

BRIDGING REGULATION THEORY AND HETERODOX ECONOMICS FOR EFFECTIVE INDUSTRIAL POLICY DELIVERY: A THEORETICAL EXPLORATION

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Regulation theory has long relied on the lexicon of “regulatory reform” to promote static economic efficiency and disciplined and rigid governance models. Although numerous authors have pointed to the technocratic nature of the existing ‘regulatory orthodoxy’ and stressed the need to incorporate non-economic values in regulatory decision-making to improve its democratic component, contemporary critiques fall short of repositioning regulation on a more progressive economic basis. This article delves into this epistemic gap by drawing on theoretical contributions from interdisciplinary research streams attuned to heterodox economic thinking. We critique the ‘regulatory orthodoxy’ at both substantive and procedural levels, outlining new macro-, meso-, and micro-level regulatory parameters. Ultimately, we provide insights into how a regulatory heterodoxy can enhance theory and practice for effective industrial policy delivery.

Keywords: development; heterodox economics; industrial policy; regulation; regulatory governance.

CONECTANDO A TEORIA DA REGULAÇÃO E A ECONOMIA HETERODOXA PARA A IMPLEMENTAÇÃO EFETIVA DA POLÍTICA INDUSTRIAL: UMA EXPLORAÇÃO TEÓRICA

A teoria da regulação há muito se baseia no léxico da "reforma regulatória" para promover a eficiência econômica estática e modelos de governança disciplinados e rígidos. Embora vários autores tenham apontado para a natureza tecnocrática da "ortodoxia regulatória" existente e, em resposta a ela, enfatizado a necessidade de incorporar valores não econômicos na tomada de decisões regulatórias para melhorar seu componente democrático, as críticas contemporâneas são deficientes ao reposicionar a regulação em bases econômicas mais progressistas. Este artigo aprofunda essa lacuna epistêmica, baseando-se em contribuições teóricas de linhas de pesquisa interdisciplinares sintonizadas com o pensamento econômico heterodoxo. Criticamos a "ortodoxia regulatória" aos níveis substantivo e processual, delineando novos parâmetros regulatórios macro, meso e micro. Em última análise, oferecemos contribuições sobre o que uma heterodoxia regulatória poderia adicionar à teoria e à prática para a entrega efetiva de políticas industriais.

Palavras-chave: desenvolvimento; economia heterodoxa; política industrial; regulação; governança regulatória.

CONECTANDO LA TEORÍA REGULATORIA Y LA ECONOMÍA HETERODOXA PARA LA IMPLEMENTACIÓN EFECTIVA DE LA POLÍTICA INDUSTRIAL: UNA EXPLORACIÓN TEÓRICA

La teoría de la regulación se ha basado durante mucho tiempo en el léxico de la "reforma regulatoria" para promover la eficiencia económica estática y los modelos de gobernanza disciplinados y rígidos. Aunque numerosos autores hayan señalado la naturaleza tecnocrática de la "ortodoxia regulatoria" existente y, en respuesta a ella, subrayado la necesidad de incorporar valores no económicos en la toma de decisiones regulatorias para mejorar su componente democrático, las críticas contemporáneas no llegan a reposicionar la regulación sobre una base económica más progresista. Este artículo profundiza esta brecha epistémica a partir de contribuciones teóricas de corrientes de investigación interdisciplinarias en sintonía con el pensamiento económico heterodoxo. Criticamos la "ortodoxia regulatoria" tanto a nivel sustantivo como procedimental, esbozando nuevos parámetros regulatorios macro, meso y micro. En última instancia, ofrecemos contribuciones sobre lo que una heterodoxia regulatoria podría agregar a la teoría y la práctica para una implementación efectiva de políticas industriales.

Palabras clave: desarrollo; economía heterodoxa; política industrial; regulación; gobernanza regulatória.

1. INTRODUCTION

According to Furtado's (1983) long-established claim, underdevelopment and development are not separate positions on a continuum but rather coetaneous manifestations of the same historical phenomenon. Seeing underdevelopment in this way – as riddled by unbalanced power relations and historical preconditions unfavorable to emerging economies – inevitably leads us to question the neoliberal agenda that has pushed for institutional determinism worldwide. In particular, regulatory benchmarks built on the current realities and ambitions of the Global North have been imposed on the economies of the Global South without due consideration of their own realities and needs.

To be sure, international knowledge exchange and comparative exercises focused on mutual learning are undoubtedly crucial in public policy and economics, not least of all because governance is increasingly defined at the transnational level. States from the Global South hold limited geopolitical heft, a condition that has only intensified as larger proportions of decision-making have been transferred to international forums (Koppell, 2010; Moloney & Stone, 2019). Yet, underdevelopment still poses particular challenges. These challenges appear as specific problems but also as contextual opportunities of structural transformation, including industrialization and technological innovation. The former and the latter demand active state participation and entrepreneurship to steer public and private actors in transformative directions.

In contrast to a transformative view of development, the 'regulatory orthodoxy' has promoted state intervention, including regulation, as a mere fixer. For orthodoxy, regulation is a corrective tool linked to a passive governance mode whereby structural change – a critical component in socioeconomic development – becomes sidelined as a state goal. This fixation on market-fixing economic regulation¹ as a way to achieve economic efficiency harms developing nations as it prevents the realization of the creative or constitutive potential that regulation also holds. The orthodox presentation also appears in the classical yet incomplete distinction between regulatory and developmental state paradigms, where it is only in the latter that structural changes feature as deliberate state goals.

While the regulatory orthodoxy has not been designed to actively promote industrialization, innovation, or market creation, we also observe that no concrete alternative epistemic narrative has yet come to fruition. In other words, a normatively skewed regulatory orthodoxy has not prompted the emergence of a comprehensive competing model. Although elements of

¹Economic regulation is normally defined as the state function consisting of setting standards, monitoring behavior and enforcing rights and obligations on economic agents in important industries, with the purpose of aligning private and public interests, particularly through the control of entry, exit and price levels.

progressivism and anti-hegemonic interpretations have been advanced in the regulatory literature, they come mostly from the socio-legal camp (e.g. Prosser, 1999; Braithwaite, 2006; Dubash & Morgan, 2013; Coutinho, 2014). Hence, the existing critical accounts do not sufficiently engage with new ways of deploying state economic regulation in a structurally oriented fashion. What is more, the absence of a coherent theoretical alternative to replace – or at least to complement – orthodoxy is more concerning given the scarce participation of scholarship associated with streams of heterodox economics in debates about regulatory governance. Heterodox economics, as a field of inquiry, has not consistently explored contemporary state regulation to generate its own ideas to counter the dominant thinking.

By focusing on the distinction between orthodoxy and heterodoxy, we aim to fill in this theoretical gap. We add to the literature by mobilizing insights from heterodox scholarship to devise a progressive economic understanding of regulation and development, conducive to industrialization. In appreciating the practical implications of our proposition, we also advocate for an agnostic ‘rhetoric of reaction’ as we claim that the encounter between orthodoxy and heterodoxy can also allow for incremental learning and constructive outcomes. With this strategy in mind, we outline practical macro-, meso-, and micro-level regulatory governance parameters that are not only problem-solving and market-fixing in nature, but also opportunity-seeking and market-creating. While this article’s primary focus is to present a critical appraisal and elaborate a new conceptual model, we also point to empirical opportunities that relate to current debates about industrial policies worldwide.

The article proceeds as follows. The next section reviews economic development as a contentious phenomenon, comparing orthodox and heterodox explanations. Subsequently, we elaborate on the limitations of orthodoxy in the area of regulation, while the last section provides insights into the opportunities of a heterodox regulation for the recent global industrial policy reengagement. Finally, concluding remarks are presented.

2. THEORETICAL APPROACHES TO ECONOMIC DEVELOPMENT AND INSTITUTIONS

2.1 Orthodoxy and Heterodoxy as Development Frameworks

Central to orthodoxy is an understanding of development as a process of modernization. The modernization standpoint is linked to the idea of stability and balanced growth, by and large echoing Rostow’s classical theory on static stages of economic growth (1960). Particularly since the so-called ‘institutionalist turn’ in the 1990’s, institutional misalignment has become a

more prominent proxy for gauging development levels and recommending reforms (Acemoglu & Robinson, 2012). The central intuition, drawn directly from the New Institutional Economics (NIE) package, is that countries will develop by mimicking the ‘right’ or ‘modern’ institutional frameworks. To this end, emerging economies are encouraged to seek benchmarking and equalization with the developed world (Krugman, 1995). In this process, simple comparisons between predetermined models are made and homogenous institutions and tools are diffused from the Global North to the Global South (Reinert, Ghosh & Kattel, 2016), overlooking countries’ historical differences.

Although it is true that NIE authors have somewhat relaxed original neoclassical tenets, especially by incorporating themes such as information asymmetry, bounded rationality, incompleteness of contracts, and the very importance of institutions for economic performance, they have not abandoned the orthodox normative foundations (Williamson, 2000). These new themes have simply made orthodoxy slightly more interdisciplinary and cleverly adapted to new empirical challenges. However, the economic neoclassical trinity of methodological individualism, rationality, and equilibrium has not been truly questioned (Colander, 2005). For instance, recent additions to orthodoxy such as behavioral economics have furthered the defense of leaner states and non-fiscal solutions for implementing public policies (Lodge & Wegrich, 2016).

Heterodox economics advances difference views. As a start, what unites economic heterodox scholars is the rebuttal of neoclassical economics tenets as a compulsory normative basis. Similarly, heterodox scholarship refutes methodological determinism, which is also common in orthodoxy. In Lee’s and Cronin’s (2016, p. 4) words, heterodox economics “is a historical science of the social provisioning process... [it] involves both human agency embedded in a transmutable, hence uncertain, world with fallible knowledge and expectations and in a cultural context”. Although quite diverse as a group and in terms of its theoretical and empirical goals, heterodox economics as a scholarly project has been particularly influential in the field of economic development.

For the conceptual aims of this study, a set of points from heterodoxy deserves close consideration. Firstly, from both a Keynesian perspective (which includes contemporary post-Keynesian authors) and the viewpoint of evolutionary scholarship (in this case connected to the seminal work of Joseph Schumpeter), development is seen not as sequential approximations to an idealized institutional model or a static benchmark deemed superior. Rather, development rests on structural economic transformations, which boils down to industrial sophistication, technological innovation, and gradual yet nonlinear economic diversification. Secondly, heterodox scholarship generally argues that development cannot be understood in isolation,

nor can it be modelled statically out of developed countries experiences, since it is incorrect to reduce underdevelopment to single causes or predictable stages (Adelman, 2001; Cypher, 2015). For heterodoxy, the idea of determining upfront the preconditions of progress, with strict prerequisites to be fulfilled, amounts to a partial understanding of underdevelopment as it ignores deep-rooted uneven trajectories that have historically favored today's industrialized nations (Gerschenkron, 1962; Chang, 2003).

It follows, then, that heterodox articulations are more concerned with the unbalanced nature of progress and with the uncertainties and instabilities that lie at the heart of it (Hirschman, 1958; Burlamaqui & Kattel, 2014). They sustain that economic development is a historical process in which discontinuities are unavoidable and transitory 'punctuated equilibria' is the only type of stability achievable (Bresser-Pereira, 1995; Hanusch & Pyka, 2007). Moreover, and critically, the role of the state and its institutions, which are contingent on administrative traditions, is undisputable. It is with the state that structural changes are activated, since it is typically the state that triggers the necessary economic conditions for industrial complexification and the social transformations that underpin development in the long-run (Chang, 2003; Gala et al., 2018).

Hence, the heterodox orientation is more process-driven and evolutionary than recipe-driven and static. Heterodoxy is at the same time corrective and constitutive, with market creation being at least as important as market fixing. Finally, from an evolutionary view of development, setting priorities and seeking domestic and international opportunities for the country's economy are more likely to bring about positive structural transformations than homogeneous and horizontal reforms as per the orthodox playbook.

2.2 Regulation and Development: the mainstream and its existing contenders

Since orthodoxy evaluates national economies based on their aptitude to achieve institutional harmonization with internationally validated benchmarks, from this tradition corrective and stabilizing objectives are more important than active and anticipatory state interventions, as the latter rest on state planning. Emanating primarily from orthodoxy, autonomous regulatory agencies have been promoted since the 1990s on a type of 'avoidance model', which is said to favor science over politics (Eriksen, 2020). Accordingly, autonomous regulators would be expected to separate themselves from the seesaw of politics so as to engender the institutional commitments deemed necessary for attracting private capital, notably in developing countries (Levy & Spiller, 1996; Estache & Wren-Lewis, 2009).

'Regulatory orthodoxy', as we define it in this study, is represented in most of the contemporary regulatory governance parlance that comes out of international organizations and closed settings such as the Organization for Economic Co-operation and Development

(OECD) and the World Bank. The regulatory orthodoxy is committed with a moral pretense of detached political neutrality, scientism, technicality and rationality. Elegant causalities hide drastic simplifications, which is epitomized in the diffusion of regulatory best-practices worldwide. As history has shown, large developing nations have frequently dispensed with the most lauded regulatory best-practices espoused by the OECD and the World Bank without suffering clear impacts on their rates of economic growth. Despite languishing in global ranks of “good governance”, “business environment”, and “regulatory quality”, countries like China, India, Brazil and more recently Mexico have shown continuous economic growth and remarkable performance in metrics like foreign direct investment (FDI), including after the 2008 financial crisis. As it turns out, the literature on determinants of FDI is not conclusive on the influence of institutional best-practices on the attraction of productive foreign capital. Previous research in this area has also found the relationship between these variables not to be statistically significant for large emerging economies such as the BRICS countries (Jadhav, 2012; Castro et al., 2013).

Furthermore, stemming mostly from the kind of normativism surrounding this debate and the leverage that powerful actors like the OECD and the World Bank enjoy globally, the regulatory orthodoxy is also associated with arguments of morality. It is said to embody a logic of correctness, trustworthiness and discipline, which works as a ‘guiding myth’ for practitioners, within a clear colonializing dynamic (Nisar, 2020).

Despite these deficiencies, regulatory reforms have been consistently modelled on orthodoxy since at least the 1990s, especially in the Western world. This has happened largely as a result of international financial organizations’ continuous advocacy, sponsorship, and often imposition, with the direct participation of national political elites, notably in Latin America (Martinez-Gallardo & Murillo, 2011). The rise of the post-Washington Consensus “good governance” program, also in the mid-1990s, has contributed to making the “regulatory state” model not only readily available and easy to install, but also widely documented by the literature, further strengthening its normative component and broadening its global reach. Regulation and development consolidated thereafter as one of the most relevant dimensions of the “good governance” package (Andrews, 2013).

This reality contrasts with previous moments in history. Back in the 1960s and 1970s, in the age of ‘national economic development’, regulation had other more active or ‘positive’ uses, not only in developed countries but also in the developing world (Evans, 1995; Kim, 1997). As pointed out by Selwyn (2014, p. 82):

while the late developers of the Victorian age (Germany, Japan, Russia, the United States) played a relatively ‘simple’ role of protection and subsidy provision, the ‘developmental’ states of the twentieth century extended their activities to the regulation and monitoring of investments by private firms. (Selwyn, 2014, p. 82)

For the latter, regulation came into play in diverse ways, from selective industrial licensing schemes to the enforcement of sectoral output quotas, sometimes with specialized and decentralized bodies being tasked with implementing these regulatory goals (Chang, 1997). In these situations, therefore, they took up competencies that were not so different from what contemporary regulatory agencies are supposed to do on a more basic level.

Indeed, in some of the fast-growing developing economies in the mid-20th century, regulation was not outside the remit of the positive, interventionist state. Regulation complemented, mainly implicitly, other state policies, which is anathema to the explicit yet negative (or corrective) use of regulation that has dominated in the age of regulatory capitalism (Jayasuriya, 2001; Levi-Faur, 2005; Braithwaite, 2008)². The sustained and explicit deployment of regulation is an intrinsic element of the current stage of capitalism, during which regulation and other means of control have gained unrivalled relevance as policy instruments (Power, 1999; Levi-Faur, 2005; Davis et al., 2012). Table 1 summarizes the main theoretical paradigms that have informed the different uses of regulation over time, both explicitly and implicitly.

Table 1 – Theoretical Paradigms in Regulation and Development

	Regulation as an explicit (anchor) policy instrument	Regulation as an implicit (complementary) policy instrument
Passive (corrective) Regulation	1- Neoliberalism and Good Governance.	2- New Structuralism
Active (transformational/constructive) Regulation	3- <i>Largely ill-theorized</i>	4 – Statist Political Economy and Old Developmentalism

Source: Own elaboration.

Regulatory orthodoxy falls in cell 1 in Table 1, given the passive yet explicit use of regulation under neoliberal and good governance agendas. The implicit use of regulation, in turn, implies positioning regulation as a supportive mechanism to other types of policies, including distributive ones and general state planning. This is the case with the Weberian-cum-Keynesian Statist Political Economy (SPE) paradigm (Skocpol et al., 1985; Evans, 1995), cell

²It is fair to say that similar synergic applications of implicit regulation have survived the demise of the “developmentalist” model and continue to this day, not only in the developing but also in the developed world. However, this is a rather exceptional situation that is typically not embraced by the regulatory mainstream (Carlile & Tilton, 1998; Thatcher, 2008).

4, as well as for the New Structuralism, cell 2, also known as New Developmentalism. New Structuralism is a theoretical camp that favors macroeconomic policies over all others, treating micro and institutional areas largely in accordance with the mainstream (Ocampo et al., 2009; Bresser-Pereira et al., 2015).

Table 1 also indicates a theoretical gap in cell 3. The explicit use of regulation but in an active and transformational sense cannot be directly associated with any specific existing paradigm in the literature. The active use of regulation would require regulatory intelligence and capacity from the state regulator to decide whether regulatory institutions should remain the same and in the background, or if a pro-active or co-creative regulatory intervention promoting new regulations to direct innovation would be needed (te Kulve et al., 2018).

3. DEVELOPMENT WITH REGULATION – ELEMENTS FOR A PROSPECTIVE “HETERODOX” APPROACH

The attempt to transplant the regulatory orthodoxy to the developing world was not without criticism. One fundamental critique has focused on the apparent contradiction between the regulatory state model and development. This position sustains that the contemporary regulatory program, as defined by orthodoxy, would be unsuitable for developing countries in their quest for industrialization (Jayasuriya, 2001; Phillips, 2006; Jarvis, 2012). In line with this idea, Naseemullah (2023, p. 11) contends that “[the] universalization of regulatory mechanisms radically restricts the possibilities for industrial policy among developing countries”. This is a radical stance, as it may categorically prevent the integration of regulation in alternative developmental scenarios and for transformative purposes.

On their part, socio-legal scholars such as Braithwaite (2006), Dubash and Morgan (2013) and Prosser (1999) have favored democratizing debates, highlighting the need to repoliticize regulatory processes and institutions. This idea relates to the notion of institutional embeddedness, which has long been central in the developmental state literature, as well as in more recent conceptualizations framed around the idea of the new developmental state, which is presented as being more democratic than the old developmentalist variant from mid 20th century (Evans, 2010; Trubek et al., 2014). The main contention put forward by these scholars is that social actors should have a greater voice in regulation, reflecting a process of social empowerment.

However, what has rarely appeared in the field of regulation and development are consistent efforts to reposition regulation on a more critical economic basis, including from a developmental perspective (Dussauge-Laguna et al., 2024). This kind of elaboration, which is currently largely absent from the literature, would be crucial for rethinking, on progressive

terms, the role of regulation in industrialization processes in the developing world. The lack of critical economic thinking in this area is reflected in the theoretical gap pointed in cell 3 in Table 1. As seen above, over time, regulatory governance and its institutional mechanisms have acquired fairly static, passive, and restricted contours, which are key tenets of the regulatory orthodoxy. This has hindered the realization of the potential of regulatory regimes in active state projects, where regulation could complement planning and developmental policies. The latter would be in line with what Mann (1993), Weiss (2012), and Levi-Faur (2013) have framed around the idea of polymorphism. In particular, the polymorphic state “goes against dominant monomorphic portrayals of the regulatory state in the literature on regulation and on the [traditional] developmental state” (Levi-Faur, 2013, p. 31). An effective state polymorphism depends on institutional and administrative complementarities (Hall & Soskice, 2001; Svava, 2001), which would also entail the reconceptualization of regulation in a more dynamic and systemic fashion.

More specific to emerging economies, we argue that a serious bias in regulatory orthodoxy is that it misrepresents development dynamics. The agenda of predictable, efficient, and static state interventions, which is entrenched in orthodoxy, differs dramatically from the socio-economic landscape in developing countries, which is intrinsically volatile and variegated. Following Schumpeter (1987, p. 32), “economic progress in capitalist societies means turmoil”. In this sense, a truly developmental or economically progressive regulation, which we label “heterodox”, would have to be theorized on quite different foundations. First and foremost, it would not overlook developing countries’ inherent dynamics, using evolutionarily institutional architectures to internalize the unpredictable and volatile flow of events within the regulatory apparatus.

However, an important obstacle for the theorization of heterodox regulation is the fact that the heterodox academic community does not seem, at present, to be invested in a serious project of rethinking the areas of regulatory governance and state economic regulation (Lee & Keen, 2004; Jo, 2016). The same can be said for the progressive institutionalist scholarship, which has not been very successful in further developing the operationalization of the idea of institutions as constitutive devices, that is, beyond mere constraints (Hodgson, 2005; Castellano & García-Quero, 2012). Unsurprisingly, no coherent theoretical paradigm to reposition regulation in a more active and evolutionary way has yet come to fruition.

4. RETHINKING REGULATORY SUBSTANCE AND PROCESS THROUGH HETERODOX LENSES: AN INTEGRATIVE MODEL

A heterodox approach to regulation, if it is to succeed at both the conceptual and practical levels, must go beyond merely unveiling the flaws of the mainstream. Indeed, a constructive proposition should give regulation another meaning, one underpinned by new attributes that are more dynamic, transformational, and constitutive. This new rationale should start by assuming that regulatory regimes need to embrace and internalize uncertainty.

Another point requiring deconstruction is the contemporary orthodox semantics of regulatory reform, since it is in itself a misrepresentation of founding ideas of reform from the first half of the 20th century. In particular, the theoretical support for the control of market power that came out of the New Deal in the USA was largely a heterodox proposition, as it effectively counteracted the neoclassical free-market orthodoxy in the interwar period. However, although initially a progressive instrument for the social control of markets and state planning, the *old* regulatory heterodoxy gradually morphed into the mainstream, embracing the assumption of market failure and an anti-state institutional rhetoric (Miller & Samuels, 2002). It also promoted the idea of a quasi-judicial and passive regulation, eventually equating the project of regulatory reform with institutional steps towards neoliberalism.

In an empirical and constitutive sense, a pro-active state regulation would focus on and support the promotion of certain strategic industries and technologies over others (Coglianese & Carrigan, 2012; Shadlen & Fonseca, 2013). The same inspiration would apply to the formation (or transformation) of the state apparatus tasked with regulation. Regulatory institutions, particularly autonomous regulatory agencies, would evolve into more active policy actors, better coordinating with other governmental areas for improved state capacity and readiness (Lodge & Wegrich, 2014; Cunha et al., 2017).

The literature has already shown that regulation can bring about win-win or “rewarding” outcomes for business and society simultaneously (Schrack, 2013). This can happen with regulation figuring as the anchor policy tool as well as a complement to other state policies or actors, such as state-owned companies and national development banks (Shadlen & Fonseca, 2013). In addressing this sort of complementarity, Evans (1995) offers a word of caution, though:

The minimalist state plays the custodial role [i.e. regulatory], but custodial behavior extends well beyond minimalist proscriptions (...) **Rules can be spurs as well as reins. They can be used for promotion as well as policing** (...) While promotional strategies usually include a regulatory component, the custodial role is not a promising transformational tool. When the state deals with a new sector by playing the role of

custodian, **preoccupation with policing overshadows the developmental potential of regulatory rules**, and possibilities for transformation are lost. (Evans, 1995, p. 78, emphasis added)

Therefore, a complementary and transformational role for regulation would depend on a shift to a new normative basis and on the uptake of new institutional roles by public organizations and officials. A reorientation along these lines could, however, favor a broad range of areas where state activism works as a transformation driver, such as industrial and innovation policies. These areas are also increasingly interwoven with environmental goals, an element that limits but also fosters institutional change, therefore amounting to reins as well as spurs (cf. Evans, 1995). As Freeman (1996, p. 33) also posits:

It is both a question of new priorities for public and private R&D to nurture a new range of possibilities in such areas as renewable and ‘cleaner’ energy sources and energy and materials conservation devices and a question of new regulatory mechanisms to ensure their worldwide diffusion. (Freeman, 1996, p. 33)

In light of these untapped opportunities, it seems that a systemic and evolutionary understanding of regulation, one that theoretically supports a heterodox proposition in this realm, is indeed critically overdue. Summarizing this debate and the arguments laid out thus far, Table 2 distinguishes between orthodoxy and the proposed heterodoxy along several dimensions.

Table 2 – Regulatory Orthodoxy versus Regulatory Heterodoxy

	Policy Goal	Regulatory Stance	Regulatory Attitudes	Organizational Structure	Operating Conventions
Orthodox Regulation	Market correction; stabilization	Passive; equilibrium prone	Problem-solving (output-oriented)	Depoliticized; Autonomous	Static, formalistic, disciplined
Heterodox Regulation	Market creation; transformation	Active; evolutionary	Opportunity-seeking (process-oriented)	Coordinated; complementarity-driven	Dynamic, negotiated, entrepreneurial

Source: Own elaboration.

Table 2 presents major substantive and procedural differences between orthodox and heterodox approaches to regulation. Across the five dimensions in Table 2, there are clear distinctions concerning the role of the state, as well as the expectations regarding government intervention through regulation. Orthodoxy has been described in this article as formalistic, disciplined, and passive, focused on solving preexisting and already measured problems. In the case of heterodoxy, its components point to a more systemic and dynamic approach connected to an opportunity-seeking attitude, more akin to a developmental and structurally oriented approach.

Institutionalist ideas such as the “polymorphic state” (Mann, 1993; Weiss, 2012; Levi-Faur, 2013), which, as explained above, aims at identifying elements of cross-fertilization between developmentalist and regulatory state programs, could offer important contributions to the new regulatory modelling that we articulate in this study. Mazzucato’s presentation of a “mission-oriented” approach to public policy, developed mainly with state directionality in innovation policies in mind, could be equally inspiring (Mazucatto, 2013; Mazucatto & Penna, 2015). More recently, Mazzucato and Rodrik (2023) have provided new insights into the idea of conditionalities, which, in the context of industrial and innovation policies, can be understood as mutually agreed provisions that the private and public sectors adopt as regulatory arrangements. Moreover, the longstanding debate on state capacity, which builds on the seminal “*Bringing the State Back In*” by Skocpol, Evans and Rueschemeyer (1985), would offer valuable contributions as well. Authors like Lodge (2014), Cunha *et al.* (2017) and Jarvis (2017) have already applied the state capacity framework to regulation.

Nonetheless, as alluded to above, there are also serious challenges that make the activation of regulation in the way suggested in this article a difficult endeavor. The first one is the sheer lock-in effect that stems from the neoclassical dominance. Historically, the mainstream has only accepted in-logic and ‘on-path’ changes, meaning that contextual variations at the jurisdictional level have generally not been able to trigger deeper transformations or off-path diversions in regulatory systems³. In other words, the regulatory orthodoxy has not been particularly open to outside interaction and exchange – rationally so, as a clear openness to dissent would only increase its costs of survival and reproduction in light of the deficiencies in the orthodox model detailed above.

This first challenge is mirrored on the heterodoxy side. As outlined before, there is to date no clearly identified conceptual or empirical effort in heterodoxy to penetrate regulatory theory as it stands. Debates in the progressive camp are often dogmatic, generic, and, critically, not aimed at reequipping existing regulatory apparatuses by instilling in them more dynamism and new state-centered ideas to reorient state regulation in a more progressive economic direction. Even the promising avenue opened by the “mission-oriented” approach does not constitute a fully developed paradigm just yet. This approach is accused of being generic and simplistic in its propositions, for instance, in its attempt to join together around common goals very heterogenous – if not rival – actors from the public and private sectors (Mckelvey et al., 2018).

³Following Deeg (2005, p. 172), “even if many institutions in a system change dramatically, so long as the logic of the system is preserved, this change represents on-path change.”

A third challenge relates to the system of transnational regulatory regimes, that is, the multilateral norms that prevent countries from adopting regulatory options as they please. The World Trade Organisation's (WTO) frameworks are particularly rigorous in blocking 'regulatory nationalism', which could otherwise be an attractive tool for industrial policy plans. Similarly to the OECD and the World Bank, the WTO has also historically pushed for liberalization and deregulation in the developing world, reducing the ability of emerging countries to freely regulate their domestic affairs. The consequence, according to Wade (2003, p. 622), is "a shrinkage not only of development space, but also of 'self-determination' space [because] it ties the hands of developing country governments 'forever' to the North's interpretation of a market opening agenda".

Therefore, we argue that it is appropriate to aim for greater pragmatism and middle-ground solutions in theory and policymaking, finding ways to promote gradual learning and continuous positive changes. The 2008 financial crisis has shown how resilient neoclassical economics is. Nonetheless, Asian countries in particular, such as South Korea and Japan, have tested with combined recipes over the last decades. Those two nations have not shied away from integrating their institutions into the mainstream when they found suitable, including in the area of regulation. However, they did so without abandoning their developmental traditions (Kim, 1997; Castellano & García-Quero, 2012; Thurbon, 2016).

These examples suggest that a pro-development progressive economic regulation, inspired by heterodox principles, would gain if it was presented not as an entirely antagonist, separate or marginal proposition, but rather as a positive project couched in alternative theoretical insights for tactical state redeployment (cf. Levy, 2005). This shift in the mode of executing regulation would directly contribute to state policy in practice. Emerging economies like Brazil have recently rolled out a myriad of state projects in line with current international efforts to revamp the role of the state as a promoter of industrial policies (Cherif & Hasanov, 2019). These new policies tend to give the ecological transition center stage, which appears in missions directed to strengthen green sectors and innovations in the country (Mazzucato, 2023).

Nonetheless, it seems impossible to conceive of an effective implementation of this type of demand- and supply-led policies without the direct contribution of regulation and regulatory institutions. In this sense, heeding the advice of te Kulve, Boon, Konrad and Schuitmaker (2018, p. 459) is appropriate: "[At] a more operational level, regulatory actors' involvement [in industrial and innovation policies] can affect the specification, opening up or closing down of preferences for new technologies and their implementation." In other words, it is not only about planning industrial policies, but also about implementing them, which nowadays depends heavily on regulation and regulators to the attainment of desirable innovations and industrial upgrading.

We believe that contemporary industrial policies worldwide would benefit enormously from turning to the more progressive view of regulation that we outline in this article for a more successful implementation.

CONCLUSION

Seeking a safe distance from orthodox regulatory tenets seems an appropriate strategy for developing countries, notably large emerging economies. This position would lead to a reconsideration of “regulatory reform” and “regulatory quality”, enriching their meanings with a more nuanced and contextualized mindset that goes beyond the regulatory best-practice lexicon championed in closed settings such as the OECD and the World Bank. This critical position would also help to counter the prevailing vision that neoclassical economics has begotten economic regulation and that there is no alternative, because there is.

This article has argued that, although orthodoxy has not succeeded entirely in establishing its validity in processes of economic development and growth, heterodoxy, for its part, has yet to articulate a credible alternative. The theoretical gap described in this article is in large part caused by the absence of a consistent theoretical rethinking of regulation and development in the heterodox camp. However, we also claimed that to move forward and start becoming more relevant, a heterodox view of regulation and regulatory governance does not need to aim for the wholesale replacement of orthodoxy, but rather for tactical state redeployment through regulation.

At the same time, any synergic evolution as articulated in this article would only make sense if the goal were not to attain immediate acceptance by the mainstream. As contended in this study, orthodoxy is always ready to cleverly absorb bits and pieces of alternative or competing scholarship whenever there is an opportunity to enhance its dominance, which in the past has meant making orthodoxy slightly more interdisciplinary. In turn, the pragmatic stance that we advocate in this article involves searching for workable exchanges with orthodoxy and primarily for blind spots not yet addressed by the mainstream, due to its epistemic and ontological deficiencies. Central components for a heterodox model are in the idea of a transformational or constitutive role for regulation and the institutional complementarity between regulatory and other more active government instruments, institutions, and policies.

While we shed light on substantive and procedural elements for theoretical development, this article also points to the practical gains that contemporary industrial innovation policy initiatives could reap from embracing a heterodox approach. Finally, we hope that future investigations will use the mostly conceptual ideas developed in this study to provide empirically driven contributions to test our propositions and refine them in different sectoral and national settings.

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