

# Macroeconomic degrowth policies in peripheral countries: conditions, possibilities and limitations

*Vinicius Martinez and Linnit Pessoa*

## Abstract

This article critically evaluates the feasibility of implementing degrowth policies in peripheral economies, aiming to address the existing gap in the degrowth economic literature. While previous research has primarily focused on central countries, this study highlights the lack of theoretical foundations that account for the unique characteristics of peripheral countries, including their inequalities, external constraints, low income levels, and socio-structural conditions. The article begins by providing an overview of the degrowth economic concept, emphasizing its key principles. It then examines the specific challenges faced by peripheral countries, including high poverty rates and underdeveloped productive structure. Furthermore, the article explores the distinct macroeconomic conditions, economic dependencies, and structural limitations of peripheral countries. These nations often have low accumulated wealth, very few high-productivity sectors, and a reliance on external accumulation dynamics in financial, monetary and productive dimensions. The last section mainly discusses the conditions and limitations that peripheral countries may encounter when implementing macroeconomic policies for degrowth.

## 1 Introduction

Faced with the environmental catastrophe that looms as a result of human action (Pörtner et al, 2022), social scientists have defended different kinds of theories, models, practices, and policies in favor of alternatives as a way to contain or mitigate the damage caused by the climate crisis. One of the most prominent has been the interdisciplinary field of degrowth studies, which embraces a wide range of research disciplines such as political ecology, political philosophy, sociology, and ecological economics (Demaria et al., 2013).

The concept of degrowth has emerged as a response to the inherent unsustainability and inequities of the growth-oriented economic model. It advocates for a reevaluation of societal values, a reduction in material consumption, and the promotion of social and ecological well-being (Bergh, 2011; Kallis et al., 2018). Within the literature, scholars have engaged in debates regarding the theoretical foundations, principles, and potential implications of degrowth policies. However, the majority of these discussions have focused on central countries<sup>1</sup>, neglecting the specific challenges and opportunities that peripheral countries face, especially when dealing with economics subjects.

The literature on degrowth economics, specifically, has also predominantly focused on examining the viability of its theories and policies within the structural economic conditions of central economies (Cosme and O'Neill, 2017; Kallis, 2018; Parrique, 2019). There remains a significant gap in understanding the applicability and feasibility of degrowth economic policies in peripheral economies, which face different challenges due to their distinct type of production, strong external constraints, dependencies, and critical socio-structural conditions (Fischer, 2015; Chiengkul, 2018; Dengler and Seebacher, 2019; Hanacek et al., 2020; Gräbner and Strunk, 2023).

The degrowth economic literature takes a drastic approach, emphasizing the development of a new societal framework that aligns with environmental sustainability, fair and just wealth distribution, stability in economic indicators, a shift in production methods toward solidarity-based sustainable activities, and a transition in lifestyle patterns toward reduced levels of consumption and working hours (Kallis and Martinez-Alier, 2012). In macroeconomic terms, the literature on degrowth is still very incipient and poorly defined. Broadly speaking, it is understood as necessary a strong state intervention capable of creating, coordinating and planning investments for sustainable sectors in detriment of destructive sectors (Mastini et al., 2021). This lack of progress also applies to the fiscal, monetary and exchange rate macroeconomic policies required to achieve a degrowth economy.

Hence, degrowth economics seems to lack a general theoretical foundation. This problem becomes even more important when one takes into account the economic policies of peripheral countries, whose macroeconomic aspects respond in a subordinate way to the

---

<sup>1</sup> We have chosen to use the concept core-periphery for a number of reasons. Unlike the dichotomies North-South, development-underdevelopment, rich-poor and advanced-late, the notion of core-periphery has as distinct qualities its flexibility, versatility, amorality, universality and absence of pre-determinism. Of course, it is a concept and, by definition, it is limited, yet it is also opportune for the analysis proposed here.

dynamics of central countries (Santos, 1970; Bonizzi et al., 2020), and, therefore, its application is fundamentally dependent on the economic and political viability of degrowth propositions. This article aims to address this gap and contribute to the critical evaluation of degrowth policies in peripheral economies by exploring the possibilities, conditions, and limitations of macroeconomic policies required for their implementation.

Peripheral countries, bearing high levels of poverty, limited access to resources, and economic dependencies, present unique challenges that necessitate a critical examination of the feasibility and implications of degrowth policies (UN, 2022; UNCTAD, 2022). Previous literature has acknowledged the need for a deeper understanding of the macroeconomic conditions and structural limitations specific to peripheral countries due to their subordinate and dependent position in the world economy (Bonizzi et al., 2020; Kvangraven, 2020). In terms of production, there is significant structural heterogeneity and concentration in primary sectors, placing most of these countries in unfavorable positions within global value chains (Bair, 2009; Milberg and Winkler, 2013). Financially, peripheral economies lack autonomy over domestic credit and are largely influenced by international financial cycles (Rey, 2015; Bortz and Kaltenbrunner, 2018). They also hold lower positions in the hierarchy of currencies, leading to high exchange rate volatility and difficulties in conducting commercial transactions (Bruno and Shin, 2015; Fritz, 2018). The macroeconomic lack of autonomy in peripheral countries directly clashes with the required socio-economic development to meet the material needs of the population.

This article seeks to provide a comprehensive analysis of the feasibility and potential socio-economic impacts of implementing degrowth economic strategies in these contexts. The analysis will focus on key macroeconomic dimensions, including but not limited to financial autonomy, the role of international economic systems in shaping the possibilities for degrowth policies, structural transformation, and the fiscal and monetary challenges of transitioning to a downscaling economy.

After this introduction, the second section deals in more detail with the degrowth propositions and the specificities of peripheral regions that raise doubts about the possibilities of their actual realizations. The third section focuses on the general structural and macroeconomic conditions of peripheral countries, as well as their subordination to central economies. The fourth section examines the constraints on macroeconomic issues including

limits of fiscal, monetary and exchange rate policies to enable degrowth strategies. The article ends with some final remarks.

## **2 Economic degrowth: review and applicability**

The literature on economic degrowth can be identified from the 1970s on, although some related discussions about the steady state have already been covered since the classics of economic thought<sup>2</sup>. Even during the 20th century, there were previous developments on sustainable development and ecological economics (Daly, 1977; Georgescu-Roegen, 1971). However, the term degrowth (*décroissance*, in French), as recently highlighted and its initial propositions, begin to appear in a better-defined form after the works of Andre Gorz and Georgescu-Roegen, as well as the debates of the so-called Club of Rome and its report "The limits to growth" in 1972. At that time, it was initially discussed the biophysical conditions of the planet and its incompatibilities with the current economic system, something that would potentially lead to ecological and social collapse.

From these initial works, passing by social movements and political activism, it was only in the 2000s that the idea of degrowth began to take on robustness in academic and scientific terms. The very term "degrowth", in English, was only officially coined in 2008, at the Paris conference. As a broad and interdisciplinary field of research, the studies were confronted with a wide range of subjects to be addressed, such as politics, sociology, ecology, development and economics. In economics, little has been written in a systematic and theoretical manner, both in macroeconomic, mesoeconomic and microeconomic dimensions, to support the necessary policies of this program. Thus, the literature on economic degrowth, in particular, is still very recent and needs a deeper theoretical foundation.

In general, the notions of growth and degrowth represent contrasting paradigms within ecological economics and sustainable development thinking. Economic growth, in its traditional conception, emphasizes the continuous increase in production, consumption and wealth, often measured by Gross Domestic Product (GDP). Degrowth, on the other hand, challenges the assumption that unlimited economic growth is feasible and desirable in the long

---

<sup>2</sup> Mill (1848), for example, addresses the idea of the stationary state, the limits and consequences of economic slowdown on society. Although it didn't clearly address the environmental issue, this work already indicated concerns about the stationary economy.

term. It proposes an approach that deliberately seeks a controlled reduction in production and consumption, with an emphasis on rebuilding the economic, social and environmental foundations towards more sustainable patterns (Kallis, 2011; Cosme and O'Neill, 2017). Degrowth does not necessarily imply a sharp drop in GDP, but rather a reassessment of well-being indicators and a shift in focus, prioritizing quality of life, equality, autonomy and resilience. It is still unclear in this literature how to achieve these goals from the point of view of economic theory. For this reason, this section deals with some of the main policies and proposals of the degrowth literature in its fundamentally economic framework. In view of the special structural conditions of the peripheral countries, this section will lay the groundwork for critically confronting the possibilities, difficulties, and limitations of adopting degrowth policies in the peripheral countries.

The degrowth economics literature focuses on a series of measures understood to be necessary to reduce the rates and levels of material production, and thus reach ecologically sustainable levels of social reproduction. In the sphere of labor, there is a proposition of work-sharing that means the reduction of the working hours proposed as a way to redistribute employment and free time, allowing a better conciliation between job, personal life and unpaid activities (Kallis, 2018; Parrique, 2019). This would also allow more people to be employed, and to create jobs with low economic productivity but high social value in non-monetized markets, such as home care, healthcare services, education and improvement of local public goods. This could be done through laws, collective agreements or incentive programs. In addition, it advocates the implementation of an unconditional basic income that ensures a decent standard of living for all citizens in parallel with a job guarantee system, with the state acting as the employer of last resort in periods of crisis. This is intended to reduce the pressure for economic growth and the competition in the labor market, providing a basis for economic security and allowing people to make more sustainable and well-being-oriented choices.

Another important notion for degrowth is the spatial approximation of the production chain stages (Kallis et al., 2012; Demaria et al., 2013). It is proposed to encourage and support the development of local and community economic sectors, such as cooperatives, social enterprises, and solidarity economy initiatives. This would promote the active participation of communities in production and consumption, strengthen social ties, and reduce dependence on large corporations and global supply chains. Besides reducing the economic and environmental costs associated with long distance trade, the localization of activities would tend to value

decent work conditions, community responsibility, and respect for the environment. For instance, it would be important to transition to regional economic activities based on the circular economy that minimize the extraction of natural resources, reduce waste, and promote the reuse, recycling, and repair of products.

In this sense, a proposal that appears to make degrowth real is to change the forms of property (Tordjman, 2018; D'Alisa and Kallis, 2020). In the capitalist regime in place, the logic of private property dominates the determination of social relations and establishes the need for exchange for the purpose of profit through competitive methods. This creates a process of commodification of the economy that requires the increase of production and, consequently, of economic growth. It is a monopolizing and power-concentrating process, which ends up determining the very formation of social institutions. The inversion of this logic would be done through the dominance of public state properties and common properties. This would include the communal management of natural resources, democratic and decentralized participation in the governance of public goods, as well as the transformation to an economy where the forms of productive organization were cooperative.

The organization of companies would also have to obey a different logic (Kallis, 2018). Instead of being systematically forced to prioritize profits, through competitive structures, market gains and labor precarization, companies would have to be cooperatives, managed by workers, with the objective of meeting the needs of products and services for the local population. Thus, the idea of the company in degrowth economies would be compatible with the principles of solidarity economy, where companies are self-managed and collectively owned, with worker dominance in decision making and fair sharing of the outputs, besides being essentially oriented to local communities. The activities of these enterprises would focus on durable goods and sustainable services, countering product obsolescence and encouraging energy efficiency, higher clean technology productivity, recycling and sharing services.

Consumption would also have to change completely in a downscaling economy. Through systemic changes such as those pointed out above and political and institutional changes through education, it would be necessary to transform the mentality of constant and repetitive consumption. Besides the need to reduce material consumption, the degrowth literature also questions consumerism and, especially, the idea that the utility of material goods is something that is fulfilling and promotes happiness. The logic of consumption is understood as a response to the logic of the economy, and would be focused on sharing, repair, durability,

and recyclability. Goods would only have functions of use, and consumption would be done accordingly, while well-being and happiness would be stimulated through social relations, leisure, nature and meaningful work.

All those proposals are trickier when dealing with peripheral economies. If it is already difficult to think in such an economic mode of operation under capitalism and its necessity of expansion, it is even harder to think in such proposals under a peripheral economy that still does not have a developed productive structure and is marked by high unemployment, low income levels and has a lack in infrastructures. For instance, in 2022, per capita income in Africa was USD 1.976, in Latin America it was USD 8.939, while in Western Europe it was USD 49.619, and in Northern America it was USD 72.920<sup>3</sup>. Similarly, there is a greater concentration of income, wealth and political power in peripheral countries. In 2021, the top 10% net personal wealth share of the population held 71.5% of total wealth in Africa, 77.6% in Latin America, a higher trend in comparison to Western Europe and North America (both 58.3%)<sup>4</sup>. Although inequality is significant in all regions, in peripheral countries this problem is even more severe and hinders social cohesion around common goals.

Moreover, according to the Global Multidimensional Poverty Index of the United Nations Development Programme, the peripheral countries severely concentrate the highest absolute and relative amounts of poverty in the world. These countries have poor health, education and infrastructure indices. Due to their underdeveloped economic conditions, undernourishment and infant mortality rates are much higher, years of schooling are low and school dropouts are very significant. In addition, living standards are very deteriorated and inferior to those of central countries, with a lack of access to cooking fuel, sanitation, drinking water, electricity, housing and assets. It is clear that the material levels of these regions still need to improve a lot in order to provide adequate living conditions for their inhabitants. In other words, the idea that these economies could give up economic growth is questionable, even more to affirm that they are able to promote degrowth policies.

In addition to the different socio-economic structures that feature peripheral economies, the proposals on the quality of employment, shortening production chains, reducing consumption patterns, property structures and company organization depend on macro-

---

<sup>3</sup> According to UNCTADStat.

<sup>4</sup> Data from the World Inequality Database. Considering the top 1%, inequality is even more significant. In 2021, while the top 1% held 24,9% of all wealth both in Northern America and Western Europe, in Africa (36,3%) the wealth concentration was higher, and it reached an impressive 46,1% in Latin America.

economic arrangements to be feasible. The literature on economic degrowth focuses on localized policies, but lacks a foundation that connects them to structural fiscal, monetary and international conditions. For this reason, the next section deals with macroeconomic restrictions and constraints on the conduct of economic policies in peripheral economies, which end up adding obstacles to the application of degrowth measures.

### **3 The lack of autonomy to conduct macroeconomic policies**

The economic structure and the constraints faced by peripheral economies are notably different from central economies, which have undergone a process of structural change, reaching a higher level of aggregate and per capita income. For a long time, the underdevelopment of the peripheral countries was understood as a "backwardness" of these economies, a historical formation that could be overcome by a development project to make a structural change in these economies. However, "underdevelopment" is a capitalist formation, not simply a historical one. The periphery is not an accident of course where development has not yet been achieved. It is substantially a product of the expansion of capitalism itself. The relationship of dependency between the central and peripheral economies is mutual, although essentially different: the relationship of exploitation existing between both favors the expansion of the center, which stimulates the peripheral economies without breaking their submissive character (Kvangraven, 2020; Fisher, 2015; Oliveira, 1973).

Even so, the economic debate in peripheral countries was constantly marked by the search for development, with the objective of improving living conditions and increasing income in these countries. The period of the golden age of capitalism, which marked the developed economies in the post-war period until the 1970s, in the periphery was expressed by the adoption of development projects aimed at transforming the production structure through industrialization. Starting in the 1990s, the policy recommendations known as the Washington Consensus advocated for structural changes in peripheral economies that limited the ability of these countries to independently shape their economic policies. Among the structural reforms, the ones that probably represent the greatest impediments in the resumption of the development process of the peripheral economies were the financial and trade liberalizations. Both reforms were carried out under the argument that they would make peripheral economies more competitive, thus stimulating and promoting economic development.



Trade liberalization is opposed to the adoption of policies aimed at productive development, such as industrial and trade policies, under the argument that free trade would be a more fruitful strategy to achieve development – i.e., to achieve structural change and increase the income level of peripheral economies. However, as Chang (2003) notes, when developed countries were in the process of development, they used active industrial, trade, and technology policies to promote economic development. The advocacy of trade liberalization and the benefits of free trade for industrial development goes in the opposite direction to historical experience, which shows that the development of activities and products with higher added value does not occur naturally, and that stimuli (and certain disincentives) are necessary for economies to promote catch up, carry out structural change and develop their economies. The foreign trade policies that developed countries adopted during their development process are precisely those that today are not recommended to peripheral countries under the argument that they would have negative effects on the development of these economies (Chang, 2003).

With trade liberalization, the economies that have not yet completed the industrialization process and that are more technologically backward now face greater external competition without having the mechanisms to protect the development of domestic industry, affecting the competitiveness of the industry and hindering the diversification of the production structure. These issues affect the growth of developing economies since the sustainable increase in long-term growth rates depends on structural change that allows the manufacturing sector to reach its full potential<sup>5</sup> (Nassif et al, 2017). It is important to point out that the debate about the need for economic growth in peripheral countries is not trivial, since the living conditions of such countries are inferior compared to those in the center and their productive autonomy – especially regarding the production of more technologically sophisticated goods – is significantly lower.<sup>6</sup>

---

<sup>5</sup> To this end, it is desirable for the government to promote industrial policy in a coordinated manner with the macroeconomic regime to carry out structural change and promote catch up. See Nassif et al (2017).

<sup>6</sup> In the debate about the economic growth of peripheral countries, it is important to consider that the greater dependence on imports combined with the underdeveloped production matrix of these economies may increase the differential between the income elasticities of exports and imports, increasing the external constraint and affecting the growth of these economies. According to Thirlwall's law, the external restriction of a country will be greater the greater the income elasticity of its imports compared to the income elasticity of its exports. An export mix focused on natural products and the production of commodities presents a low-income elasticity, while an export mix focused on manufactured products, with higher added value and higher technological content has a higher-income elasticity. Thus, in order to relax the external restriction to growth, it is necessary to promote structural change, in order to increase the income-elasticity of exports and reduce that of imports.

Beyond the broader concept of industrialization, trade liberalization imposes the necessity to take into account global value chains (GVCs) as a distinctive configuration within the realm of contemporary global production dynamics (Bair, 2014; Coe et al., 2017; Durand and Milberg, 2020) and their consequential effects on peripheral regions. As aptly emphasized by Milberg and Winkler (2013), the landscape of global industry has undergone profound transformations since the latter part of the twentieth century. These transformations have been characterized by processes such as deverticalization, fragmentation, and the outsourcing of production activities, culminating in the establishment of an internationally interconnected and extensive network for the supply of products and inputs. Notably, this structural shift has seen core countries retaining intellectual monopolies over high-technology products, while the more rudimentary and lower value-added phases of production are relocated to highly competitive markets in peripheral regions. Consequently, in an increasingly interdependent, asymmetric and unequal productive world, there are limitations to economic development and sustainable economic policies.

The defense of financial liberalization, on the other hand, comes from the idea that the opening of peripheral economies would allow the absorption of foreign savings and a more efficient allocation of capital. Assuming that capital flows are countercyclical, financial liberalization would be a development possibility for economies facing savings problems, as excess capital from developed countries would be directed to developing countries, stimulating investment<sup>7</sup> and economic growth. However, the fact that the nature of short-term capital flows is pro-cyclical has raised macroeconomic instability and affected the growth of these economies (Feijó et al, 2016; Ocampo and Stiglitz, 2008). It is precisely this nature that brings about the need for the adoption of some kind of control - contrary to what is practiced by most developing economies. Capital controls, or macroprudential policies in general, do not distort the allocation of resources by creating obstacles to the free movement of capital; on the contrary, they are instruments that increase autonomy in the conduct of domestic policies, enabling the implementation of policies that could be threatened by adverse capital movements (Carvalho and Sicsú, 2004).

---

<sup>7</sup> It is worth mentioning that Kregel (2008) notes that the evidence suggests that, in fact, higher capital flows to peripheral economies are associated with increased consumption, not necessarily raising the investment rate.

With the pro-cyclicality of capital flows, macroeconomic policy shifted to intensifying the business cycle,<sup>8</sup> rather than absorbing booms and recessions, ensuring stability (Ocampo and Stiglitz, 2008). The financial integration of peripheral economies has restricted the scope for economic policies. Compared to central economies, basic macroeconomic prices in peripheral economies are highly volatile, limiting the possibilities of conducting pro-growth short-term economic policies. The dependence of the financially integrated peripheral economies directly affects macroeconomic policy management in two ways: due to the persistent interest rate differential, which results in the tendency of the real exchange rate to be appreciated and volatile; and by causing a tendency of the interest rates to remain high (Guizzo et al., 2018).

The financial liberalization of economies without convertible currencies has established a high interest rate policy due to the need to practice high interest rate differentials to compensate for the low liquidity premium of peripheral currencies<sup>9</sup> (Paula et al, 2017). The greater volatility of peripheral currencies, together with their lower liquidity premium and their marginal insertion in the international financial system, makes these economies more vulnerable to the economic policies of central countries and to the international cycle. Thus, the monetary autonomy of the peripheral economies in a context of free capital mobility is lower. The interest rate is maintained at levels high enough to attract foreign capital and relieve the pressures that the intense and volatile flow of capital has on the exchange rate (Kaltenbrunner and Paineira, 2017).

Interest rates high enough to attract foreign capital would be necessary because, due to the insufficient savings that developing economies have, foreign savings would add to domestic savings, stimulating investment. This is one of the arguments for financial liberalization – to get developing countries to absorb foreign savings, making the allocation of capital more efficient since marginal returns are higher in developing countries. However, the increase in foreign savings tends to *replace* domestic savings rather than complementing them. Thus, it is

---

<sup>8</sup> This is because the vast capital inflows and outflows, which are pro-cyclical, affect the main macroeconomic variables (the exchange rate, interest rates, domestic credit, and the value of the stock market), which have effects on the real economy, impacting investment, savings, and consumption decisions, which makes the conduct of macroeconomic policies also pro-cyclical (Ocampo and Stiglitz, 2008).

<sup>9</sup> Each currency has a liquidity premium according to its role in the international financial system. Since peripheral currencies are at the lower end of the currency hierarchy, these economies need to compensate for their currencies' low liquidity premium by offering a higher yield to attract international investors, i.e., increase the interest rate differential, and/or remove regulation from the financial account to reduce carrying costs, i.e., remove obstacles to capital inflows and outflows.

not investment but consumption and foreign debt that increase with the growth of foreign savings. This strategy of growth with foreign savings, i.e., growth with foreign debt, does not put the economy on a sustainable growth path and increases the country's financial fragility in the medium term, implying constant balance of payments crises, since it is a strategy of growth with current account deficit (Bresser-Pereira, 2012). In effect, financial liberalization and the growth strategy with foreign savings distort basic macroeconomic prices, keeping the interest rate at high levels and leading to the tendency of exchange rate appreciation (Feijó et al, 2022).

Besides the adverse effects that keeping interest rates at high levels has on investment and economic growth, its effects on other macroeconomic prices can also reinforce the subordinate insertion of peripheral economies in international trade. The exchange rate tends to appreciate due to the practice of high interest rate differentials (i.e., a permanently high interest rate), which attract capital above the needs of current account balance, causing the exchange rate to tend to overvalue in the long run. Exchange rate appreciation also has an adverse effect on the competitiveness of industrial enterprises, and may discourage industrial development and the production of technologically sophisticated goods, encouraging specialization in the production of goods and services in which the economy has comparative advantages.

Feijó et al. (2016) note that, if associated with high interest rates, overvalued exchange rates and pro-cyclical fiscal policy policies, financial liberalization in peripheral economies can have the effect of reducing the potential output of the economy. In addition to discouraging productive investment, the tendency of the interest rate to be kept at high levels has controversial distributional effects (Becker et al, 2010) and deteriorates the public debt profile, restricting the fiscal space of the economy and leading to pro-cyclicality of fiscal policy<sup>10</sup> (Feijó et al, 2016; Guizzo et al, 2018). Fiscal policy pro-cyclicality and the higher cost of carrying public debt often come accompanied by the recommendation of fiscal austerity policies at times of business cycle downturns and rising debt-to-GDP ratios. Consistent with the theoretical framework that underlies the liberalizing reforms, the fiscal austerity policy assumes that the implementation of a fiscal adjustment, which should preferably occur by reducing government spending, would have the effect of recovering expectations and, therefore, stimulate private

---

<sup>10</sup> It is worth noting that the achievement of primary surpluses as the main objective of fiscal policy in an economy with an open capital account results in the transfer of a large part of public income to interest payments. The combination of primary surplus and nominal deficits results in the transfer of resources from the economy as a whole to debt holders, contributing to the concentration of income (Camara Neto and Vernengo, 2004).

investment, leading the economy to growth and reducing the debt/GDP ratio. The fiscal austerity agenda directly affects public investment, since they understand that there is a crowding out effect of public investment on private investment and assume the Ricardian equivalence theorem.<sup>11</sup> However, as we have seen, aggregate investment is the key variable for market economies to operate with full employment, and public investment is an important tool to promote economic growth with structural change, being complementary to monetary policy – which should keep interest rates at *low* levels. This agenda still has deleterious effects on the asymmetries that developing economies face, such as the generation of technologies and financial intermediation concentrated in developed countries (Ocampo and Stiglitz, 2008), which may doom these countries to underdevelopment, a low-growth regime with low dynamism and low income, and may not improve the quality of life of the population.

Thus, the combination of high interest rates, overvalued exchange rates, and pro-cyclical fiscal policy resulting from financial liberalization reduces the autonomy to conduct short- and long-term pro-growth policies and may reduce the potential output of economies. Trade liberalization, with the logic of free trade and increased external competition, hinders the development of new activities and products, which hampers structural change and reduces the competitiveness of these economies, and may stunt industrialization or lead to early deindustrialization. If there is no growth strategy with structural change, these economies will hardly be able to promote catching up to increase their growth potential, improve the quality of life of the population, and promote economic development, since this is not a natural process.

Financial liberalization of economies without convertible currencies and trade liberalization of economies that are not yet at the stage of mature industrial development contributes to keeping these economies underdeveloped and with a low level of aggregate and per capita income, increases their vulnerability to the international cycle, and reduces the mechanisms that could be used to deal with this increased vulnerability. Moreover, since such economies have a low level of aggregate income, economic growth is necessary to improve the quality of life of the population, otherwise the income of such countries will remain stationary, condemning the population to remain with a quality of life inferior to those countries whose capital accumulation process is superior - and therefore it makes sense to advocate the need for degrowth. We will argue that talking about degrowth in peripheral economies is problematic

---

<sup>11</sup> Fiscal austerity can still be counterproductive in reducing the debt-to-GDP ratio, especially if it is combined with a high interest rate policy, because the contractionary effect of the agenda on the output of the economy can offset the impact of reduced public spending on debt.

since such economies do not have a high enough income level to make it possible to degrow without strongly affecting the quality of life of the population.

#### **4 Macroeconomic limitations of degrowth in peripheral economies**

In light of these structural limitations faced by peripheral countries, which do not have complete autonomy to carry out their economic policies, this section seeks to present the general ideas that can be grasped in the economic degrowth literature and confront them with the conditions and possibilities of its application in peripheral countries.

In macroeconomic terms, the degrowth literature is even scarcer. In general, it is proposed to adopt alternative measures of progress and well-being, which prioritize environmental and social factors. This may include indicators of quality of life, health, education, environmental sustainability, and subjective happiness, for example, the Human Development Index (HDI), Gross National Happiness Index (GNH), and ecological footprint. But beyond this aspect of measurement, it is possible to detect some macroeconomic policies promoted by the State that are necessary for economic degrowth.

The most consensual macroeconomic factor in the degrowth literature is the role of the State (Kallis, 2018; D'Alisa and Kallis, 2020). The State could coordinate, plan and organize the transition to a degrowth-oriented economy by reducing degrading sectors, fostering strategic investments in ecological sectors and social activities through public goods, relocating supply chains to local arrangements, promoting good jobs employment policies (Pollin, 2018). This would involve investing in retraining programs for workers in declining industries, fostering sustainable technologies, and promoting eco-friendly practices. Furthermore, the State takes on a role of regulating and governing economic activities with degrowth principles, for example by stipulating targets, standards, rules and limits for the emission of pollutants, as well as for the extraction of mineral and agricultural resources. The State should also support local and sustainable economic activities providing incentives to familiar or small-scale agriculture, renewable energy production, cooperatives, social enterprises.

Such an understanding of the role of the State, even if internally coherent, presents political and economic problems to be realized in capitalist economies, especially in peripheral countries. According to dependency theorists, the constituent interactions between central and peripheral societies articulate political and ideological links between dominant elites in central

countries and subordinate elites in peripheral countries (Kvangraven, 2020; Cardoso and Faletto, 1979; Marini, 1969). In a context of very high inequalities, typical of these countries, the concentration of power and control over the State rests heavily on local elites who reproduce the practices and conceptions of central elites. Therefore, considering the dominance of the state's ideological apparatus as described by Gramsci (1975), the political and economic applicability of degrowth measures becomes very difficult, if not impossible. The dominant interests focus on the continued exploitation of natural resources and productive labor, on profits and economic growth, and not on long-term ecological and social well-being. This is reflected in the activities of the State, which is therefore subjugated to these interests.

If the role of the state per se is questionable, the applicability of state policies becomes even more problematic and difficult when macroeconomic constraints are taken into account. Socio-economic and meso-economic policies for degrowth depend on macroeconomic feasibility in order to be sustained, whether they be fiscal, monetary or exchange rate policies.

Regarding the fiscal side, the degrowth literature indirectly proposes a progressive fiscal reform and redistribution of factors seeking to reduce inequality (Bergh and Kallis, 2012; D'Alisa et al., 2015; Kallis, 2018). The underlying argument is that a progressive fiscal reform that enhances tax for the richest and wealthiest and increases the tax for activities with high environmental impact would relieve the burden on the poorest and promote a more equitable wealth and income distribution while reducing inequality. It also would have the effect of lowering and destimulating sectors and activities that have negative impacts on the environment. However, that is not a simple thing to achieve in peripheral economies, since the high wealth concentration reflects a high power concentration that minimizes the political influence of the broad society. It is already difficult to implement such reforms in countries that do not have such unequal political power structure, since it is a measure that undermines the wealthier share of society and the wealthier and more influential sectors of the economy, but it is even more difficult for countries that have these economic agents holding political power, while the low- and middle-income groups have more hurdles to overcome in order to claim their rights.

The literature also recommends adopting budgetary policies that prioritize balanced budgets over fiscal deficits, aligning with the principles of a steady-state economy (Kallis,

2012).<sup>12</sup> This makes sense in terms of the degrowth strategy, since the fiscal deficit is a way of stimulating the economy to grow again in times of economic crisis. The degrowth literature diverges from conventional fiscal policy, which seeks either to open room for private sector growth or to use the state apparatus to foster effective demand and economic growth. On the contrary, it argues that fiscal policy should focus on reduction of material production, redistribution of income and wealth with progressive tax systems, reduction of spending in sectors considered superfluous, and directing funds to sustainable projects (Bergh and Kallis, 2012). However, as we have already argued, the feasibility of thinking about degrowth in peripheral economies is questionable. The lack of infrastructure, low productive autonomy and low level of aggregate income, as well as the low level of schooling, low energy capacity, asymmetries in access to quality healthcare, and problems of access to other goods and services considered a right of citizenship as well, such as housing, drinking water and sanitation, make growth desirable in order to improve the living conditions of the population. To address such lack of infrastructure, a fiscal policy that seeks to promote public investment in infrastructure is worthwhile.

It is important to point out that arguments that are often used to defend degrowth in all economies, regardless of their economic structure and the quality of life of their population. For instance, the argument that the degrowth of certain sectors could be offset by the growth of others is not enough to defend the degrowth strategy in peripheral economies. If the level of output and income in these economies is not enough to improve society's living conditions, simply replacing factors risks condemning them to remain at a general low level of income, without increasing their productive capacity and these standards of living.

The same goes for the argument that it is enough to redistribute income. The issue is not just about the amount of income the population has, so it is not enough to take income from the richest part of society and give it to the poorest. When it comes to peripheral economies, the productive structure is crucial, as are the effects of having such a poorly developed structure and a high dependence on external goods and services. This does not mean that redistributing income would be undesirable, because it would not be, but rather that it is not enough to achieve the goal of improving the living conditions of the population.

---

<sup>12</sup> Even if degrowth is applied, there are some critics about the stability of public debt even in this context, due to the necessity of negative interest rates (Pasche, 2018).



The degrowth theorists also diverge from the dominant monetary policies. For them, instead of a monetary policy focused on inflation control and growth stability, instruments such as interest rates should discourage investments and consumption in undesirable sectors, through reforms in the monetary system to steer credit and encourage sustainable, local and communitarian economic sectors and activities (D'Alisa et al., 2015). Therefore, the interest rates should not be the main tool to control inflation, as it usually is, but should be zero (Kallis, 2012). It is also tricky, if not impossible, for peripheral economies. As shown above, the peripheral economies do not have convertible currencies. The lower liquidity of their currencies means that these economies have to pay higher interest rates than the central countries to compensate for their greater risk of their currencies. If the interest rate of the peripheral economies is zero (or close to zero), international investors will flee to liquidity, generating financial crises in these economies (Fritz, 2018; Paula et al, 2017). This strategy might be feasible only for countries with convertible currencies, i.e. the core economies.

The approach to exchange rate policy and international economics is perhaps the least discussed in this literature. It can be stated, however, that there is a defense of an exchange rate policy that discourages long-distance foreign trade and prioritizes regional and domestic activities. This would reduce the economic costs and ecological impacts of long-distance transport, besides encouraging the development of local production, reducing external dependencies, and favoring smaller scale common activities (Kallis et al., 2018). However, the production of the peripheral economies is largely focused on primary products (mostly agricultural or mineral), with a great dependence on technology and products with higher added value. Thus, it is difficult to think of such a strategy considering the current productive, commercial and financial integration that economies have in global value chains. It is not simply a question of stimulating local production, since in order to achieve this productive autonomy, entire sectors would need to be developed.

Regarding the financial sector, the degrowth literature proposes a profound restructuring of the financial system in order to direct resources towards socially useful and sustainable investments (Tokic, 2012). For this, they advocate the promotion of ethical and cooperative banks, the slowing down of financial speculation and the implementation of mechanisms that discourage the relentless pursuit of maximum short-term profit. The proposal to restructure the financial system is necessary for any proposal to tackle the climate crisis, whether degrowth or not (Saad-Filho and Feil, 2023). The short-termist nature of the financial

system is currently incompatible with any agenda for transforming the economy, be it the pattern of production, trade or consumption.

In order to come up with proposals to tackle the climate crisis, it is necessary to break with the logic of financialized capitalism, which prioritizes the maximization of short-term returns (Saad-Filho and Feil, 2023; Saad-Filho, 2021; Sawyer, 2021). This logic does not include concern for the origin or the way in which profit is generated, and there is no concern for sustainability or for the transformation of the economic structure towards sustainable production, commercialization and consumption patterns. The financial system must act in accordance with another logic, which does not only seek financial return as an end in itself.

The problem of relying on the promotion of ethical and cooperative banks is that private banks operate in a different logic than the public ones, and therefore have a higher preference for liquidity and are more averse to risks, usually acting in a more defensive way (Araújo, 2018). A more reliable proposal to stimulate sustainable investment to address climate change might be the creation of public banks, especially development banks, to promote productive investments that are not aimed at maximizing profit and short-term returns. Development banks have the capacity to direct investments and better deal with the high uncertainty and uncertain returns that characterize the investments needed to respond to the climate crisis. The capacity to act as an arm of economic policy (Feil and Feijó, 2021) makes such institutions functional and desirable for changing the orientation and to stimulate investment decisions to promote a structural change seeking to address climate change.

Concerning the degrowth strategy specifically, the investments should be directed to service sectors with lower impacts on the planet, so that the transition of productive structures, even if it encourages the growth of some sectors, would decrease the importance of others to the point of generating a decrease from the general standpoint. However, it is complicated to propose that peripheral economies focus on the services sector, once this sector can not promote development by itself, since it relies mainly on industrial policies (Chang, 2003). It is necessary to consider the low productive autonomy and technological dependence that these economies have in order to verify which proposals are viable from the point of view of society's quality of life.

The issue of financing, stimulating and enabling investment is even more important if we consider the need to transition to renewable energies and achieve energy efficiency. The degrowth literature advocates an accelerated transition to renewable energy sources, such as

solar, wind and biomass, along with the implementation of energy efficiency measures. The aim is to reduce dependence on fossil fuels, reduce greenhouse gas emissions and promote energy sustainability (Kallis et al., 2018). This is an undeniably important objective for dealing with the climate issue, but for peripheral economies, since production and income have not yet reached a significant level as in central economies, growth is still necessary to improve society's standards of living.

In sum, even if the set of policies indicated indirectly in the degrowth literature were successfully adopted, it could have important socio-economic and structural impacts. If the defining specificities and dependencies of peripheral economies are not taken into account, inflationary impacts tend to be severe for a number of reasons. First, inflationary impacts can be caused both by structural bottlenecks in the process of transitioning the productive structure and by currency devaluation due to insufficient interest rates to cover the risks of weaker currencies internationally. Peripheral economies have high structural heterogeneity and a lack of productive cohesion, which means that the process of transitioning the productive and energy matrix has strangulation points, i.e. market segments where demand is excessive, coexisting with other markets with relatively idle capacity depending on the dynamics of demand. At the same time, if monetary policy tries to maintain real interest rates near zero, the liquidity of the dollar becomes more attractive to international investors, resulting in a reduction in the supply of dollars in the peripheral markets and, consequently, a devaluation of the exchange rate followed by an increase in imported products, generally manufactured and high-tech, which reverberates in inflation throughout the economy.

Second, the labor market would also probably be strongly affected by the application of these policies. In a likely context of inflation and structural change, the transition would lead to structural unemployment on the one hand and economic stagnation on the other. Even if new jobs were created in the spheres of public services, ecology and welfare, low productivity and productive specialization in agricultural and mining sectors would mean that short supply chains would be insufficient to meet the demands of the population. In order for material needs to be met, at least one period of vigorous growth would be needed to establish local industries that would sustain the population's basic demands. Otherwise, the labor market would be incomplete, dependent, with low real wages and chronic unemployment.

Third, the demographic pyramid of peripheral countries is generally still in a phase of population growth, which means that simply maintaining material production in these societies

would mean reduced access to goods and services. In the context of degrowth, downsizing would be even more important and against the need to improve insufficient living standards. At least, growth rates in strategic sectors would have to be equivalent to population growth rates to ensure the same material conditions.

Therefore, applying the degrowth proposal in peripheral economies is not simple. These economies have many constraints that reduce their possibilities of thinking about degrowth, threaten the maintenance of living standards and make it impossible to improve living material conditions. There are macroeconomic constraints, as well as restrictions concerning infrastructure, socio-economic conditions and the productive structure for peripheral economies to achieve degrowth. If the core economies, which have a pattern of production and consumption considered "excessive", need to degrow, the peripheral economies still need to grow to reach the level of life quality of the developed economies. Making growth impossible can affect the lives of the population both through the macroeconomic instabilities it can generate and by condemning the population of these countries to permanent precarious living conditions and a permanently low level of aggregate income.

## **5 Conclusion**

This article initially sought to introduce the issue of the real viability of macroeconomic policies in line with the economic degrowth regime in peripheral economies. Initially, we showed that the development of the economic literature on degrowth is still very incipient and lacks a theoretical foundation in several dimensions. Even so, the article has made an effort to list the insights from the literature about the transformations that need to take place for degrowth to occur from a macroeconomic point of view.

Peripheral economies have various constraints that reduce their autonomy in terms of economic policies. Whether due to their subordinate insertion into the international monetary and financial system, their reduced fiscal space or their vulnerability in terms of determining the exchange rate, these economies have greater macroeconomic restrictions on the conduct of their domestic policies and are more vulnerable to the international economic dynamics. These restrictions and this reduced degree of autonomy are also expressed when we analyze the viability of policies that seek degrowth, which are confronted with other limitations that these economies structurally have, such as their low productive autonomy, lack of infrastructure, high inequality, low aggregate income, and a shortage of access to basic goods and services.

This condition seems to impose a need for growth on peripheral countries, at least in the medium term. At the same time, macroeconomic dependencies affect the possibility of implementing combined growth policies such as job guarantee, basic income, zero interest rates and local production based on social welfare services. Thus, in order to resolve macroeconomic dependencies and enable degrowth economics in peripheral countries, it would first be necessary to resolve the systemic problems that underlie them (Foster, 2011; Blauwhof, 2012). Economic and geopolitical asymmetries seem to be undermining the chances of global degrowth and jeopardizing life possibilities through the imminent environmental crisis.

As this is a research agenda still in early stages, this article does not propose to bring definitive conclusions on the subject. We propose here the introduction, so far neglected in the academic debates, of the issues that permeate, hinder or possibly make unfeasible the economic degrowth in peripheral countries. Future developments are necessary to understand the details, solutions, and contradictions of this theme, as well as to open room to state categorically whether or not degrowth is viable under these conditions.

## References

- Araújo, V. L. "Bancos públicos de desenvolvimento: uma aproximação teórica." *Análise Econômica*, Porto Alegre, 2018, v. 36, n. 70, p. 7-33.
- Becker, J.; Jäger, J.; Leubolt, B.; Weissenbacher, R. "Peripheral Financialization and Vulnerability to Crisis: A Regulationist Perspective." *Competition & Change*, 14(3-4), 225–247, 2010.
- Bair, Jennifer. "Editor's Introduction: Commodity Chains in and of the World System." *Journal of World-Systems Research* 20, no. 1 (2014): 1-10.
- Blauwhof, F. B. "Overcoming Accumulation: Is a Capitalist Steady-State Economy Possible?" *Ecological Economics* 84 (2012): 254-261.
- Bresser-Pereira, L. C. "A taxa de câmbio no centro da teoria do desenvolvimento." *Revista Estudos Avançados* 26 (75), 2012.
- Cardoso, Fernando Henrique, and Enzo Faletto. *Dependency and Development in Latin America*. Berkeley: Univ of California Press, 1979.
- Camara Neto, A.; Vernengo, M. "Fiscal policy and the Washington consensus: a Post Keynesian perspective." *Journal of Post Keynesian Economics*, 2004, vol. 27, issue 2, 333-343.
- Carvalho, F.J.C.; Sicsú, J. "Controvérsias Recentes Sobre Controles de Capitais." *Revista de Economia Política*, vol. 24, n.2, p.163-84, abril-junho de 2004.

Chang, H. *Chutando a escada: a estratégia de desenvolvimento em perspectiva histórica*. Editora UNESP, São Paulo, 2003.

Chiengkul, P. "The Degrowth Movement: Alternative Economic Practices and Relevance to Developing Countries." *Alternatives* 43, no. 2 (2018): 81-95.

Coe, Neil M., Martin Hess, Henry W. C. Yeung, Peter Dicken, and Jeffrey Henderson. "Globalizing Regional Development: A Global Production Networks Perspective." In *Economy: Critical Essays in Human Geography*, edited by John Agnew and Ron Martin, 199-215. Abingdon: Routledge, 2017.

Cosme, I., R. Santos, and D. W. O'Neill. "Assessing the Degrowth Discourse: A Review and Analysis of Academic Degrowth Policy Proposals." *Journal of Cleaner Production* 149 (2017): 321-334.

D'Alisa, Giacomo, Federico Demaria, and Giorgos Kallis, eds. 2015. *Degrowth: A Vocabulary for a New Era*. Routledge.

D'Alisa, Giacomo, and Giorgos Kallis. "Degrowth and the State." *Ecological Economics* 169 (2020): 106486.

Daly, Herman E. *Steady-State Economics*. Island Press, 1977.

Demaria, F., F. Schneider, F. Sekulova, and J. Martinez-Alier. "What is Degrowth? From an Activist Slogan to a Social Movement." *Environmental Values* 22, no. 2 (2013): 191-215.

Dengler, C., and L. M. Seebacher. "What about the Global South? Towards a Feminist Decolonial Degrowth Approach." *Ecological Economics* 157 (2019): 246-252.

Durand, Cédric, and William Milberg. "Intellectual Monopoly in Global Value Chains." *Review of International Political Economy* 27, no. 2 (2020): 404-429.

Feijó, C.; Araújo, E. C.; Bresser-Pereira, L. C. "Política monetária no Brasil em tempos de pandemia." *Revista de Economia Política*, vol. 42, nº 1, pp. 150-171, janeiro-março/2022.

Feil, F., and Feijó, C. "Development Banks as an Arm of Economic Policy – Promoting Sustainable Structural Change." *International Journal of Political Economy*, 2021, 50:1, 44-59, DOI: 10.1080/08911916.2021.1894827.

Feijó, C.; Lamônica, M. T.; Lima, S. S. "Financial Liberalization and Structural Change: The Brazilian case in the 2000s." *Centro de Estudos sobre Desigualdade e Desenvolvimento (CEDE)*, Texto para discussão n. 118, out. 2016.

Fischer, A. M. "The End of Peripheries? On the Enduring Relevance of Structuralism for Understanding Contemporary Global Development." *Development and Change* 46, no. 4 (2015): 700-732.

Foster, J. B. "Capitalism and Degrowth-An Impossibility Theorem." *Monthly Review* 62, no. 8 (2011): 26.

Fritz, B. "Global Currency Hierarchy and National Policy Space: A Framework for Peripheral Economies." *European Journal of Economics and Economic Policies* 15 (2018): 208-218.

Georgescu-Roegen, Nicholas. *The Entropy Law and the Economic Process*. Harvard University Press, 1971.

Gräbner-Radkowsch, Claudius, and Birte Strunk. "Degrowth and the Global South: The Twin Problem of Global Dependencies." *Ecological Economics* 213 (2023): 107946.

Gramsci, Antonio, and Valentino Gerratana. *Quaderni del carcere*. Vol. 4. Torino: Einaudi, 1975

Guizzo, D.; Strachman, E.; Dalto, F.; Feijó, C. "Financialisation and Development: how can emerging economies catch up?" *Ola Financiera*, vol. 12, no. 34, set-dez, 2018, DOI: 10.22201/fe.18701442e.2019.34.71956; Online at <https://mpira.ub.uni-muenchen.de/87076/>.

Hanaček, K., B. Roy, S. Avila, and G. Kallis. "Ecological Economics and Degrowth: Proposing a Future Research Agenda from the Margins." *Ecological Economics* 169 (2020): 106495.

Kallis, G. "In Defence of Degrowth." *Ecological Economics* 70, no. 5 (2011): 873-880.

Kallis, G., V. Kostakis, S. Lange, B. Muraca, S. Paulson, and M. Schmelzer. "Research on Degrowth." *Annual Review of Environment and Resources* 43 (2018): 291-316.

Kallis, G., C. Kerschner, and J. Martinez-Alier. "The Economics of Degrowth." *Ecological Economics* 84 (2012): 172-180.

Kallis, Giorgos. *Degrowth*. Newcastle upon Tyne: Agenda Publishing, 2018.

Kaltenbrunner, A.; Paineira, J. P. "Subordinated Financial Integration and Financialisation in Emerging Capitalist Economies: The Brazilian Experience." *New Political Economy*, 2017, DOI: 10.1080/13563467.2017.1349089.

Kregel, J. "Financial liberalization and domestic policy space: theory and practice with reference to Latin America." In Arestis, P. & De Paula, L. F. (Eds.) *Financial Liberalization and Economic Performance in Emerging Countries*. 2008. Basingstoke: Palgrave Macmillan, 9-25.

Kvangraven, I. H. "Beyond the Stereotype: Restating the Relevance of the Dependency Research Programme." *Development and Change* 0(0): 1–37. DOI: 10.1111/dech.12593.

Marini, Ruy Mauro. *Subdesenvolvimento e Revolução*. Rio de Janeiro: Civilização Brasileira, 1969.

Mastini, R., G. Kallis, and J. Hickel. "A Green New Deal without Growth?" *Ecological Economics* 179 (2021): 106832.

Milberg, W., and D. Winkler. *Outsourcing Economics: Global Value Chains in Capitalist Development*. Cambridge: Cambridge University Press, 2013.

Mill, John Stuart. *Principles of Political Economy*. 1848.

Nassif, A.; Bresser-Pereira, L. C.; Feijó, C. "The case for reindustrialisation in developing countries: towards the connection between the macroeconomic regime and the industrial policy in Brazil." *Cambridge Journal of Economics*, 2018, 42, 355–381. Advance Access publication 17 May 2017. doi:10.1093/cje/bex028.

- Ocampo, J. A.; Stiglitz, J. *Capital Market Liberalization and Development*. Oxford, Scholarship Online, May, 2008. Available at:  
<http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780199230587.001.0001/acprof-9780199230587>.
- Oliveira, F. D. *Crítica à razão dualista / O ornitorrinco*. São Paulo: Boitempo, 2003[1973].
- Pasche, M. "Degrowth and Sustainable Public Finance." *MPRA Paper* No. 87109. 2018.
- Paula, L. F.; Fritz, B.; Prates, D. M. "Keynes at the periphery: Currency hierarchy and challenges for economic policy in emerging economies." *Journal of Post Keynesian Economics*, 2017, 40(2), p. 183-202.
- Pollin, R. "De-growth vs a Green New Deal." *New Left Review* 112 (2018): 5-25.
- Pörtner, H. O., D. C. Roberts, and E. S. Poloczanska. "IPCC, 2022: Summary for Policymakers." 2022.
- Rey, H. "Dilemma not Trilemma: The Global Financial Cycle and Monetary Policy Independence." *NBER Working Paper Series* no. 21162, 2015.
- Saad-Filho, A. *Progressive Policies for Economic Development: Economic Diversification and Social Inclusion After Climate Change*. Routledge, 2021.
- Saad-Filho, A., and Feil, F. "From Climate Change to Sustainable and Inclusive Economies: A Policy Agenda." *Critical Sociology* 00(0), 2023.
- Sawyer, M. "Financialisation, Industrial Strategy and the Challenges of Climate Change and Environmental Degradation." *International Review of Applied Economics* 35, no. 3-4 (2021): 338-354.
- Tokic, D. "The Economic and Financial Dimensions of Degrowth." *Ecological Economics* 84 (2012): 49-56.
- Tordjman, H. "Dématérialiser la nature pour la faire entrer dans la sphère du marché." *HAL-*01948581. 2018.
- Van den Bergh, J. C. "Environment Versus Growth—A Criticism of 'Degrowth' and a Plea for 'A-Growth'." *Ecological Economics* 70, no. 5 (2011): 881-890.
- Van den Bergh, J. C., and G. Kallis. "Growth, A-Growth or Degrowth to Stay Within Planetary Boundaries?" *Journal of Economic Issues* 46, no. 4 (2012): 909-920.