

# **LAW AND TURGOT: THE IMPORTANCE OF MONEY**

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Paper to be presented at the Conference on French Political Economy 1650-1850 at Stanford University, April 16-19, 2004.

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The two greatest eighteenth century works showing the importance of money in the real economy were John Law's Money and Trade (1705) and Anne Robert Jacques Turgot's Réflexions sur la formation et la distribution des richesses (1769). Both Law and Turgot believed money was vital to the process of generating economic growth. Law maintained that money drove trade and envisaged monetary creation boosting expenditure and raising employment in the economy. Turgot contended that money 'the first foundation of capital' represented the vital ingredient for transforming savings into investment, a process that generated economic growth. Furthermore both writers were low interest advocates.

These writers, such staunch supporters of the importance of money in the economy, came to their conclusions from different perspectives. It will be contended that Law's approach on money was one inspired by the possibilities of monetary expansion through paper money and credit creation in a world freed from links to an intrinsically valuable money. His world was a specie-less one of fiat money and financial innovation.

Turgot's monetary world was one that excluded banks and paper money from consideration. It was one characterized by self-financing through the use of retained profits and where lending and borrowing, to the extent that it took place, was channeled through the intermediation of money lenders rather than through financial institutions. In it money had to be intrinsically valuable in the form of gold and silver.

Turgot's reluctance to consider any other form of money other than specie had its roots in Law's monetary experiment to produce a specie-less monetary environment in France between 1716-20. The failure of Law's System in 1720 produced a strong and hostile attack by Turgot in his first economic writing, the 'Lettre à l'abbé de Cicé' written when he was a young seminarian at the Sorbonne. This animosity towards Law and his monetary ideas remained strongly etched in Turgot's mind preventing him from grasping the huge potential that an analysis of the banking system could add to his theory of capital formation. Ironically, despite Turgot's panegyric on the importance of money, his analysis of capital formation financed through savings, became the Classical template for the nineteenth and early part of twentieth centuries, a template that suffused the role of money in influencing economic activity. Using the building blocks of Turgot's savings/investment

theory money was given a passive role to play by classical writers. This passive role was further reinforced by the advocates of new classical macroeconomics in more recent times. Under the latter approach the diaphanous veil of money becomes so transparent that economic activity appears to be taking place without the use of money.

This paper first provides a brief assessment of Law's contribution to the theory of money and banking. It then examines Turgot's first writing on monetary economics, the 'Lettre à l'abbé de Cicé' to trace the origin of Turgot's strong antipathy to Law and his ideas on monetary theory. From there it outlines the actual monetary environment in which Turgot wrote, one that featured the *notaires* acting as quasi-bankers and in which a banking system on the British model was absent. Against this background Turgot's powerful contributions on money and capital formation in the Réflexions are analysed.

### **Law's Monetary Theory**

John Law was a man considerably ahead of the age he lived in. His theorising had a very modern resonance and his policy of substituting paper money and bank deposits for metallic money have been vindicated by our current monetary system. Law's modernism in his writings may be seen in the two works that he wrote in 1704 and 1705. In the Essay on a Land Bank (1704, [1994]) and Money and Trade (1705) he used an economic terminology which one associates more with the twenty first rather than the eighteenth century. Law was effectively the first economic writer to understand and use the economic concept of demand in English. Then linking demand with quantity (supply) he put forward a supply and demand approach to price determination. His analysis of the water/diamonds paradox - borrowed, unashamedly and without acknowledgement, by Adam Smith in the Wealth of Nations (1776) - showed that, unlike many later eighteenth and nineteenth century writers, he was not a believer in the cost of production theory of value. Implicit in his approach is an understanding of the subjectivist approach to the theory of value. Building on this Law went on to analyse inflation from the perspective of a money supply/money demand approach. Furthermore he understood, as may be seen in Money and

Trade, that the demand for money was 'proportion'd to people, land or product' which, expressed in modern terminology, is the view that the demand for money is a function of national income.

In the Essay on a Land Bank, which addressed monetary issues in England, Law concentrated his attention on the issue of inflation believing that it arose when the money supply rose excessively relative to the demand for money. At this state it appeared as if Law was destined to become a pre-monetarist. This did not happen because along the way Law had a Pauline conversion when he started examining the economic problems in Scotland and later in France. There he identified the problems in the real economy - economic stagnation, unemployment, under-utilization of resources. There was, in his opinion, too little money in circulation in the economies of Scotland and France and the monetary system was blocking economic development. Here classically minded economists may raise a finger and ask why Law did not contemplate allowing the price mechanism to do its job. He was conscious of the fact that with less money in circulation wages and prices could be lower. But he did not believe that lower wages and prices would generate employment without an accompanying injection of money:

It will be asked if countries are well governed why they do not process their wools and other raw materials themselves, since, where money is rare, labourers work at cheap rates? *The answer is that work cannot be made without money*; and that where there is little, it scarcely meets the other needs of the country and one cannot employ the same coin in different places at the same time.<sup>i</sup>

Thus Law accepted that with high unemployment wages could be flexible. However, he was not prepared to accept that such wage flexibility would solve the unemployment problem. Instead Law was inferring that there was a money-in-advance requirement in order to activate the factors of production. Without it entrepreneurs were not in a position to offer employment even to low wage costing labour. Law was suggesting that money was a pre-requisite for economic development. He did not believe that money was neutral. For him it played a key role in activating the process of generating more employment and output. Was this inconsistent with his earlier pre-monetarism? Not necessarily because Law simply did not believe that either the Scottish economy in 1705 or the French economy in 1716 were at anything near full employment. He felt that income would increase as a result

of an expansion of the money supply and that this increase in income would expand the growth in the demand for money. In this way the growth in the money supply would be locked into the economy through the growth in the demand for money. As long as output and employment were stagnant such increases in the money supply would not have inflationary consequences.

Moving from the specifics of the Scottish economy Law recognised that there had been an excessive expansion of the money supply at the European (i.e. global) level because of the influx of gold and silver. He stated quite explicitly that the money supply had been increased out of line with the demand for money at this global level and that this had caused inflation.

One finds therefore in Law a hybrid of both pre-monetarist and pre-Keynesian theorizing. He was a pre-monetarist in that he was the first to discuss the concept of the demand for money and the way inflation was determined by the interreaction of the money supply with the money demand. He was a pre-Keynesian in that he believed that in the specific circumstances of both Scotland and France there was an insufficient supply of money in circulation. Money and Trade, the title of his 1705 book said it all. There was a strong nexus between money and trade. More money was required to produce more trade.

Murphy (1997) shows the way in which Law attempted to implement his monetary and financial ideas in France between 1716-20. The failure of the Mississippi System would leave a bitter legacy, one that Turgot addressed in his first writing on economics.

### **Letter to the Abbé de Cicé**

Turgot's metallist stance along with his strong antipathy to Law may be traced back to the beginning of his career as an economic writer. It started with a letter to his friend the Abbé de Cicé when Turgot was only twenty two years. The letter, dated April 7, 1749, the year when Turgot was elected prior of the Sorbonne, is a short work and is incomplete. It represents Turgot's first writing on an economic issue. Turgot wrote to his friend that 'I

have read the three letters that the abbé Terrasson published in favour of Law's System some days before the famous arrêt of 21 Mai 1720, which, as you know well enveloped him in ridicule'.<sup>ii</sup>

The Lettres have been attributed to the Abbé Jean Terrasson (1670-1750). Born in Lyons, in 1670, Jean Terrasson was elected a member of the Académie des Sciences in 1707. He was appointed professor of philosophy at the Collège de France in 1721, and was elected to the Académie Française in 1732. According to the Biographie Universelle<sup>1</sup> Terrasson made a fortune out of the Mississippi System but he kept his new found wealth in shares and paper money and lost all when the System collapsed at the end of 1720. Given the enthusiasm for shares at the time it is not surprising to find a man of letters plunging into the stock market with zeal. In England the poet John Gay and the scientist Isaac Newton were prominent investors in the South Sea Company, with the latter losing a considerable fortune in the 1720 speculation.

Given the fortune that Terrasson was making in the Mississippi Company is it not natural to find him defending its operations in the pamphlets that he wrote? Piossens (1749, v, 233) suggested that the rumours indicated that the letters were written by Terrasson. Furthermore given both Terrasson and Turgot's clerical connections – they were both *abbés* at this time and Terrasson was still alive in 1749 - it is interesting to note that Turgot had no hesitation in attributing them to Terrasson. Paul Harsin did not accept this and published all the letters in his three volume edition of Law's Oeuvres (1934). Harsin was emphatic on this score 'We believe without any hesitation as to Law's paternity with respect to them' (1934, I, lxiii).

On my reading of the letters I would agree with Harsin that Law either wrote or directed the writing of them. We may surmise that Terrasson, in that grand tradition of French political figures who use ghostwriters ('les nègres'), may have been used as an intermediary by Law for pushing his own ideas in the public. Indeed he was popularly known as a defender of the System as the following verse, reproduced by Schelle, shows:

Vil défenseur d'un faux système,  
Il nous montre que l'inventeur  
Quoique fourbe au degré supérieur

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<sup>1</sup> Biographie Universelle, 1843-47, vol. 19, p. 97.

L'est moins que son adulateur. (Schelle, i, 28)

The fact that the letters were published in the Mercur de France and that they related to key dates in the System's history reinforces my belief that Law was either writing them or suggesting to Terrasson that they be written in a certain style.

Turgot knew that he was not attacking Terrasson but John Law writing at the start:

I believe that the principals that he exposes are those of Law because he undoubtedly wrote in concert with him and arising from this I cannot help thinking that Law did not have views that were sufficiently strong and broad for the work that he undertook. (i, 144)

Thus with all the brashness of a twenty two year old Turgot attempted to belittle and deride Law's ideas. To do this satisfactorily he should have read Money and Trade (1705) which had been translated and published in French as Considérations sur le commerce et sur l'argent (1720). This might have prevented Turgot's criticisms of Law for not recognising that gold depreciated when its supply increased and not reading Locke on this issue. In Money and Trade Law specifically recognised that increases in silver and gold from the Spanish Americas had caused a fall in the value of these precious metals over a two hundred year period. Furthermore Law was quite specific in his attack on Locke for his inability to distinguish between 'demand' and 'vent'. Turgot contented himself with the Letters although he was also critical of Du Tot who in the Réflexions politiques sur les finances et le commerce (1738) had shown that he was a strong apologist of Law.

The core of Turgot's attack was directed against the view that it was possible to replace metallic money with paper credit. He did not believe that Law had discovered the 'Philosopher's Stone'. He believed that money had to be a commodity possessing intrinsic value in order for it to be used as a medium of exchange:

It is thus as a commodity that money is, not the sign but the common measure of other commodities; this is due, not to some arbitrary convention established as to the attractiveness of this metal but is due to the fact that because of its homogeneity and divisibility we always know its value. (i, 147)

Turgot opposed the view that the Crown should issue paper money as a substitute for metallic money:

First of all I observe that it is absolutely impossible that the King substitutes paper in place of gold and silver... (i, 147)

He argued that both theory and experience indicated that the public would never accept paper in place of metallic money. Here was the approach of a hard line metallist.

Turgot's 'Lettre à l'abbé de Cicé' is a badly planned and weakly argued paper. He did not read Law's main work and was not cognisant of the Scotsman's deeper theoretical arguments in favour of paper money. He produced a crude metallist argument in favour of gold and silver and showed little refinement in his dismissal of paper money. Du Pont de Nemours in the Mémoires sur la vie et les ouvrages de M. Turgot said of the 'Dissertation sur le papier monnaie' that from reading it he could easily recognise 'the man destined to become a great Minister of State' (1782, 19). However, the strong metallist stance in it meant that Turgot lacked a true understanding of the monetary economy and the scope for monetary policy. Indeed Turgot intended to write a great deal more on Law. Schelle (1913, I, 29) noted that in 1769 he had plans to write a 'Traité de la circulation' which was to include sections dealing with banks, Law's System, credit, foreign exchange trade and luxury. This work was listed in his 'Ouvrages à faire'. Though he never wrote this work he continued through his life to show a deep antipathy towards Law and his System. Turgot's further dismissal of Law will be shown in our discussion of the Réflexions. However, prior to discussing this work, it is germane to show the type of financial architecture that was in place in France when Turgot was writing. This financial architecture made it difficult for writers to glimpse any potential for an alternative banking and credit system for in it the dominant players were not bankers but the *notaires*.

### **The Notaires as Bankers**

The credit market in eighteenth century France cannot be interpreted as one in which there was a free flow of funds between surplus and deficit units with the rate of interest acting as an equilibrating factor in the allocation of funds. Religion was a key element in explaining developments here. The role of the rate of interest was limited by the usury laws. At their most basic the usury laws stipulated that the charging of a rate of interest was

illegal. However, the needs of trade and commercial life along with the adroitness of canonical lawyers, merchants and notaries created an environment in which interest was charged and paid but never explicitly mentioned by name. Just as the system of *permission tacites* had evolved to overcome censorship laws and keep France's printing and publishing industry alive in the eighteenth century, so also a tacit jurisprudential structure evolved permitting the *de facto* payment of interest whilst at the same time maintaining the *de jure* ban on it. *Rentes* became the *coda* for interest in this environment.

In France the usury laws meant that a lender of funds could not simultaneously stipulate both the rate of return and the duration of the financial contract. Turgot – in a passage which was excised from the Réflexions when published in the Éphémérides but included in the 1788 edition of the Réflexions and the English translation of 1793 - wrote of this:

You have indeed one method to make the receipt of interest lawful, it is to lend your capital for an indefinite term, and to give up all right to be repaid it, which is to be optional to your debtor, when he pleases, or when he can. If you find any inconvenience on the score of security, or if you foresee you shall want your money in a certain number of years, you have no other course to take but not to lend: It is better for you to deprive this merchant of this most fortunate opportunity, than to commit a sin by assisting him. (Section 75 of the English translation, Reflections on the Formation and Distribution of Wealth, 1793)

If a rate of return was covertly stipulated as a *rente* it could not specify a redemption date. This meant that the loan was converted into an annuity redeemable whenever, if ever, the borrower, or his heirs, so deemed. Alternatively the jurisprudence concealed the rate of return by stipulating specific amounts to be repaid at specific dates suggesting in some way that the lender was not charging a rate of interest but participating in a share of the profits of the borrower. As a result financial instruments were created in the form of *obligations*, *rentes constituées*, and *rentes viagères* to manoeuvre around the usury laws.

The hostility towards money and the rate of interest, allied with the failure of Law's Royal Bank, created an environment in which the standard evolution of banking from goldsmiths to credit creating deposit banks did not take place in France in the eighteenth century. Between 1720 and the Revolution, aside from bankers who discounted bills of exchange – an important media of exchange for merchants - and one or two scattered

sightings of banks such as the Caisse d'Escompte, eighteenth century France existed without a formalised banking structure. While the Amsterdam and Genevan based protestant bankers became major lenders to the government and big merchant companies, the question arises as to how the more mundane business of banking was carried out in the absence of clearly constituted banks in France during this century.

Recently Hoffman, Postel-Vinay and Rosenthal (2001) have advanced the thesis that the French notarial system, in particular, the Parisian *notaires*, provided a sophisticated surrogate banking system. Because of the usury laws they were in a key position to do so for every transaction embodying an implied rate of interest needed to be transacted before the notaires. The *notaires* were the only agents who could create financial instruments in the form of obligations, rentes constituées and rentes viagères. The analysis of Hoffman et al. shows that the *notaires* acted as bankers by intermediating as agents between savers and borrowers. Because of the information base that they had on their clients they were able to identify creditworthy borrowers (i.e. those with sufficient asset collateral) and therefore provided a stable quasi-banking role. However, notwithstanding the pervasiveness of their intermediating activities, the *notaires* were for the most part only demi-bankers acting as a conduit for savers with surplus funds to borrowers, most notably the state. The *notaires* were usually not principals in these transactions nor did they act as bankers in the sense of lending credit to some multiple of the funds deposited with them. Furthermore most of the lending activity that they arranged was of a long-term nature. Their banking role was narrowed down further in that most of the lending that they intermediated was to the government on a long term basis through the acquisition of *rentes* or loans for the purchase of lands or property. Hoffman et al. admit in a footnote that the development of long term credit in both Britain and France initially was more beneficial for the public debt and the housing market than for industry and trade (2001, 361). Whatever about the validity of their reflection on the British situation, it is revealing in that it shows that French lending activity was concentrated in two sectors, the state and real estate.

The thesis of Hoffman et al. is that the *notaires* provided a type of golden age in banking acting as highly efficient intermediaries between savers and borrowers. Their information base – they were able to pool and share information up to the early part of the nineteenth century - providing detailed knowledge on the assets of borrowers and whether they were

encumbered or not, enabled them to provide high quality borrowers for savers with surplus funds. The utilisation of this information provided a stable background for lenders in which there was a low risk of default. This stability in turn generated confidence in the system and increased the number of lenders prepared to act through the notarial system.

An alternative interpretation is to view this surrogate banking system as costly, highly conservative and inefficient because of the additional complication that the usury laws prevented the rate of interest from allocating credit between savers and borrowers. The notaires operated a highly effective cartel. In 1659 there were 113 notaires in Paris. Despite the growth of Paris the number of notaires remained the same until they rose to 122 in 1859! The system was costly in that transactors were subject to notarial fees and excluded from the market if they did not have appropriate asset backing. The usury laws, which set a ceiling rate of interest of 5%, effectively ensured that the *notaires* faced with excess demand for credit could filter out borrowers by the value of their asset collateral rather than the quality of the intended investment project. It was conservative in that the vast bulk of lending was to the government and property sectors. Incipient industrialists would have found it practically impossible to borrow through the *notaires*. An intimation of the difficulties of locating industry in France in the eighteenth century may be gleaned from the way in which John Law used the credit of his banking system to attract a range of industrialists to come and set up businesses in France. Above all it must be pointed out that the notarial system was not a banking system in the sense of providing a flexible structure for the expansion of credit. All the *notaires* did was to increase the velocity of circulation of long-term capital by making it easier for some borrowers to access savers. However, they were not principals in the financial transactions and were in no way capable of lending money against reserves deposited with them.

This was the French institutional financial setting that Turgot faced when he came to writing the Réflexions in 1766.

### **The Genesis of the Réflexions**

In the 1760s Turgot, then the Intendant for the Limoges area, became acquainted with two young Chinese students, whom the Jesuits had sent to study in Paris, and who were

returning to China. To help instruct these Chinese students he decided to put together his ideas on paper as to how the economy operated. This was the basis for the Réflexions sur la formation et la distribution de la richesse (Reflections on the formation and distribution of wealth). On December 9, 1766, he wrote to his friend Du Pont about this work:

...I have stained many pages since I saw you; independently of an account of large scale and small scale cultivation that I had made for a Mémoire sur les impositions du Limousin I compiled questions for the two Chinese that I talked to you about and, so that they could see the object and the sense of them, I preceded them with a type of analytical sketch of the work of society and the distribution of wealth. I did not put any algebra in and there is no *Tableau économique* except the metaphysical part; maybe I have left aside questions that it would be necessary to discuss so as to make the work complete, but I have gone into depth with respect to the formation of and the market for capital, the interest of money, etc; it is an outline. (Schelle, ii, 26)

It has been contended by Lundberg (1964) that Turgot had a small number of copies of this work privately printed in a *tirage à part* in 1766. I have talked to many bookdealers in Paris, who are experts in this area, and they have never seen a copy of the so called 1766 edition. Though we know that Turgot had finished the Réflexions in November 1766 it is my belief that the first edition of it was that published in 1769/70 in the Éphémérides du citoyen. The Éphémérides was an economics journal that Turgot's friend, Pierre Samuel Du Pont – he would later tack on the de Nemours to his name in order to distinguish himself from the other Du Ponts in the Assemblée - was editing. Emboldened by the success of their ideas the *économistes* of the physiocratic persuasion were keen to diffuse their ideas further. Although the Journal Oeconomique, first published in 1751, was still appearing it was, despite its title, a more general publication incorporating articles on a wide range of subjects. The Éphémérides, founded by the Abbé Baudeau who handed over the editorship to Du Pont in 1768, was a great deal more focused on specific economic issues and may be regarded as the first economic journal. It was first published in January 1767 on a monthly basis. In the preface of this first issue the then editor, the Abbé Baudeau, discussed enthusiastically the development and propagation of the new science. The Éphémérides was highly evangelical attempting to push the physiocratic approach as

far as possible. Turgot played a vital role in supporting the Éphémérides by advising and financially assisting Du Pont between 1768 and 1772. He was also responsible for encouraging a new start-up of the journal under the title Nouvelles Éphémérides in December, 1774 using it to provide intellectual support for his reformist policies as the Contrôleur Général.

Du Pont struggled to obtain copy for the Éphémérides and it has been estimated that he alone wrote 150 articles in its 63 numbers. He was obviously short of copy and late in his publication of promised issues in 1769 as Turgot's letter submitting the Réflexions shows

Here, my dear Du Pont is the piece on wealth that I promised you; it is not good, but it is long, although too short. It will fill up plenty of paper and that is what you need. It contains 101 paragraphs, a sacred number, like the 1001, for these type of things. Additionally, I have included in it some marginal summaries which you will be able to put in as titles, this will use up even more space....If you believe in this you will immediately start to print my piece for the November issue, or if that has already started for that of December. This could immediately fill up half of the journal because I am horrified by your delay which already amounts to four months. (Letter from Turgot to Du Pont, Limoges, December 2, 1769, Schelle iii, 73)

### **Réflexions sur la formation et la distribution des richesses**

The Réflexions<sup>iii</sup> is a work of great originality showing the mind of a confident economist at work. It is an exciting book for in it we find the utilisation of terms such as capital, utility and equilibrium in their appropriate economic contexts. Note the term reflections in the title. Turgot did not intend it to be a treatise. Unlike Adam Smith, who was able to research in the quiet of his mother's house in Scotland during the gestation and writing of the Wealth of Nations, Turgot had little time to concentrate on writing books given his administrative responsibilities as the Intendant for Limoges. It must also be kept in mind that the Réflexions represented a contribution to a Physiocratic journal rather than a book

when it publicly appeared for the first time in the Éphémérides, in three issues, volumes 11 and 12 of 1769, and volume 1 of 1770. It was probably meant more as an article to make people think rather than a polished, well-rounded work and Turgot believed that at some later stage he would be able to return back to it and deal with it more comprehensively. The style is Spartan. Turgot's ideas are presented in paragraph format rather similar to the laying down of aphorisms relating to economic theory. Du Pont, much to the considerable annoyance of Turgot, included a number of editorial footnotes in an attempt to ensure that Turgot's ideas did not move out of line with the Physiocratic doctrine.

Notwithstanding its sparse literary style the Réflexions produced a major analytical impetus for the eighteenth century economic debate in France. The Physiocrats, under François Quesnay's leadership, had become the dominant theorists of the period, a development in part due to Quesnay's strong leadership and the undoubted attractions of the Tableau Economique, a work that had been heavily influenced by earlier contributions from Petty and Cantillon. The dominance of the Physiocrats was also due to the untimely death of Vincent de Gournay in 1759. Gournay prior to Quesnay, had provided the intellectual drive to inspire a young generation of administrators such as Forbonnais, Bûtel-Dumont, Plumard de Dangeul, Clicquot-Blervache and Morellet to read and write on economic issues. Turgot would turn out to be Gournay's prize pupil, following in his footsteps to become an intendant du commerce. Turgot's debt to Gournay is evident in the 'Eloge de Vincent de Gournay' that he wrote for the Mercure in August 1759

One senses in the Réflexions the tension between Turgot, the follower of Gournay and Turgot the reader of Quesnay. There are strong brushes of Physiocracy running through the Réflexions. Turgot never became a fully fledged Physiocrat. Though pushing for Physiocratic reforms during his administrative career he remained an outlier to the Physiocratic debate. He had the intellectual stature to be his own man separate from the Physiocratic sect.

Turgot's great debt to Quesnay lies in the latter's formulation of the role of advances (les avances) in the productive process. Quesnay in his article for the Encyclopédie on farmers (les fermiers) – a work that Turgot mentioned specifically in his 'Eloge de Vincent de Gournay' - emphasised the role of capital intensity in promoting the growth of output. As farming moved from the small-scale of oxen driven ploughs (la petite culture) to the large-

scale cultivation of horse driven ploughs (*la grande culture*) the corresponding benefits in terms of increased agricultural production were plain to see. Turgot in an article written for the Ephémérides (1767, volume 5), shortly after he had written the manuscript of the Réflexions, showed that he had grasped the essential elements of Quesnay's distinction but contended that the real factor distinguishing 'la petite culture' from 'la grande culture' was the role of entrepreneurship. The former system was operated by sharecropper tenant farmers whereas the latter was organised by entrepreneurial farmers 'these farmers are the real entrepreneurs of cultivation' (Éphémérides, vol. 5, 1767, 79-80). The entrepreneur farmers had sizeable quantities of capital to invest in 'la grande culture' but it is important to note the emphasis Turgot paid not only to capital but to entrepreneurship in the production process.

In the Tableau Economique Quesnay had 'les avances annuelles' in a prime position to show the importance of this type of investment to the generation of the net product (*le produit net*). Thus Quesnay was one of the first to highlight the prime role of capital in generating economic growth – see Eltis (1984). Turgot went much further than Quesnay. He was responsible for the introduction of the term 'le capital' and 'les capitaux' into economic discussion. This was not a mere semantic addition to the economists' lexicon for he very clearly showed the process whereby savings would be translated into capital formation. This savings/capital formation analysis would prove to be one of his outstanding contributions. It would provide the basis for the Classical theory of savings and investment for most of the nineteenth century.

Turgot's use of 'capitals' in the plural suggests that he did not view the concept of capital in a single homogenised format. At times he viewed it in an *ex ante* fashion when identifying capital with advances (*les avances*). Here it was the seed required by the farmer, the money to pay workers during pre-production and production. It was a type of working capital. This type of capital was spelled out in detail:

Every species of labour, of cultivation, of industry, or of commerce, require advances. When people cultivate the ground, it is necessary to sow before they can reap; they must also support themselves until after the harvest. The more cultivation is brought to perfection and enlivened, the more considerable these advances are. Cattle, utensils for farming, buildings to hold the cattle, to store the productions, a

number of persons, in proportion to the extent of the undertaking, must be paid and subsisted until the harvest. It is only by means of considerable advances, that we obtain rich harvests, and that lands produce a large revenue. (52)

Turgot gave capital a prime role in promoting economic activity writing that ‘capitals being as necessary to all undertakings as labour and industry’ (70). He started off the process of capital accumulation by looking at savings. Income that was not consumed was saved, or in his terms economised:

$$Y - C = S$$

Where Y = Income; C = Consumption and  
S = Savings.

The transformation of savings into investment involved two important intermediating phenomena:

- (1) The role of money
- (2) The role of the rate of interest

Turgot maintained that money was vital to the whole process of capital accumulation and that a low interest rate facilitated greater investment in the economy. Not accepting the Humean line that money was just a numeraire Turgot envisaged money as vital for transforming savings into investment and thereby generating economic activity:

The more money becomes a universal medium, the more every one is enabled, by devoting himself solely to that species of cultivation and industry, of which he has made choice, to divest himself entirely of every thought for his other wants, and only to think of providing the most money he can, by the sale of his fruits or his labour, being sure with that money to possess all the rest. It is thus, that the use of money has prodigiously hastened the progress of society. (48)

As he moved through the second half of the Réflexions he continuously emphasised the importance of money. Money, as he showed in paragraph 50, enabled people to accumulate their savings. Prior to the development of money economic activity had been greatly restrained by the barter system where it was difficult to accumulate

...before the introduction of gold and silver...it was almost impossible to accumulate considerable capital, and yet more difficult, to multiply and divide

payments so much as necessary, to facilitate and increase the exchanges to that extent, which a spirited commerce and circulation require' (69).

He recognised that money as a physical substance produced nothing but once it was used in its transforming role of financing investment it was a different matter:

Money considered as a physical substance, as a mass of metal, does not produce anything; but money made use of in advances in cultivation, in manufacture, in commerce, produces a certain profit...(73)

In the final paragraph of the Réflexions Turgot emphasised once again the vital role that money played in the transformation of savings into investment. In the heading of this paragraph he called money 'the first foundation of capitals' explaining that whereas money was just a small part of the existing capital in the economy it had been crucial in the formation of all capital investment and that through the use of money savings had been automatically converted into capital investment:

We have seen what an inconsiderable part money forms in the total sum of existing capitals, but it makes a very large one in the formation of them. In fact, almost all savings are only in money; it is in money that the revenue is paid to the proprietors, that the advances and profits are received by the undertakers of every kind; it is their money which they save, and the annual increase of capitals happens in money; but all the entrepreneurs make no other use of it, than immediately to convert it into the different kinds of effects on which their enterprises turn...(101)

These are not the words of a writer who believed money had no real role to play in economic activity. They are very much the reverse showing the primordial importance of money for Turgot in his model. He was quite aware that he had to integrate his theory of money with his theory of capital. He recognised that without the use of gold and silver as media of exchange that capital formation would have been very weak:

It is almost unnecessary to remark, that undertakings of all kinds, but especially those of manufactures, and above all those of commerce, must, unavoidably be very confined before the introduction of gold and silver in trade; since it was almost impossible to accumulate considerable capital, and yet more necessary, to facilitate and increase the exchanges to that extent, which a spirited commerce and circulation require. (69)

Economic society effectively stagnated prior to the arrival of metallic money as a medium of exchange because of the difficulty of accumulating and transforming surplus product into future capital. In a monetary economy the use of money facilitated the flow of surplus product into investment channels. Money was the means to facilitate the flow of real savings into real investment. The process of savings and investment starts when income is greater than consumption enabling savings to take place. Turgot initially posited this as occurring in a moneyless economy:

Let us now go back to the time after the introduction of money. The facility of accumulating it has soon rendered it the most desirable part of personal property, and has afforded the means of augmenting, by economy, the quantity of it without limits. Whoever, either by the revenue of his land, or by the salary of his labour or industry, receives every year a higher income than he needs to spend, may lay up the residue and accumulate it: these accumulated values are what we name a capital...It is perfectly the same whether the amount of this capital consists in a mass of metal or any other matter, since money represents all kinds of value, as well as all kinds of value represent money. (58)

So for Turgot the surplus accumulated through savings could be held in commodities or money. It did not matter because money, in the form of metallic gold and silver, was also a commodity. For him money had to be intrinsically valuable. It is interesting to note that at one moment in section 59 he is referring to the savings as 'capital' whereas the heading for section 60 is 'autre emploi de l'argent en avance'. Capital and money in advances appear to be synonyms for him. What Turgot wanted to show was the way in which savings could be translated into 'capital'. He schematised five methods by which this transformation could take place:

- (1) purchase of land
- (2) investment in industry
- (3) investment in agriculture
- (4) investment in trade
- (5) lending

Method 1, the purchase of land did not create any new capital – something Turgot admitted later in the analysis – as it involved just the transfer of capital from the old owner

to the new owner. Three of these methods (2, 3, and 4) involve direct investment in agriculture, industry and trade. The fifth method did not involve direct investment because it meant lending savings through some unspecified intermediaries to people who could use them either for consumption or investment purposes. Taking method one out of the analysis because it does not lead to any capital creation Turgot then specified four transmission channels. Methods 2, 3 and 4 were direct investment channels because the entrepreneurs re-invested their profits in their enterprises. From a corporate finance perspective they involved self-financing. Entrepreneurs, using methods 2, 3 and 4, unlike the landlords, were deemed to be frugal. The surplus that they accumulated in the form of retained profits was reinvested by them. Indeed, Turgot suggested, in the last paragraph of the Réflexions, that entrepreneurs invested their savings immediately (*sur-le-champ*) into investment.

Method 5 involving lending presents many difficulties in interpretation. Lending money is another method to assist investment. Turgot recognised the possibility. An atypical landlord who was not prodigal could lend his surplus to borrowers. But then he sounded a warning against ‘those that make their enterprises on borrowed funds, are greatly in danger of failing’ (100) This would seem to indicate that he did not favour borrowing as a method of financing investment. However, there is an ambivalence here when consideration is given to his earlier discussion on the rate of interest. Initially in this discussion on the rate of interest he concentrated in attacking the usury laws. But this attack on the usury laws gave him the possibility for discussing the determinants of the rate of interest. He argued that the rate of interest was determined by the supply and demand for loans. He implicitly attacked Hume’s theory of profits determining the interest rate by showing that it was necessary not just to look at the factors influencing demand but also those determining the supply of loanable funds into the market. For example, he raised the possibility of a consumption expenditure dominated economy where little or no savings would take place. In such a situation the interest rate would be high and prevent profitable investment opportunities from taking place. In a rare passage he presented the marvellous metaphor of a country covered by a certain level of water. The reduction in the interest rate was the equivalent of lowering the water level enabling new areas of land to appear and be developed:

The price of interest may be looked upon as a kind of level, under which all labour, culture, industry, or commerce acts. It is like a sea expanded over a vast country, the tops of the mountains rise above the surface of the water, and form fertile and cultivated islands. If this sea happens to give way, in proportion as it descends, sloping ground, then plains and valleys appear, which cover themselves with productions of every kind. It wants no more than a foot elevation, or falling, to inundate or to restore culture to unmeasurable tracts of land. It is the abundance of capitals than animates enterprise; and a low interest of money is at the same time the effect and a proof of the abundance of capitals. (90)

So there is clearly no ambiguity in this section dealing with lending. A low interest rate drives the economy to higher rates of economic growth. The low interest rate in turn is a function of high rates of saving. These savings find their way into the market and lower the rate of interest. But if this is the case then it indicates that there is a considerable amount of lending and borrowing taking place in an unspecified money market. Hence the dilemma. At one point, in the final section, Turgot was highly critical of borrowing as a method of financing investment; yet at an earlier stage he was unveiling the powerful and colourful vistas of an economy transformed through reductions in the rate of interest. The dilemma is exacerbated by the fact that most of Turgot's model is a self-financing one.

With the landlords not saving and the entrepreneurs and entrepreneur farmers self-financing their investments through savings the question arises as to the need for a money market. In section 100, almost as an afterthought, Turgot tacked on to this list the possibility of a further group who invest through borrowings 'those that make their enterprises on borrowed funds'. But, as has been shown, he then quickly added that these investor/borrowers were 'greatly in danger of failing'. Clearly there is a problem here in that in this predominantly self-financing model investment through borrowing plays a minor role notwithstanding the vistas that Turgot had introduced his readers to when discussing the benefits of a low rate of interest.

The reason for this, in my opinion, is that Turgot found it difficult to incorporate a money market, i.e. a market where money is borrowed and lent, into his analysis. He had a hang up when it came to discussing this feature of the economy. Nowhere in the Réflexions does he mention the words banks, bankers or credit. He could only bring himself to use terms

such as the money lender or the proprietor who lends money. He appeared to recognise the importance of this individual:

In a word, the proprietor who lends money ought to be considered as a dealer in a commodity absolutely necessary for the production of riches, and which cannot be at too low a price. It is also as unreasonable to charge this commerce with duties as it would be to lay a duty on a dunghill which serves to manure the land (96)

So one moment Turgot was praising the activities of the money lender, though the allusion to the dunghill showed his hand a little. And yet, at a critical moment in the penultimate section, he expressed the views that most investment that takes place through borrowing is 'greatly in danger of failing'.

The problem is that Turgot's analysis takes place in the time warp of France's eighteenth century financial system for Turgot cannot acknowledge any role for banks, bankers, credit and financial innovation. There are a number of reasons for this (1) the actual state of France at the time where the *notaires* acted as quasi-bankers and bankers in the British mould did not really exist; (2) Turgot's reluctance to accept that money did not have to be intrinsically valuable. For him money had to embody intrinsic value, money was the value for which goods were exchanged. Given such a view Turgot was reluctant to allow bank credit and paper money any tangible roles in his analysis. Turgot's system is one in which metallic money, representing savings, is lent to borrowers. No other type of money may intervene.

Essentially then the savings/investment mechanism that Turgot favoured in the final section of the Réflexions was a self-financing one. Turgot's vision was of hard working, profit motivated entrepreneurs, frugal in their consumption spending and anxious to expand their businesses by a policy of continuous self-financing investment –see section 99. This self-financing mechanism also had the theoretical advantage of ensuring that savings automatically flowed into investment. There was therefore little or no possibility of disequilibrium in this market creating the type of macroeconomic disturbances that Keynes would later highlight.

However, the very fact that he was prepared to have an implicit supply of and demand for loanable funds model to determine the interest rate and that he was also able to contemplate the changed economic *habitat* that a reduction in the interest rate could produce suggest

that he was not fully happy with the self-financing model only. The great merit of Turgot's work was that he opened up theory to the channels of savings and investment and showed the merit of a policy of capital accumulation. However, the link between money and capital along with the capital accumulation process was not fully worked out in his analysis. This is because of the difficulty Turgot had in identifying the nature of money.

He certainly recognised the importance of money. In the final lines of the Réflexions he noted that even though money was a very small part of the total stock of capital it played a huge role in the formation of capital:

We have seen what an inconsiderable part money forms in the total sum of existing capitals, but it makes a very large one in the formation of them. In fact, almost all savings are only in money...(100)

Turgot believed that money was the catalyst for transforming savings into investment. Through his attacks on the usury laws and the analysis of the determinants of the rate of interest it could be argued that he had integrated the rate of interest into his theory of capital, savings and investment. The missing ingredient is the role of the banking system. Schumpeter is critical of this writing that Turgot's analysis was written as if John Law had not existed:

Turgot's theory proved almost unbelievably hardy...the theory was not only swallowed by the large majority of economists: it was swallowed hook, line, and sinker. As if Law - and others -had never existed, one economist after another kept on repeating that only (voluntary) saving was capital creating. (1954:325)

It would have been more accurate for Schumpeter to write that Turgot's analysis had this particular bias against credit creating banks precisely because of Law's System. Turgot's earlier views as expressed in the *Lettre à l'Abbé de Cicé*, as shown above, had if anything hardened. In the Réflexions Turgot formulated a model – just as Cantillon had before him – in which there was no role for banks and credit expansion. After the publication of the Réflexions, in a letter written to Du Pont on February 6, 1770, Turgot referred to Law's System as 'ce grimoire' which translated into English means a witch's spell – see Schelle, iii, 375 The use of such a derogatory expression in relation to Law's System shows that Turgot's ideas had sharpened further against Law. Turgot's inclusion of Law in the category of magicians and witches showed that he had no time for financial innovation on

the lines of that suggested by John Law and his followers such as Melon (1734) and Du Tot (1738). Savings, for Turgot, constituted a real phenomenon. Monetary creation, on the other hand, was anathema to him. It produced something from nothing, it was the magician's sleight of hand, it was artificial and inflation inducing. It produced a money that was not intrinsically valuable. For Turgot money was the value for which goods were exchanged. He did not accept Law's position that money was the value by which goods were exchanged. The young monetary conservative, when he was a seminarian at the Sorbonne, had become the staunch monetary conservative while the Intendant of Limoges. Fixated by the collapse of Law's System, a collapse that may, according to Schelle, have prevented his father, Michel Etienne Turgot, from implementing Haussmanian style plans to improve Paris, and unable to see the potential for a banking system given that France had a surrogate banking structure controlled by the *notaires*, Turgot was unable to grasp the potential for the banks and the capital market to provide credit in the form of bank loans, equity and corporate bond issues.

This monetary blockage prevented Turgot, in my opinion, from producing a work of absolute genius. His book is a great one, vastly important in terms of its presentation of the role of capital formation in the economy. However, as stated above, it was frozen in the institutional setting of eighteenth century France where an intrinsically valuable metallic money was the medium of exchange and no banking modern style banking system. Turgot did not want to envisage the possibilities of a paper money system and he was hostile to banks and their credit creating potential.

Ironically, when, like John Law, he became Contrôleur-Général des Finances (1774-1776) he was forced to abandon some of his hostility towards banks. In 1776 he assented to the creation of the Caisse d'Escompte. This approval was probably forced on him by the needs of the French Treasury and it may be noted that two thirds of the Caisse's proposed capital was to be invested in government paper as security against the Caisse encountering financial difficulties. Only one third of its capital was destined for working capital. Turgot did not live to see the French Revolution financed by the issue of the assignats, nor did he see the ensuing hyper-inflation that they caused. He would, if living during this phase of the Revolution, have said 'I told you so'. The establishment by Napoleon of the Banque de France in 1800 did little to help matters as it was primarily used as a method of financing

the government. France would have to undergo another half century of very limited banking facilities before the emergence of a branch banking system with significant credit creation facilities. Economic theorists would take an even longer time to realise that money did not need to be intrinsically valuable and to integrate banks into the process of capital formation and economic growth.

Extracts from the Réflexions are taken from the 1793 English edition. Other references to Turgot's works were taken from the Schelle edition of Turgot's Oeuvres and translated into English.

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## Endnotes

<sup>i</sup> 'Mémoire touchant les monnoies et le commerce', Paris, Archives Nationales, 1468, ms. 113, fo.7.

<sup>ii</sup> From a bibliographical viewpoint Turgot's analysis was imprecise as the Letters were published separately in the Mercure de France during the months of February and May at key points in the evolution of the history of the System. The first three were then published as a collection shortly before the May 21 arrêt, ratified by the Council on May 22.

These letters were:

Lettre 1, Lettre écrite à M\*\*\* sur le nouveau système des finances et particulièrement sur le remboursement des Rentes constituées (8 pp.), Paris, February 21, 1720.

Lettre II, Lettre où l'on traite du credit et de son usage (16pp.), Paris, March 11, 1720.

Réponse aux deux letters sur le nouveau Système des Finances, 1720.

Lettre III, Où l'on traite encore des constitutions, & du credit; & où l'on explique l'usage des monnoyes en general, & les avantages de la monnoye de banque en particulier, (33 pp.), Samedi 18 May, 1720.

It may also be assumed a further short letter Lettre au sujet de l'arrêt du Conseil d'Etat du 22 Mai 1720 originated from the same pen, as this letter is in a similar format and style to the earlier letters and is published in the collected English translation The Present State of the French Revenues and Trade and of the Controversy betwixt the Parliament of Paris and M. Law (London, 1720)

<sup>iii</sup> The French edition as published in the Éphémérides contains 100 numbered sections. Intriguingly the English translation, first published in 1793 as Reflections on the Formation and Distribution of Wealth by M. Turgot, Comptroller General of the Finances of France, in 1774, 1775 and 1776 (Anderson and Richardson, 1793) - later incorporated in a fourth edition of the Wealth of Nations published in Basle in 1801 - contains 101 rather than 100 sections. The additional section appears under heading 75 'An Answer to an Objection'. It contains about six hundred words which were not published in the Éphémérides. According to Schelle (1914) Turgot asked Du Pont de Nemours, the editor, to delete this section prior to its publication in the Éphémérides. However, Lundberg (1964) suggests that this section may have been printed in the 'tirage à part' which had been printed in 1766. The same additional section had re-appeared in the 1788 French edition of the Réflexions, some seven years after Turgot's death. The obvious question arises as to why a section that Turgot wanted excised from the Éphémérides in 1769 was re-incorporated in the French text of 1788.