

TWO PACKS OF CIGARETTES SAY THEY DON'T MAKE IT OUT OF THE FOREST

**Inflationary and Deflationary Factors in German Prisoner of War Camps During
World War II**

Tennessee Scholars Senior Project

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April 16, 1993

Imagine being in a prison two thousand miles from home in a foreign country where your guards do not even speak the same language as you. Now compound this problem by allowing your captors and guards to be sworn enemies in a war that involved almost the entire world. You are imprisoned in a compound with 1200 to 2500 other prisoners all of whom are feeling exactly the way you are--lonely and helpless. Your only hopes of getting information on the outside world comes from your captors, sparse letters from home, and incoming prisoners. Your captor's information is likely going to be false propaganda to affect your psychological state, the sparse letters from home must go through two screening processes (first your own country and then your captor's country), and finally the most reliable source of information--incoming prisoners--is a wolf in sheep's clothing. Although more prisoners coming into the camp means more news, the more prisoners coming into the camp usually means the better things are going for your captors and the worse things are going for you. Approximately once a week you receive a Red Cross parcel to supplement your rations of food and clothing provided by your captor. Such was the case for over 139,000 American soldiers during World War II in Europe and Asia. These American heroes lived life on the other side of the battlefield, they had been captured in the fight against the enemy and were now helpless in their fight against that enemy. These men passed the time as best they could dreaming of the day that

they would return home. In these awful conditions a strange development occurred. A self-contained economic system developed complete with an examples of monetary evolution, monetary controls, organized markets, and organized future markets. The purpose of this examination is to look at the conditions these soldiers lived in and the evolution and collapse of their economic system.

Anyone who has see the 1952 classic movie "Stalag 17" saw a glorified image of the POW--accurate in some ways and inaccurate in others. It was this movie that first interested me in this topic. The men used cigarettes as money. I thought for days on this subject and after a brief footnote in a textbook on the topic I decided that this was the topic I wanted to explore in my senior research project.

To really understand these economic systems it is first essential look at the constituents of the systems and to put it as John Maynard Keynes would to look at the "animal spirits" that drove them. During World War II, 139,000 were held in prison camps in Germany. The German prisoners of war will be the focus of this paper. These men consisted mainly of infantrymen and air corps personnel.

It is not surprising that the POW's feelings of utter helplessness combined with the horrible conditions faced by these men that they struggled to make their life seem controllable and normal. Many times this was done through the self-discipline process. The process evolved from one seeking to deter more severe German punishment to one of self control and a sense of guiding one's own destiny. The self-

disciplined process was strengthened by the presence of a camp organizational structure. Although the organizational structure and strength varied from camp to camp--it was always present and provided an invaluable asset in both the POW's physical welfare and mental state. As Colonel Nicholson said in the 1957 movie "The Bridge on the River Kwai"--"We must always convince the men that they are still under our control rather than that of our captor."

In addition to the self-discipline imposed on the soldiers, another organizational structure developed. Economic structures arose in the camps--this economic structure

A Standard Red Cross Parcel



Figure 1

began as a simple barter economy but developed into a sophisticated economy complete with currency, exchange markets, and futures markets. The economic system developed from trades conducted with the contents of the Red Cross parcels which were distributed weekly. The weekly distribution was overseen by a governing member in the camps POW organizational system. The standard contents (as pictured below) were biscuits, cheese, chocolate, cigarettes, coffee, corned beef, liver paste, pork luncheon meat, orange concentrate, oleomargarine, powdered milk, salmon, sugar, and soap.

The trades may have started as something simple--a bar of chocolate for a pack of cigarettes, but the trading was inevitable as was the escalation of the trading. Not all of the POW's were smokers and thus rather than just toss aside unwanted cigarettes these POW's could trade them for wanted items. Other items began to be traded and soon it was realized that the differing items had differing demand rates and a common trading medium was desired. For example food items were basically homogeneous and cheese would trade for roughly seven cigarettes. Non-food items such as clothing were less homogeneous and prices were haggled upon.

Some people at this point may wonder about another alternative to simple throwing away unwanted items: Goodwill. Goodwill did not play a very large role in German Prisoner of War camps for various reasons. People usually became initially hardened when entering into a POW camp unsure of what to expect and even

more unsure of who to trust and who to believe. In the movie "Stalag 17" J.J. Seftant related his experiences of goodwill in a POW camp by telling how he had his boots stolen in addition to his Red Cross blanket and several other items. To him it was every man for himself, and survival of the fittest (or smartest). "Very soon after capture people realised that it was both undesirable and unnecessary, in view of the limited size and the equality of supplies, to give away or to accept gifts of cigarettes or food. 'Goodwill' developed into trading as a more equitable means of maximising individual satisfaction." (Radford 190-1).

The price standard of cigarettes arose for several reasons. Aristotle (speaking on buying and selling) says, "The other or more complex form of exchange grew out of the simpler (or barter). When the inhabitants of one country became more dependent on those of another, and imported what they needed and exported the surplus, money necessarily came into use . . . Hence men agreed to employ, in their dealings with each other, something which was intrinsically useful and easily applicable to the purposes of life, for example iron, silver, and the like." (Kinley 15-16). In the case of POWs this "intrinsically useful and easily applicable" substance was cigarettes. Drawing from Aristotle's quote his countries were individual POWs in our analogy--the POW would buy (import) what he needed (or desired) and sell (export) what he needed not. Cigarettes possessed many desirable characteristics of money. According to Mishkin in order to qualify for money a possible substance

must possess five characteristics:

1. It must be easily standardized, making it simple to ascertain its value;
2. It must be widely accepted;
3. It must be divisible so that it is easy to make change;
4. It must be easy to carry; and
5. It must not deteriorate too quickly. (Mishkin 22)

The first characteristic was the only one to be seriously challenged in the POW camps. Because differing brands were present it was initially difficult to standardize the value, but buyers quickly began using only poorer quality cigarettes for transactions keeping the premium cigarettes to themselves. A noticeable anomaly occurred at one prison camp--Believe or not a "make-shift counterfeiting ring" arose. At this camp pipe tobacco began being used to hand roll cigarettes. "Pipe tobacco was issued in lieu of cigarettes by the Red Cross at a rate of 25 cigarettes to the ounce and this rate was standard in exchange, but an ounce would produce 30 home-made cigarettes." (Radford 194) Hand rolled cigarettes were not homogenous and the price standard was in danger, but soon sellers began to examine the cigarettes for weight and demand extra tobacco if the cigarette was found to be lacking in quality. This examination was similar to that of other non-homogeneous items such as clothing (i.e. better shirts were of higher value and more cigarettes were demanded for them in the market).

As for the other factors which were present in the confirmation of cigarettes as money no real challenges were met. Cigarettes were of course widely accepted even

among non-smokers because of the barter ability with the large number of smokers in the camp. Cigarettes were as divisible as the dollar bill. Although one would not trade half of a cigarette one would trade half a pack of cigarettes. Cigarettes did not deteriorate quickly : the chief cause of deterioration was the smoking of the cigarette. Cigarettes were definitely easy to carry and transport and luckily a person did not have to have a wheelbarrow of cigarettes in order to make an exchange. Inflation and deflation of the cigarette currency will be discussed in a different section of this paper. Thus after fulfillment of all of these requirements cigarettes became the accepted form of currency not only at a single camp but at almost every camp.

Certain competition arose against the cigarette as the primary currency. Most notable among this competition was the BullyMark. The BullyMark arose when a restaurant was started in one of the camps. In order to avoid the deflationary and inflationary affects (which will be discussed later in this paper) the camp's organizational staff decided to make a paper currency known as BullyMarks. A shop for food was set up and the food shop became the "bank of issue" for the BullyMark. POW's could sell their goods to the shop in exchange for BullyMarks rather than the standard cigarettes. These BullyMarks which were backed 100 percent by food could then be exchanged in the restaurant for meals. For a time period it seemed as though the BullyMark would replace the cigarette as the standard currency but it never did. Even though the restaurant and the BullyMark had no inflationary or deflationary

affects from a change in the supply of cigarettes, air raids in August of 1944 forced the restaurant to close for extended periods of time and the BullyMark's popularity died out. (Radford 197).

The original exchange markets began as simply as the Chicago board of trade began--People getting together to enact trades beneficial to both parties. In the POW camp this was first accomplished by soldiers wondering from building to building calling out their offers to buy or sell. Because of the general confusion and the large number of people shouting after distribution of the parcels a more feasible system was developed. An exchange board was posted in each building to inform buyers and sellers what goods were being offered and at what prices. After a deal was completed it was marked off or removed from the exchange board. Because these "prices" were posted public knowledge of the relative worth of various items led to established "trading price zones." (Radford 191). These "trading price zones" were present mostly for homogeneous products only. The general level of prices could be affected by several different factors, and these inflationary and deflationary factors will be discussed later in the paper. The organization of this market was in large part correlated with the development of the organizational structure. The more developed the governing system of the camp the more developed the market system. Temporary transit camps had little camp organization and little market organization. Basically the simpler barter economy was present and cigarettes although the major medium of

exchange never reached the full status of currency.

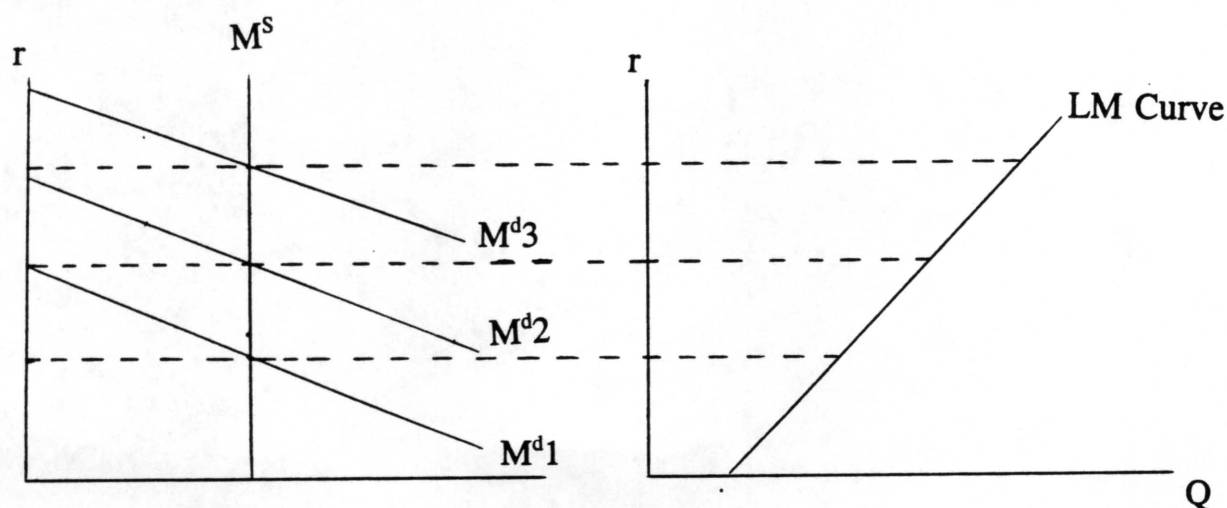
Futures markets naturally developed from the anticipation of the arrival of the camp's Red Cross parcels--the smart GI was gambling (just as today's commodities traders) on what the future price of goods would be and locking himself into a set price for the delivery or sell of goods. Naturally due to the strange nature of the system there were interruptions in the order of the Red Cross distribution if extenuating factors arose and this had various impacts upon the markets. These interruptions had effects upon the money supply and the goods supply.

The most interesting factors out of all present to me were the inflationary and deflationary factors present in this self-contained economy. It is prudent at this point to briefly discuss the two schools of economic thought which will be used in our analysis of the inflationary and deflationary cycles. The Monetarist school of thought, whose chief proponent is Milton Friedman, view the aggregate demand curve as downward sloping with one primary factor that causes it to shift--changes in the quantity of money (M^s). The Keynesian school of thought which derives from the theories of John Maynard Keynes similarly views the aggregate demand curve as downward sloping but they believe that changes in government spending (G), taxation (T), and consumer and business expectations (Expect) in addition to changes in the quantity of money (M^s) can cause the aggregate demand curve to shift. Aggregate demand is a relationship between the price level and quantity of aggregate output for

which goods and money markets are in equilibrium. Aggregate supply (which can be of two types: long-run and short-run) is the total quantity of final goods and services that firms in the economy want to sell at different price levels. Our analysis will differ slightly from these definitions. Goods and services in our economy are represented as products from Red Cross parcels other than cigarettes and various camp jobs such as laundering, pastel portraits, and odd tailoring. There is an absence of government and taxation in our economy and thus these two factors can be held constant at zero. The only government form present was that of the camp organizational structure and this group's policy in our economic world was to oversee the distribution of Red Cross parcels and the placement of restrictions on trading outside of the economy (i.e. trading with German guards for items or privileges not necessary for escape).

The aggregate supply curve will in the long run be constant and thus vertical barring any technological advance or increase in general productivity of the workforce. In our analysis the long run aggregate supply curve will be vertical because in the long run distribution of Red Cross parcels was steady and could be relied upon. This curve in the short run will be upward sloping because of businesses desire to produce more goods when the prices are higher. In our analysis the short run aggregate supply curve will be upward sloping because of the POW's desire to sell more goods when prices are higher. (Classic supply and demand economics

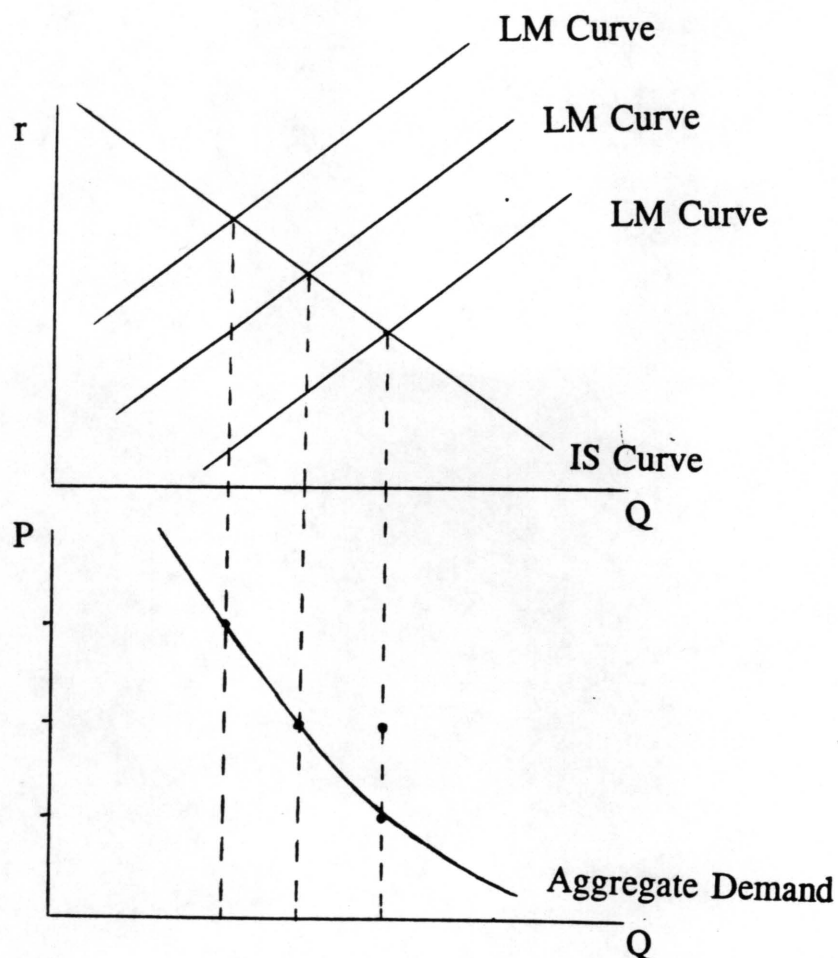
dictates that when prices are higher more products will be produced to sell at a higher price, but when prices are lower less products will be offered for sale in hopes of gaining a higher profit at a later date.) The aggregate supply curve is derived from the IS-LM Curve analysis. The IS curve is the investment savings curve and in our economy is represented by the goods (including food parcels and all other goods and services) present in the economy. The LM curve shows combinations of interest rates and aggregate output for which the quantity of money demanded equals the quantity of money supplied. Holding the money supply constant the LM curve is derived in the following fashion:



At various interest rates (M^{d1} , M^{d2} , & M^{d3} above) the aggregate output Y will differ. For example when the interest rate is lower (M^{d1}) the opportunity cost of holding money is lower so more people will demand money for transactions. When it is known that money is earning less interest people will be more likely to spend it at the

present time rather than wait for its value to appreciate. With the LM curve derived in addition to the IS curve we can now derive the key component of our analysis--the Aggregate Demand Curve.

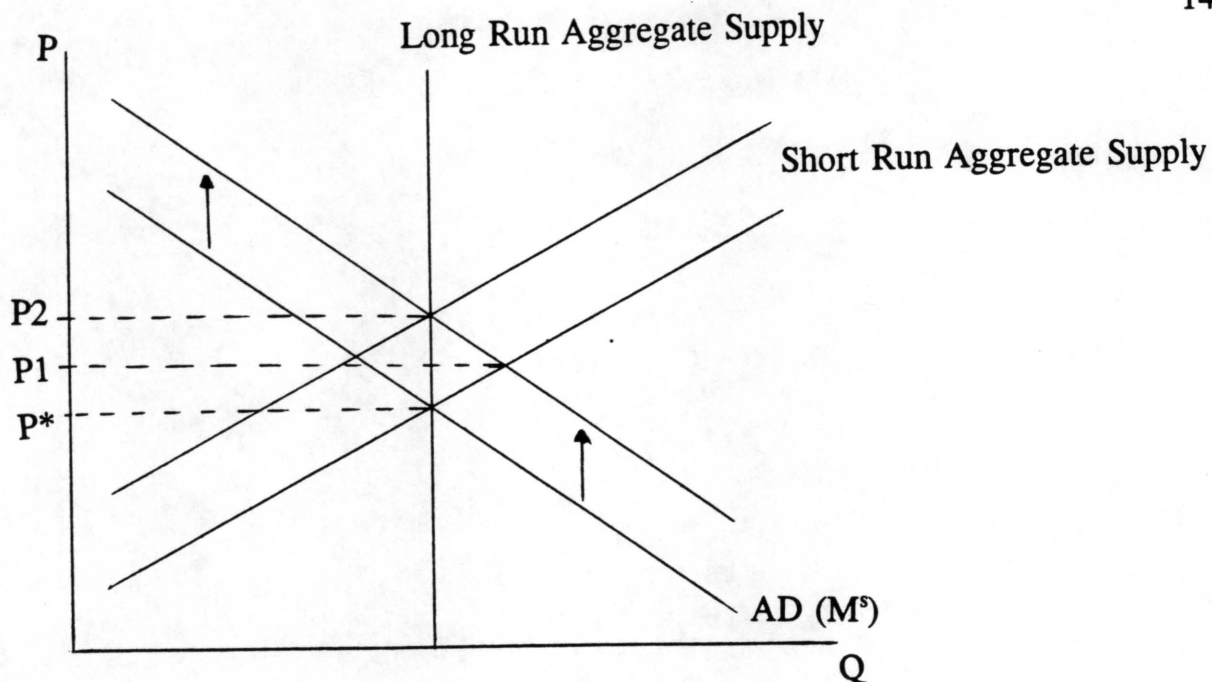
The aggregate demand curve is derived in the following manner. Taking the IS curve and plotting along axes of the interest rate (r) and aggregate output (Q)--we see that it is downward sloping. By overlaying various LM Curves consistent with various price levels in the economy we can trace out a new curve which shows the total quantity demanded at different price levels of final goods and services produced in (brought into) the economy. The aggregate demand curve is derived in the following manner:



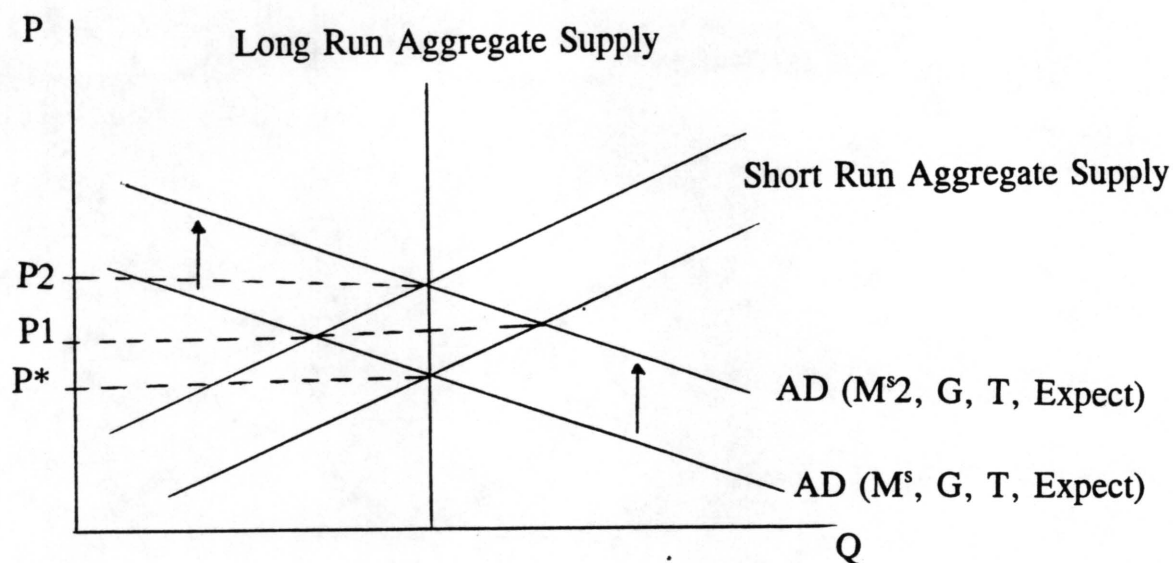
In our example we have shown the money supply held constant but with different price levels causing changes in the LM curve--this is known as the Real Balances Effect or the Piquo Effect. The nominal supply of money changes while the actual money supply remains constant.

With this basic groundwork of economics laid we are ready to begin our look at the inflationary and deflationary effects of various stimuli to the prison camp economy. These stimuli would include but not be limited to changes in the cigarette supply, an influx of new prisoners, air raids, good and bad war news, and Red Cross parcel composition and distribution.

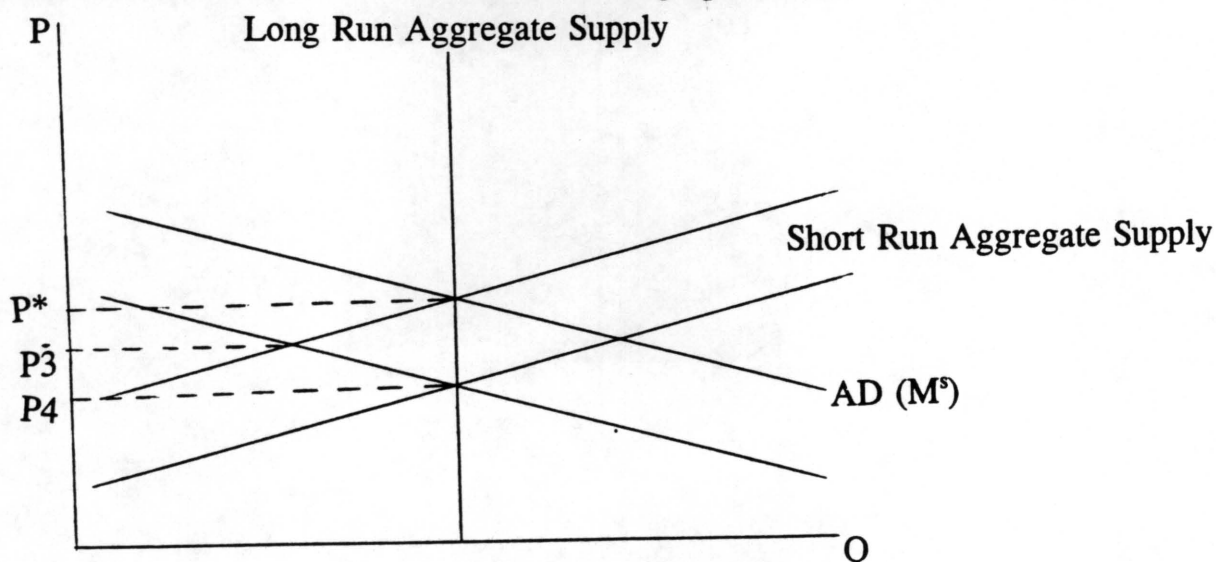
Our first graph (located on the next page) will view the inflationary effect of an increase in the supply of cigarettes from the Monetarist viewpoint. This increase in the supply of cigarettes either from additional "currency" entering the economy through private parcels or through regular shipment of cigarettes would be viewed as increase in the money supply which causes the aggregate demand curve to shift up. This increase in cigarettes while holding the other supply of goods constant results in more currency present in the economy with which to purchase goods and services--the price of goods is bid up and the general price level increases to a new higher level (P1). This however is not the end of the price increase as an additional price level increase results when the economy shifts back into long and short term equilibrium. The new established price level would be at point P2.



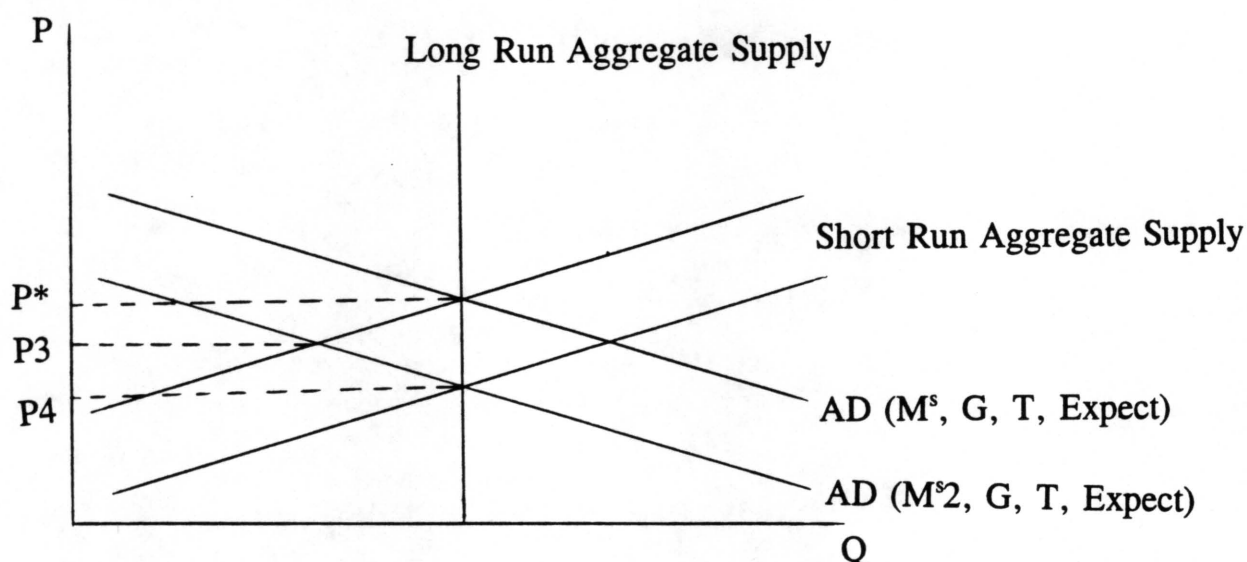
Now consider the same effect viewed from a Keynesian perspective (This graph is shown on the next page). An increase in the Money supply would cause the aggregate demand curve to shift up and the price level would once more increase in the short term to P_1 and in the long term to P_2 . There is no difference in these graphs with the exception of the shift parameters on the aggregate demand curve. Both Keynesians and Monetarists agree that changes in the money supply will effect the economy and the only result of increases in the money supply is increase in the general price level and an increase in the inflation rate.



How would this effect differ if the cigarette supply was decreased for some reason. An example would be worsening war conditions near a camp make it difficult or impossible to bring in either mail or Red Cross parcels. This change would in effect be a decrease in the money supply. Once more we will first consider this change from a Monetarist stance. The changes would be exactly opposite from the discussions above. The aggregate demand curve would shift down moving the economy to a lower short term price level (P_3) and eventually to a lower long term price level (P_4). This case is illustrated in the graph below.



Now understanding that both Keynesians and Monetarists view changes in the monetary supply as affecting the aggregate demand curve we realize the above effects will be exactly duplicated with the exception of the shift parameters on the aggregate demand curve. The Keynesian viewpoint is illustrated in the graph below.



Good and bad war news will effect the price level also but only in the Keynesian view because in the Monetarist view the only shift parameter of the aggregate demand curve is the money supply (M^s). In the Keynesian view, however, changes in consumer and business expectations can affect the aggregate demand curve. Our first example will be of "bad" war news--German forces are holding steadfastly, and the Red Cross food parcels are being delayed by the Reich's bureaucracy. When this news reaches the soldiers either through contraband radios, incoming prisoners, or German camp wardens they will become discouraged and feel their internment will be prolonged indefinitely. The cut off of Red Cross parcels means that the supply of

cigarettes is going to decline. This would have a deflationary effect on the economy, but at the same time with a reduction in Red Cross parcels comes a reduction in the supply of other goods in the economy and the price of these limited goods would be bid up by people wanting to possess them more than they are wanting to possess the cigarettes

Given the Monetarist viewpoint we can look at the inflationary and deflationary effects from an algebraic rather than a graphic perspective. Monetarists are sometimes referred to as New Classical economists. It is useful at this point to look at the Quantity Theory of Money and its relationship to the use of cigarettes as currency. Irving Fischer, the chief advocate of Classical Economics, determined the following relationship for the velocity of money in his book The Purchasing Power of Money:

$$MV_t = PT$$

Where M is equal to the quantity of money, V_t is equal to the transactions velocity of money, P is the average price per transaction, and T is the number of transactions conducted in a year. Rearranging the equation we can come up with a relationship that will once more examine the changes in price level without a graphical interpretation. The new equation is

$$P = (MV_t)/T$$

Now let us once more examine the result of an increase in the number of cigarettes

present in the camp. This would be interpreted as an increase in the money supply (holding the velocity and number of transactions constant) we would see an increase in P (the average price per transaction). This would be interpreted as an increase in the inflation rate. If the opposite occurred--the supply of cigarettes (money) was reduced, then the term (MV_t) would increase while the total number of transactions (T) thus the price per transaction would decrease and deflation rates would be experienced.

This deflation phenomenon was the cause of the collapse of the POW economy. Reductions in Red Cross parcels were the cause of the reduction of cigarettes and consequently the money supply. Exchange mart boards became filled with unaccepted offers for cigarettes; food was practically given away in order to meet the non-monetary demand for money. (Radford 200-1). This simply refers to the fact that cigarettes had an intrinsic value to the soldiers (their ability to be smoked). As the supply of cigarettes was reduced more and more of the "transaction cigarettes" were being smoked. Barter became the way of the camps and currency was practically non-existent. R. A. Radford best summed his own experiences in a camp when he said: Economics has been described as the science of distributing limited means among unlimited and competing ends. On 12th April, with the arrival of elements of the 30th U.S. Infantry Division, the ushering in of an age of plenty demonstrated the hypothesis that with infinite means economic organization and activity would be

redundant, as every want could be satisfied with effort." (Radford 201).

The former POW's were no longer limited to the meager rations of their captors. Food and clothing were not luxury items to be bartered for but rather were basic items guaranteed to each newly freed POW. These men had the rare opportunity to view evolutionary economics first hand. Most economies have been established for decades if not centuries, and our studies focus on the anomalies present in these well established economies. These men had the opportunity to view the rise of an economic system and the many factors which affected it in addition to the collapse of the economic system. Their experiences were not an isolated incident. They are a model for a larger economic system from which everyone can learn.

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Author's Note*

Although only three works were actually cited in the text of the paper it should be mentioned that a great deal of the analysis work is derived from classroom notes and instruction from Thomas Garst and Chuck Roussell. Additionally the following book was extremely helpful in information on the German Prisoners of War:

Foy, David A. For You The War Is Over: American Prisoners of War in Nazi Germany. Stein and Day Publishers. New York. 1984.

Acknowledgements

I would like to express my deepest appreciation to the following people:

Thomas Garst--for laying the Foundations of Macroeconomic theory to me;

Chuck Roussell--for expanding on monetary theory and challenging me to think;

Jenni Beckham--for bringing me out of my shell and showing me the many wonderful intricacies of life;

Rebecca Longmire--my life-long mentor and friend--you opened many doors for me and I will never forget it;

Alpha Kappa Psi--for allowing me to become a member of a group which helps to shape and mold people's lives;

Brenda Denton--you gave me confidence and hope even in the darkest periods of my college days;

Dr. William Bruce Wheeler--You caused me to think in your class and to be my own person not just a "member of the herd;"

Dr. Thomas Broadhead--from the days of Governor's School to the Tennessee Scholars program you showed genuine interest in a student's ability to reason;and

The "other Michael Lett"--you've grown up, your about to begin a new adventure--never forget your goals and remember that in time all things are possible.