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**THE SIGNIFICANCE OF DOMESTIC MARKETS FOR GROWTH DYNAMICS IN
BRAZIL, INDIA, AND CHINA**

Paper presented at SASE Conference, University of Chicago, July 9-11, 2014

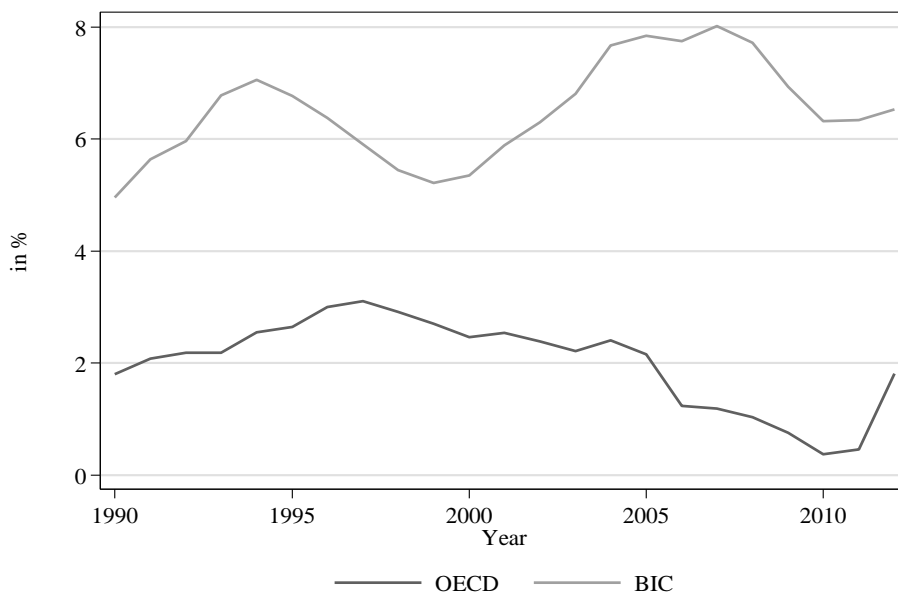
Abstract

This article contributes to the question on why growth dynamics in Brazil, India, and China (BIC) sustained since the 2000s. In contrast to dominant approaches that focus on their global economic integration and export-led strategies, we advance a different explanation that places greater emphasis on internal factors: the importance of BIC domestic markets, the growth of diverse industries, and how companies successfully orient towards them. Starting from a macroeconomic perspective, we demonstrate that the size of BIC domestic markets is of major significance for growth. Consequently, in contrast to assumptions of narrowly focused export-oriented industries, we analyse a diversified set of industrial sectors that concentrate on the production of medium-tech goods for domestic markets. Switching to a firm level perspective, we show that selected BIC firms successfully occupy large market segments especially in medium-tech and/or medium-range consumer markets and in markets for intermediate goods. We thereby recognise that state institutions are supportive of their national firms and actively engage in macro-economic policies. We conclude by discussing the implications of our research for debates within comparative capitalism research and development studies, on emerging market crisis tendencies as well as directions for further empirical analysis.

INTRODUCTION

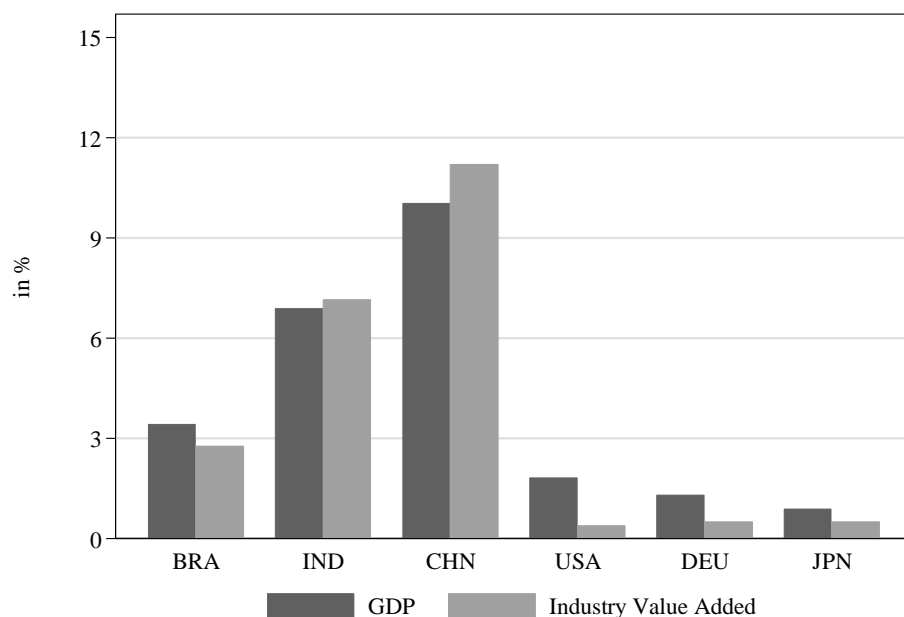
Since the 1990s, tremendous economic changes have occurred on a global level. The growth dynamics not only of China but also of other large emerging countries such as India and Brazil, recently been characterised as an ‘East-South Turn’ with global rebalancing effects (Nederveen Pieterse, 2011), can be interpreted as the biggest economic transformation in contemporary history. Their sustained growth is strongly connected to the growth of industry (see figures 1 and 2) – a fact that already led to a reawakening of an interest in industrial development and industrial policy (OECD, 2013; Elms and Low, 2013). According to the 2013 Global Manufacturing Competitiveness Index by Deloitte, for example, China will remain the top destination for manufacturing. They also predict that India and Brazil will overtake Germany and the US (currently ranked 2nd and 3rd) over the next five years (Deloitte, 2012).

Figure 1. GDP growth rates by region, 1990-2012 (smoothed rates)



Source: World Bank Development Indicators (World Bank, 2013).

Figure 2. Average annual growth rates of GDP and industry value added, 2000 – 2012



Source: World Bank Development Indicators (World Bank, 2013). Data for industry value added until 2012, except for DEU (2010), JPN (2011), USA (2011), CH (2011)

The dominant approach in the last 10 to 15 years has been to make the positive effects of global economic integration responsible for the sustained growth dynamics of Brazil, India, and China (BIC) (Brainard and Martinez-Diaz, 2009; Elliott and Zhou, 2013; Lardy, 1998; OECD, 2007; O’Neill, 2004; Srinivasan and Tendulkar, 2003). It emphasises the importance of exports to developed economies; the need for a narrow, specified export-oriented industrial structure; and the role of foreign investment in facilitating this process. As Bhagwati and Srinivasan (2002) argue, integration into the world economy correlates strongly with overall growth, and thereby, with the reduction of poverty. The same mechanism underlies most popular development programs of the last decade, such as the ‘Aid for Trade’ programme and the Doha Development Agenda, which optimistically claim that developing countries can ‘trade out of poverty’ by ‘[t]aking advantage of improvements in market access [that] will entail additional domestic policy reform to facilitate trade as well as trade-related supply-side capacities’ (IMF, 2005: 25f; OECD, 2009). Authors focusing on global production networks also argue that emerging economies are especially successful when they are highly integrated into these structures (Whittaker et al., 2010). Accordingly, many predict BIC growth dynamics to end when demand in Western markets is shrinking (Krugman, 2013).

Although we do not claim that global economic integration of the BICs is unimportant, we do contend that such one-sided explanations tend to overemphasise the role of external factors. In this article, we offer a different explanation for the extraordinary rise of these economies in the 2000s that places greater emphasis on their large domestic markets, the growth of diverse and integrated industrial sectors, and how firms successfully orient towards them. In doing so, we aim to

reintroduce an important internal perspective to current debates about the role of domestic markets for growth and development which has been prominent in earlier discussions (Chakravarty, 1979, Elsenhans, 1983; Menzel and Senghaas, 1986) but which is usually neglected or incompatible with neoclassical growth theories (see, as exceptions: Amsden, 2001; Tybout, 2000). We believe that the size and structure of domestic markets are crucial factors for explaining the growth of the BICs.

With regard to China, Loren Brandt and Eric Thun showed that in 2004, sales to the domestic market ‘represented 72 per cent of the output of firms manufacturing’ (2010: 1558). In other words, industrial firms sell three times more goods on the domestic market than abroad. This has important implications for the strategic decisions made by firms. Given the particular structure of emerging domestic markets, it increasingly implies producing medium-range goods for domestic consumer needs – a segment in which domestic firms enjoy strategic advantages. Yet, this is by no means a specifically Chinese phenomenon, but applies to India and Brazil as well. On the basis of national data, we provide evidence for similarities in core dimensions of the BIC economies that contribute to their dynamism. We also demonstrate the relevance of domestic firms in BIC domestic markets, and how they succeed in occupying low and especially medium segments of the market. This also presents a reason as to why the BICs went through the global slump relatively well.

Theoretically, we build on a burgeoning international literature that uses comparative capitalism research to analyse the evolution of large emerging economies (Becker, 2013a; Musacchio and Lazzarini, 2012; Nölke et al., 2013; Reslinger, 2013, X). In particular, this research focuses on different patterns of state involvement and different state-centric governance modes across countries. However, ‘state-directed development’ (Kohli, 2004) cannot solely explain BIC’s growth dynamics. Also, their large domestic markets distinguish them from other models of capitalism. The steady growth of state-permeated market economies since the 2000s is based on the existence of *large* and *protected* domestic markets as well as a policy of controlled integration into the global economy – despite different historical legacies and geographical location (see Saith, 2008; Kohli, 2009). As domestic markets in Brazil, India and China have comparably low technology demands, in particular *domestic firms* are able to supply the fast-growing low and medium-tech segments of the market – with the help of proactive state policies that foster their growth vis-à-vis foreign competitors. These dual factors of domestic markets and proactive state involvement make for a crucial *institutional complementarity* for the growth of BIC capitalism (Becker, 2013b).¹

¹ Other emerging economies such as South Africa neither possess a domestic market the size of the BICs (which leads South African firms to expand to regional African markets) nor a state being able to efficiently implement domestic development policies. Therefore, the complementarity between the domestic market and proactive state institutions barely exists.

In the following, we draw on a range of domestic data, interviews and case studies to support our argument. An analysis exclusively based on international databases has only limited value, because such data (e.g. IMF, 2013; World Bank, 2013) usually focuses on cross-border flows and thereby underestimates domestic features in the BICs. Hence, relying only on data by international organizations such as the UN, World Bank or the OECD can lead to an exaggeration of the effect of international flows. Critically, this supports a Western-centric worldview that still portrays large emerging countries as first and foremost developing countries that depend on resources, funds and credit from the North to prosper (e.g. Rodrik, 2009). Per definition, these countries are more or less poor and therefore, people abroad, i.e. in the developed world, would have to buy their products if economic development is to be realised. A view from inside therefore might provide a more accurate picture than the global view.

The article is structured as follows: First, we demonstrate the importance of domestic markets in the growth dynamics of the BICs. For this, we look at different measures for the size of domestic markets and point towards crucial characteristics. Second, we highlight the diversified industrial structure in the BICs which contrasts with the common assumption of one-sided export-oriented specializations, such as primary sector exports in Brazil, business service outsourcing in India and high-tech exports in China (see O'Neill, 2004). Moreover, we argue that the most dynamic industry sectors overwhelmingly do not require highly sophisticated production capacities, but mostly manufacture medium-tech products. Third, we switch from a macroeconomic to a firm level perspective and show that domestic firms – understood here as firms controlled by indigenous capital – rather than foreign ones were successful in occupying the low- and especially medium-range market segments which can be labelled as ‘good enough markets’ (Gadiesh et al., 2007) with reliable enough products at low enough prices. In this process, fourth, we recognise the supportive role of different state institutions for domestic BIC firms, which apply a range of defensive and active means to grant them comparative advantages vis-à-vis foreign firms. Fifth, after summarizing our findings, we discuss implications for debates within comparative capitalism research and development studies, on emerging market crisis tendencies as well as directions for further empirical analysis.

THE RELEVANCE OF THE DOMESTIC MARKET IN THE BICS

Mainstream economic conceptions often implicitly claim that developing countries can only grow when they are able to access consumers ‘abroad’ by increasing trade. Because of the usually small size of domestic markets in most developing countries, these did not play an important role in

development debates, too. Although Brazil, China or India were sometimes identified as having large domestic markets (Tybout, 2000: 13–14), their role did not enter the debate about BICs growth. Overall, connections between domestic consumption, industrial structures, firm strategies and growth remain hardly analysed.²

However, a look at the economic fundamentals of BIC domestic markets makes it worthwhile to reconsider this factor. Let us first approach the issue through the final consumption rate, which includes both household and government consumption (Xu et al., 2010). It indicates the extent to which money is available for spending – regardless of whether this money comes as cash or (consumer) credit. Statistically, differences exist between the BICs average final consumption rate for the period from 2000 to 2011: Brazil has an average final consumption rate of 81 per cent, a volume that resembles the consumption rate of OECD countries. In contrast, India (71 per cent) and China (54 per cent) have smaller volumes (United Nations, 2013). The lower rate for India and China are due to both lower consumption rates of workers and peasants and exceptionally high investment rates which are associated to intermediate forms of consumption (see below). Additionally, in contrast to the established centres of the world economy, domestic demand is not fuelled by the expansion of financialised credit because consumer credit is less available. Nonetheless, China and India have significantly climbed up the global market size ladder in terms of final consumption expenditure. This indicates that they are ‘rich enough’ to allow for an appropriate degree of consumption – which in turn provides stable conditions for the realisation of profit by companies that are able to supply these markets.

However, the final consumption rate is only a broad measure for the *potential* demand. By identifying the *actual* sales of particular industries, one is able to get a better idea of the size and character of the domestic market. Although all BIC economies are already deeply immersed in the international trading system, the absolute size of their domestic markets leads to a relatively low export share of industrial output. In the 2000s, exports play a smaller role in the growth story of the BICs than widely assumed (table 1). The export shares of industrial output are relatively small for all of them: between 15 and 22 per cent for Brazil, 21 to 25 per cent in India, and 14 to 23 per cent in China.

² In Economics, systematic treatments of the role of domestic markets are rare and partly outdated: on the analysis of domestic markets, consumers and growth, see Murphy et al. (1989); on the positive correlations between market size and productivity, see Matsuyama (2002); on the importance of the domestic market and industrial policy for domestic industries, see Chenery et al. (1986); on different demand-oriented growth models, see Setterfield (2010).

Table 1. Domestic industrial Output and Export share of industrial output in China, Brazil and India, 2000-2010

	China (in billion RMB)		Brazil (in billion R\$)		India (in billion R)	
	Domestic industrial Output	Export share of industrial output	Domestic industrial output	Export share of industrial output	Domestic industrial Output	Export share of industrial output
2000	8567,4	21,57%	639,9	15,89%		
2001	9544,9	20,74%	757,2	18,30%	9624,6	21,72%
2002	11077,6	22,15%	908,5	20,16%	11305,6	22,57%
2003	14227,1	23,42%	1097,3	20,39%	12873,8	22,79%
2004	20172,2	22,64%	1259,8	22,51%	16725,6	22,44%
2005	25162,0	23,16%	1355,6	21,20%	19083,6	23,92%
2006	31658,9	23,01%	1466,0	20,47%	24085,5	23,74%
2007	40517,7	21,69%	1659,2	18,82%	27757,1	23,63%
2008	50728,5	18,50%	1977,3	18,30%	32728,0	25,69%
2009	54831,1	14,17%	1906,5	15,90%	37330,4	22,65%
2010	69859,1	14,62%			46762,2	24,44%

Source: IBGE Contas Nacionais (various years); MOSPI Annual Survey of Industries (various years), http://mospi.nic.in/mospi_new/upload/asi/ASI_main.htm; China Economic Information Network, <http://db.cei.gov.cn>; UNCOMTRADE Database, comtrade.un.org; own calculations.

However, between 2000 and 2010, industrial output increased by 815 per cent for China, 486 per cent for India, and 298 per cent for Brazil. Yet, this rise in industrial production did not lead to an increase of the commodity export share: The bulk of BICs industrial production was sold domestically. This means, global sales constitute only a part of what is actually produced. By way of comparison, Germany's industry production in 2010 has been worth EUR 1237 billion, while its total manufacturing exports were at EUR 902 billions (Federal Statistics Office Germany 2014; WTO 2014). By showing the limited role of foreign markets for large industrial sectors in the BICs, this also reveals why the global slump did not hit the BICs that hard. While the export share of industrial output shrunk in all BICs after 2008, this did not apply to overall industrial output. In other words, the domestic markets in Brazil, China and India were able to absorb the decline of exports to a large extent.

From the 2000s on, the BICs have developed into some of the largest sales markets globally, with enormous future potential.³ Increasingly, companies from OECD countries orient towards them and global business elites already identified the BICs markets as a crucial aspect of their market strategies. According to the WEF Global Competitiveness Index, and in comparison to other emerging countries such as South Africa, the size of the market potential in the BICs is comparable to, if not larger than, the established centres of the world economy such as Japan, Germany or the UK (WEF, 2013). As a consequence, Western firms increasingly direct their investment and production towards emerging markets (Altenburg et al. 2008; Gereffi, 2013). Obviously, they do so

³ China has a special position within the BICs, as it already contains the biggest sales markets for e.g. automobiles, smartphones, or general manufacturing.

because the BICs provide one of the most attractive venues to realise profit. Instead of only producing in China and selling to the world market, the primary focus for American business in China is now to provide goods to the Chinese market (AmChamChina, 2011: 16, 24). Overall, business strives for a larger share of the huge Chinese market potential.⁴ The same holds true for India and Brazil which have become two of the top four global investment destinations in the late 2000s (besides China and the US).

Importantly, domestic markets should not be narrowly defined as markets for end consumers only. They also include demand from companies and state institutions, so-called intermediate consumption, which entails goods consumed as production inputs. This makes for a great portion of domestic consumption – especially in India and China where exceptionally high investment rates in infrastructure and production facilities led to a surge in demand for capital goods and intermediate materials, such as buildings, vehicles, office equipment, computers, plant and machinery. Statistical data shows a doubling of the intermediate consumption to GDP ratio in India and Brazil (no data for China), while OECD countries such as Germany, US or UK show only mediocre growth over the 2000s (United Nations, 2013). As we show in sections 4 and 5, this is also due to proactive developmental policies, as well as large-scale state-led programs for industrial development that prevented a one-sided export focus.

In sum, domestic markets in all three countries are sufficiently large to make them attractive for domestic and foreign firms. However, if exports are not as important as usually perceived and MNCs increasingly orient towards these domestic markets, which industrial sectors show the highest domestic demand?

DIVERSIFIED INDUSTRIAL STRUCTURES AND MEDIUM-TECH PRODUCTION IN THE BICS

In contrast to commentators claiming that emerging economies are dominated by a narrow, one-sided export specialization, we argue that the BIC economies rather comprise diversified industrial structures that are to a large extent driven by and compatible with their large domestic markets. Furthermore, we identify the production of medium-tech goods for these markets as particularly contributive to BIC growth dynamics.

⁴ Interview on December, 21, 2012, with Harley Seyedin, President, American Chamber of Commerce in South China. According to him, a new phase of market expansion has begun in which foreign firms try to gain a foothold in Chinese second-, third- and fourth-tier cities with a potential of around 300 million new consumers. The same holds true for firms from other countries that invest into interior provinces and build up new distribution structures, often conducted by domestic agents (IM and VDMA, 2013).

Tables 2-4 give an overview of the size and development of the most important industrial sectors in Brazil, India and China. They all show no excessive concentration or specialization but indicate the existence of a diversified industry structure that remained stable over the high growth period of the 2000s. It includes food products, energy, car manufacturing, chemicals or machinery industry. Even the Brazilian extractive sector, which is often portrayed as dominating the economy (Jäger and Leubolt, 2013), only accounts for 6 per cent of Brazil's overall output. This data shows that despite enormous growth, the industrial structure in the BIC countries remained diversified over time – a process supported and steered by state institutions through industrial and developmental policies (e.g. Heilmann 2008; Hsueh, 2012).

Table 2. Industrial output value in the largest Chinese industrial sectors, in 100 million RMB

Sector	2001	2011
Fabricated metal products	10928	123324
Machinery and Equipment	11339	118568
Extraction of Coal; Processing of Petroleum/Gas	8898	78697
Chemical Products (incl. pharmaceuticals)	8344	75767
Food and Beverages	7549	70007
Computers, electronic and optical products	8990	63795
Transport Equipment	6474	63251
Textiles	9790	55118
Production and Supply of Heat and Electric Power	5087	47352
Non-metallic mineral products	4026	40180

Source: China Economic Information Network, <http://db.cei.gov.cn>; own calculations.

Table 3. Industrial output value in the largest Indian industrial sectors, in 100.000 Rs

Sector	2001	2011
Coke, petroleum products and nuclear fuels	10394808	67971759
Basic metals	9562578	64794410
Food and Beverages	15150429	58233576
Chemical products (incl. pharmaceuticals)	15322299	48801829
Machinery and Equipment	7499794	42057961
Transport equipment	6792700	40984341
Textiles	9658792	34853544
Fabricated metal products	2154595	15497458
Non-metallic mineral products	3410960	14616648
Computer, electronic and optical products	3116924	10872089

Source: MOSPI Annual Survey of Industries, various years, http://mospi.nic.in/mospi_new/upload/asi/ASI_main.htm; own calculations.

Table 4. Industrial output value in the largest Brazilian industrial sectors, in million R\$

Sector	2001	2011
Food and Beverages	124059	413736

Transport equipment	68766	272215
Chemical products (incl. pharmaceuticals)	85581	218170
Coke, petroleum products and biofuels	43770	181364
Machinery and Equipment	54275	159753
Mineral products	61786	131214
<i>Extractive industries</i>	<i>23260</i>	<i>111829</i>
Textiles	29069	80015
Fabricated metal products	21873	72354
Computer, electronic and optical products	37608	61504

Source: IBGE Annual Survey of Industry, <http://www.ibge.gov.br/english/estatistica/economia/industria/pia/empresas/2008/defaultempresa.shtm>; own calculations.

National data and sectoral analyses indicate that most development in the BICs did not take place in either the agricultural or service sector nor in high-tech production. Apart from the IT sector in China or precision instruments in India, the strongest value added increase took place in medium-tech segments. What is more, while the IT sector (‘Computers, electronic and optical products’) has been among the largest parts of Chinese manufacturing in 2001, it has been caught up and surpassed by other industries that are mostly in medium-tech segments, notably fabricated metal products, chemical products, machinery and equipment. In Brazil, medium-tech transport equipment, machines, food production, and metal and chemical products were drivers of growth. In India, machinery, metal and chemical products, and food production added the most value.

Overall, the diversified nature of industrial sectors in the BICs, with its focus on medium-tech production, is compatible with the increasing needs of both local end consumers and manufacturing firms in the domestic market. In other words, the size and characteristics of BIC domestic markets facilitate such a diversified industrial structure. As markets are part of a wider institutional environment that translates into specific industrial path dependencies and corporate strategies, in the following section, we deepen our understanding of BICs domestic industrial development by moving from a macroeconomic to a firm level perspective. We thereby show that BIC *domestic* firms, and not foreign investors and MNCs, are predominant and of major importance in this process.

GROWTH CONTRIBUTIONS BY DOMESTIC FIRMS

As will be shown in this section, large parts of BICs economic dynamics stem from a successful concentration of firms in low- and especially medium-tech industries and medium-range market segments. Specifically, domestic firms benefit from a focus on specific industrial products and from following suitable domestic strategies, i.e. according to local consumer needs. Rather than orienting

towards Western markets, indigenous firms developed comparative advantages in their domestic institutional environment vis-à-vis foreign companies in the production of ‘good enough’ products which do not require highest levels of technology. In contrast, MNCs from developed countries were often unable to supply low- and medium-tech markets with the same competitive advantage that they have for high-tech products: ‘their business models were not designed to reach the new middle’ (BCG, 2012: 3; see also IM and VDMA, 2013: 16).

In order to understand the growth contributions through BIC firms in domestic markets, we analyse, firstly, production for end consumers. Secondly, the significance of intermediate consumption in the diversified industrial structure of the BICs is emphasised. Thirdly, we discuss the ‘fight for the middle’ (Brandt and Thun, 2010) market segment between domestic and foreign companies, as the latter increasingly aim to benefit from these expanding markets.

Domestic firms and end consumers

In contrast to popular images of the ‘new rich’ driving consumption in these countries (Passariello, 2012), the bulk of it is dominated by mass consumption, resembling consumption patterns in the Fordist era of the 1950s and 1960s in the West. A new middle class pushes domestic demand and ‘new consumers’ are of particular importance for macroeconomic growth (Gopal and Srinivasan, 2006). Growth dynamics in the BICs have been largely stimulated by the demand for ‘good enough’ products, thereby also reflecting the vast need for durable goods, ranging from textiles to white goods and mobile phones.

As observers of the BICs are well aware of, emerging markets are extremely price-sensitive (e.g. Krishnan, 2010). Products need to be as cheap as possible and consumers are unwilling to pay for additional features that are not immediately useful. In other words, contrary to markets in the West, consumers are usually not willing to pay higher prices for a higher product status. Instead, they demand so-called ‘frugal’ products that are simple and far from perfect, but therefore cheap. Not by chance is ‘jugaad’ innovation, i.e. an innovation strategy based on low R&D and instead on creative improvisation one of the most popular management themes in India (Krishnan, 2010; Kumar and Puranam, 2012; Radjou et al., 2012). As Gadiesh et al. (2007) show, these ‘good-enough market’ segments until recently accounted for two thirds of Chinese TV sales, while the premium range only accounted for a market share of 13 per cent. Practical utility determines the decision to purchase a particular product much more than in OECD countries where the focus is on branding. Due to this, many Western multinationals failed to sell products to these new consumers because they did not design their products to meet the new consumer’s specific demands and were still too expensive compared to products by domestic companies.

In earlier periods, mostly low-range industries contributed to GDP growth in the BICs. Moreover, low-end segments of the market sometimes provided incubation spaces for domestic firms. Yet since the 2000s, more medium-range segments of the market emerged as drivers for growth. Here, the automobile sector is indicative: In the Chinese auto industry – characterised by a high share of foreign capital and a dominance of joint ventures – domestic producers such as BYD, Geely or Chery have gained a bigger share in low and medium segments of the auto market. This trend is even more nuanced in other utility vehicle markets such as wheel-loaders or excavators (Brandt and Thun, 2010: 1562–1570). On top of this, domestic Chinese component suppliers were also strengthened. It should therefore come as no surprise that MNCs such as Liebherr, Caterpillar and Komatsu in construction machinery industry worry about future developments with respect to Sany, which recently acquired a 90 percent stake in Germany’s renowned Putzmeister Group, or Haitian (on the Indian case, see AmChamIndia, 2011). In Brazil, the car industry is dominated by foreign firms, with e.g. Volkswagen do Brasil. But here too, those companies are the most productive which successfully adapt to Brazilian market demands, such as FIAT, which sells more cars in Brazil than elsewhere (Danby, 2013; Ogier, 2013). Furthermore, the list of the most productive firms include a number of domestic supply firms, that are directly or indirectly integrated into the car and truck production chains, such as CSN, Iochpe-Maxion, Tupy or Paranapanema (see table 7).

An important end consumer market is the one for white goods. Midea, the 6th biggest private enterprise in China in 2012, which is focusing on e.g. air conditioning, is an archetypical example of a competitive medium-tech firm. While Midea is now present in other economies, its home market accounts for more than two thirds of total revenue. According to firm representatives, their domestic market net profit rate lies well above the sector’s global average.⁵ While their foreign competitors (e.g. Siemens) are able to serve the Chinese high-end market, Midea successfully aims at the middle of the white goods-market, and the (local) state proactively functions as an efficient ‘service-provider’ for the company.

Pharmaceutical products are another area where domestic firms successfully meet domestic demand. As incomes rise and health insurance systems slowly improve, a growing demand for medicine, especially generics, emerges. Traditionally, the pharmaceutical industry is treated as a high-tech sector because Western companies invest heavily in developing new medicines (OECD, 2011). Pharmaceutical firms from the BICs, however, rather imitate existing medicines, which relieves them from investing in the development of pharmaceuticals. This enables Indian firms to produce generics for a tenth of the price of the original medicines (Sharma 2012). Pharmaceuticals are also a very profitable industry in Brazil, where domestic producers such as EMS Sigma or Aché

⁵ Interview on December 28, 2012, with Lu Juping, Administrative Director, Headquarter, Midea Group.

are big players. This again is due to the growing demand for pharmaceutical products, as rising household incomes increases the propensity for individual health expenses (EIU, 2005; Pfeifer, 2006). Similar to India, these are mainly met by generics because Western products are simply too expensive for Brazilian consumers.

Recently established and quickly growing mobile and smartphone markets are another important field where customers are opting for cheaper local brands over international counterparts such as Apple or Samsung. Although expected, big foreign firms were unable to take over the expanding smartphone market in China by now. This is because consumers mainly demand cheap and medium-range smartphones, so that domestic enterprises such as Lenovo, which closely oriented its production to local needs, saw its market share surge between 2011 and 2013 – surpassing Apple, given its total lack of medium-end models. Apart from other large firms (Huawei, ZTE, Coolpad), smaller brands such as Gionee also grew fast, surpassing HTC and other foreign brands. In India, domestic giants such as Bharti Airtel and Reliance Communications sell simple cell phones for less than US\$20, enabling low-cost entries into the mobile phone and internet markets (Kumar and Puranam 2012, 105). This also applies to other IT segments, as demonstrated by the development of a US\$35 tablet PC by Indian public research institutions that meets the rural demand for ‘frugal’ products.

As shown by the last examples, the idea of medium-tech as the most important segment for growth has to be complemented: Although the overall picture shows a clear dominance of successful firms in low and medium-tech, some sectors grew very effectively, although they are not confined to a medium-tech segment, such as smartphones (or other IT products, and optical instruments). Hence, not the absolute level of technological sophistication but the relative ‘position’ of the product within a market is important, where for instance domestic Chinese smartphone producers were able to tap into the medium-*range* segment of a high-*tech* market. This means, medium-range products by domestic firms are not only successfully sold in ‘classic’ medium-tech segments such as construction equipment or white goods, but also in high-tech markets such as cars or computers, where they successfully compete with medium-range products.⁶

⁶ For this reason, established classifications of technological intensity of production (such as the OECD classification; see OECD, 2011) do not provide adequate data: firstly, because technological intensity is equaled to R&D expenditure, yet emerging economies regularly re-invent and rearrange existing products to cater domestic market needs. Hence, where the transfer of technology occurs through reverse engineering, sophisticated R&D plays a minor role. Secondly, successful production arrangements are not predominantly driven by product-related innovation but by the demands of the domestic market. In other words, successful innovation is not necessarily related to R&D but rather to the adaptation to local market demands. The sole measurement of technological sophistication, e.g. through technological intensity of production as proposed by the OECD, is inadequate to explain the role of medium-range markets.

Domestic firms and intermediate consumption

Next to end consumption, many of the sectors with the highest value added growth are related to production processes themselves. Such intermediate consumption combines goods consumed as production inputs ranging from office equipment, computers to motor vehicles and plant and machinery. This fixed capital accumulation has been an important driver of BIC growth from the 2000s on. The high demand for such intermediate goods are, as mentioned above, a side effect of high investment rates, especially in India and China. In recent years, their economies had an investment rate of 35–45 per cent of GDP, with the consequence that the demand for capital goods and intermediate materials increased. Those intermediate goods are often obtained locally. In contrast to one-sided global production network research, the role of ‘processing trade’ – firms obtaining intermediate goods from abroad, processing them locally and exporting them – is not as important for BIC domestic firms than for foreign enterprises. In China, the global hub for processing trade, almost 60 per cent of processing imports are thus attributable to foreign-invested firms. Another 17 per cent of processing imports are attributable to Sino-foreign joint ventures (Yu and Tian, 2012: 130–131). Furthermore, over the course of the 2000s, ‘processing firms have imported fewer varieties than ordinary firms. A lower variety of imports could reflect [...] an increased sourcing of domestically produced intermediate goods’ (Yu and Tian, 2012: 134).

Manufacturing firms are among the most important producers of intermediate goods. Construction is an equally important, albeit often overlooked, activity in the BICs, despite the obvious connection to the surge in local real estate markets. In China, for example, in the late 2000s, the construction industry represented the single biggest portion of GDP growth (NBS, 2010). Access to cheap land, labour and materials (with the help of benevolent local officials) make investment in new buildings and infrastructure very profitable. Although Brazil and India still suffer from an underdeveloped infrastructure, construction belongs to the fastest growing industries (Newman et al., 2011).

The same applies to telecommunications. Big telecommunication firms such as China Mobile or Huawei are reliable consumers for numerous domestic medium-range suppliers. In India we can also observe the competitiveness of domestic producers. The Indian telecommunications industry is estimated to account for 20 per cent of growth in the last fifteen years, even surpassing the contribution of the IT industry (Quadir, 2012). Western MNCs such as Nokia engaged in the Indian market but they were unable to provide one very important part, that is, telecommunication infrastructure. It was the ability of Indian telecom companies to provide a ‘downgraded’, price-reduced network for customers (Gudlavalleti, 2013). Moreover, the largest mobile provider, Bharti Airtel, has been able to drive down costs for mobile talk time dramatically by establishing close connections to retailers in rural India and thereby increasing mobile phone proliferation (Prahald

and Mashkellar, 2010). It was this large-scale investment in medium-range segments that made Bharti Airtel profitable.

The strategic advantage of domestic firms in the ‘fight for the middle’

Still, this does not fully explain why domestic firms were able to uphold their competitiveness vis-à-vis foreign companies. Why are foreign multinationals unable to raise profits e.g. in generics while indigenous firms can? While often lacking the resources to engage in Western markets, many medium and large producers in the BICs are successfully serving the domestic market. In most cases, large BIC companies neither have sufficiently skilled labour forces to engage in high-tech production nor the brand power to penetrate Western markets. Even if they wanted to, most producers are (so far) not able to escape their domestic markets.⁷

At the same time, Western MNCs try to enter the attractive growing domestic markets of Brazil, India and China. While in the 2000s, many Western MNCs already noted record sales, they however face several problems: firstly, their production frequently does not properly meet medium-range demands but is often ‘locked in’ high-value production, concentrating on (comparably more expensive) product innovation that aims for ever more sophistication. Secondly, local companies, whether private or state-controlled, try to capture the technology brought in by foreign investment aiming to develop ‘good enough’ products through frugal innovation or engineering (Radjou et al., 2012). Since foreign MNCs do not want to share technology, they have to come to grips with a weak regime for intellectual property rights protection and different forms of technology transfer, which increases the costs of market entry (Nölke et al., 2013). Thirdly, firms regularly have to cooperate with the state on different administrative levels, as well as with other firms, in order to enter the market and erect networks for production, sales and customer relations. In many cases, foreign MNCs have to deal with state agencies and local state-business alliances that seek to limit the influence of foreign capital or to steer its direction; either for the purpose of industrial policy or because foreign companies are direct competitors for indigenous enterprises.

The home market in the BICs therefore resembles a ‘sandwich market’ for many industries (Fischer, 2012). On the one hand, Western and East Asian MNCs have to ‘downgrade’, e.g. with respect to product sophistication in order to target medium-range markets. On the other hand, domestic producers are incrementally upgrading while trying to maintain their price

⁷ However, the similarities of domestic markets in Brazil, China and India support South-South trade. Although we can only touch upon this issue here, exports to and investing in other emerging economies already plays a vital role for BIC enterprises that are primarily domestically oriented and tend to become even more important as South-South trade increases (ADB, 2011). The large domestic markets thus also serve as a stepping stone for international expansion.

competitiveness. Thus, the intense competition between both domestic and foreign firms leads to a ‘fight for the middle’ (Brandt and Thun, 2010). This refers to the medium market segment representing the fastest growing part of the economy that has not been left unnoticed by Western industrial associations and chambers of commerce (IM and VDMA, 2013). However, competition from local companies is also identified in business surveys as the major reason for limiting foreign firm opportunities, leading to price pressures and the like (e.g. AmChamChina, 2011: 36; AHK, 2007: 20–21; BCG, 2012).

The problem for foreign firms lies in the fact that the particular structure of the domestic markets forces them to source locally in order to enjoy the same cost advantages as indigenous firms. Yet, the latter have a structural advantage within local networks between producers, suppliers and state agencies. The most successful multinationals such as Suzuki in India, FIAT in Brazil, or VW in China in fact had to establish long-term connections with the local industry, which required considerable investments.

Overall, *domestic* firms combine most of domestic industrial output and sales in the BICs. For China, statistical data exists (table 5). It reveals that even in a country where international investors have in fact become strong, domestic producers still dominate the markets – with the important exception of IT industries (‘Computers, electronic and optical products’).⁸

Table 5. Market share of Foreign Investors (FI) in China’s largest industries, 2001-2011

Ratio of FI gross Industrial Product/ total gross Industrial Product	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Extraction of Petroleum and Natural Gas	7,5%	7,8%	7,3%	-	7,8%	7,4%	7,3%	7,6%	7,3%	6,8%	6,3%
Textiles	33,9%	33,6%	35,0%	-	25,5%	24,8%	24,0%	22,9%	21,9%	21,3%	21,1%
Fabricated metal products	35,7%	35,9%	34,9%	-	36,5%	34,9%	34,8%	30,9%	25,1%	25,3%	24,4%
Food and Beverages	23,6%	23,4%	23,7%	-	23,6%	25,3%	25,0%	24,2%	22,7%	21,1%	20,9%
Chemical Products (incl. pharmaceuticals)	22,0%	22,1%	22,8%	-	25,2%	26,3%	26,8%	26,9%	26,7%	26,6%	25,5%
Machinery and Equipment	19,9%	21,5%	22,5%	-	26,1%	26,7%	27,2%	26,3%	23,3%	23,8%	22,8%
Transport Equipment	30,9%	31,8%	40,4%	-	42,8%	46,1%	45,5%	44,8%	44,4%	44,4%	44,0%
Computers, electronic and optical products	53,6%	53,2%	56,1%	-	61,0%	59,9%	60,7%	58,3%	55,0%	54,4%	53,1%
Production and Supply of Heat and Electric Power	17,7%	18,3%	18,1%	-	10,6%	8,8%	8,5%	8,3%	7,7%	6,6%	6,6%
Non-metallic mineral products	19,1%	18,8%	17,0%	-	18,3%	18,3%	18,4%	17,0%	14,9%	14,2%	13,1%

Source: China Economic Information Network, <http://db.cei.gov.cn/>.

Yet again, this is not only the case in China. In India, numerous of the most profitable firms are domestic ones (table 6). One part of the explanation is their better adaptivity to local market

⁸ In this data, Sino-foreign joint ventures as well as investment from Hong Kong and Taiwan are included in the Foreign Investors (FI) category. If you would exclude investors from Hong Kong and Taiwan, companies that have been integrated into Chinese capitalism to a large degree, the picture would be even more obvious.

demands. Global truck manufacturers Volvo and MAN, for example, tried to sell their high-tech trucks but did not account for the specific practices of Indian customers, who regularly overload their trucks and have to drive on poor roads (Fischer, 2012).

Table 6. Most profitable firms in India (2013)

<i>Company</i>	<i>Origin</i>	<i>Activity</i>
Tata Consultancy Services	IND	Computer software services
NTPC	IND	Electricity generation
Tata Motors	IND	Automobiles, vehicles
Infosys	IND	IT, business process outsourcing
ITC	IND	Tobacco, food, hotels, clothing
Bharat Heavy Electricals	IND	Boilers & turbines
Wipro	IND	Pharmaceuticals
Larsen & Toubro	IND	Industrial construction
GAIL India	IND	Gas transmission and distribution
Power Grid Corporation of India	IND	Electricity distribution
Hindustan Unilever	IND	Consumer goods
Grasim Industries	IND	Construction supplies
Mahindra & Mahindra	IND	Utility vehicles, manufacturing
Sun Pharmaceutical Industries	IND	Pharmaceuticals
Bajaj Auto	IND	Vehicles, auto-rikshas
Hindalco Industries	IND	Copper & copper products
Jindal Steel & Power	IND	Steel, electricity
NHPC	IND	Electricity
Maruti Suzuki India	IND/JAP	Automobiles
Steel Authority Of India	IND	Steel
Bharti Airtel	IND	(mobile) telecommunication
Hero Moto Corp	IND	Two-wheelers
Nuclear Power Corporation of India	IND	Electricity
Reliance Infrastructure	IND	Energy
Wockhardt	IND	Pharmaceuticals, biotechnology
Cipla	IND	Pharmaceuticals
Dr Reddy's Laboratories	IND	Pharmaceuticals

Excluding primary sector companies. Source: CMIE 2014.

Electronic steering systems, for instance, have no use under these circumstances and this is why the Indian truck buyer asks for cheaper trucks and is not willing to pay for extra features that are not immediately useful (Gudlavalleti et al., 2013). While Western MNCs are unable to profit from their technological sophistication, domestic producers like Tata Motors and Ashok Leyland are able to compete with medium-tech models. A similar situation exists in Brazil, where a relatively poor transport infrastructure makes high-tech trucks obsolete, not least because there is no network for the supply of parts and maintenance in the Brazilian hinterland.

The general pattern is not limited to the truck industry. Table 7 displays the most profitable firms in Brazil.

Table 7. Most profitable firms in Brazil (2011)

<i>Company</i>	<i>Origin</i>	<i>Activity</i>
EMS Sigma Pharma	BRA	Drugs, pharmaceuticals (generics)
Souza Cruz	GB	Tobacco
CSN	BRA	Steelmaking
Ambev	BEL/BRA	Food and Beverages
Aché	BRA	Drugs, pharmaceuticals (generics)
Fiat	IT	Cars
Marcopolo	BRA	Buses
Dana	US	Car parts
Cosan	BRA	Sugarcane refinery, Ethanol, electrics
Spaipa Coca-Cola	BRA	Food and beverages
Vale	BRA	Chemicals, Mining (iron ore)
Ioche-Maxion	BRA	Wheels, frames for commercial vehicles, railway cars
Whirlpool	US	White goods
DuPont	US	Chemicals
Tupy	BRA	Steel and car parts
Siemens	GER	Electrical equipment
BASF	GER	Chemicals
M. Dias Branco	BRA	Food and beverages
Electrolux	CAN	White goods
Grendene	BRA	Footwear
Odebrecht	BRA	Construction, diverse, chemicals
Marfrig	BRA	Meat industry
Paranapanema	BRA	Metal products, copper producer

Source: Valor (2012).

Two aspects stand out: firstly, the majority are domestic firms, not foreign MNCs. They are mostly controlled by families and by the state (through block holdings). Secondly, most of them operate in the field of medium-technology: generics, trucks, buses, steel products, construction and chemical products. The bus industry for instance benefits from the growing purchasing power of Brazilian

consumers who are starting to enjoy traveling. As new consumers, they enter the market from the bottom, i.e. by demanding cheap ways to travel. Hence, coach travel is the 'entry level' for these consumers. Marcopolo has been successful in producing buses for Brazilian demands and started to internationalise into markets with a similar demand profile, such as South Africa in 2002 and India in 2007, where it holds an alliance with Tata motors (Latin Trade, 2008). This also has implications for other sectors. Accor, for example, is expanding in Brazil's hotel sector, which has previously been dominated by the luxury segment (Ogier, 2013: 56).

Overall, domestic firms in Brazil, India and China were able to cater the specific demands of domestic markets, both in final and intermediate consumption, and also frequently outperformed foreign firms in middle segments through access to local low-cost suppliers and indigenous firm networks. These large domestic markets are a necessary, yet not a sufficient condition for growth of BIC firms, which also depends largely on the supporting role of state agencies.

STRATEGIC STATE SUPPORT OF INDIGENOUS BIC FIRMS

Apart from the size and structure of domestic markets, we highlight the supportive role of different state institutions for the enduring relevance of BIC domestic firms. The sheer potential of large domestic markets does not automatically mean that this is actually realized by indigenous firms. In fact, many developing countries in Latin America and Asia experienced how foreign firms successfully occupied the local markets in many of the sectors mentioned above. In order to support domestic firms, state agencies apply a range of defensive and active means to grant them comparative advantages vis-à-vis foreign firms (see e.g. Scerri and Lastres, 2013). Tariffs in the BICs are on average still four times higher than for EU countries with the consequence that import goods are unaffordable for local consumers (WTO, 2012). States are willing to oppose international agreements if this is in favour of the local industry. India, for instance, allows patent protection for the first three years only, and companies are allowed to produce generics immediately if these are considered important for national health (Sharma, 2012; Ragavan, 2012). In order to facilitate growth dynamics through intermediate consumption, state institutions provide production infrastructure and help to form domestic supply chains (partially embedded in transnational supply chains, see Humphrey, 2003; Yu and Tian, 2012). Investments by large state-owned enterprises and large public procurement projects regularly benefit indigenous firms. Brazil, for instance, follows an explicit strategy to nationalise the supply chain.⁹ Explicit policies to localise supply chains produced labour-intensive growth for the low-skilled population, and it also helped firms that rely on local suppliers in order to enjoy low labour costs, leading to less automatised production

⁹ Interview on February 26, 2013, Ministry of Industry & Commerce, Brasília.

processes than in OECD economies. The economic efficiency of these subcontractor systems represents an important source of the BICs comparative advantage. These trends culminated in the rise of ‘supply chain cities’, particularly in China, where enormous networks of supplying domestic but also foreign and hybrid firms, supported by state institutions, exist (Gereffi, 2009).

The permeation of the economy by state institutions is well documented for the BIC countries. A ‘close alliance between state and indigenous capitalism’, which Kohli identifies as the ‘main model of development’ in India (2009: 408), constituting a ‘marriage of repression and profits, aimed at economic growth in the name of the nation’ (Kohli, 2007: 91), shapes economic development in China and Brazil as well (see Nölke et al., 2013). A shared developmentalist stance of close state-business growth alliances are in favour of domestic producers (although foreign firms can also get some support). In other words, the ‘domestic market-proactive state’ complementarity in the BICs is ‘coordinated’ by closely interwoven private-public alliances.¹⁰

The supportive role of different state institutions in this process is thus a crucial factor that complements the success of indigenous firms on large domestic markets (also see Heilmann 2008; Hsueh, 2012; Nölke et al. 2013). An exemplary notice of the United States Department of Commerce for US firms doing business in Brazil points to implications for foreign capital: ‘[In 2010] Brazil published a decree (often referred to as the ‘Buy Brazil Act’) that provides preferential treatment for domestic suppliers over foreign firms even if the Brazilian company’s prices are up to 25% higher. [...] As a result, U.S. companies may find it difficult to participate in Brazil’s public sector procurement unless they are associated with a local firm’ (UDC, 2011: 8).

IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS

This article has aimed to contribute to the question of sustained economic growth dynamics in Brazil, India and China. Against the thesis that their growth rests on manufacturing exports accelerated by global economic integration and buoyant Western consumer demand in the 2000s, we advance a different explanation that places greater emphasis on the importance of domestic markets, the growth of specific industries, and how companies are able to occupy these markets with the assistance of state institutions.

Starting from a macroeconomic perspective, we showed that the size of domestic markets is of major significance for understanding the growth dynamics of the BICs. In section 3, we analysed the diversified industrial structures of the BICs and its concentration on the production of medium-tech goods. Our findings stress compatibility between diversified, medium-tech industrial

¹⁰ Interview on January 21, 2014, Institute for Studies in Industrial Development, Delhi.

production and domestic market demand. Accordingly, we explicated in section 4 how selected firms successfully supply this demand. Using a firm level perspective, we showed that companies occupy large segments especially in medium-tech and/or medium-range end consumer markets and in markets for intermediate goods. Domestic firms displayed a high degree of competitiveness vis-à-vis foreign firms – but only because state institutions support their national firms and actively engage in macro-economic policies. All in all, this reflects a ‘domestic market-proactive state’ complementarity that distinguishes BIC capitalism from other models of capitalism.

Our findings have several empirical and theoretical implications: empirically, for the debates on emerging market crisis tendencies, export-oriented growth models and emerging market (multi)nationals; theoretically, for debates on comparative capitalism research and development models. Thereby, we point to promising future research directions.

The emerging market hype has been met with scepticism recently (Krugman, 2013; UNCTAD, 2013). Especially since the financial crisis and as Western economies are stagnating, the argument goes, emerging economies will find it increasingly difficult to uphold their export-oriented growth models that supply the West with e.g. raw materials (Brazil), consumer goods (China) and cheap services (India). Hence, UNCTAD recently called for ‘policy shifts’ and a rebalancing of emerging economies towards domestically-oriented growth (UNCTAD, 2013: 47; also see Nederveen Pieterse, 2011: 37). But in contrast to this common perception, our empirical research emphasises that large domestic markets have already been important in these countries. This has three implications: First, the BICs have not been as export-focused (and dependent on Western prosperity) as many commentators suggest. Second, this presents a reason as to why the BICs went through the global slump relatively well and, despite cyclical downturns and various instabilities, continue to do so. Fourth, the existence of large domestic markets led to the success of domestic BIC firms that supply these domestic markets with medium-tech and -range goods in a wide array of industrial sectors. Hence, research on emerging market firms should not be narrowly focused on emerging market multinationals such as Huawei or Embraer, but should also include emerging market *nationals*.

We highlight that in these processes state policies are of vital importance – be it the role of creating essential infrastructures for production, in supporting the transfer of innovations within the economy or subsidizing firms. Although there are differences in the way the state is calibrating its regulatory instruments (Hsueh, 2012), what Atul Kohli describes with respect to India as ‘pro-indigenous business policies’ (Kohli, 2007: 90) also became an important dynamic force behind China’s sustained industrial growth and, at least since the 2000s, in Brazil. Despite different historical legacies, the BICs share a common set of features that contribute to relatively efficient

economic systems capable of generating sustained growth, albeit *without* a significant reduction of inequality. It is unclear, however, if other developing countries can (and should) imitate this growth model as they either lack large domestic markets or efficient state policies to defend indigenous business. Still, other large emerging markets such as Indonesia or Turkey should be analysed in future research as their sustained growth dynamics could at least be partially explained through the existence of proactive state institutions and large domestic markets.

Our findings also have important theoretical implications for existing growth models. The implicit assumption that sustainable growth mostly depends on export-oriented world market integration is called into question. Furthermore, the role of technological upgrading for growth has to be qualified. While others attribute the growth of emerging economies to their ability to challenge the ‘Western niches of high value-added privileges’ (Ban and Blyth 2013: 243), we argue that so far domestic BIC firms drive growth through the production and sale of mostly medium-tech goods for and on medium-range market segments. We think that a second look at older developmentalist debates and theories is very helpful here.

Another theoretical implication of interest for the study of emerging economies is to do with comparative capitalism perspectives. In contrast to Hall and Soskice (2001) who claim that only two growth-sustaining models of capitalism exist – coordinated and liberal market economies – we emphasize that the BIC economies are not exceptions to these existing ones but are self-contained growth models *sui generis*, at least up to now. By stressing the institutional complementarity of domestic markets and state institutions, we thereby integrate the role of domestic markets into comparative capitalism research and also contribute to a comparative political economy that analyses the historical evolution of large emerging countries (e.g. Conde and Delgado, 2009; Nölke et al., 2013; Schneider, 2013).¹¹

Until now, state-supported large domestic markets proved to be beneficial for growth and also helpful in moderating the impact of global crises. However, markets and firms should also be analysed as potentially destabilizing their institutional frameworks. Rather than being constantly and necessarily stabilised and controlled by it, the persistence of this growth model is not guaranteed: Competition among BIC domestic firms might further increase and thereby destabilise the larger socio-economic setup; foreign competitors might – and some already began to – modify their strategies for the ‘fight for the middle’ and thus become more successful (see BCG, 2012: 7-13; IM and VDMA, 2013); moreover, efforts by state institutions to construct ‘ladders for growth’

¹¹ As against to Schneider (2013) who sees Brazil as a dysfunctional hierarchical market economy, we suggest a different and more optimistic explanation of sustained growth dynamics. But this cannot be generalised to other Latin American economies as most of them lack large domestic markets and strong state institutions.

might fail because of different competition patterns within various industries (Brandt and Thun, 2013). Thus, next to more industry-specific studies of firm competitiveness and more detailed analyses of the similarities and differences between the BICs institutional architectures and actor constellations, these paradoxical trends are among the most interesting future research areas.

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