
Industry policy in Asia's demographic giants: China, India and Indonesia compared

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Abstract

The experience of industry policy in the wider Asian region contrasts significantly with many of the neoliberal policy prescriptions prevalent in Australia today. Using the automotive industry as a comparative case study, this article compares industry policy in three demographic and geographic giants of the region: China, India and Indonesia. China's dominant position has benefited from a highly 'interventionist' industry policy which places strict conditions on foreign carmakers in joint ventures. This policy has also influenced the emergence of a thriving domestic industry, with state-owned enterprises leading the way. While India has also emerged as a major auto producer, its industry policy has moved away from the joint venture model since the 1990s, with fully foreign-owned operations now playing a much bigger role. In contrast, Indonesia retains a version of the joint venture model while local industry is dominated by Japanese capital. The record of industry policy in these countries challenges the idea that more 'liberal' economic systems lead to stronger domestic industries or firms.

JEL Codes: 025, 014, P51

Keywords

Automotive industry, China, India, Indonesia, industry policy, manufacturing industry, varieties of capitalism

Introduction

Industry policy is a contentious issue in Australia. Recent decisions by the last of Australia's global carmakers to wind down local assembly manufacturing operations by 2016–2017 underscore a sense of pessimism about industry policy as an element of

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economic management. This pessimism has been accompanied by the ongoing influence of neoliberal economic ideas, specifically in Australia via the Productivity Commission's (2014) most recent report on assistance to the auto industry. The Commission has continued to promote strong opposition to industry policy in all its forms, as well as related remedial policies like regional adjustment programmes in response to the carmakers' announcements (Barnes et al., 2016).

But the Commission's view that state support for a dynamic manufacturing sector is unnecessary for, and even undermines, socio-economic development and prosperity is sharply contradicted by industry policy and practice in the wider Asian region. This article's central claim is that an understanding of national industry policy in the Asian region can help Australian scholars and policy practitioners to better appreciate the multiple factors that shape industry policy. The regional record also suggests that the impact and success of industry policy in facilitating economic development is dependent upon the legitimacy it is afforded by political and social institutions on a national level. Clearly, the institutional context in Australia is radically different from those in neighbouring countries in the region. This article provides a comparative overview and critical analysis of industry policy in three important Asian countries – China, India and Indonesia – using the automotive industry as a case study for each country. While there is huge variety in political and social institutions, as well as in cultures and societal relations, between countries across the Asian region, one key characteristic that unites these three particular countries is their status as geographic and demographic 'giants' – that is, the existence of relatively large and growing populations dispersed across relatively large territories.

The article uses a case study of the automotive industry to frame the comparison. The auto industry is historically a leading sector in capitalist economies, setting standards in quality manufacturing, technology and employment relations. 'Fordist' mass production emerged from this industry, revolutionising complex manufacturing. By the 1980s, a new model of 'lean production', based upon Toyota's production strategy after World War II, had become widespread as a management philosophy of waste reduction, cost-cutting and demand responsiveness (Womack et al., 1990). The auto industry subsequently became a very well-researched area in Organisation for Economic Co-operation and Development (OECD) countries (Kochan et al., 1997; Pulignano et al., 2008). As it has spread across Asia and the developing world more generally, studies on auto production in middle income and developing countries have also grown. In offering an analysis of auto production in three demographic regional giants, the article will demonstrate two key arguments. First, the development of strong domestic firms in these countries – or lack of development, as we shall see, in the case of Indonesia – has been shaped by highly pragmatic economic policy that directly challenges liberal economic assumptions about industrial development. Second, the development of industry policy is heavily dependent upon the specific political and institutional attributes of national economic systems.

The next section of the article briefly outlines the contrast between liberal economic prescriptions about manufacturing development and the record of 'interventionist' industry policy in these countries. It then offers a broad outline of the auto industry, including key characteristics, industry policy settings and key policymaking institutions in China, India and Indonesia. It also summarises the key similarities and differences between industry policy in the three countries. The evidence used to compile this section has been

drawn from documentary analysis of English-language policy documents in India (such as the Automotive Mission Plan; see Government of India, 2006), reports from the Association of Indonesian Automotive Industries (known as GAIKINDO; see Barnes, 2015), global industry data from the International Organisation of Motor Vehicle Manufacturers (OICA) and analysis of secondary source literature on China, India and Indonesia. The third section summarises and analyses the common features and key differences between auto-related industry policy in each country, what role industry policy has played in successful manufacturing industry development and explains how each case contrasts with economic liberal prescriptions about industrial development.

The auto industry, industry policy and institutions in Asia's demographic giants

Motor vehicle manufacturing in Australia is set to end by late 2017. In early 2013, Ford Australia announced it would cease production at its assembly facilities in Melbourne and Geelong by October 2016. This was followed in May 2014 by similar announcements by General Motors Holden and Toyota Australia that they too would cease production in Adelaide and Melbourne approximately 12 months after Ford's closure. In response, the Productivity Commission framed all prior industry assistance as wasteful as it only 'forestalled', but did not prevent, these announcements (Productivity Commission, 2014). The Commission's prognoses are based upon a neoliberal view of industry policy and a predictive economic model with a range of related assumptions about the Australian economy, including the operation of labour markets with close-to-perfect competition conditions, perfectly mobile capital within Australia, perfectly immobile capital globally and further assumptions that economic distribution and technology are not important priorities in the economic development process (Barnes et al., 2016). In the context of Asia's emerging economies, this view is similar to the neoliberal 'transition orthodoxy' in which fiscal conservatism is necessary, alongside individual property rights and transparent or democratic political and regulatory institutions, for successful economic development (Lo and Zhang, 2011).

In contrast, state institutions have played a far more central role in regional economic development than this orthodoxy implies. In particular, China's success has been based on a commanding role for state-owned industry, centralised political authority and generous investment in infrastructure for attracting ongoing Foreign Direct Investment (FDI) flows. The difficulties in applying a universal explanatory and normative framework for economic development in the different economies of Asia, like that proposed in the neoliberal orthodoxy, have led social scientists to explore variations in different national economic systems to explain divergent development paths. The Varieties of Capitalism (VoC) framework, which initially dichotomised 'liberal market economies' with 'coordinated market economies' (Hall and Soskice, 2001), is a key example of this foray.

Liberal market economies are focused on competition, prices and formal contracts, as exemplified by the United States, Britain or Australia. Coordinated market economies are more focused on cooperation, planning and organisational loyalties, as exemplified by Germany and Japan. A parallel distinction has been made between Anglo-American and German-Japanese employment models (Dore, 2000; Streeck and Yamamura, 2001;

Thelen, 2004). Corporate governance, management styles, remuneration systems, recruitment, trade union relations with management and the ‘corporate culture’ of firms all differ between these two systems.

Some scholars have tried to explore where, if at all, Asia’s emerging economies fit on this spectrum. For example, some suggest that China is closer to a coordinated market economy because of the strong role of the state in industrial development (Chan and Unger, 2009; Fligstein and Zhang, 2011). Others suggest that Asian economies do not fit so easily on the liberal-coordinated continuum (Becker, 2013; Peck and Zhang, 2013; Witt and Redding, 2013). For example, China has distinctive features such as an authoritarian one-party state, and state-owned enterprises (SOEs) continue to play a leading role in industrial development (Carney et al., 2009). In contrast, the coordinated market approach lends itself to collaboration between private capital and state institutions – to state *guidance* rather than state *ownership*. Similarly, China has features of political authoritarianism that distinguish it from either Germany or Japan. India also has distinctive features that make it difficult to fit into this schema. For example, despite economic liberalisation, its economy is dominated by small-scale enterprises and caste-based labour relations (Basile, 2013).

Such problems in aligning the VoC framework with the features of emerging economies have prompted some scholars to propose a new ‘Asian’ variety of capitalism which is different from either the Anglo-American or German-Japanese models (Amable, 2003; Wailes et al., 2009). For example, Witt and Redding (2013), in their attempt to categorise varieties of Asian capitalism, regard China and India as having a ‘structural similarity’ (p. 286). Such are the huge political, institutional and cultural differences between China and India that it is probably not helpful to try and ‘fit’ each country onto a spectrum primarily designed to describe policy and corporate outcomes in affluent Western countries. This seems even more true for Indonesia, Asia’s third most populated nation, where there has been virtually no scholarship that directly applies the VoC framework.

Despite these weaknesses in generating a catch-all global framework for VoC, the comparative questions raised in this literature can help by drawing attention to the critical role of politics, policy formation and institutions in addressing why integration, liberalisation and industrial development lead to divergent corporate and policy outcomes. The article pursues this claim by using the development of the auto industry in China, India and Indonesia as a comparative case study to explore how industry policy has contributed to developmental outcomes that deviate radically from neoliberal or orthodox economic prescriptions as well as producing variegated national outcomes within the region. Before returning to this conceptual discussion, the article first outlines the key features of the auto industry and supportive policies in each of the three countries.

China

The striking feature of the Chinese automotive industry is its size and scale. China is, by far, the world’s largest producer of passenger cars and commercial vehicles, surpassing Japanese production volumes in 2006 and the US in 2009 (Table 1). Average annual growth in Chinese production between 2000 and 2014 was 19.3% (Table 2). Today, major automotive assembly plants are located in various parts of China (Chin, 2010). The first

Table 1. Top 10 countries for passenger cars and commercial vehicles by production volume 2014.

Rank by total	Country	No. of cars	No. of commercial vehicles	Total	Percentage share, world total
1	China	19,919,695	3,803,095	23,722,890	26.4
2	USA	4,253,098	7,407,601	11,660,699	13.0
3	Japan	8,277,070	1,497,488	9,774,665	10.9
4	Germany	5,604,026	303,522	5,907,548	6.6
5	South Korea	4,124,116	400,816	4,524,932	5.0
6	India	3,158,215	681,945	3,840,160	4.3
7	Mexico	1,915,709	1,449,597	3,365,306	3.8
8	Brazil	2,314,789	831,329	3,146,118	3.5
9	Spain	1,898,342	504,636	2,402,978	2.7
10	Canada	913,533	1,480,357	2,393,890	2.7
15	Indonesia	1,013,172	285,351	1,298,523	1.5
–	World	67,530,621	22,203,607	89,734,228	100.0

Source: Organisation Internationale des Constructeurs d'Automobiles (OICA) (2014).

major motor vehicle operation was a joint venture between the state-owned Beijing Auto Industry Corporation (BIAC) and the American Motors Corporation (AMC) in January 1984, who looked to China to import Complete Knockdown kits (CKD kits, which are fully manufactured engine, chassis, brakes, gears, interiors and other components for assembly). Jeep Cherokee CKD kits were manufactured in the US and exported to China for assembly by the new venture, called Beijing Jeep (Gallagher, 2006: 37).

Beijing Jeep established the model for China's joint venture-based industry policy. This model remains largely intact today. As the foreign partner, AMC's share in the local operation was limited to 49%. Beijing Jeep's establishment was followed by a similar deal between Volkswagen and the Shanghai Automotive Industry Corporation (SAIC). Although Beijing Jeep was ultimately a failure and later absorbed by the merged Daimler-Chrysler group in 2003 (now known as Daimler AG), Shanghai Volkswagen was a huge success. The success of these pioneering efforts led to new joint ventures between Volkswagen and First Auto Works (FAW) and Second Auto Works (which later became Dongfeng Motor Corporation) (Gallagher, 2006: 39).

By 1997, SAIC also begun a major joint venture with General Motors (GM) and Honda acquired Peugeot's partnership with Guangzhou AMC. GM was required to establish a centre for technology and skill-sharing across Chinese firms, called the Pan-Asia Technical Automotive Centre (PATAC), as a condition of their entry. Two years later, Ford entered into a joint venture with Chang'an (Gallagher, 2006: 40). By 2003, Volkswagen and GM were the dominant foreign producers in China. By 2005, there were 12 foreign joint ventures in operation, comprising two American, one Korean, three European and five Japanese manufacturers (Gallagher, 2006: 24).

Chin (2010) argues the formation of China's joint venture policy was crucial to the success of its industrial development. He points to the role of industry policy via

Table 2. Annual growth (%), production of passenger cars and commercial vehicles, 2000–2014.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average 2000–2014	Average 2010–2014
China	13.1	12.8	40.8	35.2	17.8	9.1	25.9	22	4.7	48.3	32.4	0.8	4.6	14.8	7.3	19.3	12.0
USA	-1.7	-1.1	7.5	-1.3	-1.0	-0.4	-6.0	-4.5	-19	-34	35.4	11.5	19.3	7.1	5.4	0.4	15.7
Japan	2.5	-3.6	4.9	0.3	2.2	2.7	6.3	1.0	-0.2	-32	21.4	-13	18.4	-3.1	1.5	0.6	5.1
Germany	-2.8	3.0	-3.9	0.7	1.1	3.4	1.1	6.8	-2.7	-14	13.4	6.9	-8.1	1.2	3.3	0.6	3.3
South Korea	9.6	-5.4	6.8	1.0	9.2	6.6	3.8	6.4	-6.8	-8.2	21.6	9.0	-2.0	-0.9	0.1	3.4	5.6
India	-2.1	1.7	9.8	29.8	30.1	8.4	24.2	11.6	3.5	13.3	34.7	10.7	6.3	-6.6	-1.5	11.6	8.7
Mexico	24.9	-4.9	-2.0	-13	0.1	6.8	22.4	2.4	3.5	-28	50.0	14.4	12.0	1.8	10.2	6.7	17.7
Brazil	24.5	8.1	-1.4	2.0	26.8	9.2	3.3	14.8	8.0	-1.0	6.2	0.7	-0.2	9.1	-15	6.3	0.1
Spain	6.3	-6.0	0.2	6.1	-0.6	-8.6	0.9	4.0	-12	-15	10	-1.4	-17	9.3	11.1	-0.8	2.5
Canada	-3.2	-15	3.8	-2.9	6.2	-0.9	-4.3	0.3	-19	-28	38.8	3.2	15.4	-3.4	0.6	-0.6	10.9
Indonesia	228.9	-4.6	7.2	7.6	26.8	22.6	-41	38.6	45.9	-23	51.1	19.3	25.6	14.6	7.6	28.5	23.6
World	3.8	-3.5	4.8	2.8	6.3	3.1	4.1	5.8	-3.7	-12	25.8	3.2	5.5	4.0	2.8	3.5	8.3

Source: OICA (2014).

Automotive Industry Plans (AIPs) in 1994 and, again, in 2004. Apart from reaffirming the restriction on foreign Original Equipment Manufacturers (OEMs) to junior partners (i.e. below 50% ownership) in joint ventures, Chinese industry policy also continued to place strict conditions on the presence of foreign manufacturers. The 1994 AIP required that all automotive assembly operation use at least 40% local content. The government took advantage of competition among foreign manufacturers to leverage further concessions in terms of technology, product and knowledge-sharing. For example, the PATAC, established by GM in 1997, was the outcome of 1995 negotiations in which China encouraged competitive tendering between GM, Ford and Toyota.

In contrast, the AIP did not place similar foreign equity restrictions on automotive components manufacturing (Chin, 2010: 118). This was a major concession to foreign manufacturers but necessary due to problems experienced by them in sourcing components of sufficient quality. The AIP meant that OEMs were able to bring their partner Tier-1 parts suppliers to China and to use requirements for quality components products and efficient supply-chain management to leverage their own concessions from the Chinese state. For example, in return for investing and relocating components suppliers to China, GM insisted that the Shanghai provincial government improve transport infrastructure to enable it to operate according to 'just-in-time' principles. This was important in establishing a sophisticated production supply chain in the Shanghai urban region (Chin, 2010).

India

India is currently the world's sixth largest producer of passenger cars and commercial vehicles (see Table 1). Its production volume compares favourably with other countries, and the industry's growth is particularly impressive when compared with the larger producing countries such as the United States, Japan and Germany. As Table 2 indicates, India had the second-fastest growing automotive output of the top 10 producers during the 2000s. While India is behind China in terms of total production volume and average annual growth, virtually all global OEMs have established operations in India since the 1980s (Government of India, 2006). The presence of foreign OEMs has also transformed domestic components manufacturing, from an emphasis on retail spare parts production (the 'after-market') towards supply-chain production in which OEMs subcontract to parts makers.

As in China, supply-chain production and distribution have tended to 'cluster' around new and established OEM-assembly facilities. However, this clustering is more concentrated in a few areas than in China, partly because its domestic automotive market is less developed and also because of poor transport infrastructure in most parts of the country. The dominant clusters exist near Chennai, Tamil Nadu (southeast India); in the Chakan Special Economic Zone near Pune, Maharashtra (western India); and in the National Capital Region (NCR) surrounding New Delhi (Barnes et al., 2015).

Like China, passenger cars were regarded as a rare luxury in India until the 1990s. Local production was transformed by the entry of Japanese OEMs, above all by Suzuki in the passenger car market and Honda in the two-wheeler market. This reflects deliberate efforts by state institutions to segment the passenger car, two-wheeler and

commercial vehicle markets. From the early 1980s until the mid-1990s, the state reserved passenger car market domination for Maruti Suzuki, two-wheelers for Hero Honda and commercial vehicle production for Tata Motors. While there were other producers in these fields, the scope of their activities was either much smaller or significantly restricted by the state.

Suzuki was the pioneer of this process, signing a deal to take 26% share of Maruti Udyog Ltd (MUL) in 1982. MUL was the result of a failed attempt by the Government of India to create a 'people's car' based on import substitution in the 1970s. By the early 1980s, policymakers were convinced that the production and transformation of domestic passenger car production were only viable with foreign investment, technology and know-how. After searching for a suitable foreign equity partner, the government settled on Suzuki and retained a 74% stake in the joint venture (Becker-Ritterspach, 2007). It committed to assisting MUL to become the dominant passenger car producer, shielding it from competition. For example, the government blocked Honda's attempt to establish a similar joint venture with Telco (now Tata) Motors. However, in 1984, it allowed Honda to establish a new joint venture with the Hero Group, a family conglomerate from Punjab that had established a base in bicycle production and sales by the 1970s.

Thus, joint ventures were central to industry policy in the 1980s. The state also encouraged investment in these operations by offering a range of financial subsidies. For example, the Haryana State Industrial Development Corporation (HSIDC) provided land for MUL at below-market rates and channelled investment into major road, electricity and telecommunications infrastructure (Government of Haryana, 2006). In a similar vein, Ford and Hyundai were attracted to Chennai by the Government of Tamil Nadu offering tax exemptions, infrastructure investment and hundreds of acres of subsidised land (Gulyani, 2001: 133–135).

However, industry policy began to transform again after India's balance-of-payments crisis in June 1991, which heralded radical economic reforms, including trade and financial liberalisation as well as the dismantling of the 'license-permit raj' that had regulated large-scale manufacturing since independence. Licensing for auto production was scrapped in 1991 and the following decade saw a process of investment liberalisation which gradually unravelled the joint venture model of the 1980s. In 1993, the government allowed automatic approval for all foreign investment in joint ventures up to 51% ownership. After 2000, the government allowed automatic approval for 100% foreign ownership (Narayanan and Vashisht, 2008: 76).

After these changes, the remaining joint ventures became increasingly foreign-dominated and most became joint ventures in name only. Today, the vast majority of passenger vehicle and two-wheeler operations in India are wholly owned subsidiaries of large global carmakers which are mainly foreign-owned or owned by large Indian family conglomerates like Tata, Mahindra or Hero.

Indonesia

While Indonesia is a demographic giant like China and India, its automotive industry is significantly smaller. However, Indonesian production of passenger cars and two-wheelers has been rising up the ranks. By 2014, Indonesia was the 15th largest producer of

passenger cars in the world (see Table 1). However, industry growth since 2000 has been far higher than any of the top 10 producers, including China (see Table 2). Local production is dominated by Japanese manufacturers, especially Toyota which had a 37% domestic market share in passenger cars by 2010. By 2014, just under 120,000 workers were employed in the domestic industry, with about three-quarters employed in auto-components manufacturing, although Gaikindo (the industry peak body) claimed that a further 600,000 workers were employed in retail sales and distribution (Barnes, 2015).

Indonesia has a long history of auto production. The first plant was established as early as 1928 by GM, which was later nationalised and, in 1967, purchased by William Soeryadjaya's Chinese-Indonesian conglomerate, PT Astra International. Another auto operation, PT Indomobil, was bought by the Salim Group, headed by another Chinese-Indonesian entrepreneur, Liem Sioe Liong, in 1980 (Natsuda et al., 2015). Chinese-Indonesian business investment remains central to the Indonesian auto industry. As Robison (1986) has outlined in his business history of Indonesia, Chinese merchant capitalists have long been crucial to Indonesian economic activity. While always too marginalised politically and culturally to form a 'national capitalist class' with political primacy, a minority of large-scale Chinese family businesses were able to successfully integrate, first with the Dutch colonial regime and later as part of independent Indonesia's state-military oligarchs by offering channels for finance, investment and management that were otherwise unavailable to local rulers.

During the Suharto era, policymakers utilised the position of these Chinese businesses to implement different industrial strategies. Between 1969 and 1974, the regime pursued an increasingly nationalist, import substitution approach in which imported vehicles were banned. After 1976, the government tried to increase local content via a mandatory deletion programme for commercial vehicles' parts, which had to be replaced with locally produced components. After 1993, the ban on imported vehicles was lifted, but the government continued to provide tax breaks for cars with higher local content.

Perhaps the most controversial period in Indonesia's automotive history was the 1996 National Car Programme. This followed a similar route to the development of the Proton passenger car in neighbouring Malaysia by attempting to establish a fully owned, locally manufactured car using start-up foreign technology. Under the original proposal, a national producer committed to the programme would be exempted from paying duties on imported parts and from the luxury tax (imposed on all passenger cars, as a 'luxury' item, in Indonesia) for 3 years. The producer would need to establish 100% local ownership and 60% local content to satisfy the criteria for government support under the scheme. What emerged was the Timor Putra National, owned by President Suharto's son, Tommy. This led to the formation of a joint venture with Korean firm Kia Motors, known as PT Kia Timor Motors.

The operation violated the strict terms of the original programme, with 30% ownership by Kia. In essence, the operation produced Kia cars with a Timor badge. The key-note model, the Timor s515, sold at half the price of a Toyota Corolla, its direct competitor. Under pressure, Japan joined with the European Union and the United States to launch a successful appeal against Indonesian industry policy in the World Trade Organization (WTO). Their case suggested that Indonesia was in violation of the WTO Trade-related Investment Measures rule and violated the WTO's ban on subsidies (Aswicahyono et al.,

2000; Hale, 2001). In addition to the WTO ruling, the programme was also derailed by the regional economic crisis of 1998. Rather than pay back its massive tax concession, the venture eventually declared bankruptcy in 2001 (Natsuda et al., 2015).

While the National Car Programme folded in this period, Indonesia continued to experiment with a series of mild restrictions on foreign content. In 1999, it abolished the local content policy of 1993 but brought in a series of new import duties which applied to different car models. In 2006, it applied preferential tariffs for ‘Incompletely Knocked Down’ kits (IKDs) – that is, pre-assembled models in which some components were yet to be fully manufactured – to encourage local component production.

The Indonesian auto industry also has a peculiar structure, shaped by a 1969 decree by the nascent Suharto regime, in which all domestic automotive production had to be kept organisationally separate from sales and distribution. Like China and India, local industry has tended to rely on joint ventures with foreign OEMs, but, in Indonesia, this has also been characterised by this production–distribution split. For example, Toyota partnered with Astra International in 1970 to establish PT Toyota Motor Manufacturing and, for sales and distribution, PT Toyota Astra Motor. The manufacturing business was 95% owned by Toyota, while the sales business was 51% owned by Astra. While its partnership with Toyota has shaped local production most profoundly, Astra also established joint ventures with Daihatsu, Isuzu, Nissan Diesel, BMW and Honda two-wheelers. In competition with Astra, Indomobil (part of the multi-industry Salim Group) partnered with Suzuki, Mazda, Nissan, Hino and Volvo (Natsuda et al., 2015).

Key similarities and differences in industry policy approaches

There are several similarities between automotive production and industry policy in these three emerging economies. For example, processes of industrial development in each country have emerged alongside rising incomes and consumption expenditure. The fact that significant minorities of people in each country can now freely afford to purchase passenger cars as well as motorcycles is a significant shift of the past two or three decades. For India, D’Costa (2005) has labelled this process ‘embourgeoisement’, referring to the growth of ‘upwardly mobile, more affluent, consumer groups who can afford to participate in the growing industrial markets’ such as automobiles, electronic goods and other trappings of consumer society (D’Costa, 2005: 46). Another similarity is the clustering of components manufacturing in relatively close proximity to assembly operations, shaping the emergence of new (or transforming old) urban-industrial zones.

The differences among the three countries are also important. Apart from obvious differences in terms of output and growth, each country’s industry policy settings, joint venture policies and the emergence and character of local firms are also very different. China has retained tight restrictions on foreign manufacturers. Today, as in the early 1980s, foreign auto assemblers can only operate in joint ventures in which they are the junior partner, permitted to own up to 49% of local operations but no more. Today, most assembly operations in India are fully foreign-owned. Indonesia retains a joint venture model as well as the Suharto-era separation of production, sales and distribution, although governments have not been successful in leveraging major local content concessions

from foreign manufacturers. In the literature on Indonesian automotive development, there is an underlying concern that while FDI-promotion is necessary for capital, technology, skills and knowledge, domestic firms are far too weak to fully benefit from this process (Natsuda et al., 2015).

While these differences are important, the development of industry policy in each country runs against universalist liberal notions of economic development. Strategies in each country underscore the importance of national-level differences in politics and institutions in industry policy formation. For example, underlying concerns about reliance on the presence of foreign firms for industrial development have been expressed in each country. In India, this has been via a joint venture model used to segment and protect key industry players in the 1980s and early 1990s; in Indonesia, the joint venture model has reflected a Suharto-era split between production and distribution and a special, albeit restricted, role for Chinese-Indonesian capital. In China, the joint venture model remains the most intact of the three countries and continues to dominate domestic automotive practices and restrict the role of foreign capital.

In India's case, there is a long history of powerful industrialists shaping the direction of the economy. Large, family-owned conglomerates are part of India's modern history, having successfully emerged from the shadow of colonialism to influence economic policy after independence (Chibber, 2003; Kidron, 1965). Key business families, like the Tatas, Mahindras and Munjals, have successfully expanded into automotive production and become significant competitors in passenger car, two-wheeler and commercial vehicle production.

Consequently, the process of trade and investment liberalisation in India since the 1980s has incorporated the strengthening of these domestic industrial conglomerates *as well as* the entry of powerful foreign transnational corporations. While auto assembly in India today mainly comprises foreign-dominated operations, a key strategic role is played by these local firms. One expression of this is the success of Indian manufacturers as major transnational corporations in their own right, exercising market power beyond India's borders. Tata's global activities, including its acquisition of iconic British auto brands Rover and Jaguar, Korean firm Daewoo and Ford's heavy vehicles section, arguably form the key example in this process (Hattari and Rajan, 2010; Ray and Ray, 2011).

Indonesia, by contrast, has been very weak in terms of the development of local manufacturing firms. In part, this reflects the ongoing separation between sales, distribution and trading from manufacturing enshrined in Indonesian industrial law. It also reflects the political and cultural marginalisation of Chinese-Indonesians, who have played a disproportionately significant role in local business. The result is that, unlike India, there has been little domestic counter-weight to the influx of Japanese FDI in local automotive assembly and components manufacturing. The underlying concern in the political economy literature on the Indonesian auto industry is that, despite the alleged benefits of an open-door FDI policy, Indonesian manufacturers remain few in number, small in size and weak in terms of market power or technical prowess (Harriss, 1995; Irawati and Charles, 2010; Natsuda et al., 2015).

China presents a very different case: from a liberal perspective, there appears to be a paradox between a process of industrial development that has been far more profound and transformative than in India, and the comparative historical absence of large,

domestic transnational corporations in private sector manufacturing. This argument is underpinned by concerns that Chinese industrial development has been shaped by a culture of imitation rather than innovation and technological development among domestic firms. Partly in recognition of this problem, the Chinese government has pursued a 'techno-nationalist' response with ambitious aims to increase the proportion of research and development (R&D) spending in gross domestic product (GDP) by 2020, to reduce dependence on imported technology and to dramatically increase the number of local invention patents (Parayil and D'Costa, 2009). This response is important in the context of ongoing debate about the supposed exhaustion of China's historical surpluses of low-wage labour, necessitating a shift towards a higher road of industrial development (Davin and Harriss-White, 2014).

There is also debate about the consequences of these shifts for the development of successful Chinese auto firms. Gallagher (2006: 45) argued that WTO accession forced the Chinese state to abandon restrictions on foreign capital and that local component manufacturing will be neglected in the future (Gallagher, 2006: 104). Chin's (2010) significantly updated analysis paints a very different picture, suggesting that Chinese industry policy – especially its restrictions on foreign equity ownership in assembly production and its incentives for increased local content in components manufacturing – succeeded in modernising the auto sector. These policies disciplined state-owned joint venture partners and emerging Chinese enterprises, he argues, by requiring partnerships with well-established international automotive brands (Chin, 2010: 118). While Chin is also concerned that openness in components manufacturing has created obstacles to local innovation, he suggests that the emergence of increasingly competitive Chinese passenger car manufacturers is a direct consequence of industrial development assisted by the carefully managed presence of foreign firms.

As Chin suggests, one of the consequences of this process is that several Chinese firms have become increasingly export-intensive, selling cars in Western markets in competition with Japanese, Korean, American and European brands. To underscore the significance of China's approach, several of these firms are state-owned, such as Chery FAW and JAC Motors, alongside a range of privately owned firms like BYD, Geely, Great Wall and Lifan.

Within China's borders, there are signs that the state is becoming *even tougher* on foreign firms. In August 2014, China's National Development and Reform Commission fined 12 Japanese auto-components manufacturers a total AUD230 million for allegedly engaging in anti-competitive pricing (Yang, 2014). The following month, it fined FAW-Volkswagen AUD46 million for fixing prices for Audi car dealerships and repair shops in Hubei province. A survey of 164 foreign firms by the American Chamber of Commerce in China in August 2014 found that 60% felt 'less welcome' in the country than before, compared to 41% in 2013. In all, 49% said foreign companies were being 'singled out' for less favourable treatment by government (Lanman, 2014). While these actions may be designed to make it easier for Chinese-owned supply firms to compete with foreigners, there is no evidence that it has undermined foreign investment plans in the local industry. As Chin (2010) suggests, foreign firms have been prepared to accept tough and even arbitrary treatment in order to access Chinese markets for many years.

Conclusion

The questions remain: What is it that incentivises and enables the Chinese state to undertake this role? And why has industry policy been so different in other Asian countries like India or Indonesia? India, in contrast, has gradually shifted away from the joint venture model since the 1980s and it plays only a small role today. In Indonesia, there has been no effective attempt to increase local content in auto production since the Suharto era. The process of economic liberalisation and global integration that has taken place in each of these countries has produced divergent outcomes. This suggests that our enquiry needs to focus on the *national* political, economic and institutional level as suggested by the VoC approach.

For example, China's capacity to generate world-leading automotive production and consumption has been shaped by the role of state-owned industry and state regulatory institutions at national and provincial-urban levels. Put simply, the emergence of strong Chinese state-owned firms acting as exporters and, increasingly, sources of outward FDI would be inconceivable without a national political and economic system in which state ownership was legitimate and strategically important.

Similarly, the development of India's auto industry has been shaped by distinctive national characteristics. By 1947, there were already substantial business conglomerates in India with links to the ruling Congress party and the capacity to substantially influence economic policy (Kidron, 1965). These businesses cooperated, to an extent, with import substitution, industry reservations for public sector enterprises and industrial licensing in the 1950s and 1960s. Gradual trade and investment liberalisation, beginning in the mid-1980s, drew India closer to the *ideology* of a 'liberal market' system – especially after 1991 – and impacted industry policy in terms of a lifting of restrictions on foreign transnationals, a decline in public ownership and the joint venture model. But distinctive characteristics remain, including the enduring power of domestic Indian transnationals.

While there has been little work directly applying the VoC framework to Indonesia, we are nevertheless able to conclude that several distinctive national political and institutional factors have shaped industry policy and development there. The key question to explain in comparison with China and India – indeed, in comparison with many other Asian economies – is why such a high-growth manufacturing sector has failed to produce world-leading domestic firms. Like China and India, Indonesia's impressive auto industry growth has occurred against the backdrop of a massive rural-based economy. Industrialisation after the 1970s was shaped by the New Order's amenity to trade and foreign investment.

However, the development of local industry was equally shaped by the distinctive role of Chinese capital – politically and culturally marginalised, yet enmeshed into the power structures of Indonesia's colonial and postcolonial policy economy – as well as the central role of the Indonesian state and military as forces for economic development and despotic rule. While the auto industry has experienced high growth since the 1990s, the lack of development of local small-and-medium components manufacturers has raised questions about the socially transformative capacity of the auto industry in Indonesia.

Understanding the basis for industry policy in Asia is timely, given the serious question marks raised about the future of this arm of policymaking in Australia. The record

of policy implementation and development in the region directly challenges the suppositions of liberal economic theory epitomised by current Australian government policy and their advisors in the Productivity Commission. It shows that pragmatic thinking, planning, state-industry collaboration, as well as institutional composition and conflict have all played a role in the development of fast-growing auto sectors. In China, state-owned industry continues to be central to the story in a way that undermines neoliberal views about the role of states and firms in industrial development, while successful private-owned Chinese firms are now also emerging in global trade. Even in India, where auto production and consumption are considerably smaller than China, roles for state ownership and import substitution have been historically crucial in laying the foundations for high-growth industry today. While Indonesia presents a weaker picture than China or India, it remains instructive that the government has been able to attract significant Japanese investment in West Java through a policy that explicitly restricts foreign control over branding and distribution.

Thus, neoliberal claims – that fiscally conservative states and private-led enterprise development without substantial state subsidies provide the ingredients for successful industrial development – do not seem plausible when weighed against this recent history. In the Australian context, the Productivity Commission's framing of industry policy as an unjustifiable form of waste does not provide a means of assessing the diverse ways in which industry policy can assist and facilitate processes of national economic development. A further important consideration from the variegated experience of industry policy in China, India and Indonesia is that interventionist and pragmatic industry policy is only conceivable if a country's political and social institutions (and perhaps also their underlying social class and power structures) enable policymakers to occupy positions of authority and to nurture political influence.

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