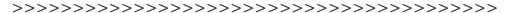
Non cooperative games, design of fictitious republic money in exchange control, banking and taxation K G Misra

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Abstract: 'Reality of money' is curiously similar to uncertainty theory of (Heisenberg) quantum physics. To some (natural societies), legitimacy of exchange control is derived by associating it with certain physical significance of 'real' goods. Exchange control is thus decided by producers in commodity exchanges. Others (Republicans of Greek civilization) think, money can be only a symbolic or fictitious unit, and any physical significance attached to it will undermine sanctity (in respect to space and time) of money used as unit for measurement of the prices. Under these circumstances, exchange control is monopoly of republics and debt engine produces competition and enterprises in people. There are two worlds. Performance of markets (Republics vs. Natural Societies) is going to test which of the perspective and understanding are true and for how long.

A republic is design of a game of Master and Slaves in creating forces of competition with fictitious (unreal or without physical significance) coupons. This is a human nature that people are excited so much about unreal things and they can always produce any amount of real / natural things or sacrifices to pay for unreal or unknowable. Gaming/gambling unfortunately uses of this human weakness in making slaves compete among themselves. This article describes design of Republican (Greek civilization) monetary system as a NON CO-OPERATIVE GAMES and how the psychograph of ignorant souls is exploited by the state, and how the mess of economics is successfully able to create a form of criminal peace and prosperity.

This article discusses the valuation of prices, unit price or measuring unit for prices, legitimacy of exchange control in markets, invention of commodity exchanges using 'real' money, invention of 'fictitious' money, banking, state monopoly of exchange control and mathematical legitimacy of interests and taxation.



Valuation of Price

Price is a resistance or pain of giving or an instrument of exchange control in the market. Transaction of goods and services in a market cannot take place without paying 'prices'. Although quantifying a 'price' is a not easy but price has certain principles. High price means, people do want to give things that easily and demand for more. Price is 'bhav' (feelings) in Sanskrit. Prices act as prevention of wastages because something is wasted, 'resistance' 'pain of giving' or 'prices' would be high. Or, if the goods made by untested technology where consequences are not fully known, prices or 'pain of giving' will again be high. Guns, weapon, drugs are thus high priced. Beneficial goods, like fruits, vegetable, education, are priced low because distributing these is harmless and unrestrained; and as a result, its production and supply increases. Price is a mechanism

how 4 principles of economics (need fulfillment, prevention of waste, risk minimization and equality) are operational.

Taking analogy of flow of electricity, price acts just like resistance across two conductors at a certain voltage difference. Difference in voltage is like 'demand' or 'should be' - 'is' . Forces of economics will try to fulfill this demand. And by this force, goods and services will begin to flow from higher altitude (surplus) to lower (deficient) areas. By principle of fulfillment, this gap (called 'demand') is bridged by human action and this action is called 'supply'. Rate of flow of electricity is called current. Similarly, supply is a rate of flow of goods and services that are regulated for certain caution or 'resistance' called 'prices' in line with economic principles of prevention of waste and risk minimization.

Demand = supply x resistance V = I .R Voltage difference = Flow of current. Resistance

1. Barter System

1.1 Idea of wealth: Removal of deprivation, by mutual transfer of goods and services

Transaction between one-to-one, voluntary and in good faith is called 'barter'. In a village, one person is growing vegetables and another person is running a horse cart (taxi run by horses). By using economic system, the farmer gives transporter a certain coupon (slip of promise note for 10 kg potato) in exchange of riding his cart for a distance of 10 miles. The rule is thus, 1 potato = 1 mile. The cart owner can use this coupon to pay to farmer whenever he would like to buy a certain quantity of vegetables. Both become happy, because each one gets the vegetables and horse cart. This removal of deprivation is called 'wealth'. An automobile, house, community facilities are example of wealth that remove various deprivations.

1.2 Exchange Control: Conventional practices in pricing

People in North East India use number of cows as unit for determining prices. Cow is a denomination of price. If a farmer sells one acre of farm land for 500 cows, it means, his demand of price or his pain of giving one acre of land has got same feel as giving 500 cows. Cow is a unit of measuring prices. The amount of price is 500 cows that mean the farmer will have as much pain in giving one acre of land as if he would have lost 500 cows. By a promise to have 500 cows from buyer, the farmer is satisfied and treated with 'equality' in a market place. In Arab (called Middle East), people are familiar with production of crude petrol and they can easily relate pricing is in terms of barrel of petrol instead of the cows in North East India. For Arabs, they can buy a car from Germany at pain of loosing 6000 gallons of crude petrol. The pain of giving or 'price' is 6000 multiplied by the unit of 'measuring the pain' in 'gallon of petrol'. The Arab is agreeable to loose 6000 units of petrol in exchange of car from Germany, and German seller is treated with equality by receiving the promise of 6000 units of petrol.

1.2: Invention of commodity exchanges

An activity of 'barter' is between one-to-one, voluntary and in good faith. And with the best of intentions, promises made cannot always be fulfilled. People do not want an expansive third party mechanism (in the name of government) to come into picture and take away their voluntary self regulation. The deficiency of barter system is one-to-one relationship; and in untoward conditions, mutual faith is destroyed even for temporary inability in fulfilling obligations. Two farmers, one grows potato and another rice. Rice farmer and potato farmer both agreed to have a rule of exchanging one kilo of rice for 10 potato and vice versa. Potato farmer has taken 10 kg of rice but somehow his potato crop failed and was unable to fulfill the commitment of 100 potatoes to rice farmer when a demand was placed. Can 'failure of promises' situation preventable? There were many other rice farmers and many other potato farmers but their 'pairing' or 'locked in one-to-one barter system' had caused shortages although the commodities existed. There was a third person in village that saw it. And he gave the farmers an idea to form commodity exchanges.

Commodity exchanges are a sort of warehouse where all potato farmers and rice farmers would agree to keep their goods. To find a way to count the things deposited by each one of them, the warehouse used to give them a receipt or 'coupon' or 'monies'. This receipt is substitute of 'real' products. A common term for monies was agreed as 'potato'. When a farmer gave stock of potato or rice to warehouse, they will get a 'coupon' with number of potato equivalent to goods received. For example, by depositing 10 kg rice, they will get 100 coupons of one potato. A potato farmer can get 1 kg rice from warehouse in exchange of 10 'potato' coupons. Now, he is not dependent on one farmer for the rice because the commodity exchanges gave them rice, potato, vegetables and all other things. The problem of one-to one barter was reduced and rice farmer and potato farmers have found a solution to it.

2.1 Value of real money is indeterminable and it changes with respect to time and space

System of commodity exchanges was thus beneficial for growth of the markets, and the 'good faith' was substituted by 'coupon' in the said example called 'monies' or 'receipts' of the warehouse for his/her goods. The 'monies' are 'money' which is receipts against our own goods and services kept in the bank. Unit price is a substitute of 'real' or physical material. Unit of Real money is pegged against a certain amount of gold or certain amount of crude petrol or anything that have fixed utility. Here this money is with a physical significance and is without need of a third party mechanism of state?

It is a free choice. If Unit of Real money is related to certain amount of gold, exchange control lies in the hand of the gold producers. Similarly, it could be related to 1 liter of petrol, the producers of petrol know what they promise, and any one producing petrol is eligible of producing real money acting as exchange control. 'Open to all' exchange control becomes a basis for movement of all goods and services in market. In this way, valuation of price in markets is calibrated every time on 'real time' basis, and commodity or commodities chosen as real money would have no guarantees, and 'prices' can

change with respect to time and space. These would be like a movement of various shares in stock market.

When money is 'real', state monopoly of exchange control is irrelevant. Producer of 'real goods' get a right of 'creating' the money unaffected by the idea of 'competition' chasing few fictitious money circulated by the state. Holder of this money have a wealth (unlike fictitious) equivalent to real goods, and none can charge penalty or interest. This money is product of 'creation of real value' and not 'competition in the gaming'.

2.2 Exchange control in hand of producers contributing into commodity exchanges, and not in hands of state

When a farmer goes to bank with 5000 kg of rice, what amount of receipt or monies should the commodity exchanges give him? A commodity exchanges is thus a free market and instrument of market is responsible for determination of the value to be recorded on receipt or price of rice. Price or exchange control in the commodity exchanges is not an instrument of state /political republics but is based on producers of commodity. For example, OPEC is a commodity exchange of fossil fuels and it determines price of crude oil. Similarly, LME (London Metal Exchange) is a commodity exchange of metals and have a fair idea of value of prices of metal. In India, food grain or farm animals can be exchange control because people can visualize a physical meaning of price in their common wealth of commodity exchanges.

USD or Yen are fictitious (unreal) money produced by various republics and these are monetary system other than commodity exchanges. This republican money is tricky business and will be discussed later. Commodity exchanges are an exchange control mechanism where producers and buyers of different commodities can operate their economics in simple and transparent manner. For example, 1 petrol = 1 copper. Petrol is current of OPEC and copper is currency of LME. Similarly, these commodities which are basic to industrial production and does not recognize republic into fair play of economics.

3. Invention of republican money

Monetary system of republics (also called state or governments) is indeed a strange idea. It works entirely on a principle of fictitious (unreal) money. Contrary to commodity exchanges, fictitious money is something like USD or Rupee or Yen that are without any physical meaning or real significance. Fictitious money is just a (printed) symbol, a numerical (unchangeable) value and can neither be produced or nor is an act of enterprise. But it is a value less object with a system around it causing anxiety and competition in gaming instinct. Fictitious money makes the market subservient to a republic, and by this way state gets legitimacy of monopoly on exchange control. USD is a sort of fictitious or symbolic unit in an act of gaming. This money is similar to coupons in casinos or dice or football that people play with? A football is a valueless object without hands that play it. Similarly: dice, playing cards, or casino coupons used in gambling, are not value objects in itself but anxiety in competition brings results or performance. Symbolic or fictitious money is a product of 'system' and is a means to measure 'system performance'. A value of fictitious money is in its speed and it looses

value when idle; and a holder is therefore penalized in form of interest for the period he/she keeps it blocked.

3.1 State monopoly of exchange control only works with unreal money that people cannot produce and remain without a choice

Value of USD is unreal therefore it can be printed on it forever. A 100 USD note will exist after 100 years, and United states Bank will accept it. On the other hand, a commodity is 'real' and also perishable, and exchange control on basis of one commodity with another commodity is relative with respect to time and space. In commodity exchanges, money is a substitute of a commodity and production is 'open to all'. Any question of state monopoly of exchange control in commodity exchanges does not arise. Producer of 'real goods' have a right of 'creating' the money instead of idea of 'competition' or 'anxiety of chasing few fictitious money circulated by the state. Holder of money have a wealth (unlike fictitious) in real goods, and it can stay as long as consumers want, and none can charge any penalty or interest for holding it.

Price in fictitious money includes two ideas a) monopoly of state in exchange control by its fictitious money and b) enticing producers of 'real' goods and services in the act gambling because gambling is probably a best way of decision acceptable to buyers and seller with equal preferences. By this belief, exchange control is monopoly of the state that produces fictitious money and circulates it. Players of this game put their 'real goods' on stake while chasing for fictitious money. People by anxiety and competition for fictitious money are forced to speed up production of real goods and services to put their stakes into it. One USD played in NY stock market is something else than one USD dropped in charity box of a Church. Money is a tool of anxiety and competition, and winner of this game are rewarded with 'real' goods. Strength of USD against Euro or Yen only suggests the higher anxiety and higher competition due to reduced money supply. In Mahabharata, Shakuni was legendary counselor of to the blind king 'Dhrat Rashtra'. By the 'dangerous' game of dice the state got a monopoly of exchange control, and it looted the wealth of artisans and hardworking people.

3.2 Disease of gaming: Anxiety and competition

In system of republican money, banks of republics are like a casino or gaming place. The owner of casino is called bank. Bank prints coupons with numbers written on it. Bank gives these coupons to gamblers who come to play in casino. Players and bank have fixed contract where value of fictitious money is fixed and printed. The player must return the coupon at the end of the game. The coupons are anyway fictitious, unreal in physical significance, and cannot be consumed and none can buy it. Fictitious money cannot be destroyed and nor produced by other than the state. While the bank and players have a fixed contact, one player and another player fight in the game and contract is uncertain. For example, a plot of land is valued as 50,000 USD and at another chance, for same land, price gets double. It is a bidding or speculation process that determines the transaction between one and another. As a result of gaming, fictitious money changes hand and coupons are then converted to real things. At end of the day, loss of one is gain to another. It means, a worker has worked hard but paid less money; and in another case, others in high position get wealth without any work.

Fictitious money such as USD or Rupee is like casino coupons and gamblers put all their wealth and enterprises at stake. Instinct of gaming is behind success of republic money. People trust the bank and return the coupon with additional interest, but do not trust the other player.

A village has population of 100 persons. A casino is opened up by a republic. Two people became members to it with 500 coupons of 10 FM (fictitious money) each. One was a farmer of potato and another was a milk man. The milk man has asked the potato farmer that he is ready to give 1 liter milk for 50 FM. Potato farmer also similarly agreed to sell 100 potatoes for 100 FM. After some time, milkman lost all FM to potato farmer. Potato farmer now has all of 5000 FM. The milkman can produce only the milk but not the FM. He is pressed to get coupons back from potato farmer so that he can return it to the bank. Bank is not bothered of fluctuation because the money printed on it. Potato farmer knew this condition of milkman's inability to repay coupons to bank, and he took the advantage. He now wants 5 liter of milk against 50 FM or five times more milk for same coupons. The milk man is working five times more to produce milk to sell it to potato farmer who now gets 5 times cheaper milk. The milkman was unable to produce 5 times milk with existing resources. He agreed to give 5 acres of land to potato farmer just against 1000 FM. Wife and children of milkman had to work part time at potato farm so that he gets relief by paying his bank debt. This is not a free market and poor milkman is more worried about the coupons of the bank than his skills and enterprise as milkman. Price of milk or any of the things the milkman has is decided not be demand supply or real mechanism of price but by the wish of potato farmer who owns more coupons milkman lost him and trying to recover.

Human mind is starved of success. It easily gets inspired by potato farmer who got rich by the gambling in fictitious money. None will look at pity of milkman. After seeing the scene of potato farmer and milkman, people realized the power of fictitious money. After some time, more people in village taken coupons and similarly transacted goods using it. The coupons although have no value but when used in gambling against real products, this has an effect of fear/ anxiety and competition. This psychograph extracts work from people. Republic money is not real, and therefore any user of it cannot escape its trap. Economic system in current times uses republic money. USA is a bigger casino and its coupons are used by people across the globe. Other republics are new in this economic gaming and people have little respect for other coupons. For example, USA sells high technology equipments at high prices, and India sells labor forces at cheaper prices. In this way, one looses out to another and each one is clever in marketplaces not to cooperate but to compete with one another. The design of casino is based 100% on competition among players. If competition is less and people are more in co-operation, coupons of republic are just a heap of paper and informal economy in personal trust replaces the republic money.

3.3 Money game: making competition instead of co-operation

In an Indian village, a man from city came with a bag of currency notes. He went to a farmer and asked him if he could be willing to exchange the 1 million Rupee for 50 acre of land of the farmer. The farmer was amused. He asked the man from city to remove

his fancy cloths and work in his fields for a day. Against this work, the farmer agreed to give him the food and drinks and a place to live. The farmer did not fall to the trick of the man from city, and he was saved from trap of republic money. This story explains a psychograph how people become dependent on money gaming. In deeper history, the republic was a Greek way of civilization. The rulers get the work done from slaves and not themselves. Slaves entertain by fighting with bulls or others animals or acts of impossible sports. These enterprises are not natural or an act of cooperation but, an expression of anxiety and competition. Rulers of Greek republic tested tenacity of human achievements under influence of fear. Slaves get the freedom after they secure rewards from kings for their heroic activity. Study of psychograph of a slave suggests success of republic money. A free natural person is not a game; he/she does not loose an option whether or not he/she needs to recognize a republic. And is in mood to play a game with symbolic or fictitious money with its obligations.

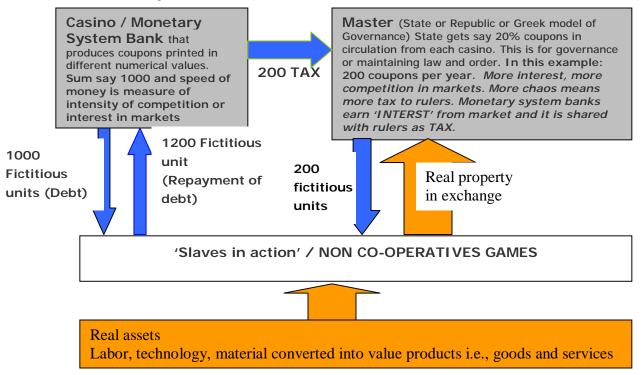
In present time, China is a threat to republics. China is a community and also has natural resources. Chinese cannot understand a game with fictitious money but only know the natural process of production of 'real' goods such as toys, cars, textiles. Design of China is not on models of Greek republic but an extended natural village community. In absence of slave and masters, everyone in China has to work and cooperate without bothering on who owns what. Simple people can live and rule the world without a battalion of chartered accountants, lawyers and auditors (so called market regulators) and saved from an elaborate system of accountancy in fictitious money. USA or Europe or India follows Greek republics and use fictitious money in gaming. In Greek way of civilization, high performance is extracted by a competition and anxiety, and not by co-operation. In republics, one person cannot help other person because 'slave' mentalities in citizens have expectation in return.

History of China is natural and lives in villages have a natural experience of freedom. People in a natural community believe not in state monopoly of exchange control but every hand is equally qualified to by producing 'real' goods worthy of exchange control. Legitimacy of producing money is those with their hard work and co-operation. Products produced by hands of Chinese people are 'real' exchange control with 100% convertibility into any brand of money. People thus produce USD/ INR/Yen. Within China, workers in factories produce goods and have houses, food and transportation. Here, intermediary role of fictitious money is missing. Wasting time in calculating 'what owns to who' in deciding actions of production is not permitted. China is an enlightened in its understanding of economics because it did not follow monetary policy of the republics (on Greek idea of using slaves in production). China is real/ natural and is careful of not making a place of casinos using republic money that people with natural mind cannot understand. Many people from India go to China and are surprised why do Chinese produce goods too cheap. None bother about the money. Indians are hopeless to see the miracle of China and their original experience of economic enlightenment.

3.4 Know-how of NON CO-OPERATIVE GAMING Theory

Origin: Colosseum amphitheater in Rome built about AD 75 or 80

How is Exchange Control fallen in hands of State?



A republic is design of a game of Master and Slaves in creating forces of competition with fictitious (unreal or without physical significance) coupons. This is a human nature that people are excited so much about unreal things and they can always produce any amount of real / natural things or sacrifices to pay for unreal or unknowable. Gaming/ gambling unfortunately uses of this human weakness in making slaves compete among themselves. Republican monetary system is NON CO-OPERATIVE GAMES designed with following rules:

- 1. How is operation of casinos or gambling houses work? It prints coupons that are delivered to players who use it in converting these into real property, and at end of the game, the coupons are returned. In step 1, fictitious money has a fixed numerical value printed on it that does not change with time and space. Fictitious money is symbolic and opportunity or non- opportunity cost is none of its consideration. The contract between the Casino and Slaves is fixed on basis of printed values on coupons.
- 2. Slaves get these coupons from casino as DEBT at *their free will*. However they must be ready to return certain extra value coupons called INTERST for a period it is on debt. This 'interest' is intensity of competition they are ready to face with other slaves; because the coupons in circulation are fixed, and loss of one slave is gain of another. More dangerous

player will bid for coupons at high interest and those with less killing spirit will have minimum obligation of risk with the state.

- 3. Slaves are in game of the republican Market (equal to colosseum) are unmindful of their real needs and put their real property and labor on stake to get as much more fictitious money or coupons for the casino. Each will compete for additional coupons from others in order to pay the DEBT and INTERST. DEBT keeps on increasing, and if a slave is not DEBT free, it gets killed. Only DEBT free Slave can leave the game. In this way, each Slave works hard in competition with others but, at the same time he/she cannot leave the game because higher competition in slaves raise the demand of the fictitious money against the real property.
- 4. INTERST is passed on to the Ruler or the State authority to maintain the Government including the Casino. If there is more than one Casino (Monetary system bank) in one state/ republic, each of it gives a fix TAX to the State. The profit of Casino is calculated as INTERST from Slaves TAX to Master. These many coupons it retains for exchanging it with slaves in real properties and goods and services.

In casinos of republic (called Monetary System Banks), coupons of printed denominations are made available to citizens. Coupons are unreal or with fixed printed value contract between the casino and citizen. Citizen must return the coupons of same amount at end of the game.

Among the citizens, exchange control is with use of these coupons. For example: a farmer needs seeds. The buyer and seller decide the transaction in number of coupons per kilo of seed. Seed is real' and not symbolic thus, no printed value on it; every sale of seed per kilo seeds at a different price. This is a game. At different points in time, how much coupons each one has will change. Someone will have it reduced and some have gained although total number of coupons in circulation remains unchanged.

The persons with reduced coupons will work hard and try to regain lost coupons. This will create competition. Enterprise of republics is unfortunately is a Greek idea and thrives on pity of slaves. Casino gives coupons to citizens in the game to act as exchange control in respect to real goods. Casinos have two principles:

- a) Competition/ fear of loosing among slaves can achieve impossible performance b) co-operation and informal economy is a risk of freedom to slaves and this way, the monopoly of exchange control of state can be lost. Republics without slaves is defunct.
- 3.4 Concept of interest and taxation

Casino in delivery of coupons to citizen have no mercy. They must return the amount of coupon which they took. This money is not real and therefore remains unaffected by demand supply irregularities in respect to time and space. Printed value on coupons is fixed and not negotiable. The citizen must compete for it, and this 'killing spirit' is called

interest.

Charging interest by casino is mathematically unfair. A bank releases 100 Rupee coupons at interest (killing spirit) of 10% per year. This money is given to ten persons at Rs 10 each. At the end of the year, these ten gentlemen must return coupons of Rs 110. How is it possible to get additional 10% when printing of money is not allowed? Game is imminent because that is only hope of getting 10% from others. What else can be, except the nine persons kill the tenth person and Rs 90 with 10% or Rs 9 from the dead man adds to Rs 99 that the nine persons have to return to bank. Similarly, if repayment is delayed by another year, two persons die. The wealth is continuously created by these dying men and women caught into the system of republic money they cannot escape.

Casino parts with10% interest collected from dying men and women to the rulers of republic. This is called tax. Rulers (called governments) charge taxes directly from casino (or control banks that print money). The coupons paid to the government as taxes are equal to interest charged from slaves in order to increase competition in the game. Higher is the interest rate, higher is competition and thus, higher is income to the rulers. Mathematically: the number of coupons in circulation is unchanged, and governments can be maintained.

High cost of government means, the banks must increase competition among slaves. By increase in productivity, slaves can produce at least more goods (equal to interest changed by banks) to repay the debt. Additional goods become available to rulers to whom the casino gives a tax (equal to interest charged). Banks give an account to the government. Governments get a tax from the bank for an amount that the bank charges interest on amount of money in circulation.

Time value or opportunity cost of money is none of the concerns of the bank. Interest is not the opportunity cost. Opportunity cost is difference in price of same goods at different time and space. This is subject of game among slaves. Individual slaves' profit and loss is none of the concern of the rulers. In some of the republics, the governments in addition of interest also ask slaves to maintain books of accounts and pay a certain tax on profits made. These are called custom or ritual. This is a free obligation of slaves towards the servants of the rulers. People serving the rulers are free to collect taxes from the citizen and their businesses. In this way, servants of rulers get the opportunity to extract something from slaves when rulers do not share tax with their servants. Normally, this is very high and servants of government create a lot of rules in name of taxes (other than interest to casinos for use of coupons) to harass the helpless slaves in the republics.

A control bank has issued 5.5 billion fictitious money (FM) to a country of slaves. If the bank must give 10% of coupons to the government maintenance every year as TAXES, 10% the bank is allowed to charge from slaves and their business as INTEREST. Total money is 5.5 billion FM in circulation. 5 billion in market and 0.5 billion to government. If the republic has 1 billion slaves, the money supply per slave is averaged to 5.5 FM. Key parameter of gaming of republic is the average money supply, interest per year on

coupons charged and % of those non performing slaves who could not pay the debt. A performing republic has properties:

- money supply comfortable,
- · slaves afford to pay interest by their extra productivity/competition,
- and banks pay the tax to rulers;
- and ratio of non performing players are a small fraction of successful players,
- and more and more slaves join the game of money.

3.5 Choice before Republics for survival of the fictitious money

How much coupons must banks circulate? The answer is how much will the markets take. The bank must release new coupons if slaves can work hard enough and capacity of payment of interest is valid. If interest or taxes become high, people loose fear in government and instead of the competition, they will begin to co-operate among themselves and not use the fictitious money as exchange control, and develop their informal economy. If such is a case, informal economy will make rulers starve. Casinos must know that slaves are not pressed too hard and are not forced to disbelief of a republic and resort to informal economy built on real money and cooperative actions. To save face, the casinos will have to reduce the interest, increase the money supply and make the competition in markets less painful. At the time when, the slaves can repay the interest by hard work and get interested in the game, additional coupons can be released so that the republics have more hands of slaves in creating wealth for government.

Some time the economy is not growing because of shortage of money supply. People can work hard but are helpless because casinos do not provide enough fictitious money for the gaming.