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BARTER

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1. Introduction

Barter, strictly speaking, is the payment for goods or services with goods or services. As such, it is a market transaction without the intermediation of money. The term "barter" has come to be used for a number of types of transactions. Those which involve reciprocal gift giving are not included in this discussion. Other types of goods exchanges, including some which do involve some role for money, will be discussed. Our primary focus will be on barter in international trade, though we will also deal with its occurrence within domestic economies.

Barter, though seemingly simple, is actually a highly inflexible form of trade. Jevons (1883, Ch. 1) points out that it suffers from three serious inconveniences: a want of coincidence of needs (both in terms of products and timing), a want of a measure of value, and a want of a means of subdivision. The use of money removes these sources of rigidity. When goods or services are exchanged for money (monetary trade), the exchange can be partial, multilateral, and spread over time rather than having to be complete, bilateral, and instantaneous. Hirshleifer (1976; pp. 217-220) gives a clear account of the use of money as a device that reduces the cost of market trading, and consequently increases efficiency gains. For barter to flourish, therefore, there must be some reason that monetary trade is not possible, or not desired.

As Dalton (1982) argues in an article on barter in primitive economies, it is incorrect to postulate that barter was necessarily the dominant mode of market exchange before the invention of money. It is very probable that it is

money that makes extensive market exchange possible, and that before its invention trade and exchange were very limited in terms of frequency of occurrence, quantitative importance, and range of natural resources, labor, goods, or services covered.

Barter occurs widely today, but it occurs between participants who are aware of the existence of the alternative of monetary trade. In the discussion below we will examine why individuals, firms, and countries turn to barter despite its apparent problems.

Barter is an increasingly important part of international trade. A recent OECD (1982) report gives an estimate of its magnitude in East-West trade and states that Eastern European governments view it as a permanent and increasingly important part of their trade relations with the West. Both the OECD report and that of Verzariu et al. (1978) are very good sources of information on the practical aspects of this trade.

We have organized the discussion below under three rubrics. Each refers to a general category of barter, and we associate with each a primary reason for its occurrence. The terms are approximate, as barter may take a wide variety of forms and the terminology commonly used to describe them is so lacking in precision. Similarly, the reason we link to each category is not exclusive; that is, another key reason may also apply, as may some ancillary ones as well. The three categories and their primary rationales are:

1) Pure Barter/Counterpurchase: This refers to an individual transaction. The intent is to adjust the relative prices at which goods trade when their nominal prices do not reflect their real scarcity values.

2) Clearing/Bookkeeping Barter: Here we discuss any ongoing relationship conducted under a clearing account. These arrangements enable trade to take place despite the long-term or structural absence of some form of money acceptable to both trading parties.

3) Countertrade/Buy-back and Coproduction: These modes of barter encompass long-term agreements involving investment or provision of capital equipment or turnkey plants, and acceptance of subsequent production in payment. Such arrangements signal that the quality of the products the East Bloc or less-developed country partner is providing is above average (for the country), and bond performance.

2. Pure Barter/Counterpurchase

In pure barter, goods are exchanged for goods, with money entering into the transaction at most as a unit of account. The parties may refer to the trade as involving goods worth X million dollars, but exchanges are actually in terms of physical quantities. Counterpurchase or compensation trade involves the payment for goods with both goods and money. The seller, typically a Western firm in East-West trade, signs two contracts. The first specifies that the seller will be paid for its products in hard currency (internationally acceptable money/convertible exchange). The second contract specifies that some proportion (usually 20 to 50 percent) of this revenue will be used to buy goods from the exporting country. The seller then resells the goods it acquires in this way at home or in third markets.

When prices are out of line with the real scarcity value of goods, individuals and firms will turn to barter. For instance, after World War II prices in Germany were still frozen at 1936 levels even though wartime financing had increased liquid funds in the public's hands tenfold. Legal

sale could frequently take place only at a financial loss. A small black market developed (i.e., outright trading of goods for cash at illegal prices), as did a great deal of "compensation trade." Sales were transacted in money at legal prices, but were augmented by compensation in real goods and services (Hirschleifer, 1976; pp. 268-269). Still within the domestic context, taxes may also play a role in influencing people to engage in barter. For example, there are reports that as income and employment taxes rise, individuals are exchanging goods and services to reduce their money income.

In the case of the East Bloc and the less-developed countries (EBCs and LDCs, respectively), prices are frequently out of line under ordinary circumstances. In the EBCs the government--rather than the market--sets the prices, and on a basis other than marginal productivity or cost. This may occur in LDCs as well. However, the major price distortion common to both sets of countries involves fixed exchange rates. The countries' currencies are almost invariably overvalued. The overvalued exchange rate acts as a *de facto* tax on exports and a subsidy to imports. Barter then provides a way to undo these effects, at least on the goods bartered.

The two parties to the transaction can bypass the exchange rate and trade in terms of real prices. The implicit prices of the goods will generally be their world prices, since each trader's opportunity cost is what he could sell his goods for on the open market, and his buying price ceiling is the international price of the other party's goods. Overvalued exchange rates accompanied by barter are thus analogous to dual (or multiple) exchange rate systems, or programs of special export prices (Tschoegl, 1978).

Cartel or monopoly prices provide another opportunity for gains from barter. By obscuring the real (monetary) price, barter allows cartel members seemingly to trade at official prices while actually selling at a discount. A

number of cases of this sort involving members of the Organization of Petroleum Exporting Countries (OPEC) have occurred in the 10 years since 1973. Similarly, a party with monopoly power can use barter to conceal price discrimination (particularly when disposing of excess production or goods of limited market appeal), by making it impossible for an outsider to unravel the transaction. Thus barter deals, particularly those arising out of "switch" arrangements (see below), frequently have a clause prohibiting re-export to other markets.

Finally, the OPEC oil-price rise in 1973 led many European countries to arrange swaps of oil for nuclear power stations, military hardware, and similar goods. These kinds of deals were largely exercises in diplomacy, with the oil purchasers trying to assure themselves of oil supplies. They may also have put the countries into positions of bilateral monopoly with an opportunity to reduce rents reciprocally.

3. Clearing/Bookkeeping Barter

A clearing agreement represents trade using a "book" money, and provides liquidity and credit to countries with inconvertible currencies. The two countries establishing the arrangement agree to exchange over some specified period of time and up to some maximum value. Each country agrees to accept as payment for its exports to the other a credit in a special account maintained in its name in the other's central bank. Debits to this clearing account then pay for imports from the other country. The accounts may be denominated in the partners' own currencies or use some other currency as numeraire. When this currency is the dollar, the account balances are known as "clearing dollars." Whatever currencies are used, the agreement specifies the exchange rates that will apply, as well as a limit (known as "the swing")

on the degree to which the accounts, and hence trade, may be out of balance. Clearing accounts rarely pay interest on credit balances or charge it on debit ones. If trade is not in balance on the settlement date, the deficit may carry over to a new agreement or be wiped clean by the acceptance of unwanted goods or the payment of hard currency. The agreement often specifies the goods which may be traded, and their value.

Clearing agreements often require a great deal of negotiation to set up, but once established may run for years with little administration. They do have their disadvantages: when one partner reaches the ceiling or the swing trade stops, countries can easily find themselves saddled with goods they do not want when their partner settles a deficit with goods and, in the absence of interest charges, there is little incentive for countries to reduce deficits quickly. The inflexibility of clearing agreements has created the opportunity for the development of "switch" traders and firms. These arrange the resale of unwanted goods or unused credits to third parties for convertible currencies (see below) at a discount.

Clearing agreements have been used quite extensively in international trade in the twentieth century. In the 1930s Hitler's finance minister Hjalmar Schacht used such arrangements to accomplish the growth of Germany's economy despite the depression. After World War II, most of the European currencies, East and West, were inconvertible. During this period, the United States of America acted as the world's banker by running balance-of-payments deficits which enabled the nations of Western Europe to use dollars in their international trade. Even so, these countries did not return to convertibility until 1958, and in the meantime negotiated hundreds of bilateral clearing agreements with each other. Partially because of the Cold War, the EBCs were less able to generate and use dollars. The Union of Soviet

Socialist Republics (USSR) and the Eastern European countries relied instead on clearing agreements among themselves and with Western Europe. Later, they extended this mechanism to their trade with other countries with inconvertible currencies, especially LDCs.

This "bookkeeping barter" also occurs within countries. Parker (1982) reports on its use in colonial Australia, where money was "scarce, varied and bad" (p. 140), and cites an account of the practice in colonial America as well. In these cases it was storekeepers who kept the accounts and acted as bankers. Currently, bookkeeping barter still occurs on a small scale in the U.S. in the form of barter "clubs" organized by entrepreneurs who charge fees for their services in establishing and managing the club. Presumably it still occurs in its classic form in rural areas throughout the world.

From the discussion above, it is evident that even when countries want to engage in monetary trade they may be unable to do so because of a shortage of international reserves (typically convertible currencies, gold, and International Monetary Fund Special Drawing Rights). The countries that have insufficient amounts of these assets for their trade requirements also often have exchange control systems which limit the usefulness of their own currencies.

The currencies subject to such controls are termed inconvertible, which means that the recipients of such currencies may not freely exchange them for other currencies. Moreover, the issuing countries frequently are unwilling to let outsiders buy what they will in the domestic economy (commodity inconvertibility). (This is especially prevalent in the case of centrally planned economies, where prices are set arbitrarily or for social reasons and where permitting outsiders access to them would risk disruption of the plan.) In either case, inconvertible currencies are relatively unacceptable as payment

in international trade. Thus, countries with such currencies and insufficient international reserves must devise other ways to pay for import surpluses. In essence, they cannot or will not use their own money, and they have insufficient internationally acceptable money for their needs.

Clearing agreements are one solution (borrowing is another), because they create bank deposits that are money within the framework of the agreement. They also facilitate the granting of credit. Countries can extend credit to each other because the terms of the agreement reduce risk. The agreement in effect gives the creditor a lien on goods produced by the debtor. Of course, there is no overarching body to enforce the contract. The fact that the maximum amount and duration of the credit are set is a more important limit on the risk.

4. Countertrade/Buy-back and Coproduction

Buy-back occurs almost exclusively in East-West trade. Coproduction is used in LDCs and industrial countries as well as EBCs. In the case of buy-back, the exporter in the West barters to the EBC the capital equipment and the technology to build a factory in return for some of its output once it is in operation. The terms of such agreements may require that the Western firm buy back a portion (in some cases 100 percent) of the plant's annual production for a period of 10 to 15 years. These arrangements suit the EBCs since they require no expenditure of hard currency and provide their own financing.

Buy-backs frequently pose problems for the Western firm, however, particularly in the area of quality. Eastern European manufacturing output frequently does not match Western standards. Therefore, most agreements contain a clause giving the Western partner nearly absolute control over quality.

In a coproduction agreement both partners make reciprocal deliveries of components which they use in a jointly finished product. Generally, the East Bloc or LDC partner produces the majority of the parts, while the Western firm provides the more sophisticated ones. The reciprocal deliveries represent a barter payment mechanism. This is completely separate from the mutual marketing and/or profit-sharing arrangements, if any, which the partners may make.

Western firms enter into these cooperative agreements to gain access to a new market and to take advantage of lower wages in the partner's country. Frequently, governments in host countries may permit foreign firms to engage in coproduction with local firms, especially their own subsidiaries, in lieu of almost complete local production mandated by local content laws and regulations. The host-country firms gain new technology and a wider market for their products. Coproduction is vulnerable to many of the same operational problems as buy-back, particularly quality.

Murrell (1982) argues that countertrade can solve problems which arise when the quality of Eastern European products is unknown or the country has a poor reputation with respect to quality. If the EBC wishes to sell higher-quality goods in the West it must devise some way of signalling that these products are exceptions to its general reputation. The use of the Western firm's capital equipment in buy-back is one such signal. The continued use by the Western firm of the output in both types of countertrade is another. In both, the East Bloc firm puts itself in a position of dependence on the Western firm (Murrell, 1982, and Kogut, 1983). In the case of buy-back, the EB enterprise is dependent on the Western firm for after-sales service and technological updates if it is to retain its quality reputation and justify its investment. The EB firm has dedicated capital equipment to produce fairly

specialized components which have little value if they are not accepted by the Western partner. In effect, the Eastern Bloc firm is issuing a performance bond.

5.0 Conclusion

Barter is the payment for goods and services with goods and services. It occurs today between parties who are aware of the alternative of monetary trade, but deliberately and rationally (given their situations) choose to barter. We have identified three categories of barter, and associated a key rationale with each. These are: (1) pure barter, which provides the parties with a means to adjust the relative prices at which goods trade when nominal prices are not appropriate; (b) clearing agreements, which enable trade to take place in the absence of a currency that is acceptable to both parties; and (c) countertrade, which enables one partner to signal that the products it provides are of good quality and to bond this assertion.

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