Business-to-business barter exchange: A Viable Marketplace

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"This revolutionary cashless system is the currency of excess business capacity."
("Welcome to IRTA")

Introduction

Business-to-business barter exchanges share many of the characteristics of social currencies (Vasconcelos Friere 2009) but most are for-profit businesses operating in the private sector and have distinct legal status at least in some jurisdictions. Much of the development in business-to-business barter exchange industry has occurred in the United States and in other countries such as Australia in the last 30 years where barter exchange is recognized in legislation. Barter credit exists as a type of sub-national instrument and barter exchange as a type of institution within the national polity.

This paper is a work in progress[*]. It is a collection of information and thoughts gathered around the questions: What makes business-to-business barter exchange viable? How does it function? What is its public accountability? What is its relationship to the national economy? And how does it affect price stability? I was struck by Stodder's proposition that the WIR, the "medium of payment" of the WIRBank, "coexists with SFr, as a secondary or "residual" currency" (Stodder 2009:26). To extrapolate a general statement, the barter credit coexists as a secondary or residual currency with the national or primary currency, standing in where the primary currency is unavailable. If this is the case, Stodder explains, barter exchange activity would have an anti-deflationary effect. Some of the explorations in this paper dialogue with this proposition.

In this paper I propose that:
1. Barter credit`s functional relationship to the national currency is shaped by the barter exchange`s role as a marketplace for excess business capacity, 2. The option available to businesses to participate in the barter exchange and the national economy acts as a mechanism that links together the barter exchange and the national economy, and 3. Conditions and constraints imposed by legal definitions and industry policy and practice business-to-business barter exchange help shape the barter credit to become the functional equivalent of an extension or residual currency to the national currency.

My emphasis will be on the barter exchange's capacity to act as a marketplace for excess business capacity. I provide information in the "Organization" and "Industry" sections that could be considered contextual or background to build a picture of business-to-business barter exchange and to consider the role of actors such as the owner/manager of the barter exchange and industry advocates. This will help to make apparent the nature of business-to-business barter exchange's relationship to the larger political economy. This also serves to identify key parameters within which business-to-business barter exchange operates which shape its functioning. I explore this in "Type of Economy".

Organization

In a study of Bartercard, a business-to-business barter exchange in Australia, the management attributed the success of barter exchanges to ``effective administration, rigorous organizational control, and aggressive marketing to obtain the right mix of high demand services and products within the exchange`` (Birch and Liesch 1998:332). Member businesses concurred, reporting they felt that effective management was a more important factor than poor economic climate to the success of the exchange.

The typical barter exchange is a small business managed by the owner with a small staff. Membership is comprised of small and medium businesses operating in the locality or region, the reach determined in large part by the owner`s "local knowledge" and connections with area businesses (Whitney 2010). Barter exchanges have on average 500 member businesses. These businesses normally make 5 to 15 percent of their total annual sales in the barter exchange`s marketplace (Birch and Liesch 1998, Napoli-Cohen 2011[1]). Membership is granted by the owner and requires payment of a

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1 Birch and Liesch (1998) found barter exchange provided about 5% of total sales for member businesses, Napoli-Cohen (2011) estimates barter

membership fee. The barter exchange operates as a kind of private club.

The barter exchange's control is essentially on the quality, variety and volume of items in the exchange and the velocity of trade (Whitney 2010, Logie 2010, Napoli-Cohen 2010). It can also control the volume and velocity of extension of credit (Whitney 2010, Logie 2010) and its membership (Logie 2010). Much of this involves the management and quality of the membership. The quality of the exchange and value of the complementary currency is ultimately dependent upon the quality of the businesses that make up the membership (Logie 2010).

Monitoring and Control
As information technology is now normally used in the management of barter exchanges, monitoring and control is made highly effective with the availability of good information. Barter exchanges operate with proprietary software applications available, for example, through licensing with a barter exchange software provider. Barter exchanges are centralized and all activity is recorded and available to the exchange operator as data in real time. With this monitoring tool available, the barter exchange operator can precisely target her management activities.

The value of the barter credit is an indicator as well as a result of the health of the trade activity in the exchange market. The value is indicated by price levels or the presence of inflation or a discount market on the barter credit. More directly, the health of the barter exchange is monitored by the exchange owner by indicators of trade activity. These are the volume and velocity of trade and the level of credits and debits in member accounts.

Sales and Marketing
A common problem in barter exchanges is a lack of trade activity related to a lack of demand for the items offered in the exchange. This is a chronic issue that requires constant management to stimulate trade in the barter exchange. Owners address this issue through marketing the offerings to members and expanding the selection of offerings by attracting new members (Logie 2010, Napoli-Cohen 2010). It is estimated that a small exchange requires two managers who spend the majority of their time in sales and marketing activity[2]. Members with high credit levels are encouraged to buy. “This is where it gets creative,” says Barter21 co-owner Napoli-Cohen. In what is essentially sales and marketing activity, such members are contacted by the barter exchange owner and shown a number of items on offer. Success is often dependent upon his sales and marketing skill. Members with high debit accounts are encouraged to make sales.

The variety and selection of goods and services on offer is monitored and controlled by the barter exchange manager. GETS Plus, a barter exchange software licensor, co-founder Richard Logie characterizes goods and services as “core” and “non-core”, and “hard” and “soft”. Core items are those that are essential and wanted almost universally, for example, electricity, paper and light bulbs. Hard items are goods and services that “can be sold twice” and soft items are those that can only be sold once. Services are soft items because the opportunity to sell them is lost once time has passed. Advertising space in a magazine, for example, is a soft item. Having some core and hard items in the mix of offering generally strengthens the exchange, encourages trade and makes it more valuable to members (Logie 2010). The barter exchange owner spends much time attracting new members to expand the selection of the offering in the barter exchange. The variety of items on offer sustains spending and trade in the barter exchange.

Membership and Marketplace
The most fundamental characteristic of the membership of the business-to-business barter exchange is the fact that they are businesses with excess capacity. This means that members are producers as well as consumers and the barter exchange is a marketplace with access to a ready supply of goods and services. Supply or production capacity is a basic element of any exchange involving trade of goods and services. The Red de Trueque of Argentina, for example, noted for its exceptional scale and longevity, was a very different kind of exchange system from business-to-business barter exchange. Yet it shares productive capacity as a characteristic, “....participants had idle or discarded resources that could

exchange provides 10-15% of a business' total sales and advises barter exchanges to aim for this proportion.

2 Richard Logie, co-founder and co-owner of GETS Plus, a barter exchange software provider, estimates this to be “60-70% of the time” and that it is not possible for one person to operate a business-to-business barter exchange. Catherine Napoli-Cohen, co-founder and co-owner of barter exchange software provider Barter BCL estimates it takes two people to run a barter exchange, one person to secure new members and the other to communicate with existing members, build relationships and encourage spending by high credit account holders. Ron Whitney, Executive Director of the International Trade Reciprocal Association, emphasizes that the building of relationships is important and that networking should be one of the benefits of membership in a business-to-business barter exchange.

be used, reused or recycled, in the form of skills, machinery, tools, leftover inputs, or perhaps a small amount of financial capital. And, of course, free time to put to work." (Gomez 2008:79)

Quality as well as quantity of the supply is a key element in the business-to-business barter exchange. The viability and quality of the barter exchange depends ultimately upon the quality of the membership (Logie 2010). A member who consistently offers inferior goods, for example, brings down the value of the barter exchange and the barter credit. A member who provides good customer care, on the other hand, adds value to the exchange (Birch and Liesch 1998, Logie 2010, "IRTA Conference Report").

One of the main benefits to businesses of joining a business-to-business barter exchange is the opportunity to make new business connections and become part of a network which lead to new cash sales and clients (Whitney 2010). Benefits include, "utilizing excess capacity, clearing slow-moving inventory while maintaining price integrity, networking, developing markets, capturing additional sales and increased profits, preserving cash flow, and accessing previously nonaffordable personal goods and services." (Birch and Liesch 1998:331) These benefit the business as a whole and not only the member's trade within the barter exchange. This indicates a dependence of the barter exchange upon the its members' activity in the larger, national economy. The barter exchange acts as a marketplace to realize activity that is part of the national economy.

Limitations of the barter exchange include difficulty by members in exhausting their surplus credits, barter being less suited to goods than services, and a limited range of goods and services available in the exchange (Birch and Liesch 1998:332).

While the barter exchange is a zero balance, mutual credit system and therefore the same amount of buying and selling must occur to keep the exchange viable, the benefits identified have largely to do with enabling the business to expand and to sell. Is there possibly a greater 'push' or motivation among members to sell their goods and services than there is a draw to the barter exchange as a market for buyers? Barter exchange owners address the constant need to stimulate spending by expanding the membership and the variety of goods and services on offer. If the desire to sell remains higher than the desire to buy in the barter exchange, however, other dynamics could emerge.

Information Technology

As the barter exchange industry evolves, the offering of products and services continues to grow. Several barter exchange management software application companies offer services which include software licensing and secure data storage. These applications provide almost any barter exchange operator tools to reduce administrative cost and human error and to raise the efficiency of the exchange.

The barter credit system bears a relation to the closed, `club` membership of the barter exchange. Participation is exclusive and participants are known to each other and the exchange operator. Transaction information including account balances is completely known to the barter exchange operator and data is generated and recorded.

Stodder notes that information technology may make possible "completely centralized credit accounting....in decentralized markets." (Stodder 2009:6) Business-to-business barter exchange as it is currently practised seems to fit this description. Barter credit in barter exchange is structured as a kind of information system. No scrip or "physical support medium" (Vasconcelos Friere 2009) is used but rather a system of accounts. With the widespread availability of sophisticated barter exchange management software applications, the usual way to structure and manage the barter credit system is essentially as an information system.

Vasconcelos Friere (2009) posits that social currency should "circulate in a circle" forming a closed loop. Failure to close the loop can lead to deterioration of the system. This occurs sometimes with systems where scrip or a physical form of medium of exchange is used and "leakage" takes place. In contrast, "...when there is no physical support medium circulating in the social currency system, but only a set of recorded information relating to transactions carried out by participants in the system .... the long-term risks and costs of sustaining the system are reduced." (Vasoncelos Friere 2009: 84-85) The business-to-business barter exchange typically operates as a centrally managed system with an accounting and a marketplace component.

While software applications are not identical to each other, they need to address common issues faced by barter exchange owners. The functions packaged in an application embed best practices in the industry and the software becomes, in effect, a means by which practices are spread and become common. Thus, through the development and proliferation of barter exchange management software applications, standards of practice are shared and shaped. As well, barter exchanges are becoming increasingly networked through their software providers who build and operate common software platforms. These are multi-exchange clearinghouses owned and operated by barter exchange software providers or operated by industry organizations. The option to join a multi-exchange network is offered as one of many services that barter exchange owners can purchase in their software licensing packages.

Barter BCL, based in Phoenix, Arizona in the United States, is one such barter exchange software provider. A description of some of features of Barter21 can illustrate the role of software application in the management of barter exchange and provide an indication of the capabilities being used by business-to-business barter exchanges.

Barter BCL is a provider of barter exchange management information technology services and the owner of Barter21, its proprietary application. This means that the barter exchange owner/operator buys a license to use the software, paying a licensing fee and a monthly fee according to the level of service and functionality of software chosen. Barter BCL provides use of its barter exchange management application and data management services. The data that is generated by its barter exchange clients, for example account information of member businesses, is stored by Barter BCL not by the exchange owner. Thus, data generated and gathered by barter exchanges is centralized to the information technology service providers. Certain responsibilities of the barter exchange are taken on by the service provider. For example, Barter BCL generates the annual report that each member business and barter exchange operator must send to the United States Internal Revenue Service for taxation purposes, Form 1099-B Proceeds from Broker and Exchange Transactions. This is a service provided by Barter BCL to its clients, the barter exchange owners.

Barter21 provides information management tools that support the barter exchange owner's management efforts. Record keeping functions such as the recording and calculation of account balances and fees owed to the exchange owner are made automatically for every transaction. Reports are automatically generated such as the profile and history of activity of each member and their accounts.

Credit card information can be collected by the barter exchange owner from members in order to have transaction fees paid by credit card. Where credit card information is collected, Barter21 provides secure, encrypted collection and storage in accordance with US legislation.

The newest functionality to be developed by Barter21 is the use of 2D or QR technology. This is an application for use with Android mobile phones to allow members to update their accounts from any location. Members can download an application to their mobile phones that can be used to settle transactions. A simplified version of member account information is accessed through this application, enough to record the items and amounts bought and sold between members. This is especially useful in situations where members do not have ready access to a computer to access their barter exchange accounts at the point of transaction, for example, when one member performs a service for another member at an on-site location. This application was developed in part to address the problem of using swipe cards – many businesses did not want to make changes to their merchant process necessary for the use of swipe card technology. This application was in Beta testing at the time of writing.

Within the barter exchange site is a place for members to post items for sale, called Trade Floor in Barter21's application. Members post items with prices and expiry date. The Trade Floor replaces the paper catalogue that is produced by exchanges without access to this technology and has the benefit of being accurate and up-to-date. The fact that members manage their own postings moves some of the management responsibilities to the members and helps to keep members engaged in barter activity. The function of the expiry date is to ensure members stay current with their offerings. A reminder email is sent automatically to the member the day before the expiry date to warn of the expiry. Members may re-post items with new expiry dates. Offerings are also listed by category as types of similar products.

Precise and timely data and information on activity in the exchange and functions within software applications provides the barter exchange operator tools to manage barter exchange with precision. Information technology creates the barter exchange as a highly efficient centralized clearinghouse and is providing the infrastructure for the creation of networked, multi-exchange clearinghouses.

The barter exchange industry has developed networks of barter exchanges. The International Reciprocal Trade Association (IRTA) operates Universal Currency, the largest multi-exchange platform of the Modern Trade and Barter Industry with about 100 participating barter exchanges ("Universal Currency"). Through Universal Currency, member businesses can trade with member businesses of other barter exchanges. Universal Currency operates throughout the United States and beyond, the barter exchanges forming nodes of the network that connect member businesses. Not all barter exchanges participate and of those that do only about 10-15% of their member businesses participate. Business-to-business barter exchange remains largely rooted in their particular localities or regions and the types of goods and services offered by member business are mostly appropriate for exchange in the locality or region (Whitney 2010). However, infrastructure exists and continues to develop for private, networked, transnational, centralized, information technology-structured barter exchange systems.

Universal Currency is run from an information technology platform owned and operated by GETS Plus, a barter exchange management software provider. Other barter exchange management software providers such as Barter BCL build on the fact that their barter exchange owner clients use their same proprietary software to build a common platform. Barter exchange owners can choose to join a network of exchanges who are other clients of Barter BCL. Barter BCL networks them through the platform and member businesses of barter exchanges in this network can seamlessly trade with each other over this platform.

Industry

"Connect to a growing group of communities sharing **fundamental standards**, **good governance**, and **ethical** practices for complementary currency exchange networks." ("Get Started", emphasis theirs)

The great majority of business-to-business barter exchanges are small businesses established and operating in their particular localities or regions managed by the owner. The average small barter exchange has 500 member businesses (Napoli-Cohen 2011). Some barter exchanges are larger and a few are notably large, for example, the WIRBank which is cooperatively owned, has WIR 890 million in deposits (Dubois 2010) and about 60 000 member businesses ("Cash Substitute"), and Bartercard International with franchises in 15 countries[3] and over $1.2 billion in annual trade globally in 2005. ITEX with over $1.6 million in income in 2010 ("ITEX Announces Results") and franchises throughout the US, is a publicly traded company. Additionally, there are several multi-exchange systems, for example, Universal Currency operated by the International Reciprocal Trade Association with almost 100 member barter exchanges with $868 318 worth of trade in the month of November 2010 ("Universal Currency"), the Barter Association National Currency (BANC) operated by the National Association of Trade Exchanges with 50 000 businesses involved, and private (rather than industry) ones such as the one owned and operated by Barter BCL.

With the renowned exception of the WIRBank established in 1934, business-to-business barter exchange is largely a phenomenon of the last three decades. Business-to-business barter launched itself in the early 1980s deliberately as an industry and the International Reciprocal Trade Association (IRTA) based in the United States has played a key role as industry advocate. IRTA was founded in 1979 by several owners of business-to-business barter exchanges to challenge suggestions that barter exchange could be used for tax evasion. IRTA`s early and lasting contribution has been to secure legal status for barter exchange in the Tax Equity and Fiscal Responsibility (TEFRA) Act of 1982 in the US. The C3 system established and administered by the STRO Foundation in Brazil, Uruguay and soon Ecuador has a business-to-business barter exchange component and has a legitimacy directly conferred by the respective national governments (van Arkel 2010). C3 will not be considered in this paper because it is structured differently.

Largely through IRTA`s efforts, the business-to-business barter exchange industry operates as a self-regulated industry in the US. IRTA lists 86 business-to-business barter exchanges in its membership ("Welcome to IRTA"). Most are located in

3 Bartercard International has franchises in Australia, New Zealand, the United Kingdom, Sri Lanka, Hong Kong, Thailand, Malaysia, Lebanon, Jordan, United Arab Emirates, Kuwait, Egypt, Russia, Cyprus and Qatar

the United States but there are 25 countries represented in all[4]. IRTA is a non-profit organization governed by a Global Board comprised of barter exchanges owners.

Bartercard based in Australia and a founding member of IRTA explains IRTA's role is the governance of the industry's code of ethics and self-regulatory system. Through education and industry self-regulation, IRTA serves the international barter industry by:

- Promoting barter trade as a responsible form of commerce to the public, media and government
- Providing legislative advocacy and political action in member countries
- Sharing best practices and new trading opportunities to enhance growth and profitability of industry members
- Raising professional standards by education and training, plus awarding credentials based on professional knowledge, experience and achievements
- Leading the industry into the future by anticipating changes and alerting members to new knowledge and systems.
- Encouraging worldwide expansion of commercial barter through mutual support and free exchange of information among nations.

("Involvement with IRTA")

Standards are created and promoted throughout the industry internationally by IRTA. The IRTA Code of Ethics addresses a number of issues and situations to serve the best interests of the public and clients e.g.

> IX. Members shall, at all times, refrain from offering more than they can deliver, or exaggerate, in any way, the availability of media and goods and/or services beyond their capability to deliver during the term of a client contract.
>
> VII. No Member shall issue trade credits entailing a "best efforts" obligation to obtain products or services for a client without a reasonable likelihood and capability of fulfillment of said trade credits and/or trade dollars.
>
> X. Members shall enter into a transaction with a client only when they are reasonably sure that they will not violate the client's restrictions on distribution of his merchandise. The Member shall further, formally and in writing, inform prospective buyers of said restrictions and take all steps necessary to assure that restrictions are adhered to by a buyer. ("Code of Ethics")

The International Reciprocal Trade Association and the National Association of Trade Exchanges (NATE), another barter exchange association in the US, are jointly updating the Certified Trade Broker programme. This is a training programme that defines professional standards for the role of barter exchange broker in the business-to-business barter exchange industry ("NATE and IRTA Working Together").

Legal Status

The legal status of community and complementary currencies has historically been an issue, a key point of contention being the constitutionality of the creation of "money"[5]. While social money exist by-and-large with unclear legal status (Vasconcelos Freire 2009) business-to-business barter has clear legal status at least in some key jurisdictions. In the United States, a legal status was secured under the Tax Equity and Fiscal Responsibility (TEFRA) Act of 1982 due in large part to the advocacy of the International Reciprocal Trade Association. Under this act, barter exchanges are granted the status of "third party record keepers" with the same fiduciary responsibilities as banks (Whitney 2010). Barter exchanges are

4 Members of IRTA are in: US, Russia, Greece, Australia, Singapore, Poland, Ukraine, Israel, Italy, United Arab Emirates, France, Czech Republic, Hungary, Canada, Puerto Rico, UK, The Netherlands, Spain, Portugal, Scotland, China, Brazil, Mexico, Turkey and New Zealand.

5 An example of this is the issuance of Prosperity Certificates by the social credit provincial government of Alberta in Canada in 1934. This was deemed to be unconstitutional by the Canadian federal government and the programme was ended.

recognized as creating their own medium of exchange, and income earned in “trade dollars” is taxable. Barter exchanges and businesses are obligated to report annually on income earned in barter exchange to the US Internal Revenue Service (IRS) with Form 1099-B “Proceeds from Broker and Exchange Transactions”.

According to the IRS, “A barter exchange functions primarily as the organizer of a marketplace where members buy and sell products and services among themselves.” (“Bartering Tax Centre”) Clearly, there is legal recognition of the barter medium of exchange. Yet at the same time barter marketplace activity is viewed as an activity of the national economy and hence taxable. It would seem to be consistent that the barter medium of exchange is also considered to be an instrument that functions as a part of the national economy. What is the relation between the barter credit and the national currency? What are the characteristics of the barter credit?

Trade in the barter exchange market is expected normally to take place without the use of national currency. It is also expected that fair market value prices be used, ``...when a barter exchange member sells a product or service to another member, their barter account is credited for the fair market value of the sale. When a barter exchange member buys, the account is debited for the fair market value of the purchase.`` (“Bartering Tax Centre”) Barter credit units are generally known as trade dollars in the US and the trade dollar regarded as having the same nominal value as the US dollar. ``Trade dollars or barter dollars are valued in U.S. currency for the purposes of returns. ... Earning trade or barter dollars through barter exchange is considered taxable income, just as if your product or service was sold for cash.`` (“Bartering Tax Centre”) Barter credit is described as playing the role of cash in barter transaction.

Business-to-business barter exchange is recognized in other jurisdictions as well. In Australia, the Australian Taxation Office rules in IT 2668 that business-to-business barter transactions are to be treated as cash transactions and are taxable (Birch and Liesch 1998). The barter dollar is assessed as one Australian dollar and the price of items should be declared for taxation purposes “at fair market value” (Australian Taxation Office). This is deemed to be, “the cash price which the taxpayer would normally have charged a stranger for the services or the sales of the goods or property.” The Australian Taxation Office remarks, “The rules of most business-oriented countertrade organizations specify a rate for converting credit units into an Australian dollar equivalent. Customarily the rules specify that each credit unit has a value equivalent to one Australian dollar.” (Australian Taxation Office) Similarly, Revenue Canada IT-490 explains that in Canada income earned through barter exchange is taxable, the barter dollar is considered the same as a Canadian dollar and price of items should be valued as “fair market value” (Revenue Canada).

In the US, Australia and Canada, barter transactions are taxed like cash transactions. Governments expect income made in barter exchange be declared at fair market value. Additionally, it seems to be the common practice of governments and in the barter industry to deem the trade credit unit to have the same nominal value as the national currency. For example, the WIR, the credit unit of the WIRBank, is declared to have the same nominal value as the Swiss Franc (Dubois 2010). Bartercard identifies “clearing slow-moving inventory **while maintaining price integrity**”(Birch and Liesch 1998:331, emphasis mine) as a benefit to businesses of barter exchange. It seems to be common practice to maintain a 1:1 relationship between national currency and barter credit nominal values. Pricing in barter exchange references pricing in the national marketplace and national currency and implicitly the national currency provides the reference for the nominal value of the barter credit.

The barter exchange marketplace appears to be considered a part of the national economy evidenced by the fact that barter exchange income is reported and taxed by the government. It follows that the barter credit also functions as part of the national economy. It is obviously not national currency but is expected to function within limits i.e. only as a medium of exchange within barter exchanges in the same way as national currency. It is defined as the functional equivalent of the national currency within barter exchange.

Nominal value of the barter credit and pricing in the barter exchange references the national currency and the national marketplace. It appears that by definition the national currency is considered as the primary currency and the barter credit in relation to it as a secondary currency.

Some Features of a Currency of Excess Business Capacity

A medium of exchange is created by the business-to-business barter exchange, the barter credit, to facilitate trade among members. It is a "currency of excess business capacity" in that it is a medium of exchange for a marketplace of excess inventory and service capacity, and its value is directly related by members to what it can buy and sell for them (Logie 2010).

Price values, as discussed above, are normally expected to have the same nominal values in the barter exchange as in the national economy. For example, one trade dollar equals one US dollar. Universal Currency states, "...it is expressly understood that for all purposes of valuation one trade dollar is equivalent to one dollar in United States currency." For barter exchanges operating outside the United States, barter credit is valued at, "...the local US dollar equivalent of the country in which the transaction takes place." And where trade is done with a US-based barter exchange, "...the transaction will be valued in US dollars."

Pricing items at the same nominal level in the barter exchange as in the national market is often a matter of policy of the barter exchange organization. The exchange may punish the inflation of prices by taking away membership (Whitney 2010). Under Terms and Conditions of Universal Currency, "Upon acceptance to the UC Member agrees ...To make available goods and/or services to other UC Members, for trade dollars at normal prevailing prices."

This barter credit valuation system is helped by the fact that members have businesses in the national market. Their prices are advertised and known to the public and can be readily compared by other members or barter exchange owner to prices of items in the barter exchange. The worth of the barter credit is also facilitated by the fact that members are businesses in the national market – the quality of the items should be the same in the barter exchange system as in the national market. Businesses' reputation in the community can be affected by its activities in the barter exchange and members should be motivated to maintain normal business practices and standards in their activities in the barter exchange.

Barter credit is created endogenously in the barter exchange system which is a zero balance system of accounts. Barter credit comes into existence as items are sold and purchased. It normally has no value outside the exchange by decree. For example, Universal Currency, the multi-exchange clearinghouse operated by the International Reciprocal Trade Association, states in its Terms and Conditions that, "...Trade Dollars shall not be considered legal tender or security by either the UC or its Members...".

The zero balance account structure of the barter exchange limits the role barter exchange plays for the member business. Businesses as profit-making entities aim to have, generally speaking, positive account balances. This is possible in the national economy. It is not possible in the barter exchange, however, for all members to hold positive account balances. So the membership on the whole cannot sell more than it buys to accumulate credits. Members are motivated to participate in the barter exchange to sell their excess inventory and service capacity and also by the facility it provides to conserve cash/national currency. This is achieved through the capacity to buy without or at a reduced amount of national currency.

A Type of Regional Economy

The WIRBank likens its own operation within the "WIR sector" to that of a central bank (Dubois 2010). In most business-to-business barter exchanges, which are much smaller and simpler, the exchange owner is highly involved in managing the membership and the marketplace as well as the credit system and member accounts. The trade in goods and services among members is, in any case, a key feature of business-to-business barter exchange. The business-to-business barter exchange could be described as a type of regional economy[6] with a centralized administration, a marketplace and a medium of exchange.

A Two-currency and Two-market System

Exchange in business-to-business barter is in "excess business capacity". Typically, 5 to 15% of a member business' total sales are made in a business-to-business barter exchange, the rest in the national market and beyond. The member

6 Richard Logie describes barter exchange as a type of economy (Logie 2010).

business' ability to produce and deliver for the barter exchange market is dependent upon its activity on the whole. At the same time, its activity in the barter exchange could help to sustain and even grow the business. The business expects the main part of its income to be derived from its sales in the national marketplace. It participates in the barter exchange as a secondary activity to derive some value from its excess business capacity. The business is an active member in two marketplaces, that of the barter exchange and that of the national economy. Through the activity of member businesses in both the national market and the barter exchange market a relationship between the two markets is created.
Barter exchanges try to operate within certain parameters, namely that: 1. Business-to-business barter transactions are treated as cash transactions, at least for taxation purposes where this applies, 2. The barter credit unit e.g. the barter dollar is deemed to have the same constant nominal value as the national dollar i.e. 1:1, and 3. The price of items traded in barter credit claimed for taxation purposes be at "fair market value". The barter dollar by definition functions identically to the national dollar within the barter exchange as a medium of exchange. The accepted practice is to keep prices in the barter marketplace and barter credit system at the same nominal levels as in the national marketplace and national currency system.

These definitions imply constraints that impact the management of the barter exchange. Experience has shown there to be a common tendency to inflation or creation of discount markets in barter credit (e.g. Birch and Liesch 1998). There is also a common problem of lack of demand for the items on offer in the barter exchange as evidenced by the need by management to continually increase the variety of items on offer to stimulate buying. It is possible that the stronger driver of demand in barter credit is a common desire to sell rather than a desire to buy in the barter exchange marketplace or that there exists a dynamic between the demand and supply of goods and services in the barter exchange marketplace that relates to the demand for barter credit. While the level of barter credit created does represent available buying power, it is also an indication of the sales that are made. A barter exchange with stronger desire to sell than to buy in its marketplace could experience problems, possibly chronic unused positive account balances or emergence of a discount market.

The barter exchange owner imposes rules and enforcements to curbs inflation and discount market tendencies. For example, the WIRBank disallowed a discount market in WIR beginning in 1973 (Stodder 2009) and the IRTA recommends the revoking of membership of any business that inflates its barter exchange prices (Whitney 2010). Allowing for a portion of a transaction to be in cash may be another way of controlling the value of the barter credit. IRTA finds it acceptable practice to allow a portion of large transaction i.e. $25 000 and over to be done in cash/national currency. The purpose is to allow the seller to cover cash costs for material inputs in a contract[7]. Another cost is the transaction fee imposed by the barter exchange owner for the service it provides i.e. the opportunity to trade in the barter exchange, for example, 6% of the price of the item to the buyer and 6% to the seller[8] (Logie 2010) to be paid in national currency. The WIRBank allows its members to receive a portion of its sales revenue in cash, and allows members to decide on this proportion. Most members receive 30-50% of their revenue in WIR and the rest in Swiss Francs (Dubois 2010). This policy could have an effect on stabilizing the value of the WIR or barter credit as it reduces the cash cost of transacting in barter credit.

More fundamentally, the ability of business-to-business barter exchanges to meet these constraints depends upon member businesses' capacity to deliver goods and services at competitive or "fair market" prices. This would be difficult to achieve if members were not businesses for this requires market-level production efficiency and know-how. As a simple example, consider an individual or a business who wishes to join an exchange as a haircutter. A haircutter with no experience and no store location would have to charge a relatively low price compared to a hair salon if the rule of fair market prices is to be followed. A barter exchange that has an inexperienced haircutter as a participant might not be able to gauge the quality of service offered by this member. A possible risk to the value of the exchange and to the value of the barter credit is introduced. This could lead to members seeking compensation for the risk or cost of holding barter credits. Conversely, a professional salon with experienced staff could bring value to the exchange and the barter credit. To meet these constraints – of pricing at fair market value/same nominal levels as in the national economy - the barter exchange owner must manage the quality of the membership and that of the goods and services offered.

In being a market of excess business capacity, business-to-business barter exchange benefits from the capacity of the

7 For example, a home renovator with a $25 000 contract could charge $4000 in cash and $21 000 in barter credit. The $4000 cash is the cost of material inputs required for the job incurred by the seller.

8 Transaction fee imposed by the barter exchange owner can also include a percentage to be paid in barter credit.

member businesses to produce at the quality and quantity that they do as members of the larger, national economy. Quantity or availability is not necessarily the same as that on the national market but supply is generally not an issue as members have unused capacity they are motivated to sell. More importantly, capacity of the participating business is geared to the scale and scope of their market in the national economy. If only 5 to 15% of a business' total sales are made in barter exchange it means that the volume of items produced is 7 to 20 times that which is offered by the business in the exchange. The unit cost for the items is accordingly low in the barter exchange relative to the volume of items offered. Its cost margins are relative to the prices it charges on the national market. In addition, it participates in the barter exchange with excess capacity which, if unsold, would represent not only lost income but unrecuperated sunk cost. This provides the business with a margin and a motivation to be able to price items in the barter exchange at fair market value.

Given the parameters defined by law and common practice, business-to-business barter exchange is dependent upon the national market. More precisely, its market in excess business capacity needs the low unit production cost available to its member businesses to be able to price as fair market and same nominal levels as in the national economy. Members' individual choices to participate in the business-to-business barter exchange provides a mechanism that makes the adherence to these constraints possible. Members can choose not to participate, for example, when cost margins are too high or excess capacity levels too low for it to be worthwhile to put any particular item on offer, or to put a greater volume of items on offer in the barter exchange market when demand falls in the national marketplace.

Through the activity of member businesses, the business-to-business barter exchange and the national economy become intertwined. The barter exchange is and must be a marketplace of excess business capacity to sustain the value of the barter credit and maintain the viability of the system as a whole. The barter exchange is for the member business a secondary marketplace. Its main activity is in the national economy. The national economy provides the primary marketplace and primary currency. The barter exchange provides the secondary marketplace and secondary currency. Together, the barter exchange and the national economy function as a two-currency and two-marketplace system.

Keeping nominal price levels stable in the region: A two-marketplace and two-currency system

Businesses in a region normally face falling demand during a downturn in the economy. The fall in demand translates directly into fall in sales and fall in income for the business. At the same time, excess capacity increases as sales decrease. Falling income leads to a cashflow squeeze forcing businesses to reduce costs e.g. by laying off workers or reducing production. To maintain sales and income, in the face of decreased demand and higher levels of excess inventory and capacity, businesses often resort to reducing prices to attract customers. In a region with one, primary currency, the lowering of price is one of the main tools available to a business experiencing slumped sales. When all businesses in a region lower their prices, however, there may be no increase in sales and income and possibly a fall in income due to increased unemployment. There may lead to a downward spiral of a general fall in prices, or deflation. Stodder (2009) suggests that if barter credit functions as a secondary, residual currency to the primary, national currency that barter exchange activity would have an anti-deflationary effect. The following is an exploration of this idea.

A region with business-to-business barter exchange provides businesses with an additional option. Businesses can put their (growing) excess capacity to sell in the barter exchange marketplace. The possible increase in activity in barter exchange during downturns (Stodder 2009) suggests that demand and supply of goods and services increase together in the barter exchange during a downturn. An increase in demand could be due to businesses seeking to preserve cashflow and to cut costs by reducing cash purchases i.e. in the national marketplace and national currency by making purchases in the barter exchange instead. The increase in demand in the barter exchange could help to keep prices stable in the exchange.

The business-to-business barter exchange could help provide price stability during downturns in a region in two ways:

1. By maintaining stable prices within the barter exchange,
2. By helping to maintain stable prices in the national marketplace and currency by providing a secondary marketplace and currency for growing excess capacity.

The choice available to individual businesses to participate in the barter exchange and the national economy is the mechanism of a two-currency and two-marketplace system.

The barter exchange is a secondary marketplace for excess business capacity. It provides the business with a means to distinguish items to sell in the national marketplace and national currency from items to sell in the barter exchange marketplace and barter credit system. The barter exchange provides the business with a separate facility to recuperate and conserve costs from excess capacity. This is an alternative to lumping a growing inventory into the offering on the national marketplace when sales are decreasing. Instead, the growing excess capacity can be put in the barter exchange marketplace where demand may also growing because other businesses experiencing the same downturn may turn to the barter exchange for buying to conserve cashflow in the national, primary currency. Price levels in the barter exchange could remain relatively stable if supply and demand in the exchange both increase. At the same time, the conservation of cashflow through the capability to buy in the barter exchange marketplace plus the separation of pricing in the national marketplace provide the business with the means to maintain its national currency price levels.

Stable prices in national currency would inform the dynamics of the barter exchange. Pricing within the barter exchange, following the rule of fair market pricing, follows pricing in the national marketplace. If prices in national currency are stable, prices in the barter exchange would tend to reflect this.

In a region facing downturn, these dynamics could have anti-deflationary effects.

The barter exchange has a two-currency pricing mechanism that provides an alternative way to price. This is a system that requires a certain relationship between the primary, national currency and the secondary, barter credit. That is, that the barter credit functions like the national currency but has a limited use and therefore value. This describes how the barter credit is defined through legislation and through industry policy and practice i.e. the barter dollar is defined as having the same nominal value as the barter dollar, fair market prices are to prevail, and the barter credit functions only as a medium of exchange and has no store of value. In this way, the primary, national currency and the secondary, barter currency can function seamlessly in a two-currency system.

Pricing can be expressed seamlessly in nominal values between the two currencies when they both reference the primary or national currency . The “price” meaning the cost of an item can be differentiated by changing the proportion of each currency rather than by changing the nominal value. This is because the secondary currency is worth less than the primary currency. A higher price then could be expressed by increasing the proportion of national or primary currency in the price, a lower price as a lower proportion of primary currency. This two-currency pricing mechanism is used by the WIRBank by allowing prices to be expressed in a mix of WIR and SFr and by IRTA by allowing large transactions to be priced partly in national currency.

The region with a business-to-business barter exchange provides businesses with the facility to operate in a two-marketplace and two-currency system. This two-currency system provides a mechanism to maintain nominal price levels while reacting to changes in demand in the national marketplace and for the national currency. This would have an anti-deflationary effect in the region.

Conclusion

The business-to-business barter exchange is recognized in some jurisdictions. In the United States it is described as the organizer of a marketplace for exchange among businesses. Barter exchanges have the status and responsibility of third party record keeper as banks do. Transactions in barter credit are treated like transactions in cash for taxation purposes. The activities of barter exchange seem considered integral to the national economy. The barter credit seems then to be implied or defined as a stand in for cash. That is, the national currency is the reference and primary currency that defines the nominal value of the barter credit or secondary currency i.e. always identical to the national currency. Pricing in the barter exchange marketplace is defined by that in the national marketplace i.e. fair market value. The secondary, barter currency is defined as the functional equivalent of the primary, national currency for barter exchange trade. But it is of lesser value because of its limited usefulness so it is a currency that extends the use of the national currency into the economy via the barter exchange. It is an extension or residual (Stodder 2009) currency of the national currency by definition.

The business-to-business barter exchange also provides the region with a separate marketplace that allows businesses to distinguish items to sell on the national marketplace from items to sell in the barter exchange. Trade in this secondary marketplace is facilitated and made separate in part by the barter credit system. The barter exchange is a facility that provides the possibility for businesses to maintain stable price levels in the national marketplace and national currency by providing this secondary marketplace. It also offers the possibility of maintaining stable price levels in the barter exchange system if demand grows with supply and pricing reflects fair market value.

Business-to-business barter exchange provides the region a facility for a two-marketplace and two-currency system. The interchangeability of the primary, national currency and the secondary, barter exchange currency is created by definition i.e. same nominal value and fair market pricing within the barter exchange system. Additionally, the barter credit is of lesser value because of its limited use. The interchangeability but difference in value of the primary and secondary currency creates a two-currency pricing mechanism that can maintain stable nominal price levels in the region. This is because cost can be expressed by changing the proportions of primary and secondary currencies in the price without changing price level.

The business-to-business barter exchange acts as an extension into the national economy, the barter exchange marketplace as an a secondary, extension marketplace and the barter currency as a secondary, extension currency. Member businesses choosing to participate in the national economy and in the barter exchange is the the mechanism relating the two systems. When businesses use the barter exchange during times sales are falling in the national economy, the barter exchange provides anti-deflationary effects.

Appendix A

Keeping Nominal Prices Stable: A Two-currency Pricing System

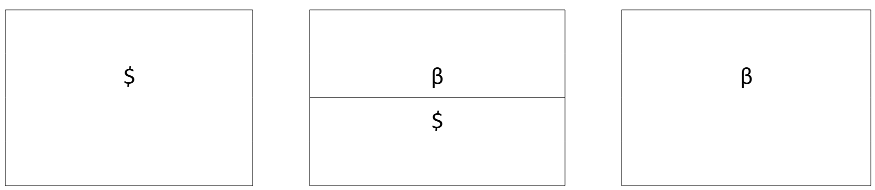
The capacity to express price in both barter credit and national currency creates a **two-currency pricing mechanism** that functions to keep nominal prices stable. The following is an illustration of how this functions within a two-currency system with flexible pricing i.e. items may be priced with a number of different combinations of primary and secondary currencies.

In this system, the national or primary currency is more highly valued than the barter credit or secondary currency. Participants operate within the constraints that the secondary currency references the primary currency and maintains the same constant nominal value as the primary currency and fair market prices i.e. pricing in the primary marketplace prevails.

A

Sellers change the price of items on offer not by changing the nominal price of items to sell but **by changing the proportion of the price in barter credit and national currency**. In doing so, the seller changes the price of the item on offer as requiring a higher or lower amount of national currency and barter credit in payment but the nominal price remains unchanged.

Example: A set price dinner for two costs $70 at a restaurant, The Fish Plaice. The Fish Plaice is a member of a business-to-business barter market. It charges other members $70 payable 60% in national currency and 40% in barter credit during peak hours. In off-peak hours it charges members $70 entirely payable in barter credit. The nominal price is 70 regardless of the mix of national currency and barter credit in which it's paid.



100% national currency | 60% national currency + 40% barter credit | 100% barter credit

Price in Business-to-business Barter System

Where a = proportion of price payable in national currency
$ = national currency
β = barter credit
nominal units is national currency and/or barter credit

The price is

$$P = \alpha\$(\#\text{ nominal units}) + (1-\alpha)\beta(\#\text{ nominal units})$$

In our example, the prices are

$1\$7(0) + 0\beta(70) = \$70$ if paying entirely in national currency

$.60\$(70) + (1-.60)\beta 70 = \$42 + \beta 28 = 70$ nominal units if paying in a mix of national currency and barter credit

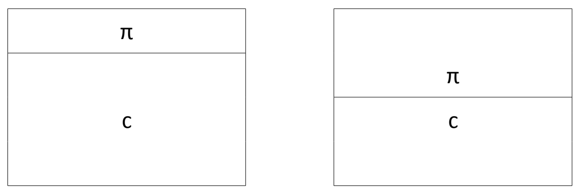
$0\$(70) + 1\beta 70 = \beta 70$ if paying entirely in barter credit

Adjusting the proportion of the price in national currency and barter credit adjusts the price while keeping the nominal price the same.

B
What is the cost to the buyer? The buyer who is a member of the B2B barter system is concerned with how many dollars she/he must pay. The buyer is also a producer in the business-to-business barter market. Her buying power is represented by the amount of barter credits she holds. She has earned it by selling her goods in the barter exchange. The price she charges is comprised of cost and profit. The lower the cost margin, the greater the ratio of buying power her cost 'investment' is yielding for her in the barter exchange.

Where P = price
B = buying power
c = proportion of the price that is cost
π = proportion of the price that is profit

$$P = B = 1 = c + \pi$$



Producer/Buyer A Producer/Buyer B

The cost, c\$, differs for every producer/buyer in the business-to-business barter market i.e. Each has her/his own cost margin.

C
In the business-to-business barter market, the dollar cost of a purchase is

$$\$C = \alpha\$(\#\text{ nominal units}) + (1-\alpha)(\#\text{ nominal units})c\$$$

Example: The owner of The Bread Shop wants to purchase the $70 dinner for two at the Fish Plaice as a gift for her employee. The cost margin, c, for her store is .73 i.e. For every dollar of bread she sells, her cost is 73 cents and her profit is 27 cents. The cost of the dinner to the owner of The Bread Shop is

$\$C = 1\$(70) + 0(70).73 = \$70$ if paying with dollars only

$\$C = .60\$(70) + (1-.60)(70)(.73) = \$42 + \$20.44 = \$62.44$ if paying 60% in dollars and 40% in barter credit

$\$C = 0\$(70) + 1(70)(.73) = \$51.10$ if paying 100% in barter credit

A different member of the business-to-business barter market will face different costs for the same dinner depending upon that business' cost margin.

The capacity for each individual producer/buyer/member of the business-to-business barter system to make choices about the proportion of national currency and barter credit in the price of items to sell is an important feature of this complementary currency pricing mechanism. This creates a mechanism that is responsive to a very micro and local level – micro to the level of the individual buyer/seller, local to the level of the individual business as it operates in its milieu. Even within the business-to-business barter network the combinations of prices expressed as national currency and barter credit will differ and change.

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