

SOCIETY SHOULD NEVER REWARD PRIVATE SAVINGS

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In the serious sciences, original work is discovery - finding connections that were always there, waiting to be seen. Joan Robinson².

Introduction.

The most popular statement in economics seems to be: "government cannot print money". It is so profoundly tied to human brain that it appears positively irreverent to mistrust it. Notwithstanding, other economic evidences do not match the belief that government³ is actually not printing money. To start with, any expenditure is paid - with money. So, if the US Federal Government owes \$14 trillion it is a fact that in the past it spent \$14 trillion out of its receipts and some people received 14 trillion dollars. If it did not print the money it spent then the FED did it. This paper points to the fact that money printing is a normal fact of central banks' daily life. In a few words, in order to pay its deficits the government issues Treasury bonds which its central bank exchanges for money. All central banks always print the money used to pay the interests upon their government debts. At the fiscal side, Treasury bills and money are the same thing with equal aggregate demand expansion and inflationary effect. The cause of price inflation is the expense itself, not the origin of the money. An important difference between money and Treasury bills is that the former is mostly spent by people buying real production which sustain employment while the latter enrich the few who spend the least, save the most and get richer collecting interest rent.

That popular statement feeds an economic dilemma which has always challenged society. Economy means spending less than the income but, when a person saves, some money is withdrawn from circulation, demand falls and some people sell less and earn less or nothing. Savings are personal and corporate needs and merits, but cause unemployment and reduce the social wealth. Society should never reward private savings. Economic theory is thus concerned with what the word economy implies: exogenous decisions to govern homes and firms assuring that expenses are lower than revenues. The individual golden rule is to save and to make profits. However, the society as a whole must create some mechanism to prevent being harmed by private savings. This seems to be the most important message Keynes left for economists.

The main purpose of this paper is to present new theoretical and practical evidences supporting the interest-free Keynesian fiscal policy. It is concerned with general theory and is not simply a new model; it is expected to be a paper which Keynes himself would appreciate to write. Despite stressing money creation, this paper is not concentrated on inflation; it is about savings, public debt, ethics, Employment, Interest and Money. It shows information on American economy to illustrate and give a suggestive support to theoretical matters here stressed. It is not presenting a new theory tailored to explain what happened to American economy around 2008. Regardless of that, this paper belongs to the small universe referred to by GALBRAITH Jr. (2010): "Just as too few predicted the financial crisis, it may be that too few are today speaking frankly about where a failure to deal with the aftermath may lead".

Financial crises outcomes are associated with the statement by DeMARTINO (2011, p. 168): "More than the other social sciences, economics coalesced during the latter half of the twentieth century around a predominant approach that posits a particular notion of human behavior and a restricted set of methods". This connection between crises and economics leads to the monetary policy as the natural counterpoint of the positive

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² In "Kalecki and Keynes", Collected Economic Papers, vol. III, pp. 92-9, 1965, p. 95.

³ If not otherwise noticed, "government" here always refers to federal or central government.

contribution presented in this article. It is here developed a mathematical demonstration that the monetary policy is unsustainable for it imparts an uncontrollable explosive trend to the public debt and therefrom to everything it touches. Financially triggered crises are just one of these things.

This paper is organized in six sections. The first uses national account system to demonstrate that registered savings are used to finance investment and governments' expenses on interests upon public debt. People savings are not only private investment. The second section is dedicated to remind Keynes on the matter of savings, leading to the relation linking public debt interest rent to income and wealth concentrations.

Third section deals with the monetary policy, scrutinizing the open market operations to display how actually the central bank prints money out of thin air to pay interests on the public debt. It is then verified that the FED is in fact printing – unbacked – money by order of the US Government. Next, the fourth section brings the mathematical demonstration that the public debt follows naturally an explosive trend. This trend comes about because public deficit never creates sufficient new tax receipts to pay the interest. The government turns therefore to spend more than it earns thus acting, and forcing the society to act the same way, in contradiction with the basic principle of economics. This anti-economic performance can only lead to an economic and social chaos, following a route full of crises. It seems that, normally, monetary policy is a non-ethical economic policy. This paper is also concerned with ethics in economics, but suggests that before taking ethics into consideration the economic theory should be fixed.

In the fifth section it is developed a mathematical demonstration that the money issued by the government to make fiscal policy is backed by the increased production it generates. Consequently, the fiscal expense pays for itself and the money supply remains under the control of the public budget democratically authorized by the Congress in the name of the society. The final section is dedicated to present a proposal of a Without Debt Fiscal Policy, whose financial concerns are based on a government's central bank money issuer. The private S&L market should be run by commercial banks, be them private, state, county or community owned, which may at will create their private central banks.

This paper does not offer a new alternative brand to the economic science, it is concerned with "the" economic science abiding by one statement by MORRISON (2006): "The challenge is to humanise the present style of capitalist system". The main conclusion is that the Without Debt Fiscal Policy is not only superior to the monetary policy, but the only economic policy supported by logic, economics and ethics.

1. Saving is not investing.

It seems that monetarists⁴ are trying to avoid cognitive dissonance⁵ when stating that savings cause investment⁶. When forced to look at the reality they just put savings *versus* investment into a drawer called "paradox", close it, ban from the academy anyone who tries to open it and keep saying to students and anybody else that savings are a necessary and sufficient condition for investment to happen. Perhaps the origin of such a belief, besides financial profits hunt, is the classical idea that the interest rate is an

⁴ Monetarist in this context refers to economists and anybody else who are incapable of discarding the neoclassical paradigm of optimization through differential calculus and the monetary paradigm stating that the government should never issue money because otherwise it will cause inflation. The Author is sorry about unavoidable negative references and stresses that his intention is not a personal criticism but a contribution to economics. This paper is dedicated to those many people unsatisfied with the state of the art of the economic science, bringing evidences to support the hypothesis that the monetary paradigm, besides anti-ethical, is not economics but faith, or faith and fraud combined (GALBRAITH Jr, 2010; WRAY, 2010).

⁵ SCHLICHT (1984) introduces the theory of cognitive dissonance in economics and KESSLER (2010) describes the interesting experience he did applying the theory to a group of monetarists in relation to the 2008 financial crisis.

⁶ Investment here always refers to investment in expanding real production capacity.

outcome of the supply and demand for loanable funds in a perfect competition environment. The assumption is that financial funds are demanded by private firms exclusively to support investments. Government could shift demand to the right, thus taking part of available financial funds, but it should not do that for it would crowd out the private sector. Despite evidences and theoretical criticism, monetarists no longer try to understand it. "Their method was to dismiss the problem from the *corpus* of Economics not by solving it but by not mentioning it" (KEYNES, p. 364).

There are, of course, some serious attempts, like the question posed by SACHS & LARRAIN (1993), about the influence of interest rate on savings and consumption. Their findings in Chapter 4 of their book are that neoclassical theory cannot provide a clear answer to this question. However, in Chapter 6 they introduce the classical loanable funds supply and demand model without restrictions. DORNBUSCH & FISCHER (1990) also analyzed the relation between savings and investment and concluded likewise, stating that reduced taxes on savings have an uncertain effect on the economy (p. 724). A few pages ahead, notwithstanding, they state that "The amount of saving, domestic or foreign, private and public, determines how much investment will take place in a country" (page 741).

The national account system⁷ may be used to make this point. This system has only cash transactions and considers interest payments but no loans. Families' expenditures on consumption are recorded in the left side of the Personal Income and Outlay Account, where savings come about as a remainder of total outlays. Then, the personal savings are recorded as a source in the Domestic Capital Account, together with savings from government and enterprises and the consumption, or depreciation, of fixed capital. The left side of this account contains the investment in capital goods, both private and governmental, and the surplus of current transactions with the rest of the world. If the change in private inventories and the depreciation are considered as included in the investment, the Domestic Capital Account leads do the accounting identity connecting the three sectors of the economy, government, private and foreign, for instance in the form:

$$Sp + Sg = Ip + Ig + CAB$$

where Sp represents the private saving, Sg is the governmental saving, Ip is the private investment, Ig is the governmental investment, and CAB refers to the foreign sector current transactions account balance, which will be a surplus if its sign is positive. One may substitute the governmental saving Sg in this identity by the balance of the Government Receipts and Expenditures Account which may be expressed by:

$$Sg = T - (FE - Ig + INT)$$

where T is total receipts, FE represents governmental fiscal expenditure, Ig is the governmental investment and INT is the governmental expenditure on interest upon the public debt⁸. The governmental investment Ig must enter this expression with negative sign because it is included in FE , the fiscal expenditure, but is not part of the Government Receipts and Expenditures Account. Replacing the latter on the former it comes:

$$Sp + T - (FE - Ig + INT) = Ip + Ig + CAB$$

Cancelling Ig and rearrang, it comes the Fundamental Accounting Identity of the economy which may be written in this form:

$$Sp - CAB = Ip + (FE - T) + INT$$

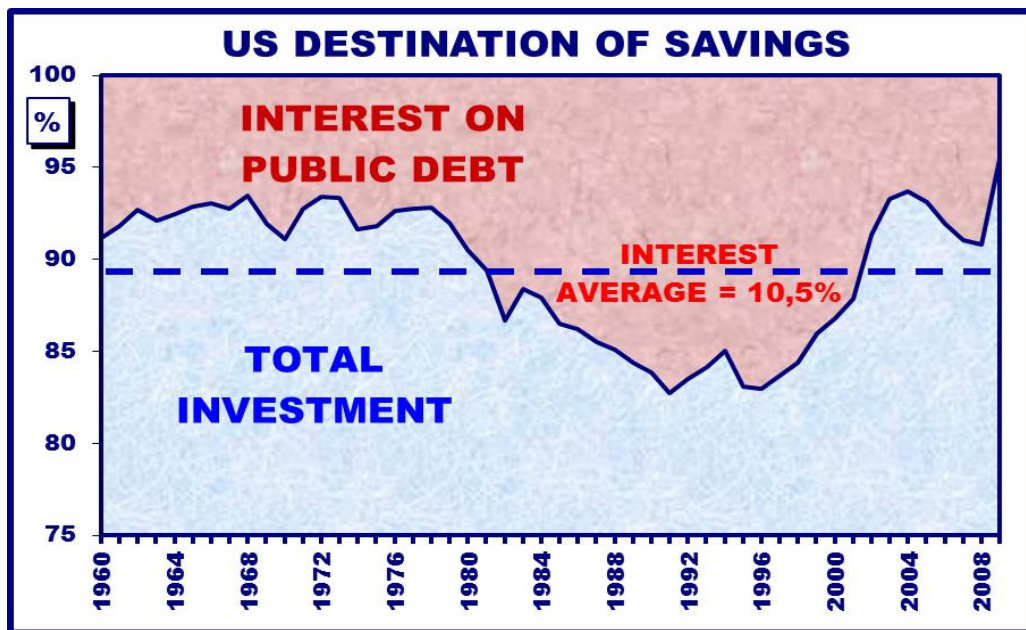
The left side of the fundamental accounting identity gives the total savings, which is composed by the private domestic saving plus the foreign savings borrowed in association with the current account deficit, or less the capital lent abroad due to a current account

⁷ In the United States the national account system is the NIPA – National Income and Product Accounts, which brings more information than the System of National Accounts of the United Nations for it includes the Government Receipts and Expenditures Account.

⁸ If not said otherwise, "public debt" always refers to the stock of Treasury bills held by the public.

surplus. The right side shows the destination given to the savings. The first two terms taken together $\{I_p + (FE - T)\}$ may be called total investment, formed by the private investment I_p and by the social investment identified with the primary deficit $(FE - T)$. The association of the primary deficit with a social investment stems from the fact that this autonomously decided deficit is always paid with money exogenously printed by the government or any bank. In both cases it is up to the government to decide exogenously to introduce more money into the economy, buying real products and services, therefore expanding aggregate demand.

This exogenous new money will then circulate in the economy creating a social wealth k times greater. k is the Keynesian multiplier and of course the larger k the greater the effect of expanded aggregate demand on production, employment, and so on. As Keynes said, primary deficits connected to house building are better than those associated with digging holes in the soil, but the latter is certainly better than nothing. So, it looks worthless to always differentiate current from investment expenditures. The conclusion is thus that total savings are used to pay the total investment and the interest upon the public debt, Q.E.D. Accordingly, the graph nearby illustrates the destination of the total US savings for a time span of 49 years, split into total investment and government payment of interest on public debt.



Data sources: US Bureau of Economic Analysis for national accounts and Historical Tables of the White House Office of Management Budget for the interest outlays.

This graph illustrates the fact that for half a century around 10.5% of total reported savings flow was used to finance government expenditure on interest upon public debt. It is expected that interest rent be mostly saved, instead of spent on the real side of the economy. Hence, the interest rent flows may be accumulated in a financial capital stock. The simple summation of the flows since 1940 produces in 2010 an amount of financial capital which approaches 6 trillion dollars.

The Fundamental Accounting Identity also discloses another very important relation connecting the three sectors of the economy. Changing its order it may be written:

$$\{(FE + INT) - T\} = \{S_p - I_p\} - CAB$$

The left term, if positive, is the public deficit produced in the sector *government*, which will always match the sum of excess savings over investments $\{S_p - I_p\}$ coming from the *private* sector plus or less the *foreign sector's* current account deficit or surplus (CAB). The accounting formula shows that money flows among sectors in such a way that if one sector produced a deficit at least one out the other two created a surplus. The excess of expenditures of one sector implies an excess of revenues in some or both other

sectors. Altogether, the sum of all three balances must be zero. The financial market is the medium through which money flows from one sector to the others. As an intermediate, the financial market produces nothing real; it just catalyzes the production process. So, it does not enter the Fundamental Accounting Identity. All the same, the monetary policy is also absent for it only establishes how the money will flow among sectors, particularly from the other sectors to the government. This means that in accounting terms neither the financial and monetary market is a sector nor it is synchronized with the rest of the economy. For the sake of the real side of the economy, the monetary policy should not have an objective of its own, should not exist.

The public deficit is associated with the governmental fiscal policy decisions on the *expenses FE*. The current account deficit is identified with the foreign relations policy decisions, especially the one concerning the *exchange rate*. These decisions influence the interest rate and all other economic endogenous variables and no other decision making center is required. However, the *interest rate* has been accepted as an exclusive concern of the monetary policy which exogenously introduces the interest expenditure INT that otherwise would not exist. So, instead of two, the basic economic policy instruments has been three: the fiscal, the exchange rate and the monetary policies.

These instruments are tied together, in such a way that decisions on one of them impart consequences on the other two. Only one can command, the others must consent and survive with the consequences, for good or for evil. If the monetary policy dominates, then the interest rate will, as long as possible, be maintained above the level which would be compatible with the fiscal and the exchange rate policies. Consequently, the exporting sector will follow a vanishing trend caused by a continuous process of national currency appreciation. Worse, the fiscal policy objective will reduce to generating savings through increasing primary surpluses (T greater than FE) to pay expanding interest expenditure. Of course this is an unsustainable economic policy for a primary surplus means destruction of money which otherwise would flow to the real side of the economy. Hence, a primary surplus leads to lower GDP, less tax revenue and more unemployment. "For this reason, trying to operate the government's budget as if it were a household that normally wants to save has a disastrous impact on the economy" (NERSISYAN & WRAY, 2010, p. 11).

Since Aristotle the basic principle of economics is that families and firms must spend less than they earn. This means that each person should save and no business should run without generating profits. Saving is a personal value and duty, which all of us must follow. However, personal saving is an anti-social behavior because, by taking money out of circulation, the saver buys less real things thus preventing someone from selling and working. My savings are good for me; your savings are bad to me. In logical and accounting terms, money is a public asset and a central bank liability. But the basic utility of money is buying things, so it should never stop circulating; to the society it makes no sense an individual to hoard money. "In a purely private system, the only way for individuals to accumulate wealth is in fact for them to save, which gives them title to a part of the aggregate wealth created by investment" (FAZZARI, 2007, p. 3).

Those who save appropriate for themselves part of the public asset intending to raise a rent. A penny saved is a penny not spent but deposited in a savings account somewhere - call it FinFund. Therefore, frauds aside, the money saved will be rewarded by the FinFund and will be accumulated as a private wealth. A second circuit is then formed, the credit circuit, an interest bearing money circulation. Contrary to the exogenous money associated to public deficit, the money issued by the FinFund is endogenous for it is created by demand⁹ from the private sector. It is the general status of economic activity that forces or suggests to people to demand credit. It is not up to the FinFund to decide to print new money out of thin air or to lend the saver's money

⁹ This discussion seems to be part of the monetarist's strategy of shedding darkness where there is light. The literature on the matter is vast, and a good start is WRAY, 2007.

deposited there. Although part of the money supply may be said to be exogenous, as monetarists require, money supply has also an endogenous part, the money-credit.

The money-credit is not flow-flow like the exogenous money, but a flow from savers to the stock, then a flow from the stock to borrowers, then a flow backward to the stock enlarged by interests, then a flow to borrowers ... and so on. Savings stock grows larger and larger and pushes interest rate down. Some hoardings will eventually be formed. Neither the saver nor any other person in the society are engaged in creating a useful destination for the money placed apart. Savings are not confined to present or future investment, savings are unspent money that the saver stores in the FinFund, then being available to any one who would like to borrow it – and pay interests. The lender is not concerned about the destination that the borrower actually gives to the money, what matters is just the yield.

The national account system is such that, despite considering interests sources and outlays, it seems that people buys only cash. However, if a new item – “credit to consumers” - were included in the families’ income in the right side of the Personal Income and Outlay Account, then savings on the left side of this account would be larger by the same amount. Therefore, the corresponding record of this larger saving in the right side of the Domestic Capital Account would be compensated by that new item - “credit to consumers” – in the left side of this account. This is the same initial recording in the right side of the Personal Income account, and thus the system will, as always, be balanced.

The same reasoning applies to the Domestic Income and Product Account, where credit could be added to its right side on the grounds that in the real world not all circulating capital comes from buyers’ cash – some are always borrowed. Therefore, if the product, the income and the capital accounts include financing, researchers could put numbers on the accounting fact that savings finance the investment yes, but also the interest on public debt, the acquisition of financial assets and the expenditure of families in consumption, which is about five times greater than total private investment¹⁰. Savings are not investments.

2. The matter of savings since Keynes.

Keynes created many new concepts in economics, pushing academic people to revise their views of the profession. For many people, also in the field of savings, Keynes has been, if no longer “The” book, at least the best reference. By the way, a scientist may contribute to expand knowledge, but no matter how brilliant the scientist is he cannot be the eternal truth. Beyond creating, Keynes refers back to many authors, including Adam Smith. For instance, writing on savings in *The General Theory* he quotes: “For he (Adam Smith) was well aware that individual savings may be absorbed either by investment or by debts, and that there is no security that they will find an outlet in the former” (p. 352).

On the subject of savings, Keynes conceived the notion of propensity to consume, or propensity to save, which may be used to deducting that the greater the saving the smaller the production and employment. In TCHERNEVA (2011) words: “Household saving means that, in the aggregate, not all of the incomes that firms have paid out in wages return back to them in the form of revenues. In this instance, a demand gap develops that must be filled by investment. The liquidity preference of households and firms, however, determines the manner in which they save and the level of investment they undertake. In other words, even when the economy is strong, some of these savings may be locked in non-reproducible and non-employment generating financial assets” (p. 12). WILDER (2011) prepared an empirical study of the USA unemployment during the

¹⁰ The United Nations Statistical Commission introduced financial data on its System of National Accounts, measured by balances variations between two points in time. However, the required information here refers to flows. The difference of two stocks levels is the difference between two flows, but never indicates the amounts of the in and out flows.

2008 financial crisis observing that corporate profits were not reinvested but saved. So, she concluded that corporate savings were the main cause of unemployment rate to rise.

Keynes dedicated two chapters to savings and investment, and to "savings versus investment", focusing on the point that nothing imposes a logical identity between them. On the contrary, "The amounts of aggregate income and of aggregate saving are the results of the free choices of individuals whether or not to consume and whether or not to invest; but they are neither of them capable of assuming an independent value resulting from a separate set of decisions taken irrespective of the decisions concerning consumption and investment" (KEYNES, p. 65).

Perhaps the most amazing story that Keynes tells us on the subject concerns Prof. John Atkinson Hobson (1858-1940) and Albert Frederick Mummery (1855 – 1895) and their book, *The Physiology of Industry* (1889)¹¹. For them, the production cannot exceed the limits imposed by the availability of natural resources, capital and labor, but it "... may be, and actually is, reduced far below this maximum by the check that undue saving and the consequent accumulation of over-supply exerts on production..." (page iv). KEYNES (p. 365) reproduces a large part of the touching statement Prof. Hobson made to the London Ethical Society in 1935, when he was 77 years old. In the occasion, Prof. Hobson reported the strong rejection the academy devoted to him personally, pushing him to teach at "low grade" institutions. It seems that the London Ethical Society of 1935, if tried, could do nothing about ethics in economics.

Any individual should pay interest on money borrowed and every private lender should be paid due interests; this is what private commercial banks serve for. A person who loses its job, income and personal wealth as a consequence of other people's savings, may be forced to borrow from this savings. However, this credit can't restore the previous demand level but temporarily. Interests paid mean more savings by the lender and less future borrower's income. Credit, stemming or not from savings, is not income and creates more savings. There is no interest-free endogenous process in the economy which leads the money thus saved to be borrowed by someone who will spend it in order to restore aggregate demand through new investments. Therefore, the society as a whole should not save. All the same, the government should not collect taxes and save. This is one more reason to explain why primary surplus makes no sense for economics and society.

The solution for negative consequences of private savings on private income is exogenous. It is up to the society to create and manage a mechanism to compensate the money put aside by personal and corporate savings and restore aggregate demand and employment. Society as a whole, or the government which represents society, should not pay interests on private savings. Society should never reward personal savings. It makes no economic sense for the society to pay interest to itself, but actually this happens and hence reduces the aggregate demand. Therefore, due to depressed labor demand, low income people borrow from rich people and pay interest to them. The rich accumulates capital and goes richer; the poor accumulates debt and becomes poorer.

On the foreign side of an economy, savings mean a negative current transactions balance, what is the same as borrowing. Consequently, after a negative current transactions balance, the next period current transactions outlays will include more interest on foreign capital. In a globalized world poor countries borrow from rich ones and then it is created a northbound flow of money, misleadingly called "capital", to send back the principal and pay interests. The rich countries accumulate capital and go richer; the poor countries accumulate external debt and become poorer. Once again, this is a reality which contradicts monetarists and once again the reaction is the same – to call it a "paradox".

For example, PRASAD, RAJAN & SUBRAMANIAN (2007), from International Monetary Fund, collected information which gives support to this process of international uphill rent

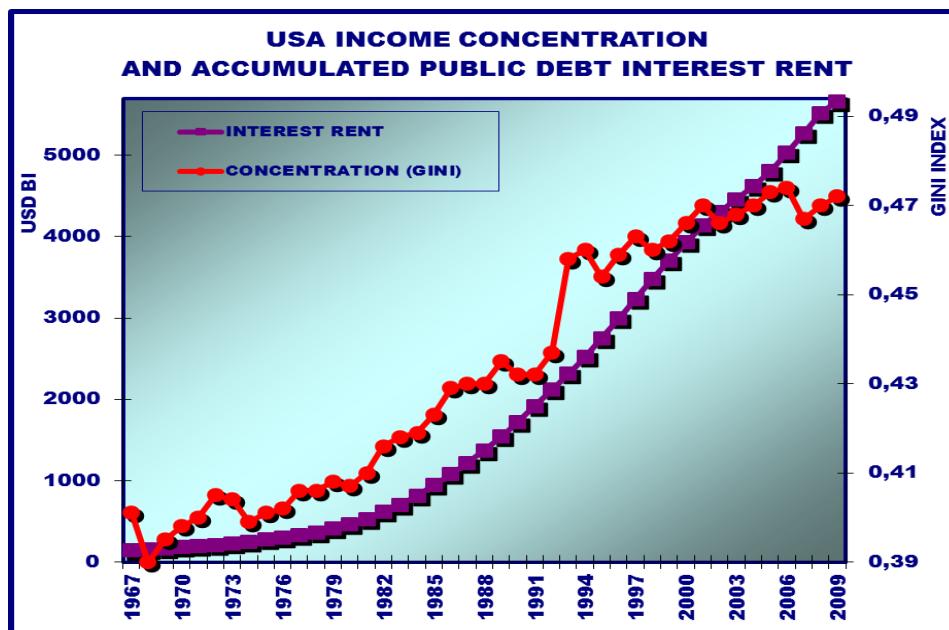
¹¹ Available at <http://www.archive.org/details/physiologyofindu00mummrich>.

transfer and wealth concentration and prepared a paper with the suggestive name of "The Paradox of Capital". Their conclusion (p. 8) is also suggestive: "An implication of our analysis is that the seemingly perverse flows of capital from poor to rich countries today are not necessarily a sign of inefficiencies in global financial markets. Rather, they may indicate financial and other structural impediments that limit a poor country's ability to absorb foreign capital". For monetarists their theory is perfect, it is always the real world which requires fixing.

A statement by Keynes applies to this subject: "Thus our argument leads towards the conclusion that in contemporary conditions the growth of wealth, so far from being dependent on the abstinence of the rich, as is commonly supposed, is more likely to be impeded by it" (KEYNES, p. 373). Any amount saved is used to buy assets, especially land, whose supply is limited by Mother Nature and therefore price rise may be taken as assured. As a consequence of the demand upward trend, prices of houses and rentals grow steadily and, also in real estate terms, the poor becomes still poorer.

Other ends for savings have been almost always guided by the human greed for more and more rent from assets, more than from working. Easy money is the carrot used by "investment" banks to steer greed people to buy financial assets, any asset, including futures on agricultural products which is basically export income for some and food for many. The consequent rise in food prices in the real life means better profits for some and hunger for many, worldwide. Economic policy stemming from monetarist's beliefs adds fuel to this fire imposing a government expenditure on interest upon public debt. This is not the only supply of savings, but a major one for it is an autonomous flourishing source of an interest rent which is distributed to few elected ones. Those few then lend to non-elected people and collect rent from them.

No matter the way an analyst develops this reasoning on savings-wealth accumulation, the end is always the same – income and wealth concentration. Nothing new, Keynes had already associated the saving propensity of rich people to the income concentration, a phenomenon which he said he could accept as natural in some degree, but he actually considered excessive. Of course, nowadays the story to tell is the same. The graph nearby exhibits the expansion of the Public Debt Interest Rent, given by the accumulation of the yearly flows of interest rent outlays, and compares it to the rise of the income concentration as measured by the Gini Index in the period of 1967-2009.



Data sources: US Census for the Gini Index and Historical Tables of the White House Office of Management Budget for the interest rent transfers.

The growth rates are incomparable, for they have quite different dimensions, but both series expanded simultaneously and very quickly. This graph gives support to the

hypothesis that the public debt interest rent may be a significant variable in the explanation of the income concentration, level and trend, in the United States. Furthermore, as savings are money placed aside, as time goes by a permanent flow of saving reduces continuously the stock of money available for circulation in the real side of the economy. The mathematical limit would theoretically be attained when all the money would be in the safes of those few. As Keynes would probably say, it is a surprise that this wealth and income concentrations had not yet caused a social revolution. Possibly, what has been preventing this imminent disaster is the government fiscal expenditure, which has been sustained, always and everywhere, on an expanding trend despite the monetarist's pressure for governments to save still more.

Finally, it is worth reminding that the society creates jobs not only for the sake of present jobless but mainly to sustain or raise society's wealth. An unemployed person means less income to his or her neighbors and to the rest of the society. This is the ethical duty of macroeconomists – to advise society on how to manage to replace money retired by excess savings and reserves, and how to create jobs for those who lost theirs and for newcomers. Economics is not only theory and engineering, but also a normative procedure. What economic theory may assure is that there is no natural force leading society to the heaven as the monetary doctrine assumes; the contrary prevails.

Actually, Federal Government and FED are doing some money replacement, but in a process marked by three serious deficiencies. The first one is the issuing of public debt bonds to postpone cash, what leads to the second one, the issuing of money out of thin air to pay interest on public debt bonds. This is unbacked money because it is not created in exchange of anything real. This rent is then saved, offered in the financial market and only partially invested. The third deficiency is thus that this process is incapable of restoring qualified lost jobs. The process of unbacked money creation is the theme of the next topic.

3. The US Federal Government is actually printing – unbacked - money.

It seems that the common sense that governments cannot print money led almost all people to believe that their governments are actually not doing so. About money one risks finding more beliefs than knowledge. In spite of the enormous literature on money, it remains the puzzling question of why money is a mystery for the human brain. "Like the air we breathe, money is so ubiquitous that we accept its existence unquestioningly. So few people ever stop to ask what money is and how it is created. Familiarity obscures both our view of that process itself and of its importance" (TAYLOR, 2008). Two famous statements by GALBRAITH (1975) may also help, not to understand, but to accept why it is so difficult to explain this amazing puzzle. The one is "The process by which banks create money is so simple that the mind is repelled" (p. 29). The other is: "The study of money, above all other fields in economics, is the one in which complexity is used to disguise truth or to evade truth, not to reveal it" (p. 5). Frequently people associate "banks" in the above phrase to commercial banks and seldom to central banks.

Giving then up any attempt to comprehend why people adopted this or that ideology about money, let's put the fact in quite simple words: all central banks do print money everyday, every minute, every second, at the order of any Treasury bills holder. Of course this money is not paper printed but the electronic one. Despite this easiness and Galbraith's statements, it must be recognized that it is still hard to realize how a central bank actually delivers money. Let's make it ease by making a cynical appreciation of the monetarist handbook. All such textbooks tell us is that the instrument central banks use (to pretend) to control the stock of money – in the holly name of inflation control – is the monetary base, or "high powered money".

There are many variables out of any influence of the central bank which make the level of the monetary base to vary. What central banks say about is that they have the power to overcome all undesired variation of the monetary base through open market operations of selling and buying Treasury bills. When the FED sells a T-bill in exchange of dollars it puts away the money then collected; the money is destroyed. In this case FED

accounting records are to erase both the T-bill from its assets and the money from its liabilities, thus reducing the monetary base. On the opposite direction the FED buys a T-bill and records the operation as an increase both in its assets and liabilities, then expanding the monetary base. The FED pays for the T-bill with dollars taken out of thin air simply tapping a computer's keyboard. What the FED does is merely to create a deposit on the current account the seller bank maintains at the central bank – this is the FED's money printer. This process is called monetary policy of liquidity control with the supposed intention of providing the economy with the proper amount it needs to achieve its economic policy objectives. No matter these objectives may be the control liquidity has been seen as a must. Monetary policy always comes first and the central bankers think that it is up to them to decide what is the proper amount of money you and the economy need, no matter the objectives you, your neighbor and the society may have.

Moving further beyond textbooks, two special features must be added to the FED's modus operandi. First, the decision of buying a T-bill from the FED, or selling a T-bill to the FED, is up to the seller¹², both in amount and timing. The FED cannot impose to anybody neither buy from it nor sell to it a T-bill; all it can do is to offer attractive prices to both operations. Second, when buying a Treasury bill the FED "prints back" the money previously destroyed when it sold some T-bills and prints an "entirely new" money to pay the due interest on the T-bill then redeemed. In the words by HANNSGEN & PAPADIMITRIOU (2010) "Treasury securities are promises to pay interest and principal in specific dollar amounts, which the Fed can print as necessary" (p. 3). Considering then that the money FED borrows serves no purpose, this new money printed is an authentic money rain. Furthermore, this money collected from nowhere will later be used to buy new T-bills. Yes, the bulk of the money used to buy T-bills is printed by the FED.

Therefore, the design and execution of the open market monetary policy are such that what the FED actually does is to offer and operate a kind of a financial fund, a branch of the FinFund. The public may deposit their savings in this fund when and how much they want, then receiving T-bills. After, whenever desired, the public may withdraw all or part of the balance, which includes the interest, then giving some or all T-bills back. "Treasuries can be thought of as bank "saving deposits" held at the Fed, earning interest" (NERSISYAN & WRAY, 2010, p. 12) – call it FedFund. At the end of 2010, the FedFund's worth, always given by the public held debt, was about 14 trillion dollars. The performance in time of the FedFund, or the intensity of money created to circulate in the financial market, is done by the money flow into the financial market, that is, the amount of T-bills the FED has been obliged to buy printing dollars, say, monthly.

In its website the FED gives access to data on the monetary base in terms of balances. On this case, FED reports the table "1. Factors Affecting Reserve Balances of Depository Institutions" which informs stocks of present and past positions in T-bills and balances variations between points in time. However, once again, the required information refers to flows and not to stocks variations as informed by the FED¹³. The amount of money which runs the economy and shakes the financial market is the amount withdrawn from all pockets, safes, mattresses and accounts, there include the FedFund, during a period of time. Money stocks are frozen money; they do move neither the economy nor the financial market. Monetarists disagree and state that money stocks rule the economy and that a "monetary impact" is given by the variation of stocks, or rather, that the variation of stocks is the right measure of the flow.

¹² In the United States the Treasury is forbidden by law of being one of these sellers.

¹³ The author tried unsuccessfully to obtain such data from FED. The Brazilian Central Bank (BCB) provides the information searched for and may illustrate the point made. For instance, during 2010 the amount withdrawn summed up BRL \$18.7 trillion, 12 times the average balance of Brazilian Treasury bills and 5 times greater than the GDP of Brazil. This means that \$18.7 trillion were withdrawn to buy financial assets. However, BCB considers as a "monetary impact" only the difference between total annual amounts withdrawn and deposited, which was only \$200 billion, for at the same time sellers of assets deposited \$18.5 trillion.

Unaware of FED's technicalities, the financial market learnt that, given the liquidity, the FedFund is a convenient place to raise some interest rent from. So, Treasury papers became very popular because they offer the best: safety, 100% liquidity and, incidentally, a good yield. Occasionally the interest rate may be not so suitable, but until default does not look imminent the FedFund will remain a convenient spare option.

Money is expected to be always circulating, either on the real production side or in financial assets transactions, for it makes no sense for anyone to voluntarily hoard money beyond transactions requirements. In the real world money is exchanged by things people make disappear and must be produced again. The money there is always employed in real trade and people usually are not concerned about raising interest on it despite some hoarding. However, in the financial market the money is used to transfer proprietorship of financial assets which do not disappear and do not demand new production and workforce. The money there is just one more financial asset which also remains idle for a considerable while, waiting for the next financial operation. In the financial market, some money is always unemployed. Then it comes out another service to the financial market performed by the FedFund. When people do not know what to do with idle money, the FedFund takes it and makes no use of it for not to disturb the financial market even more. Society does not want to reward unemployed money but the FedFund does the job for it. The suggestion advanced by Charles Ferguson in *Inside Job*¹⁴ is meaningful; it is not clear whether this is just about economics and ethics.

What is clear is that the FedFund is the instrument of a governmental intervention in the financial market, imposing a minimum price to financial capital like if it were milk. This intervention assures to financial capitalists that their money will always be fully employed and properly remunerated. Governments are doing to money what they should ethically be doing to people. Moreover, considering that the money borrowed by the central bank using T-bills as "collateral" serves no purpose, more than ever the interest payment is a transfer, a money given in exchange of nothing, a cost-free financial asset transfer, a donation. This seems to be the other-worldly world's greater rent transfer program. By the way, when talking "free market" monetarists must be defending freedom only to others, for their market must be heavily protected.

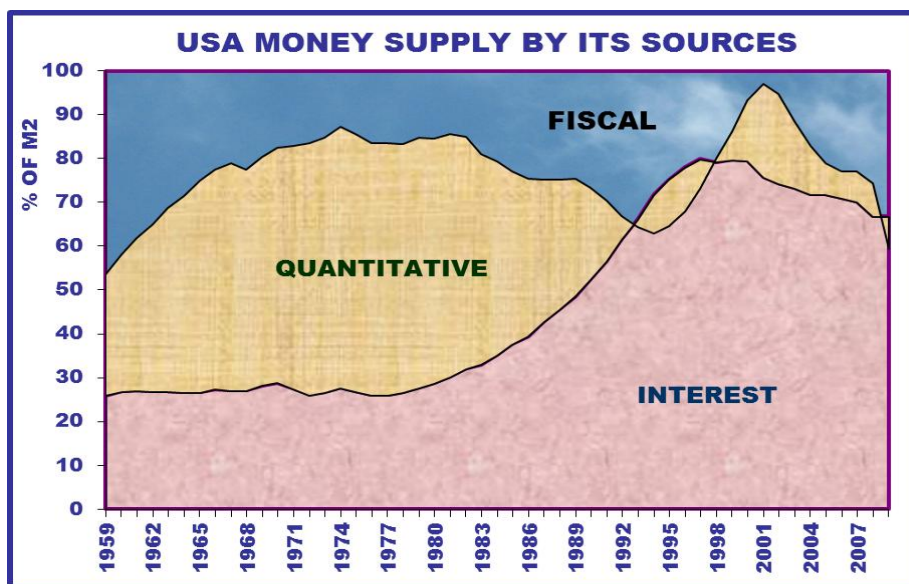
Another interesting feature of the monetary policy is that always the central bank buys a Treasury bill from someone who bought it directly from the Treasury the central bank is giving back the money previously taken from the financial market, plus interest. So, anyone can buy a T-bill this morning and sell it to the central bank this afternoon. The central bank will always be there to do exactly that. Combining these two operations, what happens is that once again the central bank gave the money to someone to lend to the Treasury. In a few words, whoever finances the government is the central bank and not the public. Even if the public were not there, the central bank would finance the government the same way. If the FED had not created the FedFund, all T-bills would remain with the FED, being renewed from time to time. Instead of the public, it would be up to the FED to stockpile T-bills ad infinitum then endlessly printing money at the Treasury order. Of course government could impose to central bank that this money would not bear interest. This zero interest loans is also a money transfer, in this case from central bank to government, but could be seen as a price commercial banks pay to society to be authorized to provide financial services to it as a private business.

A major conclusion is then that actually the central bank is the only one that finances government, and in so doing it does print money out of thin air to pay that part of the interests upon the public debt which exceeds the primary surplus. In other words, the central bank prints money to pay the public deficit. Therefore, there is no foundation to the ideas that government should not print money and that it is not doing so. Moreover, given the rules of the game, the decision on if, when and how much exogenous money will be printed stem from the governmental decisions on the budget. If the Treasury had never had a deficit to be financed, there would be no T-bills, no FedFund and no money

¹⁴ Documentary Oscar Prize 2011.

printing by the central bank. At each government deficit will follow a money creation. All expenditure always implies a money transfer. Hence, new money is created when government spends and any government deficit creates new money. The central bank always prints money to pay the government's deficit. If someone (the central bank) pays somebody else's (the government) expenses, then what happens is that someone is giving money to somebody; the central bank is making a donation to the government. No matter if the central bank is not public but a private property, this is sovereign money (WRAY, 2009).

The monetary policy process is such that M2 expands without regulation as a consequence of 1) government deficits, which has two components, the primary deficit and the expenditure on interests upon the public debt; 2) an autonomous, pure¹⁵ monetary policy, both that paying interest on the public debt covered by a pretension of inflation control and the assumed quantitative easing; and 3) current account deficits which have actually been inexpressive in relation to the other three sources. The nearby graph illustrates the composition of the US money supply as measured by the M2 in a time span of half a century.



Data sources: US FED for M2 and Historical Tables of the White House Office of Management Budget for government deficit and interest expenses.

The main source of M2 formation has been the accumulated interest rent derived from the public debt, averaging 46.2%, almost half of the money supply. In the second place, with an average of 31.0%, comes the quantitative easing, measured by the gap between the accumulated nominal deficit and M2. Thus, the monetary concerned expansion of the money supply is as high as 77.2% of the M2. It remains therefore to the fiscal job creation policy, obtained by deducting the accumulated interest expenditure from the accumulated nominal deficit, a share of 22.8% on money stock accumulation. The stock formed by the accumulation, since 1940, of that part of the public deficit which can be associated to the fiscal policy mounted to 3.5 trillion dollars in 2009. This number suggests that the money created by fiscal reasons may be expected to have restored only a very small part of the money withdrawn by private savings. Therefore, it seems that price inflation stems more likely from the monetary policy than from the fiscal policy.

Remind that when the central bank sells a T-bill it is assuming to pay interest in a date which is not up to it to set. Therefore, the monetary base is always scheduled not only to be restored but to increase in some moment in the future, out of any possibility to the central bank to prevent it. The monetary base and money supply are always

¹⁵ A monetary policy is here said to be "pure" in the cases it refers to money or inflation control and the quantitative easing. The public deficit financing is not pure monetary policy.

autonomously escalating by the amount of money issued to pay interests on the public debt. Most of this money is not devoted to replace the money withdrawn from the real economy by savings for it goes to the financial market. There happens then a financial asset inflation which will eventually spill over the consumer price index. Clearly, with or without public indebtedness, the central bank has no power to control the monetary base, the money supply and hence price inflation.

Inflation has been the reason offered by monetarists and bankers to convince almost everybody that government cannot print money and must follow their monetary policy. Having buried the law of supply and demand, they say that inflation is a complex paradoxical phenomenon which can only be controlled through money management and they promised to do the job. The failure of this strategy led them to create the modern version of this misleading story, the inflation target program, founded on the interest rate manipulation. "Adopting a gold standard, or a foreign currency standard ('dollarization'), or a Friedmanian money growth rule, or an inflation target is a political act that serves the interests of some privileged group" (WRAY, 2009, p. 6). The inflation target program does change nothing on the central bank money making process. The impossibility for the Treasury to control the public debt and for the central bank to take control over the monetary base and M2 thus remains in the inflation target monetary policy.

One important point of this story which has not been given suitable attention is that in any case the money created to pay interests on public debt is unbacked. Money has always been a fiat money but fiat money is not necessarily unbacked money. The gold conversion was a fake but left an important lesson: money must be backed. In reality, the only real stuff which can back money is the production. On the matter, quoting Mirowski¹⁶ Galbraith Jr. states "...one may consider that in Keynes's economics, total expenditure is the standard-of-value for which the equivalent in earlier theories was gold or labor or psychological welfare" (GALBRAITH Jr., 2009, footnote 7). The only thing which can be at the money's back is the production, what means human labor, what means people. The money's back is the man; the higher the value of money the lower the value of men and society.

Monetarists may try to make people to believe that the dollar is backed by sound private bonds and dependable T-bills. But a T-bill is just a paper which can only be converted into dollars. Actually, the monetary base and the money supply are not only inflating out of control, they are also being inflated with unbacked money. The conclusion is that no central bank can deliver the service it sold to its supporters, monetarists, financial capitalists and society – the inflation control. This fact must, besides smashing ethics, have some legal implication.

One last amazing puzzle on this matter is that in reality inflation is a problem only for financial capital owners. If the economic policy were to print money only to exchange for new production, there would be more income and people would be buying more higher-priced things, what means no problem at all. Normal people who have an income increase want to buy things that before they considered superfluous because they had then no money to buy. Therefore, it is for the financial capitalist's social group that monetarists are not providing service because they cannot prevent inflation from deteriorating their capital. The only tool which may reduce price level is the fiscal policy made on the wrong direction. The monetary policy neither serves an economic purpose nor matches the interest of its supporters.

If people were living in a democracy, then it would make no sense the society borrow money from, or lend money to, the society. It is senseless you to be indebted to yourself and people owing people. But it seems that things have been so ever since. For many reasons it has been ease to sell the idea that the government should not print money. Monetary theory adds to this popular belief the ambiguous idea that governmental money is the cause of inflation. It was possibly a combination of these misleading statements

¹⁶ Mirowski, P. *More Heat Than Light*. New York: Cambridge University Press, 1991.

with vested interests and political power that delivered the monetary paradigm: "government cannot print money because this causes inflation". Therefore the government is said, by bankers, academics and politicians, to issue Treasury interest bearing bills instead of interest free money in order to raise funds to finance any accounting deficit and to supply the means for the central bank to make pure monetary policy. The monetary paradigm is so profoundly tied to human brain that it appears positively irreverent to mistrust it. But this is what has been done herein. What follows closes the monetary subject of the paper with the demonstration that the monetary policy endlessly harms logic, economics and society, for it imparts a mathematically explosive trend to the public debt.

4. Public debt is an economic non sense.

Everybody realizes that the public debt is virtually always growing. Then monetarists felt they were concerned with and decided to adopt a static accounting approach to teach how the public debt may be stabilized. Yes, monetarists think that the public debt must be stabilized, never eliminated - eliminating public debt would imply eliminating monetarists. All they can do is then simply look for the accounting condition of stability and to do so they take the public debt at any point in past time as "given", as if its past debt levels had no cause. Economic dynamics in monetarist models is introduced by taking the public debt by its ratio to GDP. Therefore, monetarists calculate the primary surplus which, enlarged by a "given" dynamical greater GDP, is required to pay the interests and make the public debt stop climbing.

Then they tell the President and Congressmen that this is exactly what they must do. If it happens that the public debt grows again, either absolutely or as a GDP ratio, the fault is said to be up to politicians. Of course, they refer to the politicians outside their protection net. Moreover, as a rule monetary theoretical models exclude interest payment on the public debt created by themselves. This exclusion could only be considered if it were satisfied the condition of required primary surplus being brought about, and without any negative effect over the economy and tax receipts. In the monetary theory, however, this exclusion is an assumption. It is not a hypothesis to be submitted to the scientific test and nobody should question it. So, monetarists imposed themselves to follow a dogma, a belief without scientific support; their credibility rests upon people's ideology. Hence, all they can do is to state that there is a certain primary surplus level which stabilize public debt; they cannot answer to the questions of why this level has never historically been attained, why any public debt is always rising and why they cannot prevent future debt crises. The answer to the last question relies on the explosive trend of the public debt.

The following demonstration that any public debt, once started, tracks an explosive trend towards infinity uses a mathematical approach suited to deal with the statement attributed to George Soros who said that the financial market is disequilibrating. A stock results from a difference between previous flows, but in turn its level influences some of the next flows. To begin with, suppose that there is no money emission to pay neither the interest nor the principal, and that there is no pure monetary policy. If so, then the time performance of the public debt may be described by the following accounting stock-flow expression:

$$D = D_{-1} + INT - T + FE$$

where D is the public debt at the end of the current period, D_{-1} is the public debt at the end of the previous period, INT is the governmental expenditure on interests, T is total receipts and FE represents governmental fiscal expenditure. All values are nominal. After a once for all fiscal expense growth, at each period of time the public debt will increase by the interest on the previous public debt stock and will decrease by the tax receipts.

The key assumption is that the nominal GDP is an endogenous variable whose reduced equation states that it is a function of a set composed by macroeconomic variables which are exclusively exogenous or autonomous. This set comprises the fiscal

policy given by FE, and a subset of other exogenous variables OV, there included those connected with the economy's external sector. Therefore, the tax receipts, which are supposed to be positively associated to the GDP, are also an endogenous variable whose level may be determined by a function like:

$$T = \beta_0 + \beta_1 FE + \beta_2 INT + \beta_3 OV$$

where OV refers to other exogenous variables and β_1 is the coefficient of the fiscal policy, or the return to the government of the social investment made through fiscal policy. β_2 is intended to measure the effect of the interest payment, or the public debt itself, on the tax revenue. The idea is that the interest rent concentrates income, raises savings and lowers aggregate demand and so the anticipated sign of β_2 is negative¹⁷. Considering that for an increase in interest expenditure to happen the public debt must have risen first, this idea besides logic incidentally matches the monetary inflation targeting proposal of increasing public debt in order to reduce GDP, thus creating unemployment and then controlling inflation. Also under a monetary standpoint β_2 cannot be supposed to be positive. Next, the interest expense on public debt will be given by the product of the nominal interest rate r and the previous period public debt:

$$INT = r D_{-1}$$

Replacing then the interest expense INT in the equation of tax receipts T , and then T and INT in the accounting expression of the public debt, it comes:

$$D = D_{-1} + r D_{-1} - (\beta_0 + \beta_1 FE + \beta_2 r D_{-1} + \beta_3 OV) + FE$$

This is a finite difference equation which describes the time behavior and the possible theoretical equilibrium levels of the public debt. Collecting terms one may write:

$$D - \{1 + r(1 - \beta_2)\} D_{-1} = -\{\beta_0 + (\beta_1 - 1) FE + \beta_3 OV\}$$

The theoretical equilibrium solution for this function will be then given by:

$$D^* = 1/\{r(1 - \beta_2)\} \{\beta_0 + (\beta_1 - 1) FE + \beta_3 OV\}$$

This is a complex solution, stressing that the hypothetical equilibrium level of the public debt D^* depends on the interest rate r , on the social investment return β_1 , and on the fiscal expenses FE. Moreover, and probably less intensively, the public debt level is also influenced by a set of Other exogenous Variables OV, for instance the Chinese exchange rate, which are out of control of the monetary authorities. Complementing, the trend solution is expressed by:

$$D - \{1 + r(1 - \beta_2)\} D_{-1} = 0$$

The twofold condition for the public debt to be convergent to a theoretical equilibrium status is therefore:

$$0 < \{1 + r(1 - \beta_2)\} < 1$$

Taking one of the inequalities:

$$\{1 + r(1 - \beta_2)\} > 0$$

and transposing terms one obtains:

$$r > -1/(1 - \beta_2) \quad \text{or} \quad \beta_2 < (1/r)(1 + r)$$

Considering that r has positive signal while β_2 is expected to be negative, then any pair of simultaneous normal values for r and β_2 satisfies the first condition.

¹⁷ In an old Author's unpublished estimate of the Brazilian aggregate supply and demand model it was obtained the equation: $T = -27.7 + 0.838 FE + 0.246 MW + 16.366 ER - 0.0438 D$ (econometric tests satisfied), where FE is the fiscal expenses (fiscal policy) MW is the minimum wage (income distribution policy), ER the exchange rate (foreign relations policy) and D is the public debt (monetary policy).

To complete the task, it remains to be analyzed the other inequality:

$$\{1 + r(1 - \beta_2)\} < 1, \text{ which implies that: } r(1 - \beta_2) < 0$$

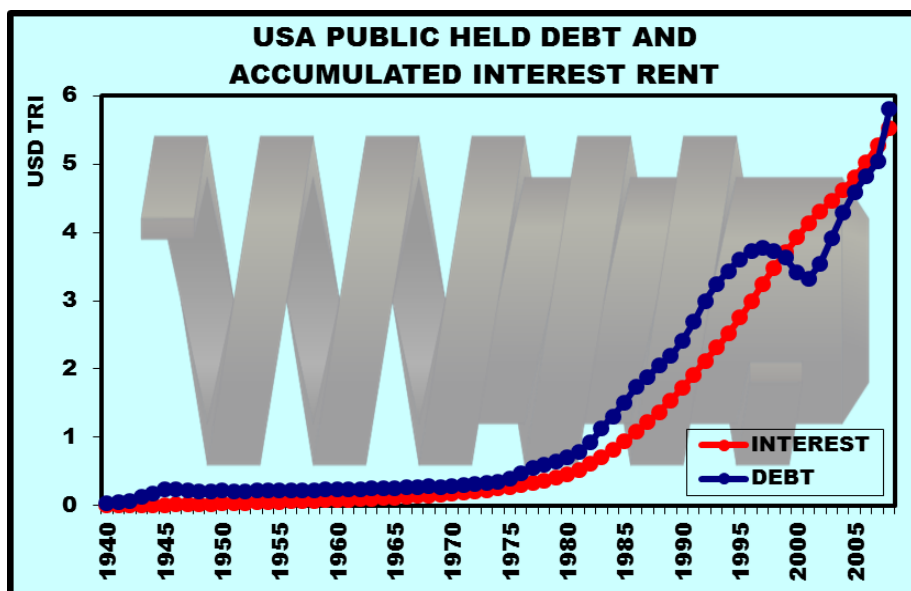
So, two possibilities must be considered. The first is that $\beta_2 > 0$ while $r > 0$, and the second is that $\beta_2 < 1$ while $r < 0$. In English this means that, for the public debt not to follow an explosive trend upwards, it would be necessary either 1) that the public debt interest expenditure be positively associated with the tax revenue while the interest rate is positive, or 2) that if the correlation of the public debt interest expenditure with the economy and consequently with the tax earnings is negative, as expected, while the interest rate is also negative. Given then that these two conditions are unattainable in the real world, the conclusion is that under normal conditions the public debt once initiated will display a mathematical tendency towards infinity and will never attain an equilibrium level, Q.E.D.

Note that the trend depends only upon the size of the public indebtedness negative effect over tax receipts β_2 and the interest rate r established by the central bank. This means that the primary surplus has not the least influence on that trend; it is absolutely useless to prevent public debt from being explosive. Raising taxes and cutting fiscal expenses are social sacrifices that can at best move the theoretical equilibrium level of the public debt; they cannot tame its trend. In this case all that social sacrifices actually do is just to postpone the next crisis and the Doomsday. Unfortunately, in the real life the effects of reduced fiscal expenditure and heavier tax burden are certain and completely negative. They deliver production recession, unemployment, misery, protests, and homeless and sic people in a very long list of economic and social damages. The consequences of insisting in applying a flawed theoretical approach to the real life are many and painful.

In passing, talking true solutions it is worth considering the theoretical possibility that the interest rate be not positive. In this case what the mathematical result suggests is that the right monetary policy which allows for a feasible economic policy would necessarily have the direction opposed to the actual one. Instead of transferring rent for some elected people by selling T-bills cheaper and buying dearer, the central bank should do the opposite, buy T-bills cheaper and sell dearer. This implies that somebody would be transferring money to the government, or that government would be printing money out of thin air to spend on purchases of whatever real stuff the society democratically decides to produce. For instance, if it were zero then there would be no trend, any public debt would be constant at a certain level and the borrowers would have made a donation to the public. If it happens that at zero interest rate the debt is increasing what happens is that the borrowers keep donating regularly.

In a private investment project, the interest rate pushes debt upwards and the expected return on the capital must be positive and such that the coefficient β_2 be negative: the debt must follow a trend to zero. However, the monetary policy acts in the opposite direction, pushing the society to realize a negative return on the borrowed financial capital. Given therefore a return on the social investment which is lower than the expenditure on interests, the necessary condition for the public debt not to explode is not to exist any public debt at all. Of course, ethics obliges economists not to recommend economically unfeasible private investment projects, but the same principle has not been applied to the public investment.

In the long period from 1960 to 2009 the burden of interest outlay over the nominal US Treasury deficit attained 66% on average. The graph nearby illustrates the perennial retro-feeding phenomenon of debt pushing interest expense which pushes debt which pushes interest expense ... and so on. Hence, the instability of the public debt being intrinsic, it seems that there is no reason to reject the hypothesis that all and any monetary model are theoretically inconsistent, because all of them always create public debt. Besides socially harmful, the monetary theory is logic and economically wrong.



Data source: Historical Tables of the White House Office of Management Budget.

Last but not least, besides fiscal deficits financing the pure monetary policy which pretends to control money and prices requires that the public be indebted. Considering then that pure central bank monetary open market operations of selling T-bills means money borrowed to be not invested, its effect upon tax revenue is obviously negative. So, it makes no sense to create primary surplus to pay the public debt because in the minute after the pure monetary policy will make a new public debt. What makes no sense is not money printing but the monetary policy itself.

Therefore, are unfeasible the above assumptions that there is no money emission neither to pay interests nor to amortize the debt, and that there is no pure monetary policy. Actually there always is money emission out of thin air and the monetary policy builds up public debt irrespective of the said fiscal policy funding. So, those specific conditions cannot be provided and then the public debt follows a higher explosive trend rate and must be described by a larger expression like for instance:

$$D = D_{-1} + INT - T + FE + DM - M$$

where DM refers to the public debt made by pure monetary policy, including bail outs, and M is money printing out of thin air, also called seignorage, to pay part of the public debt. The trajectory in direction of infinity no longer depends only on the interest rate and the negative effect of public indebtedness on tax receipts. It is now boosted by the pure monetary policy and restrained by occasional monetization. Combining all forward and backward effects, during the period of 1971 to 2008 the US public debt grew at an exponential average of about 8.4% per annum, while implicit interest rate on T-bonds arithmetically averaged 6.8%. This means that, besides the interest rate, β_2 other monetary affairs brought about 1.5% each year to speed up the public debt. About debt ratio to GDP, in those years the GDP expanded at an exponential rate of 7.0%. This is to say that the debt/GDP ratio after the end of gold standard era always rose, exception made to the monetary golden era of the Clinton administration when deficit were radically reduced until producing a couple of surplus years (1999-2000). This short-lived fiscal contraction was a useless high price paid by the society to buy the undeliverable dream of controlling inflation through monetary policy.

The general conclusion of this section is that the public debt, illustrated by USA data, follows mathematically an explosive trend stemming from the facts that 1) government does not print interest-free money to perform fiscal policy, 2) interest bearing financed fiscal deficits do not create sufficient tax revenue for government to pay for the interests upon public debt, and 3) pure monetary policy autonomously bears public debt. This conclusion implies that monetary policy cannot control the monetary base for the act of

“retiring money” is performed through a T-bill sell. But this act is in reality a commitment to pay interest and raise the monetary base some days after when the buyer decides to sell the T-bill back to the FED. On the balance, the monetary policy is just an out of thin air unbacked money printer. Actually, *ceteris paribus* the foreign sector, the only way to reduce the monetary base permanently is a state money operation. Given a balanced current account, a money destruction only happens when government spends less than its tax revenue, when government produces a primary surplus, when government performs a fiscal policy in the wrong direction.

Consequences are many, and not good news. The same explosive tendency applies to everything which is touched by public debt: interest rent, unbacked money emission, private excess savings, financial assets inflation, real estate prices inflation, food prices inflation, unemployment, income and wealth concentration, misery, violence, drugs, gun market expansion, street protests, pollution, financial crises, frauds, bail outs, and much more. Public debt implies interest and this social interest burden triggers economy down. A theory which ignores the real world cannot bear any ethics.

However, what is favorable to the people who created this announced chaos? More likely they have a problem. The monetarist paradigm cannot assure forever any benefit to anybody. The monetary policy cannot control money supply, so it cannot avoid financial capital devaluation. In the case of private central banks the stockholders assumed as profitable to print more and more money to pay for the debt of a client who will never pay the principal – the government. A client who is always borrowing more is welcome, provided that this client pays the interests. However, a client who never stops borrowing never pays interests; these are simply added to each new loan. The central banks’ stockholders have the monopoly of money printing, but they decided to issue money to pay interests on public debt; they decided to pay the public deficit. They decided to donate money to the government, provided that the deficit refers to interests. What profit central bank stockholders derive from such an operation? What kind of monopoly is this if they don’t control its own production? Why a money monopoly borrows money? Where this borrowed money comes from if not the monopoly itself?

It is possible that it was the central banks stockholders themselves that flawed their monopoly of money emission. Perhaps the origin of the damage was a greedy search for more profits, creating then a financial fund, for instance the FedFund, to trade on Treasury bills. These T-bills backed funds are Ponzi schemes; they offer an unusual and unaffordable performance to attract new “investors” to support the promised results, for a while. The FedFund offers the best: security, a suitable yield associated to the promise of inflation control, and 100% liquidity. The Treasury is obviously not a kind of profitable corporation which may provide the promised return. The informed supporter of this Ponzi scheme is the central bank which prints money out of thin air at any time to provide the committed rent and liquidity. Other banks and funds, like the mortgage packed funds, go bankruptcy first and faster because they cannot print money endlessly as the central bank does. However, like any other Ponzi scheme, also the FedFund will someday blow up.

The idle money printed by central banks expands credit supply, fosters competition, eases the access to credit, bears sub primes, blows bubbles, justifies profitable bail outs, induces frauds, and so on. The FED cannot realize its lemma because it cannot provide “the nation with a safe, flexible, and stable monetary and financial system”. To fix things, responsible academics may propose extreme solutions like the socialization of banks, but some radical political leaders may push people to attitudes still worse than that. The next section is dedicated to demonstrate that money created to buy things that people produce is backed money and causes no monetary inflation, causes no problem at all.

5. If money issued by government were backed.

Keynes was not the first one to say that the government should print money to create social wealth and consequently fight unemployment. As for some others, for Keynes money should also be backed by the human labor. Probably, if he was not famous, this suggestion would be given the same attention monetarists conceded to

similar previous propositions - none. When considered as Keynesian, this idea were approved by few, taken as a minor mistake by many and considered absolutely wrong by the most. Many people criticize Keynes presenting his words out of context. For instance, one may find in the General Theory the statement that:

“For example, unemployment relief financed by loans is more readily accepted than the financing of improvements at a charge below the current rate of interest; whilst the form of digging holes in the ground known as gold-mining, which not only adds nothing whatever to the real wealth of the world but involves the disutility of labour, is the most acceptable of all solutions.

If the Treasury were to fill old bottles with banknotes, bury them at suitable depths in disused coalmines which are then filled up to the surface with town rubbish, and leave it to private enterprise on well-tryed principles of laissez-faire to dig the notes up again (the right to do so being obtained, of course, by tendering for leases of the note-bearing territory), there need be no more unemployment and, with the help of the repercussions, the real income of the community, and its capital wealth also, would probably become a good deal greater than it actually is. It would, indeed, be more sensible to build houses and the like; but if there are political and practical difficulties in the way of this, the above would be better than nothing” (KEYNES, 1936, p. 129, italics added).

Several Keynes critics, in order to prevent themselves cognitive dissonance, perceive only that part in italics and repeat endlessly the phrase to convince oneself - and others - that Keynes should not be seriously taken. But one cannot deny that Keynes' intention was to compare two situations and show that digging holes in the search of money is the same as mining for gold to back money printing. If nobody considers the latter as a foolish the former is also not silly. More than this, in the next sentence - in the same paragraph - Keynes says that if the problem monetarists are pointing out is the digging of holes, then they should take the idea of government printing money to buy things produced by people, houses for instance, thus increasing taxable production and employment. Millions of people talk Keynes, many give support to fiscal policy, some focus on state money and few are convinced that this may be the way. In MORRISON (2006) words, the way could be called Keynes Without Debt.

What follows is a demonstration that, being backed by production, the stock of money issued by central bank converges to an equilibrium amount. Suppose a country where the Constitution prevents government from borrowing money, both internally and abroad. There will then be no monetary policy, no open market and no public interests expenses. It is hard to imagine all that but if democracy prevails somewhere, then there it is a real possibility.

In this ethical economic order, the monetary base will be affected exclusively by transactions on the real side of the economy. In fact, money will be created only when 1) the country earns more foreign currencies than she spends and 2) the government spends more money than its tax revenue. In the first case the central bank will buy more than sell foreign currencies, thus creating more than destructing money¹⁸. The central bank accounting will be balanced by the asset in foreign currencies against the monetary base as a liability. In the case of the public deficit, in order to run the model first consider that any Federal Government expense can only be realized if authorized by the annual budget law passed in the previous fiscal year.

Imagine now that there is a legal enforcement for central bank to make a deposit in the Treasury's account in an amount determined by the annual budget law¹⁹. Remind that

¹⁸ If the country's currency bears international prestige, then its central bank may not buy all these foreign currency.

¹⁹ This is absolutely not to say that central bank could print money to pay for all government expenses, and then eliminate taxes, for in this case the stock of money would increase limitlessly. All the same, it is not being suggested that the Treasury could lend money to the public.

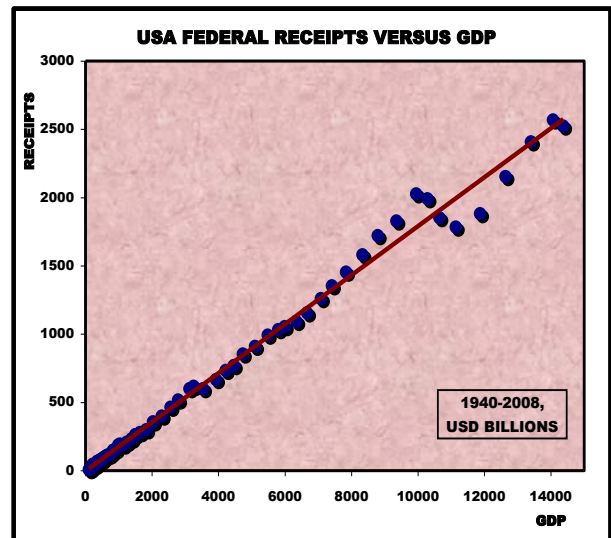
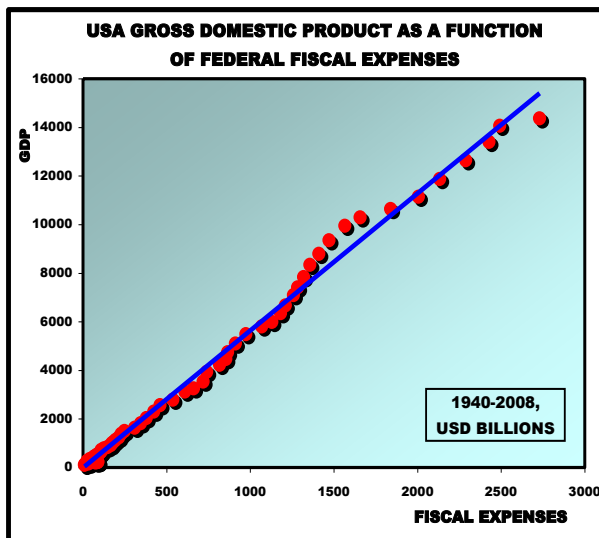
the central bank stockholders made freely the decision of donating printed money to the government; they have only asked that this money be given to interest rent seekers. If it still looks too odd, take it as the price government imposes to private banks in exchange for their license to exclusively serve the private sector of the economy. "Since government is the only issuer of currency, like any monopoly, government can set the terms on which it is willing to supply it" (WRAY, 2009, p. 16). Remind also that banks will make profits with the economic expansion associated to the fiscal policy and that money "production" comes at low cost out of thin air. This proposal of interest-free state money is not new; it follows some attempts presented later on here.

This currency, call it "primary money", adheres to WRAY (1998) statement that "Governments issue money to buy what they need; they tax to generate a demand for that money; and they accept the money in payment of the tax. If a deficit results, that simply indicates the population wishes to hoard some of the money. The deficit is of no consequence to the government; it merely allows the population to save in the form of government money. ... Taxes and bonds, therefore, have nothing with financing a government's spending and, indeed, are after the fact as they necessarily follow spending than precede it" (p. 9). The accounting formula below describes the time performance of the primary money stock:

$$M = M_{-1} + (FE - T) + CAB \tag{1}$$

where M is the stock of primary money at the end of the present period, M_{-1} is the stock of primary money at the end of the previous period, FE represents the fiscal expenditure, T is the total government revenue, (FE - T) is a measure for the fiscal policy such that a positive sign means a public deficit, and CAB is the current account balance, defined as a surplus. If public budget and current account were balanced, then money stock would be stable.

Two hypotheses must be introduced now. First, it is expected that the fiscal policy (FE > T), besides making M to increase, will cause an expansion of the aggregate demand and therefore of the GDP. The second hypothesis is that public revenue T raises with GDP growth. The more government spends the more it collects taxes²⁰. These relations are showed for the US case in the panel nearby.



Data sources: US BEA for GDP and Historical Tables of the White House Office of Management Budget for budget receipts and outlays.

²⁰ The equation: $T = -27.7 + 0.838 FE + 0.246 MW + 16.366 ER - 0.0438 D$ in the footnote 16 indicates that in the Brazilian case this hypothesis could be not rejected; the greater the exogenously defined fiscal expense FE, the greater the endogenous variable tax revenue T.

The graph at the left displays the reasonably stable positive relationship amongst GDP and one of its assumed exogenous causes, the federal expenses on fiscal matters FE. Complementing, the graph at right shows that the correlation between the GDP and the total receipts of US government is also positive and reasonably stable. It is therefore assumed that, if positive, greater (FE – T) leads to greater M and, some time later, to greater T. So, a combined hypothesis states that larger revenue T will be associated to greater stock of primary money M, for example in the form:

$$T = \alpha_0 + \alpha_1 M + \alpha_2 OV1 \quad (2)$$

where OV1 refers to "Other exogenous Variables" which may influence T values but are here omitted in the sake of simplicity. In mathematical terms, the combined hypothesis is that signal of α_1 be positive. Replacing then the government revenue T given by (2) in the accounting formula (1), the latter will become a finite difference equation which describes the time behavior of the primary money stock²¹:

$$M = M_{-1} - \alpha_0 - \alpha_1 M - \alpha_2 OV + FE$$

Collecting terms and re-ordering, it comes:

$$(1 + \alpha_1) M - M_{-1} = -\alpha_0 + FE - \alpha_2 OV \quad (3)$$

So re-arranged, it becomes clear that the particular solution for this finite difference equation, or the theoretical equilibrium value of the primary money stock M^* , is given by:

$$M^* = (1/\alpha_1) [-\alpha_0 + FE - \alpha_2 OV]$$

The theoretical equilibrium level M^* of the primary money is a function of the fiscal expense FE and the other exogenous variables OV. As it ever happens, money supply is a function of the fiscal expenses. While OV stay invariant and expenses expand more than the tax revenue, the consequent deficit will immediately be incorporated to the stock of money in circulation on the real side of the economy. First government spends then public have money to spend and multiply production. On the other hand, the complementary solution of equation (3), which is the trend of M, or the condition for the equilibrium level M^* to be attained, is:

$$0 < [1/(1 + \alpha_1)] < 1$$

To be fulfilled, this condition requires that, simultaneously, α_1 be positive ($\alpha_1 > 0$) and greater than unity with negative signal ($\alpha_1 > -1$). Given the former, the latter is redundant. Thus, the necessary and sufficient condition for money stock to be in equilibrium is that α_1 be positive. This implies that, for equilibrium to be mathematically attained, the hypothesis must hold: money backed by production and tax revenue are positively associated to each other. For this hypothesis to be observed in real life it is required that a) fiscal expenses cause government deficit, b) this deficit is paid with new interest-free money issued by the central bank out of thin air, c) this new money is used multiple times by society to buy more things produced by people, and d) the expanded production causes tax revenue to increase.

The falsification of this theorem requires that at least one out of three statements be true: i) more realized new purchases do not expand nominal GDP, ii) a public deficit does not increase the monetary base, and iii) more production does not mean more tax revenue. Taken as given that there is neither empirical nor theoretical support to none of these statements, the conclusion is that there is no reason to reject the hypothesis that

²¹ Given that CAB is an endogenous variable, it is a function of FE and a set of other exogenous variables which explains primary money stock M. So, in order to avoid linear combination, CAB was eliminated from the equation of M. Alternatively, one could replace CAB by FE and another set of other exogenous variables, say OV2. Any new expression thus created would show the same: M is a function of FE and a combination of OV1 and OV2 - call this combination OV. In this set OV there are only exogenous variables which may affect M directly or indirectly, through CAB.

money printed by central bank, if backed by production, is positively correlated to tax revenue. The money thus issued comes back to its origin. Government creates a bill of dollar out of thin air and puts it in circulation buying goods and services. The value of that bill will thus return to government some day in the future, in parcels. Having then higher tax revenue, therefrom government will sustain the planned higher level of expenses without printing. Keynes without debt is a sound theory.

Given a single exogenous fiscal policy shock, at the end of the adjustment process the aggregate demand shifted to the right in such a way that on the new equilibrium position production and price, and consequently income, employment, wages, money supply, and so on, are all greater than before. Of course, if people are buying higher priced things their new income is larger than the older one, it rose in real terms. Public deficit is the same as social investment. Society authorizes government to create money out of thin air, then this money is introduced in the circulation chain of the economy by a purchase of real stuffs, then the production value rises by the amount of money issued, and finally the Keynesian multiplier leads to an increase in the national production k times greater than the initial disbursement. A higher interest-free money stock is necessary to run a more intense economic activity.

Tax revenue will increase in real terms as much as new production allows and money will be issued until prices make the new tax revenue be equal to the amount of money issued to pay for the fiscal policy shock. OK, but price rose and even richer people believe and say that this is bad. It seems that people buy easier the monetarist idea that money inflates prices than the fiscal fact that money increases real incomes. "Keynes was quite aware that the true nature of money outside the gold standard, or any other self-imposed constraint, can be politically scary, and should be handled with great care" (TERZI, 2010, p. 15). However, fear of inflation has no support here. As soon as the nominal receipts match initial emission, government "finances" the fiscal policy with taxes, keeps the money circulating, and central bank stops printing money out of thin air. The money created has been added to previous stock, which will no longer grow. The money stock and price ups and downs will be commanded by the fiscal policy. The useless and mathematically explosive monetary policy could then be formally discarded.

Just in case, a word on Bernanke's helicopter (BERNANKE, 2002). TCHERNEVA (2010) scrutinized Bernanke's paper stressing his difficulties in dealing with the matter and observed that "... mainstream has finally recognized that the Fed cannot alone and unilaterally rain money on the banking system ... *without the Treasury*" (pp. 11-12). Central banks need governments at least twice: first to print Treasury bonds for their monetary policy performance and second to generate primary surpluses to pay interests on those otherwise not printed Treasury bonds. Central banks can only print the money which lacks to pay those interests. There is no monetary policy without public debt. Money printing without public debt depends on the demand for credit from the private sector; it is not a central bank autonomous decision. Society, government and fiscal policy do not need monetary policy.

This is not the first paper to look for foundations for a proposal of a Keynesian without debt fiscal policy. There are many other contributions to the without debt fiscal policy, curiously many of them elaborated by non-economists. TAYLOR (2008) develops the idea of an annual state investment with printed money which gives some yearly eternal return. After some years the return would be equal to the annual investment thus dispensing the printing. On April 1999 it was introduced the H.R. 1452 to the House of Representatives, named The State and Local Government Economic Empowerment Act. The main purpose was "To create United States money in the form of noninterest bearing credit in accordance with the 1st and 5th clauses of section 8 of Article I of the Constitution of the United States, to provide for noninterest bearing loans of the money so created to State and local governments solely for the purpose of funding capital projects"²².

²² The H.R. 1452 bill may be found at <http://www.govtrack.us/congress/bill.xpd?bill=h106-1452>.

WRAY (2001) develops a comprehensive analysis of alternative means of funding public investment, starting from the H.R. 1452. His conclusion is that "In sum, it seems entirely appropriate for Congress to legislate the interest rate to be charged on loans to state and local governments in order to promote capital spending" (p. 6). According to Wray, this interest rate could be zero, as provided in Section 2, clause (4) of H.R. 1452 bill: "The creation of money by the banks in conjunction with the Federal reserve banks does not limit the constitutional authority of the Congress to create Government credit funds in the form of noninterest bearing credit to fund a legislatively approved program or prevent the Congress from creating such funds".

The H.R. 1452 bill was rejected on the basis of arguments presented by the Board of Governors of the Federal Reserve System. One of those arguments referred to Section 3, clause (d, C) of the H.R. 1452 bill, which states that "the disbursement of money created under this section shall not be treated as an outlay or a budget outlay". Perhaps a more politically palatable idea would be to provide a special addendum to the federal budget. Better still if the law created a counseling Board of Governors composed by elected representatives of congress, central bank, industry and commerce, building firms, and so on, to prepare this addendum. This bill never became law.

Almost the same story happened 78 years before, with a specific capital spending under the spotlight. A set of reports by The Wall Street Journal in December 1921²³ informs that the industrial leader Henry Ford and the self-made scientist Thomas Alva Edison inspected and evaluated the Wilson Dam project at Muscle Shoals, AL. Ford strongly suggested, and Edison firmly supported, that government should print money to complete the investment. The Congress did not approve the idea, but later on created the Tennessee Valley Authority to promote the economic development of that region.

The Duke of Bedford stated: "Money, it must never be forgotten, derives its value from the presence in the country of an adequate backing of goods and services. It does not derive any value from the fact that it was first created as interest-bearing debt, or, indeed, debt of any kind" (The Duke of Bedford, 1945). Later on he defended that "The creation and issue of money would be a public service, unconnected with the business of lending money for profit" (The Duke of Bedford, 1947). ZARLENGA (2002), psychologist, and BROWN (2007, 2010), attorney, propose monetary reforms intending to give ethics and social priority to the money creation and circulation. These books remind contributions by Presidents Andrew Jackson and Abraham Lincoln, both lawyers, who also tried to make the money emission be a government concern.

It seems that economists and non-economists, despite agreeing on that something is wrong, have different perceptions of the same reality. Non-economists insights are that government money printing is the right thing to do and that the private monopoly of money creation is at the root of mankind slavery and endlessly financial crises. For non-economists the monetary paradigm is economically senseless and socially harmful. On the other side, economists apparently look at those insights with strong restrictions because, who knows, they have been put forward by non-economists. The next and final section may perhaps alleviate some concerns associated with those restrictions.

6. The Without Debt Fiscal Policy.

This section complements the arguments supporting the proposal of the fiscal policy without debt observing that, in order to restore employment, it matches the society's need of replacing the money withdrawn from the real side of the economy by excess of personal savings over investments. Remind that the idea is not confined to legally authorizing the government to issue money at its will. The right order of the fiscal policy must be first identifying the existence and characteristics of unemployment; then to look for suited social investment projects, then to prepare an amendment to the regular budget and offer it to the Congress. From then on the process will be the same as today.

²³ Articles are available at http://spiderbites.nytimes.com/free_1921/index.html, 1921, part 5.

Considering then that saving is a flow, money replacement is required as a flow. So, economist's ethics points to fiscal policy as a permanent governmental duty, for it is the right economic instrument to prevent recessions and unemployment. The fiscal policy is not a simple remedy to fix the economy after each monetary mess. Nothing but existing real wealth prevents the use of interest-free public deficits to create or restore employment. "... in an economy where the state issues money without any promise of conversion into anything else than state currency itself, the only constraint that matters, in the short or long run, is the limit of available real resources" (TERZI, 2010, p. 14).

An expansionary fiscal policy is a flow, it is a deficit generated in a period of time which will imply ups and downs variations in a long list of endogenous variables. A permanent expansionary fiscal policy implies a permanent variation in flows. But for a single shock, once time is over and no more deficits are made, all endogenous flows would remain at the new levels then attained. One stroke, one move; no stroke, no move. Having discarded public indebtedness, a once for all fiscal policy shock is incapable of inducing a self-sustained dynamics to the economy.

Fiscal policy without debt could be unfeasible only at that full employment hypothesis which is necessary to satisfy the ends of the monetary policy. In the real life people always need to save and savings continuously push employment down. If full employment were a fact, then government would be unable to, without raising prices, spend and therefore expand production. Of course it would be a non sense to try to implement an economic policy to create jobs if full employment level be a stable situation.

Nonetheless, it is possible to outline a useful theoretical limit situation to conjecture on the trend generated by a permanent fiscal policy. Imagine a scenario where there is no structural unemployment and that the only reason for people being fired is the excess of private savings over investments. Call it FESS, the Feasible Economic Social Status, a non-steady state situation. It is expected that at the FESS prices will fluctuate around some average level with a narrow standard deviation. At the FESS the economic policy intention would be to restore money retired by savings to maintain the level of economic activity and not to expand it. So, new flow of savings would push prices down and new fiscal shock, initiated at lower prices, would make them rise. Once again, one stroke, one new and higher level of prices, but not a permanent rise in prices. When the economy is following its road to the FESS the income increases and consequently prices raise because richer persons prefer to buy goods that before they had no money to buy and now they can buy higher priced goods and that is fine.

At the FESS and in the way towards it, the accumulation of discrepancies between flows in and flows out will as always make stocks assume successive new levels which will have some consequences. So, the stocks call for more attention. Well, the good news is that one may expect real wealth, both personal and social, to grow indefinitely and unemployment to reduce endlessly till zero. However, rent-hunter savers, financial capitalists and monetarists may consider that there is no good news for them. They will be right because the without debt fiscal policy precludes their monopoly on money creation. But what really hurts them is that they will no longer be given easy money.

The major concern about stocks seems to point to money. Under a fiscal policy, the primary money supply will attain a new and higher level after an expansionary shock. *Ceteris paribus*, to each level of fiscal expenditure flow will correspond a primary money stock level. The money supply varies with the fiscal expenses, on the same direction and stays unchanged if fiscal expenses do not change. Despite savings and hoardings, the Keynesian multiplier implies that the value issued for fiscal policy purpose generates a greater value of production. Therefore, the relation money/GDP actually tends to reduce.

It would be so simple if the only matter were to expand demand to eliminate unemployment. But the really complex problem stems from the fact that the society needs at the FESS a replacement for the money set aside by excess savings and by the expansion of the transactions stocks and banks reserves. Considering then that saving is a personal perennial need and merit, one could be feared that money emission would be

endless and that money stock would tend to infinity. So, it seems that it is savings which deserve still more concern. The fact is that people must save even if the interest rate is zero. So, at any interest rate there will always be savings. Part of the savings will be used to finance investments and consumption and the exceeding will remain idle, then forming reserves.

Among other possibilities stemming exogenously from the society, the fiscal policy will impose two disincentives to people to save at the idleness range. Firstly, as the savings stock goes up the interest rate and rent will go down. Probably, the interest rate offered to savers will eventually be very low, if any, and then the rate charged to the borrower will be commanded by the managerial costs, liquidity and risk. Secondly, while the economy is not at the FESS but going to it, prices will be continuously rising. Therefore, the buying power of savings could be decreasing.

So, what destination people will give to their exceeding savings, starting with the present stock of money in the form of T-bills? The best social possibility would savers decide to invest in real stuffs like industrial production and housing to match the expanding demand. Pension funds will necessarily be investors in production. Savers could reduce savings and hoard tradables or other storables to be consumed later. The worst would be buying land and concentrating real estate wealth. This is a social problem that may not disappear for the land sellers cannot use the money only to expand aggregate demand. Society may countervail this possibility and limit real estate concentration or expropriate land – no matter if at high prices – in order to create houses in a planned way. Construction is a good outlet for fiscal policy and then house rental may fall sharply. The society could create more incentives to not save in excess providing basics for retirees, for instance food, home and health care. Finally, there must be a natural limit to the per capita hoard on the grounds that, pathological cases apart, it makes no sense to spend money to store non interest bearing money.

If some exceeding savings come back to real transactions, then the fiscal policy will be less intensive. But what if savers decide to spend still more and inflate? Government may tighten or not to implement the fiscal policy or cut expenses, because creating money to pay someone already employed is senseless. Government could also confiscate the money wealth for noble reasons, for instance helping people injured by natural disasters like an earthquake in California, promoting humanitarian help abroad or investing in environment conservation. Once again, the responsibility on fixing things will be up to ethical economists.

Conclusion.

Perhaps one of the most important Keynes' contributions to the economic science is that the government can and should print money to restore the amount some people withdrew through savings. Accordingly, this paper presents evidences, both theoretical and empirical ones, to support a proposal of a Keynesian without debt fiscal policy. The counterpoint of this proposal is the monetary policy, being here demonstrated that it is unsustainable and useless both to population and to its supporters, harmful to society, and imparts an explosive trend to economy, therefore leading to social convulsions. Widespread crises like that of 2008 are just one of these negative consequences.

On the construction of the arguments, the first step is the deduction of the Fundamental Account Identity which shows that a considerable part of savings is assigned to interests upon the public debt. Moreover, this Account Identity also leads to the conclusion that the three economic policy instruments, fiscal expenses (fiscal policy), exchange rate (foreign relations policy) and interest rate (monetary policy) are interconnected in financial terms. Therefore, only one prevails for decisions on one of them have consequences on the others; they cannot be managed as if they were mutually independent. For instance, if the monetary policy comes first the exchange rate will be favorable to imports and the fiscal policy will be confined to endlessly generate increasing primary surpluses.

Next point is the revision of Keynes' statements, stressing that saving is a personal desire, need and merit, but a social tragedy. Money saved is money put aside, it will not return entirely to the production circulation, and that part which returns will pay interests. A financial rent, however, is normally received by high income people who save the most. So, savings cause aggregate demand to fall and unemployment to rise. It is up to the society to democratically manage to reconcile the private merit – to save – with the social necessity – employment.

In instead, governments all the world around follow monetary flawed assumptions and are expending great part of their receipts with interests upon public debt. So, some of the financial rent that high income people collect comes from their governments. This implies that, besides not providing the money required creating and sustaining employment, economic policy has been used to concentrate income and wealth, increasing the fortune of the few and reducing the conditions of life of the greater part of the society. The lack of ethics of the economic policy becomes clear.

Third, it is then demonstrated that the government is yes printing money. But this money is unbacked, for it is not used to expand aggregate demand and promote social progress but to pay interest on public debt. Going deeper in the matter, in the fourth step it is mathematically demonstrated that the public debt follows an explosive trend towards the infinity. So, the accumulated interest rent also rises indefinitely, implying that the main tool of the monetary policy, the open market central bank operations, has no power to control the money emission and the monetary base. Money supply is then out of control and, consequently, inflation too. In the US case more than 3/4 of the money supply stems from monetary concerns and less than one quarter is attached to the fiscal policy which creates employment.

Both monetary and fiscal policies start to perform printing money. The difference is that while fiscal policy prints a little interest-free money to create real wealth, the central bank's helicopter sprinkles tons of unbacked money to give to Treasury bills holders who will demand almost nothing real but Treasury bills. Central banks print the money that the few lend to government. Hence, all variables associated to public debt, unbacked money emission, interest rent, primary surplus, unemployment, income and wealth concentration, and so on, are tied to an explosive trend.

"... speaking frankly about where a failure to deal with the aftermath may lead" (GALBRAITH Jr., 2010), when the public debt approaches a certain default level and it is given a limit, the fiscal policy is said to be unviable and recession appears or grows. Monetarists then pretend to promote economic recovery but the central bank realizes that there is nothing it can do without more public debt. Therefore, private central banks can only issue money buying private bonds, but private debt will at best allow for a chicken flight economic expansion. Society arrives then to the worst world because the monetarist "solution" will be more primary surplus, hence more unemployment, less medical care, less pensions, less education, more street protests, more violence against people and so on. It is impossible to anticipate and describe the chaos which is now triggered, but certainly the end of this story will be a solution of continuity, a debt default and a huge social mess up to a scenario of devastated land.

On the subject, a special case is the European Union, whose country-members agreed upon limiting their own public deficit and creating an independent central bank. Worse than that, they later on enlarged the Union introducing countries which public debt was rising at a higher rate. The limited deficit implies that, in order to pretend to control the public debt, the only way is the impoverishing primary surplus which leads to unemployment, strikes, street protests, and so on. After several minor crises from those lower performance countries, the day will come when public debts of major European countries will also approach a scaring level. Country-members will then start discussing either a common fiscal policy or the European Central Bank will be given the duty of redeeming public bonds issued by any and all of them. Next, probably some higher performance countries will realize that they are trapped and more than ever the "well behaved" countries will feel that they are being called to pay for the irresponsibility of

others. Monetary policy makes the European Union to be unsustainable, but the political determination that created it will try to resist dismantling. However, united or not, all European countries share with the rest of the world the same route to chaos.

About the monetary theory and policy the conclusion is that public debt is an economic mischief. Among other oddities, monetary theory cannot provide perennial benefits to the few who collect the interest rent from the most. Central bank pretends to control a monopoly of money issuing, but it makes no sense for a monopoly not to limit its production. In reality, central banks are endlessly printing unbacked money and expanding the money supply, thus inflating assets and commodities prices and feeding crises. No unbacked economic policy may be ethical. Central banks are actually running Ponzi financial funds which are apparently backed by Treasury bills, but in fact they have been supported by their printing machines. A day will come when the global monetary system will crash in a domino sequence started in a very big country or countries' union. However, it is not central banks stockholders that will suffer but the countries' Treasuries and the societies they should be working for. Probably, at the eleventh hour those who created the unsustainable economic policy will move from the big country to somewhere else in the globe where they may start the game one more time.

The paper turns then in the fifth step to the proposal of a Without Debt Fiscal Policy. To start with, it is developed a simple mathematical demonstration that the stock of money issued by the government to buy stuffs produced by the taxpayers has a trend towards an equilibrium level. This happens because the money printed expands the aggregate demand and the national production, thus raising tax receipts. Having then received the same amount back, government stops printing. The public budget does the job that the monetary policy never could do; the fiscal policy controls the money stock, creates employment and prevents inflation. In this world the federal government issues money for social reasons while the commercial banks, owned by non-federal public institutions and individuals, controlled or not controlled by private central banks, run the S&L market as a private concern.

Finally, in the last step the paper discusses some essential concerns on the Without Debt Fiscal Policy, stressing that it is a potent instrument to promote the economic growth and social development. This economic policy is a matter of politics; it will be adopted if the society, democratically, decides so. "A debate that is freed from the constraints imposed by myths about how government really spends would allow us to move forward to gain consensus on the public purpose the American people expect government to pursue" (NERSISYAN & WRAY, 2010. p. 19). Technically, it may lead the economy to a status of near-full employment. Then, this economic policy will be needed to sustain that level attained by the society, compensating systematically the negative social effect of healthy private savings. The main conclusion is that the fiscal policy without debt is not only superior to monetary policy, but the only economic policy supported by logic, economics and ethics. Not so ease to say, but much more difficult to realize and do. However, some things are worth fighting for.

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