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A TWO-MARKETPLACE AND TWO-CURRENCY SYSTEM: A VIEW ON BUSINESS-TO-BUSINESS BARTER EXCHANGE

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ABSTRACT

This paper is a consideration of the definition of barter credit as a secondary currency. The business-to-business barter exchange and the national economy function as a system comprised of a currency component and a marketplace component. Barter activity including the creation of a medium of exchange is recognized and defined in national legislation of some key jurisdictions, and is defined de jure as a part of the national economy. The barter credit is thus de facto defined as a currency secondary to the national currency which is the primary currency. I consider three points: 1. The rule of "fair market value" guides behaviour in the barter exchange, 2. The option for business to operate in both the barter exchange and the national economy is a mechanism linking the two, 3. The barter exchange functions in such a way that there can be anti-deflationary dynamics in the region, as articulated by Stodder (2009).

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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 Freire 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 the 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.

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.

This paper is a consideration of the definition of barter credit as a secondary currency and of its functioning. I propose that the barter credit is defined by political jurisdictions to function specifically as a medium of exchange secondary to the national currency for the purpose of trade of excess goods and services of businesses in the economy. Within the confines of these parameters, certain dynamics occur and certain mechanisms are at work. In this way:

1. The concept and practice of "Fair Market Value" serves as a rule guiding nominal price levels and valuation of goods and services traded within barter exchanges, 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. The barter exchange functions as a secondary marketplace and secondary currency in such as way there can be anti-deflationary dynamics in the region.

1 BACKGROUND

1.1 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 relationships with area businesses (Whitney 2010). Barter exchanges have on average 500 member businesses (Napoli-Cohen 2010). 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). Membership is granted by the owner and requires payment of a membership fee. The barter exchange operates as a kind of private club.

One of the main benefits to businesses of joining a business-to-business barter exchange is the opportunity to make new business connections and to 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 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 the 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 (Logie 2010, Napoli-Cohen 2010). If the desire to sell remains higher than the desire to buy in the barter exchange, however, other dynamics could emerge.

1.2 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 Freire 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 Freire (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.” (Vasconcelos Freire 2009: 84-85) This description can be applied to business-to-business barter exchange. 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.

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. 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.

2 DEFINING PARAMETERS

2.1 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”. 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 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”) Barter marketplace activity is viewed as an activity of the national economy and hence taxable and barter credit is recognized as an operating within national institutions. Barter credit is defined de jure as a subnational instrument with rules defining the parameters of operation.

2.2 Fair Market Value

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 value of the barter dollar is assessed against the 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 other words, barter credit units are normally expected to have the same nominal value as national currency units. When they differ, barter credit values are converted to national currency price values for final accounting, and prices prevailing in the national rather than the barter marketplace are to be considered the norm.

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 WIR-Bank, 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) as a benefit to businesses of barter exchange. It seems to be common practice to the point that it is assumed that there is 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 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 to 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 by legal definition the functional equivalent of the national currency within barter exchange - the national currency is considered as a primary currency and the barter credit in relation to it as a secondary currency.

2.3 The Barter Exchange Marketplace and Barter Credit Price Values

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. The IRTA states that for the operation of Universal Currency, "...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."

Working within parameters set by law, 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 may also be facilitated by the fact that members are businesses in the national market – the quality of the items in the barter exchange system can be compared to that offered in the national market. Businesses' reputation in the community can be affected by its activities in the barter exchange and members. A fuller investigation of business practices and standards in the barter exchange lies beyond the scope of this paper.

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, the IRTA 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 and the use of the barter exchange can only be secondary for a normal business. 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.

The limited usefulness of the barter credit provides a market clearing mechanism in the barter exchange. The barter credit functions normally only as a medium of exchange providing a member little or no benefit as a type of asset. By contrast, national currency is – at least in a stable economy – a valuable asset that businesses strive to hold and accumulate and is relatively precious and scarce. For this reason, a secondary marketplace using national currency as the medium of exchange may not clear as effectively.

3 A TYPE OF REGIONAL ECONOMY

The WIRBank likens its own operation within the "WIR sector" to that of a central bank (Dubois 2010). Indeed, the WIRBank is structured more complexly and with additional features that allows it to create credit and make loans (Studer 1998) that simple mutual credit barter exchanges do not have. In most business-to-business barter exchanges 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 with a centralized administration, a marketplace and a medium of exchange.

3.1 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 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 of barter credit (Studer, T. 1998, Defila, H. 1994, Birch and Liesch 1998). There are indications as well that small barter exchanges commonly experience decrease or cessation of trade activity by members after a "period of initial enthusiasm" (Studer 1998:32). Barter exchange owners expend much time and energy stimulating exchange between members and expanding the membership and offering (Logie 2010, Napoli-Cohen 2010 as cited above). Small barter exchanges seem to stabilize at around 500 members (Napoli-Cohen 2010) and threshold estimates range between "several hundred to a few thousand" (Studer 1998:39). In this respect, the WIRBank with about 60,000 business members and WIR890 million in deposits (Dubois 2010) cannot be readily compared to the small barter exchange. As important at least is the WIRBank's capacity to provide loans to members. The details of WIRBank's structure will not be elaborated here but Studer identifies this as "the most powerful driving force" to WIRBank's operation (Studer 1998:32). A full exploration of the systemic nature of barter exchange including the dynamics of and between inflation, discount markets, excess supply and excess demand lies beyond the scope of this paper.

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. It can therefore not be assumed that the demand for barter credit indicates a demand for purchasing power. A barter exchange with stronger desire to sell than to buy in its marketplace could experience problems, possibly chronic unused positive account balances or a discount market for barter credit.

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. 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 (Logie 2010) to be paid in national currency. Tax would also 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.

3.2 Productive Capacity and Economies of Scale

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 to produce at competitive quality and prices. Consider a simple example - an inexperienced haircutter with no business location might not be able to gauge the quality and fair market price for his service on the barter exchange. 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 the constraints of pricing at fair market value the barter exchange owner must manage 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 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 follows that the total volume of items produced is 20 to 7 times that which is offered by the business in the barter 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.

3.3 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. In a region where all businesses lower their prices, however, there might be no increase in sales and possibly a fall in income and increase in unemployment. This 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. An increase in supply could be due to member businesses putting a greater volume of goods and services on the barter exchange market as excess capacity increases. The concurrent increase in demand and supply 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:

- By maintaining stable prices within the barter exchange,
- 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 linking the two to create 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 lower 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 be 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 from that 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.

3.4 Two-currency Pricing System

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 usually 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 due to its more limited usefulness. 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 WIR-Bank 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 are treated in law as 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 a residual (Stodder 2009) or extension 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 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 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.

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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.

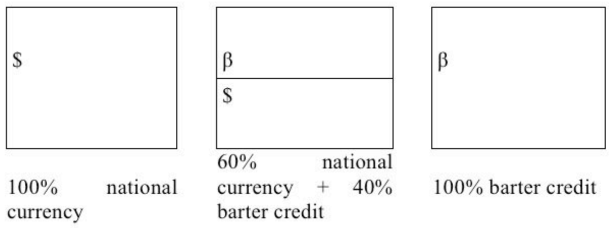
In this system, the national or primary currency is more highly valued than the barter credit or secondary currency. Participants operate within the constraints that the secondary currency references the primary currency and maintains fair market prices i.e. pricing in the primary marketplace prevails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

Nominal price levels in this example are identical (1:1) between primary and secondary currency but the system could operate in principally the same way if this were not the case.

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.



Price in Business-to-business Barter System

Where α = 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

$1\$(70) + 0\beta(70) = \$70$ 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

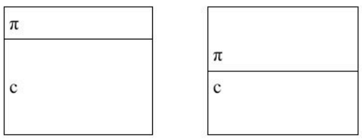
Adjusting the proportion of the price in national currency and barter credit adjusts the price or cost to the buyer while keeping the nominal price the same.

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.