

# Modern monetary theory for the post-pandemic NHS: why budget deficits do not matter

Jaideep J Pandit

Author details can be found at the end of this article

**Correspondence to:**

Jaideep J Pandit;  
jaideep.pandit@sjc.ox.ac.uk

## Abstract

NHS clinical directors are responsible for balancing departmental budgets, which can encompass staffing, equipment and operating theatres. As trust income is generally fixed, expenditure reduction is often attempted via recurrent cost improvement plans. In orthodox monetary theory, a departmental deficit contributes first to the hospital, then to the NHS, then to the national deficit. In the orthodox view, governments in deficit need to increase taxes and/or borrow money by issuing bonds (akin to mortgage loans), the interest on which is paid off for generations. Modern monetary theory offers a different perspective: government deficits do not matter as much as orthodox theory claims, if at all. This is because governments have the monopoly right to create the money in which the deficit is denominated (so do not ever need to borrow something that they can create). Therefore governments cannot default on debt in their own currency. Furthermore, government deficits equate to private surplus. This new perspective should influence microeconomic budget management at the clinical director level: the new emphasis being to deliver value and not just implement local savings to eliminate departmental deficits. This approach will become increasingly important in managing the huge surgical waiting lists that have accumulated during the COVID-19 pandemic.

**Key words:** Budgets; Health economics; Modern monetary theory

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## Introduction

Departmental budgetary administration is devolved to clinical directors, whose responsibility also includes staff salaries, equipment and operating theatres. However, the literature is sparse on exactly how a clinical director should optimally manage their budget (Davies and Prowle, 1984; Bailey, 1998). This may be because there is little to discuss: it is a trivial accounting matter to prepare a profit–loss spreadsheet, wherein budgetary balance is theoretically achieved by either increasing income or reducing expenditure (Harradine et al, 2011).

In practice, the only available option to manage deficits is to control expenditure. NHS funding as a whole is determined by a fixed, albeit periodically negotiated, allocation from the government, making the amount ultimately a political decision (Lafond et al, 2016; Berkeley et al, 2021). In turn, the NHS distributes funding to trusts formulaically. Within a trust, departmental budgets are also allocated by formula, negotiation or simply based on historical norms. Service line reporting is not yet fully embedded across the NHS (Nasrabad, 2016), so the only feasible method to balance a budget is expenditure control, which is attempted using recurrent cost improvement plans (Audit Commission, 2012). As a result, cutbacks in the budgets for drugs, equipment or staffing are common. This can lead to cheaper devices being ordered, often without appropriate clinical evidence of their efficacy (Pandit et al, 2011); attempts to limit use of expensive drugs by requiring duplicate or triplicate signatures before administration (Zarate et al, 2000; Cammu, 2018); and perennial workforce shortages as a result of constrained staffing budgets (Pandit et al, 2010).

It is important to recognise that a budget deficit means either that the original budget allocation was sufficient to deliver services and the clinical director has been profligate and/or incompetent, or that the original budget allocation was insufficient. If departmental budgets are not balanced, deficits feed in to overall trust deficits, which lead into the overall NHS deficit. Even before the pandemic, this was approximately £991 million,

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plus the £3.2 billion given to trusts as interest-bearing loans. Over the last 5 years, up to two-thirds of trusts have been in deficit (National Audit Office, 2019) and, collectively, this contributes to the national debt.

If the national debt is ever to be stabilised, it will first be necessary to balance the annual budget, including NHS trust and departmental deficits. This article describes two broad competing theories in macroeconomics that are relevant to understanding deficits and budgetary constraints. Where not specifically cited, readers are referred to general texts on economics, including Wray (2009, 2012), Fullbrook and Morgan (2019), and Kelton (2020).

### Orthodox monetary theory

Orthodox monetary theory enshrines the direct link between the (modest) departmental budget of a publicly-funded health service and the (large) national debt. The philosophy of this theory in relation to health was clearly reflected in a statement by Margaret Thatcher in a speech to the Conservative Party Conference in 1983:

**‘...the state has no source of money other than money which people earn themselves. If the State wishes to spend more it can do so only... by taxing you more... People talk about a “free” health service. It is not free. You have to pay for it.’ (Margaret Thatcher Foundation, 1983).**

According to this theory, businesses, industry and workers create wealth in the economy. The government, like any business or household, needs money to fund public services, such as the NHS, and so needs to tax this private wealth. The greater the need of the NHS (ie the greater the departmental and/or trust deficits), the higher the tax rates required. If, despite very high tax rates, governmental, hospital and department budgets are in deficit, then the government needs to borrow money.

According to orthodox monetary theory, governments borrow by issuing ‘bonds’ (termed ‘gilts’ in the UK). Individuals, banks or foreign governments can all buy gilts, attracted by the bond’s interest rate and security. However, the theory argues, the bigger the national debt, the higher the bonds’ interest rates need to be in order to make them attractive to potential buyers (Wray, 1992). Otherwise, who would buy from a bankrupt government? The result is that the UK government will spend even more for the bond interest payments. Thus, orthodox monetary theory views bonds as similar to a mortgage: a loan from someone else (bond purchaser) on which the borrower (UK government) has to pay interest. The indebted UK government is akin to a homeowner who has taken out a disproportionately high mortgage at excessive interest to buy a mansion (the NHS) that is well beyond their means. The discussion of bonds can then be spun in an emotive way, with the notion that the UK is in debt to foreign governments, such as China, and that the bond interest will have to be repaid by generations to come (Horn et al, 2020).

### Orthodox monetary theory on taxes, inflation and (un)employment

Instead of borrowing, the government could theoretically just issue more money, but this is unwise according to orthodox monetary theory. Until 1971, each country’s currency was pegged to its gold reserves. Formally enshrined in the post-war economic Bretton Woods agreement, the United States (US) dollar was defined as having a value related to the US gold stock, and all other currencies in turn were assigned a fixed value in relation to the US dollar (Bordo, 2017). This was akin to setting a standard, similar to the international system of units in physics, whereby a UK pound was worth, and could notionally be exchanged for, a flake of gold. As gold stocks are finite, printing excess money only devalued the currency in relation to the dollar. It is easy to see how this could lead to inflation and hyperinflation, historic examples of which include Germany in the 1920s Weimar Republic and, more recently, Argentina and Zimbabwe (Ferguson, 1975). However, especially in the first case, governments did not just print money for its own sake. Rather, the fall in the exchange rate of the Weimar German mark preceded the inflation. This in turn precipitated price rises which required the money supply to rise via the issue of more money. The rise in the money supply is better conceived as the effect, not the cause, of the hyperinflation (Armstrong and Mosler, 2020).

Orthodox monetary theory regards full employment as inflationary because it encourages firms to compete for labour. As workers are paid more, they compete to buy goods, leading to an increase in prices. From the orthodox perspective, this is only possible if the state allows the money supply to expand. In other words, according to the theory, inflation is caused by rises in money supply. The abhorrence of full employment in orthodox monetary theory is enshrined in the concept of the ‘non-accelerating inflation rate of unemployment’—a minimum estimated level of unemployment that is necessary to prevent inflation—which needs to be >5% of the workforce to prevent inflation (Ball and Mankiw, 2002). This was the rationale behind the statement from Norman Lamont, Chancellor of the Exchequer, during a speech to parliament on 16 May 1991 that: ‘... unemployment...has been the price that we have had to pay to get inflation down. That price is well worth paying’ (Hansard, 1991).

There is consensus across the political spectrum that government budgets need to be balanced; the debates are simply around how this should be done and the time period required. In this way, all political parties ascribe to orthodox monetary theory, which provides a macroeconomic framework that justifies the need to balance departmental budgets. This article now turns to a different perspective, which demonstrates that the fundamental assumptions of orthodox monetary theory are wrong.

## Modern monetary theory

Since the 1990s, there has been growing awareness of a fundamental problem with orthodox monetary theory. In 1971, the gold standard and the Bretton Woods agreement were abandoned, and sovereign currencies, such as the US dollar or UK pound, no longer had fixed inter-related values. Instead, they became ‘free floating’, their values determined by a host of complex macroeconomic factors (Kang and Dagli, 2018). In other words, they became ‘fiat’ currencies, existing and having value by government statutes, and not defined by a fixed amount of gold. While the ontology of money remained the same, the nature of the monetary system changed, with constraints that formerly had meaning no longer holding validity. This led to an alternative theory being developed, termed modern monetary theory, which viewed money as an ‘IOU’, a credit note rather than a flake of gold. Although now referred to as ‘modern’, this view was founded on earlier work, notably that of Innes (1913, 1914) and Knapp (1924). Accordingly, a government could theoretically issue as many monetary notes as it liked, without the currency losing value. This new perspective on money is akin to viewing physics through the lens of relativity theory and as in physics, it changes the ‘rules of the game’, leading to some very radical conclusions.

A good starting point to help understand modern monetary theory is to consider two questions posed by Kelton (2020):

1. Do you believe that the government should balance its budget?
2. Do you believe that individuals should save regularly from income?

Almost all readers will answer yes to both. However, the two beliefs are mutually incompatible, even in orthodox theory. If one entity (eg the government) is in surplus, then by accounting identity and the rules of mathematics, the other (the individual) has to be in deficit. A formal explanation of this economic relationship is offered by Gurley and Shaw (1960), Wray (1998a), Mitchell (2011a) and Armstrong (2015), and has been summarised in [Appendix 1](#). Therefore, a more relevant question is: if only one of the two can be achieved, which is the priority, balancing the government deficit or maximising individual savings?

The fundamental principle of modern monetary theory is that governments, not individuals or businesses, create money, no longer by the physical act of printing it, but by making spending commitments and creating credits via computer keystrokes (McLeay et al, 2014). The currency is not just a substitute for bartering in trade, but allows the state to provision itself (Lerner, 1947). Sovereign tax can only be paid in the sovereign currency. For example, UK tax can only be paid in pounds sterling, not US dollars, euros, goods, or livestock. To pay the mandated tax, individuals and businesses have no choice but to earn pounds. Therefore, taxation is a means of locking in all participants to the government’s economic framework (Kay, 1986).

This means that the government itself does not need to receive the tax in order to spend; it can spend on what it likes by making a spending commitment and thereby ‘creating’ money. Moreover, modern monetary theory argues that the government does not need to borrow money from anyone else. Unlike a private business or household, the government does not need to obtain money first before making a spending commitment to something like the NHS. The UK government can, at any time of its choosing (as it did in 1948), make a spending commitment of any magnitude to anything it likes, such as the army, the NHS, or banks during times of financial crisis.

Indeed, a large part of the government’s deficit is artificially generated. If the government assigns £ $x$  to the NHS as its annual budget, but the NHS spends more in that year (£ $y$ ), there is a deficit ( $y-x$ ). Instead, the government could have allocated and spent £ $y$  in the first place, with exactly the same economic outcomes. The money, £ $y$ , has been spent whichever way one looks at it.

In contrast to the orthodox monetary theory view of bonds, modern monetary theory argues that governments do not need to issue bonds to borrow because, as explained above, they can just create the money they need. Instead, governments choose to issue bonds as a means to drain reserves from the banking system and provide the private sector with an interest-bearing, risk-free asset. The sale of bonds only alters the composition of private sector risk-free assets, not their quantity. Issuing bonds is best conceived as an asset swap and is not of itself a counter-inflationary policy from a modern monetary theory perspective (Liu and Wray, 2010; Mitchell, 2011b).

### Modern monetary theory on taxes, inflation and (un)employment

Similar to its perspective on bonds, the modern monetary theory view of taxes is entirely different from the orthodox view. A fundamental aspect of the modern monetary theory perspective is that governments do not need tax income to spend. Rather, taxes have four very different purposes:

- To require people to use the currency, as form of societal control
- To limit inflation
- To alter wealth distribution across society
- To influence certain behaviours, such as ‘green’ or tobacco taxes (Baker and Murphy, 2020).

In contrast to orthodox theory, modern monetary theory aims for full population employment using the lever of government spending, arguing that only when full employment is attained is further government spending inflationary. Up to that point, all targeted spending is productive (and hence non-inflationary) if it increases employment and economic output (Wray, 1998b). For example, if thousands of people are drafted to make steel using government spending, the country benefits from steel production. However, if they were all previously engaged in building houses, the result of this policy could be a lack of housing. On the other hand, if they were all previously unemployed, then there is no trade-off between housing and steel. In the latter scenario, the real cost of employing the unemployed is negligible (Mosler, 2012). Specifically, it is the government competing with private sector sellers by raising their prices at full employment that causes the price level to rise, according to modern monetary theory. As the monopoly issuer of the currency, the state necessarily possesses the ability to determine prices (Wray, 1998a; Mosler, 2020). Modern monetary theory recognises that inflation can arise from many sources and not just from excess spending in relation to productive capacity (Fullwiler et al, 2019).

A full breakdown of the fundamental principles of orthodox monetary theory and modern monetary theory are shown in [Table 1](#).

## Lessons for clinical directors

**‘...Cost-measurement approaches [have] obscured value in healthcare... cost-containment efforts are incremental, ineffective, and sometimes even counterproductive.’ (Porter, 2010).**

**Table 1. Comparison of orthodox and modern money theory perspectives on certain variables in economic metrics**

Domain	Orthodox monetary theory	Modern monetary theory
Fundamental view of what money is	An agreed medium of exchange in lieu of bartering; a fraction of a country's value (eg gold or other tangible value reserves)	Money is credit: the money story begins with government provisioning itself by issuing money, which is a tax credit from the point of view of the holder
How money is generated in the economy	By individuals and businesses, through their productive economic activity	By governments, through the act of issuing money and the creation of money in the form of bank deposit by banks who are agents of the central bank (which is itself part of the consolidated state sector)
How government primarily funds spending commitments	By first obtaining money by taxation, or borrowing through bonds or gilts	By the policy decision of making the spending commitment in the first place (equivalent to printing or, in modern terms, crediting recipient accounts by computer)
The primary role of taxation	To provide the government with money to fund its spending commitments	To create a demand for the currency and to allow management of aggregate demand
The role of bonds or gilts	A means of borrowing: the government borrows money from investors and pays interest	To provide an interest-bearing risk-free asset; to set risk-free benchmark interest rates across the maturity spectrum; to act as collateral in the monetary system
View of (un) employment	Full employment is inflationary and unemployment should be held at or above non-accelerating inflation rate of unemployment	Full employment is desirable and should be the primary aim of government through net spending, until full employment (and hence maximal productivity) is achieved. Once full employment is achieved, further government spending is inflationary
View on the result of governments printing money (or in modern terms, creating money by making spending commitments)	This is always inflationary, it devalues the currency	This is what governments do: their primary role is to print money (make spending commitments). Spending where value and productivity result is always good; government spending at levels above current market prices is inflationary
View on government deficits	Deficit budgets are undesirable and should be neutralised. The interest on repaying the deficit increases the burden on the economy and on future generations to pay off the debt.	Deficits do not matter as much as perceived in orthodoxy. Government deficits mean private (individual and business) surpluses and vice versa. Deficits can only be neutralised by reducing private wealth and this could damage the economy. Instead, the focus should be on productivity, employment and social welfare

This macroeconomic discussion is helpful in understanding differing views on what 'deficit' actually means. The core lesson for clinical directors from modern monetary theory is that they should not ask themselves superficial accounting questions such as 'how do I balance the budget?', but instead ask 'what investments of savings are necessary to enhance value and productivity?'

Furthermore, it is incorrect to believe that the allocated department budget represents what can be afforded; the NHS budget is what simply we, as a society, choose to afford. The government puts financial constraints on the agencies it creates (such as the NHS, the military and other nationalised industries) to engender management discipline and hold agencies accountable. Financial accounting is supposed to be a proxy for each agency's command over the nation's resources; otherwise, each agency would build up in size and quickly begin to compete to become the largest. However, financial balance can be a bad proxy for controlling behaviour, because what we as a society really want is good health outcomes. Recognising this releases us all from artificial constraints to analysis and widens the range of policy options.

It is important that currency-issuing states recognise that it is real resources that matter, particularly labour, not just financial metrics. A democratic state should decide on the amount

of real resources it wishes to commit to healthcare. The costs of that resource choice are real in this sense. To determine the cost of employing more nurses or healthcare staff, it is necessary to consider what they could have done if they had chosen another career path instead, or remained unemployed. The immediate financial cost of such choices is borne by the current community. However, future generations will benefit economically and personally from established and continuing high standards of healthcare.

That said, it is not the case that profligate spending guarantees positive outcomes: nobody benefits from buying gold-plated equipment, and this would simply be inflationary. Moreover, the departmental budget might be balanced as a consequence of targeted cost savings, with a primary focus on improving productivity and output. An example is waste elimination through 'lean' programmes (Pandit and Pandit, 2011). Specific lean examples in the sphere of surgery and anaesthesia include setting clear efficiency goals (Pandit et al, 2007); optimal scheduling, which maximises operating theatre use while avoiding expensive over-runs (Pandit and Tavare, 2011); and rational allocation of surgical list durations, to minimise overtime payments (Pandit and Dexter, 2009). Unfortunately, implementing lean methodology is more difficult than indiscriminate cost cutting, and it does not yield instant results, which is often what organisations seek.

Another lesson for clinical directors is that further investment can be advantageous, even in a deficit budget. In operating theatres, there is a broadly linear relationship between productivity and staffing (Pandit et al, 2009, 2010). While measuring the budget deficit is easy, other important quality metrics are more difficult to measure, such as safety (Hall et al, 2016) or staff satisfaction and welfare (McClelland et al, 2019). Kelton (2020) referred to these as the alternative 'deficits that matter'.

Together, these lessons underline the emphasis of modern monetary theory on value, in contrast to just value for money; the former is immutable, while the latter depends only on price. Porter (2010) explained how value in healthcare can and should be dissociated from cost, although it requires a revised funding and reimbursement system to drive this changed emphasis. An example from anaesthesia of the distinction is to consider that sugammadex will always be a very effective reversing agent for neuromuscular blockade, but its price creates doubts about using it (Cammu, 2018). A price drop would cause all lingering doubts to vanish (Fuchs-Buder et al, 2012), just as occurred with ondansetron for the treatment of nausea and vomiting (Zarate et al, 2000). Conflating 'value' with 'value-for-money' is a fallacy, arising from the orthodox monetary framework. The implications of adhering only to value for money were exemplified by an American anaesthesia department chair asking, perhaps tongue in cheek, how many staff redundancies would be needed to balance the budget, if 'costly' quality improvement initiatives were introduced (Tremper, 2010).

Several budgetary constraints within the NHS could be resolved without specific recourse to modern monetary theory thinking. For example, as departmental budgets are allocated relatively arbitrarily, clinical directors may find some expenditures assigned to them which are in fact shared resources, such as certain type of drug, equipment or porting costs. Simple budgetary re-organisation may rectify the apparent deficit caused by this (Pandit, 2019). The NHS reimbursement system for surgery (tariffs) is structured in a way that guarantees large deficits (Abbott et al, 2011). Recent changes to the NHS pension scheme make it as financially rewarding for many anaesthetists, and other specialists, to drop work than offer overtime, increasing pressures on locum or temporary staff budgets (Pandit, 2016). Rectifying these issues are 'easy wins'.

### Limitations of modern monetary theory

A discussion of the evidence for and against modern vs orthodox monetary theory approaches is outside the scope of this article, but there are acknowledged limits to modern monetary theory. For instance, it only applies to sovereign governments with their own fiat currency, rather than individuals or businesses. The latter are constrained by real debt and need to find money first, either by earning or borrowing, before they can spend it; sustained deficits in private companies can lead to bankruptcy. Modern monetary theory principles only apply in countries with sovereign currencies (eg the US, UK, Switzerland), and not to European

Union countries, or those that operate under fixed exchange rates, such as Argentina. Modern monetary theory also does not apply when a country borrows money (and hence has to repay its debt) in a foreign currency on the open market, as many developing countries do out of necessity (Eichengreen and Hausmann, 2005).

The key economic message of modern monetary theory is that the government is not similar to a household or a business, because it has the monopoly on issuing its own money. Sovereign governments with deficits in their own currency cannot ever default, because they print the very currency in which their debt is denominated. For the same reason, public services such as the NHS, which exists solely as a result of government spending commitments, cannot ever become bankrupt or insolvent (unless the government wishes this to happen). The creation of the NHS, like the creation of a standing army and any other nationalised industry in the past, was a decision to link any future NHS expenditure directly to the currency-creation monopoly power of government. Therefore, modern monetary theory solutions may not apply to countries where health service expenditure is not underwritten by government.

## Conclusions

The lessons of modern monetary theory are even more important in light of the COVID-19 pandemic. On top of normal yearly demand, the NHS care backlog has reached record highs, with millions waiting for surgery. As a result, future budget deficits are inevitable. If these deficits are followed by indiscriminate cutbacks designed to balance the budget, in line with orthodox monetary theory, healthcare delivery will suffer.

Adopting the principles of modern monetary theory is a potential solution, but one clinical director cannot be expected to change the entire framework in which the NHS operates. However, focusing this educational message to clinical directors, rather than executives or central planners, might stimulate a bottom-up re-framing of conversations from those in closest proximity to expenditure and budgetary decisions. Or, expressed another way, even if modern monetary theory becomes a new, top-down perspective, it will still require the education and engagement of managers at all levels. The key lesson for clinical directors is: budget deficits do not matter as much as many believe they do, but value in healthcare does—and modern monetary theory can play a significant role in the satisfactory reconciliation of the two.

### Author details

<sup>1</sup>Nuffield Department of Anaesthetics, Oxford University Hospitals NHS Foundation Trust, Oxford, UK

<sup>2</sup>University of Oxford, Oxford, UK

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### Key points

- Modern monetary theory is a policy model for funding the spending of governments with sovereign currencies.
- According to this theory, governments do not need to borrow money or tax in order to spend; they choose to do so to limit inflation and influence behaviour.
- Because government spending is only inflationary from the point of full employment, investment for growth and social equity is desirable and possible.
- The modern monetary theory approach translated to clinical director level liberates thinking from 'how to balance the budget' to 'how to maximise value in healthcare'.

**Conflicts of interest**

The author declares that there are no conflicts of interest.

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## Appendix 1

### Explaining the relationship between government deficit and private savings

There are broadly three 'sectors' in a national economy: government fiscal balance, the foreign financial sector and the private financial sector. The sum of respective surpluses and/or deficits across these three must, by definition, be zero (where a net surplus represents net savings, ie more money flowing into the sector than flowing out, and the reverse for a net deficit).

There are three sectoral balances: the budget deficit (government spending (G) minus taxes (T), or G-T), the current account balance (exports (X) minus imports (M), or X-M) and the private domestic balance (private savings (S) minus private investment (I), or S-I). The private domestic balance has to equal the budget deficit, plus the net of exports and imports. As an equation, this can be shown as:

$$(S-I)=(G-T)+(X-M)$$

Re-arranging this equation gives:

$$S=I+(G-T)+(X-M)$$

Therefore, total non-government (private) savings equal non-government investment (or, more generally, non-government borrowing) plus the government's deficit, plus the trade surplus. For simplicity, if it is assumed that the trade balance is zero, the only source of private sector net savings by these equations is the government deficit. If the government deficit was zero, the private sector would be unable to net save. The only source of private saving would then be by private borrowing, and this would be highly unstable.

Moreover, if the government deficit is too small, the private sector will not be able to realise its net saving desires at full employment income and, assuming no change in the current account, income will fall until desired savings equal actual investment. The government's fiscal policy should thus be designed to achieve the goal of full employment. A government deficit would only be too large if it increased private sector net savings beyond desired levels at the full employment level of income. In this case, inflation would be the result. The size of the public sector deficit and debt would be of no consequence in itself; only the macroeconomic outcomes matter. The existence of significant unemployment or underemployment would be evidence that the deficit was too small, regardless of its absolute magnitude in relation to national income.