

BRICS varieties of capitalism and food regime reordering: A comparative institutional analysis

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Abstract

The emergence of the BRICS (Brazil, Russia, India, China and South Africa) has sparked debates on the possibility of a 'great transformation' in the course of neoliberal capitalism and the global agrifood system. This paper seeks to contribute to these debates by providing a comparative institutional analysis of the BRIC(S) 'varieties of capitalism' in the current 'food regime' international reordering. Capital accumulation, social reproduction and politics are key problems of the 'agrifood question' in the BRIC(S) varieties of capitalism. My argumentation is that capitalist diversity stems largely from the historically embedded legacy of the agrarian question in each country, that the dynamics of the agrifood system influence their development trajectories in decisive ways, and that the BRIC(S)-driven polycentric shifts in the contemporary food regime are crucial to the destiny of global capitalism.

KEYWORDS

BRICS, varieties (and commonalities) of capitalism, food regimes, agrifood systems, political economy

1 | INTRODUCTION

By the late 1970s, it was clear that the era of 'regulated capitalism' or 'embedded liberalism' had come to an end. The rise of neoliberalism in the United States and the United Kingdom in the 1980s and its spread through Latin American, Asian and African countries in the 1990s represent the victory of a political project aimed at re-establishing conditions for capital accumulation, restoring capitalist class power and recomposing its hegemonic fractions under the dominance of finance capital, leading to increasing social inequalities within and across nations (Harvey, 2005; Overbeek & Apeldoorn, 2012). The imposition of free market and minimum state discourses and liberalization, deregulation, privatization, austerity and labour flexibilization policies could be seen as a new

Polanyi's (2000) movement of 'disembedding' the economy from its social relations. But the global financial breakdown of 2008 and the subsequent great recession attest that the neoliberal order under the U.S. hegemony faces a double crisis of accumulation and legitimacy. Nonetheless, neoliberalism has been able to adapt and keep the power of financialization unchallenged by incorporating right-wing 'authoritarian populism' and hindering left-wing 'counter-movements' worldwide (Borras, 2019). Thus, we live in a conjuncture that could be interpreted as what Gramsci (1992) called 'organic crisis', an interregnum period in which the old is dying and the new cannot yet be born.

Even so, the emergence of the BRICS (Brazil, Russia, India, China and South Africa) alongside some middle-income countries (MICs) has sparked debates on the possibility of a 'great transformation' in the course of neoliberal globalization. It is widely recognized that the resurgence of China to the status of a great power provokes enormous impacts and repercussions as yet unknown on the contemporary economic and political world order. Still, despite the uneven economic, political and military interests and capacities among its members, all the BRICS hold certain regional leadership and a shared desire to reform global power into a multipolar direction, as shown by initiatives such as the New Development Bank and the Contingent Reserve Arrangement (Stuenkel, 2020). In this context, it has been questioned whether the BRICS countries just advance neoliberalism by serving as subimperialists or offer any alternative in promoting a new kind of state-led development path and to what extent they challenge the North–South divide as the most significant dimension of global inequality of power and wealth, without, however, challenging capitalism itself (Bond & Garcia, 2015; Kiely, 2015). Just as it has been investigated how the BRICS countries, as key sites of production, circulation and consumption of agricultural commodities and food products, owners of abundant labour reserves and natural resources and holders of large home markets, are reshaping agrifood systems at the national and regional levels, as well as their far-reaching global significance (Cousins, Borras, Sauer, & Ye, 2018; McKay, Hall, & Liu, 2017).

This paper seeks to contribute to these debates by jointly addressing history and theory through comparison. My effort is to make sense of the historical transformations and recent trends pointed out by the specialized literature on each of the BRIC(S) countries through a critical reading of two key theoretical approaches to political economy: Varieties of capitalism (VoC; Ebenau, Bruff, & May, 2015; Hodgson, 2016; Streeck, 2010) and food regimes (FR; Bernstein, 2016; Friedmann, 2016; McMichael, 2016). This paper provides a comparative institutional analysis of the BRIC(S) VoC in the international reordering of the current food regime. Why does capitalism vary in different national formations despite its general and defining common features? Whether and how do the dynamics of the agrifood system of a country influence its variety of capitalism? What role may the BRIC(S) economies and their respective agrifood systems play in the great transformation of neoliberal capitalism and the global agrifood system? My argumentation is that capitalist diversity stems largely from the historically embedded legacy of the agrarian question in the institutional foundations and class relations of each country that the dynamics of the agrifood systems influence their development trajectories in decisive ways and that the BRIC(S)-driven polycentric shifts in the contemporary food regime are crucial to the destiny of global capitalism.

The paper relies primarily on qualitative sources, especially a comprehensive but necessarily selective literature review on each national case. It is also supported by quantitative data from national sources for country-specific information and from international institutions for cross-country descriptive statistics, as seen in Table A1 (Appendix A). The resulting narrative accounts on each specific country are then comparatively incorporated within the context of wider global transformations in a theoretically meaningful way. For the sake of space and scope, the paper only laterally considers intra-regional variations within each country and effects of the BRIC(S) on their neighbours; only scantily treats the intersectionality of class with other categories such as gender, generation, ethnicity and caste and refrains from presenting a specific item on South Africa, while considering its case for comparative ends.

The paper is organized into five sections, including this introduction. Section 2 discusses fundamental theoretical-methodological issues in order to connect VoC and FR approaches. Section 3 characterizes the dynamics of the agrifood systems of China, Brazil, Russia and India in their development trajectories since the 1990s. Section 4

draws mid-range generalizations from the comparative institutional analysis of the agrifood question in the BRIC(S) VoC. And Section 5 concludes by summarizing the main findings and discussing their major implications.

2 | VARIETIES (AND COMMONALITIES) OF CAPITALISM AND FOOD REGIMES

A critical reading of VoC and FR approaches is able to provide fertile soil for a comparative institutional analysis of the BRIC(S) countries. Hall and Soskice's (2001) original standard VoC approach builds upon New Institutional Economics, Game Theory, Endogenous Growth and New-Keynesianism. Constituted within the paradigm of rational choice, VoC does not break with the basic principles of mainstream economic theory (methodological individualism, functionalism, economism and static comparativism). However, its emergence in the late 1990s relates to the search for explanations to the divergent forms of social and productive organization of developed economies and their performances after the crisis of the 1970s and the rise of globalization, contradicting the convergent trend predicted by the mainstream. And Friedmann and McMichael's (1989) FR approach, initially influenced by World-System and Regulation Theory, further integrated Marxist and Institutional insights from Gramsci and Polanyi. Constituted within historical sociology and dialectical materialist traditions, it holds a holistic, synthetic and nuanced perspective. With its origins on the revival of 'the agrarian question' in the late 1970s, since the late 1980s, FR has provided a template, thoroughly explaining the underlying role of agriculture and food in the evolution of capitalism.

Hall and Soskice (2001) frame cross-national differences as centred on the microbehaviour of business firms interacting through coordination mechanisms within four institutional domains: finance and corporate governance, industrial relations, education and training systems and interfirm relations. The existence of institutional complementarities among domains generates increasing returns from which stem the institutional comparative advantages of an economy. Rather than convergence to 'one best way', two basic polar types are posited: liberal market economies (LME), associated with England and the United States, and coordinated market economies (CME), associated with Germany and Japan. Although both VoC are equally efficient in terms of economic performance, the comparative institutional advantages of each type lead to distinct patterns of productive specialization and international trade, as well as different models of social welfare and diverse political systems.

However, standard VoC began to face criticism because of its difficulties in explaining capitalist diversity even within the OECD's developed economies, let alone the former USSR transitional economies, Asian, Latin American and African developing economies and BRICS emerging economies. The standard approach is criticized for reasoning in static terms, holding a reductionist bias towards a conflict-free, efficiency-like, firm-centric framing of coordination and maintaining a methodological nationalism that neglects the role of class actors and the state. Furthermore, cases that do not fit into the LME/CME dichotomy are classified as 'hybrids' or 'mixed' types and assumed as unstable and transitory varieties (Becker, 2013; Ebenau et al., 2015). In the end, standard VoC neither takes capitalism seriously nor attains enough variety. As problems of power, inequality and exploitation, dear to actually existing capitalism, are evaded, it does not really deal with 'divergence', but rather with 'dual convergence', failing to account for real world capitalist diversity (Streeck, 2010).

In spite of these critiques, the problem of divergence and institutional variation assumed by capitalism in different national formations, as raised by VoC, arguably remains of great importance. But it is necessary to abandon rational choice models in VoC analysis and replace it for more appropriate conceptions, as those derived from Marxist and Institutional political economy (Ebenau et al., 2015). To understand the real character of capitalist diversity, one cannot forget the 'commonalities' of capitalism as a social order based on class exploitation in which profit-seeking, accumulation and competition are the main imperatives of economic action. The continuous move towards the commodification of the processes of production, circulation and consumption epitomized by Marx famous M-C-M' formula of extended reproduction is its driving force. Capitalism is not merely about firms, entrepreneurship and technological innovation, but rather is premised on a set of institutional foundations such as private

property of the means of production, wage labour-based relations of production, widespread commodity exchange and markets involving money, financial systems involving banks, credit taking and debt selling and bourgeois political forces dominating the state. Capitalism hence exhibits an uneven and combined development over different historical periods (diachronic variation) and geographical spaces (synchronic variation) that evolves through a contradictory dynamics, cyclically prone to crises (Hodgson, 2016; Streeck, 2010).

Pursuant to this critical reading of varieties (and commonalities) of capitalism, the 'classical' definition of FR includes constellations of class relations, geographical specialization and interstate power, articulating 'international relations of food production and consumption' to 'periods of capital accumulation' (Friedmann, 2009, p. 335). The concrete formation of a FR involves 'a specific constellation of governments, corporations, collective organizations, and individuals, which allows capital accumulation based on a shared definition of the purposes of key actors while others are marginalized'. (Friedmann, 2005, p. 229).

FR's stylized narrative could be summarized through its well-known periodization. The first, colonial-diasporic FR (1870–1914/30) was rested on the hegemony of the British Empire and the Gold Standard monetary system. Under the ideology of free-trade imperialism, colonies of settlement (North America, Oceania) and exploitation (Latin America, Africa, Asia) were stimulated or compelled to supply cheap food and raw materials to the industrializing metropolises to keep the wage value of reproduction of their labour force low. The second, mercantile-industrial FR (1945–1973/85) was built upon the hegemony of the U.S. and Bretton Woods monetary system. During the Cold War period, its defining features were the flow of American agricultural surpluses to the 'third world' through 'food aid' (dumping) programmes and the worldwide diffusion of 'green revolution' technological packages. And the third FR (1995–today), lacking a consensual interpretation, is conceived by Friedmann (2009) as an emergent corporate-environmental regime and by McMichael (2009) as a consolidated corporate regime. There are no clear signs of definite subversion of the hegemony of the United States and the dollar. Although the rise of China and the instability of post-Bretton Woods flexible exchange rates monetary system after the 2008 crisis provided reasons for contestation, there are no ready alternatives to put in place (McMichael, 2020). However, the establishment of the World Trade Organization (WTO) and the Agreement on Agriculture (AoA) in 1995 is seen as an institutional landmark. Liberalization of domestic markets and restrictions of state capacities to regulate agriculture and food issues paved the way for financialization, supermarketization, land grabbing, mega-mergers and acquisitions, flex crops, biotechnologies, information technologies and the mainstreaming of 'green' discourses.

But there are critiques to FR approach as well. For Niederle (2018), FR has dealt poorly with social heterogeneity by conceiving the hegemonic core as a source of structural constraints homogeneously extended to the peripheries without a careful empirical account of the specificities of non-Northern/Western countries, overvaluing ruptures in detriment of transitions and tending to prescriptive reasoning. Wilkinson and Goodman (2017) argue *inter alia* that FR analysis has made excessive and inaccurate generalizations based on the history of hegemonies, while neglecting multipolarities in the evolving capitalist world system and historical continuities in the agrifood accumulation strategies pursued by other ascendant economies, such as the BRICS nowadays. While Bernstein's (2016) main point is against McMichael's 'binary opposition' between the vices of the corporate food regime and the virtues of peasant social movements for food sovereignty (*La Via Campesina*), which he sees as a Chayanovian echo of 'agrarian populism'. And Tilzey (2018) argues that by emphasizing this binary as a Polanyian 'double movement' of society as a whole against the ravages of the market, McMichael fails to understand the class character of the state.

These critiques call for relevant reformulations. Friedmann's (2016) appraisal is that in recent works, McMichael (2009, 2013) has apparently forgotten his method of 'incorporated comparison', which would have avoided much criticism if well applied. To develop a historically grounded theory, instead of presuming the 'parts' (national social formations and agrifood systems) from the 'whole' (world capitalism and international FR), the parts must be considered different moments of the whole that emerge from comparative analysis. The whole is thus constructed through a methodological procedure that contextualizes historical phenomena. However, the 'corporate food regime' falls short in applying this method as it substitutes for 'procedure' (guiding research questions) an 'answer' (the hegemonic structural constraints and the binary opposition). This method needs to be restored if 'the

totality of relations of accumulation, power, geography and class' are again 'allowed to be discovered though analysis of mutual conditioning of parts' (Friedmann, 2016, pp. 674 and 675). Hence, if Tilzey (2018) is misguided to dismiss Polanyi's socialist pedigree too quickly, he is correct to stress, following Gramsci and Poulantzas that the state is a condensation of the relation of forces among classes and class fractions of society. From this angle, the evolution of Polanyi's (2000) 'double movement' depends on Gramsci's (1992) 'balance of forces'. Accordingly, the international food regime (the 'whole') must also be viewed as constituted through the struggles for hegemony within and between countries (the 'parts').

But how can VoC and FR approaches be methodologically connected in search of meaningful parameters for a comparative institutional analysis of the BRIC(S) countries? Through the same methodological strategy followed by classical comparative scholars such as Moore (1983), Wolf (1984) and Byres (1995, 2016), inspired by the classical framework of the agrarian question synthesized by the latter, I propose a reformulated 'agrifood question', composing of three key problematics. The first, 'capital accumulation', regards the place of agriculture and the agrifood system in the economic dynamics, especially the intersectoral linkages of agribusiness, the relative importance of internal and external markets and the finance and investment flows. The second, 'social reproduction', refers to the forms and degrees of commodification of agriculture (land, labour, inputs, outputs, subsistence) and their effects on rural livelihood strategies and class differentiation, as well as the levels of nutrition transition and its implications for urban consumers. And the third, 'politics', deals with the contradictions, conflicts, alliances and compromises between dominant and subaltern rural classes and the role of the state in agrifood-related policies and institutions.

Mind that the comparative methodological strategy adopted in this article is 'case-based' instead of 'variable-based' (Ragin, 1987). That is, instead of observing the behaviour of certain variables in relation to each case, as does the standard VoC approach, which usually compares variables representative of the distinct 'institutional domains' to classify whether an economy is liberal, coordinated or otherwise, here the cases are compared with each other in relation to the guiding research questions through a 'process tracing' (Mayntz, 2003), which results in the reconstruction of the causal chains of the studied phenomena, expressed in the form of more or less complex historical narratives. As causal reconstruction aims at building theory, case-based analysis leads to the formulation of mid-range generalizations involving processes, not correlations, as in variable-based analysis, which only tests theory. When properly passed through the fine sieve of a critical reading, both VoC and FR approaches favour this methodological strategy, as well as Marxist and Institutionalist political economy at large.

The comparative institutional analysis put forward in this article thus follows three steps. Firstly, narrative accounts of China, Brazil, Russia and India are drawn up on the basis of an extensive bibliography and relevant statistics. Each country's narrative focuses on the historical legacy of the agrarian question by the 1990s, the main transformations and trends of its agrifood system over the last decades and the place of rural and agrifood issues in its current political context. Secondly, from the collation of these narratives, key specificities and commonalities between each country are identified and comparatively analysed. The major findings are then interpreted through a dialogue with the theoretical literature and comparative studies on the BRIC(S) countries, in order to obtain mid-range generalizations regarding the three problematics of the agrifood question mentioned above. Thirdly, by way of conclusion, tentative answers to the research questions posed in the introduction are provided. Supported by previous generalizations, my intention is to explain the institutional variation of capitalism in the BRIC(S), the decisive influence of the agrifood system on their overall development paths and their role in shaping the international reordering of the food regime.

3 | BRIC(S) DEVELOPMENT TRAJECTORIES AND AGRIFOOD SYSTEMS

3.1 | China

China provides a unique example of socialist to capitalist agrarian transition that entailed both successful wide-ranging transformations of agriculture and large-scale industrialization. After a period of land reform and

cooperativization (1949–1955), agriculture was rapidly collectivized (1955–1958) and developed into people's communes (1958–1978) and then decollectivized (1978–1984) under the household responsibility system of collective land ownership and individual contracts for use rights (up till today), including land lease/transfer rights (since mid-1990s; Ye, 2015). Throughout the revolutionary era, the extraction, appropriation and transfer of physical (labour, food and raw materials) and financial (taxation and unfavourable terms of trade) surpluses generated in agriculture spurred the initial process of industrial accumulation and the creation of basic infrastructures, services and human resources upon which the later economic achievements were erected. And during the reform era, the reversal of the terms of trade in favour of agriculture, the continuing *hukou* system of rural residence registration and later the progressive abolition of rural taxes were key factors in raising the farmers' income and consumption levels, generating the surplus reinvested in rural industry through the township and village enterprises and liberating the labour power of peasant-migrant workers to boost the special economic zones' large export platforms based on FDIs and joint ventures in the coastal regions (Zhan, 2019).

China's outstanding economic boom and social transformation hinge on a complex dynamic between state-owned and private sectors, driven by manufacturing exports, fixed-asset investment and domestic consumption (Hung, 2016). Between 1990 and 2018, the GDP multiplied over 20-fold, and per capita income over 18-fold, at low inflation rates. Although the urbanization rate rose from little more than 1/4 to almost 3/5 of the population, agriculture lost weight in GDP but still employs over 1/4 of the labour force. As the unemployment rate remained low, whereas productivity grew over 10-fold, poverty has fallen acutely, inequality has increased, and living standards have improved (Appendix A). The institutional configuration of the Chinese variety of capitalism centres on state-led capital accumulation guided top-down through direct government intervention and long-term strategic planning interacting with a bottom-up, *guanxi*-based patrimonialist entrepreneurship and capital accumulation in sectors that are often oligopolized, globally integrated and market-driven, surrounded by a broad informal sector. The reforms and opening-up policy have been carried out pragmatically, gradually and selectively liberalizing the economy while keeping state control intact under the unquestioned authority of the Communist Party of China (CPC; McNally, 2019).

China has just over 260 million rural households. The proportion of wage earners in the total labour force employed in agriculture in 2009 was estimated at around 8%, with the remaining 92% employed as peasant family farmers (Huang, Gao, & Peng, 2012). But later, estimates show that by 2014, the percentage of wage earners in the total agricultural labour force might have already reached 16% (Xu, 2017). Whatever the percentage, peasant production still predominates in both 'old' crops (grains and oilseeds) and 'new' high value-added products (fruits, vegetables, fish, meats, milk, eggs), whose overlooked increasing productivity has been characterized as a 'hidden agricultural revolution'. Funding for this has come mainly from migrant workers' remittances of part of their earnings in off-farm jobs in the cities to family members working on-farm in the villages (pluriactivity),¹ rather than from state credit and subsidies or merchant capital, as is commonly assumed. Therefore, this phenomenon has been interpreted as a process of 'capitalization without proletarianization' (Huang et al., 2012). However, this vision has been contested, with fieldwork evidence showing that capitalism is clearly developing in Chinese agriculture 'from above' (agribusiness' expansion) and 'from below' (farmers' differentiation; Yan & Chen, 2015). Though without hard statistical data and relying on insightful fieldwork observations, Zhang (2015) distinguishes a myriad of class positions within the Chinese agrarian structure: corporate and entrepreneurial capitalist farms, both using wage labour, the former left undiscussed and the latter identified mostly as the officially sponsored 'large' 'family farms' with around 200 mu (1 mu = 1/15 ha) achieved via land transfer contracts; commercial family farms, seen as petty-bourgeois,

¹Since the work of Fuller (1990), the notion of pluriactivity has become a reference in the debates on new rurality, initially in Europe and then elsewhere. By offering an alternative framework to the worn-out concepts of deagrarianization and semiproletarianization, the discussions on the role of pluriactivity in rural development, today assimilated by livelihoods perspectives (Scoones, 2009), were particularly exciting in Brazil, generating a notable academic production, selectively reviewed by Escher, Schneider, Scarton, and Conterato (2014) and continue to be explicitly used in recent comparative studies, for example, on Brazil, China and Europe (Ploeg, Ye, & Schneider, 2012). As will be seen throughout this paper, the notion of pluriactivity helps a lot to understand the BRIC(S) rural realities.

pure petty commodity producers; dual-employment households, petty commodity producers who sell and may hire, labour; subsistence peasants, who sell just a small surplus output and semiproletarianized (who lease out land, sell labour and do not sell output) and proletarianized (landless people who sell labour but not output) wage workers.

If during Mao era's green revolution the use of chemical fertilizers and high-yield seeds had already started, the current 'agricultural modernization' in China, led by the massive use of industrial inputs, is proceeding at a large pace. From 1995 to 2010 and continuing since then, the use of farm machinery increased between threefold and fivefold and of farm chemicals (herbicides, insecticides and fungicides) about twofold and threefold, not only in fruits and vegetables but also in grain production, not to mention the construction of new facilities and purchase of feed, antibiotics and veterinary services for animal production (Huang & Gao, 2013). But beyond the wide adoption of inputs upstream of agriculture, the processes of rural production are led by the increasing integration of peasant farming to agroindustrial capital downstream.

A variety of forms of integration have been noted: (1) through government-enacted land appropriation, peasant farmers become urban citizens and wage labourers working for an agribusiness that now operates on the same land; (2) rural households turn their farmland into shares of an enterprise that operates on their land and gain dividends as their income; (3) an agribusiness rents land from rural households and employs peasant farmers as their wage labourers; and (4) rural households form a cooperative that is linked [subordinately] to an enterprise (Yan & Chen, 2015, p. 376).

The main actors in these processes are the so-called 'dragon-head enterprises' (DHEs)—processing and distribution firms that meet a set of operational and financial criteria to get government funding (credit and subsidies) at the national level to source primary products from rural producers through vertical integration and contract farming. By 2011, among more than 280,000 agribusiness enterprises, 110,000 were officially labelled as DHEs. The changing diets and consumption patterns toward higher animal protein intake, induced by increased income and urbanization, have been the main driver of the restructuring of livestock production (mainly pork but also chicken), feed manufacturing and meat processing and distribution. Today, 'specialized family farms' and 'large-scale commercial farms' account for more than 2/3 of total pig production. The facilities and production methods are similar to those used elsewhere in the world—that is, 'confined/concentrated animal feeding operations' (CAFO)—but ownership and operations are predominantly domestic. DHEs that integrate these operations have as a percentage of top ten firms by sales 60% of pig breeding and production, 80% of pig slaughter, 90% of pork processing, 80% of pork retail brands and 50% of feed processing (Schneider, 2017). All of this feed is basically produced with imported transgenic soybeans, mainly from Brazil, the United States and Argentina. Additionally, it is important to note that at the end of the supply chain, the main retail outlet where consumers buy meat or any other foodstuff is currently in the supermarket sector, virtually nonexistent until the early 1990s, but now pervasive and dominated by domestic firms (Escher, 2020).

This concentration is followed by intense internationalization of Chinese agribusiness, especially after the 2008 crisis. Three examples stand out. First, Shanghui, a former state-owned enterprise, went to the stock market in 2006, obtained capital from Goldman Sachs in 2009 and from other six Chinese investment funds in 2013, when it acquired American Smithfield to become the world's largest pork processor and distributor. Second, state-owned Chem China acquired Israeli Adama in 2011 and Swiss Syngenta in 2017 (within the scope of a broader corporate consolidation process that includes Bayer's acquisition of Monsanto and the merger between Dow and Dupont), as well as Nidera Seeds (then owned by Chinese COFCO), and now controls over 8% of the seed market and 20% of the pesticide market in the world. Third, state-owned COFCO is the largest soybean producer and crusher, oil refiner, food processor and commodity trader in China. Through an agreement with the sovereign wealth fund China Investment Corporation (CIC), in 2014, COFCO acquired Dutch Nidera and Singaporean Noble Agri, both with large-scale operations in Brazil and other South American countries, entering the same ranking as the 'big four' ADM, Bunge, Cargill and Louis Dreyfuss, the 'ABCDs', now the 'big five' or 'ABCCDs', where the second C refers to COFCO.

The Chinese state and agribusiness capital are not only changing agrarian relations at home but also 'going out', opening new frontiers seeking to control access to resources, markets and competencies abroad, setting up processing operations, acquiring strategic assets and building logistical capacities. These processes are shifting the distribution of power and profits so that the Chinese agrifood companies are seriously challenging the long-established oligopolistic dominance of large North Atlantic transnational agribusiness corporations (Belesky & Lawrence, 2019; Escher, Wilkinson, & Pereira, 2017; Schneider, 2017).

The prevalence of undernourishment in the total Chinese population declined from 15.2% in 2004–2006 to 8.7% in 2015–2017, whereas obesity in the adult population rose from 5.1% in 2012 to 6.6% in 2016 (FAO et al., 2018) and overweight already exceeds 15% (Garnett & Wilkes, 2014). Thus, China faces a twofold challenge: To continue to provide more and better quality food for the remaining poor, while addressing the effects of food excesses and imbalances for the better-off. Increased meat consumption in a context of rapid advancing nutrition transition expresses the main paradox of China's agrifood policy. That is, while the government imposes the so-called 'red lines' for agricultural land (120 million hectares must remain in agricultural production) and grain self-sufficiency (95% of rice, wheat and maize must be domestically produced), it depends on the importation of soybean (and increasingly of maize) as the main raw material of the feed used to produce meat, which already accounts for 3/10 of the average Chinese consumer diet (Garnett & Wilkes, 2014).

By the mid-1990s, in the midst of escalating rural crisis, the 'sannong wenti'—that is, the three agrarian problems: peasants, agriculture and rural areas—attracted party-state attention so that the early 2000s was a period of both policy experimentation (Building a New Socialist Countryside [BNSC]) and social activism (New Rural Reconstruction Movement [NRRM]) toward propeasant, rural development initiatives. However, the state's approach shifted around 2008, when structural momentum for agrarian capitalist modernization, along with concerns on food safety scandals and the international recession, compelled more explicit urbanization, standardization of food products, commodification of land, scaling-up and technification of agriculture and transformation of peasants into market-integrated producers and consumers who would help with China's transition to a new economic model and capital's overcapacity problem (Day & Schneider, 2018; Zhang, Oya, & Ye, 2015). It is within this turn in the political conjuncture that the reassertion of Chinese 'state capitalism' through neomer-cantilist strategies—expressed in the 'going out' policy and the internationalization of agribusiness enterprises—must be understood (Belesky & Lawrence, 2019; McMichael, 2020).

3.2 | Brazil

Brazil represents a variant of capitalist agrarian transition from above, which prompted a conservative modernization of agriculture and a substantial level of industrialization. The 1930 revolution gave birth to national-developmentalism and the modern state, but did not alter the existing backward social relations in the countryside. The forces for agrarian reform that arose were defeated by a coup (1961–1964), then the technical basis of agriculture was modernized and several agroindustrial complexes were established (1965–1985), laying the foundations for agribusiness (up till today; Silva, 1998). During the civil-military dictatorship, the extraction, appropriation and transfer of physical (labour, food and raw materials) and financial (unfavourable terms of trade) surpluses generated in agriculture fed into capital accumulation through import-substitution industrialization and national territory and home market integration. Subsequently, the expansion of agribusiness under neoliberalism brought with it reprimarization of the export basket, overvaluation of the real exchange rate and early deindustrialization, but redemocratization allowed the excluded and marginalized to rise as new social actors, such as landless rural workers and family farmers *inter alia* rallying for agrarian reform, rural development and food security and sovereignty (Delgado, 2012).

Brazil's recent economic performance and social transformation hinge on mixed dynamic between state-owned and private sectors, driven by energy, mineral-extractive and agribusiness exports, finance and domestic

consumption (Escher, 2020). From 1990 to 2018, Brazil's GDP grew over threefold and per capita income over twofold, with the stabilization of inflation at moderate rates. As the urbanization rate ranged from around 2/3 to more than 4/5 of the population, the share of agriculture in GDP declined but still adds to 1/10 of total employment. While productivity has stagnated for years, the unemployment rate has recently risen, and poverty and inequality, which have significantly declined, now seem to be growing again, despite the reasonably improved living standards (Appendix A). The institutional configuration of the Brazilian variety of capitalism, after a late and limited liberalization, reasserted a state-coordinated capital accumulation through top-down direct government intervention interacting with a bottom-up, corporatist-based patrimonialist entrepreneurship and capital accumulation in sectors that are often oligopolized, internationally integrated and market-driven, but relatively protected and surrounded by an expressive informal sector. The negative consequences of neoliberal reforms have opened spaces to resume the role of the state in the economy and to build a social welfare system, which, however, since the coup of 2016 has been relentlessly attacked, undergoing a dismantling process (Boschi & Pinho, 2019).

The Agricultural Census 2006 registered more than 5 million rural establishments in Brazil. While *patronal* agriculture accounts for 15.6% of the total, concentrates 84.4% of the land area and 66.8% of the gross value of production (GVP) but employs only 25.6% of the labour force, mostly via wage relations, family farming accounts for 84.4% of the total, owns only 24.3% of the land but produces 33.2% of the GVP and employs 74.4% of the labour force, mostly through kinship relations (Escher, 2020). But this dual classification has been rendered insufficient to explain the structural heterogeneity of agriculture. To this end, Escher and Schneider (2019) propose a more detailed depiction of the Brazilian agrarian class structure. The rural bourgeoisie consists of two segments: capitalist agriculture, with less than 1% of the establishments but more than 50% of the total GVP, displaying high levels of productivity, capital intensity, specialization and integration into agroindustrial complexes, international markets and financial circuits, as well as high environmental costs; and *latifundio* agriculture, agrarian rentiers with near 15% of both the total establishments and total GVP, which given their low levels of productivity only reproduce themselves thanks to spurious practices such as debt forgiveness, land grabbing and labour precariousness. Family farming, in turn, is composed of three segments: entrepreneurial family farming, with around 6% of the establishments and 16% of the total GVP, above-average land area and high income, intensive in capital, technology and credit use and prone to agricultural specialization (monoactivity); commercial family farming, with more than 30% of the establishments and 15% of the total GVP, average land area and reasonable income, access to technologies and credit and inclined to livelihood diversification (pluriactivity) and peasant family farming, with more than 46% of the establishments but less than 2% of the total GVP, below-average land area and low income and no access to technology or credit, producing only for self-consumption and depending on off-farm precarious jobs (pluriactivity) and social transfers to survive.

The continuing modernization of Brazilian agriculture is evidenced by the index of intermediate consumption (IC), defined as the added value of all purchased inputs that enter the production process (except labour force) in the total GVP (fertilizers, seeds, chemicals, feed, medicines, machinery and implement rents, energy, services, etc). The average IC goes from 21.5% in 1965 to 38.7% in 1980 and 41.8% in 2006. It reaches 54.8% for *patronal* agriculture and 28.8% for family farming, though there are variations across regions and segments within of each category (Conterato, Schneider, Fernandes, Libardoni, & Gomes, 2014). Such technical changes result from a broader process of vertical and horizontal integration of agriculture by finance capital and agribusiness corporations. After the capital flight that followed the 1999 currency crisis, agriculture was lined up to generate trade surpluses as a strategy to restore the balance of payments—which has been reinforced since 2003, in the wake of the international boom of commodities. For this to happen, three important drivers converged: the reheating of the land market, the rearticulation of agroindustrial complexes and the relaunch of agribusiness-friendly sectoral and macroeconomic policies. Based on the comparative advantages of natural resources, ground rent extraction (arable land and mineral deposits) has thus become the leading strategy of capital accumulation for the economy as a whole (Delgado, 2012).

The soy complex represents an emblematic instance. Between 2001 and 2016, soybean production jumped from 38 to 95 million tons, as the planted area went from 14 to 33 million hectares. Productivity increases by an average of 0.7% per year contributed to these results, but the incorporation of new lands was a decisive factor, with soybean

currently covering 53% of Brazil's total grain area. Its cultivation has been concentrated in the central and southern regions, where the five largest producing states are located, albeit over the recent period there is a remarkable advance towards the north and northeast, in the region known as MATOPIBA. In 2016, soybean GVP reached 1.5% of Brazilian total GDP, 7.13% of agribusiness GDP and 24% of agricultural GDP. The amount of soy exported achieved 44 million tons, 41% of the global market, with 12% going to Europe and 75% to China. This is equivalent to 31% of the value of Brazilian agribusiness exports, 12.8% of total exports and 37% of the trade balance (Escher & Wilkinson, 2019). Such phenomenon has had major impacts in the context of global land grabbing. First, it repositioned land as a key financial asset, as shown by the strong correlation between the price of the hectare of land and the soybean bag price (0.923) and the BOVESPA (São Paulo Stock Exchange) index (0.886), causing the average price per hectare to rise from R\$ 4,756 in 2010 to R\$ 10,083 in 2015, an increase of 112% nationwide. Second, it added to the historical land concentration (the Gini index is 0.856) and the increasing 'foreignization' of land ownership, as between 2003 and 2017, there were at least 70 land deals by foreign investors, accounting for more than 3 million hectares (Escher & Schneider, 2019).

Moreover, an intense process of corporate concentration and internationalization of Brazilian agribusiness and food industry has taken place. Two cases stand out. First, Brazil Foods (BRF) is the world's largest poultry (and other products) exporter. Formed from the merger between Sadia and Perdigão, following Sadia's involvement in a scandal of huge losses arising from speculation with currency derivatives during the 2008 crisis, BRF began investing abroad and acquired several renowned smaller firms in developed and developing countries, betting on a strategy of dedicated distribution, market segmentation and brand differentiation. Second, JBS-Friboi is now the world's largest meat firm, not only beef in first place but also poultry, pork, lamb and other products. JBS has consolidated itself in the domestic market through the acquisition of large competitors like Bertin, Seara and Frangosul-Doux and also acquired firms in the Mercosul, the Argentinian Swift-Armor and in the United States, Swift, Pilgrim's Pride, part of Tyson Foods and Cargill Swines, among others. In 2017, JBS, BRF and other large Brazilian meat companies were involved in food safety scandals reverberated around the globe, accused of bribing health officials to approve sales and exports of adulterated products. Initiatives to acquire strategic assets and competencies in major consuming and exporting countries were largely undertaken to avoid non-tariff barriers or phytosanitary restrictions in order to maintain and expand market access and control, as well as profit margins. Such processes would not have been possible without state support through BNDES's (National Bank for Economic and Social Development) 'national champions' policy, which despite helping to generate foreign exchange, is criticized for privileging low-innovation sectors where Brazil is already competitive and also for its social, environmental and political costs (Escher & Schneider, 2019; Niederle & Wesz, 2018; Sharma & Schlesinger, 2017).

The prevalence of undernourishment in the Brazilian population declined from 4.6% in 2004–2006 to <2.5% in 2015–2017, whereas obesity in the adult population rose from 19.9% in 2012 to 22.3% in 2016 (FAO et al., 2018). This puts Brazil in a paradoxical and uncertain situation: although the country managed to get-off from the FAO Hunger Map in 2014, largely because of its social inclusion, poverty reduction and food security policies, a possible return is feared due to the recent institutional rupture and increasing poverty, as at the same time the incidence of noncommunicable diseases is rising because the excesses of a quite advanced nutrition transition and supermarket revolution, especially among the poor (Escher, 2020).

However, the bone of contention regards the conflicting coevolution of two cardinal agrarian projects along the PSDB (1994–2002) and PT (2003–2016) governments: *patronal* agriculture, mainly oriented to the export market, associated to land concentration and corporate agribusiness, represented by business unions, product associations and the ruralist parliamentary bloc and assisted by the Ministry of Agriculture, Livestock and Supply (MAPA) and family farming, mainly oriented to the domestic market, associated to rural development, agrarian reform and food and nutrition security/sovereignty, represented by rural social movements, farmers unions and left-wing parliamentarians and assisted by the Ministry of Agrarian Development (MDA; Bruno, 2017; Grisa & Schneider, 2015). Under the PT's rule, a realignment in the balance of forces resulted in a relative weakening of the neoliberal project and a strengthening of the neodevelopmentalist project. Foreign policy also expressed the intrinsic ambiguity of these

disputing agrarian projects, both encouraging the transfer of family farming and food security policies and supporting the 'national champions' in forging the expansion of agribusiness and other multinationals, across Latin American and African countries (Sauer, Balestro, & Schneider, 2018). Eventually, this unstable equilibrium of compromises was broken with the coup of 2016, the extinction of the MDA and the election of right-wing populist Jair Bolsonaro, who currently imposes an authoritarian neoliberal platform widely supported by agribusiness and the ruralist bloc (Escher & Schneider, 2019).

3.3 | Russia

Russia is the typical example of socialist to capitalist agrarian transition with highly contested outcomes regarding agricultural and industrial transformations. After war communism (1917–1921) gave way to the new economic policy and worker-peasant alliance (1921–1928), forced collectivization of agriculture (1928–1940) led to the creation of large collective and state farms (*kolkhozy* and *sovkhozy*) (1940–1991), later officially destatized (1991–1994) but just awkwardly privatized under a complicated shareholding system of land property rights (up till today; Wegren, 2007). Under Stalinism, the extraction, appropriation and transfer of physical (labour, food and raw materials) and financial (taxation and unfavourable terms of trade) surpluses generated in agriculture enabled the process of primitive socialist accumulation and soviet industrialization at high human costs, redressed thereafter with the deployment of an extensive social welfare system attached to the workplace. However, if the postsoviet neoliberal reforms and state withdrawal opened the way for the expansion of new farming models based on the private property of land, this achieved poor results, basically through lease arrangements, without significant changes in the agrarian structure or increased productivity, but with pronounced deterioration in the provision of rural services (Wegren, 2004).

Russia's modest economic performance and social transformation hinge on combined dynamic between state-owned and private sectors, driven by oil and gas-extractive industry, the military-industrial complex, finance and domestic consumption (Medeiros, 2011). Russia's GDP and per capita income grew 2 and a half times between 1990 and 2018, with a steady decline and stabilization of inflation rates. With an urbanization rate of around 2/3 of the population, the share of agriculture in GDP and employment is low. As the unemployment rate fell and productivity recovered, poverty declined, inequality became moderate, and living standards increased (Appendix A). The institutional configuration of the Russian variety of capitalism, after a crude, predatory liberalization, reasserted a state-centralized capital accumulation through top-down government direct intervention interacting with a bottom-up, oligarchic-based patrimonialist entrepreneurship and capital accumulation in sectors that are often oligopolized, internationally integrated and market-driven, but fairly protected and surrounded by a considerable informal sector. When it became evident that the foreign advised, shock therapy-type neoliberal market reforms had failed miserably, the state was brought back in under the authoritarian control of Putin's leadership (Becker & Vasileva, 2017).

During the transition from command to market economy, only 5% of rural residents withdrew real land shares from former *kolkhoz* and *sovkhoz* to set up their own farms. Most of them held paper shares of the corporatized farms and kept their own household plots. Since then, Russia's agriculture has been organized into three officially defined major categories, from which a rudimentary class structure appears to be forming (Wegren, 2011). Out of nearly 17.7 million farm units registered by the Agricultural Census 2016: 22,500 (0.13% of the total) are large farm enterprises, which concentrate 68.4% of the land area and 52.8% of the GVP; 174,000 (0.98% of the total) are family farm enterprises, which account for 27.4% of the land area and 12.5% of the GVP and 17.5 million (98.89%) are household plots, which own only 4.1% of the land but produce 34.7% of the GVP (Wegren, Nikulin, & Trotsuk, 2018). Large farm enterprises are capitalist firms based on wage labour, which have been formed through leasing the land shares of their former employees into the hands of a few oligarchs, thus dubbed 'oligarkhozy' (Nikulin, 2011). Since the mid-1990s, several large farms have been consolidated under ownership and control of a few mega-sized agroholding corporate companies, most established by capital from outside the agricultural sector. Today, there are 845 such agroholdings. They have the newest types of management, the most modern technologies

and an aggressive market behaviour, with the top-15 agroholdings exporting 75% of Russian grain and the top-20 producing 60% of its pork *inter alia* (Wegren et al., 2018). The private family farm enterprises that make sufficient profit from cereals, vegetable or meat are able to employ a permanent labour force. They produce for the market and invest in expanding and modernizing production. The small peasant farms and rural households with private plots, while producing for self-consumption, in general market any surplus output. However, a small proportion has farming as their main income source and always combines this with off-farm jobs (pluriactivity) to make a living (Pallot & Nefedova, 2007).

Whereas mechanization and technification of agriculture reached its peak in the mid-1980s, since the 1990s, the depreciation of machinery has increased and the use of industrial fertilizers and pesticides remains at less than 1/4 of the average of developed countries (Wegren et al., 2018). However, agrarian capitalism is clearly developing. If in the 1990s, oligarchs struggled over the privatization of public assets in industry and energy sectors, in the 2000s, attention to agriculture has gradually increased alongside the demand for livestock products (and feedgrains). Farmland has thus become the new frontier for capital, giving impetus to the creation of large corporate agroholdings. Foreign investors have also taken part in this development through the creation of Russian subsidiaries, as land acquisition by foreigners is not legally allowed. Besides controlling most of the Russian farmland, agroholdings (many state-owned enterprises) combine agricultural production with other upstream and downstream firms along the value chain, monopolizing large shares of the domestic food market and the agricultural commodity trade. Relying on heavy state support for the protection and control over this process of concentration of agribusiness in the hands of a few oligarchs, currently Russia already has more agroholdings listed on the stock exchange than traditional agricultural powerhouses like Brazil or Argentina. Ultimately, rural households are either integrated into agribusiness by renting out their land to large farm enterprises, sometimes getting a wage job there too, or they have to compete on the market as entrepreneurial or commercial family farmers (Mamonova, 2016; Nikulin, 2011).

The Russian wheat complex is noteworthy for its startling performance. Pessimistic predictions pointed out that Russia would hardly become a global breadbasket because the 'substantial costs of re-cultivating abandoned land, management and financial problems of megafarms and agroholdings, lack of infrastructure for exports, and increased domestic demand for feedgrains as input for the meat sector', adding more to global price volatility than to food security (Visser, Spoor, & Mamonova, 2014, p. 1589). Such predictions turned out to be incorrect. Despite the actuality of many of these concerns, between 2000 and 2018, wheat production went from 35 to 74 million tons and harvested area from 21 to 25 million hectares, covering 56% of the country's total grain area, at productivity growth rates of 0.7% per year. In 2015, Russia surpassed Canada and the United States, becoming the number one wheat exporter in the world. This position has been maintained so far—with 48% of 2018 crop production exported, reaching over 20% of global market share—and is projected to keep steady over the next decade (Sowell, 2019). Favourable weather conditions, importation of new equipment, use of high-yield seeds and mineral fertilizers, state subsidies and agricultural insurance programs and the opening of new markets facilitated the increase in wheat production and exports and thus foreign exchange generation. However, despite its current agribusiness' success, Russia is still a net food importer, especially of meat products (Wegren et al., 2018).

Some of the largest Russian agribusiness corporations, such as RusAgro in the grain sector and Miratorg in the meat sector, are preparing to gain bigger shares in the world markets, especially China and other Asian countries (Wegren et al., 2018). Domestic concentration, however, has not yet been followed by extensive internationalization. Rather, protectionism has escalated. While ABCD trading firms such as Cargill and Dreyfuss play a role, they not only operate in a tightly controlled environment (e.g., through import quotas), but the Russian grain import-export market is dominated by domestic players, mostly state-owned enterprises (Lander, 2018). By 2008, Russia had become the second largest world food importer, trailing only China. The global food price spikes set off alarm. The Food Security Doctrine, launched in 2010, aimed at reducing dependence on foreign food and seeking self-sufficiency, is thus symptomatic. Tariff quotas by country or region became the rule, even after Russia's accession to WTO in 2012. But the turning point was 2014, when the Food Embargo led to import bans on many agrifood products as retaliation against the sanctions imposed by the United States, European Union, Australia, Canada and Norway after the

Ukrainian crisis and the annexation of Crimea. So far, no date has been scheduled for lifting the food embargo. Import-substitution policies have taken shape, with the goal of increasing domestic production of agricultural and livestock products, raw materials and foodstuffs once sourced abroad. For example, Ashan, the third largest retail chain in Russia, went from 44% to over 80% of its food supplied from domestic producers and processors between 2014 and 2016. As a result, Russian meat production grew, consumption of domestic food products increased, European producers lost an important market and new trade partnerships (e.g., Brazil, Pakistan, Serbia, Egypt and Chile) were established (Wegren et al., 2018).

The prevalence of undernourishment in the Russian population is <2.5% since early 2000s, whereas obesity in the adult population rose from 23.9% in 2012 to 25.7% in 2016 (FAO et al., 2018). This means that most Russians are not food insecure. Rather, after the recovery from the crisis of the early 1990s, when food security really threatened, what can be observed now are the typical problems of a country with a very advanced nutrition transition. Nevertheless, Russian policy of food security as food self-sufficiency serves to galvanize popular support for the regime and bolster (food) nationalism in a geopolitical context of growing anxiety and distrust against the Western powers and possible threats on national security. In practice, the irony is that 'trade protectionism benefits primarily large and medium agriculture enterprises, agroholdings and agribusiness, large-scale private farmers and food processors—in other words, actors in the agrifood system who are exposed to foreign competition and the global food market' (Wegren et al., 2018, p. 269).

This development raise the question whether the Russian state's move towards 'food independence' contributes to 'food sovereignty' in the context of a semiauthoritarian regime and weak social movements. Wegren et al. (2018) argue that the farming style practiced by the household plots is of little help to food security or sovereignty because they are subsistence-oriented and supposedly market-averse. But the importance of this form of production and labour is grossly overlooked and downplayed by the government, as well as by critical scholars and even by the farmers themselves. They are actually as or more productive per land unit than large farm enterprises or even 'family' farms. Suffice it to state that they produced almost 35% of Russia's agricultural GVP, including 78% of potatoes, 76% of fruits and 67% of vegetables in 2015. This phenomenon might be explained by both the long-standing conceptions and practices of household security and self-reliance, which date back to the Soviet era food deficits, and the symbiosis between large farm enterprises and household plots, which consisted of the former providing the latter with inputs and services for free, combined with the habitual pilfering from large farms by smallholders (Mamonova, 2016).

3.4 | India

Lerche, Shah, and Harriss-White (2013) depicts India as a capitalist agrarian transition bypassed, on the grounds that agricultural transformations made little contribution to industrialization. After independence (1947), an overall national-developmental project informed the agrarian reforms that officially abolished the *zamindar* colonial tax system, stabilized land tenancy and opened the way for protective community development programmes (1950–1964), followed by the implementation of a new strategy (1964–1980) of green revolution and agricultural modernization in some regions (up till today) (Lerche, 2013). Under Nehruvian dirigisme, the extraction, appropriation and transfer of physical (labour, food and raw materials) and financial (terms of trade and money-lending) surpluses generated in agriculture to feed into capital accumulation via import-substitution industrialization occurred only to a limited extent. Such unimpressive economic results served at least as part of the justification for the adoption of neoliberal policies since 1991, with the retreat of state intervention and an overarching dismantling of the support apparatus for peasant agriculture, now left to fend for itself in the face of the global market, with desperate social consequences (Patnaik, 2012).

India's current economic performance and social transformation hinge on mingled dynamic between state-owned and private sectors, driven by finance, information technology-enabled services export and domestic

consumption (Dhanagare, 2016). From 1990 to 2018, India's GDP multiplied over 10-fold and per capita income almost sevenfold, at oscillating inflation rates. With the level of urbanization at less than 1/3 of the population, although the share of agriculture in GDP has consistently decreased it still represents the main source of employment. With a seemingly low unemployment rate and a still low but growing productivity, poverty is slowly declining, inequality is at a moderate level, and living standards have improved significantly (Appendix A). The institutional configuration of the Indian variety of capitalism, despite sweeping liberalization, still maintains a state-oriented process of capital accumulation through top-down direct government intervention and loose planning interacting with a bottom-up, caste-based patrimonialist entrepreneurship and capital accumulation in sectors that are often oligopolized, internationally integrated and market-driven, but relatively protected and surrounded by a gigantic informal sector. Despite India's high growth rates since neoliberal reforms, the sort of global integration experienced has generated harsh social consequences that hamper the country from overcoming the old legacies of colonialism and the agrarian constraints to industrialization (Mazumdar, 2010).

Nevertheless, there have been notable changes in the Indian agrarian structure, with its more than 138 million farm holdings. Large farms (more than 10 ha) comprise 0.7% of the total holdings and 10.6% of the land area, medium farms (4 to 10 ha), 4.2% and 21.2%, semimedium farms (2 to 4 ha), 10% and 23.6%, small farms (1 to 2 ha), 17.9% and 22.1% and marginal farms (less than 1 ha), 67.1% and 22.5% (India, 2018). However, from a class perspective, this official land-size grouping is an insufficient and problematic criterion. Even with its limited coverage, a well-fitted fieldwork compilation provides a better source for our purposes (Lerche, 2013; Lerche et al., 2013). 'Landlordism' (semifeudal rentier, usurer and speculative relations with the peasantry) has declined, although it is still significant in some regions. Rich large capitalist farmers, including a few well-to-do medium peasant farmers and even ex-landlords, are taking the lead in productivity gains, all strongly relying on wage labour and leased-in land schemes ('reverse tenancy'). Small to medium peasants are largely petty commodity producers who, seasonally or throughout their lifetimes, also engage in some form of wage labour. Those engaged in the production of cash crops and contract farming systems usually come from these strata as well. And the marginal peasants are the labouring poor whose farming output barely provides them with enough food for self-consumption, whereas the low income, they are able to earn comes mostly from hiring out their labour in agriculture or other sectors. A large number of them does not own any land to farm other than their homestead. Tragically, more than a half of the Indian farmers are in situation of indebtedness, pointed out as the main reason behind the 'suicide waves' in rural areas, with over 256,000 casualties between 1997 and 2011 (Dhanagare, 2016). These rural dwellers are not simply peasants or rural wage workers, as they crucially combine tilling their small plots, seasonal migrant labour in the cities and self-employed work in the rural nonfarm informal economy (pluriactivity) to make a living (Shah & Harriss-White, 2011).

From the 1960s, green revolution technology backed by subsidized credit for inputs adoption (fertilizers, high-yield seeds and pesticides) was introduced in the water-rich regions for food crops (rice and wheat), which was extended to nonfood crops from the 1980s. It paved the way for enhanced agricultural productivity on capitalist lines, which between 1981 and 2011 made the proportion of wage workers in the total agricultural labour force grow from 37.5% to 55%. With the exception of traditional grain producers like Punjab, Haryana and Uttar Pradesh, since the mid-1990s the share of higher-value crops like fruits, vegetables, condiments and spices increased in most of the states. Crop intensity has grown throughout India, whereas vertical integration and contract farming have only spread in the most agriculturally developed states, where a trend towards increased agricultural mechanization and the use of industrial inputs has been observed. However, this process is unequal across regions and producers, as expressed, for example, in the Gini index for land ownership, which rose from 0.74 in 1993 to 0.78 in 2011 (Mohanty & Lenka, 2016). Over time, albeit agrarian capitalism is still deepening, India's integration into neoliberal globalization has resulted in a diminished role played by agriculture in intersectoral linkages and total investment in the wider economy and the decline of the previous home market-oriented development model (Lerche, 2013).

Rice is, historically and presently, the most important food crop in Indian agriculture.² From 2000 to 2016, rice (both basmati and nonbasmati) harvested area (including *kharif* and *rabi* seasons) ranged from 44.7 to 43.2 million hectares, covering 34% of the total grain area, and production increased from 85 to 110 million tons, at a productivity growth rate of 0.34% per year. On average at national level, 60% of this production was irrigated. The three largest producing states—West Bengal, Uttar Pradesh and Punjab—together made up 35.5% of the total, mostly through irrigated production. Although India is the second largest rice producer in the world, with 21.2% of the total, after China with 28%, the country is the major world exporter, supplying around 30% of the amount traded in the global market. Rice added up to over 20% of the total Indian agricultural exports in 2016, with basmati accounting for just over 1/3 in volume but 55% in money value (India, 2018). Nonetheless, the organization of the rice complex would not be well described as a corporate-led agribusiness. Rather, longitudinal research in the southern state of Tamil Nadu reveals a continuing heterogeneity of actors within the paddy-rice market. These consist of a myriad of peasant petty commodity producers, local wholesale traders, small-scale hulling millers and machine repairers, as well as agents and brokers who link them to oligopolic modern rice mills (including a state-owned enterprise) that trade, finance, process, store and organize transport and export trading, but with no sign of vertical integration (Harris-White, 2016).

There are attempts by Indian agrifood companies to internationalize. For example, Haldiram's and Bikarnervala are food processing and distribution firms with a wide variety of snacks and sweets that operate in over 80 countries and also run several restaurants and cafes within India (Grant Thornton, 2017). Moreover, while India is considered a second-tier player in the Asian meat complex, the country is becoming a key actor in Southeast Asia. Though India's meat consumption is very low, it is the world's second largest cattle producer and the first buffalo producer. Buffalo meat makes up 14% of its total agricultural exports, whose operations are carried out by only 45 registered meat exporting plants, controlled by a few families (Jakobsen & Hansen, 2020). Of course, large transnational agribusiness and food firms such as Cargill, Unilever, PepsiCo, Olam and Walmart *inter alia* are present in various branches of the Indian domestic market. However, internationalization is a complicated task for a country where most of its agrifood system falls under the informal sector. The so-called 'unorganized sector' accounts for 42% of India's food processing industry, whereas the 'organized sector' is estimated to respond for 30%, the remaining 28% being populated by small-scale firms (Grant Thornton, 2017). Even more telling is the food retail sector. Over 95% of the retail market remains informal, whereas less than 5% are in the hands of large supermarket chains. India's retail sector is formed by between 11 and 15 million small outlets (of which 60% sell food) that employ around 40 million people, managed by owners or local caretakers who are often family members and procure goods locally through highly decentralized supply chains without standardized or transparent accounting or management practices. Along with domestic corporations, multinational retail chains have a long way to go to transform fragmented networks of small farmers and traders that end in crowded local bazaars into something akin to the reign of Western supermarkets (Cohen, 2013).

The prevalence of undernourishment in the Indian population declined from 22.2% in 2004–2006 to 14.8% in 2015–2017, whereas obesity in the adult population rose from 3% in 2012 to 3.8% in 2016 (FAO et al., 2018). Estimates from India's Household Consumption and Expenditures Surveys, 1988–2010—years of rapid growth—are more negative: whereas poverty declined by 22%, undernourishment increased by 36%. Within the so-called 'great Indian calorie debate', different hypotheses have tried to explain these paradoxical trends (reduced physical activities leading to lower energy requirements; increases in the food to non-food prices ratio; inaccurate poverty measures, which would be rising; cultural resistance against Western diets; people's choice to spend their rising incomes on luxuries over food). However, all those hypotheses are flawed or inconsistent. A far more cogent explanation is that the country is already advancing in its nutrition transition, a view supported by data on increased energy-dense food consumption, improved anthropometric measures, growing incidence of noncommunicable diseases and especially

²See Kumar (2019) for a critical survey of the historical controversies on the purported 'success' of 'green revolution' in making India self-sufficient in food grains (rice and wheat) and its contemporary significance.

the rising consumption of food away from home, whose dietary intake is not captured by household surveys (Smith, 2015).

The crux of Indian agrifood politics relates to the ambiguous role of the state polarized between protection and support to broad sections of the rural population and neoliberalization favouring an updated model of capital accumulation based on the private sector. The 2013 National Food Security Act was seen as a landmark for tackling food insecurity in India. However, despite the left-wing criticism that the Act could advance neoliberalism by being 'targeted' rather than 'universalist', once the rightist Bharatiya Janata Party (BJP) came to power after defeating the Indian National Congress Party (NCP) in 2014, the tendency has been to hollow out the right-to-food agenda of state intervention and invite corporate agribusiness to public-private partnerships to spur a 'second green revolution' towards Eastern India. These measures to eliminate the remnants of the old developmental state and social welfare apparatus put an end to the unstable equilibrium of compromises that prevented some powerful actors from embracing the new type of authoritarian neoliberalism (Jakobsen, 2019).

4 | THE AGRIFOOD QUESTION IN THE BRIC(S) VARIETIES OF CAPITALISM

The three problematics of the agrifood question amalgamate disputing blocs of interests that underlie the emergence of the BRIC(S) VoC in the reordering of the global political economy and the international food regime. Firstly, capital accumulation is definitely taking place in the BRIC(S) agrifood systems through corporate concentration, financialization and the internationalization of agribusiness and food industry around transnational commodity complexes. These processes contribute to challenging the economic power of core states and strengthening the influence of emerging states in the international arena. Secondly, the BRIC(S) cases show that social reproduction does not necessarily follow either a clear trend of class polarization predicted by orthodox Leninists, or the persistence of an undifferentiated peasantry implied by many Chayanovians. Rather, the integration of agriculture into capitalist agroindustrial and financial complexes runs alongside the commodification that transforms the peasantry into a heterogeneous and diverse family farming. Thirdly, the politics of rural and agrifood issues reflects the wider political regression worldwide with the rise of right-wing populism and authoritarianism, where protectionism, instead of adding to overthrowing the neoliberal order, tends to adapt to it. Thus the emergence of the BRIC(S) seems to signal that despite their progressive role in the construction of a multipolar and polycentric world, if the current balance of forces remains unchanged, the Polanyian 'double movement' underway may result in another global round of a Gramscian 'passive revolution'.

The findings about the internal agrarian capitalist dynamics, the export boom of specific commodities and the internationalization of agrifood companies endorse Wilkinson's (2009) thesis that state-supported corporate concentration in emerging countries, reproducing the scales of operation and oligopoly structures of the North Atlantic, represent the dominant trend behind capital accumulation in, and the globalization of, the BRIC(S) agrifood systems. McKay et al. (2017) highlight the diverse ways in which the BRICS national agrarian dynamics condition the agrarian dynamics of their respective regions and beyond, giving rise to multiple centres of power and a new range of key players in the global agrifood system, increasingly challenging the old imperialist hubs under discourses of 'South-South cooperation', but without really questioning the dominant social relations of production, property and power. And Cousins et al. (2018) point out that the over-accumulation of capital at home, the need to secure resources (raw materials, land, labour), the limitations of the domestic markets in terms of demand and profitability and geopolitical motivations are the main accumulation imperatives within the BRICS countries driving them to invest abroad.

The main form of intersectoral linkages of agribusiness in China occurs through land transfers and vertical integration between dragon-head enterprises and peasant farmers. In Brazil both horizontal integration of large capitalist farms and vertical integration of family farmers with the agroindustry are widespread. The rule in Russia is horizontal integration via mega-sized agroholding enterprises formed from the land shares of former employees of state and

collective farms. And while emerging, vertical integration is still quite incipient in India. China is the world's largest pork producer and consumer. Brazil is the world's largest soy producer and exporter. Thus the so-called Brazil-China soy-meat complex, initially formed through direct trade relations, became consolidated through Chinese investments in Brazilian agribusiness, especially in the trading business and its related infrastructures. Moreover, both China and Brazil have large agrifood firms vying to become leading transnational corporations. Russia, by contrast, without major transnational agrifood firms, has pursued a strategy of domestic market protection and import-substitution combined with wheat exports promotion.³ For its part, India, despite the limited internationalization of its agrifood firms, is nonetheless the world's largest rice exporter and plays an important role in the Asian meat complex.

The BRICS are a historically justified category that emerged in the post-2008 financial crisis largely because their state-supported accumulation strategies dominate agrifood integration nationally and globally, in contrast to the overall effects of decades of neoliberalization. Unable to remove natural risks, uncertainties and discontinuities of agriculture (the specificities of land, plants and animals) directly through a unified production process, capitals adapt within the changing limits defined by technical progress via upstream 'appropriationism' (seeds, fertilizers, pesticides, biotechnology) and downstream 'substitutionism' (food processing, distribution, marketing; Goodman, Sorj, & Wilkinson, 1987). These forces operate in a competitive environment of 'creative destruction', driven by technological and institutional innovations that require investment financing mechanisms, through both public banks subsidized credit and private-led capital markets, culminating in the intense financialization seen throughout the whole agrifood system (Clapp, 2014; Isakson, 2014). Such oligopolistic structures operates like 'accumulation machines', or 'food empires' (Ploeg, 2010) that progressively establish new forms of centralized control and massive appropriation of the surplus value produced in the BRIC(S) agrifood systems and abroad, following the same principles of expansion, hierarchy and ordering of the old hubs of global capital while aligning new power relations across classes and class fractions, states and markets.

The findings about the heterogeneity of the agrarian class structures and the crucial role of pluriactivity in the BRIC(S) corroborate Zhan and Scully's (2018) thesis that the semiproletarian condition is not an exception explained primarily by its functionality to capital but the norm explained mainly by its relevance as a livelihood strategy to secure the social reproduction of the rural 'classes of labour' (Bernstein, 2010). This happens in a changing context in which the production side is marked by increasing concentration of agriculture and marginalization of farming (Friedmann, 2016), whereas in the consumption side rising incomes, accelerated urbanization and the new middle classes are driving paradoxical patterns of nutrition transition, with economic, social, health and environmental effects (Otero, Otero, Gürcan, Pechlaner, & Liberman, 2018).

Rural social reproduction in the BRIC(S) strategically involves pluriactivity, that is, the combination of agricultural (and husbandry) and nonagricultural activities within the production unit (the farm) or outside of it in the industrial and services sectors, usually in urban sites, by at least one of the family members. In China, the vast majority of rural households with land contracted through the household responsibility system always have family members under their *hukou* doing migrant work and sending money back home on a regular basis. In Brazil, off-farm occupations range from formal jobs in agriculture, industry or service sectors in interior regions with dynamic urban centres to survivalist and precarious informal activities in poor and predominantly rural regions. In Russia, all rural households with their land shares leased to large farm enterprises necessarily combine farming on their private plots with rural or urban off-farm jobs. And in India, the practice of seasonal wage labour or self-employment is pervasive for poorer households, where agriculture is a residual source of income, or even for those better-off, who supplement their farm income with off-farm jobs. In any case, from the farmers' point of view, they do it not to subsidize capital, but to provide for their families without having to give up the land, farming and the countryside.

This puts the difficult discussion about the social reproduction of the peasantry and family farming in the context of rural class dynamics. Seeking to overcome the shortcomings of other Marxist approaches revolving around

³Niederle, Kurakin, Nikulin, and Schneider (2018), from another angle, compare the agrarian origins of the patterns of state intervention and the meaning of leading monocultures in Russia (wheat's queen) and Brazil (soy's king), also exploring the implications of their agrifood systems dynamics to the current international reordering of the food regime.

interpretations of the classics of the agrarian question,⁴ Ploeg (2009) explains the metamorphoses of family farming through the 'commodification' and 'institutional incorporation' of agriculture by markets, science and the state. He thus resignifies the Marxist categories by restoring 'agency' to farmers and accounting for varied 'commodification degrees', defined as the ratio between the quantum of exchange values mobilized through markets and the use values reproduced internally to the unit of production. In addition to the capitalist form of 'wage-labour commodity production' (WCP) and the enduring peasant form of 'domestic subsistence production' (DSP), there are two other typical forms covered by the category family farming: entrepreneurial 'simple commodity production' (SCP) and commercial 'petty commodity production' (PCM). 'The essence and the main differences between them do not reside so much in the relations of property' but 'in the (different) ways in which production, distribution, and appropriation of value are ordered' (Ploeg, 2009, p. 16). The empirical description of varying farmers' segments within the agrarian class structures of the BRIC(S) countries testifies to the relevance of Ploeg's approach.

The nutrition transition in 'developing countries', in turn, is characterized by the rapid global transformation of eating habits and dietary patterns of distinct social strata and segments of the population from staple foods based on cereals, fibre and vegetables to processed foods rich in meat, saturated fat, salt and sugar. This process is often followed by demographic and epidemiological patterns tending to lower undernutrition and higher obesity rates, lower fertility and mortality rates and higher incidence of noncommunicable chronic diseases, affecting especially the lower classes. Among the BRIC(S) countries, such a phenomenon is relatively more advanced in (South Africa), Russia, Brazil, China and India, respectively. However, nutrition transition is not a linear economic trend. Rather, it is a contradictory process deeply related to inequality, class and the politics of neoliberal capitalism, producing paradoxical and uncertain situations across the Global South (Otero et al., 2018).

The findings about a contradictory role of the state in the BRIC(S) countries' rural and agrifood issues thus reinforce Escher, Schneider, and Ye's (2018) thesis that the politics of Polanyi's (2000) 'double movement' is a dialectical process involving power relations and institutional mediations, whose depth and direction must be evaluated, in light of Gramsci's (1992) notion of 'balance of forces', as a struggle for hegemony. The ambiguous and shifting political responses to the challenges that arise in times of crises express the contradictions and struggles for the representation of interests of rural classes and class fractions in the state apparatus and the institutionalization of ideas in the implementation of agrifood policies.

In China, although since the late 1990s, NRRM's left-wing intellectuals were able to advance cooperative initiatives and propeasant policy recommendations at the national level, from 2008 onwards government support to agribusiness capital became consolidated through DHEs and 'going out' policies, under questionable discourses on food safety and grain self-sufficiency. In Russia, although the 1990s left the liberals' expectations regarding a rapid and automatic development of family farming largely unfulfilled, since the 2000s, agribusiness attracted capital from outside of agriculture, and the formation of huge agroholdings became entrenched in the protectionist food policy that rose after 2010 and especially 2014. In Brazil, from the mid-1990s, and especially since 2003, family farming, agrarian reform and other subaltern actors and left-wing intellectuals were able to gain space for rural development and food security/sovereignty policies despite the strength of capitalist agriculture, agribusiness and the land market, but since the coup of 2016, they are undergoing serious setbacks. And in India, although the neoliberal project stands almost undisputed since 1991, in 2013 the government signalled a progressive move to institutionalize a broad food security policy, which nevertheless has been apparently ruled out after the right-wing's electoral victory in 2014.

Polanyi (2000, p. 159) acknowledged that 'class interests' are the 'natural vehicle of social and political change', but warned that 'the chances of classes in a struggle will depend upon their ability to win support from outside their own membership, which again will depend upon their fulfillment of tasks set by interests wider than their own'. Gramsci (1992, pp. 55, 134) took this insight further by pointing out the importance of the hegemonic classes establishing a 'common sense' in order to 'dominate' their antagonists and 'lead' their allies in the name of the supposed 'general interest' of

⁴Goodman et al. (1987) exemplify a Neo-Kautskyan view, Bernstein (1979) represents an orthodox Leninist view and Friedmann (1978) incorporates Chayanovian insights into a Marxist framework.

society as a whole using the state apparatus. I argue that it is possible to glimpse the contours of a Polanyian double movement in the BRIC(S) countries, with an exacerbated commodification movement from the 1990s onwards and some kind of protective counter-movement struggling to emerge from the 2000s. However, the conjuncture opened with the great recession has intensified disputes over its direction within the wider politics, causing the Gramscian balance of forces to lean towards the interests of dominant agrarian projects to the detriment of the subaltern ones. In China and Russia, what occurred in the aftermath of 2008 was a relatively subtle but effective 'transformism' in food security policies, which came to be associated primarily with capitalist agriculture and agribusiness expansion, relegating peasant and family farming to a subordinate role. In Brazil and India, by contrast, what happened more recently was an explicit institutional rupture—far more traumatic to the former than the latter case—of the 'unstable equilibrium of compromises' that had hitherto allowed a tense coevolution of disputing political projects.

5 | CONCLUSION

The BRIC(S) countries are all large market economies with important informal sectors, highly patrimonialist bourgeoisies and plagued by marked inequalities, in which the state plays a leading role in their capital accumulation regimes. Regardless of these general and defining common features, the capitalist diversity currently observed in the BRIC(S) is more cogently explained by the distinct historically embedded legacies of the agrarian question, from which stem the varying institutional foundations and class relations prevailing in each country. This view, only schematically elaborated here, has been thoroughly explored by the literature on agrarian transitions (Byres, 2016), but has so far been ignored by the VoC literature (Ebenau et al., 2015), whereas both have focused almost exclusively on developed countries.

The dynamics of the BRIC(S) agrifood systems influence their overall development paths in decisive ways. The institutional configuration of capitalism and its evolution in these countries are markedly shaped by the three problematics of the agrifood question. Capital accumulation in the BRIC(S) has been led by a few state-backed agribusiness and food industry corporations able to enter the global oligopoly competition for resources, markets, profits and power to the point of challenging the longstanding North Atlantic dominance. The social reproduction of the rural 'classes of labour' in the BRIC(S) increasingly relies on the combination of multiple in- and off-farm, agricultural and nonagricultural activities in rural and/or urban sites (pluriactivity), resulting in complex rural livelihood strategies that lead to the differentiation of family farming in at least three major segments (DSP, PCM, SCP), whereas nutrition transition is driving paradoxical changes in the dietary patterns of urban consumers of distinct social segments. And the politics of rural and agrifood issues in the BRIC(S) is closely related to the contradictory role of the state, verified especially in the ambiguous and shifting character of their agricultural and food security policies, what is largely explained by the changing balance of forces along the agrarian double movement.

It is impossible to accurately predict the BRIC(S)'s role in shaping the great transformation of neoliberal capitalism and the international reordering of the food regime in a world-historical conjuncture as critical and uncertain as the one we presently live. My overall findings, however, like previous critical studies, call for a cautious and intellectually pessimistic view (Bond & Garcia, 2015; Cousins et al., 2018; Kiely, 2015; McKay et al., 2017). The polycentric reordering driven by the rise of the BRIC(S) as exporting and importing poles of key agricultural commodities and food products, the internationalization of their own food empires as new global accumulation machines and the formation of agrifood complexes articulated in a South-East line relatively independent of the Northern/Western corporate control represent, of course, a profound transformation. The methods and strategies employed, however, do not differ so much. Concerns regarding economic concentration, market, technology and resource control, geographical and class inequalities, social, health and environmental damages remain vital. The major issue then is whether the rise of authoritarian right-wing populism that is already plaguing Brazil, India and Russia, not to mention the United States and several other countries, will consolidate the current neoliberal retrenchment as a passive revolution on a world-scale, or whether the rural social movements and farmers organizations will be able, together with a wider range of allied social forces (strategically

including lower and middle segments of urban food consumers), to build 'class-conscious left-wing populist counter-movements' (Borras, 2019) striving to resist and exploring more progressive futures.

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APPENDIX A

TABLE A1 BRICS selected socioeconomic indicators

Year	GDP total (billions USD\$, PPP)	GDP per capita (USD \$, PPP)	Inflation rate	Total population (million)	Urbanization rate (%)	Employment by sector—agriculture, industry, services (%) ^a
Brazil						
1990	1.02	6.961	2,947.7	146,593	73.9	22.4/22.5/55.1 (1991)
2000	1.586	9.144	7	173,447	81.2	20/21.3/58.7
2010	2.802	14.335	5	195,488	84.3	16.1/22/61.9
2018	3.371	16.112	3.7	209,205	86.3 (2017)	9.4/20.4/70.2
Russia						
1990	1,711 (1992)	11,534 (1992)	874.6 (1993)	147,569	73.4	14.2/40/45.8 (1991)
2000	1.642	11.214	20.8	146,401	73.3	14.5/29.2/56.3
2010	3.24	22.634	6.8	143,154	73.7	7.8/27.7/64.5
2018	4.18	29.032	2.8	143,965	74.3 (2017)	5.8/27/67.2
India						
1990	0.991	1.169	11.2	847,500	25.5	63.1/15.3/21.7 (1991)
2000	2.086	2.026	3.8	1,029,500	27.7	59.7/16.3/24
2010	5.311	4.423	9.5	1,200,664	30.9	51.1/22.4/26.6
2018	10.401	7.796	4.7	1,334,221	33.6	43.9/24.7/31.5
China						
1990	1.124	0.983	3.1	1,143,330	26.4	59.7/21.6/18.7 (1991)
2000	3.713	2.93	0.4	1,267,430	35.8	50/24.3/25.7
2010	12.403	9.249	3.3	1,340,910	49.2	36.7/27.5/35.8
2018	25.313	18.129	2.2	1,396,982	58 (2017)	26.8/28.6/44.6
South Africa						
1990	0.236	6.423	14.2	36,790	52	11/28.7/60.3 (1991)
2000	0.347	7.731	5.4	44,900	56.8	9.9/27.3/62.8
2010	0.601	11.813	4.3	50,850	62.2	4.9/24.4/70.7
2018	0.791	13.774	4.8	57,420	65.8 (2017)	5.2/23.2/71.6

TABLE A1 Continued

	Unemployment rate (%)	Productivity rate (USD\$, PPP)	People below poverty line USD\$ 1.90 (%)	Gini index, income	Human development index
Brazil	6.3 (1991)	27,084 (1991)	21.6	6.05	0.611
	9.9	28,146	11.6 (2001)	5.84 (2001)	0.684
	7.7	32,380	4.7 (2011)	5.29 (2011)	0.727
	12.5	32,578	4.8 (2017)	5.33 (2017)	0.759 (2017)
Russia	5.1 (1991)	40,502 (1991)	2.4 (1993)	4.84 (1993)	0.734
	10.6	31,400	2.2	3.71	0.720
	7.4	46,808	0.1	3.95	0.780
	4.7	53,012	0 (2015)	3.77 (2015)	0.816 (2017)
India	2.4 (1991)	4,877 (1991)	45.9 (1993)	3.17 (1993)	0.427
	2.7	6,836	38.2 (2004)	3.44 (2004)	0.493
	2.4	12,078	21.2 (2011)	3.57 (2011)	0.581
	2.6	18,565	n/a	n/a	0.640 (2017)
China	2.4 (1991)	2,897 (1991)	66.2	3.23	0.502
	3.3	6,470	31.7 (2002)	4.21 (2002)	0.594
	4.5	16,830	11.2	4.37	0.706
	4.4	29,499	0.7 (2015)	3.86 (2015)	0.752 (2017)
South Africa	28.3 (1991)	38,920 (1991)	31.7 (1993)	5.93 (1993)	0.618
	30.2	36,702	35	5.78	0.630
	24.7	43,335	16.5	6.34	0.649
	27	42,894	18.9 (2014)	6.3 (2014)	0.699 (2017)

Sources: IMF (GDP total, GDP per capita, Inflation rate, Population—in: <https://www.imf.org/en/Data>); UNDP (Human Development Index—in: <http://hdr.undp.org/en/data>); World Bank (Poverty line, GINI index, Urbanization rate—in: <https://data.worldbank.org/indicator>); ILO (Employment by sector, Unemployment rate, Labour productivity, Informality rate—<https://www.ilo.org/ilostat/>)

*Proportion of informal employment in total employment—ILO data: Brazil (2013), 37%; India (2012), 85%; Russia (2016), 17%; China (2013), 57% (estimation), South Africa (2016), 30%.