The economic organisation of a Prisoner of War Camp

1. Why was it desirable to have a unit of account rather than a set of bilateral rates of exchange for each pair of goods?

Bilateral rates, such as a "tin of jam [being] worth one-half pound of margarine plus something else" (page 21), are not conducive to facilitating trade, due to the number of different ways in which it is possible to value a single good. The potential complexity of utilising bilateral rates is compounded when other confounding variables are considered, such as the number of smaller markets within the camp that existed, and the possibility to exploit this as demonstrated by the story of the padre trading around the camp. Changes in the supply of a commodity, through rationing, or the composition of the food parcels, would also serve to complicate bilateral rates, as trades which had previously been possible would no longer be viable. Changes in supply would effect the exchange rate, and new combinations of commodities would have to be arrived at, and then communicated between buyers and sellers.

The advantage of having a standard by which the values of all goods can be measured is primarily one of simplicity. By expressing the value of everything using the same unit, the relative values can be seen and compared, and the efficiency of the trading is improved.

2. Why were cigarettes used as money rather than some recognised national currency?

On a practical level, the amount of any currency in the camp would be minimal, if not non-existent. The little money there may be would be from several different countries; indeed, at Stalag VIIA there were "up to 50,000 prisoners" (page 21) of at least six different nationalities. Assuming that there was enough money in the camp, the first problem would be the pricing of commodities, as everything would have to be priced in each of the available currencies as each currency has its own value. Differing amounts of each nationality's money in circulation, and the perceived external value of the currency, would also necessitate currency exchange rates. Managing exchange rates would be comparable to the complexity of managing bilateral exchange rates for pairs of goods. A system with such a plethora of complications

would be very unlikely to thrive due to its inefficiency, and eventually a standard currency would emerge, as cigarettes did after the parallel initial bartering of goods.

The amount of money in the camp would be finite, and as there is no means of generating revenue, the economy could never develop. However as cigarettes arrive with relative regularity, the prisoners can be seen to have an income. Indeed, the quantity of currency in the camp economy led to it being possible for the German camp to have shop where the business of trading could be facilitated (page 22).

3. Are there any costs associated with the use of a consumer non-durable as money? How might it have been possible to reduce these costs?

While the cigarette was probably the most successful choice of currency when the contents of the food parcels are considered, it does have its disadvantages. The first problem is the non-monetary demand for cigarettes, or the fact that they are smoked. This means that currency is perpetually leaving the economy, and certain situations, such as "heavy air raids in the vicinity of the camp" (page 23) would increase the non-monetary demand. Less currency in the economy would lead to the falling of price levels, or deflation.

The non-monetary demand also leads to human costs for very heavy smokers. These prisoners would trade all of their food parcels in exchange for cigarettes in attempt to satisfy their personal non-monetary demand for cigarettes. They would then smoke all of the cigarettes they bought which, Radford reports led to "several cases of malnutrition […] among the more devoted smokers" (page 23).

The cigarettes are also prone to physical interference, in much the same way as coins were historically 'clipped', cigarettes were "sweated" (page 22), and tobacco removed from them and rolled into new cigarettes. The increase in hand rolled cigarettes meant that the unit of currency was no longer standard, and prices "could no longer be quoted in them with safety" (page 22). The lack of a standard meant that the seller had to demand more cigarettes to make the payment equivalent to machine rolled cigarettes. In short, the currency has been debased.

It would not have been possible to decrease the non-monetary demand for the cigarette, so unless the cigarette ration to all prisoners was increased, thereby satisfying this demand, there would still be prisoners selling all their food. The problem of pricing could only have been alleviated by a general consensus in the camp that all trading was only to be executed with machine rolled cigarettes. While this would not solve the problem wholly, as there would still be buyers trying to make a profit by dishonest means, it would be an attempt to protect the status of the currency.

4. Radford says that the market became 'unified'. What does this mean? Why is it desirable that markets should be unified? How did the cigarette monetary systems help to unify the market?

A unified market is one in which all the trading of a certain good occurs at the same price. The camp market was not unified at first: this can be demonstrated by the story of the padre; the fact that people were able to make "monopoly profits" from trading coffee with the French; and that middlemen had a role to play in many transactions - "most people dealt with a middleman, whether consciously on unconsciously, at some time or other" (page 24). Market unification was aided by regulating certain trades, such as transactions with the French or sentries (page 21), and by the existence of middlemen.

Middlemen made their personal profits by taking advantage of the market before unification. For example, if a good was selling for a lower price in market (or hut) A than consumers were buying it in market B, middlemen would buy the commodity in market A and sell it in market B. However, the increased demand in market A would cause the price to rise (demand curve shifts to the right, and move along the supply curve to the new equilibrium point indicating a price increase), and the increase in supply in market B would cause the price to fall (supply curve shifts to the right, and move along the supply curve, with the new equilibrium indicating a price decrease). These changes in price would eventually make the prices the same, or unify them between markets A and B.

Having a unified market enables transactions to be executed successfully, and it means that the consumer is, to a certain degree, protected from rogue trading, as prices across the market are standard. If the

consumer can know that they are paying a fair price for the commodity it is likely to instil a higher level of consumer satisfaction. Using cigarettes as a unit of currency meant that prices throughout the market were quoted in the same terms, and it was possible for the prices to be compared, this facilitated the unification process, and made it a natural progression

5. Middlemen who made profits by trading were unpopular, but were they providing a useful service?

The middlemen were providing an important service as their actions facilitated trading, allowing the economy to develop into an increasingly efficient system. Their unpopularity must be primarily due to the jealousy of the other prisoners who were less successful at acting as middlemen, as their social proximity with the profiteers would suggest they were well aware of what their fellow prisoners were doing.

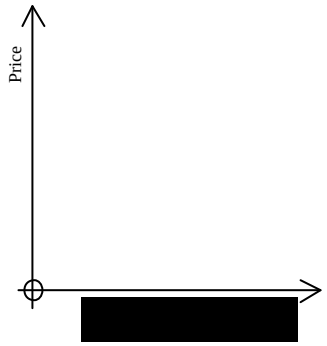
By bringing buyers and sellers together, the middleman is performing several useful tasks. He is increasing consumer satisfaction by helping the buyers to find what they want in the market, and aiding the sellers with the allocation of resources: these are both important linchpins in a successfully functioning economy. He is also, unintentionally, unifying the market while making an intentional profit for himself. An example of this is in practice is discussed above and is based on being in command of a great deal of information to trade successfully between internal markets. Assisting, even unwittingly, in the unification of the market is of immense value in reducing the potential for consumers to be exploited, and will in time allow the market to grow as the economy is running efficiently.

6. Consider the effects of the following:
a) an influx of Sikh prisoners on the price of bully beef

Sikh prisoners would not eat the bully beef issued to them on religious grounds, indeed “at first [they] exchanged tinned beef for practically any other foodstuff” (page 21). By not eating the beef, the Sikhs would want to sell it in the market, and this would cause an increase in the supply of beef. The number of people willing to buy beef remains the same, as none of the new Sikh prisoners would buy it. The increase in supply can be illustrated on the graph below by shifting S right to S1. If P indicates the original price of bully beef, the new price can be found by moving along the demand curve (D) to the new

intersection. The intersection gives the new equilibrium price, P1. Therefore an influx of Sikh prisoners would result in a falling of the price of beef due to an increase in supply.

Supply and demand curves for bully beef

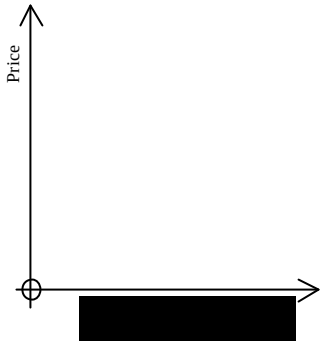


b) a fall in the supply of Canadian butter on the price of German margarine and on soap

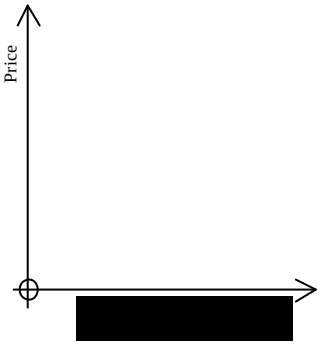
Margarine is a substitute product for butter, which means that if butter is not available, consumers will buy margarine instead. A fall in the supply of butter will increase its price – the supply curve shifts left (S to S1), and the new, increased, price (P1) can be found by moving along the demand curve to the new intersection. The higher price will cause the buyers willing to buy butter between *x* and *y* on the graph to leave the butter market, and find a substitute good.

The buyers who move into the margarine market will cause an increase in demand for it: this will cause the demand curve to shift to the right (D to D1). This change occurs as one of the assumption on which the margarine demand is based is that the price of other products in the market is fixed. The new price for margarine can be found by moving along the supply curve to the new intersection, P2. Radford describes this as "margarine appreciating at the expense of butter" (page 23).

Supply and demand curves for butter



Supply and demand curves for margarine

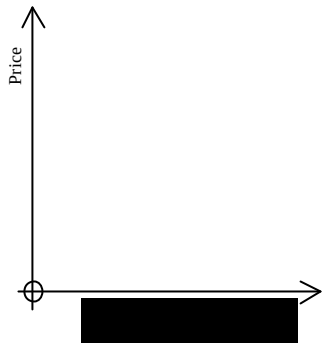


The soap market would also be affected by a change in the supply of butter, as the demand for soap includes the assumption that income is fixed. However, as seen above, a change in the supply of butter causes an increase in the price, and a decrease in the number of buyers. The increased price, and change in the number of buyers will cause a change in the demand for soap as having a fixed income is no longer a valid assumption. As butter and soap are wholly unrelated goods, it is impossible to determine whether the change in demand will cause the soap demand curve to shift to the left or right. In turn, this means that while there will be an effect on the price of soap, the direction of the price change cannot be determined.

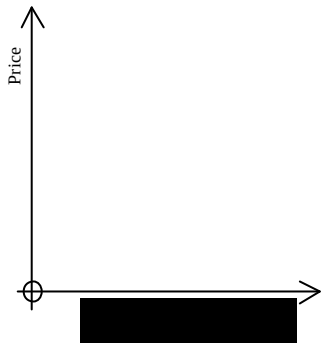
c) warm weather on the prices of cocoa and soap

Warm weather would cause a shift of the demand curves for both cocoa and soap, as it is changing the assumption that the consumers' taste is fixed. In warmer weather, the demand for cocoa will fall causing the demand curve to shift left from D to D1. The new price can be found by moving along the supply curve to the new intersection, indicating a lower price, or P1. However, the same change of assumption has the opposite effect in the soap market, as there will be an increased demand to wash, and launder clothes. As the demand increases, the demand curve shifts to the right (D2 to D3), and the price at the intersection (P3) can be seen to have increased.

Supply and demand curves for cocoa



Supply and demand curves for soap

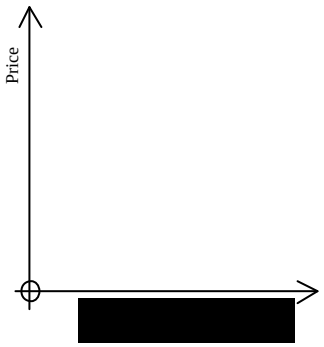


d) the discovery that alcohol could be made from sugar and raisins

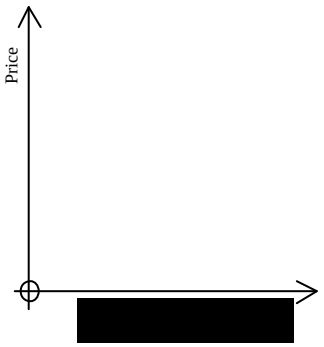
When it was discovered that "raisins and sugar could be turned into an alcoholic liquor of remarkable potency" (page 23), the immediate demand for alcohol would lead to an increased demand in both the raisin and sugar markets, as both commodities are required to make the alcohol; this can be described as a 'derived demand'. As the demand for raisins and sugar increases, the demand curve on both graphs shifts

to the right, and the price of each product can be seen to increase by moving along the supply curve to the new intersection (P moving to P1)

Supply and demand curves for raisins



Supply and demand curves for sugar

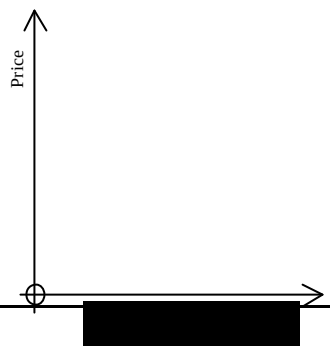


By creating a new product, alcohol, it too will have supply and demand curves. It should be noted that any changes in the supply of either raisins or sugar would alter the supply assumptions in the alcohol market, as the price of the inputs would change. As Radford describes the effect of the discovery of alcohol on the "dried fruit market" as permanent, it can be assumed that the demand for alcohol remained constant.

f) an influx of cigarettes on food prices. Would it have made any difference if this increase was anticipated?

An influx of cigarettes would cause food prices to rise dramatically. This would happen as the market demand assumptions for every product include the fact that the consumers' income is fixed. The non-monetary demand for cigarettes has been established as being less elastic than the demand for food, which means that each prisoner would have more units of currency to spend. Knowing that they have more cigarettes with which to purchase goods, will lead to an increase in demand for each good. This increase in demand would cause the demand curve for any product to shift to the right (D to D1). The shift would cause a movement along the supply curve to find the new equilibrium price for each product: the new price would be higher (P1).

Supply and demand curves for any (food) product



However, as the non-monetary demand for cigarettes is satisfied, cigarettes will disappear from the economy, and the demand for each good will fall again as there would in effect be a decrease in the consumers' available income. A decrease in demand can be illustrated by shifting the demand curve to the left, the price would then fall from P1, back to a level close to P, or possibly Radford's "just price". The decrease in demand would not be as sudden as the increase due to the slower disappearance of cigarettes through smoking, as opposed to the sudden influx of many.

If the increase been anticipated, the prices would still have risen if there was no restriction on the number of trades allowed, or any intervention to attempt to keep the prices artificially low. This can be demonstrated by using the theory of money, MV = PT, in which if the amount of money in circulation (M) increases, the number of transactions (T) within the market will increase. If the number of transactions increases, the demand for goods and services must have increased, and an increase in demand, as shown above, will result in higher prices.

7. Do you think it likely or possible that accelerating inflation could develop in this cigarette economy?

Inflation describes the tendency for price levels in a market to rise, and it is often brought about by an increase in the available currency. An influx of cigarettes into the camp causing prices to rise as described above, would be termed 'inflation'. While inflation would therefore theoretically be possible, it would only be a short-term situation as the cigarettes would be smoked, and eventually disappear from the economy. Accelerating inflation is a condition in which the inflation continues to grow, and prices would continue to increase. For this to be possible in the camp there would need to be regular large influxes of cigarettes which would overwhelm the non-monetary demand, as it is the non-monetary demand which would ensure that the amount of currency in the market would never be able to reach very high levels.

8. Should non-smokers receive a cigarette ration? If you think not, what about Sikhs and bully beef?

If the practical implications of determining each prisoner's smoking preference, and the complications of administering cigarettes to those that smoke, and not to those that do not are ignored there can be little

justification for discriminating against the non-smoking prisoners. If the prisoners did not each receive the same Red Cross food parcels, a very unequal society would develop. As all of the prisoners rely on the "detaining power" (page 20) and Red Cross to provide the basic rations any discrimination would be grossly unfair. If prisoners had to state their smoking preference, many non-smokers would claim to be smokers so as to receive the cigarettes which human nature dictates that they would then trade.

It would not be in the interests of the Red Cross to create an unequal society, and they can have had no choice but to supply both cigarettes and bully beef to everyone to ensure equality. It should be noted that this equitable society could not be guaranteed as prisoners received "private parcels" (page 20) which contained cigarettes that would give them greater purchasing power in the market. So while it can been seen that not everyone was equal, the external authoritative groups did everything possible to provide fairly.

9. Some heavy smokers developed malnutrition and became a burden on the communal resources of the camp hospital. What should have been done about this?

The only humane solution is to try and prevent this situation arising by disallowing trading with those who suffered from malnutrition as did occur in the camp (page 23). However, due to the "depleted food supplies" (page 23) of the hospitals, refusing to treat prisoners who had sold all of their food for cigarettes could be considered the fairer solution to society as a whole. Malnourished prisoners had made the conscious decision to sell all of their food themselves, they had not only paid the price of the cigarettes in supplies, but also the opportunity cost of their health. As it was their personal choice that led to the greater social cost – placing demands on the hospital's reserves – refusing to treat them could be seen as doing the greatest good for the greatest number, and therefore the more socially beneficial for the majority of consumers in the economy.

10. Outline what the role of 'Government' is in PoW camp economy. Should the role of 'Government' have been greater?

'Government' played an important role in trying to control prices within the camp economy. When faced with people making monopoly profits from trading with the French, trading was put on a "regulated

basis" (page 21) and only "accredited representatives" were permitted to execute the trades. Restricting the trading prevented the monopoly prices distorting the market prices which would naturally have been indicated by the relative scarcity of each commodity.

The organisation of a shop controlled by "representatives of a Senior British Officer" (page 22) in which prices were fixed, was again a means of protecting the market price, and the consumer. However, Radford reports that the price fixing schemes only worked because of a "body of opinion", and points out that it was not feasible to have greater control as "opinion was always overruled by the hard facts of the market" (page 24). In other words, any attempts at price regulation, even if generally agreed upon, were invalidated by the realities of the availability of goods and cigarettes to the prisoners.

It could be argued that there was a need for a greater role to be played by 'Government', whether it was in rationing the supplies to those suffering malnutrition, penalising (or taxing) those making monopoly profits, or maintaining supplies to protect against periods of deflation. While these would have been theoretically possible, the on-going non-monetary demand for the currency precludes this, and 'Government' can be seen to be in a position where it is very difficult to be able to exert any control over the economy.