scale of the nodes, this was impossible. Moreover, some coordinators took advantage of the chaos and it became common practice to charge members significant amounts of pesos to enter the markets or, aggravating the scarcity of products, in exchange for *créditos* without the corresponding products on sale. Members paid them out of desperation and the RGT leaders were overwhelmed with 5,000 daily applications to be able to control these abuses. The RGT leaders did not have the infrastructure, the means or the capacity to monitor what was happening in the CTs and there were no accepted institutions to promote or impose compliance. In fact, they did not see compliance as their responsibility because ‘the coordinators are accountable to the participants and not to us; nobody is better qualified to monitor and insist that rules are enforced’, one of the leaders argued. However, most coordinators were not qualified or did not see it as their responsibility.

In relation to creating resource synergies, in the RGT hardly any specific actions were taken to obtain more basic food products. The central leaders used part of the funds in pesos that they collected in exchange for the *créditos*, to buy food from wholesalers and sell them in a few nodes located closest to their office. With those exceptions, the actions to increase the supply of food products were left to the nodes to take. Some nodes established an entrance fee, using the pesos for pool-purchasing of basic foods, but these responses met a minimal fraction of the needs of the participants.

Transaction costs derive from trading with a non-state currency. The RGT promoted the use of a single currency across the entire RT to reduce the transaction costs for participants of having to use different currencies in the various networks. They never succeeded on this, but they had by far the largest network and their currency circulated across the country. While this helped participants to move across regions and networks with the same currency, it also made forgery more attractive and easy. So, while the intention was to reduce transaction costs, the practice of a single currency across the country increased its vulnerability significantly. Organisational costs were also intended to be minimised through the system of rapid multiplication of nodes. One or two persons instituting themselves as coordinators were normally enough to do it in less than a week. However, no long-term relations of mutual accountability were established in the process, as the RGT ignored that fact that the time spent in organising collective action represents an investment, too. So while organisational costs were indeed low, in the long run this loose structure made them very high.

In conclusion, the RGT appears as a regulated market with low sustainability. This was particularly problematic because it was the largest network of the RT and the one by whose performance the general public judged the *Trueque*. It offered a mechanism in which people had to make little effort to participate or start a new node (just find a venue, get the *créditos* and start trading) but this did not contribute to promoting mutual trust. Rules were defined top-down, but the PAR leaders were unable to enforce them; they assumed that coordinators and participants would act ‘responsibly’ under peer pressure. The assumption of legitimacy without effective control capacities was a formula for disaster, which eventually happened.

The second largest network in number of participants depicted a hierarchical governance system centred on the figure of a social entrepreneur as main decision-maker and was called *Red de Trueque Zona Oeste* (ZO). It used a similar system of rule-setting as the *RGT* but implemented it differently. Its leader, Fernando Sampayo, defined the rules for the *ZO* and exercised strong leadership, which others accepted because of his skills and personality. 'He knows how to do it,' was repeatedly heard about him in several of the *CT* visited. From its early days the *ZO* invested in computerised databases and hired as many workers for data entry as were needed to keep up-to-date membership records. No new member received fifty new *créditos* before being registered and checked. This bureaucratic structure was financed through a small membership fee. The autonomy of the nodes was limited to decide practical matters such as schedules; the rest was decided by Sampayo and his close collaborators, a practice which apparently went unquestioned. Input legitimacy was far from participative but it seemed to have worked thanks to the leader's skilfulness and reputation.

In relation to supervision and enforcement of rules, the nodes of the *ZO* were kept more or less in check. Sampayo could not control over 400 coordinators but he showed up unannounced in *CTs* at random and started trading incognito. If he found the rules of the franchise being violated, coordinators were asked to explain the lapse. Participants were also allowed to file complaints in his office or with his close collaborators. At the level of the nodes, the *ZO* advised coordinators to have a team of assistants to supervise and enforce the rules, expelling trespassers if necessary. A few cases were found in which this had actually occurred. All in all, enforcement of rules in the *ZO* corresponded to a traditional franchise system in its implementation methods.

The hierarchical style of the *ZO* proved quite effective in achieving resource synergies, and in this respect the *ZO* built quite distinctive mechanisms. It structured a supply system of products negotiating deals with firms in exchange for services such as transportation, cleaning or a share of the production performed by participants. The *ZO* established collective factories and vegetable gardens with participants' labour, who were rewarded accordingly. For instance, it organised a flour commodity chain: a mill would pay municipal tax arrears in flour, which the municipality would exchange with the *ZO* for maintenance of public spaces or bread for schools, which would be baked by *ZO* participants in collective *ZO* bakeries; flour was sold in the nodes. For transportation, a team of *ZO* mechanics cannibalised several broken-down municipal trucks and assembled five trucks out of the parts. These were used to transport goods from one *CT* to another and the local governments received the use of ten hours of transportation a week as payment. With similar arrangements, Sampayo obtained wood for furniture, land to plant fruits and vegetables, and warehouses to store goods. The *ZO* centrally planned the use of resources and hence created effective synergies.

The transaction costs of using a complementary currency and a 'social franchise' replication system were managed somewhat differently from the *RGT*. The *ZO* voucher was also forged, but Sampayo's quick reaction replaced the counterfeit ones relatively soon after they had become a threat and that enabled the *ZO* to withstand the decline of the *Trueque* better. However, while decision-making in the *ZO* was fast and maintaining the system was high and had to be paid for through setting a collective fund of individual contributions in pesos. The transaction costs were thus effectively managed, which

explains the resilience of the *ZO* when the *Trueque* declined, and it worked as long as members accepted to keep on financing these costs.

To sum up, the *ZO* created legitimacy based on following a leader, had a fair enforcement of rules, remarkable resource synergies and manageable transaction costs. It structured a hierarchy centred on the leadership of Sampayo, whose reputation and skills were known. All in all, these arrangements constructed a sustainable governance system, but they are blatantly inconsistent with the promotion of community participation, empowerment and self-reliance. The *ZO* relied on bureaucratic structures to manage information and control the network, which were sustainable only as long as participants contributed to support them and on a rather large scale, for example on the regional level. In turn, it depended critically on the skills of the leader to keep the management going and his sudden death in 2010 questions the sustainability of a model without a second line of leadership.

The third type of governance system in the *Trueque* was the associative model. The *Red de Trueque Solidario (RTS)* was the main example. In Buenos Aires and the main cities, the *RTS* not only included the wealthiest, but also the most ideologically minded and best-educated participants. Unlike the *RTS* and the *ZO*, the legitimacy of central institutions resulted from the participatory process of rule definition. Rules resulted from lengthy discussions to build consensus, after which they were transmitted downwards to the nodes. Nodes were autonomous and local, but exchanging goods with others was allowed; it was seen as necessary to increase scale and scope. Each *CT* could use its own or its region's currency, provided that statements on its issuance and distribution were controlled collectively in the network's monthly meetings. Negotiations with local governments were left to the regional sub-networks and nodes. As a result of the process of rule definition itself, the input legitimacy was high.

In the *RTS*, the autonomy of the clubs was jealously guarded and seen as a sufficient condition to guarantee rule compliance. On a similar vein as the *RGT* leaders, a regional leader of the *RTS* assured the author: 'The *Trueque* belongs to the people and it is up to them to keep it under control. That is how it works: local, democratic, and transparent'. In practice, peer control was not obvious and supervision relied mostly on the coordinators, who complained that rule enforcement relied excessively on them and participants "do not behave responsibly with us and each other". Some coordinators took their supervision roles seriously but others were more flexible and a few of the *CTs* visited looked as chaotic as the ones of the *RGT*. So, the enforcement of rules in the *RTS* was variable and idiosyncratic.

In terms of resource synergies, the official position in the *RTS* was that coordinators should arrange with members the actions necessary to increase supply of food products. Some *CTs* asked for a contribution in pesos so they could buy from wholesalers, later giving purchasing priority to those that manufactured foods for the *CT* with those ingredients, but again the results varied. Where coordinators took up the task of pooling purchases, it worked fairly well. In other cases, it came to nothing. Some also tried to trade basic food products with local governments, as the *ZO* did, or connect to their rural hinterlands, with varied degrees of success. The achievement of resource synergies in the *RTS* thus depended on specific coordinators and their strategies, but did not appear significantly higher than in the *RGT*.

Transaction costs around the variety of regional and local currencies used in the *RTS* were the original basis for check-and-balance mechanisms in which all nodes inspected the currencies of the others. This required monthly meetings that made the means of payment reliable and their printing transparent. However, cross-checks entailed organisational costs that eventually proved burdensome in terms of time and money and too slow when responses to the crisis were needed.

To wrap up, the strongest network in ideological terms was the *RTS*, with its associational model. It was more sustainable than the *RGT* because it had high input legitimacy based on participatory rule-setting, fair enforcement and low transaction costs. However, it had minimal mechanisms to achieve resource synergies and organisational costs were mounting. It was particularly weak in its heavy reliance on the goodwill and commitment of coordinators, whose capacities were not always sufficient. Besides, the mechanisms for decision-making and checks-and-balances were sometimes distracted by political intrigues, with factions often fighting each other. While ideological affinity acted as the glue that kept it together during its construction, it blocked the capacity to respond quickly to its change in fortunes and the demise of the *Trueque* gave them no slack. The *RTS* eventually died, mired in negotiation and discussion.

The fourth governance system in the *Trueque* was the community or club model. It was represented by a large and undetermined number of local and independent nodes across the country. They were based on small closed communities, in which joining the *CT* amounted to agreement with the rules and sharing pre-existent institutions. The organisers often made an effort to make the definition of rules participatory and democratic, as it was usually a population in which members knew and trusted each other from before. Divergent opinions and interests were probably accommodated, but whether the interests of the majority eventually prevailed should be assessed case by case. All in all, acceptance of common rules was high and linked to the process through which these nodes were created and their integration to their communities.

In relation to rule enforcement, in the independent *CT*, rules were easier to enforce because of their smaller scale and pre-existent ties among members. Coordinators and members alike were part of a community beyond the node, so the rules of personal exchange applied and peer pressure kept members in check. Rule compliance was variable among groups but generally high. This was especially clear in poor neighbourhoods, where shared poverty kept participants in line: "We all need to make the most of our exchanges but when the market is done we go back to the slum together. And anyway, we are all poor, what can we squeeze out of each other?" a participant said.

Due to their small scale, local nodes had scarce resources for achievement of synergies. Relatively less products were traded and the overall economic benefit on participants' lives was weaker than in the large-scale nodes of the other networks. They tried to increase their resource synergies and they sometimes obtained donations from various sources. Pooling purchases was also tried, as were raffles. In *Comunidades Solidarias*, for example, members ran a grocery shop in the school and opened every afternoon to sell goods bought with a common pool of funds and sold for pesos and *créditos*. Local and independent nodes were well organised and ruled by reciprocity but they were not as massively as the others. Their reduced size led many participants to prefer the large-scale nodes of the networks, where most necessities were on offer in spite of the chaos. The

relatively low economic benefits to participants, except where local governments support them, are the main weakness of local nodes. Their relatively peaceful atmosphere, however, was their strength.

In the local nodes, transaction costs of using non-state means of payment was not really a problem. The use of currency vouchers was mostly seen as an easier way to trade than just bartering or reciprocity networks, so the transaction costs were generally low. In fact, most participants understood the complementary currency as a system of mutual credit. ‘You can only remember a certain amount of persons that owe you or to whom you owe things. When there are vouchers to give each other, it is much easier to exchange’, a participant in *Feria Rouchon* explained. Making decisions was relatively easy and costless, given the reduced scale of the groups and the fact that most members had known each other from before.

In short, the governance system of the local and independent nodes seems more sustainable than the other three and is how community currency systems around the world are typically organised. It appears high in rule legitimacy, high in enforcement and low in transaction and organisational costs. This was attributed to its reduced scale, at which the rules of personal exchange regulate a system. Its Achilles heel lay in the lack of resources with which to achieve synergies and create a significant income. This keeps them small and the gains of resource synergies are also small, though perhaps significant in terms of poverty alleviation. Some local nodes were able to ease shortages by involving local governments and donors to support the scheme. In that case, they were the most sustainable option to combine the participation in a social network with income generation.

Conclusion

A comparison of the four types of governance systems that emerged in the second half of 2001 is compiled in Table 1 below. In the first three rows, the higher the rating expresses more sustainable systems. In the last two rows, the lower the ratings indicate higher sustainability. At the risk of oversimplifying, the table shows that all the networks had some weaknesses in terms of the sustainability of their governance systems. More importantly, it highlights the trade-offs in each type of governance systems for CCS.

Table 1. Sustainability of governance systems in the Trueque, 2002

	RGT	ZO	RTS	LOCAL
Input legitimacy	Low	Fair	High	High
Rule enforcement	Low	Fair	Fair	High
Resource synergies	Low	High	Low	Low
Transaction costs	High	Low	Low	Low
Organisational costs	High	Fair	High	Low

Notes: RGT = Red Global de Trueque; ZO = Red de Trueque Zona Oeste; RTS = Red de Trueque Solidario.

The *RT* had grown to a scale that by 2001 it resembled a parallel state, containing one third of the economically active population. The volume of trade, number of *CTs* and amount of participants demanded a system of governance that was beyond the logic of small groups and local communities, typical of civil society initiatives in general and of CCS around the world, in particular. These non-state arrangements are hard to sustain and an economic system of that scale requires a functional equivalent of the state that did not really exist; there is no functional equivalent of the state because a state accepts no substitutes, by definition.

The *RT* leaders then tried to organise their governance systems bottom-up. That is, define the institutions to coordinate and regulate economic action within their large scale networks. To various extents, all the *RT* networks had insufficiently developed supply chains, which led to scarcity, inflation and eventually chaos among thousands of members trying to satisfy their basic needs. The *Trueque* declined, further depressed by the recovery of the regular economy from the worst crisis in its history. However, some networks were more successful than others in structuring sustainable governance systems and did not lose as many nodes, coordinators and participants summarised in table 1.

This study highlights the trade-offs that affected the various networks in their combinations of organization modes and scale. On a national, large scale, there seems to be no sustainable governance system for a CCS. After all, that is what the state is, not just the actor that has monopoly over means of violence but also the bureaucracy that spreads all over a territory to regulate the economy with an acceptable level of legitimacy. The analysis showed that a hierarchy worked best at a large scale (a region) but it needed a skilful leader at the top capable of building the infrastructure and sustaining leadership so that members would finance it. On an intermediate scale, an associational governance system was sustainable as long as the commonalities were clear enough to continue negotiation and avoid tearing the network apart through internal politics. On a small scale, independent local groups appeared to be a sustainable option but they need to increase their resource base from other sources. When that was achieved, they constituted the leading case for CCS.

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ⁱ *Clarín*, 17 October 2002.