
5 Chartalism and the tax-driven approach to money

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1. Introduction

Economists, numismatists, sociologists and anthropologists alike have long probed the vexing question ‘What is money?’ And it seems Keynes’s ‘Babylonian madness’ has infected a new generation of scholars unsettled by the conventional accounts of the origins, nature and role of money.¹ Among them are the advocates of a heterodox approach identified as ‘Chartalism’, ‘neo-Chartalism’, ‘tax-driven money’, ‘modern money’, or ‘money as a creature of the state’.

The Chartalist contribution turns on the recognition that money cannot be appropriately studied in isolation from the powers of the state – be it modern nation-states or ancient governing bodies. It thus offers a view diametrically opposed to that of orthodox theory, where money spontaneously emerges as a medium of exchange from the attempts of enterprising individuals to minimize the transaction costs of barter. The standard story deems money to be neutral – a veil, a simple medium of exchange, which lubricates markets and derives its value from its metallic content.

Chartalism, on the other hand, posits that money (broadly speaking) is a unit of account, designated by a public authority for the codification of social debt obligations. More specifically, in the modern world, this debt relation is between the population and the nation-state in the form of a tax liability. Thus money is a creature of the state and a tax credit for extinguishing this debt. If money is to be considered a veil at all, it is a veil of the historically specific nature of these debt relationships. Therefore, Chartalism insists on a historically grounded and socially embedded analysis of money.

This chapter distinguishes between several broad Chartalist propositions about the origin, nature and role of money, and several specific propositions about money in the modern context. It offers only a cursory examination of the historical record to illuminate the essential characteristics of money emphasized in the Chartalist tradition. Chartalist ideas are not new, although they are most closely associated with the writings of Georg Friedrich Knapp of the German Historical School. Thus the chapter briefly surveys instances in the history of thought which have emphasized the chartal nature of money. The paper then expounds on Chartalism, clarifying aspects of the concepts and drawing out the implications for modern currencies. It concludes with a discussion of the various applications of this approach to policy.

Chartalism: the broad propositions

The historical record suggests an examination of Chartalism according to its broad and specific propositions. The latter address the nature of money in the modern context, and although Chartalism should not be narrowly identified with the modern money approach, the specific propositions are more important for understanding today’s economies, modern currencies, and government monetary and fiscal policy.

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Very briefly, the broad propositions of Chartalism are:

1. The atomistic view of money emerging as a medium of exchange to minimize transaction costs of barter among utility-maximizing individuals finds no support in the historical record.
2. The appropriate *context* for the study of money is cultural and institutional, with special emphasis on social and political considerations.
3. Consequently, Chartalists locate the *origins* of money in the public sector, however broadly defined.
4. In its very *nature* money is a social relation of a particular kind – it is a credit–debt relationship.
5. Chartalism offers a stratified view of social debt relationships where definitive money (the liability of the ruling body) sits at the top of the hierarchy.
6. Money *functions*, first and foremost, as an abstract unit of account, which is then used as a means of payment and the settling of debt. Silver, paper, gold or whatever ‘thing’ serves as a medium of exchange is only the empirical manifestation of what is essentially a state-administered unit of account. Thus the function of money as a medium of exchange is incidental to and contingent on its first two functions as a unit of account and a means of payment.
7. From here, as Ingham aptly put it, money of account is ‘logically anterior and historically prior to market exchange’ (2004: p. 25).

Neo-Chartalism: the specific propositions

The recent revival of the Chartalist tradition, also dubbed neo-chartalism, tax-driven money, or the modern money approach is particularly concerned with understanding modern currencies. Thus contemporary Chartalists advance several specific propositions about money in the modern world:

1. Modern currencies exist within the context of certain state powers. The two essential powers are:
 - (a) the power to levy taxes on its subjects, and
 - (b) the power to declare what it will accept in payment of taxes.
2. Thus the state delimits money to be that which will be accepted at government pay offices for extinguishing debt to the state.
3. The purpose of taxation is not to finance government spending but to create demand for the currency – hence the term ‘tax-driven money’.
4. Logically, and in practice, government spending comes *prior* to taxation, to provide that which is necessary to pay taxes.
5. In the modern world, states usually have monopoly power over the issue of their currency. States with sovereign currency control (i.e. which do not operate under the restrictions of fixed exchange rates, dollarization, monetary unions or currency boards) do not face any *operational* financial constraints (although they may face political constraints).²
6. Nations that issue their own currency have no imperative to borrow or tax to finance spending. While taxes create demand for the currency, borrowing is an *ex ante* interest rate maintenance operation. This leads to dramatically different policy conclusions.

7. As a monopolist over its currency, the state also has the power to set prices, which include both the interest rate and how the currency exchanges for other goods and services.

Neo-Chartalism is appropriately subsumed under the broad Chartalist school of thought. When it is said that 'money is a creature of the state' or that 'taxes drive money', two things are important to keep in mind. First, 'state' refers not just to modern nation-states, but also to any governing authority such as a sovereign government, ancient palace, priest, temple, or a colonial governor. Second, 'tax' denotes not just modern income, estate or other head tax, but also any non-reciprocal obligation to that governing authority – compulsory fines, fees, dues, tribute, taxes and other obligations.

Before detailing the broad and specific propositions of Chartalism, the next two sections take a cursory look at the historical record of the origins of money and the recognition of the chartal nature of money in the history of thought.

2. History of money

Chartalists insist on a socially embedded and historically grounded study of money. While a conclusive chronicle of its genesis is perhaps impossible to attain, they turn to a historically informed analysis to unearth a more accurate account of the nature, origin and role of money.³

Genesis of money

It is a well-established fact that money pre-dated minting by nearly 3000 years. Thus Chartalists aim to correct a common error of conflating the origins of money with the origins of coinage (Innes, 1913: p. 394, Knapp, 1924: p. 1, Hudson, 2003: p. 40).

Very generally, they advance two accounts of money's origins. Grierson (1977), Goodhart (1998) and Wray (2001) posit that money originated in ancient penal systems which instituted compensation schedules of fines, similar to *wergild*, as a means of settling one's debt for inflicted wrongdoing to the injured party. These debts were settled according to a complex system of disbursements, which were eventually centralized into payments to the state for crimes. Subsequently, the public authority added various other fines, dues, fees and taxes to the list of compulsory obligations of the population.

The second account offered by Hudson (2003), and supported by some Assyriologist scholars (ibid.: p. 45, n. 3), traces the origins of money to the Mesopotamian temples and palaces, which developed an elaborate system of internal accounting of credits and debts. These large public institutions played a key role in establishing a general unit of account and store of value (initially for internal record keeping but also for administering prices). Hudson argues that money evolved through public institutions as standardized weight, independently from the practice of injury payments.

These stories are not mutually exclusive. As Ingham speculates, since a system of debts for social transgressions existed in pre-Mesopotamian societies, it is highly likely that 'the calculation of social obligations was transformed into a means of measuring the equivalencies between commodities' (2004: p. 91). Henry's analysis of ancient Egypt (2004) bridges the two accounts. In Egypt, as in Mesopotamia, money emerged from the necessity of the ruling class to maintain accounts of agricultural crops and accumulated surpluses, but it also served as a means of accounting for payment of levies, foreign tribute, and tribal obligations to the kings and priests.⁴

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The importance of the historical record is: (1) to delineate the nature of money as a social debt relationship; (2) to stress the role of public institutions in establishing a standard unit of account by codifying accounting schemes and price lists; and (3) to show that in all cases money was a pre-market phenomenon, representing initially an abstract unit of account and means of payment, and only later a generalized medium of exchange.

The chartality of money

The above discussion gives a preliminary indication of the chartal nature of money. History reveals the role of the public authority in establishing a universal equivalent for measuring debts and in determining what 'thing' will be used to correspond to this accounting measure.

As Knapp explains, payments are always measured in units of value (1973 [1924]: pp. 7–8). Money then is chartal because the state makes a 'proclamation . . . that a piece of such and such a description shall be valid as so many units of value' (ibid.: p. 30). And it is beside the point what material will be used to correspond to those units of value. Money is a 'ticket' or 'token' used as a means of payment or measure of value. The means of payment, 'whether coins or warrants' or any 'object made of a worthless material', is a 'sign-bearing object' to which '[state] ordinance gives a use independent of its material' (ibid.: p. 32).

This is what gives Chartalism its name: 'Perhaps the Latin word "Charta" can bear the sense of ticket or token . . . Our means of payment have this token, or Chartal, form' (ibid.). Hereafter, Knapp defines money to always be a 'Chartal means of payment' (ibid.: p. 38).

It is important to distinguish between the 'money of account' and the 'money-thing', i.e., between the abstract unit of account and the physical object that corresponds to it. Keynes explains: 'money-of-account is the *description* or *title* and the money is the *thing* which answers to the description' (Keynes, 1930: pp. 3–4, original emphasis). Orthodox theories fail to differentiate the money of account from the empirical object that serves as money, leading to several irresolvable conundrums of monetary theory (see below).

Finally, 'definitive' money is that which is accepted at state pay offices: 'chartality has developed . . . for the State says that the pieces have such and such an appearance and that their validity is fixed by proclamation' (Knapp, 1973 [1924]: p. 36). Keynes similarly argues that 'the Age of Chartalist or State Money was reached when the State claimed the right to declare what thing should answer as money to the current money-of-account – when it claims the right not only to enforce the dictionary but also to write the dictionary' (Keynes, 1930: p. 5).

From Mesopotamia and Egypt to modern economies, rulers, governors and nation-states have always 'written the dictionary'. Chartalism is thus able to explain why seemingly worthless objects such as tally sticks, clay tablets or paper have been used to serve as money.⁵ Governing authorities have not only picked the money of account and declared what 'thing' will answer as money, but they have also used taxation as a vehicle for launching new currencies. This is perhaps nowhere clearer than in the cases of colonial Africa.

African economies were monetised by imposing taxes and insisting on payment of taxes with the European currency. The experience of paying taxes was not new to Africa. What was new was the requirement that the taxes be paid in European currency. Compulsory payment of taxes in European currency was a critical measure in the monetisation of African economies as well as the spread of wage labour. (Ake, 1981: p. 34)

Money taxes [in Africa] were introduced on numerous items – cattle, land, houses, and the people themselves. Money to pay taxes was got by growing cash crops or working on European farms or in their mines. (Rodney, 1972: p. 165, original emphasis)

The tax requirement payable in European currency was all that was needed for the colonized tribes to start using the new money. Taxation compelled the community's members to sell goods and services to the colonizers in return for the currency that would discharge their tax obligation. Taxation turned out to be a highly effective means of coercing Africans to enter cash crop production and to offer their labour for sale (see also Forstater, 2005).

Public authorities, like colonial governors, not only 'wrote the dictionary' but also did so for many millennia. As Keynes pointed out, money has been chartal money for at least 4000 years:

The State, therefore, comes in first of all as the authority of law which enforces the payment of the thing which corresponds to the name or description in the contract. But it comes doubly when, in addition, it claims the right to determine and declare *what thing* corresponds to the name, and to vary its declaration from time to time – when, that is to say it claims the right to re-edit the dictionary. This right is claimed by all modern States and has been so claimed for some four thousand years at least. It is when this stage in the evolution of Money has been reached that Knapp's Chartalism – the doctrine that money is peculiarly a creation of the State – is fully realized. . . . To-day all civilized money is, beyond the possibility of dispute, Chartalist. (Keynes, 1930: pp. 4–5)

3. Chartal money in the history of thought

Many scholars, both orthodox and heterodox, have dealt with the chartal nature of money. Wray (1998) and Forstater (2006) have documented these instances in the history of thought. Their surveys seem to indicate two separate lines of research:

1. The first uses the chartal nature of money to identify its role in the evolution of markets (Ingham, Henry), the introduction of new currencies, the spread of centralized governments (Polanyi, Lovejoy), and the emergence of capitalism and wage labour (Marx, Ake).
2. The second detects the tax-driven nature of money in its attempts to discover why seemingly worthless paper circulates as a medium of exchange (Smith, Say, Mill, Wicksteed).

From the first group of scholars, for example, Polanyi clearly rejects the traditional treatment of cowrie shells as 'primitive money' (Forstater, 2006). In studying the introduction of non-metallic money in Africa, Polanyi observes that cowrie existed alongside metal currencies, which were already well established in the continent. The cowrie was, in fact, an example of 'the launching of a currency as an instrument of taxation' (1966: p. 189, quoted in Forstater, 2006). Polanyi furthermore argues that the emergence of non-metallic currencies should be correctly regarded 'as a feature in the spread both of *centralized government* and of food markets in the early [African] empires which left its imprint on the local history of money' (ibid.).

Lovejoy (as Ake and Rodney above) similarly reports that taxation in pre-colonial Nigeria was used to generate demand for new currencies:

emirates [of Nigeria] paid their levies in cowries as well, so that the taxation system effectively assured that people participated in the market economy and used the currency,

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a policy remarkably similar to the one which the later colonial regimes pursued in their efforts to see their own currencies accepted. (Lovejoy, 1974: p. 581, quoted in Forstater, 2006)

Marx also wrote on the tax imperative behind modern money, but his focus was on its role in the rise of capitalism and wage-labour. It is well known that Marx had a commodity theory of money, but he none the less emphasized that money relations obfuscate the underlying social relations of production (Ingham, 2004: p. 61). This, Forstater argues, played a key role in Marx's emphasis on the role of taxation and the state in monetizing primitive economies and accelerating the accumulation of capital (see detailed analysis in Forstater, 2006). The transformation of all taxes into money taxes has led to the transformation of all labour into wage labour, much like the African colonial experience above (Marx, 1857).

The second group of scholars who had contemplated the idea of tax-driven money were those concerned with the value of money and those who attempted to solve the (neo)classical riddle, why certain units of seemingly useless material circulate as medium of exchange while others, of apparent worth, do not.

One need not look further than Adam Smith's *Wealth of Nations* for acknowledgement of the chartal nature of money and the role of taxation.⁶

A prince, who should enact that a certain proportion of his taxes should be paid in a paper money of a certain kind, might thereby give a certain value to this paper money; even though the term of its final discharge and redemption should depend altogether on the will of the prince. (Smith, 1776: p. 312)

Forstater reports that Say and Mill too recognized that paper had value because it was 'made efficient to discharge the perpetually recurring claims of public taxation' (Say, 1964 [1880]: p. 280, quoted in Forstater, 2006) and because the state had consented 'to receive it in payment of taxes' (Mill, 1848: pp. 542–3, quoted in Forstater, 2006). Mill further added that, if the issuer is the sovereign state, it can arbitrarily fix the quantity and value of paper currency (*ibid.*). Mill here seems to acknowledge the Chartalist claim that the sovereign state, in effect, 'writes the dictionary' by picking the unit of account and arbitrarily fixing its value. Finally, Wicksteed explicitly acknowledged the role of taxation as a method of creating a perpetual desire for money so that the government could acquire all goods and service necessary for its official and other purposes (Wicksteed, quoted in Forstater, 2006).

While the tax-driven money approach finds some support in the history of economic thought, simple recognition of the tax imperative behind money was not sufficient to draw out the full implications and logical extensions behind the chartality of money. Clearly neoclassical economists struggled to understand the use of paper money, but the tax-driven nature of money simply did not square with the traditional view of money as a veil. Thus, the next section recaps the Chartalist position by means of comparison with the orthodox story or – as Knapp (1973 [1924]) and Goodhart (1998) call it – the Metallist position.

4. Metallism vs Chartalism

Some of the differences between Metallism and Chartalism (M-theory and C-theory respectively [Goodhart, 1998]) have already surfaced in the previous sections. The traditional story of the origins, nature and role of money is all too familiar. According to M-theory, markets formed first as a result of individuals' inherent disposition for

exchange. Over time, money naturally emerged to lubricate these markets by dramatically reducing transaction costs.

M-theory focuses on money as a medium of exchange. Its *value* stems from the intrinsic properties of the commodity that backs it – usually a type of precious metal (and hence the term Metallism). Money owes its *existence* to rational agents who spontaneously pick a commodity for exchange, pressed by the requirements of the double coincidence of wants (Goodhart, 1998: p. 410). Money, therefore, *originates* in the private sector and only exists to facilitate market transactions. Because money has no special properties that endow it with a principal role, monetary analysis takes a backseat to ‘real’ analysis.

Since orthodox analysis turns on the smooth functioning of private markets, it generally abstracts from the role (or intervention) of government. The absence of any link between state and money also explains why M-theory cannot account for the important and almost universal ‘one nation–one currency’ relationship (Goodhart, 1998). Metallism struggles to find value in modern fiat money, no longer backed by any commodity of intrinsic worth. For M-theory, paper currency circulates because governments have usurped control over money and because it continues to reduce transaction costs of barter (Goodhart, 1998: p. 417, n. 21).

Chartalists find several problems with the Metallist story. Specifically, they identify two circular arguments, which pertain to the use of money as a medium of exchange, means of payment and store of abstract value. The first deals with money’s existence. For M-theory, money is a consequence of rational agents ‘holding the most tradeable commodity in a barter economy’ (Ingham, 2000: p. 20). In other words: (a) money is universal because rational agents use it; and (b) rational agents use it because it is universal. Attempts to resolve this circularity by concentrating on money’s role in reducing transaction costs have been unsatisfactory.

The logical difficulties emerge from the ‘identification problem’ – benefits from using a particular commodity as medium of exchange can be recognized only *after* that commodity has already been in use. Coins, for example, must be minted and circulated *before* the benefits of reduced transaction cost are recognized. And, as Goodhart notes, the costs of using an unworked precious metal can themselves be quite high (1998: p. 411). Thus the argument that private agents collectively and spontaneously choose a certain commodity for exchange *because* it reduces costs is, at a minimum, tenuous.

The second circular argument pertains to the other functions of money. Orthodox reasoning is that: (a) money is a store of abstract value because it is a means of payment; and (b) it is a means of payment because it is a store of abstract value (Ingham, 2000: p. 21). Essentially, there is no *definitive* property that gives money its special status. In the absence of an unambiguous condition that explains the use of gold, wooden sticks or salt as money, *spontaneous choice* becomes essential to the orthodox story and it must be assumed *a priori*. The result is a ‘helicopter drop’ theory of money (Cottrell, 1994: p. 590, n. 2).

C-theory does not suffer from the ‘identification problem’ or the ‘spontaneous choice’ paradox. It has no difficulty explaining the introduction and circulation of fiat currency or the ‘one nation–one currency’ regularity. This is because the origin of money is located outside private markets and rests within the complex web of social (debt) relations where the state has a principal role.⁷

The legitimate and sovereign powers of the governing body render money ‘a creature of the state’ (Lerner, 1947). Its *value* stems from the powers of the money-issuing authority.

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There is nothing spontaneous about its existence; rather, it is contingent on what the state has declared to accept in payment of taxes, fees and dues at public offices. Various 'money-things' have dominated private markets because they have been chosen for acceptance at government pay offices for settling of debt. Chartalists avoid circular reasoning by pointing out that money's role as a unit of account *preceded* its role as a means of payment and a medium of exchange. This role was instituted by the state's capacity to denominate price lists and debt contracts into the elected unit of account.

5. **Acceptation: legal tender law or the hierarchy of debt?**

Before elaborating on Chartalist theory and its application to policy, one additional clarification is in order. It is commonly believed that the chartal nature of money rests within the power of the state to administer legal tender laws (Schumpeter, 1954: p. 1090). But when Knapp proclaimed that 'money is a creature of law' (1973 [1924]: p. 1), he did *not* propose that 'money is a creature of legal tender law', and in fact he explicitly rejected such an interpretation. Chartalists argue that acceptance depends not on the legal tender status of money but on the stratified order of social debt relationships. The power to delegate taxes and determine how they will be paid explains why state money is the *most acceptable* form of debt.

If money is debt, clearly anyone can issue money (Minsky, 1986: p. 228). Minsky stressed that, as a balance sheet item, money is an asset to the holder and a liability to the issuer. What is important, however, is not the capacity to create debt but the ability to induce someone else to hold it (*ibid.*). In a sense, debt becomes money only *after* acceptance has occurred (Bell, 2001: p. 151). Different monies have varied degrees of acceptability, which suggests a hierarchical ordering of debts (Minsky, 1986; Wray, 1990; Bell, 2001).

If social debt relationships are organized in a pyramidal fashion, then the least acceptable forms of money are at the bottom of the pyramid, while the most acceptable ones are at the top (see Bell, 2001). Furthermore, each liability is convertible into a higher and more acceptable form of debt. What liability, then, sits at the top of the pyramid?

To settle debts, *all* economic agents except one, the state, are always required to deliver a *third party's* IOU, or something *outside* the credit–debt relationship. Since only the sovereign can deliver its own IOU to settle debts, its promise sits at the top of the pyramid. The only thing the state is 'liable for' is to accept its own IOU at public pay offices (Wray, 2003a: p. 146, n. 9).⁸

This stratified view of social debt relationships provides a preliminary indication of the primacy of state currency. But can agents simply refuse to take the sovereign's money and, therefore, undermine its position in the pyramid? The answer is 'no', because as long as there is someone in the economy who is required to pay taxes denominated in the state's currency, that money will always be accepted.

This indicates that the *emission* of currency is not an essential power of the state. In fact it has a contingent character. The state may very well declare that it will accept payment of taxes in, say, salt, cowries, or wooden sticks. Indeed, such historical examples exist, although generally sovereigns have preferred to use their own stamp or paper or something over which they possess full and unconditional control. The essence of state money lies neither in the ability to create laws, nor in the ability to print money, but in the ability of the government to create '*the promise of last resort*' (Ingham, 2000: p. 29, emphasis added), that is, to levy taxes and declare what will be accepted at pay offices for

extinguishing debt to the state. The unit of account that settles tax obligations is delimited by the special authority, which 'does the counting' (ibid.: p. 22).

Knapp himself emphasized this point: 'Nor can legal tender be taken as the test, for in monetary systems there are frequently kinds of money which are not legal tender . . . but the *acceptation* . . . is decisive. State acceptation delimits the monetary systems' (Knapp, 1973 [1924]: p. 95, original emphasis); and Keynes endorsed it: 'Knapp accepts as "Money" – rightly, I think – anything which the State undertakes to accept at its pay-offices, whether or not it is declared legal-tender between citizens' (Keynes, 1930: p. 6, n. 1). Legal code is only a manifestation of state powers. Lack of legal tender laws does not mean that state money is unacceptable – such is the case in the European Union, for example, where no formal legal tender laws exist, yet the euro circulates widely.⁹

What, then, is the purpose of legal tender laws? Davidson provides the answer: legal tender laws determine that which will be 'universally acceptable – *in the eyes of the court* – in the discharge of contractual obligations' (2002: p. 75, emphasis added). Therefore, legal tender laws only ensure that when a dispute is settled by the courts in terms of dollars (for example), dollars must be accepted.

Money is indeed a creature of law – not legal tender law, but law which imposes and enforces non-reciprocal obligations on the population. The 'money-thing' is only the empirical manifestation of the state's choice of the 'money of account' that extinguishes these obligations. This is the nature of the tax-driven money mechanism.

This chapter began by outlining several broad and specific propositions of Chartalism. Thus far, the focus has been primarily on the former. The role of the public authority and taxation was used to decipher the nature of money as a creature of the state and to locate its position in the topmost strata of social debt relations. The contrast with the Metallist story revealed the importance of distinguishing between the 'money-thing' and the 'money of account'. Finally it was shown that the chartality of money stems not from legal tender laws but from the state's ability to create the promise of last resort.

What light, then, does Chartalism shed on money in the modern world and specifically on government fiscal and monetary operations? The remainder of this chapter concentrates on the specific propositions of neo-Chartalism and their applications to policy.

6. Money in the modern world

Neo-Chartalists are particularly concerned with sovereign currencies – those inconvertible into gold or any foreign currency through fixed exchange rates (Mosler, 1997–98; Wray, 2001). Their main point of departure is that most modern economies operate on the basis of high-powered money (HPM) systems. HPM – reserves, coins, federal notes and Treasury cheques – is that which settles tax obligations and sits at the top of the debt pyramid. Accordingly, it is also the money 'into which bank liabilities are converted' and which is used for clearing in the bank community (between banks themselves or between private banks and the central bank) (Wray, 1998: p. 77). Only a proper understanding of how HPM is supplied through the economy and its effect on the monetary system can lay bare the full implications of modern fiscal and monetary policy.

Modern money is state money. Taxation today functions to create demand for state currencies in order for the money-issuing authority to purchase requisite goods and services from the private sector. Taxation, in a sense, is a vehicle for moving resources from the private to the public domain. Government spending in sovereign currency systems is not

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limited by the ability of the state to 'raise' revenue. In fact, as it will be explained below, sovereign governments face no operational financial constraints.

To fully grasp the logic of sovereign financing, one must make the analytic distinction between the government and non-government sectors. For the private sector, spending is indeed restricted by its capacity to earn revenue or to borrow. This is not the case for the public sector, which 'finances' its expenditures in its own money. This is a reflection of its single supplier (monopoly) status. For example, in the USA, the dollar is not a 'limited resource of the government' (Mosler, 1997–98: p. 169). Rather it is a tax credit to the population, which is confronted with a dollar-denominated tax liability. Thus government spending provides to the population that which is necessary to pay taxes (dollars). The government need not collect taxes in order to spend; rather it is the private sector, which must earn dollars to settle its tax debt. The consolidated government (including the Treasury and the central bank) is never revenue constrained in its own currency.

If the purpose of taxation is to create demand for state money, then logically and operationally, tax collections cannot occur before the government has provided that which it demands for payment of taxes. In other words, spending comes first and taxation follows later. Another way of seeing this causality is to say that government spending 'finances' private sector 'tax payments' and not vice versa. Several other implications follow.

Deficits and surpluses

Government spending supplies high-powered money to the population. If the private sector wishes to hoard some of it – a normal condition of the system – deficits necessarily result as a matter of accounting logic.¹⁰ Furthermore, the government cannot collect more in taxes than it has previously spent; thus balanced budgets are the theoretical minimum that can be achieved. But the private sector's desire to net save ensures that deficits are generated. The market demand for currency, therefore, determines the size of the deficit (Wray, 1998: pp. 77–80).

In a given year, of course, surpluses are possible, but they are always limited by the amount of deficit spending in previous years. If during the accounting period government spending falls short of tax collections, private sector holdings of net financial assets necessarily decline. The implication is that surpluses always reduce private sector net savings, while deficits replenish them. It should also be noted that, when governments run surpluses, they do not 'get' anything because tax collections 'destroy' high-powered money (Mitchell and Mosler, 2005: p. 9). To understand this, a closer look at government spending and taxing operations is necessary.

Government spending and taxation

There is no great mystery behind government spending and taxation. The government spends simply by writing Treasury cheques or by crediting private bank accounts. Conversely, when the Treasury receives a cheque for tax payment, it debits the commercial bank account on which the cheque was drawn. At present, it is not necessary to distinguish between the Federal Reserve and the Treasury when discussing government outlays and receipts. The reason is that when the Treasury writes a cheque drawn on its account at the Fed, it effectively writes a claim on itself. As Bell and Wray (2002–3) note, intergovernmental balance sheet activity is of little consequence, because it has no impact on the reserve level of the banking system as a whole (p. 264). What is important, however,

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is that the consolidated actions of the Fed and the Treasury result in an immediate change in the system-wide level of reserves. It is this effect on reserves that matters for understanding policy.

Government fiscal policy is one of two important factors that change the level of reserve balances in the banking system. The other is through Fed open market operations. The Treasury is the main supplier of HPM. When it writes a cheque on its account at the Fed, by accounting necessity, reserve balances in the banking system increase. When it collects tax payments, on the other hand, bank reserves decline. Alternatively, when the Fed buys bonds in the open market, it adds reserves, and when it sells bonds, it drains them. What Chartalism makes clear next is that the effect of fiscal policy on reserve balances can be large and disruptive. Thus, while Treasury operations are discretionary, central bank operations are largely defensive in nature.

High-powered money, borrowing and interest rates

Historically banks have aimed to minimize non-interest-bearing reserve balances. Essentially, reserves in excess of what is necessary to meet daily payment commitments are lent in the overnight market to earn interest. Alternatively, if banks cannot meet reserve requirements, they will borrow reserves in the overnight market. All else equal, these operations do not change the level of reserves in the banking system as a whole. Government spending and taxation, however, do. Any new injection of 'outside money' (HPM) floods the banking system with excess reserves. Banks try to pass the unwanted reserves to other member banks but, in the aggregate of course, these attempts are ineffective and they only depress overnight interest rates. Government spending, therefore, increases system-wide reserves and exerts a downward pressure on interest rates.

Alternatively, the collection of tax revenue reduces high-powered money, i.e. reserves are destroyed. Since required reserve ratios are computed with a lag (*even* in a contemporaneous accounting system [see Wray, 1998: pp. 102–4]), all else equal, tax payments cause a system-wide deficiency of reserves. The reserve effect is the opposite and, as banks scramble to obtain the necessary reserves in the overnight market, the federal funds rate is bid up above its target rate. In sum, discretionary Treasury action directly influences overnight interest rates through its impact on reserves.

The government has devised various ways for mitigating the reserve effect of fiscal policy. The first *modus operandi* is the utilization of tax and loan accounts (T&Ls), which offer only temporary relief to these considerable reserve fluctuations (see Bell, 2000 for detailed analysis). While T&Ls reduce the reserve impact of government spending, the calls on these accounts never match the exact amount of tax collections or government spending. Therefore, there is *always* a flux in reserves in the banking system as a whole that must be offset in order to avoid swings in the overnight interest rate (*ibid.*).

The second method for dealing with the excess or deficiency in reserve balances is through open market operations. To drain the infusion of excess reserves, the Fed offers bonds for sale in the open market. With this action it effectively provides an interest-bearing alternative to banks' interest-free excess reserves and prevents the overnight interest rate from falling to its logical zero-bid limit.¹¹ Bond purchases, conversely, add reserves when there is a system-wide reserve deficiency and thus relieve any upward pressure on the overnight rate. Therefore, open market operations are more appropriately viewed, not as borrowing or lending procedures of the government, but as interest rate maintenance operations.

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From here, several considerations emerge. First, coordinating activities between the Treasury and the Fed notwithstanding, it is clear that fiscal policy is discretionary and has a significant impact on reserve balances. Second, in an era of positive interest rate policy, the Fed has no choice but to act defensively to offset these reserve fluctuations via open market operations. Thus the Fed largely operates in a non-discretionary manner (Wray, 1998; Fullwiler, 2003).

Both taxation and borrowing deplete reserves. Taxation simply destroys them, while borrowing drains them by exchanging uncompensated private sector assets (excess reserves) with interest-bearing ones (bonds). Taxation and borrowing are not financing operations for the government but they do affect *private* sector nominal wealth. The former simply reduces 'outside money' (i.e. private sector net saving) while the latter exchanges one asset for another, leaving wealth 'intact' (Wray, 2003a: p. 151).

All of the above completely reverses conventional wisdom. Governments do not need the public's money to spend; rather the public needs the government's money to pay taxes. Government spending always creates new money, while taxation always destroys it. Spending and taxing are two independent operations. Taxes are not stockpiled and cannot be respent in order to 'finance' future expenditures. Finally, bond sales are necessary to drain excess reserves generated by fiscal operations in order to maintain a positive interest rate.

The value of the currency and exogenous pricing

Because monetary policy is accommodative and fiscal policy is discretionary, Chartalism assigns the responsibility for maintaining the value of the currency to the latter. It was already shown that taxes impart value to government money. As Innes stressed: 'A dollar of money is a dollar, not because of the material of which it is made, but because of the dollar of tax which is imposed to redeem it' (1914: p. 165). But he also argued that 'the more government money there is in circulation, the poorer we are' (ibid.: p. 161). In other words, if government money in circulation far exceeds the total tax liability, the value of the currency will fall. So it is not only the *requirement* to pay taxes, but also the *difficulty* of obtaining that which is necessary for payment of taxes, that give money its value.

For example, in discussing the experience of American colonies with inconvertible paper money, Smith recognized that excessive issue relative to taxation was the key to why some currencies maintained their value while others did not (for details see Wray, 1998: pp. 21–2). Wray explains: 'it is the acceptance of the paper money in payment of taxes and the restriction of the issue in relation to the total tax liability that gives value to the paper money' (ibid.: p. 23).

This important relationship between leakages and injections of HPM, however, is difficult to gauge. Chartalists argue that, since the currency is a public monopoly, the government has at its disposal a direct way of determining its value. Recall that for Knapp payments with chartal money measure a certain number of units of value. For example, if the state required that to obtain one unit of HPM, a person must supply one hour of labour, then money will be worth exactly that – one hour of labour (Wray, 2003b: p. 104). Thus, as a monopoly issuer of the currency, the state can determine what money will be worth by setting 'unilaterally the terms of exchange that it will offer to those seeking its currency' (Mosler and Forstater, 1999: p. 174).¹²

What this means is that the state as a monopoly supplier of HPM has the power to exogenously set the price at which it will provide HPM, i.e. the price at which it buys assets, goods and services from the private sector. While it is hardly desirable for the state to set the prices of all goods and services it purchases, it none the less has this prerogative. As it will be discussed later, Chartalists recognize that the money monopolist need only set *one* price to anchor the value of its currency.

Lastly, Chartalists point out that it is not necessary to force slack on the economy (as espoused by traditional economists) in order to maintain the purchasing power of the currency. Rather full employment policies, if properly implemented, can do the job (Wray, 2003a: p. 106).

Unemployment

Once again, government deficit spending necessarily results in increased private sector holdings of net financial assets. If the non-government sector chronically desires to save more than it invests, the result will be a widening demand gap (Wray, 1998: p. 83). This demand gap cannot be filled by other private sector agents, because in order for some people to increase their holdings of net savings, others must reduce theirs. In the aggregate, an increase in the desire to net save can only be accommodated by an increase in government deficit spending. Mosler explains:

Unemployment occurs when, in aggregate, the private sector wants to work and earn the monetary unit of account, but does not want to spend all it would earn (if fully employed) on the current products of industry . . . Involuntary unemployment is evidence that the desired holding of net financial assets of the private sector exceeds the actual [net savings] allowed by government fiscal policy. (Mosler, 1997–98: pp. 176–7)

Similarly, Wray concludes that ‘unemployment is *de facto* evidence that the government’s deficit is too low to provide the level of net saving desired’. In a sense unemployment keeps the value of the currency, because it is a reflection of a position where the ‘government has kept the supply of fiat money too scarce’ (1998: p. 84).

For Chartalists it is not necessary to use unemployment to fight inflation. Rather they advance a full employment policy in which the state exogenously sets one important price in the economy, which in turn serves as stabilization anchor for all other prices (ibid.: pp. 3–10). This proposal rests on the recognition that the state does not face operational financial constraints, that unemployment is a result of restricting the issue of the currency, and that the state can exercise exogenous pricing.

But before explaining this proposal, it is important to point out that Chartalist propositions are not *necessarily* tied to any particular policy prescription; they are simply a way of understanding the state’s powers and liabilities and its financing and pricing options.

The above implications of Chartalism outline the essential causal government powers regardless of whether they are exercised or not. Many governments willingly restrict the issue of the currency by balancing budgets. This in no way indicates that they actually face operational financial constraints. These are self-imposed, perhaps subject to political or ideological constraints. Governments furthermore do not explicitly employ their prerogative to set prices, even though they can. The value of the currency fluctuates, but this does not mean that states cannot devise a mechanism that serves as an anchor for the currency’s

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value. Chartalism simply delivers the important implications of sovereign currency control that illuminate policy choices.

7. Policy extensions

After disclosing the nature of government finance, Chartalists argue that governments *can* and *should* implement 'functional finance'. The latter was proposed by the late Abba Lerner, who vigorously objected to any conventional ideas about what constitutes 'sound' finance.

Functional finance can be subsumed under the Chartalist approach, because it appropriately recognizes money as a creature of the state and attributes two important policy roles to government. Lerner (1947) argued that the state, by virtue of its discretionary power to create and destroy money, has the obligation to keep its spending at a rate that maintains (1) the value of the currency and (2) the full employment level of demand for current output.

For the government to achieve its two main objectives, Lerner proposed two principles of functional finance, which inform decisions on the requisite amount of government spending and the manner of financing it. More specifically, the first principle provides that total government spending should be 'neither greater nor less than that rate which at the current prices would buy all the goods that it is possible to produce' (1943: p. 39). Spending below this level results in unemployment, while spending above it causes inflation. The goal is to keep spending always at the 'right' level in order to ensure full employment and price stability. The second principle states that government spending should be 'financed' through the issue of new currency. This second 'law' of functional finance is based on Lerner's recognition that taxation does not finance spending but instead reduces private sector money hoards (*ibid.*: pp. 40–41).

Functional finance can be implemented in any country in which the government provides the domestic currency (Wray, 2003a: p. 145). Two policies, virtually identical in design, that embrace the functional finance approach are the employer of last resort (ELR) (Mosler, 1997–98; Wray, 1998) and the buffer stock employment model (Mitchell, 1998). These policy prescriptions aim to stabilize the value of the currency by simultaneously eliminating unemployment. The proposals are motivated by the recognition that sovereign states have no operational financial constraints, can discretionarily set one important price in the economy, and can provide an infinitely elastic demand for labour.

Chartalists have advocated such employment programmes based on the work of Hyman Minsky and Abba Lerner and which recall the New Deal experience in the USA. The employer of last resort (to use Minsky's terminology) is very simply a government programme that offers a job at a fixed wage/benefits package to anyone who has not found employment in the private sector but is ready, willing and able to work.

The ELR is proposed as a universal programme without any means tests, thereby providing an infinitely elastic demand for labour by definition. It eliminates unemployment by offering a job to anyone who wants one. Through the ELR, the government sets only the price of public sector labour, allowing all other prices to be determined in the market (Mosler, 1997–98: p. 175). So long as the ELR wage is fixed, it will provide a sufficiently stable benchmark for the value of the currency (Wray, 1998: p. 131). As explained above, the value of the currency is determined by what one must do to obtain it, and with ELR in place, it is clear exactly what that is: the value of the currency is equal to one hour of ELR work at the going ELR wage.

Furthermore, it is argued that ELR enhances price stability because of its buffer stock mechanism (Mitchell, 1998). In a nutshell, when recessions hit, jobless workers find employment in the public sector at the ELR wage. Total government spending rises to relieve deflationary pressures. Alternatively, when the economy heats up and non-government demand for labour increases, ELR workers are hired into private sector jobs at a premium over the ELR wage. Government spending automatically contracts, relieving the inflationary pressures in the economy. Thus, public sector employment acts as a buffer stock that shrinks and expands counter-cyclically. This buffer stock mechanism ensures that government spending is (as Lerner instructed) always at the 'right' level.

This proposal innovatively suggests that full employment can anchor the value of the currency (quite contrary to the conventional belief that unemployment is necessary to curb inflation). The ELR programme utilizes the logical extensions of chartal money to achieve the two goals of government – the elimination of unemployment and the stabilization of prices.

Space does not permit a detailed discussion of this proposal; what is important is to emphasize its chartal institutional features. The ELR/buffer stock approach recognizes that:

1. The government is the only institution that can divorce 'the offer of labour from the profitability of hiring workers' (Minsky, 1986: p. 308) and can thus provide an infinitely elastic demand for labour, without concerns about financing.
2. The government can formulate an anchor for the value of its currency by exogenously fixing the wage of ELR workers.
3. The government can utilize a buffer stock mechanism to ensure that spending is always at the right level – neither more, nor less.
4. The responsibility for full employment and price stability rests with the Treasury, not the Fed. 'Sound finance' assumes a whole new meaning: it is that which secures full employment and price stability.

Chartalists stress that such an employment programme is a policy option only for countries with sovereign control over their currencies. It is not a viable proposal for nations that have dollarized or operate under currency boards or other fixed exchange rate regimes. This is because the important link between the money-issuing authority and the fiscal agent has been severed, thereby drastically reducing the range of available stabilization policy options. Goodhart has pointed out that, similarly, the present institutional design of the European Monetary Union exhibits an 'unprecedented divorce between the main monetary and fiscal authorities' (1998: p. 410). Kregel (1999) has advanced an innovative proposal to correct for this institutional flaw and allow the EMU to implement an ELR-type of programme. He recommends that the European Central Bank act as the fiscal agent for the Euro-zone as a whole and implement functional finance to secure high employment and price stability.

Chartalist analysis can equally be applied to the study of contemporary domestic issues, such as the provision of universal retirement, healthcare and education. The present debate on the social security 'crisis' in the USA, for example, and virtually the entire rhetoric on government budgeting, rest on fictitious beliefs concerning fiscal spending limitations. Chartalism insists that focus on non-existent problems disables adequate policy responses

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to pressing issues such as economic growth, development, and currency and price stability. Only after we abstract from conjured obstacles to fiscal policy can we begin to address problems relating to the provision of adequate healthcare and education, viable employment opportunities, and requisite goods and services for the ageing population.

8. Conclusion

This chapter began with the broad and specific propositions of Chartalism. These constructively illuminate the tax-driven nature of money and the sovereign powers of modern states. While Chartalism is not wedded to a single policy proposal, it logically identifies functional finance as a viable tool for economic stabilization. Chartal insights can be applied to many different areas, from understanding various currency regimes to such issues as social security and unemployment. Chartalism is especially suited for studying contemporary monetary and fiscal policy.

In closing, it is appropriate to recall Lerner's cogent observation that 'The problem of money cannot be separated from the problems of economics generally just as the problems of economics cannot be separated from the larger problems of human prosperity, peace, and survival' (1947: p. 317).

Lerner further cautioned that in sovereign currency regimes 'Functional Finance will work no matter who pulls the levers [and that] those who do not use Functional Finance, . . . will stand no chance in the long run against others who will' (1943: p. 51). Chartalism is capable of contributing constructively to the public debate about viable policy actions in the public's interest.

Notes

- * Helpful comments by Mathew Forstater, John Henry and Warren Mosler are gratefully acknowledged.
- 1. In a paper of the same title, Ingham recounts what Keynes referred to as his 'Babylonian madness'. In a letter to Lydia Lopokova, Keynes wrote that, endeavouring to locate the true origins of money in ancient Near East civilizations, he 'became absorbed to the point of frenzy' (Ingham, 2000: p. 16, n. 3).
- 2. Chartalism is not limited to floating exchange rate systems – 'even a gold standard can be a Chartalist system' (Wray, 2001: p. 1). The choice of exchange rate regime has various implications for state spending power, but it does not mean that the state has lost the ability to levy a tax on its subjects and declare how this tax will be paid.
- 3. A detailed analysis of the history of money is beyond the scope of this chapter. Interested readers are directed to Chapter 1 by Tymoigne and Wray in the present volume.
- 4. Henry further adds that money cannot exist without power and authority. Societies based on hospitality and exchange simply had no use for it, while in a stratified society the ruling class is compelled to devise standard units of account, which measure not only the economic surplus collected in the form of taxes, but also the royal gifts and religious dues that were imposed on the underlying population (2004: p. 90).
- 5. The case of Egypt is particularly interesting because the official unit of account, called the *deben*, had no relation to any specific object. It was an abstract weight measure equaling 92 grams, whereby various 'things' – wheat, copper, or silver – equivalent to 92 g, and multiples thereof, served as money (Henry, 2004: p. 92).
- 6. For a detailed discussion of Smith's position, see Wray (1998): pp. 19–23 and Wray (2000): pp. 47–9.
- 7. This does not mean that the private sector cannot or has not created money (Goodhart, 1998: p. 418). The point is that the explanations of money's origins, which rest on the role of the state, are empirically more compelling.
- 8. For example, to be accepted, household or firm IOUs must at least be convertible into deposits (bank money) or cash (state money). Likewise, bank deposits must necessarily be convertible into reserves or cash (state high-powered money) to be accepted. State money is always at the end of the convertibility chain.
- 9. Note also that a violation of the 'one nation–one currency' regularity does not mean that the state has lost the power to tax and declare what will extinguish tax obligations. In the case of currency boards, for example, the state has *willingly* abandoned sovereign control over its own currency in favour of a foreign monetary unit but, as long as the domestic currency is demanded for payment of taxes, it will circulate. In

fully dollarized countries, the state has *chosen* to declare that all debts are payable in dollars (even if it does not have sovereign control over the issue of dollars). In all of the above cases, the state has nevertheless exercised its prerogative to determine what will serve as 'definitive' money.

10. Godley (1999) has demonstrated that, by accounting necessity, public sector deficits equal private sector surpluses (including those of firms, households and foreigners).
11. For technical discussion of Fed operations, see Fullwiler (2003, 2005).
12. Wray notes: 'If the state simply handed HPM on request, its value would be close to zero as anyone could meet her tax liability simply by requesting HPM' (2003b: p. 104).

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