

Something New Under the Sun?

A Case Study of Modern Italian Barter Systems

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Modern technology can eliminate the limitations traditionally attributed to barter. This case study examines the operation of modern Italian barter systems and the motivations of companies to join such systems. Data is collected through website content analysis, interviews with key members of the barter community and a quantitative survey of firms currently using barter networks. In this case study we triangulate the data to debunk the myth that barter is only useful in times of economic crisis and show that barter can represent a strategic answer to SMEs growth and dexterity, allowing increase sales and access to new markets.

INTRODUCTION

Before the modern day introduction of money, most transactions employed a simple exchange process based on a double coincidence of wants (e.g. “I will swap my goat for your wheat”). The invention of money allowed for asynchronous trading with multiple players, which allowed more complex trading, reduced transaction costs and created the present day banking industry. The banking industry has a complex role: whilst it facilitates trade through loans and other financial structures, for some companies, particularly SMES current banking rules can create boundaries around trade. Lack of liquidity may prevent companies trading even when they have stock in the warehouse, or excess capacity for service companies. However, whilst money has many advantages i.e. it allows for non synchronous “wants”, it relies on liquidity, which for small and medium enterprises can be a problem, specifically in times of economic crisis (Carbó-Valverde, Rodríguez-Fernández and Udell, 2016).

The modern day banking system on the one hand encourages lending and trade, but on the other hand, in times of global financial crisis, can exacerbate financial problems and can lead to small companies lacking the required credit to continue trading. The results in a paradox of monetary supply in that having access to a ready supply of money would resolve the effective-demand problem, yet the source of this problem is actually the constraint of a cash-in-advance problem imposed by the models themselves (Hellwig, 1993). Brunner and Meltzer (1971) note that monetary theory has failed to resolve the problem of the use of money and argue: “*any asset is just as usable as any other for executing transactions and discharging obligations*” (p804).

The dichotomy money vs. barter can be overcome by analysing the various functions of money and asking which of them can be successfully replaced by information technology. Within economic theory, the essentiality of money have been questioned and even deemed as “*an embarrassment to economic theory*” (Banjeree and Muskin, 1996, p. 995). Nevertheless, money serves a number of functions including resolving trading frictions, being an exchange technology, facilitating search economy evaluation, acting as a self-enforcing controller, reducing transaction cost, enabling anonymity, enhancing commitment, optimizing market memory and information economy. Most of these functions could be effectively performed by modern technology therefore eliminating the inefficiencies traditionally attributed to barter.

Using alternative systems is a common occurrence in times of financial crisis, and historically, barter trade tends to increase in diametric opposition to the economic cycle (IRTA, 2009). However, outside of small closed communities, barter suffers from the problem of requiring a double coincidence of wants: i.e. a direct trade of one item for another and is therefore considered inefficient (Oliver and Mpinganjira, 2011). Fischer (1975) describes the traditional explanation of the use of money as a way to solve the double coincidence of wants, as “picturesque” and argues that monetary theory provides “no reason why one good rather than another should be used to balance trade” even if their needs don’t double coincide.

Modern barter systems offer a solution to this: modern IT based barter systems remove the need for the double coincidence of wants: allowing asynchronous and multiple player trades. In addition, these modern barter systems could offer a non- monetary based but regulated trade platform. However, to date, there has been relatively little interest in this sort of trading from Governments or other community groups. The recent global financial crisis has increased attention towards non-monetary business practices that have the potential to alleviate the effects of liquidity and credit constraints.

This study focuses on Internet based barter systems that are currently operating in Northern Italy. Specifically, this case study examines:

1. How these electronic barter systems work
2. The motivations of companies to be part of a system
3. The experiences of companies in these systems.
4. The implications of barter systems for policy makers.

In so doing, this case study also examines broader issues: First, whether barter models are indeed contingent on low economic cycles, and are a response that would generate no advantages if liquidity, credit and customer demand were easily available. Second, as firms tend to be reluctant to invest in any form of innovation (Archibugi, Frenz and Filippetti, 2013), would business models that could pair barter and money require a level of ambidexterity that is difficult for companies during times of financial crisis? Finally, this study explores whether these modern barter systems are limited by other factors than finance: is trust a potential limiting factor in the possible expansion of such barter systems?

This study presents a unique case study (Yin, 2011), as Northern Italy has a number of electronic barter systems operating. In so doing, it allows an in-depth study of a bounded system or phenomena (Flyvberg, 2006), which allows inferences to be made. To ensure rigour and present this in-depth understanding, a number of sources of data are used (Creswell, 2013) including content analysis from the barter systems websites, qualitative data from interviews with key decision makers, and a survey of users of the barter systems.

The remainder of this paper is structured as follows: a brief review of previous literature on barter focusing on motivations and opportunities for barter systems to evolve is presented. Next, the data collected within Northern Italy from three independent data collection methods is presented together with an analysis and triangulation of this. Finally, the paper concludes with a discussion of the implications for future trade and monetary systems. Our study revealed that Italian barter models are predominantly growth-oriented, rather than representing a survival strategy. Indeed electronic barter systems are not only well known but also desirable for many enterprises and Trading Associations within Italy, a country where, historically, SMEs are inclined to develop networking strategies.

BACKGROUND

Although a lack of regulations make it hard to determine, the global volume of barter and countertrade has been estimated to account for around 25-30% of world trade (Okoroafo, 1988) and is increasing globally (Oliver and Mpinganjira, 2011). Whilst the current monetary system is subject to extensive National and International regulations, barter systems generally lack regulation. This lack of regulation both hinders and supports barter systems.

Indeed, barter has often been assimilated into hidden economies, which leads to several problems: First, the lack of regulation for non-monetary exchanges, and especially for new forms of electronic barter, makes it difficult for practitioners to correctly report them. Second, if barter exchanges are recorded based on the current monetary exchange values, it can result in the loss of important data because, in general, hidden economies tend to distort economic data and are often under-reported (Bhattacharyya, 1999). This then fosters a vicious circle for which barter is not accounted for, as a consequence it is labelled as a hidden economy, which in turn feeds the prejudice that barter is a narrow economy, strictly linked to tax evasion. Indeed, *“the lack of statistics can be attributed in part to the unwillingness of governments to acknowledge these transactions officially”* (Howse, 2010, p. 291).

Some economists have also contributed to the barter taboo, for example by stating that barter *“has never been a quantitatively important or dominant model”* and that *“moneyless transactions are ‘minor, petty, infrequent and never structuring important sectors of economy’* (Dalton, 1982, p. 185). For example, a study in the UK noted that barter exchanges are commonly considered as a second choice that firms reluctantly explore only if adverse circumstances exist (Shiple and Neale, 1988). This hinders barter trade because as Howse (2010) noticed, there is a little awareness of the bartering phenomenon from governments, and regulators typically demonstrate “barter prejudice” that looks suspiciously at this type of transactions, often assuming tax evasion intentions. Indeed, in the US, since 1982, the Tax Equity and Fiscal Responsibility Act requires corporations to report barter transactions as their equivalent monetary value which may distort data on the true volumes of barter exchanges (Marvasti and Smyth, 1998). Within this US lens, barter is seen as “countertrade” and considered to be both inefficient and even a *“trade distorting phenomenon”* (Czinkota and Talbot, 1986).

In contrast to the US, abundant data about barter is available in Russia where the government itself participates in the barter economy. Because of this Government activity, there are also clear regulations in order to reduce the economic dangers of an excessive use of barter. However, the amount of barter undertaken in Russia and other former Soviet countries is massive: between 1995 and 1998 *“almost 50% of the spending by subnational governments was in noncash form”* (Pinto, Drebensov and Morozov, 2000, p.1) with non-cash payments for taxes being the norm. In Russia in 1998, barter represented as much as 60% of the national GDP in 1998 (Marin, Gorochowskij and Kaufmann, 2000). Indeed, even when forecasts indicated that non-monetary exchange would be replaced by monetary exchange over time, this has not been the case (Tsukhlo, 2000). This has been attributed to economic decline, liquidity issues, but has allowed firms to settle debts without the use of money. In addition, there are other non-financial benefits to barter in the form of guaranteed sales at the end of a production cycle, which help the planning process (Ould-Ahmed, 2003).

Both old and new research points to the direct link between barter growth and the economic cycle, with Stodder (1998) suggesting *“an overall evidence of corporate barter’s counter-cyclical nature”* (p.9). Empirical studies from the US and Russia provide evidence that barter exchange flourishes under economic constraints affecting business inventories, price inflations and liquidity. In the USA, the rise in barter has been associated with inflationary trends and fiscal policies, slow business growth and inflation (Marvasti and Smyth, 2011), and as a response to ‘economic crisis, financial crisis among clients, cost-cutting initiatives and cashless promotion campaigns’ (Kaikati and Kaikati, 2013, p. 49).

The fact that money is a core tenet of trading tradition makes it an ideal target for innovation in a context of “business model warfare” as described by Morris: *“a business model is a holistic description of a business and its relationship with the broader market, thinking about the business model may offer greater insights and better innovation targeting”* (Morris, 2013, p. 8). Barter, as an innovative response

to the current monetary system may not initially seem to be an innovation, since barter is often described as a precursor of money (Van Yoder, 2011; Williams, Tondkar and Coffman, (1984). However, there are several advantages to barter over money as a transaction: these included lower transaction costs (Ostroy and Starr, 1974), as well as aiding the planning process. Ironically, and perhaps due to the poor reputation of barter systems, there are relatively few innovations in terms of replacing money.

Motivations for Barter

Whilst most studies suggest that companies choose barter only in times of economic crisis, Kaikati and Kaikati (2013) suggest there are actually three motives for bartering: survival oriented, growth oriented, and strategic or structural:

Survival oriented barter is focused on meeting short-term financial or legal objectives. The drivers tend to be environmental constraints such as economic crises, pressing regulations or financial adversity (Kaikati and Kaikati, 2013). In many cases, firms use barter to resolve cases of debt insolvency, or to reach a range of customers that would be otherwise unable to make hard-cash payments. Once the financial pressures are relaxed, firms motivated by survival barter trades tend to return to money based trading, relegating barter to a one off exceptional event. Previous research suggested that the impact of non-monetary transactions in restructuring is negatively linked to survival oriented firms, whereas firms that are not in distress, and therefore not reliant on a pre-existing supply chain, are not negatively effected by barter correlated restructuring (Commander, Dolinskaya and Mumssen, 2002).

*Growth-oriented barter*s may initially develop as a survival mechanism but then develop into recurring transactions, as they become part of the company's core business. In these cases, the benefits of cashless exchanges may prompt managers to persist and incorporate this type of deals in order to promote "*sustainable growth, irrespective of the broader economic climate*" (Kaikati and Kaikati, 2013, p.55). Typical cases are the exchange of dated inventories for advertising or promotional campaigns. As inventories repeatedly become obsolete, and advertising is a constant need, firms may find convenient to continue using non-monetary exchanges, even after their financial situation has improved. In addition, the trading relationships established with barter partners may later provide in themselves sufficient incentive to continue business with these partners and lead to "*an inimitable, critical source of competitive advantage*" (Jap, 1999, p. 472).

Structural deals. This rare form of barter is driven by strategic goals and aims at achieving a competitive position in the long term. Accurate planning is involved, paired with the choice and development of technological means (Kaikati and Kaikati, 2013, p. 59). This type of exchange may require investment, and the long-term commitment of all parties involved. This type of deal often becomes part of a comprehensive business model and affects internal organizational structure at various levels, in particular by "*designing interfirm routines that facilitate information-sharing and increase socio-technical interactions*" (Dyer and Singh, 1998, p. 665).

In summary, barter has been historically associated with financial crises, and is often unreported, partially due to lack of legislation and regulation. In turn, this situation has reinforced the idea that barter is a form of "countertrade", to be largely ignored by economists, and it's importance in the world economy being poorly understood.

The Role of Technology

As far back as 1970, Veendorp observed, "*if all traders were informed about the excess demands of their fellow trader, indirect bartering would seem to be a reliable way for clearing commodity exchanges*" (p1). Recent developments in technology have resulted in these possibilities for monetary substitutes (Li, 2006) and may even lead to renewed competition between alternative media of exchange (Marvasti and Smyth, 1998).

Monetary theories often refer to money as an "exchange technology" in itself (Álvarez and Bignon, 2013), which facilitates matching, search, memory, networking and commitment (Stenkula, 2003). Wallace (2001) argues, "With perfect monitoring, tangible money is not needed". In fact, this link between technological advance and greater barter exchange has already been seen in a correlation

between the revival of barter commerce and ICT adoption (Marvasti and Smyth, 2011). Essentially the internet allows barter exchanges systems that can reduce some of the inefficiencies of barter transactions”, such as the double coincidence of wants, and the meeting of barter traders (Menger in Latzer and Schmitz, 2002). Internet barter systems and also reduce the operating costs (Marvasti and Smyth, 1998). With increased internet access and speed, online barter systems have developed which remove the requirement for a double coincidence of wants” and allow multilateral asynchronous exchanges.

A basic electronic barter network employs technology to enable search, matching, enforcement, and analysis of transactions and credit worthiness assessments. A more sophisticated and sufficiently large barter network could potentially use computational power to also integrate instruments typical of current banking systems. Technology is still evolving although modeling powered by software and methodologies for Distributed Agents Systems is now mainstream in e-commerce research (Fortino and Russo, 2012) and capable of implementing multilateral exchanges typical of a barter network within models of monetary economies and perform a simulation with artificially intelligent agents learning to optimize multilateral matches.

An alternative experimental web-based barter system, developed by Information Science researchers (Bravetti et al., 2007), has demonstrated the possibility of reaching market equilibrium. Moreover, it results in “*the market becoming an agent that acts as representative of the users that traded inside it*” (p. 242).

In summary, development of computer and Internet technologies could lead to changes in the way money performs its “technological” functions. Li (2006) observed how ‘recent trends in technology make it much easier to issue various substitutes for currency, which suggests that in the near future we may be faced with renewed competition between alternative media of exchange’.

Organizational Capabilities and Structure

The adoption of barter concurrently with monetary transaction could present a significant challenge to companies because current systems would need to be adapted to work with two different trading methods. This could then lead to dysfunction and a subsequent reduction in the quality of existing trading relationships. Altering the supply chain can be particularly delicate considering that relationships with incumbent suppliers are linked to an innovation performance and financial results, driven largely by trust and dependence” (Rajagopal, 2008).

Alternatively, as firms who work together may also have similar innovative capacities, firms open to a new trading environment could work together to harvest the mutual and beneficial competitive advantages through such a system (Pittaway et al., 2004). Barter offers some potential strategic advantages: it allows for hidden price discrimination, can be a powerful strategy to increase margins, as well as a potential tactic to hide marginal costs (Magenheim and Murrell, 1988), because the terms of trade are effectively hidden within a barter system. An electronic marketplace functioning as a bartering network could replace money in its functions of mediation, while maintaining money as an efficient unit of measure for comparing values. New technological developments remove the old problems of the double coincidence of wants and allow barter to occur with multiple agents and asynchronously. However, using two alternate systems has costs in terms of training, systems, processes and potentially stock levels.

CASE STUDY: ITALIAN BARTER SYSTEMS

The choice of focusing the research in a specific location, namely Northern Italy, is justified by the value of contextualising organisational research. This approach is particularly significant in contemporary organisational research because this domain “is becoming more international, giving rise to challenges in transporting models from one society to another” (Russeau and Fried, 2001). As suggested by Johns (2006), context has the power to “shape the very meaning underlying organisational behavior and

attitudes. Moreover, paying attention to industrial macrocultures enables to identify casual explanations at a higher level of analysis, avoiding the pitfalls of “explanatory reductionism” (Hackman 2003).

The next section of this paper describes the case study of barter in Central and Northern Italy. Focusing on a single regional entity allows achieving higher granularity in understanding the social, and economic humus in which a business model evolves. Italy forms a unique case study (Eisenhardt, 1989; Yin, 2011); as well as country that plays a significant role in the worldwide economy. Italy is part of the large free trade area (EEA), yet it retains little power over its own economy in terms of exchange rates as it lies within the Eurozone. In addition, Italy is part of the G-8, which accounts for half of the global nominal GDP.

Although Italy lies within the European Union trading region, Italian is rarely spoken outside of Italy, and the geography and regional differences in Italy provide a unique environment for the creation of micro regional clusters. At the time of this study, Italy was facing severe financial pressure as a result of the GFC, with banks facing liquidity crises, credit problems and confidence issues (Coleman, 2013). The deep loss of confidence in banks and monetary institutions, paired with the overall credit crisis, provided a unique environment for the development of new business model innovations. In addition, at a regional level, significant barter activity evolved based on new customized ICT solutions which allowed them to exploit “*new attractive ways to enhance their contacts with other firms inside as well as outside their established relationship networks*” (Chiarvesio, Di Maria and Micelli, 2004, p.1520). Italy is of particular interest when studying networked business models because collaborative systems are the fibre of its economy since the 1700s when, reacting to the crisis of mass production, Italian enterprises developed the innovative approach of local “industrial districts”. Italian industrial districts represent an example of cooperative behavior, featuring a high degree of flexibility, exploration of shared values and mutual trust which Mistri (2003) described through an ecological paradigm in which there is equilibrium between competition and cooperation that determined an “evolutionary stable strategy”.

Italian barter was established around 2001, and has since gained momentum. It has now been adopted, at least to some extent, by hundreds or even thousands of small and medium enterprises and this has resulted in a range of differing barter networks, ranging from nationwide networks to regional Local Exchange Trade Systems. An example of such a system is the Barter system in Sardinia, which was established in 2010, and enrolled 1000 local firms within two years (Melis, Dettori and Giudici, 2013).

Methodology

A mixed methods data collection method was chosen. Three main primary data sources were identified in order to address the research questions:

- A. Barter operator websites (companies that own, develop and manage barter networks).
- B. Barter networks members, i.e. firms that practice barter in affiliation with networks in order to carry out multilateral non-monetary exchanges.
- C. Additional stakeholders and subject matter experts, such as Trading Associations (powerful player in the Italian business and normative context), political, legal and accounting experts. Their input can provide a balanced overview of norms as well as a perspective on how barter should or does integrate with the Italian current economic texture, mentality and institutions.

The first stage involved a content analysis of websites. The text content of the websites has been extracted and transcribed. Recurring keywords have been ranked according to both recurrence and visibility, with the aid of an algorithm written in Java. In the second order analysis recurring themes and patterns common to all website allowed to identify the shared meaning of e-barter in the Italian linguistic and business context. Unique messages were investigated to contextualize them according to the preferred target of websites (company size, sector, financial health) and to the business objective of the barter network (boost sales, increase customer base, cashflow management).

Second, in-depth qualitative data was collected through nine face-to-face semi-structured interviews with the following participants:

- 2 Owners/funders and 2 Managing Directors of barter networks.
- 1 Director and 1 President of the most representative Italian trading associations of SMEs, namely C.N.A. and Confartigianato.
- 1 Owner of a law firm specialised in enterprise networks.
- 1 Barter specialist engaged as a consultant by a trading association
- 1 former Vice-President of a trading association and entrepreneur who is engaged in local politics and specialised in the interconnection between financial, political and business entities.

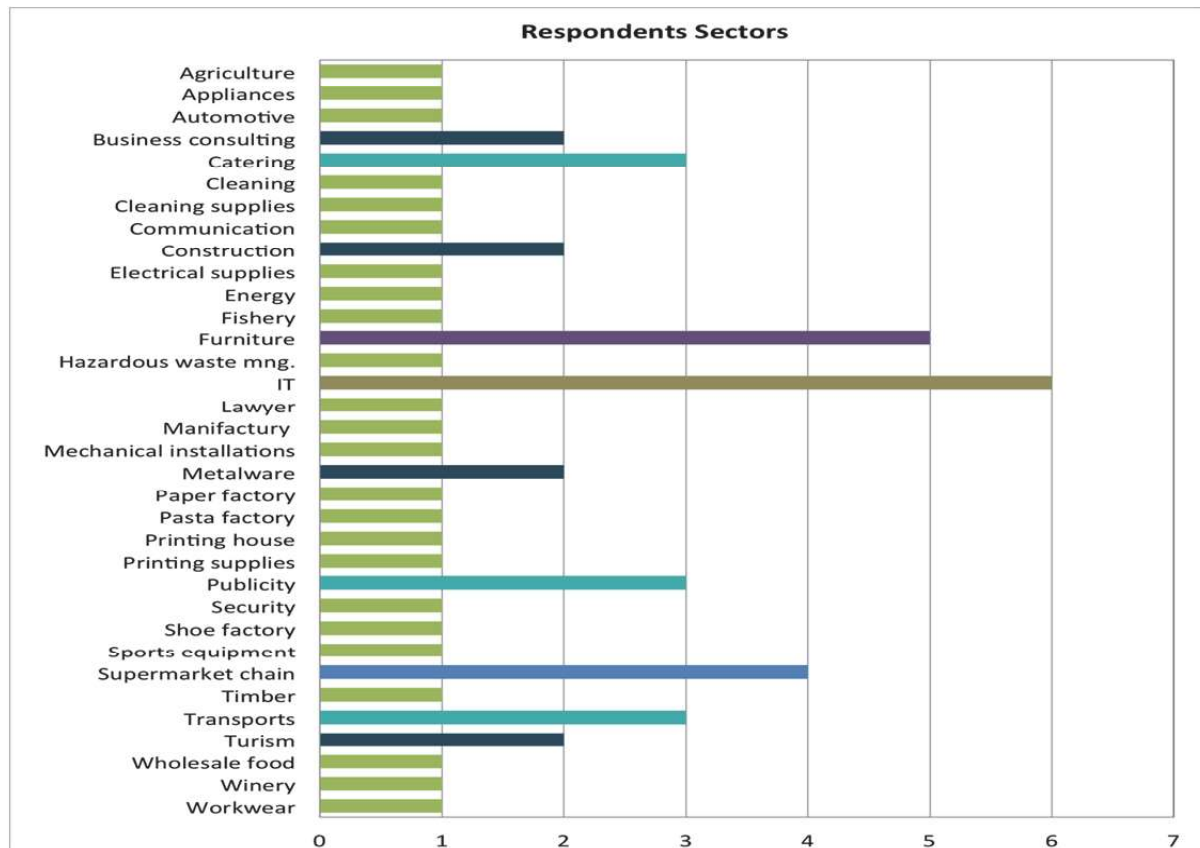
Face-to-face meetings were considered as the best way to recreate an environment for collecting qualitative data. A basic structure for the interviews ensured covering essential questions, whilst maintaining a free conversational framework permitted exploring new avenues, asking for clarifications and challenging the participants. The following topics were addressed: how the systems run, what sort of companies use and benefit from the system, and how entrepreneurial cultures influence the perception and adoption of the new barter systems. A content analysis was applied to the transcriptions of the interviews. Additionally, a narrative analysis approach was employed to identify patterns regarding the motivations to barter and to contrast expectation vs. reality concerning perceived obstacles to achieve the anticipated benefits of e-barter.

Finally, to gather data from companies actively engaged in barter systems, an online survey was constructed. The survey was distributed to companies within three different barter systems, whose directors had been previously interviewed and had agreed for data to be collected from their members. The survey link was distributed randomly to all members of these three systems. IP addresses were collected to monitor potential duplications. Fifty-six fully completed surveys were received and analysed. There was an initial reluctance to participate in this study, but once the respondents were assured that this was an academic study (i.e. not tied to another commercial network), the response rate increased. Surveys contained 12 main questions, all allowing open answers and covering the same areas as the interviews. Additionally, participants were asked to express degrees of agreement with 9 statements. In order to compare data with existing literature, the survey included questions to evaluate the 7 prejudices and benefits listed suggested by Shipley and Neale (1988). Data was analysed via line-by-line, open and theoretical coding followed by categorisation. Additionally, a thematic analysis was applied establishing conceptual relationships with the results of the interviews: this method allowed to further understand the affinities between the operators of the e-networks and their affiliates pertaining to motives, expectations and business models.

Respondents

There was a wide variety of different industry sectors represented in this section of the study, include manufacturing, wholesale, professional services and consulting as shown in Figure 1.

FIGURE 1
RANGE OF INDUSTRY SECTORS REPRESENTED IN 3 ITALIAN BARTER NETWORKS



Italian Barter Systems: Introduction

The lack of an agreed and fitting definition for non-monetary multilateral exchanges led to a variety of ways that Italian barter networks present their activities. There is no suitable Italian word to describe the activities of barter networks, so the English “barter” is more often used than the Italian “baratto”. “Baratto” is associated with bilateral exchanges and holds a negative connotation of ancient commercial practice, whilst multilateral barter is presented as an innovative model. This is then most often accompanied by discursive explanations that are best summarised as “*multilateral exchange of goods and services in compensation between firms*”. Of the 6 websites, only two use the Italian word, proposing a differentiation between “baratto” as bilateral and “barter” as multilateral. One website does not use either word. Whilst some companies chose to address the public by presenting multilateral barter as a complete different model than monetary exchanges, others prefer to explain it through their similarities, even using “financial language” such as “complementary currency to increase revenues and improve cash flows”.

Interestingly, the predominant focus of all of the six websites positions barter as a logical response to the financial crisis or companies facing financial difficulties. Indeed, references to financial crisis appear explicitly in 4 of the 6 websites, and in 2 cases also in marketing tag-lines (such as “barter: and the crisis disappears”). The other 2 websites refer instead to barter providing a resolution to generic business problems.

The following benefits were listed within the 6 websites as follows:

- Gain visibility, new clients or access new markets (6/6)
- Increase sales (6/6)
- Improving liquidity (6/6)
- Access new distribution channels (5/6)
- Reduce financial exposure (5/6)
- Reduce unsold inventories and stocks (5/6)
- Optimise productivity (3/6)

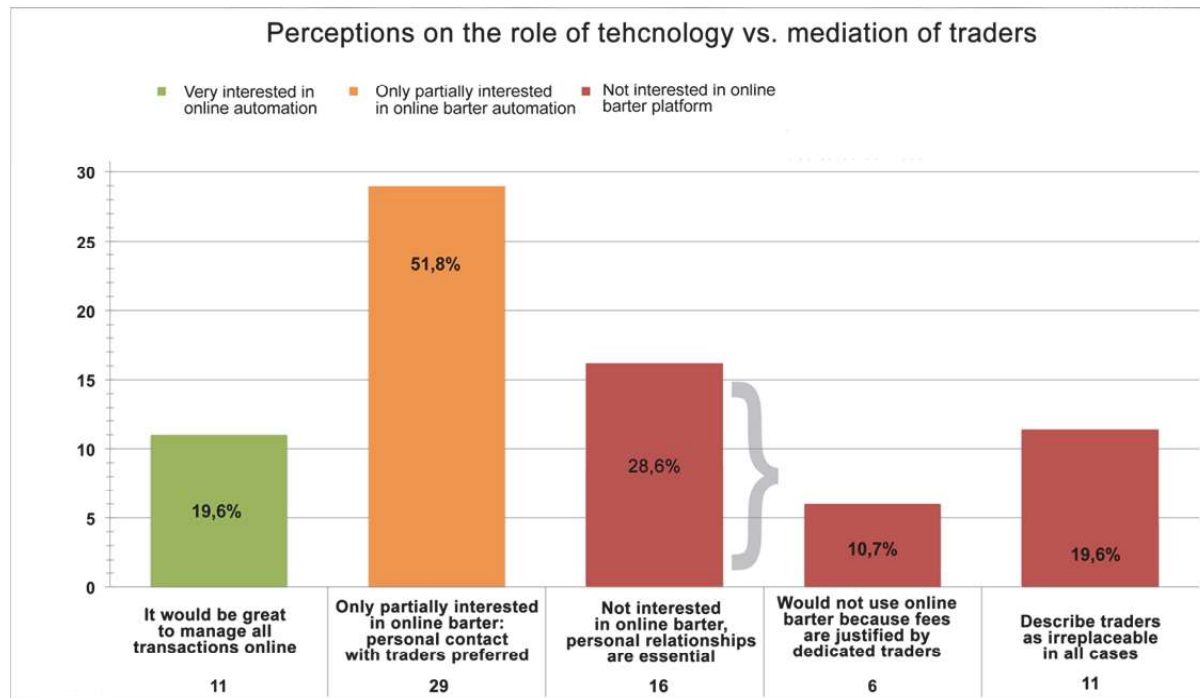
This terminology was reflected also in the interview data: All participants agreed that the Italian word “baratto” is reminiscent of bilateral exchanges, whilst “barter” (a lesser known foreign word) was more commonly used to describe multilateral asynchronous exchanges. Other terms used to represent the barter systems were: “purchasing office” and an “alternative credit network” as for some people, even the English term “barter” was felt to have negative connotations: Participant A felt that the prejudice against barter stems from misconceptions about money: the physical faculty of money is a strong, yet inaccurate, psychological construct, because it is rarely used. The real value of money, she argues, lies in its spending power” and therefore a barter network offers advantages in this regard.

Italian Barter Systems: Operations

Within the interview data, there were two different mechanisms operating in the current Barter systems. Web based barter was possible through online web platforms for some systems and Participant A placed strong importance on the quality of the web platform in order to allow users to identify opportunities and to transact online. Other barter network operators gave more importance to the active role of agents and traders in mediating transactions. Both participants B and C described SME entrepreneurs as either “too busy or too lazy” to change their sourcing methods and use Internet-based resources. They suggested that personal and even face-to-face relationships are too important in the Italian business mentality. In their networks, traders proactively visit affiliates, develop personal relationships, helping them to plan, analyse their purchasing lists and to push transactions through the network. Indeed, Participant B estimated that only 5% of firms transacting in the network did this autonomously without the assistance of a trader. For participants B and C the platform serves to create an online community, rather than automating transactions, and the network relies on personal relationships and agents.

Trading Association representatives agree that Italian enterprises are not strong in the adoption of Internet-based technologies, however they both ascribe this situation to the lack of simple, effective and reliable technologies designed for facilitating business operations. Indeed, a distrust of technology was apparent with Participant F describing the total ineffectiveness of business related Internet technology at large, which contributes to his firm’s diffidence towards it. The centrality of traders is confirmed by the comments harvested by the survey. 45 respondents described traders as “extremely important”: 29 of them consider them irreplaceable for certain barter negotiations whereas for 16 of them traders are “irreplaceable in all cases”. The language used refers in part to the importance of personal business relationships in general and in other cases specifically related to barter transactions. Traders seem to be preferred for delegating bartering activities. These views also match the survey respondent’s comments about the role of technology in barter.

FIGURE 2
THE IMPORTANCE OF TRADERS IN ITALIAN BARTER SYSTEMS



However, the view of the system operators was not mirrored as strongly in the survey, where company respondents strongly indicated that they would welcome a fully on-line platform, in line with previous findings about them giving higher importance to technology. 52% would welcome a more automated platform but without renouncing traders, whilst 28.6% would not be interested at all in technologically aided barter.

There are no specific regulations that cover barter in Italy. Participants D and F explained that barter is regulated by the Italian Civil Code, article 1552 regulating “*permuta*” (literally “swap”), which simply envisages “a contract whose object is the mutual transfer of ownership of property, or other rights from one party to another” (Anelli, 2008). Firms cannot exchange what they don’t possess; hence barter required the exchange of virtual credits, managed by the network. From a fiscal standpoint, barter is also regulated by the more complex Decree of the President of the Republic Number 633/72 (Paolo, 2010), which among other details regulates the invoices procedures, but it is not specific to barter. VAT must be paid also for non-monetary transactions, according to the equivalent monetary value. The situation becomes more complex when the exchange includes both monetary and non-monetary compensations, because it is not straightforward whether the exchange is to be considered a “*vendita*” (“sale”), a “*permuta*” (“swap”) or a combination of the two. Different theories apply to these cases, also according to rulings of the Italian Courts (Affanito and Tagliaferri, 2010).

Interview participants agree that these limited regulations constitute an advantage to barter, within a business context vexed by over-regulations. Only one Participant (D) believed that barter would benefit from more regulation in the short term: the other participants suggested that barter trade would be better served with some sort of certification or professionalization.

Invoicing or credit creation was relatively complex and cumbersome: most networks require firms to directly invoice to each other through an “invoice in compensation” system: firm 1 invoices firm 2 directly for providing a good or service in “barter credits, which firm 2 then requests the network operator to transfer to firm 1. In some cases, invoicing was more centralised: firm 1 invoices the network for providing a good in exchange of credits, and the network invoices firm 2 in the same way. Participant C

felt that this process represents an accounting simplification for companies, because they can invoice just the network for most movements, rather than keeping track of multiple VAT IDs for each trading partner. However, despite this appearing a much simpler system for the small companies, Participant A consider this method inefficient and to decouple the network from its barter nature, becoming de facto a virtual warehouse: in her view the barter network should facilitate stronger partnerships and improved relationships between companies.

All networks ask an upfront affiliation fee, in one case partially refundable if no transactions happened during the year. In addition to this, commissions are generally payable to each network in money for each transaction: whilst some networks demand them only for sales, others require them also for purchases. Some network set a fixed percentage; others calculate it on the basis of the company size; and others on the type of good, for which different rates might apply. Some networks, such as Network A, are open to negotiate their commission with individual companies, but the other networks all worked on a fixed commission basis. Some networks charge a commission fee in euros, and an additional % commission credited to “barter currency” credits: this strategy is designed to keep companies committed to the network and to increase the amount of goods and services available within the network.

Motivations for Joining a Barter Network

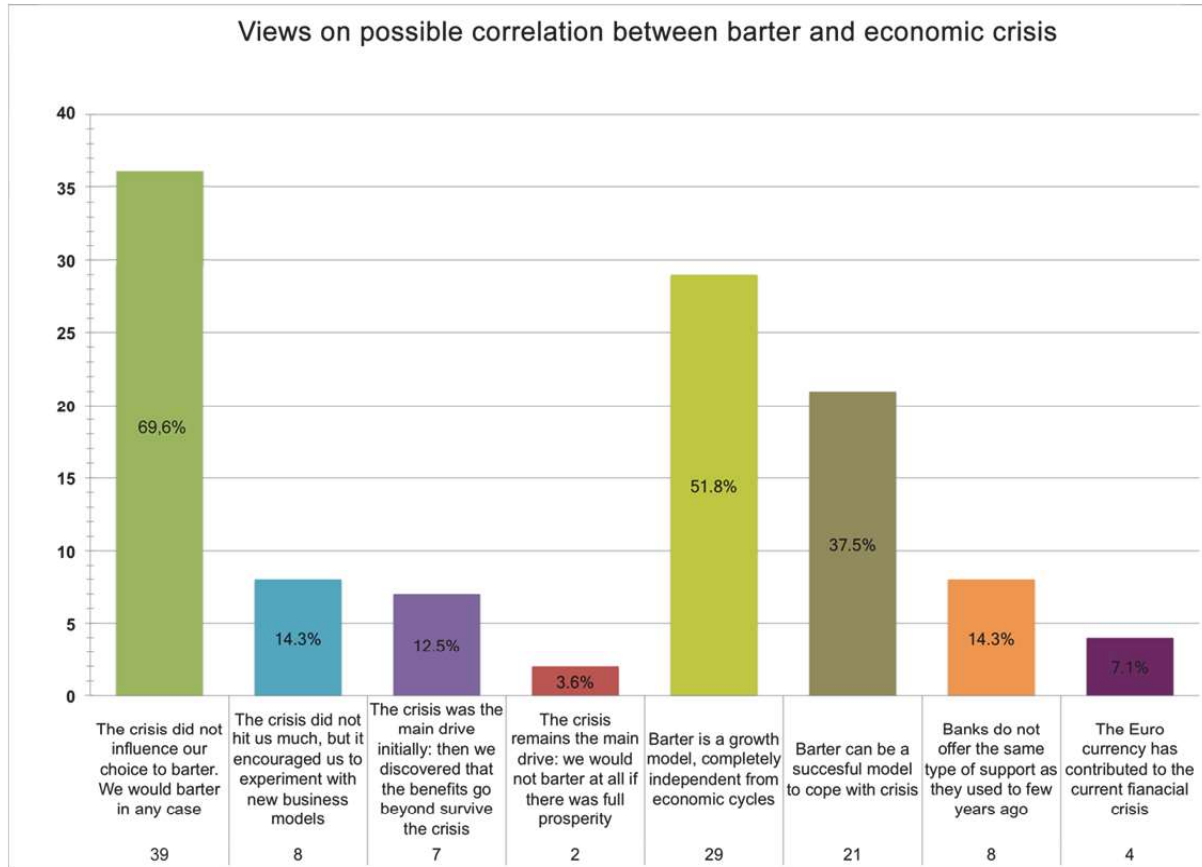
Despite the strong focus in the promotional material suggesting the main motivation to join a barter system to be financial crisis or liquidity, the entry criteria for joining a barter system appear to be strict. Indeed, membership pre-selection means that only successfully performing companies are actually allowed to join the networks. In fact, in the case of all the networks contacted in this research, it is not possible to become a member automatically through a web registration: prospective members are personally interviewed and need to provide documentation to certify their credit worthiness and their fiscal compliance in a process mirroring the one necessary to access credit from a bank.

Perhaps due to this pre-selection, the interviews and surveys provided quite a different picture to the website content. Reported company benefits related to solving liquidity issues appeared as secondary and very few respondents used the network to dispose of unsold stocks. Indeed, from the interviews it became apparent that companies facing crisis were not the segment that the barter networks wanted to recruit: the emphasis on barter as a solution to financial problems appears to be only a marketing tool, and only firms in good financial health are allowed to join and benefit from bartering. Participant A explained that the most operational firms in their networks are those in excellent financial standing and with good liquidity reserves to invest in growth: barter is being used facilitate business objectives with minimal investment. Participant A confirms that when speaking to the media, linking barter and crisis guarantees a space in the news, which grants visibility to the barter phenomenon, simultaneously acknowledging that firms in crisis are not actually welcome. According to Participant A, firms that are the most active in the network are those driven by opportunities to gain more visibility and increase their sales. The possibility to purchase without touching liquidity is considered as an incentive to experiment with an innovative model. In contrast, Participant D sees any correlation between crisis and barter to be dangerous, because it may foster the development of barter networks that are incapable of developing a structured and effective system: instead they would offer barter as an easy solution to structural cash flow issues, exploiting the crisis without being interested in constructing an economical and sustainable equilibrium within the network.

This apparent conflict between marketing “spin” and actual use of barter is reflected in the survey data (Figure 3) as well: 70% of respondents state that they did not join the barter system as a result of economic crisis, 99% of firms benefited from entering new markets and 94% experienced an increase in sales. Another 14% were not affected by the Global Financial crisis, yet they felt motivated by the economic crisis to experiment with alternative business models. Most of the respondents considered barter primarily as a growth-model. Only 16% admittedly engaged in barter to cope with the crisis, yet only 2 of these respondents would stop bartering if there was full prosperity: the others appeared to have discovered enough benefits to continue bartering in any business cycle. Interestingly, 7% of respondents related the crisis specifically to the Euro currency, which became a strong motivating force for barter, and

14% expressed contempt against the diminished support of banks. These subjects welcome non-monetary transactions as a way to actively display their hostility towards institutions that “betrayed them”.

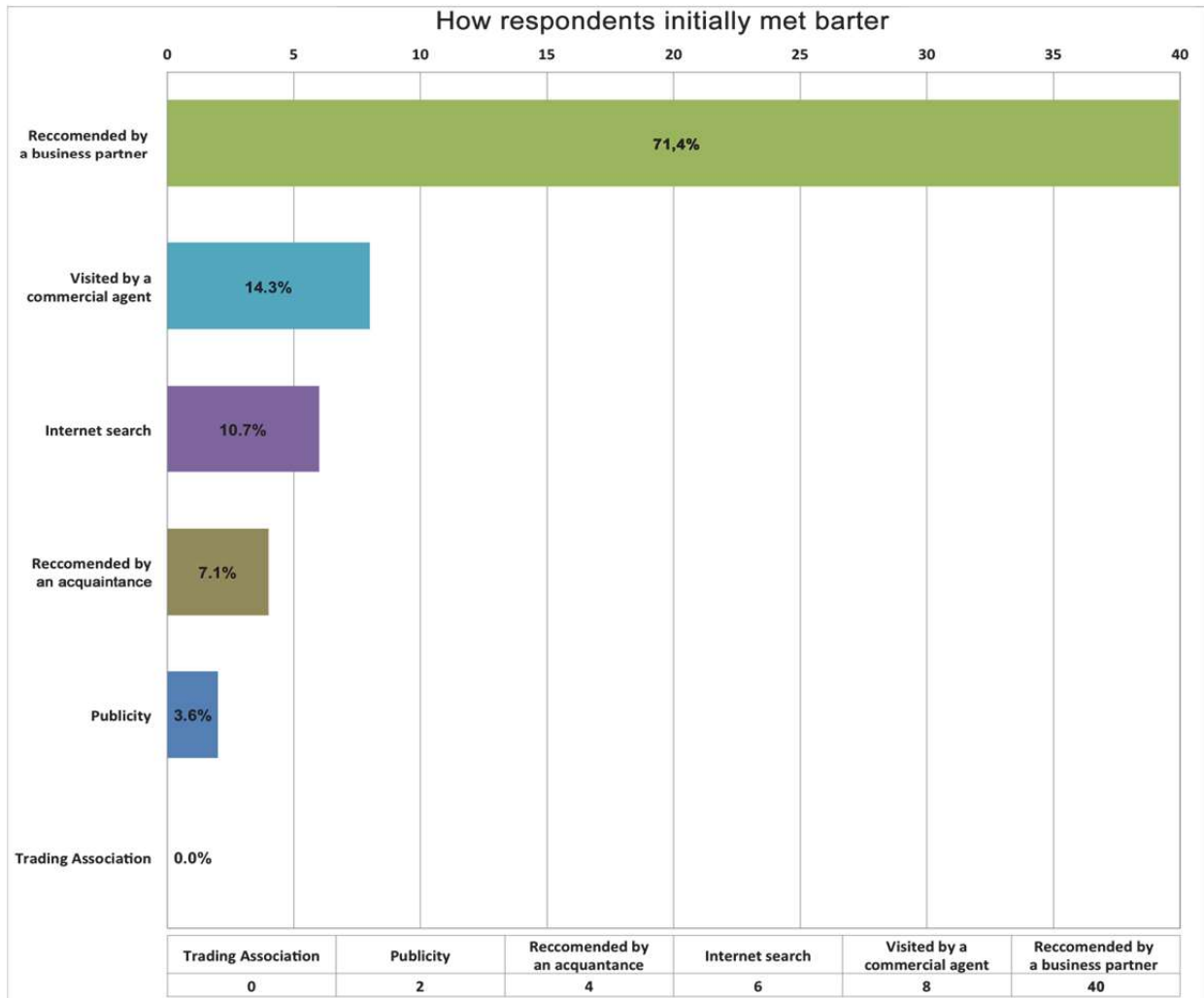
FIGURE 3
BARTER SYSTEM MEMBERSHIP AND ITS RELATIONSHIP TO ECONOMIC CRISIS



It is interesting to note the way in which companies join barter networks: the vast majority of companies were introduced to barter systems through current business partners as shown in Figure 4. The vast majority (71%) of respondents joined the network through the recommendation of a business partner: another 14% joined through a commercial agent, 11% through independent Internet searches, 7% through an acquaintance and less than 4% as a result of a marketing campaign.

Despite the general consensus about the relevance of Trading Associations, no respondent had been introduced to the network through these Trading Associations. This suggests a relatively closed and tight network of companies and is important for several reasons: the lack of institutional recommendations is an obvious gap and it is unclear whether this is due to the perception that barter is somehow “illegal” or “tax avoiding” or whether there are other issues, such as trust. Trust appears to play an important role in network participation since the majority of companies enter the network through the recommendation of existing business partnerships. Bizarrely, despite the highly personalised recommendations to join, very few companies appear to pass on this recommendation. Most respondents (82%) did not go on to propose barter to their suppliers, despite 64% of them having been introduced to barter by their own partners. Of the respondents that joined the network as a result of a referral from business partners, only a small number (7%) then recommended this system to their own suppliers.

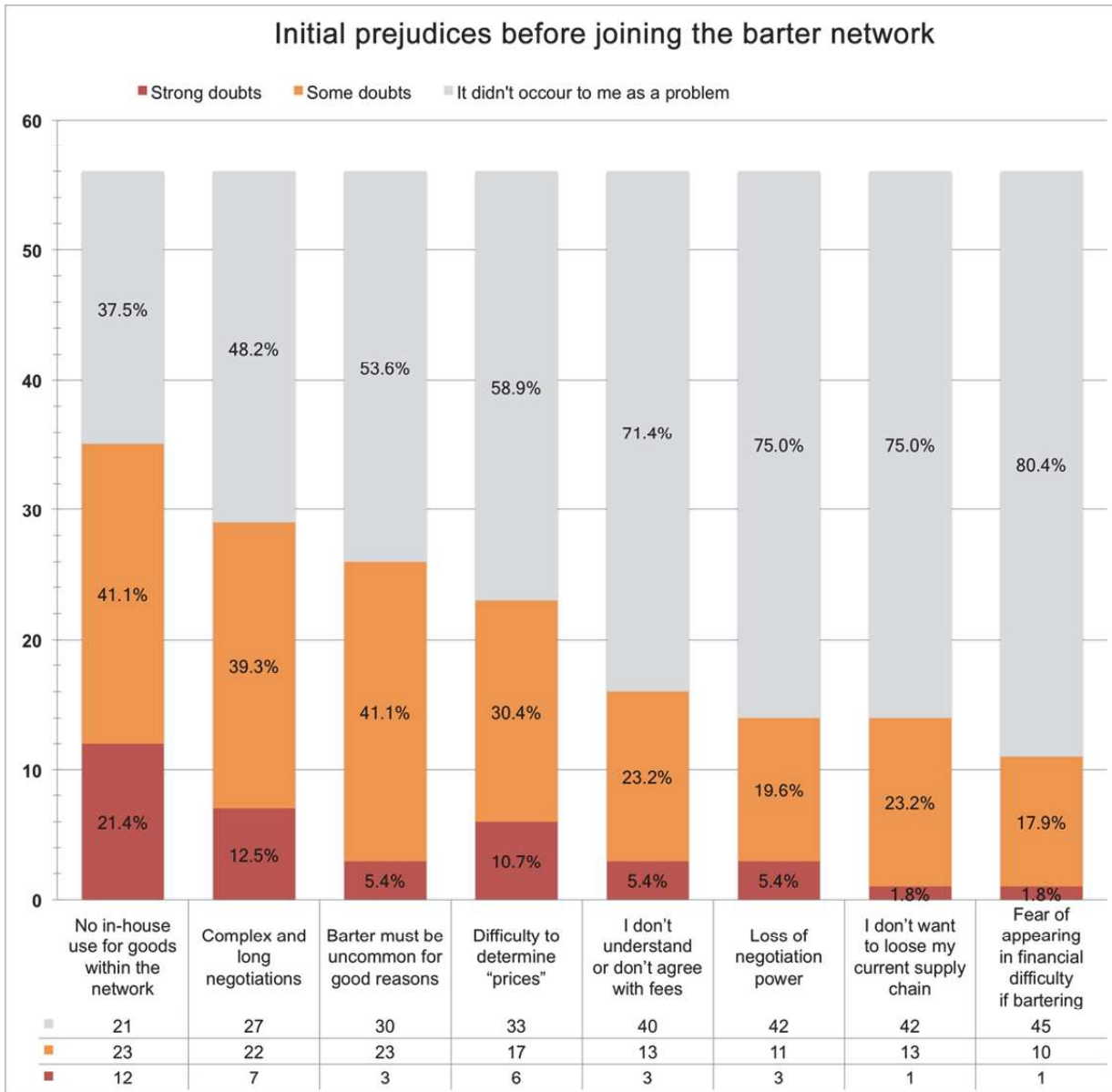
FIGURE 4
MECHANISMS FOR INTRODUCING COMPANIES TO BARTER NETWORKS



With regards to the initial prejudices against barter, this study found a similar trend to that identified by Shipley and Neale (1988), but with significantly less strong objections. This could be explained by the fact that in Italy, barter systems are still not very well known, therefore companies have not yet developed a set of strong prejudices.

The survey results confirms that barter benefits Italian SMEs are capable to adopt alternative business models with little need for internal reorganisation, due to their size and informal internal structure. Only 7% needed significant reorganisation, whilst another 14% of companies made no organisational changes at all, and the majority (76%) made only small organisational changes. Respondents described the required reorganisations as twofold: logistic (as a consequence of changing their supply chain) and relational, referring to the introduction of interactions with external traders.

**FIGURE 5
INITIAL PREJUDICES TOWARDS BARTER**



Outcomes of Barter Networks

There were three main positive outcomes to barter systems: speed of growth, increased cash flow and the generation of new customers/sales. This clearly reflects the idea that a distinctive advantage of barter is found in the opportunity for the small business to establish a base of customers that might otherwise be unavailable (Williams, Tondkar and Coffman, 1984). Participant B identified two main drivers, the possibility to acquire goods and services immediately, even with little cash available, and secondly, the zero risk of solvency when selling.

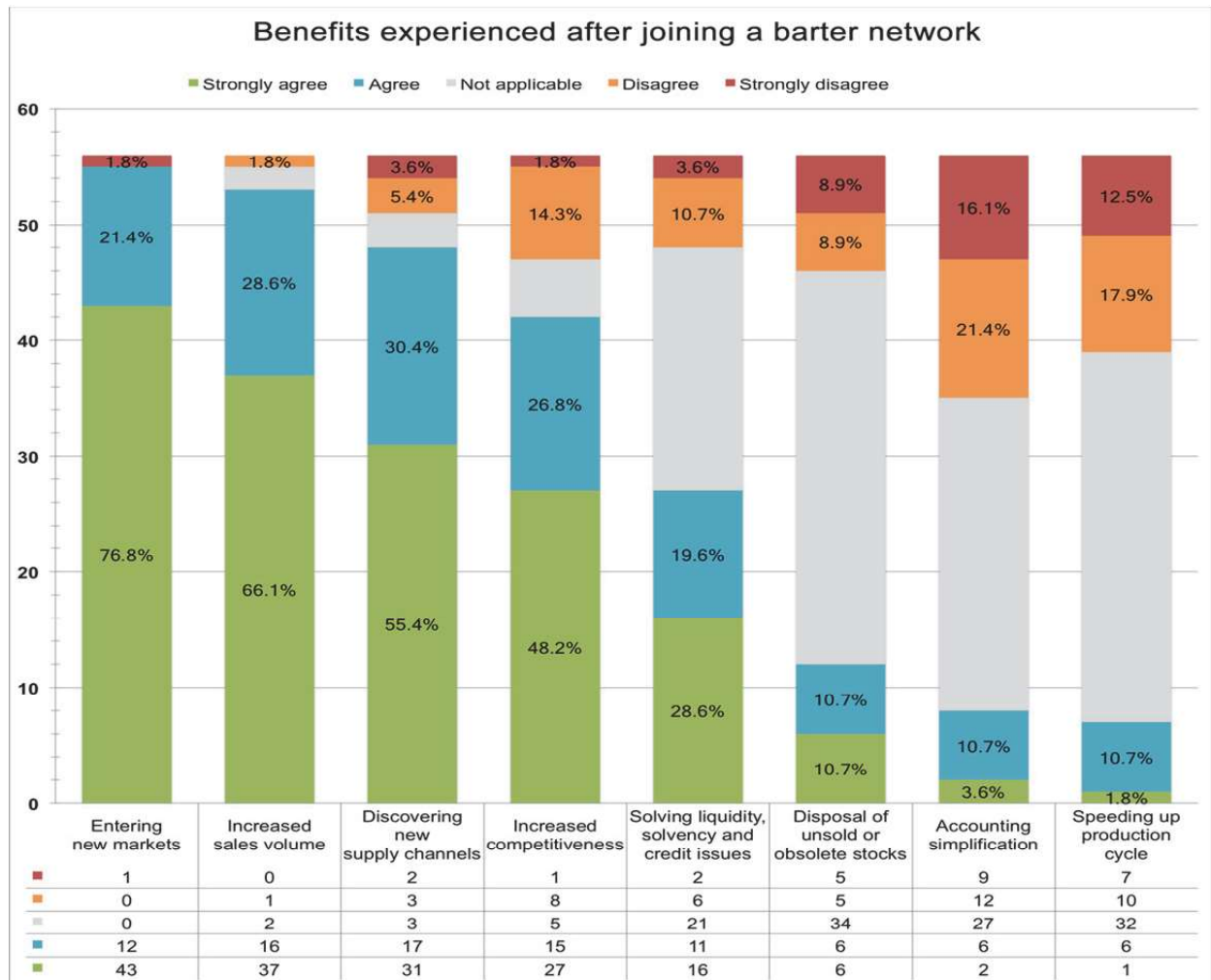
Barter appears to act as an accelerator of business activities because purchasers don't have to wait for liquidity and goods can be obtained earlier and put to good use by the firm. Both representatives of the Trading Associations support the notion of barter as productivity accelerator, and as a solution to liquidity and solvency problems. Supporting this, Participant C described barter networks as an "external

purchasing department” that actively sources suppliers for companies, offering them the advantage of anticipating purchases without affecting liquidity.

Participant F highlighted how SMEs can be seriously affected by the difficulty of getting paid in a timely manner, a situation that could be alleviated by barter exchanges in which the network ensured direct availability of credits for each sale. Participant E supported this view, suggesting that the main driver for adopting barter is the possibility to “abandon negative debts in favour of productive debts”. The power of barter networks is therefore their unique capability to transform purchases into an instant guarantee of future sales within the network, reducing the additional efforts of resource transformation when dealing with money. At the same time, he conveyed a high level of diffidence for barter networks that don’t offer sufficient guarantees: with crises come a plethora of gimmicks and scams, therefore the current economic downturn requires an increase level of awareness that, in his view, it is bound to actually delay adoption of alternative business models, even if they could theoretically be beneficent.

Participant H pictured barter as an effective solution to the crisis as long as it would involve public works and fiscal system. He described how barter could be a powerful ally to SMEs that, despite being virtuous, are denied credit from banks. This relates to a change in the way Italian banks estimate the creditworthiness of their clients, looking at parameters that do not reflect their actual ability to repay loans.

FIGURE 6
POSITIVE OUTCOMES FROM BARTER SYSTEMS FOR SMALL COMPANIES

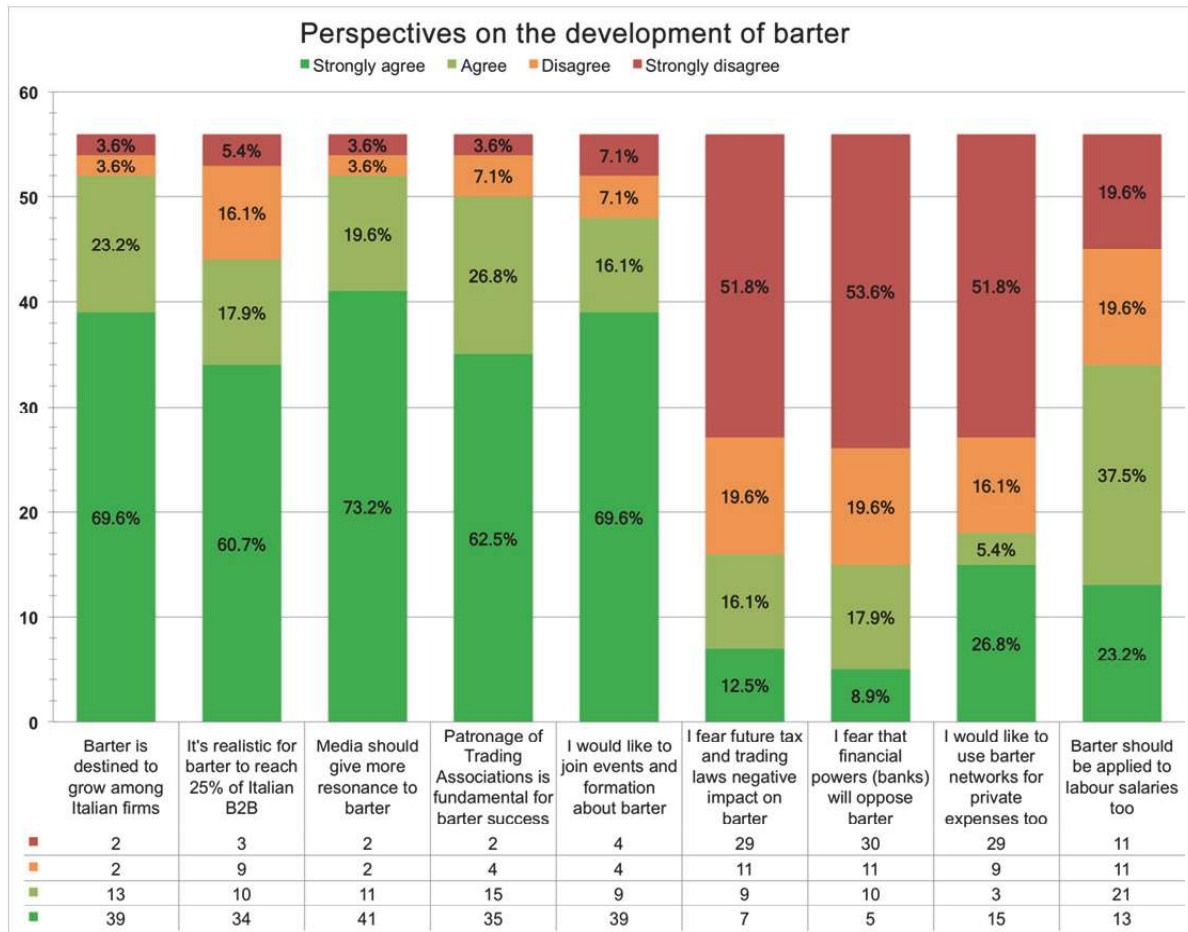


Future Growth of Barter

There was a general optimism about the future growth of barter systems, with some forecasting their replacement of up to a quarter of domestic business transactions. The involvement of Trading Associations is considered fundamental to this growth, even if no participant had been introduced to barter by such entities. There is limited apprehension about trading and fiscal laws becoming an obstacle to barter, or banks lobbying against it. Two competing perspectives were found on the operational aspects of future barter networks: one was based around technology, whereas the other proposed a system based on a traders network to facilitate transactions. Specialists tend to support the importance of Internet platforms, whilst network operators are at large creating trader-centered structures. These views are underpinned beliefs about the role of barter as opposed to monetary systems, and how much they could be integrated in the future.

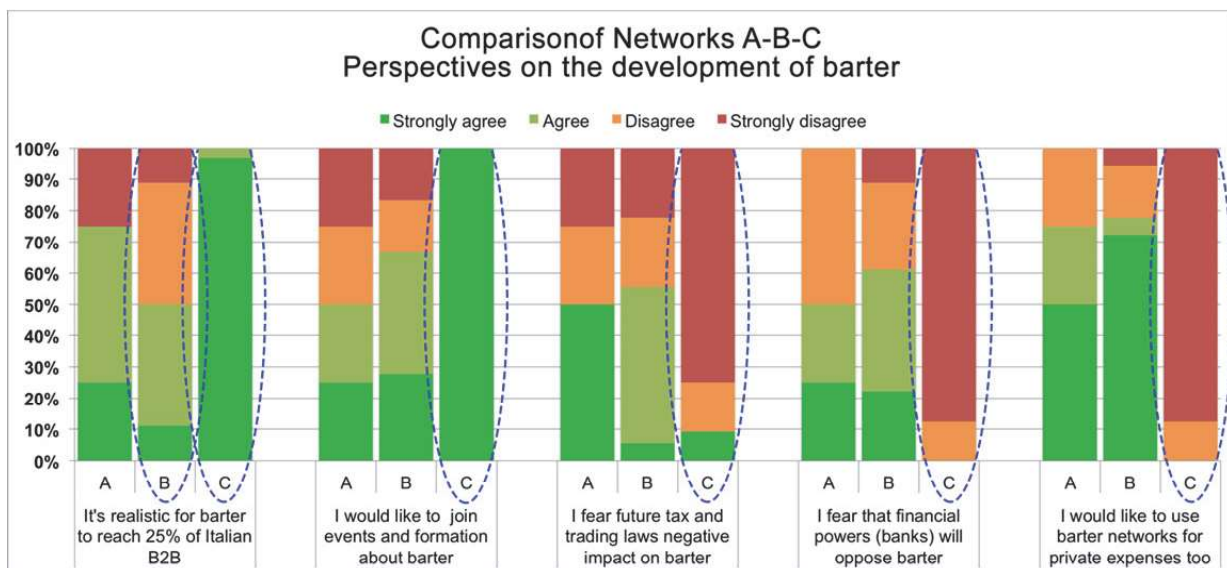
Whilst Italian SMEs appear reluctant to invest in new ICT platforms (Antonioli, Mazzanti and Pini, 2010) they remain highly sensitive to technology supporting networking because it reflects the traditional collaborative outlook in these regions (Chiarvesio, Di Maria and Micelli, 2004) in which a network based organisation is the dominant organisational structure (Capasso and Morrison, 2013). Despite the potential of IT systems, at present, Italian barter networks are powered by conventional and accessible web-based technology. This is an important factor because it ensures both affordable costs and easiness of adoption.

FIGURE 7
POSSIBLE FUTURE SCENARIOS FOR BARTER



When comparing the future scenarios for barter systems, the data revealed that each network has developed a distinct internal culture, as shown in Figure 8. Respondents from Network A (which promotes barter as a business strategy for expansion, alongside monetary exchanges) are mostly optimistic about barter reaching 25% of Italian B2B. They also are in favour of barter being used for private purchases. There is no clear trend in their answers to questions about the need for training and /or regulation, fears of institutional obstacles to barter coming from government or banks: their answers are equally distributed alongside different opinions. These findings are in harmony with the fact that Network A does not promote a barter culture in opposition to monetary transaction and targets any firm interested simply in autonomously growing their already successful business: their choice of barter is not associated with a specific take on politics or national economy.



FIGURE 8
COMPARISON OF NETWORKS A, B AND C.



Respondents from Network B (which promotes a trader dependent system) appeared to be less autonomous and half of them are not optimistic about the future growth of barter and their majority would welcome more training. They also hold no strong views about politics and national finance, and the majority of firm in Network B are strongly interested in running personal purchases through barter. Respondents within Network C (which actively promotes barter in opposition to money) are extremely homogenous in their answers. The majority are optimistic about the future national growth of barter, and they are generally very interested in events and training. The vast majority have a strong fear that the government might create obstacles to barter and they unanimously fear that financial institutions will oppose barter development. Interestingly, they are all unanimously against using barter for personal purchases. Network C clearly fostered a strong internal culture of barter almost ideologically in opposition to monetary transactions. These views are triangulated with the interview data and summarised in Figure 9.

FIGURE 9
SUMMARY OF INTERVIEW DATA KEY POINTS

	NETWORK OPERATORS				SPECIALISTS			TRADING ASS.	
	A	B	C	D	E	F	G	H	I
Educating entrepreneurs to the benefits and meaning of barter	AGREE	AGREE	AGREE	AGREE	AGREE	AGREE	AGREE	AGREE	AGREE
Create a professional figure for traders	AGREE	DISAGREE	DISAGREE	AGREE	AGREE	DISAGREE	DISAGREE	AGREE	DISAGREE
Allocate trusted referents in the local territory	AGREE	AGREE	AGREE	AGREE	AGREE	AGREE	AGREE	AGREE	AGREE
Increase traders proactive human contacts with affiliates	DISAGREE	AGREE	AGREE	DISAGREE	DISAGREE	DISAGREE	DISAGREE	AGREE	DISAGREE
Developing an effective technological platform	AGREE	DISAGREE	DISAGREE	DISAGREE	AGREE	AGREE	AGREE	AGREE	AGREE
Increase barter system automation and integration with ERP systems	AGREE	DISAGREE	DISAGREE	DISAGREE	AGREE	AGREE	AGREE	DISAGREE	DISAGREE
Partnership between barter networks and banks	AGREE	DISAGREE	DISAGREE	AGREE	DISAGREE	AGREE	AGREE	DISAGREE	AGREE
Increase integration with monetary credit circuits	AGREE	DISAGREE	DISAGREE	DISAGREE	AGREE	AGREE	AGREE	DISAGREE	AGREE
Emphasize dissociation with monetary systems	DISAGREE	AGREE	AGREE	AGREE	DISAGREE	DISAGREE	DISAGREE	AGREE	DISAGREE
Gaining patronage of Trading Associations	AGREE	AGREE	AGREE	DISAGREE	DISAGREE	AGREE	AGREE	AGREE	AGREE
Expand barter to public sector spending	DISAGREE	DISAGREE	DISAGREE	AGREE	AGREE	DISAGREE	DISAGREE	AGREE	DISAGREE
Enable barter to consumers	AGREE	DISAGREE	AGREE	DISAGREE	DISAGREE	AGREE	AGREE	AGREE	DISAGREE
Combat fraudulent and pyramidal "barter" schemes	DISAGREE	AGREE	AGREE	AGREE	AGREE	DISAGREE	DISAGREE	AGREE	AGREE
Improvement of national structure and policies against online fraud	AGREE	DISAGREE	DISAGREE	DISAGREE	DISAGREE	AGREE	AGREE	DISAGREE	AGREE
Include energy suppliers in the barter circuits	AGREE	DISAGREE	DISAGREE	AGREE	AGREE	AGREE	AGREE	AGREE	AGREE
Barter networks becoming corporations and joint-stock companies	AGREE	DISAGREE	DISAGREE	AGREE	AGREE	AGREE	AGREE	DISAGREE	DISAGREE
Transform the network in an accredited credit entity, or integrate it with one	AGREE	DISAGREE	DISAGREE	DISAGREE	DISAGREE	AGREE	AGREE	DISAGREE	DISAGREE

 AGREE
 DISAGREE

NOTES

- (1) F G envisage barter as too costly if based on physical traders, and unsustainable unless firms develop autonomous barter capabilities. I envisages Trading Associations promoting barter to their affiliates.
- (2) B C D identify traders and not technology as the main resource of barter.
- (3) Reasons: add credibility in local territory and increase affiliates via mutual conventions.
- (4) A B C feel that scams will become an issue once barter will become more common but at this stage efforts should focus on develop effective barter.

CONCLUSIONS AND RECOMMENDATIONS

In this case study of Italian barter networks, existing strong collaborative networks are an essential part of the local trading mentality and process and to some extent, barter systems are a logical extension of this. However, barter still suffers from various degrees of stigma, as well as a lack of regulation compared to monetary / banking systems. Barter has a poor reputation and the perception of tax avoidance. The use of the English word “barter” has been used to try to overcome this popular misconception.

The counterintuitive approach taken to promote barter systems by referring to financial crisis, but only allowing entry to such networks for companies with strong financial performance also appears contradictory. In contrast to the expected position of barter being relevant to companies in financial crisis, Italian barter systems offer a way through temporary liquidity issues and firms choosing to barter appeared to be more focused on growth, speed of growth, increased market visibility, and gaining new customers rather than survival. It seems likely that firms would continue to use barter irrespective of the particular economic or business cycle, and are more open to “*opportunities for structuring substantially new business models*” (Kaikati and Kaikati, 2013, p. 47).

Italian Barter systems operate in 2 distinct ways: through technology based barter networks or through agent based barter networks. Personal contacts provide an extra layer of control in a culture, where contractual rights don't offer sufficient peace of mind. Participant D, whose network has been active for over a decade, confirmed that the main problem for Italian barter is not in the lack of technological implementation, but rather in the low level of qualifications of traders, which in his view, remains the most important resource of barter. Yet experiments show that electronic web based systems could work (Bravetti et al, 2007; Duffy, 2001; Fortino and Russo, 2012). Indeed, technology is currently only playing a very small role in the rise of barter in Italy. Barter trade is currently facilitated by externally trusted traders, a model that reflects the Italian business culture of strong personal relationships. Whilst innovative, it does not represent a form of discontinuous change but rather a novel application of a long-standing business mentality that favours interpersonal relationships. Indeed, the rise of barter in Italy can largely be ascribed to the proactive work of traders, allowing companies to experience the benefits of barter with minimal investment and reorganization. As the interest for barter grows, a centralized relational model may no longer prove sustainable and effective to support the expansion of existing networks.

The main motivations of companies within the barter systems were overwhelmingly not crisis related but growth oriented as suggested by Kaikati and Kaikati (2013). This is in contrast to the way that barter is promoted by the networks which rely on the old adage that barter is an appropriate response to economic crisis. This suggests a more modern approach to the marketing of barter systems are required, and that its old image of being either “planned economies” or “crisis management”, should be reviewed. Since barter system require a critical mass of companies offering things that other companies need, once this has been achieved, networks could now focus on facilitating higher levels of autonomy for their members.

The general experience of companies within the barter system is that it brings in new customers, and at present, companies prefer to retain the personal contact through an agent-based system. There was also little requirement to set up new internal systems and therefore no new business model was required in most cases. This situation enables the existing networks to work, but leads to complications with skills, training, and regulation of such an agent-based system. In summary, Italian barter operators are currently capable of handling the *trading* aspect of it but are not ready to manage barter as a *financial credit* institution: because they lack the expertise, the credentials, the regulations and the critical mass.

The Future of Barter Trade in Italy

To extend barter systems, a future online barter system would require three main elements: a sophisticated online platform; a large network in which both purchases and sales can be resolved (without the need for traders to spend time to find new members); and an enhanced credibility framework that

ensures adequate levels of trust to new members. To this end, barter networks should envisage gaining the same type of accreditation as credit institutions, which would supply the trust necessary to encourage members to barter autonomously. It is highly recommended that current reputable barter networks need to push for the establishment of a national certification or regulation to prevent the future expansion of barter leading to a proliferation of questionable (if not fraudulent) entities.

A barter network is essentially a credit supplier and, there could be a strong temptation to “build one’s own bank” without the necessary competences and credentials. This worst case scenario envisages hit-and-run schemes aiming to collect membership fees without building a proper trading network. Other future risks include the barter networks making the same errors that led to the monetary financial crisis: internal hyperinflation, reckless offering of credit, offer-demand disequilibrium and internal speculations. The current lack of specific regulations is perceived as beneficial within a county beset with overregulation: this situation could instead be seen as an opportunity for barter operators to influence legislation for their own protection.

Finally, the expansion of barter within Italy, could be accelerated by some form of alliance or joint venture between a barter network and a credit institute. This study revealed that only a minority of network operators are working in this direction. It would be important to know if any of the existing barter networks is capable of making this change from trading network to credit entity. This could only happen once a network reaches a ceiling that makes internal equilibrium unmanageable, in which case there are two possible routes to further growth:

- The barter network forms a partnership with an existing credit/banking group in order to complement monetary and non-monetary mediums of exchange. This could work because the barter network lacks the experience and authorisation to manage monetary credit but the bank would offer this experience, and make barter a viable alternative to the current monetary system.
- A second option involves the barter network creating a partnership with a sector that offers a common commodity to all the members of the network, for example, an energy provider. In this case, the injection of a huge volume of easily exchangeable commodities within the network would allow maintenance of the equilibrium. This second option would result in the network becoming dependent on one large member who could become too powerful and alter the status of independence of the network operators.

A more feasible possibility is that the change from trading to financial will happen from external influence, and not as an evolution of current barter networks. Two ways are envisaged. One possibility is that a group of investors will partner with credit institutions, Trading Associations, energy (or communication) providers and invite in its board of directors some authoritative representative of Italian finance, industry or politics. Such an entity would have the required credentials to become a credible, large and dominant barter operator without the need to leverage on existing commercial networks. Trading associations, who are a strong presence among the Italian SMEs, would also provide a huge pool of potential customers. Additionally, Trading Associations already manage or at least have access to their members’ accounts and could therefore easily implement the necessary vetting processes to ensure the credit worthiness of potential barter affiliates. These institutions already have at their disposal a large supply of both quantitative and qualitative data about trading transactions and supply chains across various commercial and industrial sectors (i.e. all the data necessary to create a preliminary model of internal equilibrium and sustainability). These Associations also carry out an advisory role and would be very well positioned to persuade their members to engage in barter transactions. It should be noted that Italian trading associations are highly politicised and have strong ties with local government, national politics and commercial banks. The associated bank groups would be capable of managing barter credits in the fashion of monetary credits providing sufficient levels of control, credibility, risk management and macroeconomics expertise. There are few incentives for Trading Associations and associated banks to move into this new system, but it could provide an innovative way of extending their customer base, operations, and profit.

An alternative future development of a large barter network could be initiated by a powerful IT company, in particular a provider of ERP systems. In the case of Italy, this option appears quite remote but in a global context there are powerful corporations providing commercial software to manage accounting, ERP, supply chain, accounts payable and SPM. These companies already manage the largest global business networks and host in their servers the most comprehensive set of raw data about transactions of millions of enterprises. If they decided to evolve into a financial/credit institution, they would be very well positioned to elaborate an indirect barter platform integrated in their existing discovery networks.

Contribution to Literature

The main element of originality of this research is that it focuses on the Italian context. Whereas abundant literature addresses the peculiarity of Italian SME districts and collaboration models, these studies don't address the phenomenon of non-monetary exchanges. Another valuable contribution pertains to research on the correlation between barter and business cycles which provided different results in different countries.

This research diverges from common research on barter because it goes beyond its definition as a bilateral exchanges, therefore it provides a novel insight on the effectiveness of structures that allow multilateral asynchronous transaction. Moreover, this study transcends the classic approach of considering barter in opposition to money by presenting evidence of a smooth coexistence of monetary and non-monetary exchanges within a business model. Finally, this research contextualises e-barter providing insight on motives, adoption challenges and sustainability of innovative business models within specific organisational and trading culture.

Limitations and Research Recommendations

The use of a case study methodology inherently brings limitations (Flyvberg, 2006), such as the lack of generalizability, but much of what was seen in this Italian case study could apply to other countries. The heavy reliance on personal relationships and the need for trust may not transfer to other cultures, but the requirement for a range of companies looking for growth options rather than to deal with immediate crises is likely to transfer to other situations.

In addition, the amount of data gathered for any case study can always be improved upon: a larger study would help to not only the design of such barter systems but also the optimal distribution and volumes of business sectors that could make a network sustainable. As many theoretical studies on barter within monetary theories are focused only the traditional bilateral barter, it would be useful to extend them to *multilateral asynchronous* barter, with particular focus on the conditions to reach an internal equilibrium. Finally, because recent forms of multilateral barter networks act de facto as dispensers of trading credits, it would be useful to include data on barter transaction in studies pertaining to trading credits strategies and usage.

In conclusion, and despite the unique setting, the implications for the growth of regional trade through barter networks offers a viable strategy for participants, agents and new electronic systems.

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