13.6 PRICING AND COUNTERTRADE (PRICING & BARTER): CONTEMPORARY ISSUES IN PRICING

AN ENIGMA IN MODERN SOCIETIES: BARTER EXCHANGE AND COUNTERTRADE

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Modern domestic barter systems are operating in Australia at the local community level, and at the national level for business exchanges. The Australian Government, and Australian firms practise countertrade at the international level. These exchange regimes appear to have become institutionalised in an economic system which is organised on the primacy of market exchange based on price as the co-ordinating device. In this paper, possible explanations for this enigma are presented.

MODERN BARTER SYSTEMS

Definition

In searching for a definition of barter, Dalton (1982, p. 181) wrote that "...in English, we use the treacherous term barter to mean two very different kinds of transactions: moneyless market exchange (market exchange in kind), and moneyless exchange of any sort (gift-giving, prestations, ceremonial exchanges such as pot-latch, Kula and moka). To avoid ambiguity, it is essential to confine the meaning of barter to moneyless market exchanges." Hence, barter implies an absence of currency in the exercise of an exchange transaction between parties who might not have been willing to transact had the exchange been monetarised. Domestic barter, as practised within local and regional communities, is simply the simultaneous transfer of goods and services agreed upon as being of equal worth and concluded under the one 'contract' (Birch, Liesch and Yau 1994).

Domestic barter Modern barter systems are currently operating in many countries which are at different levels of economic development and which have different social and cultural backgrounds (Birch, Liesch and Yau 1994). Barter appears to provide an alternative marketing exchange system, particularly in times of low economic growth. The protracted economic recession in Australia, through the late 1980s and early 1990s, appears to have facilitated the institutionalisation of two distinct domestic barter systems. In 1993, in Australia, an estimated AUD60 million of business 'barter-style' exchange was effected between at least 3,500 companies via a network of 30 highly sophisticated, computerised trade exchanges (Hopkins 1993). In addition, over 200 community-based systems facilitate the exchange of goods and services in Australia among individuals without the need for money.

Business-based domestic barter

Business-based domestic barter in Australia is exemplified by 'Bartercard', the largest business trade exchange in Australia. Established in 1991, the company has set up 15 franchised outlets across the nation and two branches in New Zealand. The growth of 'Bartercard' in its first three years of operation has been remarkable. Annual trading has increased from AUD400,000 in the first year of operation (1991/92) to over AUD50 million of trading between its 3,500 members in 1993/94 (Sharpe 1994). 'Bartercard' is essentially an independent computerised clearing-house for effecting commercial barter-style transactions. The company recruits members, records transactions between members, issues monthly statements, provides authorisation for larger transactions, and promotes trade between members (Birch, Liesch and Yau 1994). A diverse range of consumer and business goods and services are exchanged using trade dollars rather than the formal payments system. This system differs from traditional or pure barter in that members are not restricted to a direct and simultaneous exchange. Rather, members can acquire goods and services as required, and credits can be redeemed from within the system at some later time (Hopkins 1993). Interest is neither charged on credit nor accrued on debits.

Opponents of domestic barter systems frequently express concern regarding their legality and integrity. However, the Australian Taxation Department Ruling IT2668 states that business barter transactions are to be treated as cash transactions, for the purposes of taxation, with a trade dollar being assessed as one federal dollar (West 1992). A record of each transaction is retained by 'Bartercard' for accounting and taxation purposes. Furthermore, a self regulatory body, the Australian Reciprocal Traders Association, has been formed to encourage members to abide by a strict Code of Ethics (West 1992).

New members pay a joining fee of AUD595, and are allocated a credit limit depending upon their financial status. A plastic 'Bartercard', similar to a credit card, is issued to each member. To stimulate trade, each member receives an updated copy of a national directory of members on a bi-monthly basis and regular trading gatherings are organised. To cover administrative costs and bad debts, a commission of 10% is levied on each transaction. Members' benefits have been identified as: improved liquidity, utilisation of excess capacity, improved turnover of inventory, maintenance of pricing integrity, market access and networking, additional sales and improved profits, and access to goods and services not normally available with limited cash reserves (Sharpe 1993).

Community-based barter

In addition to the business barter systems, over 200 community-based barter systems, known as *LETS*, an acronym for Local Energy Transfer (Employment Trading; Exchange Transfer) Systems have been established in Australia. *Letsystems* operate at the community level, and are democratically organised, non-profit enterprises. The main aim of these systems is to utilise more fully the skills and resources within the local community, and to provide a mechanism by which the community can remain viable and self-sufficient. *Letsystems* are based on the premise that, "...a community's wealth lies in its goods and services, the skills of its people, rather than the amount of money available to it, and thus is not linked to traditional 'employment' which is heavily dependent on money" (Jordan 1990, p. 1). Each system creates a unique unit of currency, for example 'keatings', 'bunyas', 'frasers'. These units can only be traded within the community's *Letsystem.* The system is closed, hence the sum of credits and debits within the system is always nil. As with the business system, there is no requirement for a direct reciprocal exchange, and because *Lets* units only have value within their own local system, the 'wealth' remains within that community.

These community-based systems are also present in other Western countries. For example, over 115 *Letsystems* have been established in the United Kingdom, and over 60 in New Zealand (Croft 1993). The first *Letsystem* in Australia was established at Maleny, Queensland in 1987. This system now has over 600 members and a growth rate of 10 members per month. Members, in Maleny, exchange a diverse range of goods and services using *Lets* units, called 'bunyas'. Transactions are negotiable, and use of the cash system for making valuations is discouraged. Each 'bunya' represents a cash federal dollar, and transactions are recorded for taxation and accounting purposes. Debt within the system is encouraged and is considered to represent "...a commitment to put 'energy' back into the system at some time in the future" (Birch, Liesch and Yau 1994, p. 5). There is no value to be gained from hoarding *Lets* units as interest is neither paid nor charged. Transactions between members are recorded at the community's *Lets* office, and monthly statements are issued to members. The *Lets* office is staffed by *Lets* members, who are paid in *Lets* units rather than in cash. New members pay a nominal joining fee (AUD15) and are charged a nominal annual fee (AUD2) to cover administrative functions.

This recent trend toward domestic barter has attracted the attention of the popular press. However, there appears to be a minimal academic literature available on domestic barter systems. Conversely, countertrade at the international level has been well researched and documented in the academic literature (eg Liesch 1991; Hennart 1990; Huszagh and Barksdale 1986; Neale and Shipley 1988). Research into domestic barter systems is timely as the growth of these systems has possibly seen them become institutionalised. Preliminary enquiry to date, by the authors, has revealed the extent and processes of domestic barter systems in Australia and has provided some insights into the possible motivations for their institutionalisation.

International Countertrade

The growth and spread of countertrade internationally hints at pervasive deficiencies in the world trade regime. Nations at all stages of economic development and under the various systems of government are active in international countertrade. Estimates of the extent of international countertrade are put variously at 5-40 percent (Liesch 1991). International countertrade can be identified as voluntary or mandated, the former being undertaken voluntarily by firms largely as a marketing device which increases the options available in their portfolio of trading techniques, while the latter is used as an economic policy instrument by governments targeted at various issues, including regional development, employment generation, export promotion, import restriction, trade financing and technology transfer (Liesch 1991).

The particular focus of government mandated-countertrade policies is determined, to a large degree, by the level of economic development of the country in question, and the nature of the economic system governing that economy. For example, centrally planned economies have economic systems that do not integrate well with the market economies of the West. In particular, their currencies are not convertible and they have a shortage of hard currency for international trade facilitation. Countertrade provides one mechanism which enables exchange with market economies. That is, the import of goods and services is linked inextricably with reciprocal exports. Lesser developed and developing economies often have commodities and light manufactures available for export, but with low income elasticities of demand, inferior quality and uncertainty of supply, these exports are difficult to move on world markets. To link the import of products and services necessary for economic development to reciprocal export sometimes provides the means of integrating these economies, with unfavourable international terms of trade, into the international economy. And the developed economies have innovated with the fundamentals of reciprocal trade to create various means of furthering industrial and commercial development (Liesch 1991). Most, if not all, developed economies have some variant of the mandated-countertrade instrument to effect objectives such as regional development and employment generation, and international technology transfer. For example, the Australian government enforces an offsets policy with several variants, but all of which seek to achieve the transfer of technologies and managerial/commercial acumen from abroad with the aim of raising the technological base of Australian industry. This approach recognises the imperfections in (and often non-existence of) international markets in technologies and other industrial capabilities. In the absence of arm's length transacting as an appropriate exchange mechanism, governments, such as the Australian government, have adopted various forms of hierarchial governance to effect such exchanges (Liesch 1993).

AN ENIGMA IN CONTEMPORARY ECONOMIC SYSTEMS

Western economic systems are characterised by the centrality of the price mechanism for co-ordinating the activities of the many agents who individually act in their own self-interest, but who collectively achieve community and societal goals. "The price system is essentially an information processing mechanism and uncertainty can be defined as a lack of adequate information. It is international trade in a stable, liberal framework - in conjunction with international monetary arrangements providing for free convertibility of the major currencies - that connects national price systems into an international one...only the existence of a relatively unimpaired international price system makes it possible for rational individual economic decisions to be efficient from the social viewpoint as well" (Gatt 1984, pp. 18, 19).

Decisions and actions taken outside of the price mechanism, in both the domestic and the international contexts, do not make best use of the information embodied in prices, and will be necessarily less efficient, from an orthodox economics perspective, than those that incorporate all available information. Failure to use fully all available information creates inefficient decision-taking in an environment which becomes more uncertain than need be the case. While barter-like exchanges appear to provide expedient alternatives for the individual (agent, person or firm), their inefficiencies appear to impact at the broader economic and social level in that institutionalisation of these forms of exchange mechanisms postpones adjustments signalled by the market. That is "...it perpetuates existing distortions" (de Miramon 1985, p. 27). Institutionalisation of barter-like exchanges delays a response to the deficiencies identified in the market mechanism which led to the use of a non-market form of exchange to effect a transaction which, otherwise, would not have occurred. All forms of barter-like exchanges produce two general effects, 'a price distortion effect' and a 'currency-trade displacement' effect (Goldstein 1984).

While these effects, and the costs of institutionalised barter-like exchanges, are generally acknowledged, the view of advocates of these regimes is that reciprocal trade "...fundamentally remains a means to increase (world) trade...it is a means to improve opportunities although it introduces distortions in the process because the agreed-upon prices may not be market clearing prices" (Khoury 1984, p. 268). Cohen and Zysman (1986, p. 55) ask, "Have we, in fact, established a mercantilist suborder in a liberal system and justified it in the language of liberal trade... Perhaps managing trade (exchange) [1] relations more explicitly than in the past has allowed new players to enter...has allowed trade (exchange) to continue to expand...and has allowed dramatic changes in market advantage". Both at the domestic and international levels, managed exchange has developed and spread in response to imperfections in the liberal regime of market clearing, price determined transactions. Yet, institutionalisation of these alternative systems creates its own distortions; these alternative systems are somewhat enigmatic.

ECONOMIC THEORY AND THE EXISTENCE OF BARTER

The mere fact that non-monetary (barter-like) exchange systems have become entrenched in the Australian and other high income economies suggests that market imperfections exist. In this section, a number of imperfections are outlined. It is suggested that these imperfections represent sufficient conditions for barter and countertrade to exist simultaneously with monetary exchange. For the purposes of this section, it is convenient to distinguish between domestic community-based *Letsystems,* domestic business barter systems, and international countertrade. The former domestic systems are characterised by exchange of consumption goods or services whereas the latter are characterised by exchange of intermediate inputs. In international countertrade, all types of goods and services are exchanged, but the form discussed here, viz. sophisticated government mandated-countertrade is characterised by technology exchange. Both domestic systems, however, can be construed as providing a substitute system of credit that parallels the formal financial markets. The government mandated-countertrade instrument provides a more efficient exchange mechanism to effect the exchange of technologies, than does arm's length exchange.

Community-based Letsystems

In Australia, the development of *Letsystems* has been motivated by "...a desire to strengthen the local community, increase networking opportunities, utilise unemployed skills and overcome the limited resources and credentials of members" (Birch, Liesch and Yau 1994, p. 35). It is generally argued in the economics literature that the main advantage of monetary exchange over non-monetary exchange is that the former reduces transactions costs. These costs include costs associated with searching for exchange partners, the costs of 'higgling and haggling' over the appropriate rate of exchange of one good or service for another, the costs of enforcing contracts (for example, costs of redress when quality falls below that contracted either explicitly or implicitly in the exchange transaction) and information costs associated with determining the trustworthiness of co-transactors (North 1990). However, there is a tendency to assume that barter is always and everywhere inferior to monetary exchange on transactions costs grounds. This is a mistake because barter transactions are "...by no means difficult to achieve in a small community where everybody knows a great deal about everybody else's products and requirements" (Einzig 1949, p. 352). Transactions costs associated with exchange are low in close-knit social groups. Where *Letsystems* reflect a desire to build community ties and increase networking opportunities, transactions costs may be negligible. Thus, the main motivation for monetary exchange may be absent in *Letsystems.*

Utilising unemployed skills through *Letsystems* implies failures in the market for labour. Orthodox economics predicts that if unemployment emerges in an economy, then the wage rate will fall to such a level that all who wish to work can obtain a job at the 'going rate'. The fact that there are nearly 40 million people unemployed in the member countries of the Organisation for Economic Cooperation and Development (OECD) today, with many individual countries recording unemployment rates of around 10 percent of their labour force, indicates that there is market failure on a massive scale. A number of theoretical perspectives on unemployment can explain this fact.

First, unemployment can be interpreted as the outcome of chronic deficient demand that induces businesses to lay off workers regardless of what is happening to wages. This interpretation is associated with the so-called Keynesian approach to the analysis of mass unemployment. If businesses perceive slack demand for their products they may lay off workers rather than try to negotiate lower wages since there are costs associated with the process of negotiation. Furthermore, in most industrialised countries, wages are only a rela-

[1] The authors' insertion

tively small contributor to total costs of production, so very large reductions in wages would be necessary to maintain profitability of firms. Keynes (1936) also demonstrated that even if wages were to fall, a return to full employment could not be guaranteed because falling wages would be accompanied by further decline in demand for output, unless there was an export boom large enough to more than compensate for reduced domestic demand. Once people have been unemployed for some time they tend to lose their skills as workers and cannot easily be re-hired without training. This diminution of 'human capital' has been implicated in the persistence or hysteresis of high rates of unemployment in OECD countries (McCallum 1986). In times of recession, businesses are understandably reluctant to fund training schemes for unemployed workers.

Second, the existence of trade unions might create 'insiders' and 'outsiders' in the labour market. Insiders are those who have jobs and outsiders are those who do not have jobs, but are seeking them. Continuously increasing unemployment rates might have very little moderating effect upon wages if the insiders do not take outsiders into account in wage negotiations. A variation on this is the existence of internal labour markets characterised by relative permanency of the relationship between employer and employee, promotion from within and few points of entry (Doeringer and Piore 1985). New entrants into the labour force might find it very difficult to shift from the external to the internal labour market. The existence of internal labour markets is well accepted by labour economists today and helps explain why unemployment often impacts very heavily upon the young who have never had employment experience. Whatever the causes of persistent unemployment, it is not surprising that unemployed people get together to trade their skills among one another. If they are locked out of the labour market, then the *Letsystem* becomes a substitute 'labour exchange' that enables them to trade their own labour for consumption goods and services.

Utilising *Letsystems* to overcome limited resources and credentials of members implies failures in the capital market. Unemployed people may have very limited access to credit. They may have little to offer by way of collateral and the lack of regular paid employment may disqualify them for loans from banks and other financial institutions. For people whose spell of unemployment is not expected to be permanent, this is a clear case of market failure because if capital markets were perfect, unemployed people would be able to borrow against expected future income. There might also be discrimination in capital markets based upon race, sex or some other group characteristic. In these instances, *Letsystems* provide what might be described as a parallel credit system for those locked out of the formal markets. In *Letsystems*, individuals can run up debts (within limits) which are extinguished later by transactions in kind.

Business Barter Systems

The rationale for the rapid growth of business barter systems might be different from that of the *Letsystems*. Business barter systems can be construed as institutions specialising in reducing transactions costs and in providing a substitute credit market when interest rates are high.

It has been estimated that the total transactions costs of using monetary exchange markets in the US in 1970 was equivalent to 45 percent of gross domestic product. A century earlier, transactions costs amounted to only 25 percent of gross domestic product (Wallis and North 1986). This being so, there must be a substantial incentive in high income economies to reduce these costs. Among the important costs of using any form of exchange, including monetary exchange, are the costs of enforcing contracts and costs of gathering and processing information associated with determining the trustworthiness of potential co-transactors. Business barter systems emphasise the importance of reputation, an ancient device used for minimising such costs, although they still rely upon legal remedies as last resort. If a member of a business barter system dishonours obligations, there is a price to pay in terms of reputation (usually signalled by expulsion from the system). The threat to reputation may be a very powerful incentive to individual members to maintain integrity in their transactions. This means that business barter systems are cost-effective tools of debt management. All transactions are electronically recorded and the system manager acts as a clearing house for the netting out of transactions. An individual member firm only has to be concerned with its net credit or debit position in respect of the system as a whole. It can ignore the positions of all the specific buyer - seller pairs of which it is a member. (In passing, it is noteworthy that general practitioners and other professionals who are members of *Letsystems* probably find them a very effective mechanism for minimising bad debts.)

Business barter systems may also be a lower cost alternative for businesses requiring working capital. Arranging overdraft facilities through the banking system is costly because of interest and other fees charged. Acquiring inputs via barter can alleviate the need to maintain or extend overdraft arrangements. The transaction charge incurred through a business barter system is low, especially compared to today's market rates of interest. Furthermore, business barter might be the only mechanism that offers credit to some businesses in times of high interest rates owing to the phenomenon of 'equilibrium' credit rationing. Even if financial markets are working efficiently, at high interest rates, many businesses might be locked out because banks cannot distinguish between good and bad risks. When interest rates rise, some borrowers will substitute low return - low risk activities with high return - high risk activities, but the problem for banks is that they do not have enough information to distinguish between the two types of business. Consequently, some firms which do not make the substitution will be denied access to loans (Stiglitz and Weiss 1981, 1992). Firms may then seek to offer goods through the barter system as a substitute for short term loans. Therefore, business barter systems can be seen as a non-monetary, market-based antidote to a failure of the formal financial system in times of high interest rates. Those businesses that would make the high return - high risk substitutions if they could get credit in the formal financial market would possibly be deterred from moving into the barter system by virtue of its reliance on reputation as a sanction against risky or dishonourable behaviour.

International Countertrade: Government Mandated-Countertrade

A common objective of many of the more sophisticated variants of government mandated-countertrade policies practised by Western governments, including the Australian government, is that of encouraging the transfer of advanced technologies, skills and capabilities from technology-rich foreign suppliers of government-funded purchases to local firms (Liesch 1991). Why does not the process of commercialisation of the market for technology ensure willing buyers will search out willing sellers and agree upon a price to conclude a transaction at arm's length?

Technologies have particular characteristics that render conventional marketplace arm's length exchange difficult, and often, impossible. The initial development costs far exceed the marginal cost of making that technology available to other parties. This is not to infer that the costs of effectively communicating knowledge (technology) are insignificant; these costs are often prohibitive. The effective transfer of technology is far more complex than its mere availability. Commensurate with this complexity is the array of commercial activities that has stemmed from the commercialisation of technologies which has required legally enforceable restrictions to be placed on their exchange. The net effect has been a 'market' that is imperfect, with monopoly profits for firms with a competitive advantage in knowledge production, and with buyers attempting to capture some part of the rents created.

In addition, technology (knowledge) depreciates over time, requiring that for knowledge-producing firms to appropriate returns, proprietary rights must accompany these technologies. This is the appropriability problem in that once secondary parties gain access to knowledge, the originator's return is reduced. While uncertainty is a feature of all markets, uncertainty characterises technology exchanges. In particular, technology suffers from "...the classical property of asymmetrical access by the potential parties to a transaction to knowledge about its expected payout" (Caves, Crookell and Killing 1983, p. 250). Opportunism is a feature of the process of negotiation in closing-off transactions when these features are exhibited. Hence, it is implicit in this discussion that an alternative organisational form to arm's length marketplace exchange might exist through which technologies might be transferred. It is possible that this alternative might be more efficient than are markets, as a result of the breadth and pre-eminence of the various imperfections in these 'markets' (Liesch 1993). The unifying concept in determining the nature of this organisational form is that of transactions costs. These are all of those costs "...associated with an economic exchange that vary independent of the competitive market price of the goods or services exchanged" (Robins 1987, p. 69). Calvet (1981, p. 53) writes, "In pure markets, transactions among individuals or groups are carried out at arm's length...In hierarchies, transactions take place among individuals or groups that are linked via an authority relation (...The authority relation gets its legitimacy from ownership rights)... markets and firms can be considered as two extreme modes of organising economic transaction. (Needless to say, many exchanges fall somewhere in between these two modes...)".

Technology is often best exchanged through hierarchial organisational forms, i.e. it is often internalised within an organisation, and sometimes new organisations are established to retain commonly used (and developed) technologies within the organisation. The processes of bureaucratic governance are called upon to ensure efficient hierarchial exchange. When this governance structure is enforced by government fiat, as it is in the specific case of international technology transfer, introduced here, it is termed government mandated-countertrade. Government mandated-countertrade is the most sophisticated form of reciprocal exchange conducted at the international level.

CONCLUSIONS

Formalised systems of reciprocal non-monetary exchange exist in Western economies alongside economic systems which are organised according to the dictates of the price mechanism in market exchange. This is somewhat enigmatic. Yet, on closer enquiry, the puzzle is unravelled. The existence of both types of domestic barter systems, viz. community-based *Letsystems* and business-based systems, and of sophisticated government mandated international countertrade can be explained by failures in the orthodox market systems to effect efficient outcomes from the perspectives of the transactors. Imperfections in the markets for labour (motivating *Letsystems*), for capital (motivating business barter systems), and for technologies (motivating many applications of government mandated international countertrade), unravel the puzzle. While these systems might introduce distortions of their own into the more widely used systems of monetary exchange, they exist in response to market distortions, and they appear to have become institutionalised.

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