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# Financing ‘sustainable welfare’: a critical review of the options

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## ABSTRACT

The literature on ‘sustainable welfare’ argues that meeting everyone’s needs within planetary boundaries requires the financing of welfare to become independent from economic growth. However, it remains contested how this is possible given the mutual dependency between growth and welfare in current economies. Multiple sources of financing are proposed in the post-growth and ecological macroeconomics literatures but, so far, they have not been assessed against sustainable welfare criteria. To address this gap, this article conducts a systematic literature search to identify proposed options for financing welfare in a post-growth context. It then critically assesses these options against four sustainable welfare criteria: growth independence, redistribution, needs satisfaction and reduction of ecological harms. We find that while the proposed financing options perform differently against the latter three criteria, none of them, on their own, fully resolve the current growth dependency of welfare provision. However, this could be addressed by combining some of these options, extending the revenue base, balancing the supply of financing and demand for welfare, adopting preventative approaches to reduce ‘unnecessary’ welfare demand, and redistributing economic resources towards needs satisfaction. Overall, this will likely require a more fundamental reorganisation of the economy.

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## Introduction

Achieving economic growth – as measured through gross domestic product (GDP) – is the main policy goal of modern societies (Jackson 2017, Raworth 2017). However, the pursuit of growth is challenged on environmental, social, economic and justice grounds. There is overwhelming evidence that the absolute decoupling of growth from environmental impacts at the global level will be extremely challenging, if not impossible, at the rate required to stay within planetary boundaries (Parrique *et al.* 2019, Haberl *et al.* 2020, Hickel and Kallis 2020, Vogel and Hickel 2023, Slameršak *et al.* 2024). Furthermore,

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most of the benefits generated by growth go to the already wealthy (Chancel *et al.* 2022, Christensen *et al.* 2023) while most of the costs are born by the poor (Hickel *et al.* 2022), widening inequalities (Piketty 2015). The pursuit of aggregate growth is no longer considered an inefficient means of improving human welfare, particularly in advanced economies in the Global North (Van der Slycken and Bleys 2024) where material throughput is well beyond sustainable limits (Sultana 2023).

These challenges have led to the emergence of several growth-critical fields and social movements, including degrowth (Kallis 2018), steady-state economics (Daly 1992), doughnut economics (Raworth 2017), wellbeing economics (Trebeck and Williams 2019) and post-development (Escobar 2015). While recognising their differences, we summarise these approaches under the umbrella term 'post-growth' (Jackson 2021).

A sustainable steady-state refers to a non-growing economy which provides for the needs of all at a sustainable level of energy and material throughput (Daly and Farley 2011). 'Degrowth' refers to the equitable downscaling of the material and energy throughput of the economy and the transformation from capitalist, growth-based societies towards post-capitalist, steady-state societies centred on social justice and ecological sustainability (Kallis *et al.* 2012, D'Alisa *et al.* 2014, Kallis *et al.* 2020, Langridge 2024).<sup>1</sup> 'Post-development' critiques colonial and culturally imperialistic models of development (Fanon 1965, Gandhi 1965, Sankara 1990, WPCC 2010, Escobar 2011). It challenges the association of the word 'developed' with high GDP and alignment with Western values and advocates for pluralistic processes through which societies can achieve wellbeing for all within planetary limits without focusing on capital accumulation and economic growth as overarching goals (Demaria *et al.* 2023). We consider a sustainable steady-state to be the end goal of a degrowth transition (in the Global North) and of sustainable (post-) development in the Global South.

Modern welfare states have co-evolved with growth-based economies creating a mutual dependency (Corlet Walker *et al.* 2021, Büchs, Koch *et al.* 2024). First, economic growth is often considered necessary for financing welfare spending as it keeps employment levels stable and responds to rising demand from ageing societies (Bailey 2015, Büchs, Koch *et al.* 2024). Second, welfare systems support, stabilise and legitimise growth economies by keeping inequality, poverty and social exclusion in check, supporting labour productivity by improving education, skills and health; and by maintaining consumer demand among groups outside the labour market (Büchs, Koch *et al.* 2024).

The transition to post-growth societies therefore creates a challenge for welfare states. Overcoming the mutual dependency between welfare provision and growth is necessary for post-growth visions to be taken seriously (Wiman 2024). This article focuses on the first part of the dependency: options for financing sustainable welfare which satisfy human needs and reduce inequality while aligning with planetary boundaries and post-growth perspectives. This is currently under-addressed in the literature (Bohnenberger 2023, Olk *et al.* 2023). Several studies have modelled options for financing specific eco-social policies, such as unconditional basic income (UBI) (Reed *et al.* 2023, Widerquist and Arndt 2023). In addition, Bailey (2020) has discussed the 'trilemma' of post-growth, an increased role for the 'Green State' and how this could be financed. However, there has so far been no systematic assessment of the options proposed for financing post-growth welfare against sustainable welfare criteria. This is a gap that this article addresses.

The article conducts a systematic literature search to collate the financing options proposed in the post-growth and ecological macroeconomics literatures. It then assesses the options against four sustainable welfare criteria: growth independence, redistribution, needs satisfaction and reduction of ecological harms.

Section 2 introduces post-growth and sustainable welfare. Section 3 outlines the methods employed in the article, including the terms used in the systematic literature search and the assessment criteria against which the proposed financing sources were evaluated. Section 4 presents the identified financing options before Section 5 evaluates them against the assessment criteria. Section 6 concludes by discussing some of the wider implications for financing sustainable welfare in a post-growth context.

## Post-growth and welfare states

The end of growth has profound implications for existing welfare states (largely in the Global North) and the development of welfare states in the Global South. The issue of financing welfare is commonly discussed among post-growth proponents and sceptics alike, especially the question of how public expenditure can be financed in a shrinking economy (Kallis *et al.* 2012, Pollin 2019). The ‘elephant in the room’ concerns how sustainable welfare policies – such as Universal Basic Services (UBS) (Coote and Percy 2020), UBI (Langridge 2024) a job guarantee (Alcott 2013) and other pre- or redistributive welfare (Fitzpatrick *et al.* 2022) – can be financed as taxable economic activity declines (Bailey 2015, 2020). These debates primarily respond to the concern that welfare states are dependent on economic growth (Bailey 2015, Büchs 2021, Corlet Walker *et al.* 2021).

Concerns regarding the growth dependence of current welfare states rest on the following arguments: First, when productivity increases, growth is required to keep employment levels stable (Jackson and Victor 2020). Since the largest share of welfare spending comes from employment-related social insurance contributions and taxes, financing welfare states is currently dependent on growth (Büchs and Koch 2017).

Second, demand for welfare provision is increasing. For instance, evidence from the ecological macroeconomics literature suggests that lower levels of paid employment in a no-growth economy would increase welfare demand (Fontana and Sawyer 2024). Jackson and Victor’s (2020) modelling of a post-growth scenario for sustainable prosperity also assumes an increase in welfare spending requiring redistributive taxes and increased government borrowing. In addition, ‘ageing societies’ – related to rising life expectancies and falling fertility rates – increase demand for pensions and health and social care (Rouzet *et al.* 2019). Impacts on health and livelihoods from the ecological crises are also likely to increase future demand (Dafermos *et al.* 2017).

Third, welfare spending is often counter-cyclical and so tends to be financed through public debt during economic downturns. Servicing this debt creates pressure for further, future economic growth, according to orthodox economic theory (Bailey 2015).

These challenges necessitate alternative approaches to welfare provision. ‘Sustainable welfare’ refers to welfare systems which prioritise the satisfaction of human needs and greater equality within planetary boundaries and without economic growth (Koch 2022, Büchs *et al.* 2024). Several scholars have started to consider how sustainable welfare could be financed, raising questions about the ability to resource public expenditure in a shrinking or non-growing economy (Andersson 2010, Bohnenberger 2020, Büchs

2021, Büchs *et al.* 2024). Others have theorised alternative, non-state approaches to sustainable welfare provision, including an increased social role for cooperatives and the commons (Saito 2024).

## Methods

This article first conducts a systematic literature search of the post-growth and ecological macroeconomics<sup>2</sup> literatures to identify options proposed for financing sustainable welfare policies in post-growth contexts. It then evaluates these options using criteria developed from the sustainable welfare literature.

### Literature search terms

The literature searches were conducted on Scopus and limited to English language peer-reviewed journal articles. The full search terms are provided in Table 1. The results were screened by title and abstract based on whether they considered options for financing sustainable welfare policies in a post-growth context.

In total, 184 articles were identified across the searches. After screening and the removal of 11 duplicates, 98 articles were reviewed in full.

### Criteria for evaluating sustainable welfare financing proposals

To date, financing options proposed in the post-growth literature have not been systematically assessed against criteria for sustainable welfare. This is a gap this article seeks to address. Büchs (2021, p.1) defines sustainable welfare as "systems which aim to satisfy everyone's needs within planetary boundaries and to decouple the welfare-growth nexus" and identifies four specific criteria: compatibility with planetary boundaries, needs satisfaction, fair distribution and democratic governance. We use this definition of sustainable welfare and the related criteria as the basis for our assessment criteria.

The first criterion we adopt is growth independence. This is based on the broad definition of sustainable welfare as a system that decouples the welfare-growth nexus

**Table 1.** Systematic literature search terms and results.

Search terms (Title, Abstract, Keywords)	Articles returned	Articles after screening
degrowth OR post-growth OR 'post-growth' OR 'beyond growth' OR 'without growth' OR 'doughnut econom*' OR 'steady-state econom*' OR 'steady-state econom*' OR 'sustainable welfare' OR 'wellbeing econom*' OR postdevelopment OR 'post-development' AND 'welfare' OR 'social policy' OR 'social protection' OR eco-social OR socio-ecological OR 'social expenditure' AND fund* OR financ* OR tax* OR 'sovereign wealth' OR 'sovereign money' OR 'public money' OR 'modern monetary theory' OR MMT OR 'complementary currenc*' OR 'alternative currenc*' OR 'community currenc*' OR 'local currenc**	84	47
degrowth OR post-growth OR 'post-growth' OR 'beyond growth' OR 'without growth' OR 'doughnut econom*' OR 'steady-state econom*' OR 'steady-state econom*' OR 'sustainable welfare' OR 'wellbeing econom*' OR postdevelopment OR 'post-development' AND 'basic income' OR 'universal basic services' OR 'job guarantee'	40	34
"ecological marcoeconomic**	60	28
Totals	184	109

(Bohnenberger 2020, Gough 2022, Büchs *et al.* 2024). The second criterion is based on the argument that inequality could increase in post-growth contexts without appropriate countermeasures (e.g. Jackson and Victor 2016). Financing options must therefore contribute to greater social equality through redistribution. Third, satisfying the needs of all is an important component of sustainable welfare definitions (Gough 2017, Büchs *et al.* 2024). Financing options should support this objective. Finally, given that the purpose of sustainable welfare is to improve societal wellbeing within planetary boundaries (Bohnenberger 2023, Büchs *et al.* 2024), the fourth criterion concerns whether financing options contribute to reducing ecological harms. In summary, financing options should:

- (1) Support the growth independence of the welfare state.
- (2) Be redistributive, placing the responsibility on the wealthy and contributing to achieving greater social and political equality and justice.
- (3) Not compromise needs satisfaction, especially of vulnerable groups.
- (4) Be compatible with planetary boundaries and contribute to reducing ecological harms.

### Financing options proposed in the post-growth literature

The systematic literature search identified several proposed options for financing post-growth welfare.<sup>3</sup> Most come from the sustainable welfare and post-growth literatures. Some are also discussed in the ecological macroeconomics literature which focuses more on the stability of steady-state economies and financing a degrowth transition more broadly.

The ecological macroeconomics literature also discusses theories of money and their implications for post-growth societies. Orthodox monetary theories consider public expenditure to be financed through tax revenues and state borrowing. Heterodox monetary theories – such as Functional Finance (FF) (Lerner 1943), Modern Monetary Theory (MMT) (Kelton 2020) and ecological theories of money (Ament 2020) – question the orthodox logic. Heterodox theories suggest that governments with their own sovereign currencies do not rely on tax revenues or borrowing but can spend by creating new sovereign money. While this might suggest there are "technically no financial limits to welfare expenditure" (Bohnenberger 2020, p.5), real limits do still exist. These include the availability of productive resources (such as land, workers and technologies), inflation, limits related to exchange rates and balance of payments, and ecological limits (Olk *et al.* 2023, Helker-Nygren and Katz-Rosene 2024, Vogel *et al.* 2024). The latter of these is absent from much of the MMT literature (Helker-Nygren and Katz-Rosene 2024). According to heterodox theories of money, the role of taxes and borrowing is not to raise revenue to finance spending but to manage those real limits and the social and ecological consequences of government spending (Lerner 1943, Ruml 1946, Murphy 2019, Hirvilammi *et al.* 2023).

Whether aligning with orthodox or heterodox theories of money – and so seeing taxes as a source of finance or as a means of controlling inflation and limiting and redistributing real economic resources, respectively – various taxes and subsidies were cited in the literature as options for financing sustainable welfare.

'Progressive'<sup>4</sup> taxes on incomes (both from employment and from other sources, such as profits, savings and capital gains) were commonly discussed (e.g. Bailey 2015, Koch 2022, Khan *et al.* 2023, Islar *et al.* 2024). Progressive income taxes are proposed as a means of revenue generation (Bailey 2015) and for achieving social objectives such as reducing inequality (Ferguson 2013). Income caps have also been proposed (Buch-Hansen and Koch 2019) although with limited public support (Kongshøj and Hedegaard 2025). Progressive income taxes were included in some of the ecological macroeconomic modelling (e.g. Jackson and Victor 2020).

Progressive taxes on wealth – e.g. on net wealth or specific assets such as land, property, financial assets, inheritance or data – are also advocated in the literature (e.g. Gough 2022, Gumbert *et al.* 2022, Koch 2022). Proponents highlight their potential to redistribute economic and political power (Buch-Hansen and Koch 2019), reduce the environmental harms associated with excessive wealth (Islar *et al.* 2024) and shift the tax base from 'flows' to 'stocks', which may be less affected by economic fluctuations under certain conditions (Büchs 2021).

Pigouvian taxes on environmental harms – such as on emissions, energy use or 'luxury' wasteful consumption – are also discussed in the post-growth literature (e.g. Bailey 2015, Germain 2017, Otto and Gugushvili 2020, Bashir *et al.* 2021, Islar *et al.* 2024) and included in ecological macroeconomic modelling (Bovari *et al.* 2018, D'Alessandro *et al.* 2020, Jackson and Victor 2020, Distefano and D'Alessandro 2023). Pigouvian taxes are advocated for their ability to shift the tax burden away from socially valuable activities (such as certain types of work) and onto activities which cause social and environmental harm (Lawn 2004, Ferguson 2013, Bashir *et al.* 2021). They are also proposed as a means of mitigating reduced revenue from income taxes in a no-growth economy in some ecological macroeconomic modelling (Røpke 2016). Environmental taxes have received increasing attention in recent decades (Bashir *et al.* 2021) and are now one of "the most common instruments proposed by environmental economists" (Andersson 2010, p.4).

Alongside taxation, the redirection of subsidies is another option proposed to support welfare financing (e.g. Mastini *et al.* 2021, Rammelt and Gupta 2021). Since subsidies are revenues that governments have already committed to spend, they are not strictly a source of finance. Rather, the literature argues that subsidies that are currently committed to support environmentally or socially damaging sectors could be redirected to sustainable welfare.

Money creation through government spending – in line with the heterodox monetary theories explained above – is getting increasing attention in the post-growth discourse, including for welfare spending (Ament 2020, Olk *et al.* 2023, Helker-Nygren and Katz-Rosene 2024). Issuing treasury bonds and bills is also modelled as a means of financing green investments in the ecological macroeconomics literature (Dafermos *et al.* 2018, Carnevali *et al.* 2024), although not specifically for financing welfare.

Finally, alternative, complementary or community currencies are advocated as a means of re-localising economic activities in line with post-growth perspectives (e.g. Hornborg 2017, Bouchez *et al.* 2025). The literature offers examples of alternative currencies with economic, social and ecological benefits, such as currencies tied to carbon emissions or natural resources (Turnbull 2015, Hornborg 2017), or time banks which allow citizens to contribute their time and skills towards care and other social activities (Bailey 2015).

However, the ecological dimension of alternative currencies is under-prioritised and reflections from a post-growth perspective are rare (Bouchez *et al.* 2025). Furthermore, little attention is paid to them in ecological macroeconomic modelling (see Lagoarde-Ségot and Mathieu 2024 for an exception).

## Evaluating the proposed options for financing sustainable welfare

This section offers a first examination of the financing options proposed in the post-growth and ecological macroeconomics literatures against the sustainable welfare criteria defined in Section 3, drawing on currently available evidence. Where arguments, additional factors or feedback loops require further empirical or modelling work, we highlight this accordingly.

### *Growth independence*

When considering whether different sustainable welfare financing options support the growth independence of welfare states, the main question to consider is whether changes in the size of the financial resources that these options generate are coupled to changes in the size of the economy, i.e. whether financial revenues are likely to fall (or rise) as GDP falls (or rises).

As discussed in Section 2, one of the most directly growth-dependent activities is employment. If labour productivity increases (and the size of the labour force stays the same), GDP growth is required just to keep employment, and the related revenue from income taxes and social insurance contributions, stable (Jackson and Victor 2020). Changes in the total volume of production and consumption, as well as associated 'flows' of incomes, emissions and resources, are also closely coupled to changes in GDP (Parrique *et al.* 2019, Haberl *et al.* 2020, Vogel and Hickel 2023). Taxes on these activities can therefore be regarded as growth dependent as the revenue they generate is likely to fall when GDP contracts, and vice versa.

In contrast to flows, 'stocks' include economic assets such as land, property, bonds and shares. Taxes on stocks are also responsive to changes in the size of the economy (Semmler 2011): when growth declines the income from economic assets (e.g. rents, interest, capital gains) and the value of assets (e.g. property, land and financial assets) tends to decline. Revenues from taxes on the income from, and value of, stocks can therefore also be considered growth dependent.

Taxes could also be levied on the physical *size* (such as square metres of land or property) rather than the monetary value of some stocks (Connolly and Bell 2009). Revenue from such taxes is less affected by changes in GDP. They could also incentivise the break-up of large landholdings as owners try to reduce tax liabilities or because it is difficult to convert assets such as land or property into cash. The break-up of large landholdings would increase the availability of land and redistribute ownership. However, this would reduce potential tax revenue. Unintended consequences such as equity issues, a loss of accrued farming knowledge or impacts on productivity would also have to be considered (Aragón *et al.* 2022).

As discussed above, the redirection of subsidies is, strictly speaking, not a financing source but a government spending decision based on available resources. While the

decision to redirect subsidies is not directly dependent on changes in the size of the economy, many sources that fund subsidies are (e.g. employment, production, consumption). However, redirecting subsidies from privatised public services (whose main aim is to produce profit) towards sustainable welfare policies with the aim of achieving equitable needs satisfaction within planetary boundaries could *reduce* the growth imperative (Kallis 2018, Corlet Walker *et al.* 2021).

As discussed above, heterodox theories of money argue that governments with sovereign monetary systems can spend money into existence without relying on prior tax revenues or borrowing from commercial providers (Olk *et al.* 2023, Helker-Nygren and Katz-Rosene 2024). The creation of money comes first, and that money is then ‘cancelled’ through taxation or the selling of bonds (Murphy 2019, Kelton 2020). In this sense, money creation through government spending can be considered as independent from growth. Such perspectives are also proposed in the post-growth literature. For example, Bailey (2020) suggests that financing public expenditure in this way is a way of circumventing the ‘paradox’ of an enlarged, interventionist ‘Green State’ and reduced tax revenues in a post-growth world.

However, there are limitations to the creation of sovereign money for direct government spending in a post-growth context. One limitation is that the total throughput of physical resources and energy would be constrained in a post-growth context by environmental regulation in line with planetary boundaries. Expanding the supply of money in an economy in which productive capacity is restricted for ecological reasons would eventually lead to inflation, as the supply of goods and services cannot grow to match increased demand (Olk *et al.* 2023). This suggests that although governments can choose to generate additional money to increase welfare spending independently of GDP growth, inflationary pressures arising from environmental regulation to keep the economy within physical limits may constrain this option.

Such inflationary pressures could be managed in several ways. First, if the energy and resource efficiency of economic activity increases or direct government spending is directed towards activities with relatively low environmental impacts, such as care work, supply could expand without increasing environmental pressures and so ease, or even prevent, excess inflation. However, rebound effects (Lange *et al.* 2021), unintended environmental and social consequences of technological innovation (Parrique *et al.* 2019) and absolute limits to increasing resource efficiency and recycling (Gough 2017) would need to be taken into account. Given that evidence of the absolute decoupling of economic activities from environmental pressures is rare (Parrique *et al.* 2019, Haberl *et al.* 2020, Vogel and Hickel 2023) and is supported by outsourcing to the Global South, the option of relying on efficiency improvements to stabilise prices while the volume of money increases is limited (Cerini *et al.* 2025).

Second, inflation could be contained through policy prescriptions, including taxation, price controls, regulation and complementary currencies (Olk *et al.* 2023). Since taxes ‘cancel’ money, they could ease inflationary pressures by reducing the money circulating in the economy and therefore reducing demand and consumption (Murphy 2019). This would be compatible with post-growth contexts if the burden of such taxes was felt by the wealthy (Olk *et al.* 2023). Strategic price controls on essential goods could contribute to monetary stability and prevent inflation while protecting vulnerable households (Weber 2021). Furthermore, improving needs satisfaction through collective provisioning

(e.g. UBS), would reduce aggregate demand and help ease inflationary and environmental pressures (Schneider and Stevenson 2025). However, such policies would require additional government subsidies and so additional financing, either through further taxes or increased sovereign money creation.

Another potential issue with new money creation through government spending is that it involves interest payments. At some stage, new money issued by the Central Bank usually ends up in the reserve accounts of private banks at the Central Bank on which interest is payable (Ryan-Collins *et al.* 2012). Some authors consider such interest-bearing debt to be incompatible with steady-state or degrowing economies (Douthwaite 2000, Lietaer *et al.* 2012, Costanza *et al.* 2013, Farley *et al.* 2013). However, ecological macroeconomic modelling suggests that a steady-state economy could be compatible with (low) positive rates of interest if interest payments are fully redistributed into the economy and accompanied by appropriate taxation (Berg *et al.* 2015, Cahen-Fourot and Lavoie 2016, Richters and Siemoneit 2017, Janischewski 2022). These models, however, often assume no demographic changes, for example ageing populations resulting in an increase in welfare demand.

Alternative or complementary currencies can, but do not necessarily, align with post-growth perspectives. Loyalty points, air miles and business barter schemes are all, technically, examples of complementary currencies intended to stimulate consumption. Those examples discussed in the literature (e.g. LETS, timebanks, HOURS etc.), while having the potential to encourage resource sharing and facilitate local purchasing, are only likely to play a "marginal role in driving purposive degrowth" due to their small scale preventing them from facilitating alternative livelihoods (Dittmer 2013, p.11). There are currently very few proposals for alternative currencies which consider post-growth perspectives (Bouchez *et al.* 2025). However, options could be designed to encourage pro-environmental behaviour, increase civic engagement, support local businesses, build new systems of provision for sustainability and embed economic exchange within ecological limits (Lietaer and Dunne 2013, Hornborg 2017). Hybrid options, with local currencies designed to complement national currencies, could overcome the limitations of scale (Hornborg 2017) if guided by appropriate ecological frameworks (Olk *et al.* 2023). Complementary currencies could also be used to limit inflation by offering a savings option and so reducing demand in the monetised economy, especially if spent on low-carbon and socially useful activities such as care work (Olk *et al.* 2023). However, the expansion of informal, non-monetised activities is still limited by planetary boundaries, and post-growth compatible complementary currencies require further research to understand any unforeseen consequences.

### **Redistribution**

Some of the financing options discussed in the post-growth literature have regressive distributional impacts, notably environmental and consumption taxes on 'necessities' such as home energy and other goods that are consumed relatively evenly across income groups (such as sugar, meat and plastics) (Säll 2018, Sommer and Kratena 2020). This means that flat taxes on such goods would place a greater relative burden on low-income households (Büchs *et al.* 2021, Gough 2022). This is a possible explanation for popular opposition to environmental taxes (Otto and Gugushvili 2020) and a reason

why they require participatory and equitable designs (Mehleb *et al.* 2021). Applying taxes at higher levels of consumption could mitigate these impacts (Gough 2017). However, an example of variable water tariffs in Italy demonstrates that they can still have regressive impacts as the relationship between income and the consumption of essential goods is weak (Cecchi *et al.* 2022).

Redistributing revenues from taxes on necessities could help mitigate these impacts, e.g. through subsidies targeting vulnerable groups (Owen and Barrett 2020, Cecchi *et al.* 2022) or through more universal policies such as UBI (Cattaneo *et al.* 2016) or UBS (Coote 2022). Such policies are often proposed in the literature to mitigate the regressive impacts of environmental taxes and increase their moral, social and political acceptance (Andersson 2010, Distefano and D'Alessandro 2023, Vogel *et al.* 2024). Alternatively, environmental taxes could be applied at the industry, rather than consumer, level. This could reduce the regressive distributional impacts *if* industries were prevented from passing the cost on to consumers (e.g. through price caps) while ensuring that such caps did not overly limit the supply of essential goods.

Taxes on environmentally harmful 'luxury' consumption (such as frequent air travel, large or luxury cars, private swimming pools etc.) align better with the criterion of redistribution as they would predominantly affect the wealthy (Kallis *et al.* 2020, Büchs and Mattioli 2024).

Progressively designed taxes on income and wealth often place a larger relative burden on high earners or wealthier people (Duncan and Sabirianova Peter 2016, Nguyen and Khieu 2021). Structural changes, including more widespread common ownership of productive assets, property and land, would create more equal wealth distributions in the long-term (Duncan and Sabirianova Peter 2016, Saito 2024). The role of progressive wealth taxes as a source of revenue would therefore diminish (Stratford 2020). However, in the meantime, they could offer a more socially progressive financing option.

Redirecting subsidies that currently support harmful industries (e.g. fossil fuels) or benefit wealthy asset owners (e.g. some agricultural subsidies) towards supporting low-income households through welfare policies or investment in public services would also have progressive distributive impacts (Kallis 2018).

Government spending of new money has the potential to be redistributive, depending on how it is spent. For example, if governments create new money to invest in public services or welfare policies such as UBI or UBS and accompany this with inflation controls which target the wealthy, then this could have a positive redistributive impact. In contrast, controlling inflation through taxes which disproportionately target low-income households, e.g. VAT, would have regressive distributive effects. While greater attention has been paid to direct government spending in a post-growth context in recent years (Olk *et al.* 2023, Helker-Nygren and Katz-Rosene 2024), further empirical work on the potential distributional impacts is required.

Challenges such as ageing societies, geopolitical tensions or the transition to net zero are likely to place upward pressure on public debt-to-GDP ratios in the future. This could be exacerbated in post-growth contexts where the rate of economic growth falls below the rate of interest (Jackson and Jackson 2025). Some heterodox economists argue that interest rates can, and should, be set very low or even at zero (Wray 2007). The distributional impacts of low or zero interest rates require further research. They could have progressive

distributional effects by decreasing borrowing costs and interest earned on savings. However, they could also increase the value of assets, such as housing, which could benefit the wealthy (Arestis and Pérez-Moreno 2022)

The redistributive potential of alternative / complementary currencies depends on the currency design. For example, they could exacerbate regional inequalities if they boost economic activity more in wealthier compared to poorer regions. The implementation of complementary currencies would therefore still require some form of higher-level, cross-regional coordination to mitigate any regressive distributional impacts. Complementary currencies are also limited in the sense that they cannot support cross-regional welfare programmes, and, unlike national currencies, they cannot be used for general taxation and related redistributive objectives (Dittmer 2013). Hornborg (2017) therefore proposes a hybrid option with complementary currencies – paid as a UBI – backed by an official, national currency.

### **Needs satisfaction**

Some of the reviewed financing options risk compromising the needs satisfaction of vulnerable groups. As discussed above, examples include environmental or consumption taxes on essential goods which may cause poorer people to cut consumption below acceptable levels (Büchs *et al.* 2021).

Other financing options appear better suited to supporting equitable needs satisfaction. Progressive taxes on income or assets target the wealthy and are therefore unlikely to compromise the needs satisfaction of vulnerable groups. A combination of subsidy redirection, direct government spending and complementary currencies could support needs satisfaction if directed towards goods, services and infrastructures with social and ecological benefits, for example public services, direct cash payments, food provision, public green spaces, etc. ‘Packages’ of such policies and appropriate combinations of possible financing mechanisms should be the subject of further research.

### **Reduction of ecological harms**

All the sources of financing for sustainable welfare discussed in the literature have the potential to reduce ecological harms. Progressive taxes on income and wealth could reduce the excessive consumption associated with high earnings or wealth (Kartha *et al.* 2020, Büchsé *et al.* 2024, Islar *et al.* 2024). Income and wealth taxes that apply to corporations could also reduce the accumulation and reinvestment of profits which drive economic growth and related environmental damage (Cattaneo *et al.* 2016). The same applies to taxes on consumption and environmental harms if the rates are sufficiently high to disincentive unnecessary consumption. However, unintended distributional consequences connected to higher prices for necessities would need to be avoided. Ecological macroeconomic modelling also suggests that for environmental taxes to improve ecological outcomes they would need to be accompanied by additional financial regulations including a more active role for central banks (Campiglio 2016, Bovari *et al.* 2018).

Pigouvian taxes on unnecessary consumption and environmental ‘bads’ aim to reduce these activities and their associated harms. If they perform as intended, environmentally

harmful activities would therefore decline along with the revenue these taxes generate. From an orthodox monetary theory perspective, Pigouvian taxes are therefore limited as a source of long-term financing because they undermine their tax base over time (Bailey 2015, Langridge *et al.* 2022). In addition, theories about the greater price elasticity of luxuries may be less relevant for higher than for lower income groups: if the wealthy can afford to consume despite the increased cost, taxes on 'luxuries' might be less effective at reducing luxury consumption among the rich than commonly assumed (Kim 2023). While this would provide a higher revenue stream, it would also come at an environmental cost and further increase emissions inequality. Combining such taxes with policies to limit excessively high incomes and wealth could therefore be required, and 'packages' of such policies should be the subject of further investigation.

Redirecting subsidies from high- to low polluting sectors, e.g. from fossil fuel industries to the health and care sector, would have clear environmental benefits.

The ecological impacts of new money created through direct government spending and of complementary currencies would depend on the overall volume of economic activity they generate and which sectors and activities they support. Much of the MMT literature considers the main limit for government spending to be the availability of productive capacity within the economy without causing inflation, whether or not this is ecologically sustainable or socially just (Helker-Nygren and Katz-Rosene 2024). The ecological benefits of money created through government spending and of complementary currencies are not guaranteed but depend on appropriate ecological frameworks that guide the overall volume and environmental impacts of monetary and non-monetary economic activities (Olk *et al.* 2023). For the latter, such frameworks are underdeveloped (Bouchez *et al.* 2025). However, these sources could be compatible with planetary boundaries if directed towards supporting low-resource activities, such as care work.

Table 2 summarises the alignment of each identified financing option against the criteria for sustainable welfare. It demonstrates that while none of the sources, alone, are truly growth independent they all have the *potential* to reduce ecological harms. Progressive taxes on income, wealth and luxury goods align strongly with the redistribution and needs satisfaction criteria. The alignment of subsidy redirection, direct government spending and complementary currencies with these criteria varies considerably depending on where they direct resources.

## **Discussion and conclusions: wider implications for sustainable welfare in a post-growth context**

Discussions in the literature on financing post-growth welfare have so far remained quite generic. This article provides an initial, overarching assessment of options proposed in the literature against four criteria for sustainable welfare: growth independence, redistribution, needs satisfaction and reduction of ecological harms. Future research should build on these findings to develop more detailed proposals, examine potential outcomes through empirical study and macroeconomic modelling, assess political feasibility and consider the implications for global economic justice.

Overall, the analysis suggests that all proposed financing options have the potential to reduce ecological harms. Progressive income, wealth and luxury consumption taxes are

**Table 2.** Alignment of financing options with sustainable welfare criteria.

	Growth independence	Redistribution	Needs satisfaction	Reduction of ecological harms
<b>Progressive taxes on employment-related income</b>	Growth dependent if productivity increases and coupled to financial and physical size of the economy	Progressive redistribution	Low risk of harming needs satisfaction of vulnerable groups	Can reduce ecological harm if effective in reducing excess luxury consumption
<b>Taxes on other incomes (e.g. from assets)</b>	Coupled to financial and physical size of economy	Progressive redistribution	Low risk of harming needs satisfaction of vulnerable groups	Can reduce ecological harm if effective in reducing excess luxury consumption
<b>Taxes on wealth</b>	Potential for greater short-term stability. <i>Value</i> of assets coupled to financial and physical size of economy. Taxing size of assets (e.g. land) is more growth independent	Progressive redistribution	Low risk of harming needs satisfaction of vulnerable groups	Can reduce ecological harm if effective in reducing excess luxury consumption
<b>Environment &amp; consumption taxes on necessities</b>	Coupled to financial and physical size of economy	Regressive distributional impacts	Can impact needs satisfaction of vulnerable groups	Potential for reducing environmental impact if rates are sufficiently high
<b>Environment &amp; consumption taxes on luxuries</b>	Coupled to financial and physical size of economy	Progressive redistribution	Low impact on needs satisfaction of vulnerable groups	Potential for reducing environmental harm but perhaps greater price inelasticity
<b>Subsidy redirection</b>	Redirection is independent from size of economy, but funding sources are likely to be dependent	Can be redistributive if diverted from support for the wealthy to fund needs satisfaction	Can support needs satisfaction if diverted from support for the wealthy to fund needs satisfaction	Potential to reduce environmental harm if redirected from polluting industries to fund needs satisfaction
<b>Direct government spending</b>	Independent from the financial size of economy but coupled to physical size through resource limits and planetary boundaries	Potential for redistributive effects depending on spending decisions but high debt/GDP ratios require low interest rates which could have regressive effects, e.g. increasing property values	Can support needs satisfaction if spent in sustainable welfare sectors and if controls on inflation borne by wealthy	Can be compatible with reducing environmental harm if it does not contribute to overall increase in economic activity

likely to be the most effective options for redistribution and needs satisfaction. Direct government spending (and the reallocation of subsidies) could also align with redistribution and needs satisfaction if policies to control inflation and limit environmental harms are borne by the wealthy.

However, none of the options on their own can be regarded as strictly independent from economic growth, since the volume of revenue they generate is either directly or indirectly affected by changes in the size of the economy. ‘Packaging’ options together may increase alignment. For example, mitigating possible inflationary pressures from direct government spending through progressive taxation on wealth and measures to prevent inflation of the price of necessities could increase alignment with the growth independence criterion. Designing and modelling such ‘packages’ should be the subject of further research.

It is important to note that the relationship between financing options and changes in the size of the economy is only an issue if there is an imbalance between available financing and welfare demand. If both the demand for welfare spending and the supply of welfare financing are stable and balanced in a sustainable steady-state economy, then growth is not required to maintain provision. However, a funding gap arises when demand increases – e.g. due to population ageing, rising unemployment or intensifying environmental impacts – and welfare financing does not. Equally, if available finance shrinks – e.g. during a degrowth phase – a funding gap emerges even if welfare demand remains stable.

This insight shifts the discussion to other levers for providing welfare without growth. *Stabilising the provision of finance* in a post-growth context could be made more achievable through any or all of the following options: making employment independent from growth, reducing the environmental impact of production and consumption and increasing the tax base or tax rates.

Reducing the growth dependence of employment has been described as ‘crucial’ for a degrowth transition, also involving a potential shift of power from capital to organised labour (Edwards 2025). From a post-growth welfare financing perspective, reducing this dependency would be necessary as employment-related taxes and social insurance contributions would likely still play a role. Previous research has shown that employment can be stabilised in contexts without growth through policies such as working time reduction and by distributing more work to socially and environmentally useful, but low-productivity, sectors such as care work and ecological conservation (Jackson and Victor 2016, Jackson and Victor 2020, Kallis *et al.* 2025). In the long term, such measures could make taxes on employment-related income a more suitable financing source as the need for growth to mitigate unemployment would be reduced.

In addition, the lower the ecological impact of provisioning systems – for food, housing, travel etc., the more ‘ecological room’ there is for economic activities beyond basic needs satisfaction. Expanding economic capacity in this way reduces any inflationary pressures from direct government spending while also expanding the tax base. Policies and technologies that increase the resource efficiency of provisioning therefore remain critical.

In phases in which financing for welfare falls short of demand, policymakers could either increase rates of existing taxes or expand the tax base – e.g. by decreasing exemption thresholds or levying new taxes – which could go hand in hand with expanding direct government spending.

Various options also exist for *stabilising the demand for welfare* in a post-growth context. At least part of current welfare state spending is related to ‘negative social externalities’ of growth-based capitalist market economies, including poverty and inequality, unemployment, homelessness and increased chronic diseases (De Schutter 2024). The better the economy as a whole provides needs satisfaction, social cohesion and wellbeing for all, including through market-based, community and household activities, the fewer government resources are required to ‘fix’ social issues. Eco-social policies focused on prevention are highly relevant here (Gough 2015, Islar *et al.* 2024).

Even with such preventative policies and more needs-focused provisioning systems in place, demand for welfare is likely to increase due to population ageing and the growing impacts of the ecological crises (Büchs *et al.* 2024). Economic growth over recent decades has allowed politicians to meet this demand while avoiding “unpopular tax hikes or

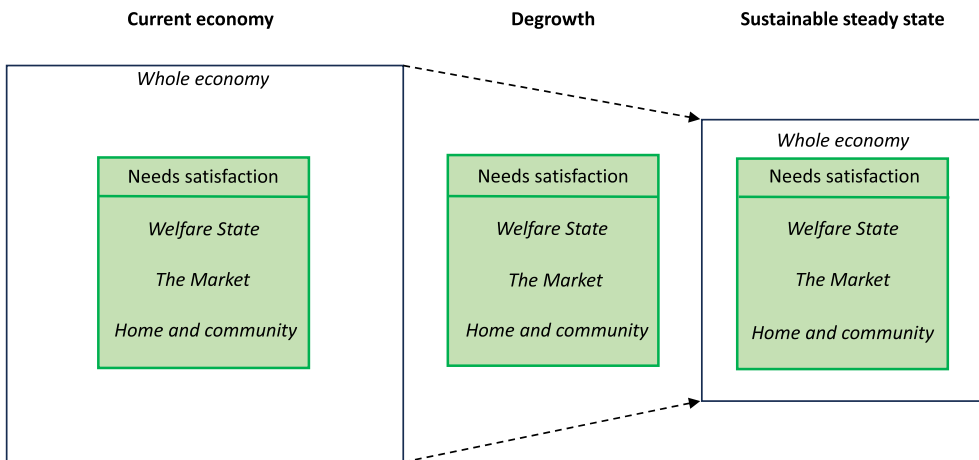
dedicating a greater proportion of state resources to welfare services” (Bailey 2015). However, in the absence of growth, policies will likely be required to reduce demand – e.g. by increasing retirement ages, strengthening preventive measures and/or mitigating the ecological crises. The political feasibility of these options is difficult to predict and requires further research.

Overall, the analysis in this article finds that providing welfare for all within planetary boundaries and without growth requires a fundamental transformation of the economic system such that it dedicates a higher proportion of overall economic activity and material throughput towards needs satisfaction, especially through not-for-profit provisioning. Merely ‘tweaking’ or ‘greening’ fiscal and monetary policies – as is the primary concern of the mainstream macroeconomics literature (Espagne *et al.* 2023, p.125) – is unlikely to be sufficient.

In a degrowth transition, where the absolute volume of material and energy throughput would contract – along with GDP given the absence of decoupling (Haberl *et al.* 2020) – the overall share of resources dedicated to needs satisfaction would need to increase substantially. In other words, the transition towards a sustainable steady-state economy requires a significant redistribution of monetary and biophysical resources away from ‘luxury’ and wasteful production and consumption and towards needs satisfaction (see Figure 1).

Ecological macroeconomic modelling should consider how resource stocks in non-essential sectors can flow towards welfare sectors. Since all sectors – public, private, community and households – contribute to welfare and needs satisfaction the redistribution of resources from ‘luxury’ to needs-related activities would need to occur across all of them, guided by democratic political and economic decision making (Lee *et al.* 2023, Steinberger *et al.* 2024).

Since resource limits are global, questions of global justice also need to be considered, especially given the historical reliance of Global North welfare state funding on the expropriation of labour and resources from the Global South (Bhambra and



**Figure 1.** Proportion of needs satisfaction in high-income growth-based, degrowth, and sustainable steady state economies (Source: The authors).

Holmwood 2018, Bhambra 2022). The global justice implications of financing sustainable welfare are currently under-explored in the literature and should be the subject of further research. However, financing just, sustainable welfare without aggregate growth requires a fundamental, global redistribution of real resources from luxury consumption to meeting human needs and an end to expropriation from the Global South for the benefit of the Global North.

## Notes

1. In addition, ‘doughnut economics’ (Raworth, 2017) and the ‘wellbeing economy’ (Trebeck and Williams, 2019) have emerged as prominent frameworks for government-led initiatives that prioritise social and ecological objectives over economic growth.
2. Ecological macroeconomics is a relatively new field seeking to integrate insights from ecological economics with those from broader heterodox macroeconomic theories, notably post-Keynesian (Espagne et al., 2023). Much of this literature focuses on the stability of steady state economies, their compatibility with profits and positive rates of interest, and how systems of finance, production and distribution both depend upon, and direct the transformation of, materials and energy (Althouse, 2022).
3. Given word limits, it was not possible to cite all the articles which mention a given financing source.
4. In this context, ‘progressive’ refers to taxes which apply higher rates to higher earners.

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## Authors’ contributions

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**Milena Büchs:** Conceptualisation; Methodology; Formal Analysis; Writing – Original Draft, Writing – Review & Editing; Visualisation; Supervision; Funding Acquisition.

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