Modern Monetary Theory and International Trade: Developments on the Base Case for Analysis

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Abstract

Modern Monetary Theory (MMT)'s approach to international trade distinguishes it from other schools of thought. From an MMT perspective, exports are real costs as they require giving something up that could have been consumed at home whereas imports are real benefits as they involve other nations giving something up that they could have consumed. Given a nation's ability to consume goods and services is based upon what it can produce domestically plus what it can import, it follows that a country should aim to fully employ its available labour force and maximize output (subject of course, to the demands of ecological sustainability) and maximise its real terms of trade.

Such an approach constitutes a 'base case for analysis' (Mosler, 2010) and has been criticized on several grounds, financial, strategic, ethical and environmental concerns have been expressed. In this paper, the validity of criticisms and their implications for trade policy are assessed.

Key words
Modern Monetary Theory, International trade, Current account balance, Structural autarky

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1. Introduction

Modern Monetary Theory (MMT)'s approach to international trade distinguishes it from other schools of thought. From an MMT perspective, exports are real costs as they require giving something up that could have been consumed at home whereas imports are real benefits as they involve other nations giving something up that they could have consumed. Given a nation's ability to consume goods and services is based upon what it can produce domestically plus what it can import, it follows that a country should aim to fully employ its available labour force and maximize output (subject of course, to the demands of ecological sustainability) and maximise its real terms of trade.

Such an approach constitutes a 'base case for analysis' (Mosler 2010) and has faced significant broad -ranging criticism, even from economists who are broadly sympathetic to MMT's analysis of money operations (Keen 2018; Murphy 2025). Section 2 considers the ontological differences between Post- Keynesianism and MMT and their implications for developing meaningful knowledge before discussing the Post-Keynesian approach. Section 3 introduces the base case, followed by an evaluation of the criticisms made of the MMT analysis of trade. Section 4 discusses the MMT approach and summarizes how its differing ontology facilitates a robust response to its critics. A consideration of the importance of developing appropriate operationally-focused institutions follows in section 5. Section 6 focuses upon ethics, the environmental impact of trade, and the importance of strategic considerations. The key features of a possible UK trade policy based upon this analysis is outlined section 7. Section 8 concludes.

2. The importance of Ontology

(i) Distinguishing between a Post-Keynesian and a MMT ontology.

Post-Keynesian economic models are generally constructed from a non-government, closed-economy starting point (Armstrong and Wilson 2025) where private sector agents (households and firms) interact in markets, with the government later introduced as a potential stabiliser that injects demand when private investment falters or as a distributor of income through taxation and expenditure policies (see for example, Aboobaker and Ugurlu, 2023). This modelling structure is underpinned by a tacit ontological premise: that the economy exists independently of the state. Such an approach leads many Post-Keynesian theorists to consider macroeconomic issues, such as unemployment, inflation, economic growth or exchange rate dynamics, as primarily the outcome of interactions between private agents with government actions analysed regarding their impact on already-existing markets and institutions.

The implications of this modelling approach are significant. For example, unemployment is most frequently understood as a byproduct of insufficient private sector investment or a breakdown in

consumer-related effective demand, often linked to capital accumulation, profit squeeze dynamics, or global competitiveness (Armstrong and Wilson 2025). These presumptions miss the deeper institutional and operational mechanisms by which money and markets are created. By failing to recognise the state as a foundational actor that holds direct responsibility for outcomes, Post-Keynesian models maintain an ontology that struggles to account for the endogenous causality of state money creation and its implications for employment, inflation, and policy space (ibid).

An understanding of MMT challenges the foundations of Post-Keynesian ontology. It begins not with markets or private agents, but with the institutional architecture of the state and its authority to impose tax liabilities and to issue a currency accepted in settlement of those liabilities (ibid). The importance of sequence is stressed in the MMT approach. The process is founded on the state's need to provision itself, a need it fulfils by imposing a coercive tax obligation and declaring its currency as the unit required for settlement. Consequently, this initial condition generates demand for the state's money, as sellers of goods and services seek to exchange their products for state currency.

(ii) The Keynesian/Post-Keynesian approach

With respect to trade, orthodox Keynesian/Post-Keynesian modelling leads to the belief that, although the government has the capacity to increase employment when the cause of lack of jobs is insufficient aggregate demand (AD) simply by keeping spending power high enough to employ those willing and able to work producing non-tradeable goods and services, the government will not be able to maintain employment in the tradable goods sector at uncompetitive exchange rates (Laughton 2018). Increasingly, in the UK and USA, for example, fewer firms produce tradable goods for both domestic and international markets because foreign products are less expensive. In Post-Keynesian modelling it is demand and potential profitability that drives investment and innovation and Post-Keynesians (ibid) argue that firms will not take out loans to invest in production that will be unprofitable (because the products if they were produced would be more expensive than imports). Thus, even if the state maintained a high level of AD to promote employment an increasing proportion of jobs would be for non-tradable goods.

In addition, some Post-Keynesians support the contention that full employment requires prior capital accumulation (Aboobaker and Ugurlu 2023; see Watts and Armstrong forthcoming for a counterargument) and that rises in productivity occur only when it is profitable for the private sector to invest, noting that investment will be curtailed if higher wage costs or an overvalued exchange rate prevents goods from being competitively priced. From this perspective, for example, domestic firms would have to ensure their green energy products are as efficient and price competitive as the major innovators in countries which are more competitive. Implicitly, the suggestion is that a nation *needs* competition in order to drive innovation and increases in

productivity and, importantly, the government's influence is secondary. The corollary of this approach is that although the state can maintain full employment, its ability to maintain the stability and profitability of sectors deemed be of strategic importance is limited by 'market forces' and the ability of foreign producers to outcompete them.

3. The Base Case and its Critics

Mosler (2010, pp. 68-71, emphasis in the original) sets out the fundamental argument as opposing 'Deadly Innocent Fraud #5: The trade deficit is an unsustainable imbalance that takes away jobs and output'. He counters with, 'Imports are real benefits and exports are real costs. Trade deficits directly improve our standard of living. Jobs are lost because taxes are too high for a given level of government spending, not because of imports… In other words, going to work to produce real goods and services to export for someone else to consume does you no economic good at all, unless you get to import and consume the real goods and services others produce in return. Put more succinctly: The real wealth of a nation is all it produces and keeps for itself, plus all it imports, minus what it must export. A trade deficit, in fact, increases our real standard of living. How can it be any other way? So, the higher the trade deficit the better'[2]

Criticisms of the base case

The logic set out above introduces a base case for analysis for trade. It is not argued here that there are no acceptable arguments against maximizing net imports but rather that the onus is on those who suggest alternatives or developments on the base case to provide compelling support for their viewpoints. Indeed, in Section 6, we consider ethical, environmental and strategic factors and discuss how they might impact upon the conclusions following from the base case.

Here we assess a range of criticisms of the base case and examine if there are circumstances when maximising a nation's real terms of trade might not be in their -or the rest of the world's- interest.

[2] Note that there is no fallacy of composition in this argument, MMT does not suggest that everybody can run a trade deficit, only that countries who benefit from a foreign net savings desire can benefit from a net real wealth inflow over time. Nor should the MMT approach be considered a 'snapshot', rather the MMT argument is *dynamic* and argues that if a continuous foreign sector net savings desire exists then deficit nations can continue to benefit in real terms over time.

(i) Is it possible that trade surpluses can be beneficial after all?

Nations running a current account surplus satisfy a net savings desire in foreign currency[3] (Mosler 2010). They are net exporters of goods and services and net importers of foreign currency. We might ask if such a sacrifice of real goods and services to acquire financial assets is worth it or, indeed, more presciently, if any exporter state is even aware of the sacrifice made to their real standard of living. To date, we are yet to find any significant evidence to suggest that any exporter state recognises that the trade surplus reflects a real macro expense to the domestic economy but has nevertheless decided that the benefits of accumulating external financial assets are worth the price.

It has been suggested that if a nation increases its growth rate sufficiently by running a current account surplus (the so-called export-led growth policy), then no sacrifice of consumption in real terms occurs over time. Keen (2018) argues against Mosler (2010) and Mitchell (2018, 2019). He states that, 'Exports are a way of increasing capacity utilization over and above the limits imposed by aggregate demand in the home economy and (s)ince the extra units exported will drive the firm closer to full capacity utilization, the costs will be lower and the potential profit margin higher' and concludes that, 'Exports are therefore not a cost to the exporting firm, or its host country: they are a profitable way of increasing domestic aggregate demand'.

This paper argues that Keen's analysis does not stand up scrutiny and also that he argues at cross-purposes with Mosler and Mitchell. Mitchell (2019, emphasis added) notes that, 'For an economy as a whole, imports represent a real benefit while exports are a real cost. Exports mean that we have to give something real to foreigners that we could use ourselves – that is obviously an opportunity cost. Imports represent foreigners giving us something real that they could use themselves but which we benefit from having. The opportunity cost is all theirs! Thus, net

[3] Mosler (2004) provides an example to illustrate this point, a US consumer buying a German car. 'If the consumer pays cash for it, the consumer's checking account in a US bank is debited and the German carmaker's account is credited, thereby increasing foreign savings of USD financial assets. Total deposits in the US banking system remain unchanged. If the consumer borrows to buy the car, the bank makes a loan to the consumer, which results in a loan on the asset side of the bank's balance sheet and a new deposit on the liability side (loans create deposits). After the car is paid for, the German car company has the new bank deposit. Consumer borrowing increased total bank deposits and funded foreign savings of USD.That's what the finance behind the trade gap is all about – *foreigners desire to net save USD financial assets and sell goods and services to the US to obtain those assets.*
He further adds, 'Following the above transaction the foreign holder of USD bank deposits may instead desire to purchase US Treasury securities. At the time of purchase, the seller of the Treasury security becomes the new holder of the bank deposit, and the foreigner the new holder of the Treasury security. (If the foreigner buys securities directly from the Treasury the result is the same.)The US government is now said to have foreign creditors, and the US is said to be a debtor nation.While this is true as defined, a look past the rhetoric at what the US government actually owes the holder of the Treasury security is revealing. What the government promises is that at maturity the foreigner's security account at the Fed will be debited, and his bank's reserve account at the Fed will be credited for the balance due.In other words, the US government's promise is only that a non-interest bearing reserve balance will be substituted for an interest bearing Treasury security. This is not a potential source of financial stress for the government'.

imports means that a nation gets to enjoy a higher material living standard by consuming more goods and services than it produces for foreign consumption. *Saying that an export is a cost is not the same thing as saying that the act of exporting makes a nation poorer.*

From the perspective supported here, Keen is simply specifying specific circumstances where he believes the real costs of exporting might be lower than the potential gains (see figure 2 and figure 3 below); his arguments do not contradict Mosler (2010) and Mitchell (2018, 2024). As we discuss below, at specific stages in the economic development of particular nations when the appropriate institutional structure is in place it might be possible for exports to 'increase capacity utilization above the limits imposed by aggregate demand, the costs will be lower and the potential profit margin higher'. However, although it is true that marginal costs may be lower and profit potential may be raised, total production costs are higher. It is acknowledged that such a situation is possible and arguably has been the case with the Asian 'Tigers' since the 1960s, it is not likely to apply to the majority of economies in the Global South which lack the necessary institutional structure and manufacturing capacity. In any case, exports still add a cost to the exporting economy. Although exports are 'not a cost to the exporting firm' they still constitute an opportunity cost to domestic consumers. As noted above, the question whether the hoped-for positive impact on growth rates is worth the real cost[4].

Earlier in the same article, Keen erroneously claims that opportunity cost is inapplicable except at full employment and concludes that, given Modern Monetary Theorists argue that exports are an opportunity cost, they must -at least implicitly - be assuming full employment. Keen suggests this places MMT in the neo-classical camp with regard to assuming economies automatically adjust to full employment.

First, contrary to Steve Keen's view, MMT *does not assume full employment.* MMT actually argues that (for countries with their own fiat currency under floating exchange rates) unemployment constitutes policy failure and stresses that without a Job Guarantee programme in place the economy is likely to stay below full employment. With the currency itself a public monopoly, and unemployment the evidence of insufficient state spending to cover the need to pay taxes and desires to net save (a monopolist restricting supply), full employment is dependent upon the state sustaining the appropriate fiscal balance.

Second, MMT acknowledges opportunity cost does exist in economies below full employment; certainly where institutional structure and lack of aggregate demand cause output to stay well below full employment for extended periods. A demand constrained economy would still suffer

[4] Importantly, the exports of manufactured products by Asian 'Tigers' have taken place when a ready supply of unemployed or underemployed workers, willing to work for low wages by international standards, have been available. In such a situation, when a nation lacks the institutional structure, political will and domestic demand required to produce to satisfy domestic needs, an export-led strategy might seem an appropriate policy (see below).

opportunity cost via a real loss of goods and services through exports (further discussed in Section 4).

Keen (ibid) accuses MMT of 'accepting neoclassical assumptions' when in fact, without apparently realising it, he commits that error himself by *assuming economies can seamlessly move towards the PPF* (the Production Possibility Frontier shows all the maximum, efficient combinations of the two products shown on the axes that can be produced with current resource endowments and technology), thus eliminating the opportunity cost of exports. Keen fails to consider the importance of the nature of real-world economies; movements to full capacity are contingent on institutional factors and adequate aggregate demand. His argument relies upon the *presumption that the economy can adjust towards full employment* in order for there to be no opportunity cost. When the economy fails to do so, output exported is not necessarily replaced by additional output as capacity remains unused.

When Keen (ibid, emphasis in the original) suggests that *'if you are not at full employment, then there is no opportunity cost',* he refers to the diagram below (figure 1) and assumes that a nation operating at point B can increase output of both commodities by shifting to point A, 'this toy economy can have more of both food and clothing if it is at point B, and can (somehow) move to point A.' Thus, it is Keen who assumes that economies 'naturally' adjust towards full employment, for, without this adjustment, his argument would be invalid, i.e., if economies fail to adjust "automatically" to full employment then *opportunity cost does exist below full employment*.

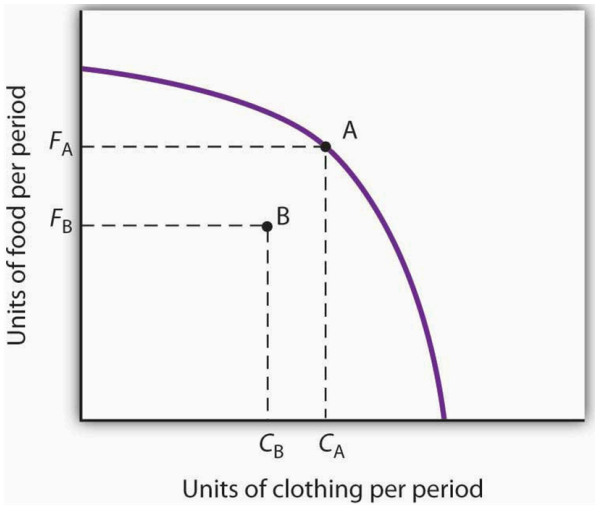

Figure 1. The production possibility frontier (PPF) runs through point A. Point B shows an economy operating below potential maximum output.

Referring to figure 2 (below), to illustrate this point it is argued here that if an economy (for example, an EME), does not automatically adjust towards full employment it would remain on a 'demand constrained' locus (i) close to point B. In this case, increased production of good x would reduce production of good y (and vice versa).

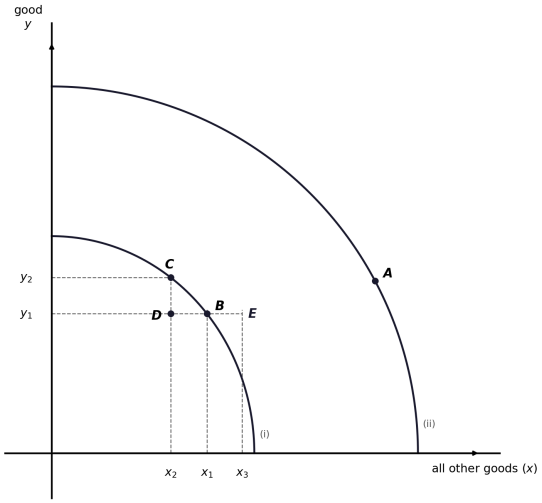

Figure 2. The domestic PPF (ii) shows combinations of goods x and y that can be produced using all domestic resources (e.g. point A).

The locus running through point B (i) shows the range of possible demand/institutionally constrained output combinations that can be produced domestically (e.g. point B). *Ceteris paribus*, if good y can be readily exported, the nation might shift its output combination from point B to point C, exporting CD (the real cost of y1 to y2), initially adjusting to point D. The real gain in imports, facilitated by the sale of exports, is shown by a movement to the right (a gain in all other goods, x). If this movement is beyond B then the real gain is greater than real costs, e.g. at point E, where the real gain of DE (x2 to x3) exceeds the real cost of CD allowing the nation to consume beyond the institutionally constrained domestic production locus. Nevertheless, *exports (CD) are still real costs* even though the economy is materially richer.

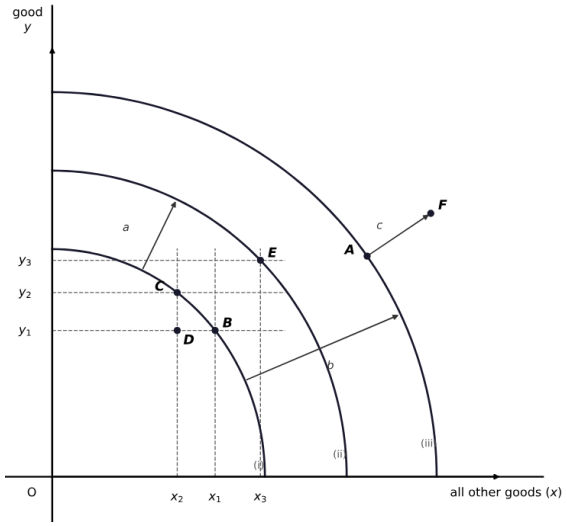

Figure 3 Keen's analysis (which suggests exports can be beneficial to the economy, raising overall output) is illustrated above.

Here, exporting CD of good y (for example, manufactured goods) directly leads to a shift in the aggregate demand/institutionally-constrained locus, (i) to (ii) (movement a). This shift might result from the impact of a combination of factors resulting from the increased emphasis on manufacturing, such as increased economies of scale, technology transfer and the facilitation of institutional improvements. For illustration, *ceteris paribus*, we might note that by moving from point B to C, and exporting CD (the real cost, y1-y2) of good y manufactured goods, the nation is enabled to move from point B to point E on locus (ii), gaining x1 to x3 and y1 to y3 relative to the pre-trade position. However, this is sub-optimal; by ensuring full employment (for example, by employing a Job Guarantee) the country can move to point A on the PPF (movement b), and by maximizing its real terms of trade it can then move to point F which lies beyond the PPF (movement c). Point F is analogous to achieving maximum real wealth (by maximizing both domestic output and real terms of trade) in this context (Mosler 2010).

It is unreasonable to assume that an EME facing significant underutilisation (with no inherent dynamic present to change that position) which exports food products suffers 'no opportunity cost'. Interestingly, at the end of his above statement, with reference to figure 1, Keen notes that the economy '…can have more of both food and clothing if it is at point B, and can (somehow) move to point A' is telling in its use of 'somehow' in parentheses. It seems Keen is at least tacitly acknowledging the possibility that the economy might not adjust to full employment, meaning the opportunity cost of exports does, in fact, remain in place.

Importantly, Keen misses the point that the employment itself is a cost of production and the benefit is the output. When a net exporter merely accumulates balances at a foreign central bank the economy would have had the same 'economies of scale' and real outcome had the net exports simply been destroyed.

Keen then goes on to discuss another issue. Again, he seems to be arguing at cross purposes with Mitchell (2018). He suggests that a reliance on the 'seller's utility in trade' underlies Mitchell's argument, interpreting the latter's position as being consistent with a 'Neoclassical way of thinking about exchange in general (not just international trade): the seller of an object foregoes the possible utility of consuming it in order to gain revenue instead' (ibid).

Keen refers to Marx (1976: chapter 2) who argued that 'goods are produced with a view, not to *either* consuming them *or* selling them if "the price is right", but with a view to selling them, period. The utility of the product to the actual producer is close to zero: its true utility to the producer is its capacity to be sold for a profit'. Keen seems to miss the point which is not about producers choosing between whether to sell or retain a product but rather about *who to sell to*. If food producers sell their produce to domestic buyers, then domestic real consumption is higher than if it is sold abroad. The 'seller's utility' is relevant in the sense that a decision by the seller to export rather than sell domestically is based upon the former's expected higher profitability. When a Kenyan farmer exports food, owing to higher expected profitability, then the local population has less to buy, given institutional and capacity constraints (see Section 6) .

Advocates of export-led growth strategies acknowledge that the pursuit of a current account surplus requires a particular policy approach, including maintaining a low exchange rate, possible wage suppression and direct government aid for exporters, in particular in research and development. If successfully implemented, this strategy allows the nation to exploit significant economies of scale and utilize the latest technological and organisational methods, leading to a reduction in marginal cost which may not be possible at the lower levels of output required for the domestic market. The beneficial by-products of this pursuit of current account surpluses include enhanced productivity and higher levels of economic growth[5].

One might argue that if we observe both greater growth of total consumption and national income overall in trade surplus countries than in trade deficit countries it might suggest to the casual observer that the enhanced total growth in surplus nations outweighs any losses in current real domestic consumption caused by the exporting countries' negative real terms of trade. As noted above, the basis of this argument is that if nations mass produce for world markets, they benefit from significant economies of scale and are able to use the most technologically-advanced and efficient methods which are only feasible at high output volumes. Expressed simply, a nation is effectively sacrificing current output (by exporting goods for foreign use) but gaining a very efficient domestic industry, enhancing both current levels of income and future growth potential. It is important to again highlight that marginal costs and total costs are two different things and also note that the exports are competitively priced to

[5] Many of the world's new technology-based production bases are in countries with 'competitive' currencies but the profit bases are often in the different countries, such as the USA and Europe. This begs a question regarding international trade data which arguably distorts the true financial picture by including exports as a credit on the balance sheet of the country of origin not the profit base.

reflect those efficiencies, including a relatively small profit for the exporter, to the benefit of the real terms of trade of the importer.

Furthermore, even if we observe a positive correlation between growth rates of income and current account surplus in this contexts, we must also be careful *to distinguish between cause and effect*[6], i.e. does improved productivity drive growth and increase current account surpluses or does the pursuit of current account surpluses drive productivity and growth? In addition, we need to consider if such correlations are dependent on the level of economic development and extant institutional structures of the nations under scrutiny?

Taking the case of Japan, taking full account of the productivity and trade data, it seems clear that Japanese productivity rose rapidly -using state support- which resulted in Japanese industry becoming internationally competitive and was then followed by current account surpluses[7]. The process *began with productivity enhancement* and later this productivity rise, coupled with the low yen exchange rate policy enabled Japan to achieve current account surpluses[8]. The deliberate depreciation of the yen by the Bank of Japan resulted in a redistribution of income towards the Japanese export sector from other sectors (Mosler 2025), Japan exported significant output but it benefited from economies of scale and employed efficient methods compatible with large-scale output. The institutional structure and the stage of economic development of a particular nation are important, for example, taking the case of Japan, although increasing productivity in the manufacture of goods was the initial driver of the surplus, its nature has shifted over time. Indeed, the composition of Japan's current account surplus has altered with a surplus on primary income (interest and dividends generated by past overseas investments), becoming increasingly important in the new millennium.

A comparison of Asian 'Tigers' to African EMEs who mainly export primary products is valuable. It is clear that African countries are exporting food when their own population is often undernourished (see Section 6). The situation faced by many African nations perfectly illustrates that exports are a real cost and suggests the idea that exporting on a large scale tends to lead to future gain (elucidated above) seems to have limited applicability at best. Abu-Ishmael (2003,

[6] In any case, the discussion of sequence does not alter the fact that lowering marginal costs through trade volumes does not necessarily mean lower unit costs for the domestically retained output.

[7] Japan and later, China, prior to their rapid economic growth had significantly lower levels of productivity than the relatively slowing growing trade deficit countries. However, maintaining growth rates for advanced nations which already have high levels of both productivity and relatively high levels of output is a much harder task than new industrializing nations face.

[8] We note here that productivity growth in Japan came first; the Japanese government actively supported industry, especially the so-called 'sunrise' industries (including heavy industry such as steel and shipbuilding, automobile and electronics), during the 1950s and 1960s, providing, for example, loans at low interest rates and access to foreign currency, enabling them to import the resources required to develop production. These industries also benefited from protection against established international producers (an approach which draws upon the so-called infant-industry argument). This was followed by an extended period of current account surpluses beginning in the mid-1960s (as opposed to the current account deficits which had characterized the Japanese position in the 1950s). Japan grew remarkably rapidly from this time and the nature of Japanese exports changed significantly. By the 1980s Japan no longer relied on low quality products such as textiles and toys as had been the case in the 1950s .

p.1, parentheses in the original) carries out a detailed empirical study[9] and reaches a conclusion that contradicts the view that a general positive relationship exists between economic growth and export growth, "Conventional wisdom purports a positive causal relationship between growth and export promotion. Empirical evidence and stylized facts that emerge from this work give policy conclusions that are far less decisive. Export-agnosticism is also backed by historical evidence. For example, cross-country analysis reviewed here shows two groups of countries that have achieved export growth over long periods: oil exporters and Asian 'Tigers'. For the first group of 'outliers', foreign exchange bonanzas (typically in the form of a sudden and significant jump in oil exports, labor remittances, service exports, etc) rarely came without complicating effects on growth. In one recurring scenario, demand pressure from an oil boom will result in cost-push inflation, overvaluation of the exchange rate, de-industrialization and asset bubbles. Furthermore, as in the case of larger developing countries, if wages are not fully indexed and the economy is wage led, income distribution worsens and growth lags behind. The moral is clear: export growth per se is neither necessary nor sufficient for long-term economic growth'. Abu-Ishmael's cross-sectional analysis of the relation between exports and growth yields little correlation outside the cluster of outliers (oil -based economies and Asian 'Tigers'). He concludes that 'the theory of export-led growth cannot therefore be a general one; export-led growth remains a unique and predominantly exclusive phenomenon' (ibid, pp. 11-12).

These conclusions coalesce with the analysis put forward in this paper which supports the logic of the base case for trade as a post-production activity, i.e. imports add to your real wealth and exports reduce it. The alternative approach outlined above, based on the contention that a nation can increase its real wealth over time by running a current account surplus (Keen 2018), relies upon institutional and capacity-utilisation based *contingent factors* and has no fundamental general applicability. It is acknowledged that the real costs of exports might be a price worth paying for specific nations at particular phases of their industrial development. For example, in the nineteenth century Great Britain's institutional structure and competitive manufacturing allowed it to employ an export-led growth strategy, followed by, for example, the USA in the late 19th to the mid 20th century. However, once institutional structures in those countries changed, that strategy became obsolete. In the Post War period the Asian 'Tigers', for example, first Japan and then China have adopted an export-led growth. However, even in their case that strategy is evolving as the structure of their economies change. For the majority of nations an export-led growth strategy is neither feasible nor desirable (see below).

A clear fallacy of composition would undermine an attempt to suggest an approach based upon exchange rate depreciation designed to enhance economic growth has universal applicability.

[9]Abu-Ishmael utilises Taylor (1991) as a key empirical and theoretical reference and considers how economic openness affects growth at the country level. He concludes that Taylor's (1991) conclusions regarding trade and growth are 'still essentially relevant'; 'trade does not seem to be closely related to the way economies perform. Fast growing economies are more or less open, have diverse patterns of specialization, and their success is not obviously led by exports, industrial or otherwise' (Taylor, quoted in Abu-Ishmael, 2003).

The policy of reducing domestic currency value and/or suppressing wages to pursue export-led growth, implicitly assumes that other nations are prepared to be net importers and accept an appreciation of their currency. For example, Japan, and later China, utilized a low currency policy and became net exporters, a process enabled by, for example, the USA's willingness to accept a higher exchange rate. The USA has benefited immensely from increases in real wealth from this policy stance (Mosler 2010). Clearly, not all countries can be net exporters so if current surpluses are seen as desirable, a nation would have to decide whether trying to achieve them is worth the cost (this issue is developed in Section 7).

In addition, it is important to assess the extent to which *policy failure* has influenced the relationship between current account balances and economic growth. In principle, nations running a current account deficit are adding to their real wealth, freeing up labour for other purposes. However, if state policy leaves such labour unemployed, real output is necessarily lower than potential. In this case current account surpluses *merely help alleviate the problems caused by misguided state policy* but, from the perspective of the exporting nation, do so in a less resource efficient manner as real output leaves the nation rather than being consumed domestically.

If we measure national income in the standard way, GDP = C + I + G + (X -M), we observe that if policy failure and/or inadequate institutional structure, mean that unemployment and underemployment persist, a current account surplus might increase growth over time since the labour employed in export industries may not have been utilized domestically. When we look at the Asian 'Tigers' we see this point illustrated in practice; current account surpluses have been accompanied by increases in output and employment, albeit at wages below those in developed economies, apparently facilitating enhanced growth rates. However, Mosler (2000) points to a critical contrast between free trade under conditions of full employment on the one hand and unemployment on the other. He notes that 'Our textbooks and macro models assume full employment when they discuss the automatic benefits of free trade… Nations with unemployed labor compete for capital by offering lower costs for international businesses - particularly the real costs of labour. As long as more than one nation is at less than full employment, free trade will create continuous downward pressure on real wages'. He later notes that with competing exporters there is a race to the bottom in terms of real wages (Mosler 2026, personal correspondence).

If a nation is at full employment it is not affected by this phenomenon, as trade and foreign direct investment is driven by comparative advantage. Foreign direct investment must compete with domestic employers for labor which means upward wage pressure, as investment necessarily 'crowds out' consumption, which is thereby reduced. Presumably, the new real investor pays the higher real wage because, responding to 'price signals', he intends to produce more real output for the same labour input and can afford to pay the higher wage, so both wages and output rise and consumption is deferred (ibid). (See Section 7).

(ii) Are trade surplus countries gaining more than they are losing?

Some economists and commentators (for example, Keen 2018; Buffett 2003) also suggest that trade surplus nations gain the capacity to acquire assets in deficit nations and that this can become a significant problem for the latter. MMT shows that net importing nations gain goods and services but the consequence is that the foreign sector holds savings denominated in the domestic currency. MMT regards the gain in goods and services to consume as outweighing the holding of domestic currency by foreigners because the domestic issuer can always limit what foreign holders do with that currency. However, Keen (2025) argues that when the foreign sector holds domestic currency they have gained the capacity to acquire domestic assets which can be highly problematic. In the British case, when foreigners use pounds to buy a UK company, or to buy real estate, Keen deems this to be a potentially damaging loss of an asset. We might consider if it matters that trade surplus countries might gradually acquire ownership of firms and real estate in trade deficit countries? Given non-residents are subject to the same domestic laws and regulations as residents we might ask why does it matter where the owner resides? And if it is thought to matter, domestic laws and regulations can readily be modified accordingly.

Foreign direct investment (FDI) is often portrayed as a positive development in both the media and orthodox economic discourse. For example, the opening of Nissan's car plant in the North East of England was widely praised rather than being described as a loss of assets to foreign-based owners. Yet this view warrants scrutiny. The conventional portrayal assumes that ‘location' and 'ownership’ are the most important factors in the economic relationship, while the significance of the ‘operational currency’ governing productive entities frequently escapes analysis entirely.

Wilson (2026, personal correspondence) offers a useful analogy by conceptualising FDI as a large ‘barge’ of overseas origin docked in a domestic harbour. Within this framework, the Nissan plant, serving as the barge, may currently be moored in the UK but operates primarily within the yen currency zone. Domestic labour, materials, and energy are supplied to the barge, while only a small portion of turnover is exchanged for sterling with UK importers to pay for these local inputs. The sterling zone's concern is the net flow: what physical resources and currency go onto the barge versus what returns. Herein lies the analytical pivot (ibid).

Crucially, all returns to scale, credit balances at the central bank, accrue to the ‘barge’ (the foreign-currency area), rather than the sterling area. The actual export of vehicles and the import of component assemblies remain, in reality, a foreign concern. While the value of these exports is recorded in UK GDP by *converting* them into the sterling reporting currency of the National Accounts, this is a statistical convention that distorts the actual quantity of sterling-based activity flowing within the UK. In a world of free-moving capital, the currency area is rarely aligned with the territorial borders used for national accounts. Multinational corporations transcend these boundaries, creating effective currency zones around the globe where nominal economic control and benefits accrue to the operational currency zone of the investor, rather than the local area.

Admittedly, the barge analogy risks oversimplifying complex supply chains; critics might argue that it underplays 'spillover' benefits, such as technology transfer or local supplier development. However, such benefits are not guaranteed outcomes of FDI but depend entirely on the policy environment. FDI must deliver more than mere local employment or nominal capital inflows, which are outcomes that any state operating a free-floating currency can achieve independently, without ceding control to foreign owners.[10]

This brings us to a second point: the common misunderstanding of what 'ownership' entails in a world of sovereign currency issuers. The currency-zone analysis reveals *where* value goes; an understanding of Modern Monetary Theory (MMT) reveals *who could stop it*. Critics, such as Keen (2018), who lack a deep understanding of MMT ontology (Armstrong and Wilson 2025), often fail to grasp the key insight that the issuer of the currency remains fundamentally in charge. States retain the power to direct foreign-based agents within their national boundaries. 'Ownership' is not an absolute right of control, reward, and exclusion; these privileges exist only insofar as the domestic jurisdiction permits them[11].

Just as a property owner can always be forced to lease to the state for no reward if they do not use it—as demonstrated in various compulsory purchase or eminent domain laws across jurisdictions—a sovereign government can impose capital controls, local content quotas, or joint-venture requirements to ensure FDI aligns with national priorities. The perceived 'risks' of FDI are, therefore, less about the nature of the investment itself and more about institutional design reflecting particular interests. If a state allows foreign ownership to bypass the public interest, it is a choice of the polity, not an inevitable consequence of running a current account deficit (see Section 7).

While international trade treaties or political constraints may appear to limit this sovereign control, these are ultimately functions of political choice. In the UK, for example, the principle that no Parliament can bind its successor ensures that the state retains the ultimate authority to renegotiate or withdraw from international commitments if the national interest demands it. Evidence from nations like China demonstrates this MMT principle in action: by imposing strict regulations on FDI, the currency issuer can enforce conditions that ensure foreign ownership serves domestic goals. Ultimately, the impact of FDI is a matter of state agency; the 'barge' takes on character only through the terms of its mooring (Wilson 2026, personal correspondence).

[10] Linking this back to the analogy, if the Nissan barge 'floats away' will the local cluster of transferred technology survive and enhance local production or will it all wither and die? (Wilson 2026, personal correspondence).

[11] 'The idea of foreign ownership has long been a concern for progressives because ownership of financial wealth bestows power and allows the owners to influence government policy to their advantage. Further, the accumulation of local currency assets can manifest in asset price bubbles (real estate) that disadvantage local residents, especially lower income cohorts.In this regard, governments have to have strict rules in place as to which assets a foreigner can accumulate in the currency of issue' (Mitchell 2018).

(iii) Trade and exchange rates

A current account surplus can be indicative of a country's net savings desire in foreign currency, e.g. China's aim is to increase net exports and its current account surplus and satisfy its net savings desire for USD. Foreign exchange market intervention is one of the policy tools available. A national central bank can pursue a policy designed to depreciate its exchange rate in order to improve competitiveness, raise export sales and increase net saving in foreign currency, for example if the Bank of China buys USD it lowers the USD price of Chinese goods, and increases the Bank's USD reserves. If the USD gained by Chinese exporters are sold to the Bank of China which pays in newly issued domestic money and does not sterilize[12] (with bond sales) new money (as defined) is created in the exporting country and its CB's balance sheet expands (it holds more foreign exchange as an asset and more reserves as a liability). However, if the exporting firm retains the foreign currency in a bank account in a foreign sector bank (for example, a Chinese firm keeps a USD balance in the US banking system) or exchanges the foreign currency for domestic currency on foreign exchange markets, no new domestic currency is created. In the latter case there is simply a transfer of deposits: the exporter has gained a RMB deposit but lost a USD deposit and the counterparty has done the opposite[13] (see Mitchell 2024).

4. The MMT Approach

The logic of the 'base case' shows that a nation can maximise its real wealth by first ensuring full employment and second maximising its real terms of trade (figure 3). However, MMT advocates acknowledge that when ethical, environmental and strategic considerations are taken into account a different perspective can be taken on the latter and a more complex picture emerges (discussed in Sections 5-7).

In stark contrast to the orthodox Keynesian/Post-Keynesian approach, an MMT-informed ontology suggests that full employment can *always* be maintained by a nation with its own currency under floating exchange rates (Mosler 1993, 1997) irrespective of the level of capital accumulation, exchange rates, 'international competitiveness' etc. (Armstrong and Wilson 2025;

[12] The concept of sterilization in this context is rather outdated. Under fixed exchange rates bond sales were required to drain convertible currency from the system to prevent conversion to foreign exchange at a fixed rate. In the monetarist heyday when the now-disproven money-multiplier myth was commonly accepted, bond sales were seen as an important means to reduce the 'money supply' as reserves counted as 'money' whereas bonds did not. Nowadays it is commonly understood that bonds and reserves are best conceived as different forms of non-government net financial assets and the distribution between the two is of little macroeconomic consequence.

[13] Mitchell (2018b) gives a step step guide to the foreign exchange dynamics which accompany international transactions. It is argued here that support for the 'exports create money' myth is misplaced. Such a viewpoint fails to consider the fact that banks will not maintain currency mismatches on their balance sheets. Their assets and the liabilities will largely match in denomination terms. When a bank takes dollars to create pounds, that bank already has a lay-off lined up to get rid of the dollars, either by making a dollar payment for a customer, or by exchanging it with another bank who has an excess of pounds and needs the dollars to make a payment. It is that layoff process that causes the exchange rate to shift (Wilson 2026, personal correspondence).

Armstrong 2025b) and thus argues that trade policy should be carried out in a full employment context (Watts and Armstrong forthcoming; Armstrong 2025).

MMT points to the distributional consequences of trade policy. For example, in order to facilitate exporting to the US as part of a broader objective of achieving a current account surplus, the Bank of Japan has pursued a policy of exchange rate depreciation by buying USD, reducing the prices of Japanese goods in the USA and making American goods expensive in Japan. Such an exchange rate policy has caused the Japanese real standard of living to be lower than otherwise; real wages in Japan have been reduced by the exchange rate fall, whereas American real wages are corresponding higher[14]. From this perspective it is clear that a low exchange exchange rate policy supports exporters to the detriment of living standards of the rest of the population[15] (Mosler 2025).

MMT stresses that governments can always support their own industry in sectors deemed to be strategically important, enabling domestic firms to maintain market share in the home market [16]. Not only can the state buy anything available in its own currency at a *price it determines,* the state can insist upon premium quality, technologically advanced goods and services as a part of

[14] Is it reasonable to argue that *if* an exchange rate fall increases production runs which in turn boosts investment and increases import substitution, there would be no fall in living standards and domestic real wages might actually rise? Quite possibly, but such an eventuality clearly relies on a particular set of economic and institutional circumstances, such as the Asian 'Tigers' at particular periods in their economic development (as discussed above). On the other hand, when we look beyond the Asian Tigers, we observe the inapplicability of such an argument, for example, when we consider Global South nations which primarily export agricultural products and other commodities. Since these exports are sold at world prices (usually in USD) a change in the numeraire of the exporting nation will leave the relative price of such commodities unaffected (Mosler, quoted in Armstrong 2025). Simple manufactured goods (priced in domestic currency) may be cheaper abroad but have low price elasticity of demand; there would simply be an income redistribution in favour of exporters from consumers of imports which are priced in USD. It seems that a low exchange rate policy *might* work for nations which produce high value manufactured goods on a large scale, but only temporarily. Over time, political and institutional circumstances change and nations might be expected to become less and less willing to sacrifice real resources in order to facilitate export-led growth (see below).

[15] As noted above, a fall in the exchange rate might conceivably cause real wages to rise (possibly after a time lag) but this seems to be a special case; it possibly applies to the Asian 'Tigers' at a particular phase in their history with a favourable world trade environment and appropriate institutions. In general, though, the reverse is likely to be the case. A lower exchange rate raises the prices of imports, reducing the purchasing power of nominal wages. As a direct consequence real wages fall. Imported components and raw materials cost more in domestic currency, raising business costs, creating downward pressure on real wages. It is also possible that a fall in the exchange can be met with retaliation (even with accusations of 'currency manipulation' in certain cases), meaning no gain in economic activity follows. Increased income inequality is also likely as currency depreciation increases the real purchasing power of foreign buyers while workers who are paid in domestic currency see a corresponding decline in their real wage.

[16] A nation's competitiveness is influenced by numerous factors including wage rates, productivity, research and development, skills, know-how and diversity of production. If we employ a Post-Keynesian approach (Aboobaker and Ugurlu 2023) we might argue that a country that is uncompetitive tends to get into a downward spiral, where government spending cannot create the virtuous cycle of more investment, better research, better products, higher consumption. However, an MMT understanding is based upon a different ontology (Armstrong and Wilson 2025; Invernizzi, 2021). MMT recognises that the government isn't the 'chaser' but the 'driver'. The government is the currency-issuer and can always draw resources to investment as determined by the imperative to serve public purpose. MMT shows that targeted government spending could facilitate the development of green energy (Nersisyan and Wray 2021), new technologies etc. irrespective of the state of 'international competitiveness.'

its procurement policy and require domestic firms to meet rigorous quality standards, providing direct subsidies, free energy, investment and education and training and, by putting domestic firms in competition with each other as required, best enable those standards of excellence to be maintained. It is acknowledged that institutional structure is path dependent and should be designed to encourage the development of an innovative culture (see below). The state never *needs* the private sector to fund investment. It might *choose* to pursue a policy which encourages private investment but it can always invest directly when real resources are available. The argument presented here disagrees with the 'economistic fallacy' which suggests that exposure to 'market pressure' is *essential* for growth. If this was the case, how could any nation ever gain a foothold in global markets? The fact that the Asian 'Tigers' did just that by government support and protectionism shows that such 'market pressure' cannot be essential (although of course, it might be viewed as beneficial for the outcomes of particular industries at particular times). MMT stresses the dynamics of state-determined and maintained institutions and that markets are not 'the only tool in town' nor everywhere present, just an aspect of the institutional structure. Rapid improvements in military, aeronautics, space technology support the counter view[17] (Reuven and Shamir 2025).

Importantly, a state can buy foreign technology whatever the exchange rate (though the real terms of trade may be prohibitive for nations which lack a fiscal system which is soundly based on enforceable taxation). In the UK's case, the pound is well grounded by tax liabilities and the UK state can import whatever technology[18] it requires at reasonable terms of trade. In the highly unlikely case that all foreign net saving desire evaporated, the state could still buy whatever it liked by utilizing gross export revenue, effectively employing its hierarchical position to have 'first call' on gross export earnings, irrespective of the current account balance (Mosler 2022). The state can always subsidise its own green technology (if considered to be consistent with public purpose)[19], meaning imports become uncompetitive in targeted areas, irrespective of the extant exchange rate. A direct subsidy avoids the arbitrary distributional gain for exporters of a fall in the exchange rate. In summary, MMT argues that given the state's position as the monopoly issuer of the currency, it necessarily has the authority and the tools to ensure selected domestic industries remain 'competitive' (the question of which sectors should be supported for strategic, ethical or environmental reasons is discussed in Section 7).

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[17] The socialist countries of eastern Europe and also the Soviet Union spent fifty years trying to achieve excellence using the state's power and promise to purchase. They had some success but eventually fell further and further behind. The Soviet Union is an example of institutional failure in this context, see Harrison (2001).

[18] Looking deeper, it is argued that exporters are actively trying to sell more exports often because they have overinvested (have excess stock) and need to generate a return. Indeed, banks advertise their services at trade fairs with slogans such as 'take the local currency to boost trade'. In such circumstances, exporters will offload the local currency onto such banks and the banks will exchange the currency with agents who require it to settle tax liabilties and debts in that currency in exchange for output. Critically, the state needs to set up and maintain an appropriate institutional structure to facilitate this process.

[19] This would have the effect of increasing the public sector deficit or non-government sector net saving, *ceteris paribus*, in order to serve public purpose. Policy should should be designed to balance efficiency with resilience in real resource terms (see Section 6 (iii), below)

Clearly, trade deficit countries can lose employment in those industries where cheaper imports are available[20]. Trade surplus countries might suppress consumption in their own countries at the behest of manufacturing industry and other exporters, implying that the exporting countries could be consuming more by purchasing their own output instead of exporting, thus exports are an opportunity cost. A lower exchange rate might increase exports which would either divert resources from alternative uses or bring more resources into use. If the domestic economy has unused resources it could export goods and services which it would not have necessarily produced had it not been exporting, increasing its share of world trade and increasing workers' incomes. However, at full employment, workers would be diverted from production for domestic use to export sectors. In summary, MMT informed policy can ensure full employment and, given that a currency-issuing state can always employ the labour shed from industries which have lost demand to foreign competitors and thus acquire the cheaper imports plus additional output in other domestic sectors, *non-achievement of full employment is always a policy failure*[21].

5. The importance of institutions

A nation's ability to ensure a high quality standard of living (as it many define it) depends upon its access to real resources (both domestically and via international trade), the political and societal will to harness a nation's capacity to deliver progressive policy and crucially, the existence of well developed institutions which facilitate effective policy delivery.

A detailed analysis of the empirical and theoretical work on the relationships between institutional structure and economic growth and development is outside the scope of this paper. Nevertheless, we briefly consider some of the key aspects of the structure of institutions and

[20] We might note that a country whose economy is uncompetitive may well be hampered in its ability to maintain production of tradable goods, because consumers would shift demand to the cheaper imports produced in more competitive countries. However, if consumers want to access cheaper foreign cheaper goods to a value above export revenue, it would not be possible unless the foreign sector has a desire to net save domestic currency. It is important to distinguish between *desire* to import and *ability* to import. If the nation faces a positive net savings desire it can import cheaper foreign products by exporting its own currency, and redeploy labour to maintain full employment but if there is no net foreign savings desire then domestic consumers would have to continue to buy domestic products unless its exports increased in order to facilitate it. This is very relevant for developing nations which may face a very low to zero foreign net savings desire. Such nations would need to export in order to generate the foreign exchange to pay for imports (or enter into -often highly disadvantageous- foreign currency-denominated loans). Without access to foreign exchange developing nations would be unable to import foreign cheap consumables which means their living standards remain suppressed. In contrast, nations such as the US and UK are able to import significant cheap consumables but a question emerges. To what extent should they do so? (See section 7, below).

[21] Mosler (2010, p. 59-60, emphasis in the original) notes, with respect to the USA, 'All we have to do is keep American spending power high enough to be able to buy BOTH what foreigners want to sell us AND all the goods and services that we can produce ourselves at full employment levels. Yes, jobs may be lost in one or more industries. But with the right fiscal policy, there will always be sufficient domestic spending power to be able to employ those willing and able to work, producing other goods and services for our private and public consumption'. Interestingly, economists often debate the extent of possible marginal gains from trade policy of a nation with high unemployment and not the massive gains to be had from readily available domestic full employment policy.

industrial policy required to promote innovation and growth. This is followed by a consideration of the relationship between institutional structure and trade policy.

Dolfsma and Mamica (2020) suggest that mainstream economists tend not to favour government intervention in the form of industrial policy but, in contrast, institutionalist economists have recognised its potential benefits. Importantly, MMT economists recognise the potential losses of not having industrial policies. They note that institutional economics naturally provides an analysis of industrial policy that takes into account the formal and informal institutions required to support progressive change. Nast et al (2024) consider how government support influences technological progress and complexity. They argue that government support drives complexity when it encourages private investment in research and development, noting that this might be expected to contribute positively to economic growth. They see government support as providing impetus rather than merely accompanying technological change. The OECD (2023) argues that the conduct of the competition authorities is very important in fostering innovation, noting that the effect of competition on innovation depends on the degree of contestability and the capacity of innovators to capture the benefits from innovation (at least temporarily). They stress that the relationship works both ways as innovation can also change the competitive dynamics and structure of markets. They warn that successful innovation can also lead to reduced competition. A range of external factors are significant including regulation (including differences between regulatory regimes) and the extent of collaboration and 'a sound competition policy that creates a level playing field also facilitates the entry of new players to the markets and the introduction of new products and processes and these innovations, in turn, also affect market structures'.

Amable and Petit (1999) support an approach which seeks to identify the relative importance of institutions which influence technological change and growth and their interconnectedness. They stress the importance of recognising that, although advanced economies might face similar global challenges, they are nevertheless characterized by the presence of diverse forms of capitalism. This leads to differences in institutional structures and performance, in turn requiring diverse policy approaches.

Levy et al (2025) examine the importance of industrial policy and its influence on firms' performance. They highlight a highly significant expansion in government intervention in recent years. They view this development as reversing the trend which followed the establishment of the World Trade Organization and the increasing acceptance of free-market and free-trade policies (as opposed to the provision of domestic industries which had characterized earlier times). 'The COVID-19 pandemic and rising geopolitical tensions, which intensified economic and global supply chain vulnerabilities, reversed that trend. Between 2017 and 2024, global industrial-policy actions increased by approximately 390 percent, with a particular focus on critical industries such as defense, semiconductors, and high-end equipment'.

When we take a historical perspective, we observe that states with an underdeveloped institutional structure, including an inefficient state apparatus, low productivity, high levels of unemployment and underemployment might benefit from rapid industrialisation, coupled with a current account surplus, economies of scale, technology transfer etc. e.g., South East Asian nations (or 'Tigers') at various points in time[22]. However, once institutions are well -developed, including state capacity to maintain full employment with a job guarantee and the ability to 're-embed' markets (Polanyi 1944; Mitchell and Fazi 2017: Armstrong 2015) treating market forces as 'servants not masters', within a state-constructed institutional structure, the pursuit of current account surpluses becomes unnecessary. Efficiency can be maintained without the sacrifice of real resources, wage suppression or deliberate exchange rate depreciation.

Mosler (2010, 2020) recognises the state-centric reality that begins with tax liabilities creating sellers of goods and services that, to the extent of subsequent state spending, are directed to what the state wants to buy. At its core the economy's design is that of a command economy, with the rest of economic activity utilizing what is 'left over' as it operates within the state's institutional structure. This structure includes everything from a military industrial complex to state-funded medical research as well as structures of rules and regulations for student education. 'The remainder of the economy is analogous to private vendors outside a football stadium!' (Mosler 2026, personal correspondence)

Clearly, there is a deep need for the right operationally- focused institutions; this underpins the capacity of a nation to enact the progressive policy. An appreciation of MMT reveals that markets are part of a state-instituted and maintained institutional structure and ultimately, *the state is in charge* for good or ill (Mosler 1993, 2020; Mitchell and Fazi 2017; Armstrong and Wilson 2025).

The policy approach becomes more complex and, indeed, more urgent when we take a global rather than national perspective. We might suggest that a move to more balanced trade for reasons below - ethical, environmental and strategic is the way forward. It could easily be argued that in the current political environment, where nationalism is on the rise, ethics are subjugated to profits and climate change denial is rife, such a policy approach might be viewed as unattainable. Nevertheless, blending optimism with realism, the argument put forward in this paper suggests that it is worthwhile analysing the importance and ethical and environmental aspects of trade and taking full account of them in the development of trade policy.

[22] If we consider the Asian 'Tigers', we observe how their economic development has been characterized by passing through several stages beginning with state-led and state- supported industrialization, enhanced productivity, manufacturing for export with an increasing emphasis in technological innovation and finally, the development of financial and services sectors.

6. Ethical, Environmental and Strategic Considerations

(i) Environmental sustainability

International trade involves mass transportation of raw materials and tradable goods, long complex supply-chains with potentially damaging consequences to the environment (WTO N.D.). Kyriakopoulou et al (2023) take account of WTO (N.D.) data and note that, 'Around 20–30% of global CO2 emissions are associated with international trade and therefore it is important to reduce these emissions as part of wider efforts to mitigate climate change. The impacts of climate change also pose significant physical risks to trade and mitigating climate change is the best way to avoid these worsening significantly'[23] They point to the importance of building buffer stocks and supply chain diversification but caution against damaging 'the fundamental building blocks of the modern trade system, whereby countries tend to specialise in economic sectors in which they have some comparative advantage and try to benefit from economies of scale and the optimisation of global value chains'. Kyriakopoulou et al (2023) note that low-carbon transport on a large scale will not be introduced quickly, requiring immediate prioritisation of shorter supply chains and a move towards more local production and enhanced resilience. However, they also acknowledge that the breadth of adoption of 'clean technologies' (Serin 2023) can be enhanced by international trade[24]. It is clear that the relationship between trade and environmental protection is far from straightforward but too much caution regarding trade policy might be expected to be counter productive with respect to environmental protection.

[23] Kyriakopoulou et al (2023) point out that 'Globalisation and the fragmentation of production processes have been important contributors to rising emissions due to increases in the transportation and disposal of goods as part of complex global value chains. More than 75% (WTO 2021) of the emissions embedded in international trade come from just a few sectors, including energy and transport. Freight transport can be decarbonised through *sustainable aviation fuel* (IATA N.D.), moving to lower-carbon modes of transport – including zero-emission vehicles on land and sea – and improvements in fleet efficiency. Such shifts require regulatory incentives and innovation, which in turn requires investment. Several countries have introduced initiatives to incentivise progress, including the ReFuelEU Aviation initiative (European Council 2023) launched as part of the EU's 'Fit for 55' package in 2021 and the US Sustainable Aviation Fuel Grand Challenge (US Department of Energy 2021) launched in 2022'.

[24] Kyriakopoulou et al (2023) use the example of the solar energy industry and suggest that it 'demonstrates how international trade can accelerate the investment and innovation needed to deliver the low-carbon transition. Over the last decade, the deployment of solar photovoltaics has hugely increased while costs have significantly fallen. This is in large part thanks to global value chains (IEA 2022) that have made the industry more efficient by spreading the production of inputs (such as the silicon solar cells) widely across different regions, so that risk to any one constituent part is also spread. Further cost reductions have been made possible by economies of scale enabled by international trade. Breakthroughs in energy storage and transmission are now needed to facilitate the trade of solar and other renewable energy across countries and thus respond to the varying levels of energy supply and demand caused by the uneven nature of access to sunlight and wind'.

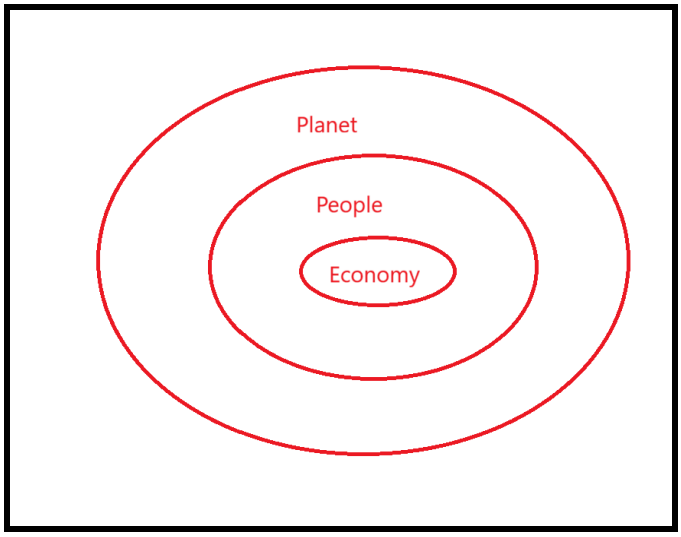

Figure 4. Mosler (2026, personal correspondence).
The economy is a social construct, designed by people to serve the purpose of provisioning. However, the whole provisioning process is set within planetary boundaries (see also Raworth 2018).

ii) Ethics

The MMT 'base case' export-import insight frames the outcome of international trade from the perspective of an individual nation, with exports as real costs and imports as real benefits. However, even as we accept the persuasive logic of the base case, as progressive economists, we need to broaden the analysis of international trade and take a global perspective.

We might examine the ethical aspects of economically developed nations, arguably at least, exploiting developing countries in order to maximize their real terms of trade. Indeed, a consideration of the base case through the lens of ethics brings into focus the complexity of the subject of 'imports are a real benefit, exports are a real cost'.

An examination of the literature seems to point clearly to ethical problems, for example, Kenya, even when its own people go hungry, exports agricultural produce to the UK (Royal Geographical Society N.D.). These exports clearly reduce Kenya's capacity to feed their own people, representing a real cost. Of course, the farmers who produce for export employ people who benefit from wages which, although low by international standards, often provide Kenyan workers with a higher than average income meaning they are less likely to go hungry than the unemployed or underemployed workers. Thus, in this scenario, it seems clear that the UK is benefiting from the imports on the back of Kenyans' hunger. George Alagiah (ibid) makes the comment that he 'wishes these things were clear cut, but they are not' as he struggles to make a decision about whether growing beans in Kenya for UK customers is a good thing or a bad thing.

The potential loss of income for Kenyan workers which might follow from reducing food exports requires a response.

As a critical first step the government should fully provision itself with labour as needed, then supplemented by a permanent, universal, nationwide job guarantee scheme (JG) to facilitate a transition of the remaining unemployed to private sector employment Permanent full employment would reframe the issue (Mosler 2000, 2020; Tcherneva 2020; Pino 2025; Watts and Armstrong forthcoming). We note that Kenya has already enacted several temporary public employment programs (PEPs) usually targeted at particular groups, such as youth[25]. Such schemes provide young people with labour-intensive, short-term work, alongside skills training, and entrepreneurship, but they are not transformative. Only a permanent scheme of increasing public sector employment to adequately serve public purpose, alongside a JG open for all would provide a wage floor, eliminate involuntary unemployemt and maximise output[26]. Such a JG scheme would introduce a built-in price anchor as it provides a buffer stock of employed labour readily available for the private sector to hire. In common with all nations which issue their own currency under floating exchange rates, the Kenyan state can always provide the funding for labour to be employed along with a JG at a fixed wage. While JG workers could produce output for local consumption, especially in agriculture, providing an additional inflation offset from the supply- side, that might be better done by the private sector. However, it is important to stress the importance of institutional factors. The implementation and maintenance of a Job Guarantee programme requires an appropriate institutional structure which facilitates efficiency and fairness alongside democratic accountability (Kostzer, 2023). Importantly, a JG not only adds to output, it also enhances the quality of life of its participants, delivering the 'goods of work' (Gheaus and Herzog 2016; Armstrong, C. 2023) during their time of transition to private sector employment.

MMT recognises that the existence of a current account deficit (CAD) can be a consequence of foreigners having positive net savings desires for financial assets denominated in the importer's domestic currency. In the simple example of the US and China, where the US runs a current account deficit with China, the US gains real goods and services and the Chinese are able to satisfy their net savings desire in USD (Mosler 2010, p. 61-2); there is no "imbalance" in the sense described by orthodoxy. Both the net importing nation and the overseas holders of net financial assets are able to satisfy their consumption and net savings desires, respectively (Armstrong 2024).

[25] For example, the Kazi Mtaani initiative, the Kazi kwa Vijana (KKV) programme, and the Kenya Youth Employment and Opportunities Project (KYEOP). Although many participants gained valuable experience from such schemes, they have been criticized for their short-term nature and institutional failure caused by corruption and nepotism. The importance of competent and honest oversight cannot be overestimated.

[26] The use of JG policies in EMEs has received significant criticism from Post-Keynesian authors (for example, Aboobaker and Ugurlu 2023; Palley 2020, Bonizzi et al 2019) but arguments based upon its alleged weaknesses have been addressed and countered (Armstrong 2025b; Watts and Armstrong forthcoming). At time of writing, despite being given every opportunity to respond to the rebuttals of their arguments, no reply from Post- Keynesian critics has yet appeared. It is therefore assumed that they are unable to provide any meaningful counterarguments.

However, when we look at the position of many EMEs, we observe very high interest rate policies which sustain high levels of deficit spending required to pay a level of interest payments which overwhelms savings desires and is resolved by ongoing currency depreciation and inflation. Such nations cannot then export their currency to pay for imports without additional undesired currency depreciation and may take out a foreign currency loans, in, say, USD in order to fund imports. This process is accounted for in the balance of payments as an increase in imports/current account deficit which is 'financed' by the loan (shown as a financial account surplus). In this case there is no foreign net savings desire for domestic currency present and the critical importance of conceptualising exports as real costs comes sharply into focus. The government has borrowed foreign currency, such as USD, and exported those funds to pay for state imports; additionally, it might intervene and sell borrowed USD reserves to support private sector imports. As these foreign currency loans need to be repaid, future real costs are incurred.

Many countries in the Global South face a large international debt burden[27], which requires them to use foreign revenues from future export sales to settle foreign currency debts (Kaboub 2026a). The situation is made much worse by the fact that although nations in the Global South often earn substantial amounts of foreign currency from exports much of it is then remitted to foreign owners.

In addition, the extent of fraudulent practices that result in illicit financial flows (ECA 2015) is clearly an important issue from an ethical perspective[28]. Sylla (2024) notes that 'Between 2000 and 2018, for example, African countries suffered greater financial hardship from profit transfers by foreign investors, dividend repatriation by subsidiaries to their parent companies (see also Sylla 2023), and illicit financial flows (UNCTAD 2020) than from servicing its external debt. They issued foreign-currency debt that paid high interest rates (Fofack 2021) partly to plug the gap created by foreign nationals appropriating – both legally and illegally – vast dollar earnings'[29]. Progressive authors naturally support the idea that an internationally supported policy of external debt forgiveness would be beneficial not only for developing countries but for the world as a whole. Such an approach has great appeal on ethical grounds as greater financial capacity would allow poorer nations to improve the health of their populations and develop their

[27] The international financial system has a long history when it comes to the exploitation of poor countries by rich countries. Toussaint (2019) explains how the international system of sovereign debt peonage has provided a powerful vehicle for exploitation of poor nations by colonial powers and latterly, rich nations. Toussaint considers the concept of 'odious debt' (as formalized by Alexander Nahum Sack) and makes a case for the legitimacy of the arguments for its repudiation.

[28] However, although such illicit activity is certainly unethical (at least from a progressive perspective) we might note that, given the current financial architecture, it is often possible for nations to continuously refinance their debt, (and even increase borrowings from time to time) without ever having to repay it, thereby sustaining and benefiting from continuous trade deficits. In these cases, it is unemployment and high domestic policy interest rates that are largely responsible for lower standards of living (Mosler 2026, personal correspondence).

[29] However, Mosler (2026, personal correspondence) notes that despite this unwarranted drain, some African nations have still managed to run trade deficits, indicating these nations are, in real terms, the beneficiaries of trade per se, further suggesting that a failure to sustain domestic full employment remains the major issue requiring a policy response (see above).

infrastructure as well as enabling them to invest in climate resilience. In addition, halting what Sylla aptly describes as the 'financial bleeding' which has become embedded in a world financial system dominated by multinational corporations is essential for long term international stability and justice. However, debt forgiveness, although laudable, would not be sufficient, if policy allows continuously high unemployment to occur, standards of living will continue to be significantly lower than their potential.

Importantly, if we view the international debt burden from the perspective of the creditors, a different story emerges. Currency-issuing states are not financially constrained in their own currency, and the cancellation of both the public and publicly guaranteed external debt stock of 131 lower- and middle-income countries, $2.6 trillion in 2022[30], is entirely possible. 'The main challenges would be coordination – between different creditors and debtors, as well as other relevant actors – and accountability, not affordability' (ibid).[31]

(iii) Strategic factors

In times of international crisis such as war, pandemic etc, does a reliance on imports make a nation too vulnerable? Should nations sacrifice cost-effectiveness and efficiency in order to enhance resilience?[32] Asking such questions is certainly not new. For example, in 'How Open Should or Can We Be?' Keynes explained in 1933 how economists have a deep-seated cultural faith in 'free trade', 'I was brought up, like most Englishmen, to respect free trade not only as an economic doctrine which a rational and instructed person could not doubt, but almost as a part of the moral law. I regarded ordinary departures from it as being at the same time an imbecility and an outrage' (Keynes 1933: 755).

Although the arguments set out in this paper certainly do not oppose international trade *per se* or advocate protectionism, as conventionally defined, they nevertheless suggest that increasing domestic production, where feasible and efficient in terms of real resource use, is surely beneficial. Again, this point was developed by Keynes in 1933, 'A considerable degree of international specialization is necessary in a rational world in all cases where it is dictated by wide differences of climate, natural resources, native aptitudes, level of culture and density of

[30] This figure excludes China, Russia, and India.

[31] It is interesting to note here that, although significant environmental damage has been caused by the activities of multinational corporations, especially in Africa, and workers in the Global South are often exploited by MNCs by being paid wages lower than their western counterparts, it nevertheless seems that the narrative of the Global South being *exploited in international trade itself* can be challenged (Mosler 2026, personal correspondence). In fact, many non-oil exporters in the Global South are running trade deficits, which shows they are being subsidized in real terms by the actual process of international trade. In such cases, trade is not the problem. Instead, the presumed trade exploitation is due to seeing debt per se as problematic and, importantly, has taken attention away from the continuous unemployment which originates from policy and institutional failure, both domestic and international (especially when related to aid policies of advanced nations) which has been a root cause of quality of life remaining significantly lower than potential in the Global South.

[32] The recent rise in the use of tariffs as a means to exert control over trading partners is a growing concern (Carney 2026).

population. But over an increasingly wide range of industrial products, and perhaps of agricultural products also, I have become doubtful whether the economic loss of national self-sufficiency is great enough to outweigh the other advantages of gradually bringing the product and the consumer within the ambit of the same national, economic, and financial organization… a moderate increase in the real cost of primary and manufactured products consequent on greater national self-sufficiency may cease to be of serious consequence when weighed in the balance against advantages of a different kind. National self-sufficiency, in short, though it costs something, may be becoming a luxury which we can afford, if we happen to want it.'

Keynes also opposes what he describes as 'The decadent international but individualistic capitalism, in the hands of which we found ourselves after the war [WW1]'. He suggests escaping from deep international financial entanglements but nevertheless increasing social and cultural links. He notes, 'I sympathize, therefore, with those who would minimize, rather than with those who would maximize, economic entanglement among nations. Ideas, knowledge, science, hospitality, travel - these are the things which should of their nature be international. But let finance be primarily national' (Keynes 1933: 760-61).

The case for becoming 'more local' with respect to finance has been given much credence, especially after the global financial crisis, certainly, for the USA and UK, an 'over-sized' financial sector has become a problem (see Mosler 2009, 2024). It is a leading, although unproductive, producer that captures much value from abroad (Potts and Armstrong 2020).

In concluding this section it is argued that the concept of "structural autarky" (Wilson 2026, personal correspondence), is highly relevant. An independent currency area should seek to resource itself in a resilient manner. A currency area has no enforceable legal control over foreign production *in extremis* which means an area should aim to have both diversity of supply and reserve excess unused capacity (or stock) sufficient to ensure resilience in needed imports in the face of supply failures. When the costs of resilience and excess supply, taking account of local costs of production, are compared to their benefits then a different picture arises from the orthodox focus on 'efficiency only' supply analysis. Diversity also applies to exports, which is why nations should never fully rely on a single export. This applies to currency exports as well as coffee beans or bananas or, indeed, financial services (ibid).

7. UK Trade Policy

Wilson (2026, personal correspondence), argues that in the first instance, a key focus of UK trade policy should be *minimising the physical cost* of exports, which requires analysing the resource cost implications of exports in a systematic manner. Wilson (ibid) stresses that export operations

also require an analysis of their 'local currency area' flow impact. Exporting issued currency both guarantees the exchange is in sterling, and the unit additional resources cost is zero (or negligible). In essence, it pushes the currency zone out of our country and back into other countries. Export operations that are closest to this 'ideal' should then be promoted and those further away discouraged. Such an approach would drive improvements in the real terms of trade.

Looking deeper, Wilson (ibid) focuses on the fundamental issue- whether, as you increase the productivity of exports, reductions in physical costs are accompanied by a maintenance of local currency flow, or whether reductions in physical costs reduce local currency flow at the same time (as more of the export value is retained in another currency area). He notes that the local currency flow represents additional foreign exchange capacity for local importers explaining why 'exporting currency' is the ideal export. It has no physical cost, and the flow is, by definition, entirely in the local currency.

Wilson (ibid) considers the examples of foreign tourists and overseas students studying on university courses in the UK. Both have a large domestic cost footprint; every unit of additional export incurs a large variable input cost but productivity is quite low. However, on the plus side, there would be a large exchange into sterling flowing in the other direction. He then compares these exports with LNG production which would be a side effect of maintaining the energy supply (it might even be deemed to be a waste product). In this case, the reverse would be true; the additional unit cost would be very low but productivity is large. However Wilson (ibid) cautions that the sterling flow needs to be considered; if the LNG generates little sterling flow, its net result could actually be inferior to tourism with respect to the real terms of trade.

This approach provides a framework for analysis for manufacturing exports. An assessment needs to be made of both the level of the expected exchange back into sterling (which may well be low, if there are few UK costs to require that exchange) and the extent to which economies of scale accrue to the sterling currency zone as opposed to a foreign currency area (such as the yen, for example). Raising wages would help to increase the flow into sterling and raise domestic spending capacity but when pushed too far, higher wages might damage the viability of manufacturing from a capital point of view.[33].

These insights align to the base case which shows that, in purely economic terms, it is better to import than export, but looking beyond economics *per se*, the analysis outlined here argues

[33] By using this framework Wilson (2026, personal correspondence) is able to highlight where Keen's (2018) analysis fails. Keen fails to analyse exporters and importers as operating in multiple currency zones, and thereby ends up deploying fixed exchange rate thinking. He misses the point that economies of scale or increased capability do not necessarily accrue to the currency area of interest just because they are within that country's borders. For that to happen, other contingent factors would have to be in play such as raising the wages of workers or domestic profit distribution,

against excessive reliance (however defined) on imports in an increasingly unstable world[34]. It supports an acceptance of the importance of 'structural autarky' (see above), suggesting it should underpin UK trade policy and that the UK should reduce its dependence on imports both to enhance resilience and for ethical or environmental reasons. Government support for resource-efficient domestic production would mitigate against the environmental damage which follows from long and complex international supply chains. Ethical trade policy must surely require foreign firms selling in domestic markets to pay their workers well and protect the environment *as a condition of a trade deal*. We develop this line of reasoning below.

Trade policy should be fully integrated into economic and social policy in general and not seen as a stand alone approach. Importantly, *trade policy should be set in a full employment context.* The UK possesses an institutional structure which allows for the efficient implementation of a Job Guarantee policy which enables the achievement of permanent full employment, ensuring current domestic output is maximised, given current technology and resource endowments, subject environmental constraints. A full endorsement is given here to two recent proposals in this regard. Wilson (2025) proposes a Job Guarantee plan designed to minimise changes in the legislative framework. Pino (2025) provides a Job Guarantee plan which acts as a transformative blueprint for the UK.

For strategic, ethical and environmental reasons, it is argued that the UK should introduce a green transition and move towards net zero as quickly as institutional and technological factors allow. The achievement of net zero as soon as is feasible is consistent with concerns about climate change. In addition, the great majority of inflation in the UK has originated in the energy sector, particularly oil (Armstrong 2024) which suggests that the UK reduces its reliance on imported fossil fuels. Consistent with environmental aims, a green energy transition would not only provide crucial protection for an increasingly fragile environment but also insulate the UK from a major source of inflation[35]. It would have the added benefits of making the UK more 'energy resilient' in what is a very unpredictable world economy.

Once it is recognised that currency-issuing states, such as the UK, face real resource not monetary constraints, this opens the way for new policy approaches. Investment in environmentally friendly infrastructure is also a key element of creating the right conditions to allow for more real-resource efficient production. Such a policy will also make UK firms more competitive without the need for wage suppression or exchange rate reduction. This should be

[34] At the time of writing, 'decoupling' from the USA is becoming ever more urgent as the Trump administration pursues isolationist policies including very high tariffs, combined with an aggressive militaristic approach to foreign policy. The unrestrained use of 'hard power' by the USA under the Trump presidency has destabilized world trading networks and is likely to cause commodity prices, notably oil, to become increasingly volatile. Post-Trump, UK-US trade relations would, of course, need to be re-assessed, however, a reduced reliance on imported fossil fuels should remain a core focus.

[35] The engagement of wind, solar and nuclear power could be used to create green LNG, providing a storage buffer with sufficient production and over-supply that can be exported.

combined with increased spending on education and training and public sector- based research and development.

A key aim should be to develop a diversified, flexible and innovative economy. This should be combined with a recognition of the pressing need for increased resilience, especially given the correct climate crisis and heightened political turbulence. The requirement for the UK to prioritize reducing reliance on long international supply chains, makes agricultural investment to improve food production, alongside moving towards greater self-sufficiency, ever more urgent. Increasingly well-designed regulation on UK firms (OECD N. D.), plus grants to help them improve standards, would be beneficial, alongside continued use of the tax system to discourage conspicuous and environmentally damaging consumption. An important issue is how to determine which sectors and specific industries are strategically important. For example, foreign purchases of housing have been shown to increase house prices across the whole price range (especially in the case of more expensive homes). 'Foreign investment reduces affordability and the number of vacant dwellings but has no effect on construction' (Sá 2025). Recalling the point made in Section 3 (i) we see that the UK as currency-issuer needs to set clear rules on what foreign based agents can buy with domestic currency to alleviate this issue.

Importantly, echoing Keynes from almost 100 years ago, it is clear that a drive for greater self - sufficiency in production should be combined with social and cultural openness. The development of a genuinely development-orientated trade policy with the Global South, designed to reduce global inequality would be critical and, in the light of the above analysis, would require careful planning and wide discussion. As a starting point the UK should assist Global South nations in the development of their systems of banking and finance, including their central banking operational structures which would allow them to exploit their own currency efficiently and effectively. The UK is a world leader in banking and finance, and its governance structure is already commonly in place across the world (Wilson 2026, personal correspondence).

Economic relations between the Global North and Global South have undertaken a pivotal shift as a result of several key changes in the current global order including the US tariffs, Brexit, and the international aid cuts. The UK is central to this shift as one of the six countries ever to have met the Organisation for Economic Cooperation and Development (OECD) OECD Development Assistance Committee (DAC) target to provide 0.7% of its GNI in official development assistance (ODA). By 2027 UK ODA will fall to 0.3% of gross national income, its lowest level since 1999. This equates to £9.2-£9.4 billion, approximately £6 billion lower than its peak in 2023 (ICAI 2025). Annual Aid for Trade has approximately halved from a maximum value of £1.1 billion.

These cuts, alongside a broad reduction in aid from Europe and the US, will cause considerable harm to many vulnerable economies and peoples. They also signal an era in which north-south

relations return to a clearer, commercial basis rather than being couched in terms of development assistance and 'partnership'. They show that the international relations of the Global North have primarily focused upon self-interest, rather than magnanimity or benevolence. This reorientation of trade and development, despite its immediate consequences, may liberate many southern countries from the notion that handouts alone were the way to help them 'catch up'. The Global South may now be able to forge a new, genuine path toward sustainable development freed from the misleading impression that development was a process of mutual cooperation with the Global North driven by gradually increasing ODA[36]. From a trade and development policy perspective, systemic policy changes and the better orientation of international agreements toward development could have a bigger impact in the long run.

Here, it is argued that UK trade and development policy should cover several dimensions if it is to move in a genuinely development-orientated direction, starting from a position of 'first doing no harm'. This stance should be adopted multilaterally, in conjunction with other like-minded countries, under the realisation that a single small nation will alone have little impact (Gay 2020).

First, the UK should cease its support for a policy approach based upon the expropriation of Southern countries' resources without value-addition, putting in place incentives to add value locally rather than export resources and minerals to be processed elsewhere (Kaboub 2026b). A range of schemes has been proposed, including commodity price stabilisation plans and global taxes on raw resource transfers (Gay 2020). However, a careful case-by-case analysis would be beneficial as, in the case of some commodities, intense competition and the use of subsidization policy have made value addition likely to deliver only a very low margin. (In such circumstances, labour might be considered as being more productively used in other sectors, such as domestic construction, infrastructure improvement and health and education, especially if economies in the Global South are able to move towards full employment[37]).

Second, the UK should maintain and improve the inward market access for the developing countries that it already provides. This means continuing the commitment to zero tariffs or quotas indefinitely, and incentivising the import of processed resources over raw materials. Rules of origin can be further relaxed, in order to promote use of the new Developing Countries Trading Scheme preferential trading scheme adopted post-Brexit. Other development-orientated trade agreements can also be adopted given the UK's trade policy flexibility after Brexit. It is important to reiterate that *exports are a real cost to developing nations.* The encouragement of a

[36] As noted above, as a starting point, this paper suggests that nations in the Global South employ a full employment policy which can always be sustained unilaterally for nations with their own currencies under floating exchange rates (Watts and Armstrong forthcoming).

[37] It is nevertheless acknowledged that, currently, many economies in the Global South (especially the economies of small nations), are so inflexible that factor mobility is very limited, meaning that, unfortunately, the export of agricultural products can remain the best available option for employment for many workers. It is therefore important to stress the compelling need for both systemic change in international relations (Kaboub 2026a) and institutional improvements facilitating the adoption of full employment policy within the Global South.

flow of exports from the Global South to the UK, should be categorised as the price they are paying for their imports, not a privilege. From an ethical perspective, the fact that most non-oil exporting developing nations are net-importers should be seen as a benefit to such nations in terms of their real standard of living.

Third, the UK should better enable countries of the Global South to make higher technology products rather than retaining technology, know-how and critical intellectual property within its own borders. Technological copying and catch-up is a critical route to development as it facilitates the future capacity of developing nations to produce more efficiently in terms of efficiency of real resource use, rather than relying on wage suppression or deliberate exchange reduction to attract foreign investment.

Fourth, the developed world, starting with the UK, caused climate breakdown, not the poorest nations, and it should be the rich nations that lead the 'clean up'[38]. This means obliging businesses and politicians to halt support for projects which generate carbon emissions globally, including in the Global South, and following through on net zero pledges. The UK should support developing nations' governments who are trying to make ecocide a crime (France24 25).

Finally, when it takes up the G20 presidency in 2027, the UK should support measures to put in place global taxation laws. The OECD agreed a global minimum tax rate of 15% but the US administration backtracked on its agreement here, in effect ending the possibility of the agreement coming into effect (Harvard University 2025)[39].

8. Conclusion

[38] More broadly, Kaboub and Adow (2026, p. 3) note, 'Africa has contributed the least to global climate change, resource scarcity and biodiversity loss, yet it is the continent facing the brunt of the related economic and ecological impacts. While the formal colonial presence on the continent ended decades ago, the colonial legacy persists to this day, largely in the form of economic roles imposed on Africa. Africa today continues to play the same colonial economic roles that were designed to produce and maintain a particular economic and geopolitical hierarchy in which Africa was to remain locked at the bottom. These colonial roles were not supposed to deliver economic development, prosperity, or a just transition; they were designed for colonial extraction of wealth from the African continent'. He adds, 'Africa's just transition requires a coherent and comprehensive radical approach to climate, energy and development policies that transforms the economic structures of the continent. Africa's just transition framework must also be accompanied by structural economic transformation to undo its colonial economic roles, which is consistent with the five Earth4All possible policy turnarounds that are needed for humanity to survive and thrive' (ibid p. 21). See Earth4All (N.D.).

[39] A small levy on billionaires could raise US$200–250 billion a year, and an additional US$100–140 billion if extended to people with a minimum net wealth of US$100 million (centi-millionaires). This could help compensate for the aid cuts if such revenues were placed in a multi-national sovereign wealth fund, making trade-related assistance more flexible and providing countries with direct funding for local priorities. Of course, as noted above, developed nations with their own currencies are currency-issuers and never spend tax revenues in their own currencies. Taxes on the wealthy are a viable means to reduce inequality and reduce the 'conspicuous' consumption of the super—rich which might be deemed environmentally harmful but *tax revenues should never be seen as a means of financing state spending.*

This paper argues in favour of the base case for analysis for trade (Mosler 2010) and notes that exports are a real cost and imports are a real gain. However, it acknowledges that when we take into account strategic, ethical and environmental considerations, a more complex and nuanced picture emerges and that valid arguments can be made that nations might be justified in pursuing a trade policy which does not focus on the maximization of their real terms of trade.

For strategic reasons, a trade policy based upon structural autarky (Wilson 2026, personal correspondence) is considered to be the best way forward. Problems are likely to follow from an overreliance on imported products in 'strategically sensitive' areas and it is argued that support for key domestic industries is justified. Taking the UK as an example, the market alone would not be sufficient to sustain sizable UK-based environmentally-friendly, technologically-advanced production. State investment and assistance on the supply-side should be combined with demand-side policy, with the government acting as a purchaser based on quality not price. Policy should be implemented so as to minimize global environmental impact. In addition, allowing foreign owners of financial assets free rein and access to real domestic assets, such as property, seems not to be in the interests of the population as a whole.

When international trade is viewed from an ethical perspective, the argument for fair trade is strengthened. An ethical trade policy should surely not involve the exploitation of developing countries; rich nations need to be prepared to accept lower real terms of trade (even after acknowledging that many developing nations are already running trade deficits). In the light of climate change, it is clear that the effect of buying and transporting imports on the environment should be a key focus which, again, may well involve advanced nations accepting less than maximum real terms of trade. A move towards structural autarky, with shorter supply chains and more economic self-sufficiency, where feasible, is surely becoming more and more urgent.

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