

Gómez, G. (2012). Sustainability of the Argentine Complementary Currency Systems. *International Journal of Community Currency Research* 16(D), 80-90.
<https://doi.org/10.15133/j.ijccr.2012.014>

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International Journal of Community Currency Research

Volume 16 (2012) Section D 80-90

SUSTAINABILITY OF THE ARGENTINE COMPLEMENTARY CURRENCY SYSTEMS: FOUR GOVERNANCE SYSTEMS

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ABSTRACT

The Redes de Trueque (RT) thrived during the economic crisis of 2001 in Argentina but fell sharply after 2002. Some networks, however, withstood the downfall better than others. These differences in the decline cannot be attributed to external factors, which were basically the same across the Trueque, but to the various governance systems that the leaders structured as the scheme grew in scale and sophistication. Following an institutionalist perspective, this article assesses the sustainability of the governance systems in the RT in relation to input legitimacy, rule enforcement, resource synergy and transaction and organisational costs. None of the governance systems structured in the Trueque in Argentina scored highly on the four accounts. The largest networks managed to be sustainable by resorting to a hierarchical structure that violates the principles of participation and self-reliance of complementary currency systems. In the other extreme, the smallest ones achieved sustainability but with a low economic impact.

ACKNOWLEDGEMENTS

Part of this study was funded by WOTRO/NWO, Grant WB 46-494. I wish to thank the insightful comments of the two referees and the participants who kindly gave their time and dedication to make this research possible.

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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 demise of the national economy 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 (Rosenaau 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. Since the question is not why they declines, but some of them declined less than the others, the study will discuss the conditions inside the governance systems of the Trueque and not at the context, which was basically the same for all of them. 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 in November and December 2006. Data was collected through interviews with the main leaders, who provided lists of the Clubes de Trueque (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. Such extensive coverage is a novelty in 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 ar-

eas. 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. While these are costs, the process of organising and making rules supports the construction of a common identity that are captured under input legitimacy (first item). These four 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 to the 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 and incorporated other segments of society, mainly the structural poor. Their offers 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 a 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 in which their governance depended entirely on its members and there was barely any government intervention or legal protection. For a while the main networks were articulated under a single umbrella organisation in which common rules were agreed on, but this broke up in 2002.

The CTs got a definite boost with the crisis of 1998 – 2002, when they allowed an estimated 2.5 million households to trade in about 5,000 marketplaces (Ovalles 2002). Evidently, they had to build governance systems from below that would transcend the community level, but like other institutions stemming from civil society or the private sector, this was problematic. The organisers tried to find functional equivalents to the state as regulators of economic activity but limited resources and capacities, they mostly failed. At the peak of their scale the RT began to crumble, barely months before the regular economy began its recovery.

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 (Abramovich, 2003; Gonzalez Bombal, 2002). 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 and some had the skills but no pesos to buy parts. 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 initially 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, goods made as hobbies (paintings, knits, handmade dolls) or those accumulated in better times (toys, suitcases, 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 prosumption 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.

Large-scale CT were the sites of many abuses, among them by the coordinators who were supposed to organise them, as was also found by Peter North (North 2005; 2007) and Susana Hintze (Hintze, 2003). Excess demand for basic food products 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 (North, 2005). It will perhaps never be known who was responsible for the forgery and the suspects range from normal criminal gangs to political brokers. Participants in a group interview arranged in Billinghurst, a western suburb of Buenos Aires, recalled in August 2004:

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. 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 RGT, the largest network in number of members, estimated that ninety per cent of the circulating notes were counterfeit (Clarín, 17 October 2002). They then implemented a plan to collect all

the créditos in circulation and weed out the fake ones. The scheme was too burdensome for coordinators, many of whom got fed up, split from the network or closed their CT. The governance system did not have sufficient resources and provisions to enforce such control over the money and its failure damaged the credibility of the system as a whole (Gonzalez Bombal, 2002, 2006; Hintze, 2003).

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. The government grant did not immediately cause a steep fall in the number of members but reduced membership over the medium term (Hintze, 2003). The second factor was the recovery of the regular economy after 2003, when many of the Trueque members could gradually return to regular employment.

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 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 "ugly duckling" nobody wanted to be involved with.

A coordinator in the city of Mar del Plata said in an interview in November 2004:

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.

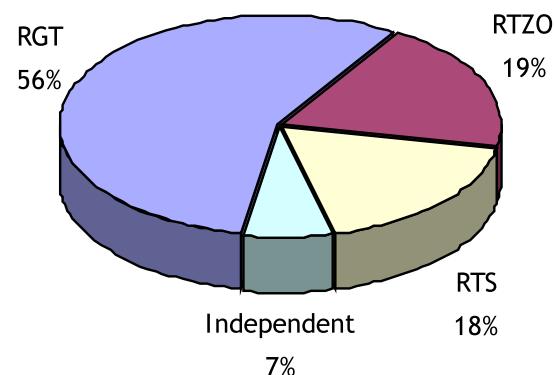
GOVERNANCE SYSTEMS OF THE RT NETWORKS

To some extent, the collapse of the Trueque could have been foreseen, given the explained facts of both the context and the RT themselves. Several authors have explained why the Trueque has declined, like Gómez (2009), Hintze (2005), North (2005, 2007, 2008), Pereyra (2006) and Saiag (2008). 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. These differences in their fates deserve an explanation, as they were all affected by similar problems but did not suffer the shrinkage equally.

Some sub-networks disappeared or declined sharply and 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 had disappeared, while others reached their nadir in 2004 and recovered after 2006. 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. This study will argue that the explanation for this variation lies in the governance systems that each network had structured and not in the contextual factors, which were more or less the same for all of them.

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 largest 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 buy the desired amount of 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. There was no strict control structure across the network, only basic ground rules that operated as voluntary guidelines. Participants within and across CTs would coordinate primarily via price mechanisms, like any market system, although embedded in a specific social setting. In the bimimensional categorisation of Hollingsworth and Boyer (1998), the RGT roughly corresponds to a regulated market governance, with atomistic and spontaneous coordination between participants and clubs and self-interested behaviour as broadly accepted action motive. The second largest network was the Red de Trueque Solidario (RTS), which operated mainly as an umbrella association of regional and local networks. Each region had its

own complementary currency system, identified with common logo. 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". It implemented a system of training (capacitación) to initiate new members to the system and the principles of solidarity, which was gradually abandoned as RTS grew beyond its capacities to train new members. So it was arranged along the lines of an associational model, with multiple CTs converging into a decision-making / negotiation forum that coordinated. 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 constrained by the bonds of reciprocity the RTS promoted through its permanent training mechanism, while peer control was expected to sustain solidarity.

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. They had no organisers; coordination was purely spontaneously. Decisions such as the schedule were made by consensus by those present.

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: willingness of the actors to abide by the rules. It is assessed by the management of the currency systems, the mechanisms to replicate CTs, the handling of pesos, and the negotiation with other actors such as local governments. The second factor of sustainability is the set of mechanisms of rule compliance and enforcement, even against some resistance. In the RT, it meant having the means and capacities to monitor the behaviour of coordinators and participants and impose compliance at the level of the CTs. The third factor supporting sustainability is the benefit for agents based on achieving resource synergies, which in turn feeds into output legitimacy. In the period analysed, basic food products were the critical resource across all networks in the RT. The fourth factor supporting sustainability are the costs of running the system, like transaction and organisational costs of managing a non-state currency system and keeping the CTs articulated as a network.

The benchmark network of the Trueque was the Red Global de Trueque (RGT). 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 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 often received by mail. The rules were thus poorly communicated and there was no provision to change them in ways that would generate legitimacy later. Rule compliance was 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 too 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 impose compliance. In fact, the leaders did

not see compliance as their responsibility because 'the co-ordinators are accountable to the participants and not to us', one of the leaders argued in an interview in November 2004. However, most coordinators were not qualified or did not see it as their responsibility either.

In relation to creating resource synergies, in the RGT hardly any specific actions were taken to obtain more basic food products. With some 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 in 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 co-ordinators 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 in the building of a common identity too. So, while organisational costs were indeed low, in the long run this loose structure made them very high.

In the framework presented above, the RGT represents an regulated market governance system based on individualistic action motive and loose coordination structures with top-down rules that were hardly ever enforced. The leaders assumed that co-ordinators and participants would act 'responsibly' under peer pressure, so they did not prepare a tighter coordination. The assumption of legitimacy without effective control capacities was a formula for disaster, which eventually happened. The RGT model was barely sustainable and 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.

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 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 CTs visited in 2004 and 2006. From its early days the ZO invested in computerised databases and hired workers for data entry

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 the social entrepreneur and his collaborators, a practice that apparently went unquestioned. Input legitimacy was far from participative and relied on the skillfulness and reputation of its leader.

In relation to supervision and enforcement of rules, the nodes of the ZO were kept more or less in check. The leader could not control over 400 co-ordinators but he showed up unannounced in CTs at random and started trading incognito. If he found the rules of the franchise being violated, co-ordinators were asked to explain the lapse. Participants were also allowed to file complaints against the co-ordinators and at the level of the nodes, the ZO advised co-ordinators 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 hierarchical 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 the labour of participants, 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, the ZO obtained wood for furniture, land to plant fruits and vegetables, and warehouses to store goods.

The transaction costs of using a complementary currency were kept under control. The vouchers of the ZO were also forged but its leader's quick reaction was to replace the counterfeit ones as soon as they had become a threat. However, the cost of maintaining the hierarchical system of the ZO was high and had to be paid for a collective fund of individual contributions, so the ZO was successful as long as members financed the costs.

To sum up, the ZO created legitimacy based on charismatic leadership, had a fair enforcement of rules, remarkable resource synergies and manageable transaction costs. It structured a hierarchy centred on a social entrepreneur, whose reputation and skills were known. These arrange-

ments constructed a sustainable governance system, but they are blatantly inconsistent with the promotion of community participation and self-reliance promoted by most CCS around the world.

The third type of governance system in the Trueque was that represented by the Red de Trueque Solidario (RTS). It included the wealthiest, 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. These were autonomous and local, but exchanging goods with others was encouraged. 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, input legitimacy was high.

In the RTS, autonomy of the clubs was jealously guarded and accountability of coordinators to members and peer control were seen as sufficient to guarantee rule compliance. A regional leader assured the author in October 2004: '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 in September 2004 that rule enforcement fell on them and that participants 'often do not behave responsibly with us or each other'. Some coordinators took their supervision roles flexibly and their CTs looked as chaotic as the ones of the RGT. Thus 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 to increase the 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, 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.

The reduction of transaction costs related to using various regional and local currencies were the origin of a system of checks-and-balances 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 and could be described as an associational model in the framework of Hollingsworth and Boyer (1998). 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 high. It was particularly weak in its voluntaristic reliance on the goodwill 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 kept it together during its construction, it blocked the capacity to respond quickly to the demise of the Trueque. It 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 sharing an agreement with the rules made in common. 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 prevailed should be assessed case by case. Rule enforcement was easier in the local CTs because of their smaller scale and pre-existent ties among members, as argued by North (2005). Coordinators and members alike were part of a community beyond the node, so peer pressure kept members in check. This was especially clear in the poorest neighbourhoods, where shared poverty glued participants together. 'We all need to make the most of our exchanges in the CT but when the market is done we need to go back to the same slum together. And anyway, we are all poor, what can we squeeze out of each other?' a participant in El Campito in Rosario said in November 2004.

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 large as the nodes of the RGT, for instance, which many participants preferred because they could find most basic necessities on offer in spite of the chaos. The relatively low economic benefits to participants, except where local governments supported them, were the main weakness of local nodes while their peaceful atmosphere was their strength.

In the local nodes, transaction costs of using non-state means of payment was not really a problem and most participants understood the complementary currency as a system of mutual credit, which was also observed by Saiag (2008). 'You can only remember a certain amount of persons that owe you or to whom you owe things, so when there are vouchers to pay, it is much easier to exchange', a participant in Feria Rouchon explained in August 2004. Making decisions was relatively easy and costless, given the reduced scale of the groups and the fact that most members knew 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 ranks high in rule legitimacy and their enforcement and low in transaction and organisational costs. Its Achilles heel lay in the lack of resources with which to achieve synergies and create an income, though perhaps still significant in terms of poverty alleviation. Some local nodes were able to ease shortages by involving local governments and donors to support the scheme, then becoming a sustainable option to combine the participation in a social network with income generation.

CONCLUSION

The leaders across the Trueque tried to combine their perceptions of the motivation of their participants and the coordination structures organise 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.

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, higher rating expresses more sustainable systems. In the last two rows, lower 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.

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 an 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 legitimacy and resource synergies 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.

The combinations of strengths and weaknesses in terms of governance and sustainability of CCS provokes further reflections. The RT had grown to a scale that by 2001 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 that characterise civil society initiatives in general and CCSs around the world in particular. An economic system of the scale of the RGT or the ZO 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. If a large scale is a goal of a CCS, this comes at the expense of participation and self-reliance. In the other extreme of the local and independent CTs, the resource synergies were too low to reach a significant economic impact. Many CCS around the world share the characteristics of this governance system within the Trueque, as well as the criticism expressed by some researchers on their limited scope (Aldridge, 2002). However, they gain sustainability on account on their input legitimacy, rule enforcement and low transaction and organisational costs. North (2005) discusses the problems of

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	High	High	High	High
Transaction costs	High	High	High	High
Organisational costs	High	Fair	High	High

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

scale in alternative economic practices and reaches similar conclusions in a comparison with LETS schemes in the UK. Governance systems built with no state participation, therefore, may not grow beyond certain limits if they want to preserve their essence as alternative economic spaces.

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